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## Toke: Rural Economic Institution in Indonesia

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**ABSTRACT:** This study discussed toke as an economic institution in the village. Sociologically, toke is always studied through a patron-client approach that causes peasant households to always be in poverty. While the author's experience received social and economic support from toke. This is an ethnographic study, the researcher stayed with toke for more than a year. Researchers conducted engaged participation in all toke activities, observation of the entire area of Parit Baru village and in-depth interviews with selected informants. The study found that toke is a village economic institution that plays a role not only economically but also socially by ensuring the continuity of household consumption through debt. Toke requires 4 rounds of capital to stay on as a toke and always add clients through debt. If toke tidan is able to meet the demand for a loan of money from its client, then automatically the existing debt is considered to be paid off. This research contributes to rural socioeconomic studies, particularly to client patron theory. That the toke is not only a sucker for farmers but also as a guarantor of the slimness of household consumption.

### INTRODUCTION

The strongest reason I did research on *toke* was, *first*, as a villager was supported by the toke institution. Toke was instrumental in ensuring my household consumption and financed family member to continue my education until undergraduate.

*Second*, the results of library studies since have encountered in campus libraries, online libraries and journals, the study of toke that only focus on the patron-client relationship approach, and put the village as a closed market unit, so that only toke can enter the larger market. In fact, my personal experience has been that I have benefited greatly from toke institution. Therefore, I did research on toke by anthropology.

In 2008 when I visited Parit Baru Village, I found Cu Deyen as a toke that was able to survive of the social change, while other tokes went bankrupt. Another reason, because the location of Parit Baru village can be reached 15 seconds from my home in Pekanbaru, making it easier for me to go down the field and go home when I need something. One of the important factors that causes the role of toke to be so important in the rural economy is because rural in Indonesia is still at the subsistence economic stage.

The concept of subsistence economy developed in Russia through the Russian economist Chayanov (1966) whom he called the microeconomic theory of households. Chayanov explained that subsistence economics is an economic activity that carries out *self-exploitation* with the intention of satisfying household needs with what domestic workers have without being paid. Subsistence economics according to Chayanov is described through the concept of *houses hold utility maximization*. This definition was also used by Scott (1966) that the subsistence economy as the maximum effort of the household to meet the minimum needs of the household. Likewise Ellis (1988) as stated in his book *Peasant Economics, Farm Households And Agrarian Development*. In the book Ellis lists five subsistence economic units, namely; *First*, economic activity is as a farmer; *Second*, land as an economic base; *third*, workers come from unpaid families; *Fourth*, capital, the amount of production is equal to consumption; and *the fifth* consumption is subsistence consumption. While Ever (1998) defines a subsistence economy as a direct relationship between production and consumption (production equals consumption) that is independent of the state's count, involving labor without paying in the household. The subsistence economy according to Ever (1991) has 2 variables, namely household units and community units. The two units have a very strong relationship in both the production and consumption processes. The household is a unit of production and consumption that is the main core of the economy, workers are family members without pay. In addition to being domestic workers, family members also become unpaid laborers in relationships with the community.

The core of the subsistence economy is debt intended for the fulfillment of shortages of primary consumption and mass costs. Production determined some of the required consumption.

### FIELD RESEARCH

This study is an ethnographic in the village of Parit Baru. I lived in Parit Baru Kampar Regency, Riau Province from August 2012 to September 2013, in January 2022 I returned to Parit Baru to explore the data about toke in the village.

The research process went difficult because linguistically and culturally different from the language I used. Indeed, some people I already know well, because the working relationship includes with toke. But it is still necessary to carry out a deeper immerse process.

I really feel what James S Scott (2000) argues that ethnographic research is not an easy and simple matter, requiring a long time and time 24 hours a day. I am almost pessimistic to see the changes taking place in Parit Baru Village which in my opinion no longer allows toke to survive or act out the function of toke because toke has no land, the village is very open, residents are very critical and basic needs can be bought anywhere.

Basically, I already know the toke in Parit Baru Village, village officials and some residents who have interacted with me. But because the political conditions of the village are very dynamic, where the change of village head rolls quickly, so when I went to Parit Baru Village to start research, it turned out that the village head had changed.

The first thing I did was build a '*rapport*' proximity (Spradley, 1979; Chambers, 1983) and learning Kampar, going to mosques, participating in *yasinan* (read qur'an together) and various activities could bring me closer to them. The most important thing I told them, that I was learning about the village. To support my absorbency, I was assisted by recording tools, videos and other tools. To the informant I asked permission to record a conversation with them.

After September 2013 to January 2014 I went home to Pekanbaru every week, but every Friday, Saturday, Sunday and Monday I always in the village. Friday is the day of the market and toke sells rubber latex to the factory, Thursday and Saturday is the day of rubber latex sales to toke. Tuesday and Wednesday are slightly weighing days for toke to carry out other activities, while residents are days for extracting rubber and other agricultural activities. Until now I still communicate via cell phone to the residents for data update. In early January 2022, I again visited Parit Baru Village to explore data changes. But nothing has changed yet, only Toke Cu Deyen has passed away, the economic source of the village household has also changed from rubber to palm oil.

I write *fieldnotes* every day, after I write and then I also double-check the data. So the *fieldnotes* that I write, I print, and then I ask to be read or corrected, especially to toke and *datuk*<sup>1</sup> tribes and ex-head of village.

The key informan in this study is Toke Cu Deyen because of several considerations. *First*, the only toke in Parit Baru that can survive in the social of change. While the other five tokes are already bankrupt, there are indeed other tokes, but they do not fully perform the function of toke only as a collector; *Secondly*, I think Cu Deyen is a representation of toke in Indonesia in the face of the rapid flow of change, even though he did not finish school but was able to read the opportunities and enter the flow of change comfortably; *Third*, Cu Deyen's ability cannot be followed by other toke, so I think Cu Deyen's toke can be an inspiration for other toke in Indonesia. *Fourth*, consciously or not Cu Deyen has facilitated the peoples of Parit Baru Village to enter the culture of the city safely, through the function of banking broker, multinational products and, Cu Deyen plays a cultural broker.

Besides Cu Deyen, the other informants selected were one bankrupt toke, datuk tribes from the Piliang Tribe, Malay Tribe, Pitopang Tribe and Domo Tribe. Datuk this tribe was chosen because of its position in the social structure of the village, Datuk tribe plays a very important role. To interview the datuks of the tribe I was assisted by the son of toke Cu Deyen to meet the datuks. I also interviewed former village chiefs who were involved from the beginning of the formation of Parit Baru Village and at the same time partners toke. I interviewed informants based on age categories, namely young families aged between 25 – 40 years, consisting of women and men, young people under 25 years old, and over 40 years old. It also includes the client category. There are also two people who used to toke to Cu Deyen then moved and now go back to Toke to Cu Deyen. All informants interviewed in the interest of information about the toke and testing the correctness of the information obtained from the toke

Every day I'm with toke, if the toke has closed its tavern or has family business then I go around the village talking to the villagers about themselves, about the toke and about what they are going to do. I never did a formal interview with the toke or the public, but I still told you that the outcome of the conversation would be the subject of my writing. In addition, I have observed everything that is in motion – toke and residents. All my activities are recorded in voice recordings, and a small part I also record with a cell phone, where I am informed that the conversation I recorded, generally no one refuses to record the conversation. In the afternoon and evening, I sit around in a tavern selling fried bananas, satay and miso while discussing with residents and youth. After 10:00 p.m. I returned to my ride house, talking to the homeowner and writing a *fieldnote*.

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<sup>1</sup> Informal leader

## Toke: Rural Economic Institution in Indonesia

### STUDIES OF TOKE

The word toke or "tauke" is found in Indonesian dictionaries, but toke is interpreted simply as boss or superior. In everyday life<sup>2</sup> tokes are often also equated with middlemen, loan sharks and the like<sup>3</sup>. Toke is also often connoted as a Chinese merchant<sup>4</sup> who gives debts to villagers and at the same time buys agricultural products or fisherman produced by villagers.

Toke is a socio-economic institution in the village that regulates the processes of production, distribution and consumption, where economic activity in the village is centered on toke. Toke is a village economic institution that runs a business as a merchant, toke sells daily necessities to the village community on a debt basis; as a collector, toke buys agricultural produce to sell to the market; And as a creditor, Toke lent money to the villagers. Toke is also a guarantor of the continuity of household consumption of farmers or fishermen in the rainy season or large sea waves.<sup>5</sup>

Toke is merchant in the village while acting as a charismatic figure having an obedient following because according to Emerson (1979) that relationships are built to strengthen cohesive bonds and social integration in the form of loyalty and honesty tied through debt. Toke's relationship with loyal and honest followers is known as the patron-client relationship.

Toke acts as a patron while the farmer he is in debt with is a client. As a patron,<sup>6</sup> toke can freely determine the price in buying agricultural products and freely determine the selling price to farmers as consumers. Meanwhile, the client tries to fulfill his obligations by selling his agricultural production on toke, and buying the consumption needs of yes also on the toke by way of debt on the basis of trust and honesty.

The debt is the driving force of the toke that forms the patron-client structure and give status as a toke. Utang for toke is a binding transaction mechanism, the more households are in debt the greater the asset and the greater the profit. A toke is declared successful if there is more and more receivables to households in one village. Toke's ability to give debt to households is a guarantee that his business survives. If the toke can no longer give debts to households in the village, then the toke will automatically go bankrupt and the receivables cannot be collected.

Toke is not the same as loan sharks and middlemen, toke in the debt process does not recognize collateral, interest and maturity periods. Loan sharks and middlemen lending money require collateral, interest and debt maturity, such as the harvest season. The rice that is going to be harvested, the owner is lent money, the money is paid with the rice harvest at a price set unilaterally by the loan shark or middleman earlier.

Meanwhile, toke isa socioeconomic institution that ensures the continuity of consumption of fishermen who cannot work due to natural conditions, such as the high sea wave season and the rainy season, supporting the production process and distribution of household agricultural products. When the toke is unable to meet the needs of consumption and buy rubber of the citizen at the same time the debt is considered to be paid off.

Toke is also no longer synonymous with ethnic Chinese, indeed as the word toke is known and the perpetrator of toke is ethnic Chinese. A study conducted by Susan Mann (1984) found that in China the business patterns are exactly like the practices that are carried out by toke in Indonesia. However, in Indonesia, toke is no longer played by ethnic Chinese but is already a local population. Toke is already a rural economic institution that can be played by anyone and any ethnicity, which does not always name itself toke but is highly dependent on local idioms.

The toke referred to in this paper is a toke as a merchant, creditor and collector who actively acts as a small capitalist by collecting debt as his main business. The position of the toke controls economic resources and builds a wider market network. A person can only be called a toke if they get recognition from the village community as a toke and have a number of clients and not accomplices of a toke from outside the village. A toke should have a daily tavern where clients shop.<sup>7</sup>

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<sup>2</sup> The word toke is taken from the pronunciation of the community which in the Big Indonesian Dictionary QT Media writes as Toke which defines Toke as an employer (who owns the company); Cekidot Bas (Head of Work). Read on Wikipedia, Id.Wikipedia in Indonesian.Org/Wikiv/Halaman\_Utama, Chinese people translate Toke every day with the word Tuan. In the Indonesian dictionary, Toke is defined as an employer. Daryanto, 1998, Complete Dictionary of Indonesian, Surabaya Apollo.

<sup>3</sup> Middleman and leech land be name other from loan shark that is Individual that give credit compass short, use guarantee Form thing that Value more big from the money that Loaned with flower relative tall see (<http://id.wikipedia.org/wiki/Middleman>, Khudzaifah Dimiyati, 1997 and Ririn Darini (2007) see also reports in the media mass mention gecko same with Middleman leech land <http://jambi.tribunnews.com/2011/10/27/>; <http://bangka.tri-bunews.com/2012/01/12/>, <http://www.magazine.com>

<sup>4</sup> Opinion that flower at community that gecko be merchant China, even Zamroni (2007) and Firth (1990) in a Palpable mention that gecko be merchant China.

<sup>5</sup> Definition aforementioned Inspired by concept gecko that Delivered Shamsulbahri, (1996) at community fisherman at where gecko run Business Include merchant, Gatherer and Creditors.

<sup>6</sup> At Village Ditch New, client called *anak semang*

<sup>7</sup> Recognition of the Toke is not solely based on the assessment of the client but also on the assessment of the villagers as a Toke as a whole because the Toke has been doing business on its own responsibility for more than one year.



## Toke: Rural Economic Institution in Indonesia

Toke has long existed in Indonesia, it is even estimated that it has existed since ethnic Chinese migrated to the archipelago, therefore<sup>8</sup> toke is almost found throughout Indonesia, especially in coastal areas and riverbank villages. Some researchers noted that in some villages in Indonesia there are exchange activities as befits toke di Pelawan Bengkulu Water Village is found called *pecinkau* which provides debt facilities and farmer coffee collectors (Tjahjono, 2001), in fishing villages of South Sulawesi and Kalimantan it is called *pongawa* as buyers and providers of debt for fishermen (Pelras, 1981; Purnamasari, 2002), in the fishermen villages of Pekalongan Central Java called *Cakong* (Wahyuningsih, 1997), in the fishing village of Jatimalang, Purwodadi Purworejo called *Tungga* (Fitryah, 2006), in the fishing village of Kalibuntu Kraksaan Probolinggo called *pengambe*, (Martin & Melano, 2011). In the fishing village of Bajo Tanjung Pasir, Rote Island, East Nusa Tenggara is called *juragan* (Therik, 2008). In fishing villages and rubber farming in South Sumatra, Jambi, Riau Islands, and in Riau called *toke* (Syamsulbahri, 1996; Dirhamsyah, 2004; Joseph, 1994). In Malaysia it is called *toke* (Firth, 1990) and in China it is known by the name *yanang* where there is a common system that works patterned for the purposes of consumption and rural production (Susan Mann, 1984) exactly as toke does in Indonesia.

Research on toke has been carried out by many universities in Indonesia with a patron-client approach, especially in coastal villages, including villages on the coast with main jobs as fishermen and mainland villages in streams, whose main occupations are rubber farmers, coffee, oil palm and other perennials. Raymond Firth (1990) an anthropologist on the study of fishermen in Malaysia discusses the following toke briefly:

*'.... This toke moves in a variety of ways. He gives down payment or foodstuffs such as rice and cloth clothes to fishermen in the catch season or in times of insufficient yield, namely as a guarantee of future catches. He borrowed money to buy a boat and instead he supplied fishing gear without more price. Instead of a toke making a contract with the fisherman: the toke will buy fish at a mutually agreed price or a price determined by the toke which is always below the market price level. In this connection the role of the toke is important. It bears a large part of the market risk. He gave liquid capital to the fisherman i.e. the means of goods and he saved the fisherman from looking for buyers.....' (Raymond Firth, 1990)*

Purwadi Eka Tjahjono (2001) conducted research on the Semendo Lembak Ethnic Group in Palawan Air Village, South Kaur District, South Bengkulu Regency, finding *pecinkau* which acts as a *pecinkau toke* is a patron for coffee farmers in Pelawan Air Village, as a place for farmers to owe basic necessities, and borrow money and sell coffee crops at prices determined unilaterally by *pecinkau*.

Cristian Pelras (2000) conducted research in Makasar to find patterns of *pongawa* – *sawi* relationships in economics. Economic relations in South Sulawesi are built on the basis of patron relationships - clients are played by *pongawa* as a patron while *mustard* is a client, or fisherman. The function of *pongawa* is described as collecting fishermen's catches, as traders selling basic necessities to fishermen in debt and creditors in the form of cash, as well as buying fishermen's fish at prices determined unilaterally by *pongawa*.

Sudarmono, et. all (2012) in his article *Patron-Client Relationship of Urbanized Fishing Communities in Makassar*, examined *mustard* retainers in the urbanization process in Makassar. The study found that changes did not affect the *pongawa*-*mustard* relationship, even *pongawa* was a middle person that paved the way for *mustard* to interact with outsiders.

Purnamasari, et. all (2002) in their research on "Pongawa Production Relationship Patterns - Farmers in Babulu Laut fishing village, Babulu District, Pasir Regency, East Kalimantan" revealed that *pongawa* and farmers in reality have a vertical patterned relationship. The position of the *pongawa* (especially the large *pongawa* who is also an owner's farmer) is in the upper layer, then the owner farmer and the trapping farmer are in the lower layer.

*Pongawa* is tied to the owner farmers who borrow capital and the trapping farmers who manage the pond land. *Pongawa* – *sawi* interaction in the form of an exchange mechanism through a certain amount of value for money. Capital loans for pond businesses from *pongawa* are reciprocated by the owner farmer by selling the proceeds of his plantation to *pongawa* who provides loans at a predetermined price *pongawa* unilaterally. The factors that encourage farmers to be tied to *pongawa* are lack of capital and raw material needs, so farmers have no choice in selling their farm products. However, the exchange, which seems to be the more dominant economic element, actually contains an auxiliary element.

Muhammad Chozin, (2008) in his article *Illegal but Common: Life of Blast Fishermen in the Spermonde Archipelago, South Sulawesi, Indonesia*, revealed that the act of catching fish using bombs is a series of actions involving *fiancées*, *pabalang* (fish brokers), fish traders, fish industry, fish exporters and suppliers of explosives. The series of involvement of various parties and fish bombing activities can occur due to the strong patron-client relationship. Clients who are in debt with patrons and are heavily

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<sup>8</sup>Liang Liji (20120) Reveal that By excavation things era ancient at China, relationship China with Archipelago already last since 3000 – 4000 year that then. Joseph (1994) Reveal that relationship *gecko* with fisherman in Riau already last since era Invaders Dutch.

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dependent on the juragan cause fishermen to have no choice but to bomb the fish as the patron wants. It is not even just patrons and clients but also involves the fishing industry.

Wilson Therik, (2008) in his article "Fishermen in the Shadow of Juragan: A Portrait of the Life of Traditional Bajo Fishermen in Tanjung Pasir, Rote Island, East Nusa Tenggara" found that fishermen's dependence on juragan is due to debt. Juragan encourages residents to shop for what they don't need to increase the amount of debt. In bajo fisherman's house that is shabby and dirty, there is a 24" television, parabolic antenna, tape, radio, CD, VCD, DVD player, playstation, active speakers and a set of sofa chairs as well as several calligraphy paintings with Islamic nuances.

The study of toke in the Riau Islands was conducted by Yusmar Yusuf (1994), the focus of the study was intercultural relations, namely the relationship between ethnic Chinese and Malays. This research found that the relationship between ethnic Chinese and Malays has been going on since colonial times and continues to this day. The relationship between ethnic Chinese and ethnic Malays is bound by patron-client relations, patrons come from ethnic Chinese called toke while clients are ethnic Malays who are fishermen. Toke is also an extension of the big toke in Singapore.

The relationships built by Toke on fishermen are exploitative without being noticed by fishermen. Models of exploitation carried out by toke such as weighing in the middle of the sea which usually occurs weight reduction of up to five kilo grams every time the weighed because it is weighed hastily. As well as the debt system that causes fishermen to be tied to a price determined unilaterally by toke Toke makes tactical adaptations by giving red envelopes (ang pau) in it containing money on Chinese holidays and Eid al-Fitr.

Syamsulbahri (1996) conducted the study "Fishermen and Poverty; A Study on the Pattern of Patron-Client Relations in Riau, precisely in the Village of Mantang Baru, Riau Islands" found that the exchange of goods in the production process is widespread in various social interests. Production process activities include toke as fishermen, traders, collectors and creditors. Through debt, toke cements fishermen's dependence, by buying latex below market prices. Toke not only monopolizes one type of business but also combines four businesses at once by relying on a patron-client relationship. Toke does not allow fishermen to sell their catch to other parties, if it is known that the employment relationship is terminated, if there is a termination of the fisherman's relationship by the toke then the fisherman has difficulty getting a replacement toke.

According to Syamsulbahri (1996), toke makes debt a mechanism for obtaining and profiting. All fishermen obtain production assets by way of credit from toke charged 10% interest every month. In addition, the toke also provides cost and working capital loans without interest, as a consequence of such interest-free borrowing the toke buys fish at a price lower than 10% of the market price and is not counted as a debt installment. The position of fishermen remains weak because fishery facilities and infrastructure and various necessities of life are monopolized by toke

Dirhamsyah (2004) conducted a study of coral reef regulation policies in Selayar Village, Numbuh Kepulauan District, Riau. This research found that toke plays an important role in the fisherman's economy. Toke is seen as a patron of the fishermen's economy that directs for generations, thus forming a cultural system better known as the patron-client relationship culture. Toke takes advantage of the wave and strong wind season where clients can't go to sea so they have to owe toke

According to Dirhamsyah, toke takes advantage through four ways, first, subsistence transactions, namely shopping for daily necessities, second, from fish transactions, which are priced far below the market price, third, deceiving the weight scales of fishermen's fish, fourth, peddling luxury goods that fishermen do not need. Toke, in addition to exploiting fishermen, also protects fishermen when fishermen cannot produce and gives gifts during Eid, Chinese New Year and other big days.

Research on oil palm and rubber plantations conducted by Titik Sumarti (2007) in Indra Giri Hilir Riau found that there was an increase in poverty in oil palm farmers, because the pattern of controlling assets and capital entirely in the hands of toke Toke acted as a patron to determine prices in a lonely manner because farmers were bound by debt so that farmers were very dependent on toke and became poorer.

A similar study was also conducted by Kurniawan et. al (2012) on "The Pattern of Cooperation Between Rubber Farmers and Toke (Patron-Client) in Muara Musu village, Rambah Hilir District, Rokan Hulu Regency" This research found that the patron-client relationship with rubber farmers to cause rubber farmers cannot be separated from dependence on toke. Rubber farmers are bound by debt which has never been paid off, and the price of rubber is unilaterally determined by toke.

In addition to toke always being meticulous using patron-client relationships, other studies have also understood toke as a trade capitalist or a small capitalist. Sudarmono, et al (2012) revealed that the ponggawa-sawi relationship entered the realm of the urbanization process. Mustard cannot move to urban areas due to limited access, and resources, but mustard can move to cities while still relying on ponggawa even though the patron-client relationship has not changed.

Wigna, at all (2012) who researched the local capitalism of the Bajo Tribe. Wianti describes the Bajo tribal society as changing from a subsistence to a capitalist economy. Bajo people who turned into village capitalists because of the influence of interactions

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with outsiders of the village. Long before Joel S. Khan (1980) researched blacksmiths in Pariaman West Sumatra, about how the blacksmiths connected to a larger market. Benjamin Kojo Otoo (2012) conducted a study in Ghana, discussing female petty traders in Ghana.

Zawawi Ibrahim (1983) that the entry of capitalism into the village through trade capitalists. Capitalists buy farmers' produce cheaply and sell industrial production at high prices. Toke acted as a merchant, buying the latex and palm oil of the citizens and selling the capitalist production of the industry in the village relying on patron-client relations.<sup>9</sup>

Small capitalists are individual or household enterprises that have few workers and whose owners are directly involved as workers. This interpretation gives a very wide space to all small businesses to be able to enter as small capitalists, especially toke. This definition is not tied to an economic explanation that assesses a business based on turnover and labor, but on the process of the business being carried out. Therefore, Alan Smart & Josephine Smart (2005), includes family businesses such as street vendors, small producers and subsistence manufacturers.

C.K. Prahalad (2004) argues that multi-national should see the poor and isolated rural communities as important consumers for multi-national production, in my opinion, <sup>10</sup>toke can play a role as the distribution of their production. The poor also want to have access to multinational products. It is important to create the ability to consume, with different access patterns, and create small unit packages. So that multinational products can be enjoyed by the poor even though they are low in purchasing power. Toke takes on the role of opening access to multinational products to remote villages.

The power of capitalism drives the form of a world network known as globalization. Globalization then builds networks through production systems, as stated by Philip Mc Michael (1996) with commodity chains. Companies in central countries, such as Japan, the United States and others, form branch installation plants in Indonesia or in Malaysia or through the expansion of MNC (Multi National Corporation) and TNC (Transnational Corporation). The MNC and TNC produce locally and use local labor. Immanuel Wallerstein (1984) reveals that the world is now connected by a global network of labor production, so that households in villages are already part of the labor production network for capitalism.

Rosen (1975) argues that globalization can easily enter the village because the activities of rural communities are very broad, they can never live alone, are interdependent societies with urban infrastructure, government, and global markets. It is evident, as Timothy P Barnard (1998) finds that villages in Riau have been connected for a long time to the global market through perennial farming; rubber, gambier, logs and others. The production of rubber, logs and spices produced by households is distributed through toke and then enters the market through Singapore.

Toke is also interested in growing the consumer society to maintain and increase its business turnover. The flourishing culture of consumerism in the village is an opportunity to increase the number of <sup>11</sup> clients. If the client increases, it means that the amount of debt increases and the amount who spends also increases. For toke, the flourishing culture of consumerism in the village makes it easier for toke to market capitalist products in the village. Without a consumer society the products produced by capitalists do not sell.<sup>12</sup> Toke easily encourages consumerism in the village through debt mechanisms, through debt citizens can buy any product through toke. The task of toke is to make the things it sells a sign of certain identity values.

### TOKE BUSINESS PATTERNS

Toke plays a dominant role in controlling economic and social resources. Toke is the only access for residents to sell rubber sap, palm oil and catches and buy basic necessities, residents can access out of the village only by river. The relationship built is vertical where the client is required to be obedient, honest and loyal to the toke. The position of the toke is like this because the villagers, especially the client have no choice to be able to avoid the toke *pola lama*. Toke can be seen in the following scheme:

Schema 1 describes the toke relationship with the client as a vertical one. Toke is in a central position and connects to clients through debt. Isolated clients do not have access, the only access door to economic and social resources through toke. Toke controls economic resources and can access easily to markets, factories and large tokes. The strategic position of the toke gives

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<sup>9</sup> Toke be reflection integration at network Global through relationship interchangeability or The market that not fair.

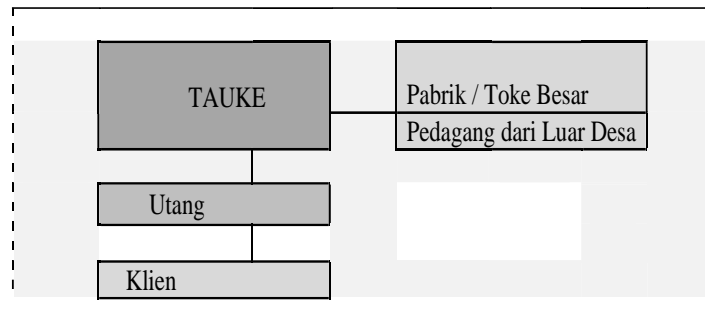
<sup>10</sup> Prahalad (2004) offer concept capitalism Total through Approach *Bottom of The Pyramid* (BOP), that is build basis pyramid as manner wipe poverty. *First*, Change community poor become user. *Second* BOP as market and must give chance growth new for sector private and become Forum to innovation. *Third*, BOB markets must become part important from private.

<sup>11</sup> Attitude Consumerist as expressed Mowen (1998) as attitude without each other base planning but act in an emotional to gratification desire because interest or above basis Other.

<sup>12</sup> Learn from the experience of the Bajo tribe (Wianti, et al, 2012) that Consumerist that be-so Supported by possession television by the Bajo people in Village Bajo Mola, with Impressions Television that then provided example other from Consumerism. Fact, appropriate with change that happen at community in the region mountains Tengger. Hefner (1999) mention that Spread television at area slope mountains Tengger already Provides example other from challenge to receive Norms consumption.

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the toke the right to unilaterally determine the price. Toke takes the initiative to increase client debt day by day, thus creating dependence on toke



Sumber : Diolah dari hasil lapangan,2013

**Scheme 1. Toke and Client Relationship Patterns**

Toke only bind the client through debt only on the one that the toke trusts. The trust gained from the toke is because it has its own rubber plantation or take latex the toke rubber farm, as well as not selling rubber latex to other tokes. The compensation from the trust of the toke is that the client gets a guaranteed consumption, can go into debt even though he is unable to produce. To maintain such trust, the client must maximally demonstrate obedience and honesty to the toke.

The position of the toke relates to the balance of production and consumption. When there is no production or production is running low, household consumption is not disrupted and remains fulfilled normally because they are given debt by toke. Households Residents who are in debt are clients who are required to sell rubber latex or palm oil on toke. The function of the balance of production and consumption takes place continuously due to some social, economic and ecological conditions as follows; *First*, natural conditions. During the year, there are two seasons, the rainy season and the dry season. In the rainy season farmers can not depress rubber sap. Rubber trees cannot be tapped because the latex that comes out of the pohan bark is mixed with water, the latex cannot be frozen and cannot be sold, so it is useless if the rubber is tapped. In addition, tapping rubber trees during rains, causes rubber trees to die quickly, because the wounds from the diteres are slow to close the rubber trunks, making it easier for beetles to nest. If the rubber tree has already been hollowed out by beetles and a lot of mold grows, then the latex decreases and soon dies.<sup>13</sup>

The production activities of residents in the rainy season are fishing, collecting firewood, and farming, to grow rice or other hard tamaman. After the oil palm entered the village in 2002, every rainy season residents went to the oil palm plantation, cleaned the plantation, fertilized and harvested, the residents started harvesting oil palm in 2007. In the dry season, the main activity of residents is to depress rubber latex, after returning from rattling rubber latex then continued by clearing land. Hasil latex sold to toke is mostly used to pay off debts. Prior to 2005, each weighing was directly paid to debt, for daily needs and cash needs, clients borrowed to toke The average client owes a monthly debt of Rp.200,000 to Rp.5,000,000,- accumulatively.

*Second*, residents do not have their own plantations. In young couples and poor people who do not yet have their own latex plantations their source of production is rattling rubber plantations owned by toke. Generally, toke has a large rubber plantation, which is sorted out by clients who do not have a plantation, done with a profit-sharing system. Residents who depress toke's rubber plantation, are provided with daily household needs for a week or even a month through debt first. At the time of weighing, the peneres got 2/3 and the toke got 1/3 of the results obtained. Toke determines the price unilaterally, the result of weighing directly<sup>14</sup> to pay the debt and re-indebtedness for daily needs on the toke.

*Third*, the needs of celebrations and schoolchildren. At the time of religious celebrations, marriage traditions, and death traditions. The traditions of celebration in the village include, religious traditions such as *belimau kasai* before the entry of the month of Ramadan, the month of Ramadan, Eid al-Fitr, fasting six, hajj, one Muharam, and other religious events. Marriage traditions, including weddings, seven months, births, naming, circumcision and devotion. Death traditions, including burial, tahlilan from the first to the third day, the seventh day, 100 days and others. Traditional traditions, such as traditional feasts, datuk appointments and others. Residents sold plantations and land for celebration expenses, shortfalls in the cost of going<sup>15</sup> into

<sup>13</sup>Season dry season at Ditch New Isn't dry season Long because deep Month still exist rain, very or two river keep at season Rainy, deep Month certainly exist day that not go down rain.

<sup>14</sup>Officially the profit sharing system is 2/3 for drawer, 1/3 for Toke. Because rubber latex is purchased at a price far below the market price, while daily necessities are priced much higher than the market price.

<sup>15</sup>Fast that Done six day after Eid.

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debt to toke and extended family assistance. For example, the need to go to hajj is 60 million rupiah, after the land is sold is still less than 10 million rupiah, borrowing to a toke 5 million rupiah shortfall of 5 million rupiah is assisted by his extended family.

The above three conditions make the toke in the village very important, acting as the main buffer of the household economy in the village, which is not just a general trader but is already a village economic institution. Toke must be in the village, without rubber latex toke cannot be sold because there are no other traders besides toke because the village is still isolated and can only be connected by river to other villages. In addition, without toke residents will starve during the rainy season because there is no place for debt for daily consumption. As Markib points out below;<sup>16</sup>

*"Toke is very important to the village, there is no toke who will buy the latex of the people. Where can people go into debt, can starve people. Therefore, the village protects the toke from the outside so that the toke can survive"* (Interview with, Markib, Former Secretary and Kades, 2013)

The village provides protection to the toke, ensuring that there are no tokes from outside selling in the village. If the toke in the village goes all bankrupt, it makes it difficult for residents to leave the village to sell latex and shop for daily necessities.

Among the tokes, they also understand that toke outside the village cannot buy latex outside the village, and vice versa, only people from their village can become toke in the village. To be able to buy latex or palm oil outside the operational village, the toke must have a toke foot, but rubber or palm oil farmers can sell latex or palm fruit to toke<sup>17</sup> outside the village. Village officials are responsible for directly supervising the implementation of the unwritten rules.<sup>18</sup>

### TOKE CAPITAL

Becoming a toke is not an easy thing because it requires a large amount of capital and a large rubber plantation land. The rubber plantation is where clients tap latex with a profit-sharing system or motor boats for fishermen. Toke must have a daily shop or shop to supply the client's daily basic needs. The most important thing for a toke is that it must have strong capital, because it must be able to lend cash to the client whenever necessary.

As a result of my observations, become toke must provide capital at least four times, *first*, the capital to buy sap. In large toke rubber latex feeding takes place every day, solid days of weighing are carried out twice a week, namely Thursday and Saturday. On Thursday weighing is done to shop at the village market every Friday, while Saturday is for children who go to school to Pekanbaru. Toke sells its rubber latex to the factory on Fridays and Sundays if the latex is sufficient. If there are Tuesday to Thursday the amount of weighing is large, while there is not enough quota, then the toke will sell the latex to other toke who come to his shop looking for rubber latex.

Prior to 2005 all latex weighed in toke was intended to pay debts. If at the time of weighing the latex sold exceeds the value of the debt the money is paid in cash. For the daily needs of the client returning to debt and if there is another cash need the client borrows money to the toke. The cash supply must be available at all times, because the client borrows money at a moment's notice, if it is not met the client will borrow to another toke, if the client borrows money at that very moment, if it is not met the client will borrow to another toke, if the client borrowing to another toke then triggers the client's move to another toke who can provide cash loans at any time necessary;

*Second*, capital to carry out daily needs and other needs. Every week toke goes shopping to fill the needs of his shop. In addition to shopping outside the village, toke also buys from merchants who come. The toke shop should always be available for the goods of its clients as it is part of the addition of debt and additional profits that are multiplied. Toke, for example, every week must provide a minimum of 30 million rupiah to shop to fill his shop. If the toke does not provide the client's shopping necessities, then the client shops to another store which triggers the client's move to another toke. Special shopping is done toke during Eid to give Eid gifts to all its clients. ;

*Third*, capital to loans cash. Cash loans are interest-free debts, with no return limits. The need for cash must be available at all times, because from the client borrows money suddenly without prior notice. In addition, clients borrow money based on a certain period, for example during Eid, the beginning of the new school year and the rainy season. In that period toke had to provide special money to make loans to his clients;

*Fourth*, round capital for shopping and buying the next sap. The money lent to the client is uncertain when it will be returned, as the client borrows to the toke unsecured, indefinitely and without being billable. Therefore, the toke must have cash for the

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<sup>16</sup>Without three condition at above, so Estimated role and function gecko will Reduced.

<sup>17</sup>Foot Toke exist just people who Appointed by toke to do transaction at outside village gecko

<sup>18</sup>Interview with Markib, former Village Secretary and Village Head, his opinion is not always true because I met three families who Toke to Tanjung Kudu Village.



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capital round of expenditure and purchase the following latex when the transaction to the large toke or to the factory is delayed because the amount of rubber latex has not reached the quota;

The turnover of money largely depends on the quantity of rubber latex collected. Rubber latex is sold to the factory if the quota of at least one *pick up car* is full. The slower the full *pick up car*, the longer the latex is sold to the factory, the longer the turnover of money back into cash. For toke that has many clients, the turnover of money is also very fast, every day rubber latex weighing can be directly sold to the factory. Toke sells rubber latex to factories at least twice a week, sometimes even up to four times a week. The more often the toke sells latex to the plant, the faster the turnover of money and the greater the profit. If the amount of latex is insufficient for the quota of one *pick up car*, it is common for the toke to sell the latex to another toke so that the scale reduction is not too much and cash is immediately available to buy the client's latex .

The following scheme illustrates that toke requires capital and clients to develop a business, the capital is able to multiply the client so as not to go bankrupt. If you don't have capital, you can't have clients, if you have capital but don't have many clients, then toke is also bankrupt. Therefore, the toke must have two components of capital and client. Capital should always be available, clients should always be growing. Toke not only has capital, but must be able to keep existing clients from moving to another toke.

Capital factors and the number of clients are the main determinants of whether a toke can survive or not. If capital is not available, the number of clients is certainly limited, if clients are limited, of course, the sale of latex to the factory is also limited, then the turnover of capital and profits is also limited. If capital is limited and profits are limited then the supply of capital to lend to clients is also limited. Meanwhile, the main factor for clients to survive and increase is the availability of cash every time they are needed. If it fails to provide cash to the client, it is certain that the client moves to another toke, while the receivables cannot be collected, then the history is that the toke is bankrupt.

### TAUKE PROFIT MECHANISM

The core of the toke business is debt, debt for toke is a binding transaction mechanism. Through debt, the client is obliged to sell latex to the toke at a price lower than the market price. Through debt toke mastered the marketing of rubber latex in the village. The more households owe the greater the assets and the greater the profit for the toke. A toke is declared successful if more and more clients are in debt. Toke's ability to give debt to households, became the guarantee of his business survival. Toke continuously increases the number of citizens who are in debt, increases the value of the debt and does not want clients to pay off their debts. If the client pays off the debt on the toke then the toke no longer has binding rights to that client. Therefore, toke always takes the initiative to increase client debt to maintain and strengthen dependence.

Upliers are a toke mechanism for reaping profits. Through debt toke profit in the following way; *First*, the price difference. Debt makes toke can monopolize the price, monopoly of the purchase price of rubber latex, palm oil and selling daily basic necessities. Toke determines the price not based on the price circulating in the market. But based on the client's debt load. The more debt, the more toke tends to buy the client's rubber latex at a lower price. The low price also applies to clients who tap rubber toke. Debt-bound clients do not have the option of where to sell because they have to sell and buy on the toke at the price set by the toke

*Second*, *quality* categorization, each rubber latex is paid for based on the quality of the latex and fruit of the palm. To get the advantage of <sup>19</sup> toke categorizing the quality of rubber latex, the good quality category has the highest price, the medium quality category has a lower price while the bad or reject quality category means that the latex does not sell.<sup>20</sup>

To get a large profit difference, toke never sets the best latex quality but tends to set medium quality, so the price of buying latex is low. It is not uncommon for toke to easily determine the quality of bad latex for some reason, which causes the latex to be reject. Against the latex that is reject, clients usually continue to sell the latex to toke at a very low price. At this time, the toke no longer enforces sap. All saps are weighed and calculated according to the category, for latex that is bad the reduction in scales is enlarged, for example 5:10, every ten kilos assessed only five (5) kilos. To indicate that the latex being weighed is of good quality, it can be seen that at the time of payment, the owner of the quality latex gets additional money given behind closed doors with a value of Rp.100,000.- up to Rp.200,000, - based on the amount and least latex weighed.

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<sup>19</sup>Good quality category if the latex has been stored for a long time, little air and not mixed with rubber tree bark. Medium quality category if the water content is more than good category. The category of poor quality is if the new Rattling rubber latex is immediately sold, it contains rubber tree bark and contains a lot of air.

<sup>20</sup>Toke tends to look for reasons to assign medium quality rubber to the category of rejects, thereby keeping prices down. Meanwhile, those who refused were only paid rudimentary, because it was impossible for the client to withdraw the rubber latex from being sold to another toke other.

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*Third*, depreciation reduction. In addition to categorization, there is also still a reduction of 1:10, that is, each scale of 10 kilos is removed one kilo for the good category, and 2:10 to 3: 10 for the medium and even ugly rubber latex categories for the latex is calculated at 5: 10. This reduction in depreciation, understood by the client as something to do, since the time distance weighs with the selling distance. By the time the toke sells to the factory, the latex sold by the client is already depreciating due to the release of water from inside the sap, which reduces the weight of the sap.

For example, Cu Deyen's toke weighs latex on Tuesday, if on Wednesday the next day the quantity of latex is insufficient for the quota of one *pick-up* car to be sold at the factory, then Cu Deyen contacts the toke from another village to sell it. If there is a price agreement, Cu Deyen's toke immediately sells the sap. The quantity of the weight of the scales on Tuesday was 1,200 kilos, purchased at a price of Rp.11,000 per kilo gram with a capital of Rp. 13,200,00,- on Wednesday the quantity of the weight of the scales was reduced to 1,123 kilograms, and sold at a price of Rp.12,500,- per kilo gram, the total price of Rp.14,037,500,- there was a profit of Rp.1,037,500,-. Whereas if it is sold to another toke on the same day and the same time without depreciation all are sold with a value of Rp.15,000,000,- with a profit of Rp.2,000,000,- but because there is a difference of one day the profit is reduced to Rp.1000,000,- Therefore, Cu Deyen's toke does not want to keep the latex for too long in the shelter.

*Fourth*, technical weighing. Toke also takes advantage of the scale limit, the width of which the actual weighing stone reaches a distance of five (5) fingers. Whenever the weigher should be the weighing stone only to the last number before the end of the scale, the position of the stone is inside of the scale boundary. In reality, the toke always puts the weighing stone to the end of the scale so that the toke gets a large difference of almost one (1) kilo every time it rises the scale.

The client did not protest against the toke's actions, because according to the client, when the toke sold to the factory, the toke also received the same treatment, even the whole latex was split to detect the moisture content, and the bark of the rubber tree inside. In the Factory, the latex that goes into the scales is split into six pieces, after which it is freshly weighed. This action is done to avoid a lot of rubber skin in the latex and reduce the amount of water in the sap. Along with the cutting of such sap, the quality of the latex is also determined, the quality is good, medium or reject

Toke can only treat this set of profit mechanisms pada who are in debt. Without debt toke can not enforce these four sources of profit easily. Non-debt-bound citizens can sell latex freely and act critically against the toke's profit mechanism and only sell rubber on toke who buy rubber latex at a higher price. Therefore, debt for toke is very important, through the toke debt device creates client dependence.

In addition, social benefits are obtained by toke through social security, toke is seen by clients as someone who is meritorious because it can ensure the continuity of household consumption, especially in the rainy season, dry season, fasting and Eid. For these "good services" toke has a loyal and honest following. For residents to become clients also get social benefits because debt is a sign that the household in question has received recognition and trust from the toke.

## CONCLUSION

Theoretically, the results of this research contribute very significantly to the patron-client relationship theory developed by Scott (1972). Scott sees a personal client relationship that is reciprocally intertwined between two or more people who have differences in social and economic status. The two established a relationship specially. Higher social status acts as a patron who provides protection and benefits to the party whose social status is lower called the client.

The study found that client patron relationships are not just limited to personal relationships between two or more parties but rather a socioeconomic institution that produces the economic culture of society. Patrons not only involve power relations due to class differences, but are already a culture that involves social status in society. A person becomes a client not solely because of his lower socioeconomic status, but because of the choice of social status.

Toke, which acts as a patron, is a village socioeconomic institution that forms a socio-economic institution as a social security for the survival of households when they do not produce because of nature, disasters and mass production needs. The social security function of this toke exceeds that of the government's social networking program.

This study makes patron-client theory very cultural so that it strengthens the study of anthropology to be present in the study of village economics through a patron-client approach. This study also further strengthens the network approach in anthropology which was previously the preferred approach to studying complex societies.

Theoretical application to the development of anthropological theory is *first*, the development of rural economic theory. Rural economics can not only be analyzed with a *household utility maximization* approach, namely the economic subsistent activity of Chayanove (1991) and labor *consume balance* from Frank Ellis (1988), but the village is studied with institutional approach to rural economics.

## Toke: Rural Economic Institution in Indonesia

In addition, national companies engaged in credit services need to benefit from the results of this study, including the certainty of payment of goods and money loans in the village. Through this research, it was revealed that billing services can systematically be transferred to toke as an economic institution in the village. This study provides an overview of the efficiency steps that companies can take because they do not need to pay for installment collection and collection services.

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Map : Riau Province



Source: BPS Riau 2014



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## The Adaptation of the Nyepi Celebration during the Pandemic by The Hindu-Balinese Community in Surabaya as A Manifestation of The Implementation *Tri Hita Karana* Value



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**ABSTRACT:** This study aims to interpret and analyze the meaning of the series of Nyepi celebration ceremonies following the concept of Tri Hita Karana teachings, describe what rituals and customs are performed by Balinese-Hindu society in Surabaya in celebrating Nyepi day, and analyze the influence of the pandemic on sustainability. Hindu-Balinese religious celebrations in Surabaya. This study uses a qualitative method by conducting open interviews with Balinese Hindu society who live in Surabaya. From the 15 informants collected, the researcher formulated five informants as the main data of the study. The study results indicate that Hinduism is a religion that is still a minority in the city of Surabaya. Hence, the Hindu society that migrates to Surabaya needs to make cultural adaptations, especially in celebrating Nyepi. The whole series of Nyepi carried out by the Balinese Hindu society in Surabaya is related to the implementation of the values of Tri Hita Karana. Since the pandemic, several celebration events had to be canceled, or their capacity was limited to break the spread of the coronavirus. The limitation of this study is the difficulty of finding suitable informants for the research sample because the Hindu community in Surabaya is still a minority. Hence, it takes a long time to compile this research.

**KEYWORDS:** Tri Hita Karana, Hindu-Balinese, Nyepi Celebration

### INTRODUCTION

Hinduism is one of the religions in Indonesia, originating from Bali. Even though it comes from Bali, this religion is spread throughout Indonesia because many Balinese have transmigrated to other cities. Surabaya is one of the cities targeted for the transmigration of Hindu-Balinese tribes for those who have an interest in education and work. Hindu society living in Surabaya needs to adapt because Hindu society generally has norms about the direction of Balinese social life. One of the things they do is form a community with strong kinship ties based on the Banjar system. The Banjar system is a form of community association based on a single environmental unit, the binding element for its members is the territorial boundaries per the applicable Banjar regulations (Wihantari 2013). not only that, but they are also actively performing socio-religious activities in the temple area. So this allows them to gather and carry out all the implementation of these religious ceremonies so that they can be preserved and maintained by groups of fellow Hindu society, especially those living in Surabaya. The Surabaya City government website (Surabaya City Government 2015) notes that Surabaya has ten temples in different sub-districts. However, all activities for celebrating religious days are centered on Pura Agung Jagat Karana in West Perak and Pura Tunggal Jati in the Kenjeran area. In religious activities at Hindu gatherings, they usually communicate with themselves, especially in terms of prayer or worship activities around the temple environment. Although the existence of Hindu society in the city of Surabaya is still a minority, this is where the existence of adaptation of social and cultural capital is where they gather and form a group bond of social life. Nyepi is one of the biggest celebrations in Hindu society. Nyepi usually coincides with the caka new year. According to Arswati et al. (2018), The year of Caka in Bali began with being alone, there were no activities as usual, and all activities were eliminated, including public services, such as closing the international airport, but not going to the hospital. According to Paramarta (2020), the implementation of Nyepi in each region is different. These are a form of cultural adjustment made by Hindu migrants in cities outside Bali. The basic concept of celebrating Nyepi is an afterthought consisting of the teachings of *Catur Brata Penyepian*. Nyepi Day aims to ask *Ida Sanghyang Widhi Wasa* (God Almighty) to purify *Bhuana Alit* (humans) and *Bhuana Agung* (universe) so that

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the universe is balanced. Nyepi is carried out through various series of Nyepi rituals such as *Melasti*, *Tawur Kesanga*, *Catur Brata Penyepian*, and *Ngambak Geni* as a form of religiosity acknowledges the existence of supernatural powers. The whole series of Nyepi Days intersects with the values of *Tri Hita Karana*.

Despite being a minority in Surabaya, the Nyepi day series is held annually. Moreover, Hindu society gets support and financial assistance from the Surabaya City Government. It illustrates that Surabaya is a city that upholds tolerance amid cultural diversity. However, since 2020 all Nyepi celebrations must undergo significant changes because the government has implemented a lockdown policy. Hindu society is still allowed to celebrate Nyepi and apply health protocols under instructions from the minister of religion, central Indonesian Hindu Dharma Association, and Indonesian Hindu Dharma Association Surabaya. Even though it was forced to stop several Nyepi celebrations, which could trigger crowds, it still did not reduce the essence of Nyepi itself. Based on the problems described, this study aims to analyze how the Balinese Hindu community transitioned to the adaptation of the Nyepi celebrations during the pandemic and interpret the value *Tri Hita Karana* contained in each series of Nyepi Day.

## RESEARCH METHODS

This study uses a qualitative approach that emphasizes descriptive analysis and the dynamics of the relationship between observed phenomena using scientific logic. The data sources of this research consist of primary and secondary sources. Primary data was obtained from several purposively selected informants. Sampling data consist of the Balinese Hindu community who migrated to Surabaya in the age range of 20-60 years and are still active in carrying out socio-religious activities in Surabaya. Secondary data was obtained from literature reviews from various references, including books, online journals, and trusted websites. This analysis contains theories and discussions focusing on similar phenomena in previous studies.

Researchers conducted in-depth interviews with all informants by including the main questions developed. The arrangement of questions in this interview guide starts from light and concrete questions, then gradually to abstract questions. At this stage, the researcher used several supporting equipment, such as a voice recorder and paper that already contained a list of questions. Then the researchers recap the interview data in the form of a matrix. The matrix data is then analyzed continuously during the research by combining one data with another into a meaningful whole. The researcher determined the answers of the five informants from the 15 informants interviewed to be interpreted into this study. Then the researcher conducts a literature review to analyze several phenomena relevant to the research object.

This study uses an interactive model proposed by Huberman and Miles (Idrus 2007) in analyzing data which consists of three main things, namely: 1) Data Reduction Stage or the selection process, focusing on simplifying, extracting, and transforming raw data that emerges from written notes in the field; 2) Display Data by looking at the presentation of this data so that researchers will more easily understand what is going on and what to do; 3) Withdrawal of Conclusions (Verification). In this qualitative research activity, concluding may take place during the data collection process and then performing data reduction and presentation.

## THEORETICAL FRAMEWORK

### A. Cultural Diversity

Banks (2008) formulated the concept of cultural diversity in his research that cites Patterson (1997) and Schlesinger (1991), stating that group identity promotes group rights over individual rights and that individuals should be freed from primordial ties and ethnic groups to have free choice and choice in a modern democratic society. Cultural diversity is sometimes used in sociology and everyday life as a synonym for ethnic pluralism. However, it is often used in philosophy, politics, and education as a theory, a policy, and a curriculum (Lin, 2019).

Parekh (2000) identified cultural diversity as the individuals and groups involved in sharing. They are happy with the broader culture and are only concerned with opening up appropriate spaces within it to express and live by their choices in the relevant areas of life. Furthermore, Parekh also categorizes several forms of cultural diversity in modern societies, which consist of 1) although members of society share a broadly common culture, they also entertain different beliefs and practices concerning certain significant areas of human life; 2) some members of society are highly critical of the central principles and values of the dominant culture and seek to reconstitute it along appropriate lines; 3) most modern societies also include several self-conscious and more or less well-organized communities entertaining and living by different systems of beliefs and practices (Parekh, 2000)

In line with that, in his book "Multicultural citizenship: a liberal theory of minority rights," Kymlicka (1996) highlights a comprehensive argument about the liberal theory of multicultural citizenship because it is justified based on freedom of conscience which treats autonomy as the 'most basic liberal right.' He also suggests that cultural diversity has become a



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central feature of contemporary society and seems likely to become more so in the immediate future. Through his book, Kymlicka distinguishes between two types of ethnocultural groups 1) National minorities. It relates to groups with some or all of the history, community, territory, language, or culture in multinational states; 2) Ethnic groups in polyethnic states are general ethnic groups in a multinational state.

Cultural diversity is also a characteristic of Surabaya city, and this occurs because various ethnic groups have immigrated to Surabaya and built a community there. Surabaya is the second largest city in Indonesia, with heterogeneous citizens from several ethnicities and religions. Balinese is one of the ethnic groups who immigrated to Surabaya and formed a community from the same religious background called the Indonesian Hindu Dharma Association.

### B. Cross-Cultural Adaptation

An anthropologist E.B. Tylor (1903), declared that culture is a complex that includes knowledge, belief, art, morals, law, customs, and other capabilities and habits acquired by humans as members of society. In other words, culture includes everything that is obtained or learned by humans as members of society. Reisinger (2009) classifies culture into six levels; the lowest level is individual culture, characterized by individual values and standards. The second level represents a culture comprising minor social groups, such as organizations and families. The third level consists of industrial and professional culture, which consists of a group or community. The fourth level refers to the nation, origin, or culture of the residence shared by people of the same nationality, country of origin, or country of residence. The fifth level is represented by the culture of civilization and consists of different nationalities with the same political system, stage of economic development, ethnic roots, and religious values. Finally, the sixth level is represented by universal human culture. This highest level represents the culture of all nations and peoples, their way of life, behavior, values, ideas, and morals. Culture also manifests language patterns in forms of activity and behavior that serve as models for adaptation actions and communication styles that enable people to live in a society in a given geographic environment at a certain level of technical development and at a certain time. So that if an individual transmigrates to a place with cultural differences from the place of origin, they have to adapt well to a new environment. Regardless of the reason for moving to a new place, all immigrants undergo acculturation and cross-cultural adaptation.

In line with this, Redfield, Linton & Herskovits (1936) state that acculturation refers to the change process arising from sustained contact between two or more cultures. This acculturation concept is closely related to the cross-cultural adaptation of immigrants, migrants, asylum seekers, refugees, and international students. Kim (2001) defined *crosscultural adaptation* as the dynamic process by which individuals, upon relocating to new, unfamiliar, or changing cultural environments, establish (or reestablish) and maintain stable, reciprocal, and functional relationships with those environments.

Furthermore, Nashilatul (2014) revealed in her study that cultural adaptation could also be defined as the means used by immigrants to overcome the obstacles they face and to obtain positive balances with the background conditions of the immigrants. So, it can be concluded that cross-cultural adaptation is an effort to harmonize and get a decent life by making adjustments by a community group when entering an area with a different cultural background from their culture of origin. Ward & Kennedy (1994) revealed the two types of acculturation most widely discussed: psychological and socio-cultural adaptation. The former refers to affective responses to adjustment, including self-esteem, emotional satisfaction, and wellbeing. In contrast, the latter refers to the behavioral aspects of adjustment required for dealing successfully with daily life problems and social interactions in a new cultural environment. In this study, cultural adaptation is more likely on the socio-cultural aspect.

## RESULT AND DISCUSSION

The study results show that Hinduism is a religion that is still a minority in the city of Surabaya, so Hindu society who migrate to Surabaya needs to make cultural adaptations, especially in celebrating Nyepi. Researchers connect the opinions of all informants who have conducted interviews with the concept and meaning of the Nyepi celebration. Then, the answers from all informants during the interview are shown in the following table:

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Table 1: The relationship nyepi ceremonies with implementation *Tri Hita Karana* value

Ceremonial Series (Nyepi)	Cultural Elements	Tri Hita Karana Value	Implementation During Pandemic	
			Before	After
<i>Melasti</i>	Hindu societym use <b>tirta (holy water)</b> as a medium to purify the tools in the temple and purify themselves from sins and ask for the pleasure of Amerta at sea	<i>Parahyangan</i>	<i>Melasti</i> ceremony is held simultaneously by all residents of Surabaya, Gresik, Mojokerto, and Sidoarjo, or about 7000 people in the North Sea of Surabaya (Arafuru Sea)	Representative religious leaders only attended this ceremony to symbolize taking water at sea and praying at temples. Meanwhile, ordinary people are enough to pray at home.
<i>Tawur Agung</i>	Hinduism present <b>sesajen (offerings)</b> of natural products to maintain the balance of the universe as well as a form of gratitude for the natural resources given Hinduism will celebrate an <b>ogohogoh (scary big sculpture art)</b> parade as a symbol of the power of the universe, namely Buana Alit and Buana Agung. it also aims to purify the universe	<i>palemahan</i>	Hinduism will simultaneously carry out the <i>bhuta yadnya (Mecaru)</i> ceremony and the <i>ogoh-ogoh</i> parade at the hero monument. Before the pandemic, there was an <i>ogohogoh</i> parade around the hero monument three times, then Hindu society would burn the <i>ogoh-ogoh</i> simultaneously at Segaran Temple in the morning	<i>Mecaru</i> ceremony is carried out simply in their respective homes, and the <i>ogohogoh</i> parade is canceled, but in the morning, the <i>ogoh-ogoh</i> burning is carried out by religious leaders only at the Segaran Temple.
<i>Catur Brata Penyepian</i>	Hindu society will meditate and fast at home to reflect on every mistake of the past year. This mediation activity can also reduce conflicts with neighbors and people around.	<i>pawongan</i>	There is no differenc e in implementing this ritual because before the pandemic Hindu society would self-iso late as a form of selfcontrol meditation on Nyepi.	
<i>Ngambak Geni</i>	Hindu society will carry out forgiveness activities to strengthen relations with neighbors, friends and relatives	<i>pawongan</i>	Hinduism carry out worship together at the nearest temple, and after that, they will forgive each other.	Hinduism only sends messages or makes calls through social media because there is no prayer activity.

From the table above, we can conclude that Nyepi ceremonies are related to implementing the *Tri Hita Karana values*. Since the pandemic, several series of celebration events had to be canceled, or their capacity limited to break the chain of the spread of the coronavirus, which is further elaborated in the discussion below:

## A. Series of ceremonies celebrating the holiday of Nyepi in Surabaya

The Nyepi Day celebration is commemorated as a national holiday held annually at the turn of the *Caka's* new year. For Hindu society, a series of Nyepi ceremonies are carried out as a form of *Bhuana Alit* (human) and *Bhuana Agung* (universe). Hindu society views the transition period as an easy time to bring harm or unwanted bad things, so they initiate the importance of carrying out ceremonies on Nyepi. Nyepi celebrations in Bali and Surabaya are certainly different, considering Hindu society in Surabaya is still a minority.

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If the whole process of implementing the Nyepi ceremony series in Bali is coordinated and carried out by each *Kelian Banjar* (equal to the village head) according to the Indonesian Hindu Dharma Association Bali Guideline, while in Surabaya the implementation of the series of ceremonies is flexible because the Hindu-Balinese community is still a minority in Surabaya. The differences between the Nyepi celebration in Surabaya and Bali are also described by informant (1), which is presented in the following data:

*“Perbedaan Nyepi di Bali dan Surabaya adalah di Bali pelaksanaannya sesuai dengan hari baik, misalnya tiga hari sebelum pelaksanaan Nyepi. Karena kebanyakan orang Bali adalah transmigran di Surabaya, maka upacara Melasti menyesuaikan dengan kondisi masyarakat dan mencari hari libur. Misalnya, pada hari Minggu untuk membawa seluruh komunitas. Pelaksanaan Tawur Agung pada hari raya Nyepi di Bali dimana pelaksanaannya adalah suatu tempat yang diyakini sebagai titik atau pusat desa, kemudian secara bertahap kecamatan, provinsi, atau nasional. Di Surabaya, kita tidak bisa melakukan tawur kesanga di persimpangan jalan (kita harus menghormati kondisi di Surabaya yang memiliki banyak kendaraan padat penduduk), jadi kita umat Hindu melaksanakan Tawur Kesanga di halaman pura. Pelaksanaan Hari Raya Nyepi di Bali tidak diperbolehkan keluar rumah bagi setiap warga. Bahkan jika Anda bukan Hindu, Anda tidak diperbolehkan menyalakan api atau musik yang dapat mengganggu ketenangan. Bahkan pelabuhan dan bandara ditutup. Semua penduduk Bali (bahkan non-Hindu) tidak dapat menyalakan Listrik, lampu, siaran TV dan radio. Jadi suasananya benar-benar sepi dalam keheningan. Misalkan kegiatan tersebut hanya dilakukan di Surabaya oleh umat Hindu, tidak semua. Jadi kami menyesuaikan secara pribadi dengan tidak menerima tamu, puasa, dan tidak menyalakan lampu di hari raya Nyepi. Bedanya hanya dari segi amalan, tapi maknanya tetap sama dan tidak mengurangi esensi dari Nyepi itu sendiri”* (Interview 11/08/2022).  
“The difference between Nyepi in Bali and Surabaya is that in Bali, the implementation is according to a good day, for example, three days before the Nyepi implementation. Because most Balinese are transmigrants in Surabaya, the Melasti ceremony adjusts to the conditions of the community and looks for holidays. For example, on Sundays to bring the whole community. The implementation of *Tawur Agung* on Nyepi day in Bali where implementation is a place that is believed to be the point or centre of the village, then gradually sub-district, provincial, or national. In Surabaya, we can't do *Tawur Kesanga* at crossroads (we have to respect the conditions in Surabaya, which has a lot of vehicles dense population), so we Hindus carry out *Tawur Kesanga* in the temple yard. The implementation of Nyepi Day in Bali is not allowed to leave the house for every resident. Even if you are not Hindu, you are not allowed to start a fire or music that can disturb the peace. Even ports and airports are closed. All Bali residents (even non-Hindus) cannot turn on Electricity, lights, TV and radio broadcasts. So the atmosphere is really quiet in silence. Suppose these activities are only carried out in Surabaya by Hindus, not all. So we adjusted personally by not receiving guests, fasting, and not turning on the lights on the day of Nyepi. The difference is only in terms of practice, but the meaning remains the same and does not reduce the essence of Nyepi itself” (Interview 11/08/2022).

According to informant (1), there are some differences in the series of Nyepi ceremonies in Bali and Surabaya. However, this does not reduce the essence of Nyepi itself because the celebration of Nyepi depends on each individual. Furthermore, informant (2) explained in detail how the series of Nyepi ceremony rituals in Surabaya in his statement during the following interview:

*“Melasti mengawali perayaan Nyepi di Surabaya dengan mensucikan alat-alat upacara di laut sebelum kita melaksanakan ritual Nyepi. Pemerintah Kota Surabaya mendukung perayaan Nyepi, termasuk tenda dan porsikonsumsi. Setelah melaut, umat Hindu melakukan persembahyangan di pura Agung Jagad Karana dan mengembalikan semua perlengkapan yang telah disucikan ke pura. Setelah itu, kita melakukan tawur kesanga satu hari sebelum Nyepi. Pada waktu-waktu biasa kami melaksanakan Tawur Agung di tugu pahlawan dengan segala atribut ogoh-ogoh. Kami mengelilingi monumen pahlawan tiga kali, bermaksud untuk menyucikan alam semesta dan menjaga keseimbangan alam semesta. Biasanya, seorang pendeta Hindu juga akan memimpin upacara Mecaru dalam kegiatan ini. Namun sejak pandemi kami tidak keluar, dan kami hanya melaksanakan di Pura Agung dengan upacara yang lebih minim karena kami tidak bisa mengarahkan masyarakat dan ada pembatasan. Ogoh-ogoh juga ditiadakan saat pandemi, dan hanya dilakukan pembakaran Ogoh-ogoh di pura Kenjeran. Setelah itu, barulah kita menjalankan intisari rangkaian Nyepi. Karena kami sangat fleksibel dan beberapa tidak bisa merayakan Nyepi di rumah karena kondisi lingkungan yang tidak mendukung, mereka melakukannya di pura. Saat Nyepi, kita juga berpuasa dari kesenangan duniawi dan tidak makan selama 24 jam mulai dari terbitnya matahari. Otomatis kita*

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*juga meditasi pengendalian diri agar tidak bersenang-senang. Keesokan harinya, sebagai upacara penutupan, kita merayakan Ngambak Geni dan Dharma Santi atau acara meminta maaf kepada sesama kerabat dan teman. Perayaan Dharma Santi juga diperbolehkan sebulan setelah Nyepi, tetapi lebih baik melaksanakan Dharma Santi sehari setelah Nyepi di Pura Jagad Agung” (Interview, 15/08/2022)*

“Melasti starts the Nyepi celebration in Surabaya by purifying the ceremonial tools at sea before we carry out the Nyepi ritual. Surabaya city government support the Nyepi Celebration, including tents and servings of consumption. After the sea, the Hindus perform prayers at the Agung Jagad Karana temple and return all the equipment purified to the temple. After that, we do tawur kesanga one day before Nyepi. In normal times we carried out the *Tawur Agung* at the hero monument with all the ogoh-ogoh attributes. We surrounded the hero monument three times, intending to purify the universe and maintain the balance of the universe. Usually, a Hindu priest will also lead the *Mecaru* ceremony in this activity. But since the pandemic, we didn't go out, and we only carried out at the Great Temple with a more minimal ceremony because we couldn't direct the people and there were restrictions. Ogoh-ogoh was also abolished during the pandemic, and only carried out the burning of Ogoh-ogoh at the Kenjeran temple. After that, we carry out the essence of the Nyepi series. Because we are very flexible and some cannot celebrate Nyepi at home due to unfavourable environmental conditions, they do it at the temple. During Nyepi, we also fast from worldly pleasures and do not eat for 24 hours starting from sunrise. Automatically we also self-control meditation so as not to have fun. The next day, as the closing ceremony, we celebrate Ngambak Geni and Dharma Santi or an event for apologizing to fellow relatives and friends. The celebration of

Dharma Santi is also allowed a month after Nyepi, but it is better to carry out Dharma Santi the day after Nyepi at the Pura Jagad Agung” (Interview, 15/08/2022)

Based on statements from informant (1) and informant (2), the ceremonies begin with the *Melasti* ceremony, which is held two or three days before the Nyepi day. This ceremony aims to wash the tools of worship in the temple. When the *Melasti* Hindu society parades the equipment into the Arafuru sea, they think the sea is a source of holy water that can purify equipment. A day before Nyepi, the Hindu society will carry out the *Mecaru* ceremony at the Heroes Monument in Surabaya, accompanied by an art performance of ogoh-ogoh as a symbol of Bhuta Kala, which is made in a spooky form.

In carrying out this ceremony, Balinese Hindu society in Surabaya usually serves offerings in the form of a *janur* (yellow coconut leaves) as a symbol of plants in the universe which are then sewn or woven. Then this *janur* is filled with natural products such as five colors of rice: red, black, yellow, white, and *brumbun* (a mixture of the four colors). It is also complemented by side dishes, Balinese arrack (traditional alcohol), and *api takep* (fire made from coconut fiber). This sesajen is a tribute to *Bhuta Kala*, which aims to maintain the balance of the universe and humans from the disturbance of *Bhuta Kala* (demons). The implementation of this ceremony coincides with the day of the *Tilem* Month (lunar eclipse) or the last day of *sasih kesanga* to carry out the Bhuta Yadnya ceremony. The *Mecaru* ceremony was held at the Heroes Monument in Surabaya, accompanied by an art performance of *ogoh-ogoh* as a symbol of Bhuta Kala, which was made in a scary form. At night Hindu society will parade the ogoh-ogoh while welcoming the caka new year. Then, before sunrise, the ogoh-ogoh is burned at the Segara temple to expel evil spirits. After the ritual of burning *ogoh-ogoh* at sunrise, continue to *Catur Brata Penyepian*.

*Catur Brata Penyepian* is the essence of the Nyepi holiday, in which Hindu society fast; not sleeping, not eating, and not drinking. Suwena (2017) argues that by carrying out this seclusion, Hindu society in Bali can concentrate or focus calmly and solemnly to return to their identity by doing meditation or self-reflection in a quiet atmosphere. *Catur Brata Penyepian* is held for 24 hours, starting from five in the morning until five in the morning the next day, by implementing four prohibitions: *Amati Geni* (prohibition to turning on lights), *Amati Karya* (prohibition to going to work), *Amati Lelungan* (prohibition to leave the house or to travel), *Amati Lelanguan* (prohibition to having fun) aims for Hindu society to focus on meditation. The last series of Nyepi ritual ceremonies is *Ngembak geni* which indicates the end of *Catur Brata Penyepian*. Usually, Hindu society will hold a gathering with family and relatives to forgive each other for mistakes made in the previous year.

**B. The Meaning of Nyepi Day Celebration According to the Value of *Tri Hita Karana*** Hutasoit (2017) defined *Tri Hita Karana* as related to three elements that cause complete happiness in the continuity of every human life. The elements of *Tri Hita Karana* are divided into three, namely: *Parahyangan*, or a form of human harmony with *Ida Sang Hyang Widhi Wasa*, which means a human effort to achieve happiness by drawing closer to God Almighty; *Pawongan*, or efforts to establish harmonious relations among human beings by avoiding quarrels, respecting each other and helping each other in terms of goodness. *Palemahan* or human relationship with the Universe. In this context, humans are trying to maintain the Universe's balance. Human beings



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consist of three *Prana* (life), namely *Sabda* (human strength to build good communication, interaction, networks, and relationships with others), *Bayu* (ability to use the five human senses in daily activities), and *Idep* (creative, critical, Systemic, divergent, convergent, deductive-inductive, reasoning, scientific, power and thinking ability). Humans will produce good thoughts if they can control their actions and words for good things. In the context of the relevance of Nyepi celebrations with the teachings of *Tri Hita Karana*, Informant (3) stated that:

*"Melasti berarti menyucikan peralatan di pura. Umat Hindu secara bersamaan datang ke laut sebagai wadah peleburan segala kotoran dari ucapan, penglihatan, dan perilaku yang disucikan atau menghapus segala dosa kita selama setahun dengan ritual yang diturunkan oleh Tuhan Yang Maha Esa (Ida Sang Hyang Widhi Wasa). Mereka semua akan melaut untuk mengantongi berkah Amerta di laut. Kemudian mereka akan mengambil air laut dan membawa pulang air tersebut. Airnya gak dikasih bunga jadi gak bau"* (Interview, 03/08/2022)

*"Melasti means purifying the equipment in the temple. Hindus simultaneously come to the sea as a melting pot of all impurities from speech, sight, and behaviour that are purified or wash away all our sins for a year with rituals revealed by God Almighty (Ida Sang Hyang Widhi Wasa). All of them will go to the sea to beg Amerta's blessing at sea. Then they will take sea water and bring the water home. The water is not given flowers, so it doesn't smell"* (Interview, 03/08/2022)

Informant (3) statement is strengthened by the interview answer from informant (4) which elaborates further in the quotation below:

*"Nyepi merupakan implementasi dari Tri Hita Karana. Dalam konteks ini, setiap rangkaian Nyepi berkaitan dengan Tri Hita Karana. Tri Hita Karana adalah tiga penyebab keharmonisan. Salah satunya palemahan (bagaimana manusia hidup selaras dengan lingkungan alam). Saat melaksanakan Nyepi, kita telah menerapkan ajaran Tri Hita Karana yaitu di bagian palemahan. Karena selama perayaan Nyepi, kita tidak menyalakan api, bepergian ke luar, atau membuat suara keras, yang menyebabkan lingkungan kita menjadi lebih sehat, terutama dalam hal pengurangan polusi udara karena pengurangan asap kendaraan bermotor (larangan bepergian dengan kendaraan). Kemudian pembagian kedua Tri Hita Karana, Pawongan, Nyepi juga merupakan implementasi dari kehidupan rukun sesama manusia. Dalam rangkaian pelaksanaan Nyepi, terdapat proses saling memaafkan dan menghormati agama atau agama lain. Artinya ada hubungan yang harmonis antara manusia. Kemudian dari segi Parahyangan tentunya juga jelas karena tujuan dari Nyepi adalah untuk mempersembahkan atau menyembah Tuhan Yang Maha Esa. Tentunya pelaksanaan Nyepi merupakan implementasi dari Tri Hita Karana dan sangat relevan."* (Interview, 11/08/2022)

*"Nyepi is an implementation with Tri Hita Karana. In this context, every series of Nyepi is related to Tri Hita Karana. Tri Hita Karana is the three causes of harmony. One is palemahan (how humans live in harmony with the natural environment). When implementing Nyepi, we have implemented the teachings of Tri Hita Karana, namely in the palemahan section. Because during the Nyepi celebrations, we do not start fires, travel outside, or make loud noises, which causes our environment to be even healthier, especially in terms of reduced air pollution due to reducing motor vehicle fumes (ban on travelling by vehicles). Then the second division of Tri Hita Karana, Pawongan, Nyepi is also an implementation of the harmonious life of fellow human beings. During the Nyepi implementation series, there is a process of forgiving and respecting other religions or religions. It means there is a harmonious relationship between humans. Then in terms of Parahyangan, of course, it is also clear because the purpose of Nyepi is to offer or worship God Almighty. Of course, the implementation of Nyepi is the implementation of Tri Hita Karana and is very relevant."* (Interview, 11/08/2022)

According to the two informants' views, Hindu society tries to realize the three elements of *Tri Hita Karana* through the implementation of a series of ceremonies and rituals for the Nyepi day, namely *Melasti* ceremony, *Mecaru* ceremony or *Tawur Agung Kesanga*, *Catur Brata Penyepian*, and *Ngambak Geni*. During the *Melasti* Ceremony, Hindu society realizes harmonization by maintaining the sanctity of the *Ida Bhatara Pecanangan* Statue and its natural contents through the *Melasti* ceremony at sea because they think that the sea is the largest source of *Tirta* (holy water). In essence, this ceremony aims to melt the dirt on humans so that the world does not darken humans by hoping to get a blessing from *Ida Sang Hyang Widhi Wasa* (god of Hinduism). It can be concluded that the essence of *Melasti* is an interpretation of the *Parahyangan* element. Nyepi Day is realized through the *Mecaru* ceremony, which means that the *Bhuana Agung* (universe) remains in *RTA law* (God's law which is eternal, pure, and absolute) and does not clash with one another. Usually, the celebration of this ceremony takes place one day before the *Brata Penyepian*. The purification of nature through the *Mecaru* ceremony is one

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of the human efforts to maintain the magical balance of the *Bhuana Agung* (universe) by offering natural products to *Bhuta Ala*. In line with the teachings of *Tri Hita Karana*, namely *palemahan* (maintaining the balance of nature), the ancestors convey a moral message that we have to preserve the universe to avoid extinction, and real action is needed.

Harmonizing human relations with themselves (*Bhuana Alit*) or others based on the *pawongan* element in the *Tri Hita Karana* is realized by carrying out *Brata Penyepian*. Implementation of *Brata Penyepian* can reduce interaction between individuals and can reduce conflict. *Brata Penyepian* means a promise to oneself to be able to recognize oneself more deeply and maintain self-balance. In essence, the meaning of *Brata Penyepian* is controlling lust in humans and contemplating mistakes for a year to create inner and outer peace. The existence of *mulat sarira* (self-introspection) is necessary to reflect on ourselves before finding fault with others. After doing the seclusion for 24 hours, the Hindu society will carry out *Ngambak Geni*, which aims to strengthen the harmonization of human relations by implementing the *pawongan* element in the *Tri Hita Karana*. Based on the explanation above, it can be concluded that the whole series of Nyepi has a close relationship with the values of the *Tri Hita Karana* teachings, which support Hindu society to achieve *Jagadhita* (worldly welfare) and *Moksartham* (afterlife welfare). Thus, implementing the Nyepi ritual in Hinduism is not only seen as a cultural phenomenon learned through the analysis of symbols, rituals, and religious practices but is also a practice of the teachings of *Tri Hita Karana*.

### C. Celebration of Nyepi Day by Balinese Hindu society in Surabaya During the Pandemic Period.

Since 2020 the Coronavirus outbreak has spread very quickly in Indonesia. Surabaya has been named the city with the first highest virus spread in Indonesia. As a result of the rapid spread of the coronavirus outbreak, the Surabaya city government recommends that the public implement social distancing to maintain distance and avoid crowds and mass mobilization. The atmosphere of the implemented lockdown had an impact on several sectors, one of which was the celebration of Nyepi in Surabaya, where there were slight differences in several ceremonies. This is in line with the information obtained from informant 5, who stated:

*"Bagi saya, wabah virus corona tidak berpengaruh signifikan terhadap perayaan Nyepi. Pada dasarnya, Nyepi adalah meditasi seperti isolasi diri. Jadi tidak jauh berbeda dengan perayaan Nyepi sebelum pandemi, namun perlu ada penyesuaian di beberapa rangkaian Nyepi. Dulu, kami biasa pergi ke laut untuk Melasti. Selama pandemi, kami hanya simbolis mengambil air suci di pura dari laut. Kami memurnikan peralatan di kuil menggunakan air laut. Namun tidak menghadirkan banyak orang, hanya pengurus pura dan pemangku kepentingan, sehingga menghindari pelaksanaan. Selama pandemi, kami hanya membutuhkan beberapa orang simbolis di sekitar kuil. Selama masa pandemi, ritual tambahan seperti pawai ogoh-ogoh ditiadakan untuk menghindari keramaian dalam pencegahan virus corona. Kemudian dalam pelaksanaan Tawur Kesanga atau mecaru, kami tidak melibatkan banyak orang, hanya tokoh-tokoh yang berperan, seperti wali/stakeholder, pengurus pura, dan tokoh masyarakat. Kami tidak mengalami perbedaan dalam perayaan Nyepi selama pandemi. Semua rangkaian Nyepi tetap dilaksanakan, namun ada penyesuaian jumlah orang yang hadir, dan prosesnya lebih sederhana. Kami juga memberikan informasi kepada masyarakat Hindu di Surabaya melalui grup wa mengenai ritual Nyepi dari rumah masing-masing. Perubahan tersebut tidak mengurangi makna dari prosesi Nyepi itu sendiri."* (Interview, 11/08/2022)

"For me, the coronavirus outbreak did not significantly affect the celebration of Nyepi. Basically, Nyepi is meditation-like self-isolation. So it's not much different from the Nyepi celebration before the pandemic, but there need to be adjustments in several Nyepi series. In the past, we used to go to the sea for Melasti. During the pandemic, we are only symbolic of taking holy water at the temple from the sea. We purify the equipment in the temple using seawater. But did not present many people, only temple administrators and stakeholders, so they avoided implementation. During a pandemic, we only need a few symbolic people around the temple. During the pandemic's implementation of additional rituals, such as the ogoh-ogoh parade, it is abolished to avoid crowds in preventing the coronavirus. Then when implementing the *Tawur Kesanga* or mecaru, we do not involve many people, only the figures who play a role, such as saints/stakeholders, temple administrators, and community leaders. We don't experience any difference in Nyepi celebrations during a pandemic. All Nyepi series are still carried out, but there are adjustments to the number of people attending, and the process is simpler. We also provide information to the Hindu community in Surabaya through the wa group regarding the Nyepi ritual from their homes. The changes do not reduce the meaning of the Nyepi procession itself." (Interview, 11/08/2022)

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According to informant (5), several changes in the implementation of the ceremony did not become an obstacle for the Balinese Hindu society in Surabaya to continue to carry out Nyepi solemnly. However, an adjustment is needed based on the rules of the Surabaya city government and recommendations from Parisada Hindu Dharma Indonesia regarding the procedures for carrying out the holiday. Balinese Hindu society in Surabaya simultaneously carries out Nyepi Day with a simple order according to the instructions and rules that apply during the pandemic. In a series of *Melasti* activities, all Hindu society should go to the beach to clean the equipment at the temple and perform self-purification. During the pandemic, Nyepi activities in Surabaya were only carried out by representatives of religious stakeholders and temple administrators as implementers and witnesses of the *Melasti* ceremony. So that this does not bring many people, and only temple administrators or religious leaders perform the *Melasti* ceremony. In contrast, other people are quite symbolic, just doing it in their respective homes. Although this activity is only carried out as representatives, all those who attend the ceremony must still implement health protocols according to government recommendations, such as using masks and hand sanitizers to prevent the spread of the COVID-19 virus. These restrictions do not reduce the essence and sacredness of the wisdom of implementing the *Melasti* ceremony because they all believe in the greatness of *Ida Sang Hyang Widhi Wasa*. Likewise, for the implementation of the *Mecaru* ceremony. Every year, Hindu residents in Surabaya flock to the hero monument field to carry out the *Tawur Kesanga* or *Mecaru* ceremony. Moreover, the people of Surabaya also made ogoh-ogoh parades paraded around the hero monument three times, and displayed them as art. However, during a pandemic, the *Mecaru* ceremony was implemented by representatives of people who have an important role in Hinduism. At the same time, the ogoh-ogoh parade itself was abolished to avoid crowds.

At the time of ngembak geni, all Hindu society in Indonesia carries out worship to worship the greatness and omnipotence of *Ida Sang Hyang Widhi* as a form of gratitude for being able to go through the process of silence for 24 hours during a pandemic. The implementation of Ngembak Geni because they only need to carry out four main teachings *Catur Brata Penyepian: Amati Karya, Amati Geni, Amati Lelungan, and Amati Lelungan* Hindu society in the city of Surabaya by praying in their respective homes. After Nyepi, the Hindu society will carry out *Ngambak Geni* by praying together at Pura Agung Jagad Karana in the morning. After that, Hindu society carries out *Dharma Santi* (forgiveness event) in front of the temple led by religious leaders. During the pandemic, *Dharma Santi* (forgiveness event) activities were only carried out in a small scope, such as with family and neighbors. The rest was only conveyed through social media.

Although the pandemic affected on Nyepi celebration, as a good citizen, we should follow the applicable rules following the provisions of the central government and local government during the Nyepi ceremony celebration without reducing the gratitude of the Hindu society in Surabaya to *Ida Sanghyang Widhi Wasa* for *Wara Nugraha-Nya*. Thus no matter how heavy the calamity we face, we must surrender to God and ask that we be free from all calamities.

### CONCLUSION

From the discussion above, it can be concluded that the implementation of Nyepi is closely related to the implementation of the values of the *Tri Hita Karana* teachings, which include efforts to achieve happiness through harmonization of the three elements contained in *Tri Hita Karana* including *Parahyangan, Palemahan, and Pawongan*. This study also explains some differences between the implementation of Nyepi in Bali and Surabaya by the Hindu society currently wandering in Surabaya. Nyepi celebrations in Surabaya have more flexible regulations than in Bali. Even so, the Nyepi celebration in Surabaya was lively because the Surabaya city government provided support and assistance regarding budget and facilities. However, when the pandemic entered Indonesia, all Nyepi celebrations had to be completely suspended to prevent the coronavirus's spread. There have been many significant changes to implementing a series of ritual ceremonies and Nyepi celebrations to be simpler. The Balinese Hindu community in Surabaya has proven that the pandemic has not reduced the essence of Nyepi implementation values because it has been proven that they can still carry out rituals solemnly from their homes.

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## Implementation of Strengthening Character Education in Senior High Schools



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**ABSTRACT:** Strengthening character education is very relevant at this time because it is to realign the morals of the nation's generation who are increasingly far away from the values of Pancasila's life. The purpose of this study was to determine the implementation of strengthening character education in schools, especially SMAN 1 Ciseeng, Bogor Regency, West Java Province. This research uses a qualitative descriptive approach, data collection is done by in-depth interview techniques, participant observation, and documentation study. Data analysis techniques include data reduction, data presentation, and concluding. The research informants were school principals, deputy principals, religious teachers, and guidance and counseling teachers. The research findings show that if character education is based on a clear vision and mission, detailed basic character formulations, strong principles, and appropriate methods, it will run effectively and efficiently, (2) If the pattern of character formation is based on an integrated approach, by involving the roles and responsibilities of all components of education in schools and the role of parents at home, it will run effectively and efficiently, (3) strengthening character education with a class-based approach, school culture, and community-based approaches still exist obstacles in its implementation are the lack of motivation to learn from students, and lack of awareness in implementing KDP, the lack of awareness and sense of responsibility of the school community. Besides, there is a lack of teacher commitment to carrying out school habits or culture.

**KEYWORDS:** Implementation, strengthening, Character Education

### I. INTRODUCTION

Character, moral and knowledgeable students. Therefore, character education is given at every level of education. Besides that, a human's success in the future is determined by a strong character actor with a strong character that will make you mentally strong. Meanwhile, a strong mentality can make a strong spirit, responsibility, discipline, and ready to face anything. Character education aims to improve the quality of education and the results of character education where these characters will be applied to daily behavior and life in society. education that gives good results, namely that students not only master science but can have a good character following the objectives of the education of the Indonesian nation.

Character education is a way to help the development of the personalities of students, both physically and mentally, from innate traits towards a better civilization. In the process, character education has a continuous and continuous process that never ends so that it is expected to produce quality personalities and be able to create intelligent and knowledgeable humans. Sudrajad (2010) argues that character education is a system of instilling character values in school members which includes components of knowledge, awareness or willingness and action to carry out these values, both towards God Almighty, self, others, and the environment. . Elkind & Sweet (2004) states that character education is defined as follows: "character education is the deliberate effort to help people understand, care about, and act upon core ethical values". Character education is a deliberate attempt to help people understand, care, and act according to ethical values. Meanwhile, according to Ramli (2003), character education has the same essence and meaning as moral education.

The goal is to shape the child's personality so that he becomes a good human being, a citizen, and a good citizen. The statement described above is in line with that stated by Gray (2009), in a journal article entitled Character Education in Schools states that "Character education is necessary because of the effects on society when there is no morality guiding student's actions". Character education is very important because it has an impact on society when there is no longer moral guidance for the behavior of students. Whole and comprehensive character education does not only shape young people into smart and good individuals but also shapes them to become actors, both for changes in their own lives which in turn will contribute to changes in the social order of society for the better as well. (Koesoema: 2010).



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Meanwhile, Zuhdiar (2010) argues that the implementation of character education for students in schools can be done in various ways, and adapted to the conditions and environment of the school concerned. In elementary schools, for example, implementing character education through habituation to behave honestly and politely, by not cheating on exams and shaking hands and greeting the teacher when entering and leaving school. Strengthening character education is a continuation of the previous program which provides solutions to the decline in the morale of the nation's children because according to the Ministry of Education and Culture (2017) one of the urgencies of KDP is "21st-century skills that students need to realize the competitive advantage of the Golden Generation 2045: Character Quality, Basic Literacy, Competence. 4 C (Critical Thinking and Problem Solving, Creativity, Communication Skills, and Ability to Work Collaboratively)". With this program, the development of life skills and children's personalities develops well. Besides students can recognize the world of technology so that it balances personality, knowledge, and use of technology well.

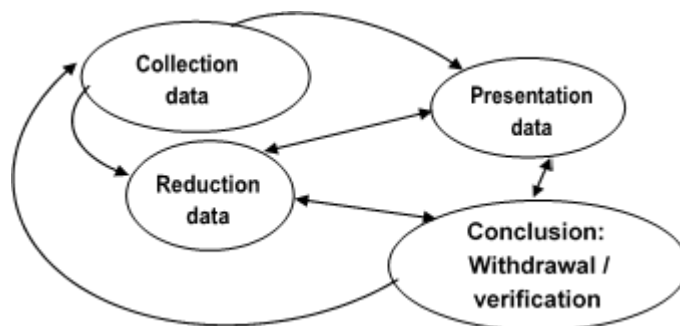
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## II. RESEARCH METHODS

In this study, the authors used a qualitative research method to describe the core of the problem by observing the existing circumstances to obtain comprehensive data regarding the implementation of strengthening character education in the school. This research on strengthening character education was carried out in senior high schools in the Ciseeng district using a sample of schools including SMA Negeri 1 Ciseeng. The data contained in this study contains data obtained from interviews, field observations, and official documents related to the problem under study. To obtain complete data, the authors took the data by going directly to the school that had been used as a sample in this study and conducting interviews with the school including the principal, teachers, and other parties who were directly involved in the implementation of strengthening character education in schools.

Data collection techniques used in this study were observation techniques, interview techniques, and documentation. The process of data analysis based on an interactive model developed by Miles and Huberman (1997) will be described as follows:

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Based on the above opinion that as a key instrument of data collection, researchers carry out reduction, phenomenological and data reduction, and transcendental reduction. The phenomenological reduction is done by researchers to free themselves from subjective assessments of phenomena, not the subjective opinion of researchers. Data reduction is done by freeing themselves from theories, scientific propositions, or traditional doctrines that can pollute the purity of data

### III. RESULT AND DISCUSSION

SMA Negeri 1 Ciseeng is one of the high schools located in Ciseeng District, which is located at Jln. Cibuteung Muara Rt. 02/06, Putat Nutug, Ciseeng district, Bogor Regency, West Java Province. The planning process for strengthening character education at SMAN 1 Ciseeng is designed through the Internal Quality Assurance System (SPMI). The school follows the advice set by the local education office which is then discussed with teachers and school committees, if it has been approved by the board of education stakeholders, the program that has been compiled is poured into the education unit level curriculum as a reference for implementation at school and finally, the activity is socialized to parents.

The implementation of PPK at SMAN 1 Ciseeng is poured into habituation, namely: increasing faith and piety with the "Jum'at Rohani" program where every Friday prayer is held in the congregation and reading short letters in the Al Qur'an every morning. Then there is the "Healthy Jum'at" program. Healthy Friday activities are filled with healthy exercises that are carried out routinely every Friday. Furthermore, the "discipline culture" program. Activities in the disciplinary culture program are shaking hands or greeting every time you meet anyone in the school besides that every morning the teacher welcomes students at the gate. The next habit, namely every Monday in the first hour before starting the subject, is filled with religious activities.

The implementation of strengthening character education involves all components in schools, namely the principal, the principal manages all programs that have been made to advance the improvement of school quality by supervising and fostering teachers to be able to carry out the strengthening of character education. Second, the role of the teacher in implementing KDP, which is poured into the Learning Implementation Plan (RPP) and is directly related to students to carry out school programs and learning activities that are integrated with KDP. The third role of the school committee is to support school activities with financial contributions and also to supervise schools in carrying out school programs that have been established at the beginning of each year. The research results obtained at SMA N 1 Ciseeng related to Strengthening Character Education are based on the results of data collection conducted that in this school character education habituation has been implemented following the derivative rules of Perpres No.87 of 2017, namely Permendikbud No. 20 of 2018 that the implementation of "Implementation of KDP which optimizes the function of the education trip center partnership as referred to in Article 5 is carried out with a" class, school culture and community-based approach. In a class-based approach, the implementation of strengthening character education in schools is carried out by integrating character education in every lesson, teachers are required to always instill character habituation and this is included in the learning implementation plan as conveyed by the principal of SMAN 1 Ciseeng.

Then the implementation of strengthening character education based on school culture at SMAN 1 Ciseeng includes 5s habituation (smile, greeting, greeting, courtesy, and courtesy), as well as other habituations called spiritual Friday, healthy Friday, and student discipline. Where this is following Fathurrohman (2013: 115) that character education is an effort to instill good values in students related to God Almighty, themselves, fellow humans, and the environment and nationality based on religious norms. , law, karma, and customs. Meanwhile, the implementation of strengthening character education with a community-based approach, namely by strengthening the role of parents to be involved in the implementation of strengthening character education by making them a school committee. Other information was given by the Wakasek curriculum at SMAN 1 Ciseeng, namely Mr. Suwanto., S.Pd., M.Pd. students are brought directly to the community to find out the diversity that exists in society, tolerance, and educate them to love and protect the surrounding environment more.

Based on the information given by the school, both the principal, the head of the curriculum, and the teachers at SMAN 1 Ciseeng, it was carried out well, it's just that there are still many obstacles or obstacles encountered in its implementation. These constraints, among others, arise from individual students themselves, namely a lack of motivation to learn, then they still

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have a kurdis attitude (lack of discipline), a low sense of responsibility so that the implementation of strengthening character education is not optimal. Apart from individual students, other obstacles, namely from the implementer of education, namely teachers, the lack of commitment of teachers in carrying out habituation or school culture so that character education, especially through habituation programs or school culture, cannot be properly embedded in students

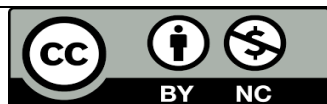
### V. CONCLUSIONS

Based on the results of research on strengthening character education at SMAN 1 Ciseeng, it is concluded that this implementation has been carried out well by strengthening character education with a class-based approach, school culture, and a community-based approach. Strengthening character education is adjusted to the guidelines for school programs that are carried out with spiritual Friday habituation activities, healthy Friday, and a culture of discipline and learning activities that include character education values.

In its implementation, several obstacles are still encountered, including a lack of motivation to learn from students and a lack of awareness in implementing KDP, low awareness, and a sense of responsibility for school residents. Besides, there is a lack of teacher commitment in carrying out school habits or culture.

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## Election Rigging and Violence in Nigeria in Historical Perspective: A Case Study of 1959, 1964, 1965 And 1983 Elections



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**ABSTRACT:** This paper examines election rigging and violence in Nigeria in historical perspective. Particularly, the 1959, 1964, 1965 and 1983 elections came to focus. It discusses the nature of election rigging and forms of violence in Nigeria electoral process. The causes and consequences of election rigging and violence in Nigeria were demonstrated.

Data for the study was obtained through oral interview as primary sources and the secondary sources like books, newspapers, articles, journals, theses and dissertation were also used.

It was found that rigging is almost synonymous with Nigerian elections. It was also found that the aim of electoral rigging or fraud is to frustrate the democratic aspirations of citizens who have voted or would have voted into office someone other than the victor.

In conclusion, the elections between the period of 1959-1983 were bedeviled by several forms of violence which consisted of murder, assassination, arson, sabotage, armed attack, intra and inter-party clashes, hostility, thuggery and rage through physical force directed against persons or property.

**KEYWORDS:** Election, Rigging, Violence, Politics and Injustice.

### INTRODUCTION

Election in terms of origin is colonial in nature and outlook. Elections were used as early in history in ancient Greece and ancient Rome and throughout the medieval period to select rulers as the Holy Emperor and the Pope. The origins of elections in the contemporary world lie in the gradual emergence of representative government in Europe and North America beginning in the 17<sup>th</sup> century. At that time, the holistic notion of representation characteristic of the Middle Ages was transformed into a more individualistic conception, one that made the individual the critical unit to be counted. The advent of colonial rule brought the issue of election into the country as nothing was heard about election before this time. Nigeria though democratic according to their levels of development was devoid of election and electoral processes.

In 1919, Sir Fredrick Lugard Governorship or term of office in Nigeria ended, Sir Clifford was appointed the new Governor and was the first administrator to devise the first written constitution for the country (Ediagbonya, 2020:242). The Clifford Constitution of 1922 introduced the elective principle into Nigerian politics which provided for voting in Lagos and Calabar. The new constitution made provision for a total membership of forty-five. It consisted of 26 official members and 15 nominated members. Four elected members who were Nigerians, were included in this council. Oyeleye posits that for the first time in Nigeria, Lagos and Calabar were granted the right to vote in an election to the Legislative Council (Oyeleye, 1998). What this meant was that the four elected Nigerians came from Lagos and Calabar. Three seats were allocated to Lagos and one seat to Calabar.

This concept of elective principle introduced by Sir Clifford encouraged the formation of political parties particularly in Lagos to contest election into the legislative council and Lagos town council. The first of such parties was the Nigerian National Democratic Party established in 1923. Ojiako notes that late Herbert Macaulay and his supporters like Dr. Adeniji Jones, Egerton, Shyngle, Thomas Horatic, Varimu Kotun, J. T. White and Baul Erick founded in 1923 the Nigerian National Democratic Party (Ojiako, 1981:10). This party was victorious in the 1923 elections to the legislative council as the party won the 3 seats for Lagos.

## **Election Rigging and Violence in Nigeria in Historical Perspective: A Case Study of 1959, 1964, 1965 And 1983 Elections**

An election is a formal group decision making process by which a population chooses an individual or multiple individuals to hold public offices. Election can be defined as the process or the act of choosing a person or persons for an office or for certain officers by the voters who are formally qualified to do so (Ojo, 2007:17). It is seen as highly organized channels of popular expression. It refers to the act of electing or choosing candidates to represent the people of a given state or country in the parliament executive and other governmental positions according to the constitution of the country (Ibid).

The people, world over crave for free and fair election. It is their expectation that votes would count. Free and fair election is a situation where persons are free to vote according to their wish without any coercion, inducement, harassment and intimidation. It is the position of Ojo that free and fair election connotes that the electorates are free to vote according to the dictates of their conscience (Ibid, 124).

Kurfi observes that rigging is almost synonymous with Nigerian elections (Kurfi, 2005:101). According to him the objective of electoral rigging or fraud is to frustrate the democratic aspirations of citizens who have voted or would have voted into office someone other than the victor (Ibid). Precisely because of this history of electoral fraud, elections in the country have often been associated with political tension, crisis and even violence (Adekanye, 1990:2)

It was perhaps Nigeria's pride that she achieved her independence with a minimum of disturbances (Tamuno, 1972). However, it is rather unfortunate that after independence Nigeria stumbled from crisis to crisis and near disintegration as the country witnessed a marked increase in the bitterness of party (Ibid, 40).

Infact, the quality of elections is part of the conditions for assessing the level of consolidation of new democracies. Despite the vital place that election holds in democratic government, the organisation of free and fair elections remain a critical obstacle for new democracies in West Africa particularly Nigeria.

The fragile condition of Nigeria democracy can be viewed from high profile assassination, clashes between and within a political party, violence in rallies and campaign grounds, thuggery and rigging elections.

In order to put the focus of this paper in its proper context, it may be necessary to have a clear meaning and understanding of the concept "violence".

Violence could connote militancy, coercion, destruction or muscle flexing. Corsini defines violence as the expression of hostility and rage through physical force directed against persons or property (Corsini, 1976). It is aggression in its most extreme and unacceptable form and most investigator conclude it has no therapeutic justification, since there are most constructive and human ways of expressing anger (Ibid).

The federal elections of 1964 and the Regional elections of 1965 in Western Region witnessed high level of political violence. The Nigeria's fourth republic (1999-2003) was bedeviled by several forms of violence and crime which consisted of murder, assassination, religious and ethnic disturbances, arson, sabotage, armed attack, intra and inter-party clashes, electoral violence etc. Punch Editorial attributed the problem of political and electoral violence to the rising number of idle youths paid for deployment as thugs as well as the worrisome arms build-up nationwide. Violence is the greatest threat to democracy in developing countries. Again, it is established that in Nigeria, the 1964 general election crisis and the western regions electoral crisis of 1965 contributed immensely to the collapse of parliamentary democracy in Nigeria.

So it is not subject to debate or argument that that nation's democracy has been plagued by electoral violence since independence. It could be said that electoral violence comes in the form of assassination, kidnapping, arson, looting, ballot stealing and armed struggle. Multi-parties in Nigeria have seen politics as a matter of 'do or die affairs'. That is why there have been several cases of electoral violence and crisis in Nigeria and it has affected Nigeria in various aspects especially in their socio-economic and political system (Nwolise, 2007:153).

From the inauguration on May 29, 1999 to the handing over May 29, 2003, the number of politically motivated murders was said to be equal to the number of people killed in the run-up to 1960s violence that tore Nigeria apart (Daily Independent, June 9, 2003). That demonstrated the increasing wave of political violence in Nigeria attacks on voting and collation centres. The principal actors of organized violence during elections may be non-state armed groups or political parties.

### **THE FEDERAL ELECTIONS IN 1959: RIGGING AND VIOLENCE**

There was plan for the federal election in December 1959 which was meant to be achieved in the political independence of Nigeria (Okoiguni, 2006). The federal elections of 1959 was conducted on December 12. The elections were held in 312 single member

## **Election Rigging and Violence in Nigeria in Historical Perspective: A Case Study of 1959, 1964, 1965 And 1983 Elections**

constituencies throughout the country. For the first time, voting was by secret ballot. In the Western and Eastern Nigeria, all adults duly registered were qualified to vote but only adult males registered in the North were eligible to vote.

Ojiako maintains that no less than 26 parties were registered to contest the election (Ojiako, 1981). But the main contest was between the Northern People's Congress of Northern Nigeria, the Action Group of Western Nigeria and the National Council of Nigeria and the Cameroon's of Eastern Nigeria. The election for 8 seats for Southern Cameroons representative was suspended pending the outcome of the plebiscite on the future of the territory to be held before March, 1961 (Ibid, 67). It was the 1959 election that gave birth to three powerful regional parties such as Action Group for the west, the Northern People Congress for the North and National Council of Nigeria citizen for the Eastern Region (Yaqub, 2002:51).

On October 28, 1959 the Governor-General of Nigeria, James Robertson issued a proclamation announcing the dissolution of the Federal House of Representatives with effect from November 1, 1959 (Proclamation Issued by the Governor-General, James Robertson, October 28, 1959). The dissolved House of Representative was duly elected in 1954 and made up of 184 elected members and 6 special members to represent special interests of commerce, shipping, banking and so on. In January, 1959 the Premier of Eastern Nigeria, Dr. Nnamdi Azikiwe and Chief Obafemi Awolowo the Premier of Western Region indicated interest to contest the federal elections that would take place in December 12, 1959 (Ojiako, 1981:67).

By October 24, 1959, campaign started throughout the country. Unfortunately, it was not free of electoral violence. Against this background James Robertson called for an end to hooliganism in the political campaigning. In a broadcast, Sir, James Robertson warned that if the wave of hooliganism now sweeping the country was not checked by party leaders he would instruct police to use sterner measures (Broadcast by Sir James Robertson, October 28, 1959). He added that he had written in the most solemn language to leaders of major political parties to ask their party organisations to put an end to acts of violence or encouragement to violence (Ibid). The colonial last Governor-General, James Robertson expressing disappointment on the wave of violence during the campaign of 1959 elections, complained that on the eve of Nigerian independence, it was unfortunate that campaign meetings should feature lorry load of cutlasses, broken bottles and rods to beat up political opponents (Ibid). This is a confirmation that the rate of political and electoral violence is already visible before independence. Infact it is synonymous with the political history of Nigeria.

At a press Conference held in Lagos, Mr. K. Bovell, Inspector-General, of the Nigerian Police described actions which police were taking to ensure fair and orderly elections (Ojiako, 1981:74). According to the Inspector-General of Police, there would be 5,000 Nigeria Policemen, 1,200 L.A. Police, 6,000 special constables to maintain order (Ibid).

During the campaign, there were accusation of intimidation, bribery and violence. The parties involved in the elections made official statements and complaints to the government in powers about how they were badly maltreated in the regions controlled by the opponents (Interview conducted with Dr. Duyile on 16-10-21).

It was claimed by N.C.N.C that at Bida, their supporters were attacked. The Northern Government claimed that the disturbances experienced in the North during the campaign was due to visiting politicians for bad manners and lack of tact. Makaman Bida also commented on AG. Campaign with helicopter saying that it created unnecessary tension, anxiety and very unreasonable (Ojiako, 1981:74).

The Northern People Congress complained that during their campaign in Western Region there was Hooliganism and disorder caused by Action Group using unpalatable words on their opponents. However, on December 12, 1959, the Federal elections took place throughout the country. It was orderly to a reasonable extent. It must be put on record that the electoral campaign witnessed large number of people injured, houses destroyed in some areas. It was relatively peaceful despite the fact that many were arrested for electoral offences which could take the form of physical assault on individuals during campaign and when election results are released. It could also take the forms of organised acts or threats, intimidating, blackmailing or influencing an electoral process (Nwolise, 2007).

All the prominent political leaders in the country were returned. These included Alhaji Tafawa Balewa, Chief Obafemi Awolowo, Dr. Azikiwe and all the members of the outgoing federal cabinet. After the election, coalition government was formed by N. P. C. and the N.C.N.C. So this new federal government was officially established on December 20, 1959. According to Barrister Charles Aiyamenkhue, this coalition government becomes necessary because no one single party could win enough seats to form the government alone at the centre (An Interview with Barrister Charles Aiyamenkhue on 1-2-2022).

An amendment to the constitution (orders) in Council provided for the establishment of a Senate consisting of not less than 56 appointed members plus those members of the Federal House of Representatives who were Ministers (An Amendment to the Constitution (Orders) in Council 1959).

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### **THE 1964 FEDERAL ELECTIONS: ELECTORAL RIGGING AND VIOLENCE**

The 1964 federal elections was a serious challenge in this country because of high level of election rigging, thuggery and violence. By the time of the general election of 1964 the pattern of alliances had changed, two major alliances were eventually formed to contest the election of 1964 which were NNA, the Nigerian National Alliance made up of NPC, NNDP, Midwest Democratic Point and Dynamic Party of Dr. Chike Obi and UPGA, the United Progressive Grand Alliance made up of the NCNC, the AG, NEPU and the United Middle Belt Congress.

In June 1964, both the NCNC and AG announced that they would enter into an alliance. In the following month, the NCNC abandoned its coalition with the NPC and declared its decision to campaign jointly with the AG in the Federal elections of 1964 (Eluwa, Ukagwu Nwachukwu and Nwaunani, 2005). This change of alliances could be attributed to the census crisis of 1963/1964 in Nigeria. The census controversy was a very serious problem during this period. The politicians were very much aware of the significance of census as it determines the numerical strength of each region the federal legislature. In addition to that, it determines the revenue which each region collects from the federation account or from the central distributable pool (Ediagbonya, 2022).

Ojo maintains that one of the political issues that arose from census figures in Nigeria has always been that they determine the relative numerical strength of each region or state in the federal parliament and that the eastern region issued its first secession threat over the 1963 census controversy (Ojo, 2006). The tension created by claims and counter claims compelled the Prime Minister, Abubakar Tafawa Balewa to cancel the 1962 census results and he ordered a recount. The 1963 census created more confusion, anxiety and tension. When the result came out in February 1964, the North had 29.7 Million, East had 12.4 Million, West had 10.3 Million, while Lagos had 0.75 Million and Midwest had 2.5 Million (Ibid, 88-89). The 1963 census became very imperative because it is going to enable the Federal Electoral Commission allocates parliamentary seats to each of the regions on the basis of their population for the 1964 federal elections. The most surprising aspect of the census result of 1963 is that it affirms the population of the North was more than that of the east, west, midwest and Lagos combined. Hence the large scale condemnation in Southern Nigeria. The NPC accepted the result as a true reflection of what took place. The premiers of eastern and Midwestern regions, respectively, Dr. Okpara and Chief Dennis Osadebey rejected the result (Ediagbonya, 2022). In an editorial of February 27, 1964, the Nigerian Tribune described the results of the census as a mixture of surprise and riddle (The Nigerian Tribune, 1964).

It was therefore not a surprise that the N.C.N.C broke the coalition government with NPC and decided to enter into a strong political alliance with Action Group for the first time to contest the federal elections of 1964. Hence the emergency of UPGA, in reaction, the NPC decided to join hands with Akintola's NNDP. In August 1964, the Nigerian National Alliance (NNA) was formed. This was followed in October, 1964 by the formation of the United Progressive Grand Alliance (UPGA) (Eluwa, Ukagwu, Nwachukwu and Nwaunani 2005, 258-260).

By the time of 1964 federal elections, there were too much irregularities and increasing incidents of thuggery and intimidation even before the elections (Ibid). Infact the election was declared as an election that is so well orchestrated with violence and so much norm-less by the then President of the newly declared republic (Falola and Ihouvbere, 1985). According to Mr. E. Esua, the Chairman of the Federal Electoral Commission; "strict security measures would be taken to avoid foul play. The ballot boxes were designed in such a way that the symbol of each party would appear inside and outside each box. It would also be impossible to remove party labels on boxes" (Ojiako, 1981:194).

The 1964 electioneering campaign was punctuated with appeals to ethnic sentiment and marked by thuggery, hooliganism and violence (Ojo, 2006:148) accusations and counter-accusations of evil intentions and fraudulent electoral practices also characterized the campaign (Ibid). The government authorities jailed the candidates of the opposition or opponent party, manipulating the nominating machinery in such a way that the UPGA candidates could not get registered, treating the candidates physically and physically in a such a way as to scare them away, withholding the necessary permission for campaign meetings by the local authorities or hiring thugs to break-up such meetings (Olav, 1970:41-46).

On December 19, 1964, nominations for 312 constituencies closed. 22 Million of Nigeria's was on the voter register (Ojiako, 1981:195). In a broadcast to the Nigerian nation on December 10, 1964, the President Azikiwe said that he was not happy at the political turn of events in our embryo republic (Broadcast by President Azikiwe on December 10, 1964). He also confirmed that he had received hundreds of telegram and letters from different parts of the federation pleading that he should use his good offices to ensure a free and fair election. They complained of victimizations, false imprisonment, malicious prosecution, denial of bail for trifling offences, refusal of permits to hold meetings and beating of political opponents (Ibid). On a wave of lawlessness, engulfing certain

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parts of our beloved nation, he said that it would appear that the instruments of power were being used in some respects not only to stifle opposition but also to prevent the forth coming elections from being free and fair (Ibid).

Ojiako remarks that the election campaign was marked by many violent incident largely caused by private armies of the two alliances and resulting in several deaths (Ojiako, 1981:201). The government of each region controlling the local police forces intimidated and subdued the opposition (Ibid). At the end of the election, NPC wing of the NNA had won 162 of the 167 seats in the North which by implication means without merging with any other political party, it could on its own form a government at the federal levels. The newly formed Nigerian National Democratic party under the leadership of Chief Akintola won thirty-six seats in the west which was additional boost to the NNA as it increased the electoral strength of the alliance (Ediagbonya, 2022).

This electoral victory of NNDP in the Western region was not as a result of the general acceptance of the party by the electorates, it was partly due to UPGA leaders who asked their supporters to boycott the election and the high level of rigging by the government in power. By the rules of the game, it was the duty of the President to appoint as Prime Minister, the leader of the political party that had the majority in the House of Representatives. Dr. Azikiwe threatened that he would resign than to call on a person like Sir Tafawa Balewa to form a government (An Interview with Hon. Efosa Igunbor on 6-3-22). The issue became complex when the Prime Minister refused the advice of the President to set aside the results of election. According to Folola and Ihonvbere, Dr. Azikiwe initially refused to call Alhaji Tafawa Balewa, the Prime Minister, to form a government (Falola and Ihonvbere, 1985:70). This resulted in the absence of government for three days for the first time in the Nigeria's political history. This was later resolved in the interest of national unity based on the advice of senior citizens of the country. The President later called on the Prime Minister Tafawa Balewa to form a government. According to President Azikiwe:

*“All Nigerian Patriots must hang their heads in shame today. The first national post-independence general election had been the signal for assaults on the constitution and various acts of lawlessness hitherto unknown in the history of this country (Ojiako, 1981:205). In the same vein, Anglin argues that the “1964-1965 elections has often been referred to as a classic case of the politics of brinkmanship and that it was during these elections that the first plot for a military coup d’etat by some members of the Nigerian army was planned (Anglin, 1965:173)*

### **ELECTION RIGGING AND VIOLENCE IN THE WESTERN REGIONS ELECTION OF 1965**

The first military coup received its immediate justification in the crisis that followed the massive rigging of elections in the old western region (Ademoyega, 1981: 25-44). The attempt by the leadership of the defunct Nigerian National Democratic Party (NNDP) to impose itself on the people of the West led to violence in which the killing of NNDP supporters and the burning of their houses was the order of the day. The inability or unwillingness of the federal government to restore order provided the platform for the military intervention (Ibid).

Politics is the cause of a much number of deaths in Nigeria through the acts of violence, thuggery, political assassination and crimes that are linked with the quest for power. In the course of all these, many criminal offences are committed. Security personnel are often mobilized to harass or intimidate political opponents or take sides in undermining free, fair and credible balloting. The 1965 Western Region's election was not an exception.

The western regional election of 1965 created more problems for the country. Infact it was the last straw that broke the camel's back. The desperation and inordinate ambition of Chief Akintola to remain in power in the western region which was challenged by the people resulted in unmitigated disaster which will be discussed from generation to generation (Ediagbonya, 2022). This incident was the last in the chains of events that eclipsed the Nigerian first Republic.

During the campaign, both the NNA and the UPGA used violence, murdering their opponent or destroying their property. The UPGA accused Akintola's government of rigging the election since many of his candidates were returned unopposed even though the UPGA had put forward its own candidates in the constituencies concerned (Eluwa, Ukagwu, Nwachukwu and Nwaunani, 2005:265). When Akintola and his party were declared to have won the election, lawlessness broke out all over the west. Whole sections of towns were burnt including human beings (Ibid). It was impossible to travel on some roads even by day.

The Nigerian National Diplomatic Party government backed up the NPC used all available means to intimidate its opponents (Olav, 1970). The electoral commission went into hiding after having registered the NNDP candidates. Thus making it impossible for the UPGA candidates to register in some instances (Ibid, 45-47).

In the end of the election, procedures were made difficult for the UPGA to check and the results were extensively falsified. The UPGA claiming on the basis of the local counts that it had won 68 out of 94 constituencies as against the official results (NNDP 71,



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AG 15, NCNC (Ibid, 47). After these elections, the situation in western Nigeria got out of control as the supporters of the UPGA demonstrated violently against NNDP politicians. Law and order broke down and several persons were killed during the crisis that followed. This was sequel to the desperation of both the NNDP and Action Group in their bid to determine which of the two political parties that would rule the western Nigeria. The announcement by NNDP in September 30<sup>th</sup> that 15 of its candidate had been returned unopposed created more problems and challenge. The legal action instituted by Action Group to stop the 15 unopposed candidates failed.

More serious disturbances marred the election, on the eve of the poll, an electoral officers was shot dead in the electoral office at Ibadan and on the polling day, two electoral officer and two polling agents were equally shot dead (Ibid, 80). Also there were other contradictory election results which were heard in the radio and newspapers and at a time, Akintola was been announced the winner (Ibid). At the other hand, Alhaji Adegbeniro was announced (Ibid).

This October election in 1965 in Western region unfortunately produced more violence than had ever been witnessed before the electoral officers suffered greatly, so there was collapse of the electoral administration. Serious riots broke out in many parts of the region on Election Day and in some areas police opened fire and killed innocent civilians (Ediagbonya, 2022). Due to election rigging and federal government support, Akintola and his party NNDP formed the government after much intimidation and killing of political opponents (Ibid).

A common feature of that election was the serious riot and violence between the supporters of the NNDP and the UPGA. Many were killed and properties destroyed. Again one would have expected the federal government to declare a state of emergency hence there was a total breakdown of law and order, contrary was the case, as the government in power allowed the situation to degenerate to such a disgraceful and dangerous state, because the federal government was more interested in preserving Chief Akintola as the Premier of the region than to restore law and order. This is inspite of the appeal from the students of the University of Ibadan, Labour Unions, Civil Societies and other elites. The votes were falsified in favour of the ruling party.

In such a chaotic situation, Nigerian were not surprised when Major Kaduna Nzeogwu announced the coup of January 15, 1966, one of the factors that led to the Nigerian Civil War in 1967. In the early hours of January 15<sup>th</sup>, 1966, a number of officers of the Nigerian Army carried out a coup detat by striking simultaneously at widely different centres, killing two Regional Premiers, Alhaji Sir Ahmadu Bello (North) and Chief Samuel Akintola (Western Region and abducting the Federal Prime Minister, Sir Abubakar Tafawa Balewa and the Federal Minister of finance Chief Festus Okotie Eboh (Ojiako, 1981:222).

These developments followed continued unrest in the Western Region where the authorities admitted that the October elections for the Regional Legislative Assembly had been irregular and where riots and clashes in which hundreds of persons were killed, led to a gradual breakdown of law and order (Ibid).

### **ELECTION RIGGING, VIOLENCE AND LITIGATIONS IN 1983 GENERAL ELECTION**

The fall of the second Republic of Nigeria has generated heated argument among the scholars of this contemporary period. While some expressed the view that the military coup of 31<sup>st</sup> December, 1983 has destroyed the most efficient democracy in the world others joined hundreds of Nigerians to congratulate the Military men for a job well done. Whatever the view of any scholar, one point is clear, our politicians made a mockery of democracy which eventually led to the sudden fall of the second Republic of Nigerian on 31<sup>st</sup> December, 1983 (Ediagbonya, 1984:2).

The 1983 elections witnessed the worst election rigging in the history of our dear nation. The presidential, Gubernatorial, Senatorial, Assembly and Representative elections were characterized by rigging. No party was left out of the rigging exercise. The only political parties that could not complain of election rigging were those parties that lacked the resources to rig (Ibid, 25).

In the 1983 election in Nigeria, the Military had quitted the stage and did not supervise these elections. So those who could not demonstrate their acts of vandalism and thuggery during the 1979 elections now had the ample time to demonstrate the vices.

The wide spread accusations of ballot stuffing in the 1983 election led to another successful Northern official coup in 1983. The election had become a zero-sum gain and some of the losers as always would be advocate for military intervention.

In 1983 election infact the most violence of the mayhem took place in Ondo State where the carnage was so high. It was the same sad experience in Oyo State also considered to be stronghold of the Unity Party of Nigeria. Several persons lost their lives and large scale destruction of property was recorded (Alemika, 2011).

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### **ELECTION RIGGING AND VIOLENCE IN ONDO STATE IN 1983 GENERAL ELECTIONS**

It is recorded that more violence and election rigging took place in Ondo State during the 1983 general elections. The ostensible cause was the popular reactions against rigging gubernatorial elections which followed a National Party of Nigeria (NPN) candidate in an overwhelmingly Unity Party of Nigeria (UPN) State (Adele, 2012:210).

In the violent demonstration, the entire families of politicians were wiped out and hundreds of houses were set on fire including the state headquarters of FEDECO (Ediagbonya and Aluko, 2020: 821). Isola Olomola argues that 1983 election in Ondo State witnessed political turbulence and complete turmoil caused not so much by prioritization between adherents of the UPN and NPN but by the rancour between the UPN and the decampers, the latter were a thorn in the flesh of the Party and its leadership (Olomola, 2005:153).

According to him, many of the fanatical critics of Governor Ajasin's government policy in regard to Ekiti changed gear in the couple of weeks preceding the 1983 State elections (Ibid). The main issue at stake in the political violence that followed the 1983, 16<sup>th</sup> August general election was the declaration of Akin Omoboriowo as the winner of the gubernatorial election by Federal Electoral Commission (FEDECO). The supporters of the incumbent government, Chief Ajasin alleged that the election was rigged in favour of Akin Omoboriowo using the federal might (Olauyi, 2019:32). There was violent protest in various parts of Ondo State. Some reports claimed that the outbreak of violence was the worst in the history of post-independence Yoruba and exceeding the Wete' riots of the 1960s (Omotosho, 2016:13).

In the election, Ajasin had a clear lead but the NPN, intent on taking the state from the UPN had put Omoboriowo in a clear lead as the result was being announced. The state became a war front when Omoboriowo was declared the winner and political thugs and supporters of both parties turned the state into a theatre of war (Olauyi, 2019:33). At least 40 people were killed in Ondo including two NPN Congressional candidates, Olaiya Fagbamide and Kunle Agunbiade, who were set ablaze by an angry mob (Akin Omoboriowo NPN, Candidate, August, 1983).

Both Omoboriowo and Akerele had a narrow escape. However the house of Akerele was burnt down by angry protesters (Olauyi, 2019:34). The issue was challenged in court by Chief Ajasin. A panel of five judges of the Federal High Court sitting in Akure reversed the elections and declared Ajasin as the winner (Ibid, 33). The case was appealed by Omoboriowo and four of the five of Appeal judges that sat in Benin City returned a verdict in Ajasin's favour (Ibid, 33-34). Only Ayo Irikefe dissented and so Adekunle Ajasin was declared Governor of Ondo State for a second term.

In the end, Omoboriowo was driven out of the state and spent some time in exile. The 1983 violence was a repeat of the western region crisis. It provided a golden opportunity and an excuse for the military to put an end to a second Republic that was characterized by monumental corruption and reckless embezzlement of public funds. So it could be said that the Second Republic collapsed on 31<sup>st</sup> December, 1983 because of the anti-democratic practices of the party leaders. These leaders used their positions to illegally acquire stupendous wealth through government contracts and other deals as well as a massively rigged election especially the 1983 election.

### **LITIGATIONS IN THE 1983 GENERAL ELECTIONS**

The so-called Federal Election Commission (FEDECO), the organ charged with the responsibility of conducting the election was not an efficient and effective organ. There were trouble here and there over the election results announced by FE DECO because the body was a toothless bulldog. The federal government led by Alhaji Shehu Shagari took over the responsibility of FEDECO as it became mere puppet and appendages to the government in power.

A case in point was Anambra State where there was serious dispute between the then incumbent Governor of Anambra State Jim Nwobodo and the Governor-elect Chief C. C. Onoh. It was a matter of life and death before Chief Onoh was declared by the Court as the Governor of Anambra State (Ediagbonya, 1984:25). Again, there was another election petition filed by Governor Ambrose Alli against FEDECO's declaration of Dr. Samuel O. Ogbemudia as the Governor-elect in the August 13<sup>th</sup> Gubernatorial election, 1983 (Ibid, 16). The hearing in the court began on Wednesday September, 7<sup>th</sup>, 1983 (An Interview with Hon. Influence Osagie on 16-6-22).

It is also fresh in our memory how the federal court of Appeal sitting in Kaduna struck out an appeal filed by FEDECO challenging an order of a Kano Court judge that fresh Senatorial election be conducted in the Kano South-West Constituency. The court rejected the appeal filed by FEDECO and also ordered the Federal Electoral Officer for the constituency and the Returning Officer to pay ₦400 cost to the Respondent (Cited in Ediagbonya, 2004:29).

The Head of the banned Unity Party of Nigeria, Chief Obafemi Awolowo, condemned the conduct of the elections and said it witnessed the worst rigging ever in the history of elections in Nigeria (Ediagbonya and Aluko, 2020:821). Another strong criticism came

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from the Owelle of Onitsha at the end of the general elections in September, 1983. He wrote a letter to the ousted President Shehu Shagari advising him to resign as President because the election results were falsified (Daily Times Weekly Publication, September 28<sup>th</sup>, 1983: 14-15).

Considering the high level of election rigging thuggery, lawlessness and violence in the 1983 general elections in Nigeria, Nigeria observer comments that "if initial general euphoria exhibited by a great number of Nigerians is any reliable index, the latest bloodless change of country's political life is very welcome (Nigeria Observer, January, 1984). Even the National concord of Friday January 6<sup>th</sup>, 1984 captioned the military take-over as "The Coup of all coups" (National Concord, 1984).

The Head of State of Nigeria after the coup detat of December 31<sup>st</sup>, 1983 General Buhari also observed the high level of thuggery, violence and lawlessness in the 1983 elections when he said in a world press conference on Thursday 5<sup>th</sup> January, 1984 that:

"As for the objectives of this administration, I should like to emphasize that its basic pre-occupation is to revive the Nigerian economy by officially exploiting and harnessing all available human and material resources in order to improve the quality of life of all Nigerians. To this end, the administration shall "maintain law and order and ensure the security of life and property" (Major-General Buhari at a World Press Conference 5<sup>th</sup> January, 1984).

### **CONCLUSION**

Election in terms of origin is colonial in nature and outlook. Nigeria though democratic according to their levels of development was devoid of elections and electoral processes. Election is the process or the act of choosing a person or persons for an office or for certain officers by the voters who are formally qualified.

Violence could connotes every variety of protest, militancy, coercion, destruction, or muscle flexing. The 1959 election in Nigeria was not free from election rigging and violence. The federal elections of 1964 and the Regional elections of 1965 in Western Region witnessed high level of political violence. Even the Nigeria's fourth republic is bedeviled by several forms of violence and crime which consist of murder, assassination, arson, sabotage, armed attacks intra and inter-party clashes and electoral violence.

The widespread accusation of ballot stuffing in the 1983 election led to another successful northern official coup in 1983. Infact the 1983 general election witnessed high level of thuggery, violence and lawlessness.

In the 1983 elections, in Nigeria, the military had quitted the stage and did not supervise those elections. So those who could not demonstrate their acts of vandalism and thuggery during the 1979 elections now had the ample opportunity to demonstrate the vices in 1983 elections. Infact, the most violence of the Mayhem took place in Ondo State where the carnage was so high. It was the same sad experience in Oyo State considered to be stronghold of the Unity Party of Nigeria like Ondo State. Several persons lost their lives and large scale destruction of property was recorded.

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## The Adoption and Diffusion Process of Sustainable Agribusiness Management through the Role of Vocational High School Graduates



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**ABSTRACT:** Unsustainable agricultural development has an impact on land damage, decreased water quality, increased critical land and it is hoped that agriculture will transform towards sustainable agriculture. Sustainable agriculture is development that considers economic, ecological and social dimensions, so that agricultural development can be enjoyed by current and future generations. Sustainable agricultural development requires human resources as agents of change. The existence of Vocational High Schools in agriculture as a subsystem of national education is expected to produce graduates who have competence in the agricultural sector. Research on the process of conveying sustainable agribusiness messages through the role of Vocational High School graduates uses a phenomenological approach to understand the experiences of research subjects. The research subjects were graduates of Vocational High Schools who worked as farmers and extension workers with the sampling technique using snowball sampling by examining the role of graduates of Vocational High Schools as adopter farmers and distributors, non-adopter farmers, extension workers and extension officers who own farming businesses due to the success of the adoption process and Diffusion is influenced by information sources and message delivery methods. The results of the study show that the learning-by-doing method of information sources is considered effective in the process of adoption and diffusion of sustainable agribusiness.

**KEYWORDS:** Adoption, Diffusion, Sustainable Agribusiness

### I. INTRODUCTION

Sustainable Development Goals (SDGs) are a continuation of the Millennium Development Goals (MDGs) which are the commitments of the member countries of the United Nations, including Indonesia. Regarding SDGs in Indonesia, Presidential Regulation number 59 of 2017 has been issued regarding the implementation of the Achievement of Sustainable Development Goals. Sustainable development consists of 17 goals, categorized into four dimensions or pillars, namely the pillars of economic development, the pillars of social development, the pillars of environmental development and the pillars of development of law and governance. Sustainable agriculture as part of the implementation of sustainable development is of concern to many countries. The concept of sustainable agriculture between regions or countries has various definitions and indicators.

Sustainable agriculture is a holistic farming concept which helps in meeting the needs of the present generation without affecting future generations [1]. Sustainable agriculture is defined as the use of agricultural practices and technologies which simultaneously: (a) maintain and increase agricultural productivity and profits while ensuring the sustainable supply of food, (b) reduce pollution and other negative externalities and gradually lead to positive ones, and (c) rebuild ecological resources (soil, water, air and biodiversity as "natural capital" assets) and use resources efficiently [2]. Sustainable agriculture reduces the consumption of inputs (water, pesticides, and fertilizers) and increases crop productivity. The practice of replacing chemical pesticides with natural pesticides [3]. The concept of LEISA (*Low External Input Sustainable Agriculture*) improves the quality of the environment, humans and society [4],[5].

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The most significant advantages of sustainable agricultural practices are the protection of water against pollution and the reduction of greenhouse gas emissions [6]. Long-term application of the LEISA rice farming system can reduce the need for synthetic fertilizer applications while increasing soil organic carbon [7]. Development practices that pursue productivity and ignore environmental aspects have a negative impact. The impacts of agricultural development include: 1) natural resource degradation and declining soil fertility, 2) expansion of critical land, 3) levels of pollution and environmental damage continue to increase, 4) decline in water quality, 5) poverty and unemployment rates in rural areas remain high [8],[9],[10],[11]. Based on the explanation above, the implementation of sustainable agriculture is important. Not only limited to the obligation to follow the agreement. The Ministry of Agriculture's Strategic Plan (Renstra) for 2020-2024 explicitly transforms agriculture through the paradigm of sustainable agricultural development in the downstream and upstream sectors. Agricultural development is said to be sustainable if it fulfils the three pillars, namely economically, socially and ecologically sustainable [12],[13],[14].

Sustainable agricultural practices in Indonesia face several obstacles, suggesting that farmers have not yet practiced Integrated Pest Management (IPM) for environmental sustainability because the recommendations are voluntary. Weak sustainable agricultural practices in Indonesia caused by several factors are a challenge in agricultural development. Diffusion of sustainable agricultural innovations is needed. The diffusion of innovation requires interpersonal networks through opinion leaders and agents of change. Graduates of agricultural master's vocational schools who have agricultural competence are expected to become agricultural human resources both as natural business actors and agents of change [15]. The existence of a change agent for sustainable agribusiness in order to change the knowledge, attitudes and skills of farmers. Farmers become adopters of sustainable agribusiness. Land management behavior and affective attitudes of farmers are the most significant factors influencing the behavior and attitudes of farmers in determining how to farm.

Delivery of sustainable agribusiness messages apart from the aspect of the actor who conveys it, needs to examine the aspects of the source of knowledge and the process of conveying the message. Depart from this background. This study aims to understand the sources of information about sustainable agribusiness among vocational high school graduates and the process of conveying sustainable agribusiness messages played by vocational high school graduates.

### II. STUDY METHOD

This study uses a phenomenological approach. The phenomenological approach focuses on meaning, tries to understand what is happening, sees the totality of each situation, develops inductive thinking. Reality is the result of subjective construction. Phenomenological approach to subjects studied in natural contexts. Phenomenology provides an in-depth understanding of an experience [16].

This study used in-depth interviews and observation methods. The key informants in this research were vocational high school graduates who worked in the agricultural sector, both as farmers and extension workers. Key informants were selected using the snowball sampling technique. Characteristics of key informants are presented in Table 1.

**Table 1. List of key informants**

No	Initials Informant	Characteristics of Informants	work
1.	P	Male, 26 years old, last education vocational high School	Paddy rice farmer
2	D	Male, 23 years old, last education vocational high School	Paddy rice farmer
3	AN	Male, 21 years old, last education vocational high School	Paddy rice farmers and horticultural crops
4	F	Male, 22 years old, last education vocational high School	Hydroponic vegetable farmer
5	J	Male, 26 years old, last education vocational high School	Pepper Farmers and Cattle farming business
6	R	Male, 35 years old, last education S1 Agribusiness	Horticultural crop farmer, Head of farmer group, Facilitator READSI
7	HM	Male, 44 years old, last education S1 Animal Husbandry	Horticultural crops growers and Leader of the farmer group
8	M	Female, 40 years old, last education S1 Agriculture	Extension worker and owns a farming business
9	NH	Female, 43 years old, last education S1 agriculture	Extension
10	RW	Male, 44 years old, last education S1 Agribusiness	Extension
11	S	Male, 38 years old, last education S1 Agribusiness	Extension worker, has a farming business
12	WL	Female, 31 years old, last education S1 Animal Husbandry	Extension worker and owns a farming business

Source: Research Results, 2022

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## III. RESULTS AND DISCUSSION

### A. Results

Graduates of Vocational High Schools in agriculture have competence in agriculture. Graduate competence concerns the domain of knowledge, attitudes and skills in agriculture. Sources of sustainable agribusiness knowledge aside from being obtained from formal education, graduates obtain this knowledge through counseling, training and media activities. Based on the source of knowledge and the process of delivering sustainable agribusiness messages, the roles of graduates are categorized into four categories. These categories are: (1) non-adopter farmers, (2) adopter farmers and carry out sustainable agribusiness diffusion, (3) extension agents, (4) extension agents own farming businesses.

#### **THE ROLE OF GRADUATES AS FARMERS**

Graduates of Vocational High Schools who act as non-adopter farmers have characteristics including recent Vocational High School education, owning paddy rice farming, horticultural crops and pepper plants. Never participated in extension activities and was not registered as a member of a farmer group. There was one graduate who was registered as a member of a farmer group, but the farmer group has been inactive for two years.

Agricultural competence obtained at the formal education level provides capital in cultivation, as stated by an informant (AN, 21 years old, horticultural crop farmer), as follows:

*"I learned to make beds at school, the basics of planting were obtained from school, including fertilizing and even making biopestisida, even though biopestisida is not used in cultivation"*

The same thing was stated by informant (P, 26 years old, lowland rice farmer)

*"We were taught how to use tractors, make manure and fertilizers, we held exhibitions of cultivated products, and residents came to buy our cultivated products"*

Knowledge about the negative effects of unwise use of inorganic fertilizers and pesticides has been acquired since the Vocational High School. In practice, farmers are still inseparable from the use of inorganic fertilizers and pesticides. Mimicking the habits of farmers in their environment and the perception that the use of organic fertilizers is needed in larger volumes, management is required before use, so it is not efficient. This is as in the interview excerpt:

*"Organic fertilizer requires a lot of capital. Chemical fertilizers are used sparingly and the capital is not much (AN, 21 years old, paddy rice farmer).*

*"If you use organic fertilizers, the results may not be good, the rice will turn white and the harvest may fail" (F, 26 years old, lowland rice farmer).*

Cultivation of paddy rice using organic fertilizers was carried out by informant (D, 23 years old, lowland rice farmer) as stated as follows:

*"When fertilizer was scarce, we used organic fertilizer using fertilizer from sown broiler chicken manure, there was no use of NPK, one month later we embroidered, many snails and rats were found, the rice field water became itchy. After that, we never used organic fertilizer again"*

According to the informant (D, paddy rice farmer, 23 years old) pest spraying is done by paying attention to the attacking pests. Spraying is done every two weeks. If the pest population increases, spraying is usually done once a week

*"Farmers have knowledge about the impact of using chemicals but it is difficult to implement because organic use requires capital. Inorganic pesticides are easily available and affordable" (D, paddy rice farmer, 23 years old).*

The same thing was expressed by the informant (F, lowland rice farmer, 26 years). The use of inorganic pesticides at the lowland rice farmer level depends on the type of pest that attacks. Regular spraying uses the Alika trademark pesticide to eradicate caterpillars and ticks. Exterminate informant leafhopper pests using Starban brand insecticides. Spraying is usually done 12 days after planting.

The use of inorganic pesticides is unavoidable. The rainy season and high rain intensity encourage farmers to use inorganic pesticides intensively. The spraying process was carried out by the informant (AN, lowland rice and horticulture farmer, 21 years old). The application used is stated in the following interview excerpt:

*"When growing tomatoes, I used 7 kinds of pesticides in one application, the materials used included: Prepaton, Beskonil, Amistartop, cng calcium, Milk calcium, Antrakol, Adhesive. It is sprayed twice a day, especially during the rainy season, it is feared that fungi and bacteria will attack the tomatoes"*

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## THE ROLE OF GRADUATES AS ADOPTER FARMERS AND DIFFUSION ACTORS

Characteristics of farmers who are adopters of sustainable agricultural agribusiness in this study have an undergraduate level of education in agriculture, carry out horticultural crop cultivation, head of farmer groups, are active in extension activities. Apart from obtaining knowledge about agriculture in formal education, it is also obtained from extension activities. This is in accordance with the nature of the interview excerpt as follows:

*"We make compost, leaves, straw, cow dung, gamal leaves, bran, given em4 decomposers for 2 weeks to become solid fertilizer. I learned from the heads of other farmer groups, and PPL from the district. After that we practiced it in farmer groups, I used the results of my practice. When fertilizer is expensive, farmers make compost"* (R, 35 years old, horticultural farmer, head of farmer group, READSI facilitator).

*"I got knowledge about cultivating hydroponic systems at Vocational High Schools, then I learned from hydroponic communities and learned from hydroponic practitioners who had received training and were certified"* (F, 22 years old, hydroponic vegetable farmer).

Apart from being an adopter, the informant also carried out sustainable agribusiness diffusion as stated by the informant as follows:

*"When using mulch, local farmers were not interested in using mulch, because farmers thought the price of mulch was expensive. However, after they see the yields, mulch saves energy, reduces the use of herbicides, so now farmers use mulch"* (R, 35 years, horticulture farmer, farmer group leader, READSI facilitator).

Likewise with the informant (F, 22 years, hydroponic vegetable farmer) based on interviews and observations. The informant helped Kendari 5 Vocational High School and assisted in the Youth Social Institution, to make hydroponic plant installations. In addition, informant F assisted him to succeed in cultivating these hydroponic plants

Diffusion of sustainable agribusiness carried out by the informant (HM, 45 years, horticultural crop farmer, farmer group leader) as quoted in the following quote:

*"I conveyed to the farmer groups, to use pesticides according to the dosage, at the right time of spraying, but it was still difficult to accept. The use of local wisdom by using the Lepuri plant which is burned to eradicate caterpillars, is still used by farmer groups"* Agribusiness diffusion delivered by farmers to other farmers is more effective than extension agents. This is as stated by the informant as follows:

*"Farmers believe more in what they have seen, not what they hear, if there is only one farmer who adopts a sustainable farming system, he will be an example for other farmers, and this is easier for farmers to accept, this approach is considered effective, compared to just what is said instructor"* (RW, 45 years, extension worker).

So that currently the role of extension workers is to produce farmers who adopt sustainable agribusiness, then these farmers as actors of sustainable agribusiness diffusion to other farmers.

*"If there are 20 farmers who are trained, 1 person who implements it is already a success, because farmers have to see it first hand, so the current strategy is how farmers who have adopted sustainable agriculture will be an example for other farmers, and this approach is considered effective"* (RW, extension worker 45 years).

## The Role of Graduates as Extension Workers

Extension agents as State Civil Apparatus have the duty and function of providing guidance to farmer groups. The characteristics of the extension workers in this study were S1 agricultural graduates (who graduated from a Vocational High School in agriculture), had a group of assisted farmers.

Extension agents as agents of change in the diffusion of sustainable agribusiness essentially carry out the process of delivering sustainable agribusiness messages. The aim of the diffusion is for knowledge, attitudes and skills of farmers, so that farmers are expected to adopt sustainable agribusiness in five dimensions. The counseling methods carried out by extension workers, as in the following interview excerpt:

*"The KWT under construction makes vegetable pesticides using ingredients from srikaya leaves added with tobacco, then settling for a week. Use of pesticides to eradicate caterpillars and pests"* (NH, 44 years old, extension worker).

*"Before making biopesticides, we have to identify which pests are attacking. If the pests are rats, we can make biopesticides using raw papaya which is chopped, then placed in holes that are thought to be nesting rats"* (RW extension worker, 45 years).

*"Together with farmers, we make NPK fertilizer from natural ingredients using Gamal leaves which are high in Nitrogen (N), green plant branches as a source of Phosphorus and Potassium (K) from straw, then fermented using EM4"* (S, 38 years, full length).

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Based on excerpts from interviews, extension workers carry out extension activities through the performance method, namely together with farmers to make organic fertilizers and biopesticides. This method is considered effective compared to the lecture method.

### The Role of Graduates as Extension Workers and Farming Actors

Graduates who have an extension role in farming have the characteristics of Bachelor of Agriculture graduates, fostering farmer groups, owning horticultural crop farming, and being involved in crop engineering. In addition to carrying out counseling in accordance with the main tasks and functions, Extension workers who have farming businesses share their experiences with farmers, this is as stated in the interview excerpt as follows:

*"An approach to farmers, by sharing experiences, we cannot patronize, however, farmers have more experience than us"*(S, extension worker, 37 years).

The same thing was conveyed by informant M extension worker who has a horticultural crop farming business. Has 1 hectare of land used to plant chilies. Sharing experiences is an effective way, as in the interview quotes:

*"I emphasize experience more than theory, even if we know the knowledge but never put it into practice it is definitely different. It is better if the extension agent has a farming unit, or pilot, before conveying it to the farmers, the extension agent will conduct a trial run, if successful then it will be conveyed to the farmers. Farmers are quicker to respond or trust"* (M, extensionist and owns a farming business, 40 years).

*"I told the farmers to plant chillies. Because the marketing is good, and the technology is available. Before telling farmers about fertilizers, I usually do trials. However, we also sometimes learn from the experiences of successful farmers"*(M, extension worker and owns a farming business, 40 years).

In addition to sharing experiences, the technical assistant invited the assisted farmers to see cultivation that was developed without the use of inorganic fertilizers and pesticides. This method is used to convince farmers that cultivation by reducing the use of chemicals can be carried out, this is as stated in the following interview excerpt:

*"I usually invite my assisted farmers to walk home, see how I cultivate various plants without using chemical fertilizers and inorganic pesticides"*(S, extension worker and content creator, 37 years).

Likewise with the informant (WL, 30 years old, extension worker, owns a farming business). Informant WL cultivates horticultural crops, using BPP land with a loan system. The area of cultivated land is 1 hectare. The cultivation of horticultural crops is very profitable, the planting time is quite short and the farming business actors have no marketing difficulties. Based on the following interviews, it provides an illustration that farming can be used as a pilot:

*"I'm usually a farmer going for a walk to the garden, if the yields are abundant I sometimes give it to the surrounding community, so that they are also interested in gardening"*.

### B. Discussion

Adoption and diffusion of sustainable agribusiness requires actors as actors. This research provides an understanding that actors in the adoption and diffusion of sustainable agriculture are graduates of vocational high schools in agriculture. graduates have competence in agriculture as output of Vocational High Schools in agriculture.

Education at the Vocational High School level contributes to knowledge, attitudes and skills in agriculture, as initial capital when graduates work as farmers, extension workers or continue their education at a higher level. Knowledge and technology in agriculture continues to develop, so that the self-development of farmers and extension workers is still carried out.

In addition to the actors in sustainable agribusiness, the existence of a network is very important. The network determines the delivery pattern of the message/communication. There are two networks in the process: (1) actors who have formal relationships and vertical structures, (2) informal relationships and horizontal knowledge. In addition, the research examines the learning methods used for the adoption and diffusion of sustainable agribusiness at the farmer and extension worker levels.

Farmer knowledge and farmers' attitudes towards sustainable agriculture greatly determine the success of sustainable agriculture [17],[18]. The farmer's attitude towards sustainable agriculture is influenced by the counseling that the farmer attends. Neutral attitude towards sustainable agricultural practices, lack of counseling has a significant relationship with farmers' attitudes towards sustainable agriculture [19]. Farmer agricultural competency development can be carried out by being active in farmer group activities and counseling. Farmers' knowledge and perceptions about sustainable agriculture are based on general knowledge, not specific knowledge obtained through formal education [20].



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Adoption and diffusion of sustainable agribusiness can be more effective, if the adoption and diffusion actors are carried out by farmers. New adopters are usually found near farmers who have already adopted an innovation [15]. Informal learning facilitates the diffusion of innovations because farmers more easily adopt practices accepted by their peers [21].

Farmers learn from other farmers in conservation farming. For small-scale farmers, membership in farmer groups can be a conduit for better access to extension services and for exchanging experience and information with other farmers [22]. The findings of this study graduates have a role as adopter farmers as well as sustainable agribusiness diffusion actors characterized by a high level of education (S1), active in farmer groups or other farming communities, status as head of farmer groups. Knowledge aside from formal education, is also obtained through extension activities. Extension agents and owning a farming business have competence in the field of extension. Have experience in farming cultivation. Extension competence and experience in farming is an important element in farmers' acceptance of extension agents.

Extension activities or knowledge sharing about sustainable agriculture in formal and informal networks. Using the lecture method is considered less effective. Actor research findings in sustainable agribusiness diffusion use the learning by doing model. Extension agents together with assisted farmers, or fellow farmers make organic fertilizers and biopesticides sourced from natural resources available in the farmers' environment. This counseling activity is a learning by doing process.

The learning by doing method comes from John Dewey's view of experience and education. John Dewey stated that education is a reconstruction of various experiences and events experienced by individuals, so that everything new becomes directed and meaningful. Experience as a foundation in education must be emphasized on practice, trial and error. The principles of continuity and interaction are two important points in Dewey's view.

The principle of continuity implies that all experiences are brought forward and influence future experiences; every experience in one way or another influences all potential future experiences. The interaction principle is based on the concept of continuity and implies the interaction between the learner and what is learned, and how past experiences interact with present situations to create one's current experiences [23]. Learning by doing is facilitated through experience. Learning is said to be the result of offering people the opportunity to engage with concrete 'real world' sustainability problems and the space to explore them, trial solutions, play around with assumptions, fail, try again, etc. Openness and flexibility [24].

Studies on the positive impact of learning by doing can improve competency through collaboration which not only gains knowledge but also values that guide action [25],[26]. The increase in farmers' income is in line with the increasing experience, learning by doing, social networks that are built [27]. Through learning by doing they will develop the confidence to apply these skills [28]. Farmers who do not adopt sustainable agribusiness are farmers who are not registered as members of farmer groups and have never participated in extension activities. Many agricultural messages are obtained through the process of imitating the habits of farmers in their environment. Even though this experience is a conventional agricultural practice that does not pay attention to ecological aspects.

## IV. CONCLUSIONS

Actors of adoption and diffusion of sustainable agribusiness played by graduates of Vocational High Schools in agriculture can be categorized into four roles: (1) role as farmers, (2) adopter farmers as well as diffusion actors, (3) extension workers, (4) extension agents who own farming businesses . Each actor has a different source of knowledge. Sustainable agribusiness knowledge apart from formal education, is also obtained through outreach activities, training and through the media. Nonadopter farmers of sustainable agribusiness sources of sustainable agribusiness information are obtained through formal education. Adopter farmers obtain knowledge apart from formal education, counseling, the media contributes to shaping this knowledge. Extension officers as civil servants who foster farmer groups gain sustainable agribusiness knowledge through formal education, training and media. Sustainable agribusiness messages carried out by adopter farmers, extension workers and extension workers who have farming businesses with a learning by doing approach (learning and doing). Adopter farmers and extension workers who have farming businesses have the opportunity to gain the trust of farmers. In addition to having sustainable agribusiness knowledge, they also have farming experience. Farmers are more able to accept or believe messages that are seen by their eyes, not just heard.

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## Analysis of the Effect of Tempering Temperature on the Formation of Microstructure and Hardness Values in SKD11 Steel



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**ABSTRACT:** SKD11 steel is a tool steel material. SKD11 steel must have strong and tough mechanical properties. So to improve the quality and ability of SKD11 steel to accept external loads and forces, it is necessary to heat treatment. The heat treatment carried out in this research is hardening and hardening – tempering. The hardening process is carried out by heating SKD11 steel at austenitic temperature of 950 °C and holding time of 30 minutes. Then fast cooling (quenching) with water cooling media. As for the hardening – tempering process with temperature variations of 400 °C, 500 °C, 600 °C and a holding time of 60 minutes. In the as-quenching process the microstructure formed is martensite and residual austenite which cannot be transformed. Increasing the tempering temperature affects the martensite formed into tempered martensite consisting of ferrite and cementite carbide. In addition, with increasing tempering temperature the volume of carbide distribution will decrease and have a smoother shape. As the volume of carbide distribution decreases and the ferrite structure becomes more consistent, the ductility of the steel will increase and the hardness will decrease. The hardness value of SKD11 steel with hardening of 950 °C is 61.5 HRc. While the steel with hardening - tempering at a temperature of 400 °C = 57.3 HRc, 500 °C = 56.3 HRc, and 600 °C = 49,5 HRc. Increasing the tempering temperature will increase the ductility and decrease the hardenability on SKD11.

**KEYWORDS:** SKD11 steel, tempering temperature, microstructure, mechanical properties

### INTRODUCTION

SKD-11 steel is a type of high quality stainless steel which is a tool steel and is widely used in industry because it has high hardness and wear resistance. SKD11 steel material can be increased hardness and ductility through heat treatment. To obtain a better and longer lasting level of hardness, hardening and tempering processes are usually carried out.

The hardening process is by hardening the steel to the austenitizing temperature, then the next process is quenching, and after that the tempering process is carried out to achieve the desired final hardness. The tempering process is carried out so that the steel has good ductility and is not too hard/brittle. So that with the tempering process it is hoped that the steel will have good hardness and good ductility.

Tempering is one of the heat treatment processes after the hardening process. This process aims to restore some of the toughness/toughness that was lost due to the hardening process (Clark, 1962). The reduced ductility of the metal is due to the transformation of martensite resulting from the rapid cooling of the metal. So that tempering can add ductility and toughness to the metal, it is very important to increase the absorption of impact energy and the tempered martensite structure produces good dynamic strength in steel (LI Hong-ying, 2013 ).

Martensite is a metastable structure. If the martensite structure gets heat treatment ( tempering ). The carbon in the BCT structure of martensite will come out into carbide and BCT will transform into BCC ferrite.

This study aims to determine the effect of variations in tempering temperature on the microstructure formed and the hardness value of SKD11 steel.

### RESEARCH METHODS Research Material

The SKD11 steel material used in the study uses material from PT. Daido Steel Indonesia with the brand name DC11.

### Research Stages

The test material is named with the name of each sample A, B, C and D which will be subjected to heat treatment. All specimens went through the hardening stage with a temperature of 950 °C and a waiting time of 60 minutes. Then rapid cooling

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was carried out with water cooling media. Then after the hardening stage was completed for specimen A no tempering treatment was carried out. As for specimen B, tempering will be carried out with a temperature of 400 °C and a waiting time of 60 minutes, after which it will be cooled quickly using air cooling media. Furthermore, for specimen B, tempering will be carried out with a temperature of 500 °C and a waiting time of 60 minutes after that it is quickly cooled using air cooling media. Finally, specimen C will be tempered with a temperature of 600 °C and a waiting time of 60 minutes, after which it will be cooled quickly using aircooled media.

### Hardness Test and Microstructure Testing

After the preparation of each specimen was completed heat treatment. The next step is to do hardness testing. Hardness testing is used to determine the hardness value of each specimen. The tools used for hardness testing use Hardness Rockwell Test.

After the hardness test is completed, it is continued with testing the microstructure of each specimen using a metallurgical microscope. Microstructure testing is expected to show the results of differences in the structure of each specimen that has been through the hardening and tempering treatments. So that the results of microstructure testing can be used for the analysis process and determine the mechanical properties of each specimen. In the process of testing the microstructure, an etching liquid is needed. Etching serves to see more clearly the microstructure formed on the specimen. In testing the etching microstructure used is Nital 4%.

### RESULT AND DISCUSSION Hardness Testing

Material hardness is the ability or resistance of a material to withstand indentation or deformation loads on the material. The purpose of hardness testing is to measure the resistance level of the material and determine the mechanical properties of the material. Heat treatment of materials generally causes a change in the hardness of the material. In this study the hardness test used the Hardness Rockwell Test. The results of the hardness test for each sample can be seen in the following table.

**Table 1.** Rockwell Hardness Testing Results (HRc)

Test Object Code	Hardness Test Point			Mark Violence Average
	Point 1	Point 2	Point 3	
A	60.5	63	61	61.5
B	56.5	57.5	58	57,3
C	55.5	57	56.5	56.3
D	49.1	50	49.3	49.5

Information :

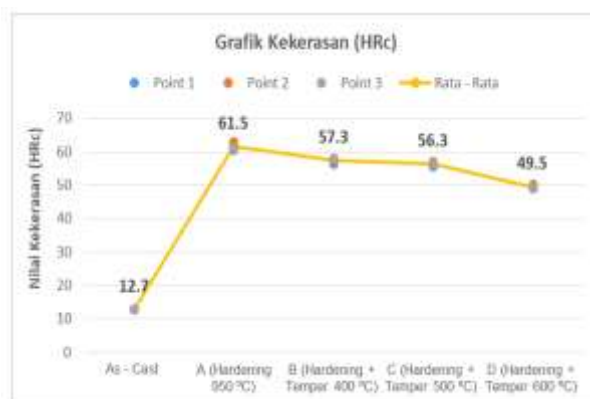
Test Object Code

A ( Hardening 950 °C )

B ( Hardening 950 °C + Tempering 400 °C )

C ( Hardening 950 °C + Tempering 500 °C )

D ( Hardening 950 o C + Tempering 600 o C )



**Figure 1.** Effect of material conditions with hardening and hardening – termpering treatment on the hardness value (HRc)

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Then the results of the hardness values of the 3 points are averaged to become the hardness value of the sample. Figure 1 explains that the relationship between the sample treatment and the sample hardness value. In the graph, the steel sample code A with a hardening treatment of 950 °C gets a hardness value of 61.5 HRc. While the steel code sample B with a hardening treatment of 950 °C and continued with a tempering process of 400 °C obtained a hardness value of 57.3 HRc. After that, steel code sample C with a hardening treatment of 950 °C and continued with a tempering process of 500 °C obtained a hardness value of 56.3 HRc. Finally, steel code sample D with a hardening treatment of 950 °C and continued with a tempering process of 600 °C obtained a hardness value of 49.5 HRc. The highest hardness was obtained from sample code A steel with a hardening treatment of 950 °C without a tempering process, namely 61.5 HRc, and the smallest hardness was obtained from sample D steel with a hardening treatment of 950 °C and a tempering process of 600 °C, which was 49.5 HRc. As the tempering temperature increases, the hardness value of the steel will decrease and the ductility of the steel will increase.

### Observation of Microstructure

Results of microstructure observations of SKD 11 steel with hardening treatment at 950 o C and holding time of 30 minutes then rapid cooling using water cooling media can be seen in Figure 4.2 The structure contained in the as-quench sample is a matrix in the form of mertensite (M ), carbide (C) and retained austenite . The martensitic structure is formed due to the fast cooling rate at the austenite temperature. The rate of cooling (quenching) in steel is very influential on the phase formed. The rapid cooling process does not produce 100% martensite structure but also produces retained austenite. Retained austenite is austenite which does not undergo transformation into martensite upon rapid cooling or we can call it residual austenite. The average remaining austenite during the quenching process ranges from 10% - 30%. The reason for the formation of retained austenite after the quenching process is because during the quenching process the martensite structure phase does not reach Mf ( Martensite Finnish ) on the CCT ( Continuous Cooling Temperature ) diagram, p. This can be caused by the low temperature ( Martensite finnish ) due to the influence of the alloying elements. However, the remaining austenite cannot be seen in the microstructure. SEM and XRD testing is required to determine the amount of austenite remaining in the post-process material. Then the formation of the carbide structure is influenced by the presence of Chrom elements in SKD11 steel. Structure the carbides formed can also be called chromium carbides.

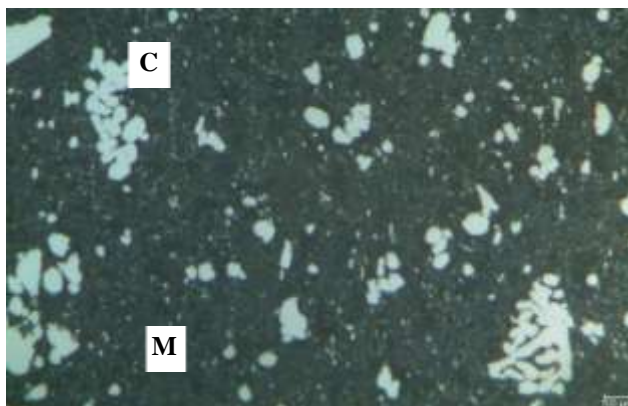
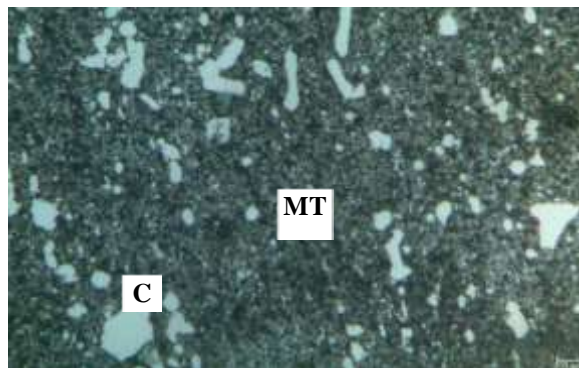


Figure 2. SKD11 microstructure after hardening process with 500X magnification.

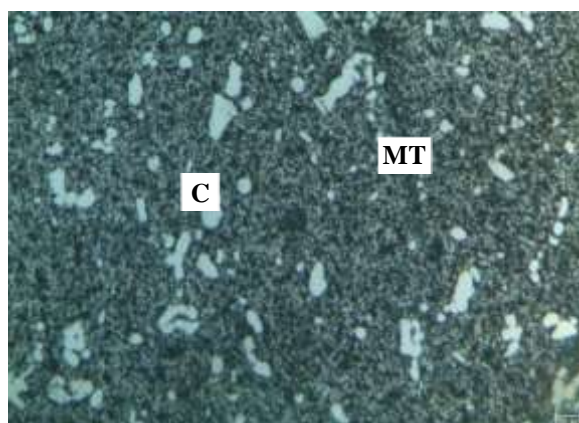
Observation of the microstructure of the specimens by hardening treatment with a temperature of 950 °C and holding time of 30 minutes then fast cooling using water cooling medium ( quenching ). After that, the specimens were tempered at a temperature of 400 °C with a holding time of 60 minutes and followed by a cooling process with air cooling media. Figure 3 Observation results of as- tempered steel 400 °C, the microstructure formed is Martensite Temper ( MT ), Chrom Carbide ( C ) and retained austenite . The martensite formed from tempering is called tempered martensite, namely martensite which has changed its microstructure to ferrite and cementite carbide (Fe<sub>3</sub>C) . The tempering process on SKD11 steel causes the martensite phase formed from the as-quenching process to transform into ferrite and cementite carbide. Meanwhile, carbides from chromium alloy elements have a smaller shape. Then there is still retained austenite (remaining austenite) which has not been completely transformed.

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**Figure 3. SKD-11 microstructure after 400 °C hardening and tempering process with 500X magnification.**

Observation of the microstructure of the specimen with hardening treatment at a temperature of 950 °C and holding time of 30 minutes then fast cooling using water cooling media. After that, the specimen was subjected to a tempering process with a temperature of 500 °C with a holding time of 60 minutes and followed by a cooling process with air cooling media. Figure 4 Observation results of as-tempered steel 500 °C, the microstructure formed is almost the same as the as-tempered condition of 400 °C, namely Martensite Temper (ferrite + carbide cementite ( $Fe_3C$ )), the difference is that the distribution of ferrite is more even and the volume of distribution of chromium carbide (C) on the as-tempered condition of 500 °C has a smaller and finer carbide size than the as-tempered condition of 400 °C. This can be seen in the photo of the microstructure with the as-tempered condition of 500 °C. The remaining austenite also decreases in the as-tempered condition of 500 °C. Retained austenite (remaining austenite) will be totally transformed and become pearlite phase at tempering temperature  $\geq 520$  °C.



**Figure 4. SKD-11 microstructure after 500 °C hardening and tempering process with 500X magnification.**

Microstructure of the specimen with hardening treatment at 950 °C and holding time of 30 minutes then fast cooling using water cooling media. After that, the specimen was subjected to a tempering process with a temperature of 600 °C with a holding time of 60 minutes and followed by a cooling process with air cooling media. Figure 5. Observations of as-tempered 600 °C steel material, the microstructure formed is almost the same as that of as-tempered 500 °C, namely Temper Martensite (Ferrite + cementite carbide ( $Fe_3C$ )), the difference is ferrite which is more stable and The volume of chrom (C) carbide distribution in the astempered condition of 600 °C is more than the volume of carbide distribution in the as-tempered condition of 400 °C and 500 °C. This can be seen in the microstructure photo with the as-tempered condition of 600 °C has carbides with a smaller size than the as-tempered conditions of 400 °C and 500 °C. At a temperature of 600 °C the carbide has a smaller size, more spread, and smoother has a spheroid shape.



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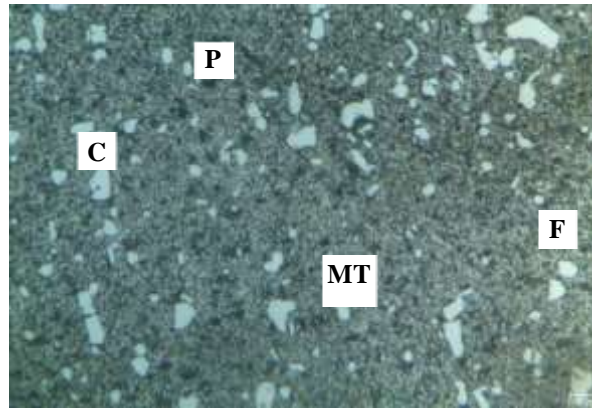


Figure 5. SKD-11 microstructure after hardening and tempering 600 °C with 500X magnification.

### The Effect of Tempering Temperature on the Microstructure of SKD11 Steel

This study aims to observe and analyze the effect of different tempering temperatures on the microstructure formed in SKD11 steel. The microstructure obtained from the hardening-tempering treatment was compared to the microstructure obtained from the hardening treatment without tempering.

hardening heat treatment process was carried out at an austenitizing temperature of 950 °C with a holding time of 30 minutes, and water cooling medium. Then for the tempering process carried out at temperatures of 400 °C, 500 °C, and 600 °C with a holding time of 60 minutes.

SKD11 steel in the as-quenched condition has a hardness value of 61.5 HRC and the results of observing the microstructure in samples that were only hardened without tempering are shown in Figure 2. The structures formed are martensite and residual austenite. The rapid cooling process with water resulted in the formation of a hard martensite structure and the transformation of the austenite FCC crystal structure into a martensite BCT crystal structure. Martensite has a crystal structure that is unstable, shaped like a needle, very hard and brittle. The BCT ( Body Centered Tetragonal ) martensite crystal structure is caused by the rapid cooling process, so carbon does not have time for diffusion transformation. Then the fast cooling process also results in no time for austenite to turn into ferrite. So it can be said that the formation of martensite is the result of austenite transformation which is influenced by the fast cooling rate and carbon content in steel. The strength of the martensite formed depends on the amount of carbon content in the steel material. The higher the carbon content in steel, the harder the martensitic structure will be. The increase in material hardness can also be affected by carbides. The carbide formed in the SKD11 material is influenced by the presence of the Chromium alloy element present in the material. Primary and eutectic carbides are carbide structures formed from a solidification process. Where materials with high chrom content will react with carbon elements and form  $M_7C_3$  compounds, these compounds will occupy empty space (vacancy) in the grain boundary area, so that they can form carbides continuously.

SKD11 steel in as-tempered condition 400 °C get a hardness value of 57.3 HRC. Furthermore, for the as-tempered condition of 500 °C it produces a hardness value of 56.3 HRC. Then the steel samples in the as-tempered condition of 600 °C produced a hardness value of 49.5 HRC.

Then for the results of the microstructure of the steel samples which were hardened and tempered at temperatures of 400 °C, 500 °C and 600 °C, it can be seen in Figures 3, 4 and 5 that the microstructure formed is a tempered martensite matrix (ferrite and carbide). cementite), then the carbide structure which is influenced by chromium alloying elements in SKD11 steel. In addition, there is also an austenite structure that cannot be decomposed properly during the quenching process or is commonly called residual austenite but is not clearly visible in the microstructure. The tempered martensite microstructure formed from the martensite tempering process is a combination of ferrite and cementite carbide. The tempering process produces a ferrite phase fraction where ferrite has soft and ductile properties. Thus increasing the elasticity of steel. The tempering process also affects the carbon contained in the steel. The martensite tempering process can lead to the deposition of a carbon-rich phase into an epsilon carbide phase. The formation of this phase causes the carbon content in the steel to decrease. The formation of carbide in the tempering process will make steel have good strength.

The results of the tempering process at temperatures of 400 °C, 500 °C and 600 °C with the formation of ferrite and carbide microstructures can affect the mechanical properties of steel. The microstructures formed in the tempering process are ferrite and carbide phases. The higher the tempering temperature, the ferrite phase will increase and the more stable it will be. At a tempering temperature of 600 °C the remaining austenite structure will be fully transformed into pearlite and chromium carbide

## Analysis of the Effect of Tempering Temperature on the Formation of Microstructure and Hardness Values in SKD11 Steel

will be transformed into spheroid carbide. Pearlite has strong and hard properties. Tempering temperature will also affect the carbide formed. The higher the tempering temperature, the more and finer the distribution of carbides from chromium elements. So that the higher the tempering temperature can affect the stability and the number of fractions of the soft ferrite phase offset by the hard pearlite and carbide phases. So that steel has good toughness, strength and ductility.

### CONCLUSIONS

Tempering temperature 400 °C, 500 °C , 600 °C The microstructure formed is almost the same, namely tempered martensite consisting of ferrite + cementite carbide, then chromium carbide. Tempering temperature variations can affect the hardness value that is formed on SKD11 Steel. The hardness value of steel with quenching without tempering process is 61.5 HRC. Meanwhile, the hardness value of the material with the addition of 400 °C tempering resulted in a hardness value of 57.3 HRC. Then for a tempering temperature of 500 °C it produces a hardness value of 56.3 HRC. Finally, a steel sample with a tempering temperature of 600 °C produces a hardness value of 49.5 HRC. The higher the tempering temperature, the more and more consistent the distribution of the ferrite structure will be, so that the higher the tempering temperature can affect the hardness value of the material. Steel material becomes more ductile and has good resistance to external forces or loads.

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## Parental Factors as Determinants of English Language Achievement among Junior Secondary School Students in Cross River State, Nigeria: Implications for Learners' Formative Evaluation



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**ABSTRACT:** The study examined the influence of parental factors on the English Language achievement of Junior Secondary School students of Cross River State, Nigeria. A sample of 500 junior secondary students was selected for the study. Two hypotheses were tested at .05 level of significance and findings showed that socioeconomic status of parents significantly influence students' English Language achievement while parenting style had no significant influence on English Language achievement. Based on the findings, it was recommended, among other things that, Public Awareness Campaigns should be mounted for parents on ways to improve the socioeconomic status of their wards which is a significant factor in the latter's English Language achievement.

**KEYWORDS:** Parental socioeconomic status, parenting style, English Language achievement, formative evaluation.

### INTRODUCTION

The dwindling academic performance of students in both internal and external examinations is a disturbing and distressing development to parents, teachers the government and numerous stakeholders in the education sub-sector of Nigeria. The core subjects such as English Language and Mathematics are worst affected as shown by WAEC and NECO results in recent years; as reflected in the 2014 and 2015 results shown in Table 1. This situation affects both the Senior and Junior Secondary school students. However, this study focuses on the Junior Secondary School learners whose academic performance over the years has become a major source of worry. Numerous factors may be responsible for the dwindling academic performance of this category of students. Apart from the home variables, other factors include societal, cultural, governmental neglect, religious influence and environmental conditions. Some stakeholders of education attribute the observed failure rate in English Language to the students' social adjustment problems.

**Table 1. Summary of 2014 jsce results for cal.edu.zone.**

S/N	LGA	SUBJECT	TOTAL CANDIDATES	NO. PASSED	NO. FAILED	% PASSED	% FAILED
1	Akamkpa	Mathematics	1043	827	216	79%	21%
		English Language	1044	906	138	87%	13%
2	Akpabuyo	Mathematics	544	375	169	69%	31%
		English Language	542	389	153	72%	28%
3	Bakassi	Mathematics	165	48	117	29%	71%
		English Language	165	143	22	87%	13%
4	Biase	Mathematics	876	490	386	56%	44%
		English Language	877	790	87	90%	10%
5	Calabar Muni.	Mathematics	3135	1076	2059	34%	66%
		English Language	3113	2642	471	85%	15%
6	Calabar South	Mathematics	2047	571	1476	28%	72%
		English Language	2047	1829	218	89%	11%
7	Odukpani	Mathematics	655	399	256	61%	39%
		English Language	641	528	113	82%	18%

**Source:** Planning, Research and Statistics Department, Secondary Education Board, Calabar.

## **Parental Factors as Determinants of English Language Achievement among Junior Secondary School Students in Cross River State, Nigeria: Implications for Learners' Formative Evaluation**

Several studies have linked parental or home factors to students' behavior which eventually hampers their learning and achievement in school subjects. Ogodo (2005), for instance, carried out a study on home background and discipline behaviour of secondary school students in one of the Senatorial Districts of Cross River State. He sampled three hundred and three respondents (174 males and 129 females) drawn from five Local Government Areas. Their ages ranged between fourteen (14) and eighteen (18) years. Two null hypotheses tested at 0.5 level of significance, guided the study. Home Background and Disciplined Behaviour Questionnaire (HDQ) was used for data collection. Data obtained were analyzed using the one-way analysis of variance (ANOVA). The result of the One-Way analysis of variance showed a significant difference among students from home with autocratic, democratic and uninvolved parenting styles. The Fisher's LSD test result showed that students from autocratic parenting style background displayed significantly higher level of indiscipline behaviour than students from democratic parenting style background ( $t = 2.86$  as against critical  $t$ -value of 1.96). The results revealed that students from autocratic parenting background with ( $X = 37.87$ ) were more disciplined than students from authoritarian parenting style background (With  $X = 40.87$ ).

Ekor (2002) asserted that students from affluent homes do not lack educational opportunities. Facets of knowledge are brought to their doorsteps through internet, television sets, video sets and radio sets. Some have their home private study rooms or at least comfortable spaces where they can relax at home to do their assignments and revise. They do not trek long distances to school, as they are either in boarding houses or are provided with enough pocket cater for their transportation and other needs. Cherry (2012) noted that the majority of parents display one of three qualitatively different parenting styles. These are: Authoritative parenting style which is highest in all of the dimensions mentioned above, that is disciplinary strategies, warmth and nurturance, communication styles, and expectations of maturity and control; and Authoritarian parenting style which is high in disciplinary strategies and expectations of maturity and control but low in warmth and nurturance and communication styles; Permissive parenting style which is high in warmth and nurturance but low in terms of disciplinary strategies, communication styles, and expectations of control and maturity.

The effect of socioeconomic status on students' achievement was examined by Ciftci and Cin (2017) in a meta-analysis study. They explored literature review covering a total of 187 research studies, out of which 66 were included in the meta-analysis. The 66 research studies were compiled to obtain a sample of 266,817 subjects. The results of the random effect model showed that socioeconomic status has a high level of effect on students' achievement. In a predictive study, Akhtar (2012) investigated the influence of socioeconomic factors of Pakistani students on their achievement. The sample of the study comprised secondary school students enrolled in four districts of Rawalpindi of intermediate and secondary education Division. The achievement of students was collected in form of grade from the gazette of respective Board of Intermediate and Secondary Education. Linear regression showed mother's education, income, refrigerator, and source used to travel to school has positive effect on achievement. Number of siblings and transport facility (car/van) has negative effect on achievement.

Most studies in the literature explored had established significant links between parental socioeconomic status of students and their academic achievement. Parenting style, however, had been found not to contribute significantly in influencing students' academic achievement generally. The peculiarities of the researchers' geographical setting formed part of the unique features of the present study, which gap the researchers have attempted to fill.

### **PROBLEM OF THE STUDY**

The study was informed by the abysmal English Language achievement of junior secondary school students in Cross River State, Nigeria as shown in Table 1. A situation which had continued to account for very high annual dropout rates among students, as they choose to give up due to their inability to cope. Some of the affected students, in frustration, resort to various forms of examination malpractices and other vices within the school system. Government and other stakeholders of education have done a lot, including ensuring that only professional teachers were employed to teach, so as to nip the ugly situation in the bud, without any positive results. Consequently, the researchers had to undertake to investigate the influence of parental factors on English Language achievement among junior secondary school students in Cross River State, Nigeria. Expectedly, various stakeholders of education in the State may glean from the findings of the study to reposition the school system for improved achievement in English Language among secondary school students.

### **METHOD**

The study made use of the ex-post facto research design. The choice of this design was owing to the fact that the independent sub-variables (parental factors) were not manipulated. Their influence on the dependent variable (English Language Achievement) had already occurred prior to the study. The Population of the study was all Junior Secondary School students in Cross River State

# Parental Factors as Determinants of English Language Achievement among Junior Secondary School Students in Cross River State, Nigeria: Implications for Learners' Formative Evaluation

Public Secondary Schools whose total figure was 5110, comprising 2420 males and 2690 females. The study sample was five hundred (500) junior secondary school students randomly selected from the population.

The instrument used for data collection was a questionnaire titled 'Home factors, Deviant Behaviour Questionnaire (HFDBQ). The questionnaire items were of the modified 4-point Likert type with four response categories of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The instrument passed through face validation by experts in Measurement and Evaluation. One-way analysis of variance (ANOVA) was applied in testing the two hypotheses at .05 level of significance.

## RESULTS

### Hypothesis one

The null form of this hypothesis stated that parental socioeconomic status does not significantly influence English language achievement.

#### Analysis of variance (ANOVA) of English Language achievement on parental socioeconomic status

Level of parental socioeconomic status	N	Mean (X)	Std. Dev.	Std. Error
High	67	27.522	9.046	1.10514
Average	373	28.416	8.715	.45124
Low	60	24.850	8.551	1.10388
<b>Total</b>	<b>500</b>	<b>27.868</b>	<b>8.799</b>	<b>.39350</b>

Source of variation	Sum of squares	Df	Mean	F-value	P-value
Level of parental socioeconomic status	666.332	2	333.166	4.361*	.013
Error	37966.956	497	76.392		
<b>Total</b>	<b>38633.288</b>	<b>499</b>			

- Significant at .05 level . P< .05

From Table 2, the P-value of .013 is less than the level of significance (.05) chosen for the study . Based on this outcome, the null hypothesis is rejected. This means that parental socioeconomic status significantly influence students' achievement in English language.

To find out which pair of the group means was responsible for the significant results, a post hoc (LSD) test was carried out. The results are presented in Table 3.

**Table 3. Post HOC (LSD) pairwise comparison of English Language achievement by level of socioeconomic status**

Level of parental socioeconomic status	High	Average	Low
High	27.522 <sup>a</sup>	-0.894 <sup>b</sup>	2.67.2 <sup>b</sup>
Average	.442 <sup>c</sup>	28.416 <sup>a</sup>	3.566 <sup>b*</sup>
Low	.082 <sup>c</sup>	.004 <sup>c</sup>	24.850 <sup>a</sup>

\*: Significant at .05 level. P< 05.

a: Values along the main diagonal are group means

b: Values above the diagonal are mean differences

c: Values below the diagonal are P-values.

In Table 3, the mean difference between average (28.416) and Low(24.850) accounted for a significant result because it yielded a p-value of .004 which is below the chosen level of significance(.05).Other mean differences were not significant. This implied that the significant influence of socioeconomic status of parents on students' English Language Achievement was as a result of the significant difference between parents of average socioeconomic status and those with low socioeconomic status.

### Hypothesis two

This hypothesis stated that parenting style does not significantly influence secondary school students' English language achievement.

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## Analysis of variance (ANOVA) of English Language achievement on parenting style

Parenting style	N	Mean (X)	Std. Dev.	Std. Error
Democratic	363	28.204	8.892	.46670
Autocratic	75	27.560	8.446	.97523
Permissive	44	26.886	9.189	1.38522
Neglectful	18	24.778	7.034	1.65793
<b>Total</b>	<b>500</b>	<b>27.868</b>	<b>8.799</b>	<b>.39350</b>

Source of variation	Sum of squares	Df	Mean square	F-value	P-value
Parenting style	262.350	3	87.450	1.130	.336
Error	38370.938	497	77.361		
<b>Total</b>	<b>38633.288</b>	<b>499</b>			

From Table 4, the p-value (.336) is observed to be higher than the chosen level of significance (.05). Based on this result, the null hypothesis is not rejected. This means that parenting style does not significantly influence secondary school students' English language achievement.

## DISCUSSION

The study found that parental socioeconomic status had significant influence on Students' English Achievement. This was in line with the position of Ekor (2002), who asserted that students from affluent homes do not lack educational opportunities. Facets of knowledge are brought to their doorsteps through internet, television sets, video sets and radio sets. Some have their home private study rooms or at least comfortable spaces where they can relax at home to do their assignments and revise. They do not trek long distances to school, as they are either in boarding houses or are provided with enough pocket cater for their transportation and other needs.

The results of the study also indicated that parenting style does not significantly influence Secondary School students' English language Achievement. The findings contrast those of Roche (2007) who showed that levels of permissive parenting was significantly related with academic strain. Parents with permissive style allow their children to have free control of their behaviors and actions.

## IMPLICATIONS FOR LEARNERS' FORMATIVE EVALUATION

Evaluation, in the context of school learning, is the process of comparing a learner's actual and expected performance in any given assessment situation. The process could be formative – where learners are continuously subjected to assessment activities or tasks within a given instructional season, or summative – involving a one-shot examination or test at the end of a term or school session. Formative evaluation serves to effectively track and enhance learning progress as it involves the continuous engagement of learners in assessment processes. Parents of high-level socioeconomic status are most likely to be in a position to provide the needed learning facilities at home to help their children to make rapid progress academically. Such learning resources like internet facilities, visual and audio aids, can easily be provided at home by wealthy parents to support their children's learning progress and thereby improving their overall rating in formative evaluation. Parenting styles that support learning progress of children would also naturally beef up their school performance in formative evaluation. Such children tend to be highly competitive academically among their colleagues.

Parents who are academically supportive in their mode of parenting would always be on hand to readily track the learning progress of their children by checking their notebooks, prying into knowing their performances in classwork and other forms of continuous assessment and possibly guiding them into problem solving or engaging private instructors to help. The roles of parents in the assessment of the learning of their children, as opined by Ojating (2019), really complement what the teacher does and facilitate the overall learning process. This is, however, applicable only if they (the parents) have what it takes to stimulate their children academically. Home environments that support learning activities are therefore critical in guaranteeing outstanding performance records in formative evaluation. This was corroborated by Berlin (2018), when he noted that lack of engagement of families in helping children with homework and the like can hamper their learning progress.

## CONCLUSION

The results of the study indicated that students' parental socioeconomic status had significant influence on their achievement in English Language. That is, the higher the level of socioeconomic status the higher the achievement of students in the subject and

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vis versa. Parenting style, on the other hand, was found to have no significant influence on the students' achievement in English Language. In other words, the choice of parenting style is not significantly linked to achievement in English. Some studies have, however, refuted this position, having found significant relationships between various parenting styles and students' performance in school subjects.

### RECOMMENDATIONS

- (i) The Parents' Teachers' Associations (PTA) in Secondary Schools should create veritable platforms for the sensitization of parents on the various tips for wealth creation to enhance their income and help them meet the school needs of their children.
- (ii) Public Awareness Campaigns should be mounted for parents on ways to improve the socioeconomic status of their wards which is a significant factor in the latter's English Language achievement.

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## Study of Impact of Prominent Diseases in Hotspot on Pearl millet Genotypes (*Pennisetum glaucum* L.)



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**ABSTRACT:** The present study was conducted to identify impact of biotic stresses on pearl millet genotypes. It is one of the hardy crops adaptable to wide range of ecological conditions and water scarcity. Pearl millet crop is affected by number of diseases caused by fungus, bacteria, virus, nematodes, etc. The present investigation was carried out using 50 different genotypes with two replications. Observations on diseases viz Downey mildew (green ear head disease) and blast reaction (Leaf spot) were recorded. The genotypes S-21/05(1%) followed by S-21/06(1%), S-21/18 (1%), S-21/18 (1%), DHLB-27B, (2%), DHLB-36B (2%), S-21/13 (2%), S-21/15 (2%), S-21/07(2%), S-21/11 (2%), DHLB-37B(3%), S-21/04 (3%), S-21/08(3%), S-21/14 (4%), S-21/16 (4%), S-21/12 (5%), PBLN-2021-204 (5%) exhibited highest resistance to blast reaction. The genotype DHLB-31B (1%), followed by S-21/05 (1%), ICMB-9544 (1%), PBLN-2021-203 (1%), S-21/17 (2%), S-21/19 (2%), PBLN-2021-204 (2.38%), PBLN-2021-211 (2.38%), S-21/07 (2.54%), S-21/10 (2.54%), PBLN-2021-212 (4.39%) and S-21/20 (4.67%) were found highly resistant to Downey mildew incidence.

**KEYWORDS:** Pearl millet, Biotic stress, Downey mildew, Blast reaction.

### INTRODUCTION

Pearl millet is a climate resilient crop and it protect itself from adverse effect of climate change. It has potential to increase income and food security of farmers in arid region while pearl millet is one of the hardy crops to wide range of ecological conditions and water scarcity. Pearl millet crop is affected by number of diseases caused by fungus, bacteria, virus, nematodes, etc. Blast is one of the important fungal diseases of pearl millet also called as leaf spot. It is caused by *Pyricularia grisea* (teleomorph: *Magnaporthe grisea*) and it is the serious disease affecting both forage and grain production (Nayaka *et al.* 2017). Initially in 1953 pearl millet leaf blast was reported in India. Since 1970 pearl millet growing states of India facing extensive blast incidence and from year 2000 it became more serious. Recently in most pearl millet growing states like Gujarat, Madhya Pradesh, Uttar Pradesh, Delhi, Maharashtra, Rajasthan and Karnataka are also facing prevalent incidence of blast. (Fig. 2). The disease incidence data from 2002-2016 indicates that the disease is becoming more and more widespread (AICPMIP Annual Reports, 2002-2016). Over a decade AICRP - PM has been reported at Dhule, Jaipur, Jamnagar and Gwalior centres were hotspot of blast and was recorded on almost all the entries that have been evaluated under pathological trials. The map showed that Dhule, Aurangabad, Ahmednagar are the hotspot for blast in Maharashtra.



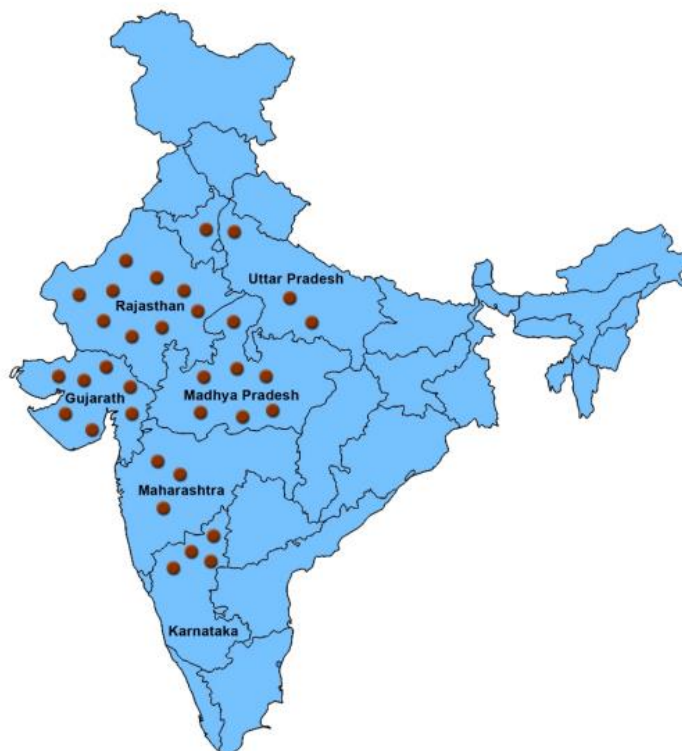


Figure 1. Hotspots of Magnaporthe blast of pearl millet in India

Pearl millet also has huge threat of disease downy mildew which is caused by oomycetes of fungal pathogen *Sclerospora graminicola*. The disease is popularly known as green ear head disease due to transformation of floral parts into leafy structure and unable to even grain filling. This is such a serious disease which may lead to 80% of yield losses. (M. Nandhini *et al.*,2019). The major epidemic in India occurred in 1971-72 since many contradictory opinions towards transmission of downy mildew. (Singh *et al.*,1993)

**MATERIALS AND METHODS**

The experimental materials used for present research consist of 50 genotypes of pearl millet [*Pennisetum glaucum* L.] were received from Bajara Research Scheme, College of Agriculture, Dhule and the field experiment was conducted during the *Kharif* season of 2021. The experiment was carried out under randomized block design with two replications.

**Blast Reaction (%)**

Blast disease is caused by *Pyricularia grisea*. The disease severity is evaluated by visual appearance according to lesion area of spot of blast on leaf, stem and neck accordingly. Also, we observed size and shape of blast spot and colour changes in spot and categorized disease severity in percentage as per spot as follow; (plate no.3)

Table No. 1. Scale for Blast Severity 0 to 9

Sr. No.	Severity Index	Symptoms observed
1	0-leaf area free from infection	Nil
2	1-	Leaf area infected with Pin point small brown specks
3	2 -	Larger brown specks
4	3-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks
5	4-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks <5% leaf area
6	5-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks 6-10% leaf area
7	6-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks 11-25% leaf area



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8	7-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks 26-50% leaf area
9	8-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks 51-75% leaf area
10	9-	Up to 2 mm size small roundish to slightly elongated necrotic grey spots with brown specks >75% leaf area

### Downey Mildew

Downey mildew disease is one of the serious diseases also known as green ear disease caused by fungus *sclerospora graminicola*. We count total number of plants in each row and plant affected by Downey mildew and further calculated disease severity in percentage as per following formulae

$$\text{Disease Severity (\%)} = \frac{\text{Number of Infected Plant in Per Treatment} \times 100}{\text{Total}}$$

## RESULT AND DISCUSSION

### Blast Reaction on pearl millet genotypes (Table No.4.17)

#### Mean of blast severity

The general population mean of blast disease incidence in experimental plot was 17.40

#### Resistant to Reaction (1-5%)

The genotypes had found S-21/05(1%), S-21/06(1%), S-21/18 (1%), S-21/18 (1%), DHLB-27B, (2%), DHLB-36B (2%), S-21/13 (2%), S-21/15 (2%), S-21/07(2%), S-21/11 (2%), DHLB-37B(3%), S-21/04 (3%), S-21/08(3%), S-21/14 (4%), S-21/16 (4%), S-21/12 (5%) and PBLN-2021-204 (5%) resistant to blast severity.

#### Moderately Resistant (6-10%)

Most of the genotypes were moderately resistant which follows criteria blast severity percentage up to 10%. The genotype S-21/19(7%), followed by PBLN-2021-203 (7%), PBLN-2021-209 (7%), DHLB-14B (8%), DHLB-23B(8%), S-21/20 (8%), PBLN-2021-207 (8%), PBLN-2021-207 (8%), S-21/02 (9%), S-21/03 (9%), PBLN-2021-205 (9%), ICMB-13444 (10%), ICMB-10889 (10%), DHLB-28B (10%), DHLB-33B (10%), DHLB-35B (10%), S-21/09 (10%), S-21/10 (10%), PBLN-2021-206 (10%), PBLN-2021-211 (10%) and PBLN-2021-212 (10%) had found moderately resistance.

#### Susceptible (11-50%)

The genotype PBLN-2021-210 (11%) followed by S-21/01 (12%), S-21/17 (14%), DHLB-17B (14%), DHLB-31B (20%), DHLB-15B (25%), DHLB-32B(25%), DHLB-24B (28%), DHLB-21B (30%), PBLN-2021-208 (31%), and DHLB-16B (32%) had found susceptible.

#### Highly Susceptible (>50%)

The genotype ICMB-9544 (51%) was found highly susceptible to Blast Severity.

**Table No. 2. Reaction of Blast severity on Pearl Millet Genotype in (kharif 2021)**

Sr. No.	Genotype	Blast severity %	Blast Reaction
1	DHLB-10B	14	S
2	ICMB-13444	10	MR
3	ICMB-10889	10	MR
4	DHLB-8B	14	S
5	DHLB-14B	8	MR
6	DHLB-15B	25	S
7	DHLB-16B	32	S
8	DHLB-17B	14	S
9	DHLB-21B	30	S
10	DHLB-23B	8	MR
11	DHLB-24B	28	S
12	DHLB-27B	2	R
13	DHLB-28B	10	MR
14	DHLB-31B	20	S
15	DHLB-32B	25	S
16	DHLB-33B	10	MR

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17	DHLB-35B	10	MR
18	DHLB-36B	2	R
19	DHLB-37B	3	R
20	S-21/01	12	S
21	S-21/02	9	MR
22	S-21/03	9	MR
23	S-21/04	3	R
24	S-21/05	1	R
25	S-21/06	1	R
26	S-21/07	2	R
27	S-21/08	3	R
28	S-21/09	10	MR
29	S-21/10	10	MR
30	S-21/11	2	R
31	S-21/12	5	R
32	S-21/13	2	R
33	S-21/14	4	R
34	S-21/15	2	R
35	S-21/16	4	R
36	S-21/17	14	S
37	S-21/18	1	R
38	S-21/19	7	MR
39	S-21/20	8	MR
40	ICMB-9544	51	HS
41	PBLN-2021-203	7	MR
42	PBLN-2021-204	5	R
43	PBLN-2021-205	9	MR
44	PBLN-2021-206	10	MR
45	PBLN-2021-207	8	MR
46	PBLN-2021-208	31	S
47	PBLN-2021-209	7	MR
48	PBLN-2021-210	11	S
49	PBLN-2021-211	10	MR
50	PBLN-2021-212	10	MR

**Table No. 3. Scale for blast resistance (IARI, 2019; Singh *et al.*, 2019)**

Sr. No.	Blast severity %	Blast Reaction
1	1-5	R
2	6-10	MR
3	11-50	S
4	>50%	HS

### Downey Mildew

#### Mean of Downey Mildew Incidence

The general population mean of Downey Mildew disease incidence in experimental plot was 23.74

#### Highly Resistant to Downey Mildew

Reaction of 50 genotypes of pearl millet revealed that, The genotype DHLB-31B(1%), followed by S-21/05 (1%), ICMB-9544 (1%), PBLN-2021-203 (1%), S-21/17 (2%), S-21/19 (2%), PBLN-2021-204 (2.38%), PBLN-2021-211 (2.38%), S-21/07 (2.54%), S-21/10 (2.54%), PBLN-2021-212 (4.39%) and S-21/20 (4.67%) were found highly resistant to Downey mildew incidence.

#### Resistant to Downey Mildew

The genotypes had found resistant to Downey Mildew incidence S-21/18 (6.63%) followed by PBLN-2021-205 (7.18%), PBLN-2021-208 (7.18%), DHLB-24B (7.61%) and S-21/09 (8.66%) etc.

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### Susceptible to Downey Mildew

The genotypes had found susceptible to Downey Mildew incidence ICMB-13444(11.5%), DHLB-23B (15.12%), DHLB-28B (18.11%), DHLB-32B (10.49%), DHLB-36B (13.57%), S-21/06 (15.35%), S-21/11(10.07%), S-21/16 (15.2%), PBLN-2021-209 (11.48%) etc.

### Highly Susceptible to Downey Mildew

The genotypes had found highly susceptible to Downey Mildew incidence ICMB-10889 (39.4), DHLB-8B (39.4), DHLB-14B (31.7), DHLB-15B (48.7), DHLB-17B (26.49), DHLB-21B (26.14), DHLB-27B (37.99), DHLB-33B (44.49), DHLB-35B (26.48), DHLB-37B (41.87), S-20/01 (28.64), S-21/02 (28.15), S-21/03 (39.87), S-21/04 (37.99), S-21/08 (46.88), S-21/12 (35.68), S-21/13 (37.44), S-21/14 (34.16), S-21/15 (21.14), PBLN-2021-207 (25.1) and PBLN-2021-210 (37.05)

**Table No.4. Reaction to Downey mildew Incidence on Pearl millet Genotypes**

Sr. No.	Genotype	Downey mildew Incidence %	Downey mildew Reaction
1	DHLB-10B	38.88	HS
2	ICMB-13444	11.5	S
3	ICMB-10889	39.4	HS
4	DHLB-8B	39.4	HS
5	DHLB-14B	31.7	HS
6	DHLB-15B	48.7	HS
7	DHLB-16B	2.63	HR
8	DHLB-17B	26.49	HS
9	DHLB-21B	26.14	HS
10	DHLB-23B	15.12	S
11	DHLB-24B	7.61	R
12	DHLB-27B	37.99	HS
13	DHLB-28B	18.11	S
14	DHLB-31B	1	HR
15	DHLB-32B	10.49	S
16	DHLB-33B	44.49	HS
17	DHLB-35B	26.48	HS
18	DHLB-36B	13.57	S
19	DHLB-37B	41.87	HS
20	S-20/01	28.64	HS
21	S-21/02	28.15	HS
22	S-21/03	39.87	HS
23	S-21/04	37.99	HS
24	S-21/05	1	HR
25	S-21/06	15.35	S
26	S-21/07	2.54	HR
27	S-21/08	46.88	HS
28	S-21/09	8.66	R
29	S-21/10	2.54	HR
30	S-21/11	10.07	S
31	S-21/12	35.68	HS
32	S-21/13	37.44	HS
33	S-21/14	34.16	HS
34	S-21/15	21.14	HS
35	S-21/16	15.2	S
36	S-21/17	2	HR
37	S-21/18	6.63	R
38	S-21/19	2	HR
39	S-21/20	4.67	HR

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40	ICMB-9544	1	HR
41	PBLN-2021-203	1	HR
42	PBLN-2021-204	2.38	HR
43	PBLN-2021-205	7.18	R
44	PBLN-2021-206	1	HR
45	PBLN-2021-207	25.1	HS
46	PBLN-2021-208	7.18	R
47	PBLN-2021-209	11.48	S
48	PBLN-2021-210	37.05	HS
49	PBLN-2021-211	2.38	HR
50	PBLN-2021-212	4.39	HR

**Table No.5. Scale for Downey mildew Incidence**

Sr. no.	Downey mildew Incidence (percentage)	Resistant Category
1	0-5%	HR
2	5.1-10%	R
3	10.1-20%	S
4	>25%	HS

### CONCLUSION

#### Blast Severity

1. The genotypes found resistant to blast severity was S-21/05, S-21/06, S-21/18, DHLB-27B etc.
2. The yield performance by the blast resistant genotypes was S-21/05 (52.51), followed by S-21/06 (44.20), S-21/18 (55.66), DHLB-27B (25.64) recorded grain yield per plant in grams.

#### Downey Mildew Incidence

1. The genotypes DHLB-31B, S-21/05, ICMB-9544 and PBLN-2021-203 was found highly resistant.
2. The genotypes found resistant to Downey Mildew incidence was S-21/18, PBLN-2021-205 PBLN-2021-208, DHLB-24B and S-21/09 etc.
3. The yield performance by the genotypes highly resistant to Downey mildew was DHLB-31B (43.86), S-21/05 (52.51), and PBLN-2021-203(21.39)

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### PLATES



**Different Stages of Blast**



**Different stages of Downey mildew**



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## Collection of Local Content Indatu's Heritage in the Development of Aceh's Culture



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**ABSTRACT:** Cultural diversity is valuable for a region, including Aceh's cultural diversity. This is because culture has the impression of a message characteristic of the area and is the root source of historical writing. The values contained in local cultural wisdom are important as pillars of maintaining and building national character. The facts show that most young people today prefer and like to apply foreign cultural habits. Even foreign culture is a dominant mode that young people learn and play. It is feared that this phenomenon will affect the existence and extinction of local culture. One way to maintain local culture is to preserve culture through local content. This research aims to provide information and evaluation material for stakeholders, especially the Aceh government, to protect Acehese culture. This study uses a qualitative method with a descriptive design. The data used are primary data through observation and secondary data through various relevant references. The study results show that Aceh has a unique and exciting cultural diversity such as *meugang*, *khanduri maulod* or *khanduri pang ulee*, the *Tulak Bala* tradition, *khanduri blang*, *ranup* lamp dance, *seudati*, *rapai geleng*, *peusijek*, and various other cultures. These cultural treasures need special attention. One of them is local content, which starts with the collection, presentation, processing, preservation, and utilization. Through this policy, it is believed to be able to maintain, care for, and maintain the existence of local culture so that its authenticity is maintained, realized by utilizing existing libraries, starting from the regional library to the local library as a place to accommodate various local cultural documentation in the form of books, documentaries as well as ebooks.

**KEYWORDS:** Aceh, Culture, Local Content Collection, floating, Indigenous Legacy

### 1. INTRODUCTION

Indonesia is a large nation rich in cultural diversity. Hilden Gert in Marnelly argues that the territory of Indonesia consists of thousands of islands with various ethnic groups, cultures, and beliefs. (Marnelly, 2017). This is evident from data from the Central Statistics Agency (BPS) showing that Indonesia has up to 300 ethnic groups, 1,340 ethnic groups, and 718 types of regional languages (BPS, 2010). Garna in Joebagio, states that culture is an identity or symbol that can control behavior, so cultural processes must be understood, translated, and interpreted (Riezal et al., 2018).

In essence, culture has the impression of a message that is always conveyed through values that can be implemented, given, and inherited over time and the process of changing the social order in society. In their writings (Verulitasari & Cahyono, 2016), Chaerol Riezal and his friends argue that the implementation of cultural values is a form of legitimacy and the manifestation of society towards its culture, where the existence of cultural diversity and noble values contained in culture can be a means of building the character of community both individually and group (Riezal et al., 2018).

According to Geertz Clifford, culture is a pattern that has a comprehensive meaning that is intertwined, has symbols that are transmitted historically, has a conceptual system that is inherited in the form of characters that can be used as a means of communication, preserving and developing their knowledge and attitudes towards life. (Geertz, 1992). While Kelly and Kluchohn in Niode argue that culture is a pattern in life that is formed in history explicitly, implicitly, rationally, and irrationally or non-rationally that exists at all times and becomes a potential guide for human behavior (Niode, 2007).

Based on the explanation above, it can be said that culture is all patterns of people's behavior that are inherent and interrelated with one another, starting from social, economic, and cultural aspects, becoming a symbol or characteristic that cannot be separated from the life activities of the community because it is inherent in each person as well as playing an essential role in



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efforts to maintain the character of a region or nation. Culture or local wisdom can be interpreted as all behaviors or views of life, advice and sayings, and traditional values that are alive, respected, and practiced amid society, whether they have customary sanctions or do not have sanctions. (Sanusi, 2005).

Local wisdom is a valuable asset for an area. Local wisdom or indigenous knowledge is a form of pure knowledge that comes from the interactions and original thoughts of the people of a place (Efendi, 2018). Warren stated that indigenous knowledge is part of knowledge that is communicated orally and continues to grow from time to time (Warren, 1991). This knowledge must be preserved, so it is not eroded by the era's increasingly rapid and sharp developments. This is because local wisdom or culture is a characteristic of an area and the source or root of historical writing. Existing traditions can be used as a socio-cultural mechanism for that area.

This indirectly shows that the values contained in local wisdom culture are essential as roots and pillars to maintain and build national character (Gebrina, 2018). However, in reality, over time, the existence of local wisdom culture and the values contained therein have not been able to be constructed appropriately and comprehensively, and even its existence has been threatened by the influence of external cultural developments, which are so rapidly and sharply eroding the local wisdom culture itself. Information related to regional culture is starting to be sidelined by outside cultural influences, especially for the younger generation, who know more about foreign cultures than their own regional culture, and some young people do not even know their local culture (Puteh, 2013).

The facts show that most young people today prefer and like to apply foreign cultural habits rather than their own local culture, even though foreign culture is the dominant mode learned and played by young people. The outbreak of external influences indicates that today's youth lack confidence in their region's local culture, so it will negatively impact local cultural wisdom for the area and the nation if the cultures that are rich in diversity of values in it are lost and forgotten because they are already covered with foreign cultural influences (Pandaleke & Jazuli, 2016).

So we need a forum to accommodate and preserve this cultural diversity as a form of protecting the treasures of Indigenous heritage and a form of love for a local culture so that its existence is maintained through local content. Local content is related to the socio-culture of an area that needs to be maintained and developed so that local people know or are familiar with their culture, both developed and still growing today. Local content can be used as an intermediary or bridge in maintaining and introducing local culture to the community, including the local culture of Aceh (Melayu et al., 2021).

Aceh is one of 34 provinces in Indonesia, located at the northernmost tip of the island of Sumatra, with a diverse cultural heritage. During the rapid development of the times, the people of Aceh are part of an area still thick with customs (Riezal et al., 2019). The people of Aceh are synonymous with solid Islamic law, have businesses, and are rich in cultural diversity. As in the socio-economic field, the people of Aceh have the traditions of *Peusijek*, *Meugang*, *Khanduri Pang Ule*, *Peutroen Aneuk*, and *Khanduri Tulak Bala*. While in the area of art, the people of Aceh have a tradition of *Ranup Lampuan dance*, *Likoh Pulo*, *Seudati*, *Rapai Geleng*, *Saman*, and others (Attas & Anoeграjekti, 2021).

Besides that, historical facts show that Aceh is also a center for studies and the spread of Islam in the Southeast Asian region. In the most phenomenal historical writings, Ying-yai Sheng-lan (1416) and History Of The Ming Dynasty (1368-1643), Groeneveld mentions that Aceh was a strong Islamic empire and succeeded in conquering the surrounding areas and played an essential role in spreading Islam to the region. Malacca to Java, until sunan-sunan, commonly called nine Wali Songo, was born.

However, it seems that Aceh's various historical and cultural facts have not been appropriately cared for by the Acehnese people and government as an identity or characteristic and identity for the Aceh region in particular and the Indonesian nation in general. This can be seen from the fact that the minority of Acehnese people rarely carry out and begin to forget this tradition, plus the lack of Acehnese cultural literature for young people is increasingly eroding the existence of local Acehnese culture. So, according to the author, local content is the right place to accommodate the variety of Aceh's local culture (Situmeang, 2020).

Aceh's local cultural information as an identity seems to have started to be forgotten. Its existence is beginning to be marginalized by modern details. This is a big problem because if it is allowed to drag on, it is feared that later the local culture and knowledge will become extinct with time. If this knowledge is not realized in generations of young people, they will forget their true identity. Therefore, it is crucial to preserve Acehnese culture through local content to prevent the fading and extinction of local culture among the people of Aceh in particular and the Indonesian nation in general.

To identify the threat and possible loss of Aceh's cultural identity due to the lack of literature on access to Acehnese cultural knowledge and lack of interest because cultural knowledge is beginning to erode over time, it is crucial to conduct research related to efforts to preserve Aceh's local culture as an indatu heritage. The need for measures to maintain culture is to build regional and national civilization because culture is a creation of taste and initiative that will continue to encourage people to build and develop life while maintaining their identity (Arifin&Khambali, 2016).

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This research aims to discover the efforts to preserve Acehese culture through local content to maintain and care for Aceh's cultural heritage treasures. The results of this study are expected; first, as a source of information, evaluation, and reference for the government and people of Aceh in particular and Indonesia in general regarding the preservation of Acehese culture through local content as an effort to preserve Aceh's local culture as well as being a motivation in improving programs for preserving Acehese culture in the future; second, can contribute ideas or ideas that will enrich the body of knowledge in the preservation of local culture; third, as a reference source for future researchers in similar studies.

### 2. LITERATURE REVIEW

Culture is complex because it includes knowledge, belief, art, morals, law, customs, and other capabilities and habits acquired by man as a member of society (Soekanto, 2005). Koentjaraningrat argued that there are several elements of culture, including; tools for everyday human life, economic and livelihood systems, social systems, language as a medium of communication both orally and in writing, science and the arts, and religious systems (Abidin & Saebani, 2014).

According to Arianto, local content contains various sources of information that are unique and have their characteristics so that they are of high value to users of a library because local content describes social, economic, political, religious, and cultural values produced by local communities as traces of the nation's civilization records. Growing amid society (Arianto, 2016).

Research related to the preservation of local culture was conducted by Oluwaseye and Adebola with the title Documentation and Dissemination of Indigenous Knowledge by Library Personnel in Selected Research Institutes in Nigeria, published in the journal Library Philosophy and Practice. The study results show that collections of local wisdom culture are stored in the form of several media such as books, videos, flash disks, compact disks, and audio recordings. Meanwhile, the process of disseminating information is distributed through the library's website, videos, print media, direct mail, seminars, exhibitions, exchange of collections, and transfer of data to other libraries (Adebayo & Adebola, 2017).

The difference with this research lies in the realm of study. Oluwaseye and Adebola's research examines the process of documenting and disseminating information on local cultural wisdom. In contrast, the author scans the preservation of local culture through local content as an effort to maintain identity, identity, and heritage, especially the conservation of Acehese culture.

Furthermore, Pertiwi and Prasetyawan's research, with the study titled Management of Local Content Collections as an Effort to Preserve Local Wisdom at the Salatiga City Library and Archives Service, the results show that the Salatiga City Library and Archives Service provides collections of local content to preserve information on local wisdom of the city of Salatiga which is documented in The three types of collection groups are books, documentaries and *ebook* (Pertiwi & Prasetyawan, 2018).

The difference in this research lies in the scope of the study, which examines the management of local content collections to preserve local wisdom. In contrast, the author scans cultural preservation through local content to protect, care for and maintain the local cultural wisdom of Aceh's indatu heritage (Hanindya, 2019).

Cultural preservation needs to be done to maintain and care for the heritage of indatu or ancestors while at the same time maintaining regional identity and identity. Local content can become a vessel or bridge in supporting and preserving local cultural treasures because local culture is the root of the essence and uniqueness of an area that must continue to be maintained for its sustainability to avoid the loss of local cultural values due to the times (Hanindya, 2019).

### 3. RESEARCH METHODS

This study uses a qualitative method with a descriptive design. This research wants to examine profoundly and thoroughly related cultural preservation through local content as a crucial issue to maintain the cultural treasures of Aceh's indatu heritage. The analysis uses a case study approach to explore activities comprehensively and naturally while remaining within the limits of the study problem.

The source of this research uses primary and secondary data. Preliminary data were obtained from observations in the field, while secondary data was obtained through documentation in books, journals, articles, and other reference media relevant to the research study. Data analysis in research using Miles and Huberman consists of data reduction, data presentation or display, and conclusion (Emzir, 2012).

### 4. DISCUSSION

#### 4.1. Aceh's Energy and Cultural Resilience

Culture is the root of regional and national civilization and an indigenous heritage that has high value for the region and the nation. This is because culture is a lifelong desire understood by society, reflecting conditions, differences, and social, economic, and political developments. Even with culture, the identity or identity of the area is known (Saputra & Zuriah, 2020).

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The strong currents of development and changing times and the rapid acculturation that is endemic in society make the culture of origin or the region marginalized or swayed and can even shake local cultural values. Coupled with the encouragement of material-oriented acculturation of foreign cultures, the gap in globalization and various other influences increasingly threatens the position of local culture to keep flying and surviving in society.

An effort and role from various stakeholders are needed to maintain the treasures of cultural heritage through local content to build and develop the civilization of the Aceh region in particular and the Indonesian nation in general. Because the step to be able to develop and create a nation's society will not proceed quickly, precisely, and accurately without a mixture of local cultural roots. On the contrary, pushing aside or leaving local and regional culture is the same as going to identity and identity (Hadi, 2016).

Applying foreign culture and abandoning local culture indicates that people lack confidence in their culture and identity, so they are dominant in using external customs or influences. In other words, people live by adhering to the culture of other nations in their homeland. According to Lasa, culture needs to be preserved as a reference for the following things (Lasa Hs, 2009):

1. Culture is a source of inspiration. In developing a region or nation, motivation is needed to support this process. This inspiration can come from cultural diversity, which includes traditional values, community ethics, and the existing social system.
2. Maintaining identity, where the various values contained in culture, can make cultural developments in the future more focused. These directions come from different local pearls of wisdom to stay within the frame of the local personality and culture of the region or nation.
3. Maintaining the stability of the development and progress of the nation. It is stated that a strong nation is a nation that can respect and maintain its own identity and personality. That way, the community will still stand firm and unshaken in the face of foreign cultural influences because it has cultural values as a firm grip.

Besides that, cultural preservation through local content also requires a place such as a library to allocate local culture. Libraries have a strategic role in the culture of a region or nation, especially in this case to distribute Aceh's various local cultures. As a cultural and educational institution, the library is essential in preserving regional or national cultures for education, information, research, and recreation. Various historical facts have proven the library's role (Lasa Hs, 2009).

### 4.1.1. The Kingdom of Aceh is a source of strength

It's impressive when a small and economically weak country like Portugal can explore the world quickly. This achievement was driven by the great need for European gold and silver to meet market needs and fulfill the ambitions and desires of the Portuguese empire itself.

At the beginning of the 15th century, the Portuguese, in a relatively short period, were able to explore and conquer two continents at once, namely the continents of Africa and Asia. This was a fantastic achievement because Portugal was only a small kingdom on the European continent. The achievements made by the Portuguese were considered a natural, severe threat and were right in front of the eyes of the Islamic empire in the Southeast Asian region. In 1508, the Portuguese succeeded in seizing Hormuz and even intended to take control of Mecca as the holy city of Muslims.

In addition to religious pressure, economic threats began manifesting when the Portuguese became the main rival for Islamic traders in the Red and Indian seas. The Portuguese danger became even more severe and unsettling to Muslims in Southeast Asia when the Portuguese succeeded in occupying Malacca in 1511. At the same time, the kingdom of Aceh emerged as a new Islamic power in the western hemisphere of the archipelago in a relatively short period. Where at that time, Southeast Asia was under a severe and significant threat from the position of the Portuguese. Until this position ended on January 14, 1641, the Portuguese could no longer fortify themselves from the Dutch attack.

Aceh was a kingdom that could unite the small kingdoms around it, such as the kingdoms of Pasai, Pidie, Peudada, Meulaboh, Daya, and Lamuri, which were successfully taken over and were the key to forming the kingdom of Aceh Darussalam. Early signs of the emergence of the Acehnese domain can be seen from its unification with Lamuri, as evidenced by the Crown of Nature at the end of the 15th century or the beginning of the 16th century. The new era of the kingdom of Aceh Darussalam began when Sultan Ali Munghayasyah succeeded in conquering power in 1520, Pidie in 1521, and Pasai in 1524.

This proves that the Sultan established himself as a strong ruler and controlled the entire region on the northern tip of Sumatra Island. It was stated in Bustan al-Salatin that Ali Munghayasyah was the first Sultan of Aceh Darussalam. This illustrates that Sultan Ali Munghayasyah was the first Sultan to expand the territory of the kingdom of Aceh, where Aceh Darussalam became the ruler of all the great legacies of his predecessor kingdoms, namely Pasai, Pidie, and Daya. (Hadi, 2010).

### 4.1.2. Aceh Center for the Study and Spread of Islam in Southeast Asia

Aceh is the center of the study and spread of Islam in Southeast Asia. Sunan Gunung Jati is one of the saints from Aceh out of a total of 9 popular saints in Java (Hadi, 2010). The Samudera Pasai Kingdom in Aceh was founded by Meurah Silu or Sultan Malik

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Al-Shaleh (Malikussaleh) as the first Sultan of the Pasai kingdom. Pasai is also known as the first Islamic kingdom in Indonesia. This is evidenced by historical facts from Marco Polo's visits at the end of the 13th century and Ibn Battutah in 1345 and 1347, who conveyed important first-hand information regarding the Pasai kingdom in various aspects. Besides that, it is also corroborated by historical evidence with the discovery of the tombs of the king of Pasai and ancient Arabic writings in the Gauteng area, North Aceh.

The location of Aceh is very strategic as a center for the study and spread of Islam in Aceh, Indonesia, and the Southeast Asian region. At the beginning of the 17th century, the Aceh sultanate reached its heyday; during sultan Iskandar Muda, the influence of Islamic religion and culture was considered in people's lives. Until Aceh immediately got the nickname Seuramoe Mecca or Veranda of Mecca. The handle was pinned on none other than because Aceh became a stopover to learn about Islam for people who would depart for the holy Arab land, Mecca.

### 4.1.3. Portrait of Entrepot Aceh

Usai has become one of the most critical entrepots in the Southeast Asian region, predominantly visited by traders from various parts of the world such as Arabia, Turkey, Iran, Gujarat, Malaysia, Siam or what is now popularly known as Thailand, and different parts of the archipelago such as Java. As well as being a best-selling business entity, Pasai has a portrait of abundant natural resources such as pepper, silk, nutmeg, camphor, gold, copper, and others. Crude oil is an essential natural resource produced in the Perlak area, East Aceh. This result greatly benefited the kingdom of Pasai.

## 4.2. Values in Acehese Culture

Acehnese culture and customs are none other than the Islamic values and norms contained therein. Islamic culture and teachings have been well-correlated and harmonious among the people of Aceh for centuries. The primary forms of culture and customs in the people of Aceh are applied in various fields, economic, social, religious, political, legal, and other areas.

The Islamic element has become essential in Acehnese culture and customs development. This can be seen from the strong influence of Islam in the arts such as Seudati, rapa'i, saman dance, and ranup lamp. The seudati dance comes from the word Syahadatain which means two sentences of creed. In contrast, the rapa'i dance comes from the phrase rifa'iyah (tasawuf school), which is one of the names of the founders of the rifa'iyah congregation. Most of the lyrics or poems in these dances contain praises to Allah SWT and blessings to the Prophet Muhammad SAW.

In reality, Islam has become a reference or way of life for the people of Aceh in managing and living in society. This affects all Acehnese people's activities, including culture, starting from the way of thinking, behaving, and interacting. Because Islam is the way of life of the people of Aceh, it is only fitting that Islam is very influential, and there are many Islamic values in various aspects of Aceh. Historical facts show the high respect and glory of Islam for the people of Aceh by making Islam a way of life, and the clerics also have a noble place on the side of the people of Aceh. Appreciation and respect for Aceh's privileges in positioning Islam then received support and clear legal regulations from the government with the issuance of Law Number 44 of 1999 concerning the implementation of Aceh Privileges in Law no. 11 of 2006 relating to the Government of Aceh, in which Aceh is permitted to apply Islamic law.

Acehnese Islam and culture are interesting and unique because of its style, character, and uniqueness. The emergence of terms such as peusijeuk, meunasah, dayah, teungku, imam mukim, seudati, rapa'i, khanduri pang ulee, khanduri tulak bala, and several other typical Acehnese cultures which are evidence of the correlation between Islam and Acehnese culture. The following are some Acehnese cultures that are rich in Islamic values and are purely born from the culture of the Acehnese people themselves, which are their characteristics for the people of Aceh and the Indonesian nation, including the following:

### 4.2.1 Meugang

Meugang or makmeugang is an Acehnese tradition or culture in the context of cooking meat, especially beef and buffalo meat which takes place three times a year, namely before the month of Ramadan, Eid al-Fitr and Eid al-Adha. Meugang is one of the traditions passed down from Sultan Iskandar Muda's time in 1907 and has survived to the current millennial generation. Even the Ministry of Education and Culture has included and determined meugang as a cultural heritage other than objects in 2016. Prof. Ali Hasyimi, in his article entitled Aceh Culture in History in 1983, argued that meugang during the time of Sultan Iskandar Muda was done by distributing the meat to orphans and the poor in large quantities where all costs of the beef were borne directly by the royal treasurer.

This tradition or culture of meugang has survived even though the kingdom of Aceh fell under the hands of the Dutch. However, it's just that the distribution of meat was not carried out by the kingdom or government officials but by Ulee Balang, who was allied with the Dutch for the people of Aceh. This tradition is still routinely carried out by the people of Aceh now, and the dominant community starts the meugang tradition two days before Ramadhan, called small meugang, and the day before Ramadhan, which is called big meugang.

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The current meugang tradition is not the same as during Sultan Iskandar Muda's time because people are now required to buy their meat at the market, not from the portions distributed by the government. A minority of wealthy people distribute meat to people who are poor and poor. Meugang is a bridge or vessel that can strengthen brotherly relations in an Islamic context and harmonize the poor and the rich in society. Especially for migrants, when the meugang period arrives, most of them will return home to celebrate the meugang tradition with their families.

### 4.2.2. Khanduri Maulod or Khanduri Pang Ulee

Khanduri maulod (maulid commemorating the birth of the Prophet Muhammad SAW) is one of the prominent and sacred celebrations for the people of Aceh because it adheres to traditional and cultural values. This maulid celebration was lively and even more vibrant than conventional events such as weddings. This is because the maulid celebration takes place not only on 12 Rabi'ul Awal (according to the Hijri calendar) but is also celebrated for three consecutive months. Starting from Rabi'ul Awal, it is called maulod awal (early maulid), Rabi'ul Akhir is called maulod teungoh (middle maulid), and Jumadil Awal is called maulod akhe (late maulid). The people of Aceh have interesting ways and ideas of welcoming and celebrating the birthday of the noble Prophet Muhammad SAW by holding a significant, even the longest-lasting feast in Aceh.

The maulid celebration is a particular traditional celebration for all Acehnese people. The community gathers at the meunasah or mosque, which celebrates the maulid, inviting guests, orphans, and the needy to eat together and giving compensation accompanied by chanting blessings, remembrance, and prayers. Prayer was full of praise, glory, and hope for the pleasure of Allah SWT. In general, the maulid event is carried out all day long, during the day starting from the typical cooking at the meunasah or the mosque known as Beulangong sauce (Aceh special meat dish) plus a variety of food that will be delivered by people who can feast on the meunasah or mosque (the food is collected in its entirety beforehand to be distributed), accompanied by chanting of remembrance and blessings. There is a joint meal agenda in the afternoon, and in the evening, there will be a religious lecture inviting a teungku or significant scholars.

Besides that, the rich not only celebrate the birthday at the meunasah but also celebrate it at home by inviting relatives, teungku, orphans, and the poor, and inviting the whole community, depending on the ability of the homeowner to have a feast. The birthday celebration positively impacts the people of Aceh, such as strengthening friendly relations, cooperation, and solidarity between the rich and the poor. This celebration gives a distinct impression to the community, where people eating together will reap a sense of intimacy between each other.

### 4.2.3. The Tulak Bala Tradition

The tulak bala tradition (rejecting reinforcements or disasters) is a cultural tradition carried out by the people of Aceh to avoid all disasters. According to T. Abdullah Sakti, one of the elders from one of the Aceh regions, the tradition of rejecting reinforcements was rarely practiced by the people of Aceh entering the 80s. It should be noted that there are two types of rules for leaving mounts among the Acehnese people namely; First, it is enough to reject reinforcements by holding a feast together with blessings, remembrance, tahlil, sunnah hajat prayers, and prayers for safety together; Second, repel reinforcements which are carried out by going around the village carrying torches and accompanied by reading Waqul Jaa-alhaqqu Wazahaqal Bathilu Innal Baathila Kaana Zahuqaan as well as reciting remembrance and other tahlil.

This tradition of rejecting reinforcements is usually carried out and led by religious leaders in their respective areas, either staying in one place or going around the village carrying a torch. This tradition is usually carried out after performing the Maghrib prayer in the congregation, reading Yasin, and then praying the insha prayer in the assembly, followed by the tulak bala tradition. Cultural activities like this aim to ask for help, mercy, and guidance from Allah SWT so that they are avoided or immediately kept away from epidemics or disasters faced by the community. The tulak bala tradition is carried out not only when facing an epidemic or disaster but can also be done before the disaster or epidemic.

### 4.2.4. Khanduri Blang

Khanduri blang (feasting down the rice fields) is one of Aceh's traditional or cultural activities, which is still preserved today. Khanduri blang is a conventional event carried out by the people of Aceh when they go down to the rice fields as a form of gratitude to Allah SWT for the abundance of sustenance obtained from the harvest by sharing it with others. Besides that, the purpose of implementing khanduri blang is to build and maintain kinship ties or, more precisely, to establish family relationships in social life.

Khanduri blang is a routine obligation, and ritual for rice farmers, all members of the community participate, from adults to children, who also revitalize this traditional event. The process takes place close to the rice field area. Later the community will bring all the necessary tools and materials and carry out the cooking to pray together. A prayer reading will lead this by the teungku imum until later. The teungku imum will inform when the land will be plowed and planted with seeds simultaneously. This is done to avoid pests that will attack rice fields.



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Furthermore, when the rice has reached the stage of removing the fruit. Then the people of Aceh will do khanduri porridge and pray together, so the rice is free from pests. And when harvest time comes, the farmer takes seven strands of rice and puts them at the door of his house.

### 4.2.5. Ranup Lampuan Dance

Ranup lampuan dance in the Acehnese language means offering or respect for the venerable. This dance is a traditional Acehnese dance that is offered to glorify guests, such as welcoming royal officials or now known as government officials, which is held directly in open areas such as the royal courtyard or regional office courtyard, as well as a large field. Along with the development of the era, the Ranup Lampuan dance was held to welcome government guests and guests at formal events such as weddings or other guest reception events.

Until now, Ranup Lampuan dance is one type that is still preserved in society, especially as a custom in honoring and receiving guests. This can be seen from every movement and equipment dancers use, such as betel nut served to the guests. You can also see gentle hand movements both right and left by swinging as a form of soft expression, inviting guests to sit in the seats provided, and offering betel nut as a typical symbol or symbol of brotherhood. The Ranup Lampuan dance is also a form of opening or preamble to every intention of the life of the Acehnese people.

### 4.2.6. Rapai Geleng

Rapai geleng is a form of regional cultural art in Aceh. The art of rapai geleng is played by men with a total of 8 to more than 12 people. At first, this game was played by adult men, but with its development, this type of game is now more often played by children and teenagers. This is because the movements played are more unique and fun than adult men. The art of rapai geleng has a central role in voicing the rays of Islam in the land of Aceh because a sense of love for the art culture of rapai geleng creates an understanding and awareness of the people of Aceh how outstanding the contribution of this art is in spreading Islam as well as becoming an Acehnese identity both in shaping people's perceptions, channeling ideas positively, as well as forming an active and critical mindset which is represented in every lyric or poetry of Rapai Geleng.

Rapai geleng gave an important impression and role in the development of Islam in Aceh, which Sultan Iskandar Muda led at that time. At that time, rapai geleng had such a sizeable socio-cultural influence that it formed art. Rapai geleng became a bridge in the development of Islam in Indonesia through musical instruments or art, which originated with one of the great Islamic scholars, Sheikh Abdul Qadir Zailani. Cultural values are so important in the art of rapai geleng. This is reflected in the Acehnese language, which makes people and generations apply and love their language as an identity that cannot be abandoned.

In addition, the values and ethics contained in each rapai geleng lyric also include a profound message regarding grammar and politeness of speech, thus forming a pattern of community behavior as a guideline in social and social ethics, such as saleum, which is uttered as an opening sentence when meeting people. Other. The cultural values in the rapai geleng poetry can be a reference or guide in forming a dynamic mindset for the people of Aceh because the poetry in it not only concerns culture but also contains educational, moral, religious, political, and legal values. In the past, the people of Aceh revived the tradition of rapai geleng through formal and other significant events. Still, it is rare to find rapai geleng, and its existence is almost unknown.

### 4.2.7. Peusijuek

Peusijuek comes from the word sijuek, which means cold. So peusijuek can be interpreted as cooling or cooling. Peusijuek is a form of traditional activity in the culture of the people of Aceh, which is usually carried out to ask for safety, peace, and happiness in the world and the hereafter. This tradition started to develop long ago and is still carried out today. This tradition is often carried out at cultural events such as traditional weddings, thanksgiving, traditional celebrations, and other events to ask for happiness and blessings in life. Various peusijuek practices in Aceh are still being carried out today. This is one proof of the substantial meaning of the peusijuek traditional procession. Peusijuek is one of the essential aspects of the resilience of Aceh's cultural heritage.

The peusijuek tradition in Acehnese culture is often carried out in activities such as Peusijuek Meulangga (to reconcile disputes or disputes), Peusijuek Padee Bijeh (start planting rice), Peusijuek Rumoeuh Baroe (occupying a new house), Peusijuek Peudong (building a new home, dayah, meunasah or mosques and other unique places that you want to develop), Peusijuek Keurubeuen (namely the day of the sacrifice), Peusijuek vehicles, Peusijuek circumcisions, Peusijuek performing the pilgrimage, weddings, and Peusijuek seven months. Not much different from other cultural traditions, peusijuek is also inseparable from Islamic content, containing prayers for safety, praise to Allah SWT, blessings on Rasulullah SAW, and different Islamic values. Because the peusijuek tradition is a correlation between Acehnese culture and the Islamic religion, the people of Aceh are still trying to survive.

So peusijuek is a cultural heritage rich in values and contains a profound religious and social meaning. It is fitting that a tradition like this must be realized to maintain its authenticity and presence among the people of Aceh. Peusijuek is not just a tradition



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but has valuable meanings and values. Apart from being an expression of praise and gratitude to Allah SWT for His mercy and blessings, it is also a request that there is always hope for blessings, safety, and prosperity.

### 4.3. Preservation of Acehese Culture Through Local Content Collections

Some efforts, such as recording, recording, storing, or documenting our efforts in preserving works made by human hands or those born from values in social life which contain knowledge, norms, and values of regional and national culture. The same thing also applies to preserving Acehese culture through local content. Acehese cultural values that have existed for a long time to become an identity and identity will not be possible to maintain, maintain and develop optimally if there are no efforts such as collecting, presenting, processing, and preservation.

Ancient collections and traditions or culture created by the people also have an essential role and value for the region's culture, nation, history, and science. As stated in Law Number 43 of 2007 concerning Libraries Chapter 1 Article 1, paragraphs 3 and 4, all written documents that are not printed or reproduced in other ways both domestically and abroad are at least 50 years old years, have essential values for national culture, history, and science.

The importance of preserving culture in written and verbal form, in the state of art, social, economic, political, or religious values. Even the government pays tribute to people who save, protect, care for, and preserve ancient texts and cultural values. Article 10, paragraph c states that the government can maintain or transfer ancient texts, traditions, and cultural heritage owned by the people in their respective regions to preserve and utilize them.

So efforts such as the collection, presentation, processing, preservation, and utilization of cultural treasures that can be done by utilizing the library's role as a media will later form an intercultural, intertemporal, and intergenerational artistic exploration. Because in this case, the library plays its role as a medium in preserving history and culture in various forms that are appropriate to that culture. By keeping culture through local content by utilizing the role of the library as a supporter, then here the community will be able to know, use, develop and better protect local cultural heritage through various collections that continue to be preserved and managed by the library, both the regional library and the Aceh provincial library in particular and Indonesia in general.

To build a nation's civilization, the emergence of foreign cultures needs to be considered and considered. Because the influence of outside culture is impossible to avoid, it is also impossible to completely fortify oneself. This is because a closed culture and unable to open up will only tend to stagnate. Over time the vacuum will only decrease until it finally becomes extinct. So the existence of intercultural correlation in the future will provide a strong foundation and enthusiasm for developing and building local, national, and international civilizations. Cultural values become the basis for the formation of society. For this reason, efforts to preserve culture through local content, starting from the stages of collection, presentation, processing, and preservation, are essential, especially for the Aceh region, which is rich in cultural heritage.

Through the preservation and utilization of local culture, the public will later find out cultural information managed by the library in the form of books, documentary films, and ebooks. It can be a new gateway in welcoming the formation of local and national civilizations. It is hoped that the results of preserving Aceh's culture will become an acculturation of various cultures in Indonesia, which will indirectly form a cultural society in Indonesia, and Aceh will be safe in maintaining and maintaining its identity in the eyes of Indonesia and the world.

## 5. CONCLUSION

The cultural diversity of the Acehese people is an exciting thing and has its uniqueness as an identity and identity for both Aceh and Indonesia. Aceh's cultural wealth can be a formula for shaping character and building civilization for future generations. So, for this reason, this cultural diversity needs to be maintained, cared for, preserved, and utilized through local content, starting from the collection, presentation, processing, preservation, and utilization. In particular, this can be done by regional libraries with unique authority in preserving assets. Culture. This needs to be done to maintain the treasures of Aceh's indatu heritage so that the influences and changes of time do not marginalize it.

In addition, through preserving culture, people will be able to know and love their own culture more as an asset that should be maintained because not all regions or countries have a similar culture. Culture is unique and has its characteristics, which are expected to become an attraction and roots in building the civilization of Aceh in particular and the Indonesian people in general.

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## An Existence of Traditional Marriage Forms and Implications in the Community of Kei Southeast Maluku



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**ABSTRACT:** This research is analysis about the forms of marriage in the Kei ethnic community develop and adaption themselves to contemporary developments. Therefore, a form of marriage is determined by the method or mode of the man who carries out the marriage, and also depends on the availability of marital property and the consent of the woman's parents, or vice versa. There are seventh forms of customary marriage in the Kei community with a differentiation of the form of the traditional procession. In conclude, the type of marital property and its legal implications. Show that any form of marriage by the level an existence of the male side.

**KEYWORDS:** form of marriage, implications, Kei society

### INTRODUCTION

In the state of Indonesia, there is a nation state consisting of various ethnic groups, races, religions and between groups, who inhabit the archipelago from Sabang to Merauke and from Miangas to Rote. It is a pluralist society with different customs and cultures. These various differences are the wealth of nation should be preserved and developed to contribute the civilization in the Indonesian nation. This especially facing with more various challenges in today's millennial era.

Furthermore, an Indonesian people having a mindset of "integral harmonious participation in the life of the universe" crave a harmonious, harmonious, dynamic-balanced atmosphere in social life. One of the smallest community groups in living together such a family. The formation of families in human civilization is usually through marriage institutions. In the context of customary law communities recognize various forms of marriage, each with different characteristics from one ethnic group to another. In today's millennial life, it is interesting to examine the relevance of these forms of marriage to exist in modern life today.

Married life is an existence of other forms about marriage among the various tribes that live in this archipelago, such the Kei tribe in the Southeast Maluku region. In order to an existence of the Kei tribe with the customary law of Larvhul Ngabal needs to be explored, documented, preserved and developed in line and in harmony with the values of modern life today. Nevertheless, the forms of marriage of the Kei community, full of moral messages that are not widely known, are understood and practiced by the younger generation, especially those who live in urban areas and overseas. Based on this thought, this research on customary law will reveal various forms of marriage and their social and legal implications in the reality of the life of the Kei people of Southeast Maluku.

### RESEARCH METHODS

This research has a research method such the form of customary marriage and its implications in Kei. Southeast Maluku is a normative legal research whose implementation seeks and finds customary law norms, especially norms regarding the form of marriage that lives and develops in the Kei community.

Representing for this research requires data both primary data originating from respondents and secondary data originating mainly from "legal materials". A primary data needed is in the form of information about marriage. Based on the purposive sampling technique used to determine some respondents, which were customary officials who considered to have competence with respect to the research objective.

Legal materials as the main source of secondary data for this research is consist of primary legal materials, secondary legal materials (literatures are explained with primary legal materials), and tertiary legal materials (legal dictionaries, encyclopedias, and others). Primary data were obtained from 10 traditional official respondents who were spread from Tubungil village to Hollat village.

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Data and information were obtained through interview techniques using an interview guide instrument with a few variety of questions that had been prepared in advance, then the respondents' answers were deepened. Meanwhile, this research also need to obtain secondary data through document study. A data processing and analysis techniques includes data reduction, simplification and presentation of data, and verification of research results to obtain conclusions.

### **DISCUSSION**

#### **Forms of Marriage**

##### **Customary Law Community**

In the conception of Customary Law, there are many more various forms of marriage. Law Number 1 of 1974 in Article 1 stated that a marriage is an inner and outer bond between a man and a woman as husband and wife with the aim of forming a happy and eternal family based on God Almighty.

Civil law describes that the meaning of marriage as an inner bond between a man and a woman as husband and wife. According to customary law, marriage is customary law rules that regulated by the form of marriage, procedures for application, marriage ceremonies, and termination of marriage, then suitable with Indonesian indigenous peoples. Some rules are customary marriage law in various regions in Indonesia are different, since the nature of any community, customs, religion, and beliefs of the community are different. There are many mixed marriages between different ethnic groups, customs, and religions. A progress of the times is caused a shift in marriage customs.

Basically, the forms of marriage can be viewed from two aspects, such as:

##### **a. Aspects of the number for husband or wife**

In terms of a number of husbands or wives, the form of marriage consists of:

- 1) Monogamous marriage is a marriage between a man and a woman. This form of marriage is the most ideal and in accordance with religious teachings and the Marriage Law.
- 2) Polygamous marriages are marriages between a man and more than one woman or a marriage between a woman and more than one man.

Thus, this form of marriage can be further divided into two types, such as:

- a) Polygyny such marriage between a man and more than one woman
- b) Polyandry such marriage between a woman and more than one man. For example, Eskimos, Markesas people in Oceania, Filipinos on Palawan Island and so on.

##### **b. Aspect about husband-and-wife origin place**

When viewed from the perspective of any origin between husband and wife, the form of marriage consists of:

- 1) Exogamous marriages are marriages between men and women of different ethnicity and race. For example: people in Tapanuli, Minangkabau, and South Sumatra.
- 2) Endogamous marriage is a marriage between a man and a woman who come from the same ethnicity and race. For example: the Toraja people.
- 3) Eleutherogamy marriages such marriages that do not recognize restrictions or requirements as a case with an endogamy system and an exogamy system. For example: the people of the Special Region (DI) Yogyakarta.
- 4) Homogamous marriage is a marriage between a man and a woman from the same social strata. For example: rich people tend to marry children of rich people, Batak people tend to also marry children from Batak families, and so on.
- 5) Heterogamous marriages are marriages between men and women from different social strata. For example: people of noble descent marry ordinary people, Batak people marry Sundanese.

2. In addition to the forms of marriage above, there are also other forms of marriage, such as:

##### **Cross Cousin's Marriage**

It is a marriage between cousins such a child of the mother's brother (uncle's son) or a child of the father's sister. For example in the Batak area (pariban)

##### **Cousin Parallel Marriage**

It is a marriage between the children of their father's brother or their mother's sister.

##### **Eleutherogamous Marriage**

It is someone who is free to choose his mate in marriage, it would be from his own clan or from other clans. For example: in communities in Java, East Sumatra, Kalimantan, Minahasa, Ternate, and Bali

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### **3. Forms of Traditional Marriage**

There are several community structures known in Indonesia, such as patrilineal, matrilineal, parental, and mixed community structures. A difference about composition of the community then gave birth to different forms of customary marriage. Some forms of customary marriages exist in Indonesian society are as follows:

- a. Forms of marriage according to kinship structure
- b. Marriage in a patrilineal kinship arrangement, women move into the kinship of their husbands and break away from their original relatives.
- c. Marriage in the matrilineal kinship structure, although there has been a marriage, but each husband and wife remain in their respective relative groups, while children are included in the mother's kinship group.
- d. Marriage in the arrangement of parental kinship, after marriage, husband, and wife enter into the husband's relatives and wife's relatives. Children also belong to their father's relatives and their mother's relatives.

### **Honest Marriage**

Customary law in a patrilineal society, for example in Batak customary law, which is referred to as boli, tuho, parunjuk, pengoli, and sinamot as a handover. Other regions that use a form of honest representation are Gayo, Nias, Lampung, Bali, Timor and Maluku.

This meaning of honest means magical religious with giving sinamot does not talk about buying a daughter but maintaining a balance between two parties.

Honest marriage by giving (paying) honest money (goods) is a customary obligation. In this case, an application is made that must be fulfilled by male relatives to female and relatives to be distributed, then relatives (marga or tribe) elders. In general, honest marriages occur in customary law communities that maintain a patrilineal lineage, as happened in the Gayo, Batak, Nias, Lampung, Bali and Maluku areas. Honest money or goods in each region are called by different names, for example:

- a. Gayo, money or honest goods is called with show
- b. Batak, money or honest goods are called with Boli, Tuhor, Parunjuk, or Pangoli
- c. In Nias, money or honest goods are called with Beuli Niha
- d. In Lampung, honest money or goods are called with Segreh, Seroh, or Daw Adat
- e. In Kei Maluku, honest money or goods are called with Beli or Wilin

Honest money or goods are carried out by some relatives (marga or tribe) about a prospective husband to the relatives of prospective wife as a substitute. Additionally, the release of a bride out for customary citizenship such her father's legal alliance, moving and entering. After marriage, a wife is under the authority of her husband's relatives, her life and death. There are any responsibility of the husband's relatives, legally domiciled, and living quietly with the husband's relatives. In general, in the form of honest marriage, the 'abstinence to divorce' custom applies, nevertheless it is happy or difficult for a wife to live under the authority of her husband's relatives.

### **Semanda Marriage**

Generally, semanda marriages occur in matrilineal indigenous communities, in order to maintain the maternal (female) lineage. In a semanda marriage, the prospective groom and his relatives do not give honest money to the woman, even as applies in Minangkabau. There is a customary application from a woman to a man. During a marriage, the husband is under a power of wife's relatives and their legal position depend on form of marriage. The forms of simultaneous marriage that apply in Minangkabau are:

- a. Semanda rajas, means husband and wife are in balance or equal, both on the wife's side and on the husband's side.
- b. Semanda loose, means that the husband follows any wife's or matrilineal residence.
- c. Semanda is free, means that husband remains with his parents' relatives.
- d. Semanda waiting, means that husband and wife reside on the side of wife's relatives, while waiting for wife's sister (in-law) to be independent.
- e. Semanda ngangkit means that husband takes his wife to be successor of the husband's mother's lineage, since a mother does not have daughters.
- f. Semanda son of trade or semanda bird, means that husband does not stay at the wife's place, but comes from time to time, then leaves again.

In general, in the form of marriage about the wife's power plays a more important role. Many of these forms about marriage are no longer valid nowadays, especially since the enactment of Law Number: 1 of 1974 concerning Marriage.

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### **d. Free Marriage (Independent)**

According to the form of free marriage or independent marriage applies to customary law communities such parental. It has happened to the Javanese, Sundanese, Acehnese, Kalimantan and Sulawesi communities, as well as to modern Indonesian society by family or relatives with no longer interfering by hands in the family / household. This form of marriage is required by Law Number 1 of 1974 concerning Marriage, in which the position about rights of husband and wife. After marriage, husband and wife separate from the power of their parents and their respective families and build their own family or household and live independently. Some parents have had both parties only provide provisions for a survival of bride and groom's household with gifts or inheritance in their marriage.

### **e. Mixed Marriage**

This form of mixed marriage is also known in customary marriage law. For example, there is a clan appointment ceremony for a husband/wife who not from Batak clan, now, after marriage, the clan/boru clan appointment can be carried out.

According to customary law, marriages are occur between husbands and wives of different ethnicities, cultural customs, and/or different religions. Meanwhile, mixed marriages according to Law Number 1 of 1974 concerning between husbands and wives of different nationalities.

An occurrence of mixed marriages raises legal problems between customary law and or religious law, such as a law will be treated in the implementation of a marriage. Basically, customary law or religious law does not justify the occurrence of mixed marriages. But, in its development local customary law provides a way out to overcome the problem, then mixed marriages can be carried out.

### **f. Running Marriage**

In customary marriage law, if a man has secretly agreed with a woman to elope, or a man secretly takes a woman, or the woman comes alone to the man's place. This form of customary marriage in Palembang is known as "belarian", in Bali it is "ngerorot", in Ambon it is called by "lari bini", in Flores it is called by "kawin roko".

Elopement can occur in indigenous peoples, but the most common among the Batak, Lampung, Balinese, Bugis or Makasar people, and Maluku. In area, elopement is a violation of culture, there are rules on how to deal with. Actually, elopement is not a form of marriage, but it is a system of application. Because of the event of elopement, honest, marital, or free marriages can occur, depending on the circumstances and negotiations of the two parties. The elopement system can be divided into two form such as:

a. Elopement together, in Dutch called vluch-huwelijk or wegloop-huwelijk, is an act of begging to carry out any marriage with a consent of a girl. A way for the bachelor and girl agree to elope and at the appointed time go on a run together. The girl was secretly taken by some bachelor's relatives from her residence, or a girl came alone to the bachelor party's residence, then suitable with a traditional martial law.

b. Forced elopement, in Dutch called schaak-huwelijk, is the act of escaping by a girl by deceit, or by force, and not with the girl's consent, but not according to the traditional rules of belarian. This forced elopement system, if it occurs, is often passed on by relatives who feel their honor has been violated to the police by using the provisions of Article 332 of the Criminal Code (KUH Pidana) as the basis for complaint.

### **g. Serving Marriage**

Continuation of a pending honest marriage about devotion to be honest, which is paid off usually husband and wife will work for the wife's parents. Their children are still under the supervision of in-laws and included in the clan for the father-in-law. The practice of customary marriage law is known in Batak as mangdingding, in Bali as nunggonin, and in Lampung as erring beli.

### **h. Continuing Marriage**

This is a continuation of an honest marriage with no need for honest repayment. This marriage took place since the first wife who died was married to her sister. In Tapanuli, this continued marriage is called with mangabia, while in Java it is known as coral wulu.

### **i. Marriage Replaces**

It is a continuation of an honest marriage and there is no need for honest payments, but an incident that occurred in the second marriage. Since, the first husband died, nevertheless the husband's brother was married off. In Tapanuli, this change of marriage is called pareakhon, in Palembang it is replaced by mats, and in Java it is called bedun.

### **j. Marriage Takes Children**

This marriage occurs in patrilineal kinship, where the man does not need to pay honestly, with an intention of including his son-in-law into his family. His descendants become the successors of his grandfather's line. This form of marriage can also occur in the



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semendo community, which is called the marriage of cemento taking children, in order to continue the lineage according to the female line.

Marriage taking children in this patrilineal concept occurs since the customary law of marriage allows a father to take a son to be married to his daughter. In this case, an intention that the man becomes his own child and his descendants follow the clan (klan) of his son-in-law.

Due to honest payments, the son-in-law and his descendants are officially separated from their original clans, this happens a lot in South Sumatra.

### **k. Karang Walu Marriage**

This form of bilateral marriage occurs in Javanese society, or *tungkat* in the language of the Pasemah community. The form is a widower marriage with a woman from his late wife.

### **l. Rich Marriage**

The form of marriage between a rich man and a poor woman, or conversely, a marriage that protects with the *kagelung* between a rich woman and a poor man

### **m. Hanging Marriage**

This form of Hanging Customary Marriage occurs because his future wife is still a minor, while a man as adults. During a certain time, they are not old enough, his wife (who is still a minor) may not mix with her husband. On the other hand, a presence of her husband for a daughter-in-law as a free labor by the family.

### **n. Blended Marriage**

Marriage is a marriage bond between a man and two or more women at the same time. In areas that know the layers of society, women from a higher (same) layer are made the first wife and women. Additionally, a lower layers are made the second wife and so on. The married wives (concubines), each with their children stay and form a house apart from each other.

## **Kei Tribe Marriage Forms**

In human life, it turns out that humans cannot live alone. Individual human beings who need each other not only in social life, but also in the life that forms household *mahligai*. People's lives cannot be separated from people's lives, as expressed by a prominent Roman philosopher, legal and political expert named by Marcus Tullius Cicero (106-43 BC) that *Ubi Societas Ubi Ius*. Society means that there are two people (the smallest community group) socializing where there is law. Peace and justice from society can only be achieved if the legal order is proven to bring justice. Likewise, community groups who wish to form households, crave happiness, prosperity in justice based on the One Godhead.

Marriage in the Kei community, is a sacred legal act, which not only involves the male and female families but also actively involves all families, both clans (*faam*) and families in *periparan* relationships. An involvement of extended families and even other social institutions is intended to, apart from helping the bride, and groom lead to the happiness of married life, then being responsible for the continuity of household life. Eventually, it is also being responsible for any assets that must be paid to the woman, as a manifestation of restoring. A cosmic balance has been disturbed due to marriage, as stipulated in the law of *Larvhul Ngabal*.

### **The Kei people recognize the following forms of marriage:**

#### **Tai reet fid-Kebel taha lim**

The first form of marriage is *Tai reet fid-Kebel taha lim* *Tai reet fid-Kebel taha lim* such as climbing stairs and doors-holding the hand of a woman who is about to be married. This means that the perfection of marriage, both processes, procedures, stages based on the law of *larvhul ngabal* are fully implemented. This is an honorable and noble form of marriage in the tradition and law of *larvhul ngabal* in the Kei Islands.

The form of marriage is the same as honest marriage in a Patrilineal Society. Honest marriage is a marriage with the payment of property (goods and money), which is called naming *beli* or *welin*, when an application also made to be distributed to the elders (tribes and clans) of a women. Honesty as a substitute sign for women to leave and move from their tribal relatives, their *faam* and into the male family/husband's association. Honesty in marriage as a substitute signs of releasing the bride from her father's legal alliance, moving, and entering into her husband's legal alliance. This is a principle in customary law that in marriage women are not bought, but property will given as a return to the cosmic balance, a substitute for the presence of women in the alliance, relatives, and family for her father.

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Some stages of the Tai reet fid-Kebel taha lim marriage are manifested in the stages of obtaining customary marriage assets as follows:

### **Saan Sabak (offering, application)**

The proposal ceremony is carried out by the family of a male relative who visits a house of his parents/relatives to propose to the woman he loves. The procession that will be passed, among others, will be asked by women who represent the elders, whether the application is accepted or rejected.

### **Ba Soloik II (female side visiting male side)**

This stage is a return visit from woman to man (regardless of whether the application is rejected or accepted). However, it is usually an application that accepted and preceded by various family approaches for agreement.

### **Ubut rovhwolot tatau (engagement)**

This engagement stage is a sign and announced by a man and a woman also ready for the marriage stage. This engagement is a sign of prohibition that a man and woman already own/own each other. There is no longer room for interference by men or another woman. This is where the bond called by yan ur-mangohoi arises.

Yan ur means that female family/relative group; mangohoi means: family group / male relatives. The meaning is a unity of a few parties, who are bound as a result of a marriage between a man and a woman and as the responsibility for two large families (fam).

### **Doc vhaan yaib-Kebel taha lim**

This stage for the customary court to regulate an implementation of marriage as well as any delivery about marital property, according to the following stages:

#### **Really good**

Ngeban Tenan is carried out in a customary court in the form of the main customary assets that must be brought by the male family (yan ur) to the female family (mangohoi), then as a main forms of customary property (ngebaan tenan) are:

- a. Saisaid (Portuguese small ancient cannon)
- b. Frozen (Medium sized cannon)
- c. Chest (gong)

In the trial procession, it happened that the party who entered and was going to put the real ngebaan in front of the trial, the mangohoi party would hand over clothes, cloth, even in an envelope containing money and handed. It over to the people from a side who brought the ngebaan tenan. In this procession, yan ur party also handed over a customary property to the mang ohoi party who was entitled to receive it, such the father and brother for prospective bride, in the form of:

- (1) rubuil Yahau Duan
- (2) Waung Tamtam.

This submission of the main customary property is a form of seriousness in the application.

### **Ngelan custom**

Ngelan custom is part of a traditional procession in the form of handing over with some customary property (gold) to the mang ohoi party who considered with the most meritorious, among others:

Mother of the prospective bride, members who do not agree with a prospective bride marrying. Eventually, a property given to the mother of a bride and groom is in the form of gold, as a tribute to the mother's milk who has raised her child. In today's practice, traditional gold treasures are replaced with money.

### **Tamtam money**

A third part in a traditional procession called with waung tamtam, which is the handing over of any customary marriage property to the ur mangohoi party. It has close kinship with the prospective bride, such as Mata Rumah, faam, clan, and parties who contribute to launching the customary assembly. According to the traditional figure of Ohoi Tuburngil Maksimus Bukutubun, waung tamtam, known as renak in the form of saisaid, was handed over by the yan ur party, the mang ohoi party compensated by handing over food ingredients for half of the estimation assets given by the yan ur party.

### **Taha Lim Cable**

Kebel Taha Lim is the final stage of Tai reet fid-Kebel taha lim such marriage procession, which is marked by the completion of a customary marriage property from both parties, such as yan ur and mang ohoi. A kind of prospective bride will be given marriage advice by the woman who is elder in family relatives, then the prospective bride comes out of the room and meets the

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groom. It is usually asked about the relationship between two briefly, for example, whether this is a woman who will become a prospective wife. This also followed by a traditional marriage where both are tied with a sarong. Whose ends are wrapped in gold bracelets, a sign of the union of husband and wife with an advice that given again by one or two peoples. Some elders in the faam/marga community, followed by prayer, then the rightful party has the right to take a wife from mang ohoi side. For another side, this also take her to a house of the man's parents (husband) accompanied by dance and or the sound of tifa music, gongs, songs, flutes and cheers.

### **Ftu Fboir (elope, steal)**

The second form of marriage is Kawin Lari (Ftu Fboir) with a form of marriage that occurs without going through an application and engagement. This causes of marriage of Ftu Bboir as follows:

#### **a. Parents don't agree**

An occurrence of elopement is many more parents of women do not approve of their child's relationship, various subjective reasons from parents, among others, men do not have jobs. There are lazy, often make trouble, rarely worship, low education, or problems between parents in the past and so on. On the other hand, it is rare for male parents to disagree, because women's behavior does not match any expectations for the male parents, widows, never married without marital ties, and so on.

#### **b. Differences in social stratification**

The first difference in social stratification is the men do not own a land and the hamlet, which will later be used to support their daughters. Since, one men or women does not come from the same customary group (in Kei it is known as Mel-mel: noble group; Ren-ren: worker group who helps every work of the nobles both in government and development and war ; Iriri: is a group whose life is full of misleading mystical practices, suanggi science).

#### **c. Do not has enough wealth for the marriage dowry**

Disapproval of the relationship by the parents since a man does not has enough customary property, or money as a substitute for customary property, to be handed over to the woman's parents as in the form of a Tai reet fid-Kebel taha lim marriage.

#### **d. Differences in beliefs**

Parental disapproval (although rare) on the relationship between a man and a woman who love each other due to different religions (disparis cultus) or different churches (mixta religio)

#### **e. Tub Riin**

The third form of marriage is Tub Riin such a marriage that carried out, since some parents of a man do not approve for their child's relationship with the woman he loves. If the woman's parents agree to their child's love relationship, they will inform for a man. Nevertheless, if the woman's parents do not agree, they will expel or detain the man in his house to ask for accountability. For example, paying for certain customary assets because of the shameful disgrace in his house.

#### **f. Kerik Tamar Nger**

The fourth form of marriage is Kerik Tamar Nger that also called by Vhat Yanan marriage, occurs since a man gives himself up to become his wife's family later. Normally, a children born from a marriage will use the faam or clan of the woman. In this case, any marriage occurs since a men are unable to meet a numerous demands for culture and the women's family regarding to the customary property of marriage.

#### **g. Vhat Stukar**

The fifth form of marriage is Vhat Stukar

This form of Vhat Stukar marriage occurs when there is a simultaneous marriage between a man and a woman. A same womb with a woman and another man of the same birth, cross-marriage between two families both men and women at the same time become yan ur and mang ohoi or vice versa.

#### **h. Fraung**

The sixth form of marriage is Fraung, such marriage between the widower and the sister or cousin for a wife who has died or vice versa the widow marries the brother, sister or cousin in her husband who has died. The purpose of this fraung form of marriage is to look after and care for the children. However, father and or stepmother who are still relatives will pay attention to them.

Generally, Fraung in the form of marriage in Indonesia is called with a marriage instead of mats. This form of marriage is carried out with reasons for the continuation of brother's family life, then the husband's younger brother marries his brother's wife. A goal is to ensure family life. His sister's children will be raised just as he raised his own. On the other hand, if his brother's wife dies while his wife still has an adult sister, then she may marry her brother's husband. In a quite contrast, marriages in Kei

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are called mating instead of mats. This type also occurs in the Arfak community in West Papua, and the Biak Papuan tribe, known as the byuk fedwer.

### Tu Vhaur

The seventh form of marriage is Tu Vhaur, which is a marriage performed by a widow with a man outside the relatives for her late husband. The property given by a male party is in the form of Vhaur vhungan sus vhahan. It means that the property is given as a symbol of any maintenance of his deceased father and the mother's milk left by his marriage. In reality, when children are still small, they will continue to follow their mother and live with their stepfather, but they are not allowed to replace their faam or clan with their stepfather's clan.

### B. Implications of Forms of Marriage in Kei Traditional Marriages

The implications of marriage in the Kei (Evav) community vary according to the form of marriage. I describe that any differentiation in the table as follows:

No	Form of marriage	A participation	Traditional procession	Property sides	Implication of law and society
1	<i>Tai reet fid-Kebel taha lim</i>	<i>Yan ur dan Mangohoi</i>	<i>Saan sabak; Ba soloik il; Ubut rov- Wolot tatau; Dok vhaan yaib-Kebel taha lim</i>	<i>Beli atau welin; Ngeban Tenaan : (sadsaid, beku, dada); Adat Ngelan</i>	Perempuan menyatu dengan keluarga suami dan kerabat suami;
				dan <i>Waung Tamta</i> : mas, kain, uang, bahan makanan.	ia bukan lagi milik keluarga dan kerabat orang tuanya, tetapi telah masuk menjadi keluarga dan kerabat suaminya,  dan berhak menggunakan faam atau marga suaminya,  berhak menikmati harta yang tak terbagi, berhak atas pemanfaatan dan pemilikan harta yang dimiliki oleh suaminya.  Istri tidak lagi berhak atas kenikmatan dusun orang tuanya, kecuali yang dihibahkan kepadanya.

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2	<i>Ft u Fb oir</i>	<i>Yan ur dan Mangohoi</i>	Sidang adat penyelesaian kewajiban awal: <i>Melaan</i> ;	<i>Melaan</i> : berupa <i>said-said, beku, gong, mas, uang</i>	-Memalukan ( <i>vameat</i> ), tidak etis. Tinggi nya potensi konflik,
			<i>Sdevhon Yan Ur Mangohoi-Dok Vhaan Yaib</i> . Penetapan waktu pernikahan adat dan Agama.		Namun manakala terjadi perkawinan maka akibat hukum sama dengan bentuk perkawinan yang pertama yakni: <i>Tai reet fid-Kebel taha lim</i>
3	<i>Tub Riin</i>	Pihak lelaki dan perempuan serta pihak Mediator: lazimnya <i>Soa, Orangkai</i> atau <i>Rat</i> ;  Manakala kesepakatan terjadi perkawinan baru ada <i>Yan ur dan Mangohoi</i>	Ada Prosesi sidang adat ( <i>Sdevhon Adat</i> ) dipimpin oleh Pihak ketiga sebagai mediator; kedua belah pihak baik laki-laki maupun pihak perempuan .	Manakala hasil persidangan adat dilakukan dan pihak laki-laki siap, bersedia dan sanggup menyelesaikan harta utama adat dan harta lainnya yang ditentukan dalam sidang adat, maka harta adat berupa <i>said-said, beku, gong, mas, uang, hasil panen dan lain-lain</i> .	Memalukan, potensi konflik sangat tinggi;  Manakala sudah ada kesepakatan dalam rapat maka hak-hak suami istri sama seperti: bentuk perkawinan <i>Tai reet fid-Kebel taha lim</i> .
4	<i>Kerik Temar Nger</i>	Tidak ada Para Pihak	Sidang adat ( <i>Sdevhoon</i> )	Tidak ada harta utama Adat, dan	Suami tetap menggunakan faam atau

		Yang ada hanya Keluarga Perempuan yang mengatur segalanya.	oleh Keluarga Perempuan, guna mengatur dan menentukan waktu yang tepat untuk dinikahkan.	harta lainnya.	<p>marganya, tetapi anak-anak yang dilahirkan dari perkawinan tersebut menggunakan faam atau marga ibunya.</p> <p>Yang menentukan dan memimpin tidak secara terang-terangan dalam keluarga adalah Istri.</p> <p>Suami mengolah harta bawaan dari istri, karena dalam perkawinan seperti ini istri tetap menikmati, memiliki harta keluarga seperti saudara lelakinya.</p> <p>Suaminya dapat mengolah dan mengelola harta dari keluarganya kalau memang ada. Karena si suami melakukan</p>
					<p>perkawinan masuk ini akibat tidak mampu menyelesaikan kewajiban sebagaimana lazimnya dalam perkawinan adat Kei.</p>
5	<i>Vhat Stukar</i>	<i>Yan ur dan Mangohoi</i> secara timbal balik	<i>Kebel Taha Lim;</i> Proses perkawinan Adat yang dilakukan karena	Tidak ada harta kawin	Perempuan menyatu dengan keluarga suami dan kerabat suami;



			seimbang, karena perkawinan silang antara dua kakak beradik denga dua kakak beradik lainnya.		<p>Istri bukan lagi milik keluarga dan kerabat orang tuanya, tetapi telah masuk menjadi keluarga dan kerabat suami,</p> <p>dan berhak menggunakan <i>faam</i> atau marga suaminya,</p> <p>berhak menikmati harta yang tak terbagi, berhak atas pemanfaatan dan pemilikan harta yang dimiliki oleh suaminya.</p> <p>Istri tidak lagi berhak atas dusun orang tuanya, kecuali yang dihibahkan kepadanya.</p>
6	<i>Fraung</i>	Tidak ada para pihak dalam perkawinan bentuk <i>Fraung</i>	Prosesi yang ada hanya <i>Kebel taha lim</i>	Tidak Ada Harta Adat Kawin Janda kawin sepupu suaminya lazim ada harta, namun sebagai simbol saja	Janda berhak atas harta asal dari suami barunya, kekayaan bertambah, dan sebaliknya suaminya juga berhak atas harta peninggalan suami istrinya dan anak dari istrinya.

7	Tu Vhaur	<p>Yan ur dan Mangohoi ; Mangohoi di sini bukan keluarga dan orang tua janda tersebut, melainkan keluarga mendiang suaminya . (hubungan dengan orang tua biologis dan kerabatnya sudah putus, kecuali harta adat kawin belum dilunasi).</p>	<p>Prosesi yang ada hanya <i>Kebel taha lim</i>: Perkawinan Adat dan agama.</p>	<p><i>Ngeban Tenaan</i> :(<i>sadsaid, beku, dada</i>); Adat <i>Ngelan</i> dan <i>Waung Tamta</i>: mas, kain, uang, bahan makanan. (Jumlah dan kuliatas harta adat kawin tidak sama dengan perkawinan <i>Tai reet fid-Kebel taha lim</i> Harta adat kawin tersebut diterima oleh anak-anak Janda tersebut dan keluarga mendiang suaminya.</p>	<p>Janda menyatu dengan keluarga suami dan kerabat suaminya yang baru;</p> <p>ia bukan lagi milik keluarga mendiang suami dan kerabatnya, tetapi telah masuk menjadi keluarga dan kerabat suaminya yang baru,</p> <p>Berhak menggunakan faam atau marga suaminya yang baru,</p> <p>Janda yang telah kawin lagi itu berhak menikmati harta dan berhak atas harta yang dimiliki oleh suaminya.</p> <p>Janda yang kawin lagi tidak berhak atas dusun dan harta mendiang suaminya, kecuali harta yang dibawa olehnya ke dalam perkawinannya yang baru.</p>
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### CONCLUSION

The forms of marriage in the Kei tribe have developed and adapted themselves to contemporary developments. This is determined by a method or mode for a man who carries out the marriage. It also depends on the availability of marital property and a consent of the woman's parents, or vice versa. There are seventh forms of customary marriage in the Kei community, with a differentiation of the form of a traditional procession. In conclude, the type of marital property and a legal implications with any form of marriage such a level of existence for male side.

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# Comparing the Safety and Efficacy of Two Different Synbiotics in the Treatment of Infantile Functional Constipation Resistant to Non-Pharmacological Therapy: A Randomized Clinical Trial



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## ABSTRACT:

**Background:** Recent evidence emphasizes the positive effect of probiotics and synbiotics in the treatment of functional constipation in childhood, but no study has surveyed the effectiveness of synbiotics in improving the clinical conditions in infants  $\leq 6$  months suffering from functional constipation, so we performed this study.

**Aims:** Comparing the efficacy and safety of two types of synbiotics including PediLact<sup>®</sup> (Zist-Takhmir Co., Tehran, Iran) drop containing *Bifidobacterium infantis*, *Lactobacillus reuteri*, *Lactobacillus rhamnosus* plus fructooligosaccharides with BB-Care<sup>®</sup> (Zist-Takhmir Co., Tehran, Iran) drop containing *Bifidobacterium lactis* BB-12 plus fructooligosaccharides in the treatment of infantile functional constipation.

**Study Design:** This trial was performed on infants less than 6 months of age who met the ROME IV criteria for infantile functional constipation. The patients were randomly assigned to receive PediLact drop (n = 44) or BB-Care drop (n = 45) for one month and were evaluated on the seventh day and at the end of the first month.

**Results:** A significant downward trend was revealed in the responsive rate of every clinical symptom in both intervention groups but BB-Care was more effective than PediLact in improving the frequency of weekly defecation. Both synbiotics also improved significantly all symptoms of constipation in all types of feeding methods after one week and one month of intervention (primary outcomes). There was no side effect of synbiotics through intervention (secondary outcome).

**Conclusions:** This study shows that both synbiotics improved significantly all symptoms of functional constipation after one week and one month of intervention apart from type of feeding method in infants less than 6 months of age. Due to the greater effectiveness of BB-care in increasing stool frequency, *B. lactis* may play a more prominent role in this age group. This study has been registered at the Iranian Registry of Clinical Trails (IRCT20160827029535N7).

**KEYWORDS:** Infant, Functional constipation, Synbiotics, Treatment

## 1. INTRODUCTION

Constipation is a common problem in children, with 3% of referrals to general pediatric clinics and 30% of referrals to pediatric gastroenterologists in developed countries for children with constipation [1]. Although the prevalence rate of childhood constipation appears to be lower in Eastern countries as a result of using a high-fiber diet, children around the world still suffer from it [2,3]. Organic causes to justify constipation are not found in 90% to 95% of children [4,5]. The rate of constipation is different, ranging from 2.5%- 79% in adults to 0.7% -29.6% in children, throughout the world [6]. About 60% of children with constipation are treated with laxatives and a significant proportion need long-term treatment [7]. In one study, 52% of children still had constipation after 5 years [8]. In addition, about 30% of children with constipation, even after puberty, experience complications such as incontinence and painful bowel movements [7]. Therefore, the effectiveness of current therapeutics for the treatment of childhood constipation and their long-term impact on patients' quality of life should be reconsidered. On the other hand, the development of novel treatments for constipation in children and infants is necessary.

Previous studies have shown that probiotics are effective in treating inflammatory bowel disease, traveler's diarrhea, and constipation [5,9]. In recent years, there has been a great tendency to use probiotics in functional gastrointestinal diseases. Probiotics contain beneficial bacteria that can be used to alter the composition of gastrointestinal bacteria [10, 11]. Prebiotics

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contain certain nutrients such as fructooligosaccharides and galactooligosaccharides which can be used to affect the arrangement and function of gastrointestinal bacteria. [12, 13]. In this regard, synbiotics are a mixture of probiotics and prebiotics (most often oligosaccharides selectively utilized by bacteria), which act synergistically to promote the growth and survival of beneficial microorganisms in the gut [14, 15]. It has been well demonstrated that synbiotic intake can selectively modify microbiota composition, restore microbial balance in the intestinal tract, and also improve the gastrointestinal functional state [16, 17]. At present, in Iran, only two synbiotics including BB-Care and PediLact are available to treat gastrointestinal disorders in infants. According to our last search and the last systematic review of Rodriguez's study on pediatric functional constipation in 2021, there is no clinical trial that has surveyed the effect of synbiotics in the treatment of functional constipation in infants less than 6 months of age, so the present study was performed [19].

## 2. MATERIALS AND METHODS

### 2.1. Study design

This parallel randomized double-blinded clinical trial was performed to compare the effectiveness of two different types of synbiotics including PediLact® (Zist-Takhmir Co., Tehran, Iran) drop containing *Bifidobacterium infantis* (*B. infantis*), *Lactobacillus reuteri* (*L. reuteri*), *Lactobacillus rhamnosus* (*L. rhamnosus*) plus fructooligosaccharides (FOS) and BBCare® (Zist-Takhmir Co., Tehran, Iran) drop containing *Bifidobacterium lactis* BB-12 (*B. lactis* BB-12) plus fructooligosaccharides (FOS) in the treatment of infantile functional constipation.

### 2.2. Participants

Ninety-two infants, less than 6 months of age with a diagnosis of infantile functional constipation who were referred to the clinics of Bahrami Hospital in Tehran from 2020 to 2021 were enrolled in this study. The infants were fed by breast, formula or both. According to the ROME IV criteria. The infants less than 6 months of age who met at least 2 characteristics of the following criteria for 1 month including (1) Fewer than two spontaneous bowel movements per week, (2) History of excessive stool retention, (3) History of painful or hard bowel movements, (4) History of large-diameter stools, (5) Presence of a large fecal mass in the rectum, who did not respond to non-pharmacological treatment (including reassurance, feeding training to gain optimal hydration of the infant, oral mineral oil and abdominal massage) were assigned to this study. Other diagnoses were ruled out based on the clinical manifestations of the patients, lab tests, and abdominal X-ray or sonography. The infants less than 6 months of age with the diagnosis of GI obstruction or surgery; receiving opiates, muscle relaxants, and sedatives; mechanical ventilation; atopy; central and peripheral nervous system abnormalities; endocrine diseases (hypothyroidism); anorectal abnormalities; Hirschsprung disease; receiving probiotics products for one week before intervention were excluded from the study. The infants with a history of using probiotics or any signs of allergy to these compounds were not included in the study. Also, patients whose parents discontinued medication or those who were not re-accessible to record treatment responses were excluded from the study. The parents declined rectal exam so it was not performed for the diagnosis of a large fecal mass in the rectum as the fifth criteria of ROME IV criteria for diagnosis of constipation.

### 2.3. Clinical interventions

Ninety-two infants who met the inclusion and exclusion criteria, who did not respond to non-pharmacological treatment (including reassurance, feeding training to gain optimal hydration of the infant, oral mineral oil and abdominal massage) were randomly assigned to a double-blind clinical trial into two groups. Group A received PediLact drop containing *B. infantis*, *L. reuteri*, *L. rhamnosus* ( $1 \times 10^9$  CFU per ml) plus FOS, and group B received BBCare drop containing *B. lactis* BB-12 ( $1 \times 10^9$  CFU per ml) plus FOS daily for one month. Every infant in each group received 5 drops of the synbiotic every 6 hours after feeding which was equal to 1ml of each synbiotic containing  $1 \times 10^9$  CFU probiotics.

Before the intervention, a checklist including demographic data (age, gender, birth weight, weight at presentation and type of feeding) and symptoms and signs of infantile functional constipation (according to ROME IV criteria) was filled out by a clinical researcher. The same clinical researcher evaluated the clinical manifestations of patients according to ROME IV criteria after one week and one month to define the rate of clinical improvement. The response rate was considered positive if >50% of the clinical manifestations were reduced during the intervention.

### 2.4. Outcomes

The primary outcome was the response rate to each synbiotic. The response rate was estimated according to the times of defecation per week, the consistency of the stool according to the Bristol stool scale, cramps or pain during defecation, and stool diameter. The secondary outcome was the possible side effects of each synbiotic (the symptoms of small intestine bacterial

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overgrowth including increase in gas, bloating or diarrhea; constipation or thirst; triggering allergic reactions; higher rate of infection; vomiting and skin rashes or itching) during the intervention.

## 2.5. Sample size

According to the study of Baştürk et al. [18], a total sample size of 83 infants was estimated using  $\alpha = 0.05$ ,  $\beta = 20\%$ , confidence level = 95%, power = 80%, and  $d = 0.2$ . To increase the power of the study, the total sample size was increased to 92 patients. Two patients in group A and one patient in group B discontinued intervention as soon as recovery symptoms appeared. Finally, forty-four infants in group A and forty-five infants in group B, completed the study and their data were analyzed (Figure 1).

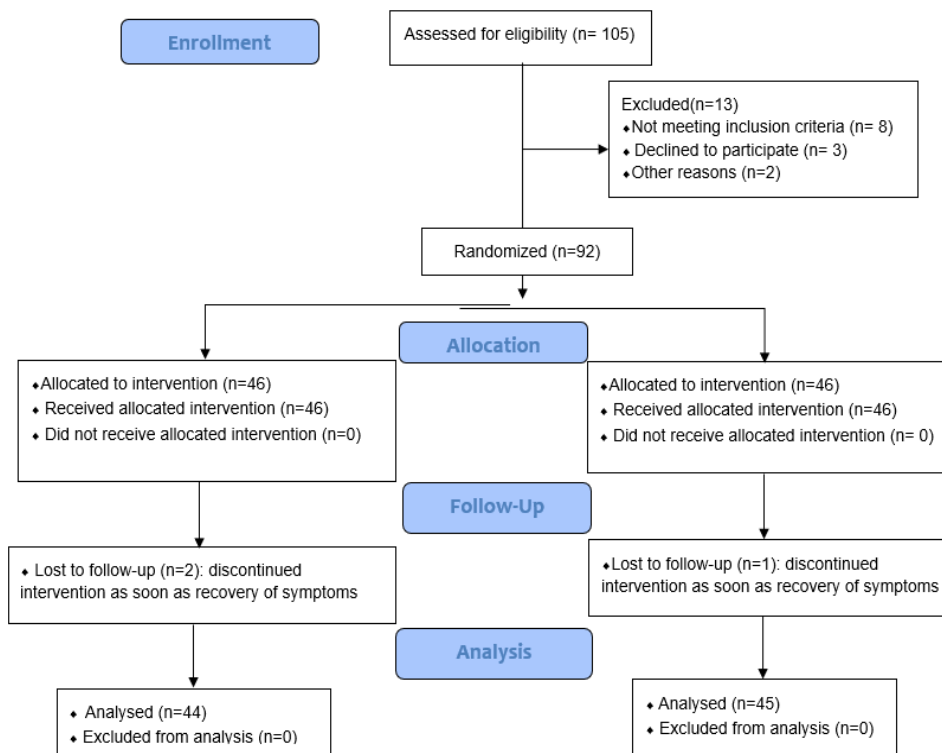


Figure 1. CONSORT Flow Diagram

## 2.6. Randomization

We used the random number tables from Rand Company for simple randomization. The first researcher generated the random allocation sequence, enrolled the participants, and assigned them to interventions. The second researcher evaluated the clinical manifestations of patients according to ROME IV criteria and assessed outcomes in one week and one month after the intervention.

## 2.7. Blinding

Both synbiotics were produced in a single drug company [Zist-Takhmir Co., Tehran, Iran] in similar bottles that were labeled with blue or red color. Group A received the synbiotic with a blue color label and group B received the synbiotic with red color label, so the infants, their parents, the caregivers who administered the synbiotics, the researcher who followed the patients, and gathered the data; and the statistician who analyzed the data, were completely unaware of patients' grouping and type of administered synbiotic.

## 2.8. Ethical Considerations

Written informed consent was obtained from the parents of patients who participated in this study. The details of the study protocols were approved by the ethical committee at Tehran University of Medical Sciences (IR.TUMS.MEDICINE.REC.1398.644). This study has been registered at the Iranian Registry of Clinical Trails (IRCT20160827029535N7).

## 2.9. Statistical analysis

The results were presented as mean  $\pm$  standard deviation (SD) for quantitative variables and were summarized by absolute frequencies and percentages for categorical variables. The normality of data was analyzed using the Kolmogorov-Smirnoff test.



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Categorical variables were compared using the chi-square test or Fisher's exact test when more than 20% of cells with an expected count of less than 5 were observed. Quantitative variables were also compared with the t-test or Mann U test. The multivariable logistic regression model was used to compare the efficacy of medications with the presence of baseline parameters as the confounders. For the statistical analysis, the statistical software SPSS version 16.0 for windows (SPSS Inc., Chicago, IL) was used. P-values of 0.05 or less were considered significant.

### 3. RESULTS

In this study, ninety-two infants were randomly assigned into two groups. Forty-six infants were classified in group A and forty-six infants in group B. Two patients in group A and one patient in group B discontinued intervention as soon as recovery symptoms appeared (Figure1).

#### 3.1. Baseline data

The two groups were similar in baseline parameters including gender, birth weight, gestational age, type of feeding (as breastfeeding or using formula), age of onset of constipation symptoms, and history of atopy. Comparing clinical manifestations related to constipation between the two groups before intervention showed no significant difference (Table 1).

**Table 1: Baseline characteristics in the PediLact and BB-Care groups**

Characteristics	PediLact group N=44(%)	BB-Care group N=45(%)	P- value
Male gender, %	21 (47.7)	23 (51.1)	0.833
Mean birth weight, gr	2988.9±274.3	3112.8±315.8	0.051
Gestational age, week	38.0±0.7	38.0±0.9	0.863
Type of feeding			0.924
Breast milk	16 (36.4)	18 (40.0)	
Formula	10 (22.7)	9 (20.0)	
Breast milk and formula	18 (40.9)	18 (40.0)	
Mean age of onset of symptoms, day			0.294
< 30 days	31 (70.5)	26 (57.8)	
30 to 60 days	11 (25.0)	18 (40.0)	
60 to 120 days	2 (4.5)	1 (2.2)	

#### 3.2. Numbers analyzed

Finally, forty-four infants in group A and forty-five infants in group B, completed the study and their data were analyzed. Data analysis was based on the intention to treat principle.

#### 3.3. Outcomes and estimation

The effect of two drops was significant on improving all symptoms of constipation after one week and one month of intervention (Table 2).

The inter-group comparison of the related symptoms showed that BB-Care was significantly more effective in increasing the times of defecation after one week and one month of intervention. The effect of two drops was significant on improving other symptoms of constipation after one week and one month of intervention too but it was not significant between the two groups (Table 2).

**Table 2. Clinical condition of patients before and after interventions**

Characteristics	PediLact group N=44(%)	BB-Care group N=45(%)	P- value
Times of defecations (≤ two times/week)			
Before	34 (77.3)	37 (82.2)	0.606
One week after	25 (56.8)	17 (37.8)	<b>0.029</b>
One month after	11 (26.8)	4 (9.1)	<b>0.021</b>
P- value	<0.001	<0.001	
Cramps or painful defecation			

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Before	34 (77.3)	37 (82.2)	0.606
One week after	20 (45.5)	20 (44.4)	0.811
One month after	8 (19.5)	10 (22.7)	0.999
P- value	<0.001	<0.001	
<b>Dry or hard stool defecation</b>			
Before	37 (84.1)	37 (82.2)	0.999
One week after	27 (61.4)	25 (55.6)	0.800
One month after	12 (29.3)	9 (20.5)	0.430
P- value	<0.001	<0.001	
<b>Large stool defecation</b>			
Before	16 (36.4)	20 (44.4)	0.519
One week after	6 (13.6)	5 (11.1)	0.483
One month after	5 (12.2)	4 (9.1)	0.999
P- value	0.002	<0.001	

Using a multivariable logistic regression model and with the presence of baseline confounders, BB-Care was more effective than PediLact in improving the frequency of weekly defecation in infants suffering from constipation one week after the intervention ( $OR = 2.275$ , 95%CI:1.908 to 5.700,  $p = 0.039$ ).

In similar modeling, we could show high efficacy of BB-Care as compared to PediLact in the improvement of weekly defecation one month after the intervention ( $OR = 3.070$ , 95%CI: 1.889 to 10.603,  $p = 0.046$ ).

Both PediLact and BB-Care drops improved all symptoms of constipation significantly after one week and one month of intervention in all types of feeding methods including breast-feeding, formula-feeding or breast-feeding plus formula-feeding too (Table 3- 5).

**Table 3. Clinical condition of breast-fed infants before and after interventions**

Characteristics	PediLact group N=16(%)	BB-Care group N=18(%)	P- value <b>0.737</b>
<b>Times of defecations (<math>\leq</math> two times/week)</b>			
Before	12 (75)	6 (33.3)	0.022
One week after	10 (62.5)	3 (16.7)	0.028
One month after	5 (31.3)	3 (16.7)	0.555
P- value	0.050	0.368	
<b>Cramps or painful defecation</b>			
Before	10 (62.5)	15 (83.3)	0.169
One week after	8 (50)	7 (38.9)	0.515
One month after	2 (12.5)	3 (16.7)	0.732
P- value	0.002	0.000	
<b>Dry or hard stool defecation</b>			
Before	15 (93.8)	17 (94.4)	0.932
One week after	8 (50)	16 (88.9)	0.013
One month after	4 (25)	5 (27.8)	0.694
P- value	0.000	0.000	
<b>Large stool defecation</b>			
Before	5 (31.3)	9 (50)	0.268
One week after	2 (12.5)	1 (5.6)	0.476
One month after	2 (12.5)	0 (0.00)	0.122
P- value	0.050	0.000	
<b>Total</b>			
Before	8 (50)	11 (61.1)	0.515
One week after	0 (0.00)	0 (0.00)	1.00
One month after	0 (0.00)	0 (0.00)	1.00
P- value	0.000	0.000	

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**Table 4. Clinical condition of formula-fed infants before and after interventions**

Characteristics	PediLact group N=10(%)	BB-Care group N=9(%)	P- value <b>0.737</b>
<b>Times of defecations (<math>\leq</math> two times/week)</b>			
Before	8 (80)	7 (77.8)	0.906
One week after	1 (10)	8 (88.9)	0.001
One month after	1 (10)	5 (55.6)	0.064
P- value	0.001	0.097	
<b>Cramps or painful defecation</b>			
Before	9 (90)	7 (77.8)	0.466
One week after	4 (40)	3 (33.3)	0.764
One month after	2 (20)	3 (33.3)	0.707
P- value	0.011	0.035	
<b>Dry or hard stool defecation</b>			
Before	8 (80)	8 (88.9)	0.896
One week after	8 (80)	1 (11.1)	0.003
One month after	6 (60)	1 (11.1)	0.008
P- value	0.235	0.001	
<b>Large stool defecation</b>			
Before	7 (70)	5 (55.6)	0.515
One week after	2 (20)	1 (11.1)	0.596
One month after	1 (10)	1 (11.1)	0.929
P- value	0.006	0.018	
Before	6 (60)	7 (77.8)	0.405
One week after	1 (10)	0 (0.00)	0.303
One month after	2 (20)	0 (0.00)	0.156
P- value	0.030	0.001	

**Table 5. Clinical condition of breast-fed plus formula-fed infants before and after interventions**

Characteristics	PediLact group N=18 (%)	BB-Care group N=18 (%)	P- value <b>1.00</b>
<b>Times of defecations (<math>\leq</math> two times/week)</b>			
Before	14 (77.8)	13 (72.2)	0.700
One week after	8 (44.4)	10 (55.6)	0.492
One month after	8 (44.4)	7 (38.9)	0.723
P- value	0.069	0.135	
<b>Cramps or painful defecation</b>			
Before	15 (83.3)	15 (83.3)	1.00
One week after	8 (44.4)	11 (61.1)	0.317
One month after	6 (33.3)	6 (33.3)	1.000
P- value	0.001	0.001	
<b>Dry or hard stool defecation</b>			
Before	14 (77.8)	12 (66.7)	0.457
One week after	11 (61.1)	8 (44.4)	0.317
One month after	3 (16.7)	8 (44.4)	0.047
P- value	0.001	0.497	
<b>Large stool defecation</b>			
Before	4 (22.2)	6 (33.3)	0.457
One week after	2 (11.1)	3 (16.7)	0.630

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One month after	2 (11.1)	3 (16.7)	0.628
P- value	0.135	0.135	
<hr/>			
<b>Total</b>			
<b>Before</b>	15 (83.3)	17 (94.4)	0.589
<b>One week after</b>	11 (61.1)	12 (66.7)	0.729
<b>One month after</b>	6 (33.3)	5 (27.8)	0.632
<b>P- value</b>	0.002	0.000	

#### 4. DISCUSSION

The present study was performed on 89 infants with functional constipation according to the ROME IV criteria. Forty-four patients were treated with PediLact drop (*B. infantis*, *L. reuteri*, and *L. rhamnosus* plus FOS) and forty-five patients were treated with BB Care drop (*B. lactis* plus FOS). According to our recent research and the last review of Rodriguez's study [19] on pediatric functional constipation in 2021, the six studies of Khodadad et al, Bustarc et al., Hannah et al., Hashemi et al., Mahdavi et al., and Abedny et al. are the only clinical trials that have surveyed the effect of synbiotics on functional constipation among patients  $\geq 6$  months of age [14,18, 20-23]. No study has surveyed the effect of synbiotics on functional constipation among patients  $\leq 6$  months of age, so this study was conducted.

The present study compared the effect of two synbiotics on the treatment of infantile functional constipation. In one-week and one-month follow-up, the number of defecations per week in the BB Care group was significantly higher than the PediLact group (inter-group comparison). There was no significant difference between the two groups in terms of cramp or painful bowel movements, dry and hard stools, the large diameter of stool, and treatment-related side effects. The response rate of both drops was significant after one week and one month of treatment (intra-group comparison). This finding emphasized that the synbiotic containing *B. lactis* was more effective in the treatment of infantile functional constipation.

According to our recent search and the last review of Rodriguez's study [19] on pediatric functional constipation in 2021, some researchers, including Russo et al., Jose et al., Guerra et al., and Sadeghzadeh et al. found the positive effect of probiotics on pediatric functional constipation [24-27]. Some other investigations have shown the usefulness of specific strains of probiotics for the treatment of pediatric functional constipation [28-30]. Studies in children and adults have shown that probiotics, especially Lactobacilli and Bifidobacteria, increase colorectal peristalsis by producing short-chain fatty acids and lowering intraluminal pH that led to increasing stool frequency [17]. In the present study, we found a significant increase in the frequency of defecation in the BB-care group compared to the PediLact group.

Among six clinical trials that have surveyed the effect of synbiotic therapy on pediatric functional constipation, five studies have shown the positive effect of synbiotic therapy in the pediatric groups that include: 1. Hannah et al. studied 41 patients aged 6 months to 14 years with functional constipation. They compared the effect of a synbiotic containing FOS and probiotics including *L. casei*, *L. rhamnosus*, *S. thermophilus*, *L. acidophilus*, *L. bulgaricus*, and *B. infantis*, *B. breve* ( $1 \times 10^9$  CFU per ml) with placebo. After 7 days, there was a significant recovery rate in the synbiotic group [20]. 2. Baştürk et al. performed a clinical trial on 146 patients aged 4-18 years with the diagnosis of functional constipation based on the Rome III criteria. The first group received a sachet of synbiotic (Kidilact) /day. The second group received a sachet of placebo/day. After 4 weeks of intervention, a significant response rate ( $p \leq 0.001$ ) was observed in all symptoms in the synbiotic group. Complete recovery was found in 48 (66.7%) in the synbiotic group versus 21 (28.3%) patients in the placebo group [17]. 3. Khodadad et al. studied 102 children aged 4-12 years with functional constipation according to Rome III criteria. They were randomly divided into three groups who received oral liquid paraffin plus placebo or oral liquid paraffin plus synbiotic or oral synbiotic plus placebo. The number of bowel movements increased in all three groups per week significantly ( $P < 0.001$ ). Other clinical symptoms of constipation decreased in all groups similarly and there was no difference between them statistically. They used a synbiotic (restore\* $1 \times 10^9$  CFU/1 sachet, Protexin Co, UK) containing probiotic strains of *L. casei*, *L. rhamnosus*, *S. thermophilus*, *B. breve*, *L. acidophilus*, *B. infantis*, and fructooligosaccharide as prebiotic [14]. 4. Hashemi et al. surveyed a study on 120 children aged 2-16 years with functional constipation (based on ROME III criteria). The children were randomly divided into three groups who received polyethylene glycol plus placebo or synbiotic plus placebo or polyethylene glycol plus synbiotic. They used a synbiotic Kidilact containing  $10^9$  CFU/1 sachets, (colony forming units) of seven probiotics (*L. casei*, *L. acidophilus*, *L. rhamnosus*, *L. bulgaricus*, *B. breve*, *B. infantis*, and *S. thermophilus*) and one prebiotic (Fructooligosaccharide). The response rate was evaluated after 6 weeks. This study showed that the response rate was significant after interventions in all three groups but polyethylene glycol plus synbiotic showed the highest response rate after 6 weeks [21]. 5. Abediny et al. performed a study on 90 children aged 4-12 years with functional

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constipation (Rome III) in 2013. The control group received Pidrolax powder and the intervention group received Pidrolax powder plus the synbiotic (Kidilact). Abdominal pain considerably was reduced after 2 and 4 weeks after intervention ( $P < 0.05$ ). Their study showed that the addition of synbiotic to standard therapy was effective in the treatment of pediatric functional constipation [23].

The dose of probiotic and the type of oligosaccharide used in the studies of Khodadad et al, Bustarc et al., Hannah et al., Hashemi et al., Mahdavi et al., and Abedny et al. were similar to our study, while the probiotic strains and the age group of patients were different. On the other hand, all mentioned studies compared a synbiotic with placebo, while our study surveyed two different synbiotic that both of them had significant positive effects on infantile functional constipation who did not respond to non-pharmacological treatment (including reassurance, feeding training to gain optimal hydration of the infant, oral mineral oil and abdominal massage). The age of all previous study groups was  $> 6$  months while the age group of our study was  $\leq 6$  months. In our study, both synbiotics improved significantly all symptoms of constipation in all types of feeding methods including breast-feeding, formula-feeding or breast-feeding plus formula-feeding after one week and one month of intervention. We found no side effects through the interventions in both groups of our study.

### **5. CONCLUSIONS**

In general, the results of this clinical trial show that the use of both PediLact and BB-care synbiotics are effective in improving the clinical criteria of functional constipation in infants  $\leq 6$  months after one week and one month of intervention apart from type of feeding method. Due to the greater effectiveness of BB-care in increasing stool frequency, *B. lactis* may play a more prominent role in this age group of patients.

### **LIMITATIONS**

Similar studies are suggested to compare the synbiotics holding numerous probiotic types with synbiotics holding a similar single probiotic strain. Future studies with more participants in this age group are necessary too.

### **INNOVATIONS AND BREAKTHROUGHS**

1. Administering and comparing two different synbiotics for the treatment of functional constipation .2. Studying the age group of under six months of age.3. The significant effectiveness of both synbiotics in the treatment of infantile functional constipation apart from type of feeding were the novelty of this study.

### **LIST OF ABBREVIATIONS**

*B. infantis*: Bifidobacterium infantis; *L. reuteri*: Lactobacillus reuteri; *L. rhamnosus*: Lactobacillus rhamnosus, *L. casei*: Lactobacillus casei, *B. Lactis BB-12*: Bifidobacterium Lactis BB-12, *FOS*: fructooligosaccharides.

### **DATA AVAILABILITY**

The details of data used to support the findings of this study are available from the corresponding author upon reasonable request.

### **CONFLICTS OF INTEREST**

There was no favoritism in this research.

### **FUNDING STATEMENT**

The authors declare that no grant was taken from financial institutions for performing this study.

### **AUTHORS' CONTRIBUTIONS**

Concept - PAT; Design - PAT, NG, KE.; Supervision -PAT, KE. Resource – PAT; Materials - PAT, NG; Data Collection&/or Processing - PAT, NG; Analysis and/or Interpretation - PAT, NG; Literature Search - PAT, NG; Writing - PAT, NG; Critical Reviews - PAT.

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## Corporate Life Cycle, Profitability, Institutional Ownership and Dividend Policy in Companies Listed on the IDX for the 2017-2020 Period



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**ABSTRACT:** This study to test the influence company Cycle life, profitability, ownership institutional to policy dividends on the company manufacturers listed on the IDX for the 2017-2020 period. Cycle life company classified based on growth sale with four stages cycle life company which are start-up, growth, maturity and decline. Cycle life company be measured with using retained earnings to total equity (RETE), profitability be measured with Return on Assets (ROA), Ownership institutional be measured with percentage ownership institution. The control variable of this study is age company, size company and asset growth. Dependent is Policy dividend be measured with use dividend payout ratio (DPR).

Population of this study is companies listed on the Indonesia Stock Exchange except financial sector for the 2017-2020 period. Total population of 569 companies with 2850 data. The sampling technique using purposive sampling and obtained as many as 820 data that sharing dividend. Research results show that RETE has a significant negative effect to Policy dividends, Return on Assets (ROA) has a significant negative effect to Policy dividends, ownership institutional influential positive significant to dividend policy, Age effect positive significant to dividend policy, size has a significant negative effect to dividends policy and asset growth are not influence to dividend policy.

**KEYWORDS:** Dividend Policy, Corporate Life Cycle, Institutional Ownership, Profitability, Sales Growth

### I. INTRODUCTION

Indonesia is a developing country in southeast Asia, Governance index companies in Indonesia is relatively low based on governance companies in the world, especially if compared to the United States and Europe. The governance company relate with decision finance in the company. Decision finance company covers decision funding, decisions investment and policy dividend. The dividend policy is important and up to date issues moment this still becomes debate and mutual related with policy finance other.

A number of theory reveal that dividend must paid to the winners share because will upgrade company profile whereas another theory argues that dividend no relevant because no upgrade company value. Dividend policy must related tight with finance policy because after payment of dividend, internal sources funding will reduced and external funding will becomes a choice. DeAngelo et al. (2004) argued that there is deep transformation practice dividend company during last two decades whereas according to Gugler (2003) dividend payments in this world during two decades with the same magnitude. Payment dividend at each company was different, based od company condition. Company can produce high profitability so possibility company pay dividends are also high. Enhancement profitability company determined by the capital owned company. company capital one of them originate from investors. When company can pay high dividend then investors will interested for invest the funds to the company.

One influencing factors payment dividend is cycle life company. Gup and Agrrawal (1996) classify cycle life in four phase, that is pioneering, expansion, stabilization, and decline. Black (1998) stated that pioneering step as start-up and call step expansions as step growth, as well mention step stabilization as step mature. According to Weston and Brigham (1975) company life cycle classified based on growth sales company and shared becomes four stages that are startup, growth, mature, and decline. At stages start up company tend do investment so that company cash flow tend negative value. At stages growth company tend pay dividend although the amount still low. At stages mature, dividends paid already bigger compared stages

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previously whereas in stages decline company tend share smaller value dividends. Factor both affect policy dividend is profitability. Profitability is ability company in producing a profit.

Previous studied which conducted by Lestari (2017) showed results that there is influence positive significant profit detained to total equity (RETE) against payment dividend on stage mature, whereas in stage initial, growth and decline, profit detained to total equity (RETE), which no influence significant to pay dividend. Nur and Koe (2016) found that life cycle as a moderating factor, where the significant moderate influence of leverage, profitability and size of dividends policy, however, no moderate effect of liquidity on dividend policy. Deangelo et al. (2006) found that exists company step in cycle that caught with both by a mix of internal and external capital, The dividend tend have acquired high equity relatively on donated capital, and those that are not pay back.

The factor both influential to dividend is profitability company. The profitability company is ability company for produce profit. When the company can do efficiency, company will obtain maximum profit and will used for share dividend. Dividend company is part from generated profit company that magnitude earned profit company influence dividend company. The profitability be measured with using return on assets (ROA) which is net ratio profit to total assets level. higher return on assets then dividends distributed will the higher. This condition is accordance with the signaling theory which states that investors assume that dividend as company signal in produce profit. The previous research conducted by Akmal (2016), found that Return on Assets has a positive effect on dividend payments with an effect of 1.871. Pradana and Sanjaya (2017) in their research also found that (ROA) has a significant and positive effect on the dividend payout ratio.

The third influencing factor Policy dividend is institutional ownership. The institutional ownership is presentation shares holder owned by the institution. Institutional ownership could reduce problem agency in the company because exists function supervision from investors to manager behavior. It is accordance with agency theory that states the higher institutional ownership will upgrade supervision to manager so that reduce deviate manager behavior. The high institution ownership will increase the manager effectiveness in manage a company that will upgrade affect magnitude of dividends distributed. It's in accordance with the results of previous studies conducted by Nugraheni & Mertha (2019); Rahayu & Rusliati (2019); Aditya & Supriyono (2021) which stated that institutional ownership has a positive and significant effect on dividend policy. The aims of this research to analyze the influence of company life cycle, profitability, dividends policy, age company, size company, and asset growth to dividends policy on each stages company life cycle.

## **II. LITERATURE REVIEW**

Dividend policy and payment is a very important decision in a company. This policy involves two parties who have different interests, the first party is shareholders and the second one is the company itself. Dividends are defined as payments to shareholders by the company for the profits. Dividend payment determined by the holder stock at the time meeting General shareholders (GMS). The determinant factor to magnitude dividend company is magnitude profit detained for interest company. The profit hold and pay dividend is two mutual related. When company decide for withhold the profit, then profit will used for next period investment. Dividend policy related with income company among income for activity investment or for paid to holder stock. If profit detained company for necessity operational company, the mean profits to be paid as dividend becomes smaller. On the contrary if company more choose for share profit as dividends, then will reduce portion profit hold and reduce source of internal funding. However, if choose share profit as dividend will increase the holders shares welfare, so the share holders will keep going embed the stock for company. Wicaksono (2014) argued that one factor determinant dividend payment of company is company cycle life.

Several previous studies have shown that many factors can influence a company's dividend policy, one of which is the life cycle of the dividend itself. Putri (2017) said that the decision to pay dividends is related to determine the amount of profit generated by the company each period to be distributed to shareholders as a dividend or used as an internal source of financing for the company. The large investment opportunities are owned by companies in the early stages (start-up stage). To make an investment, a company at an early stage (start-up stage) requires large funding (Juniarti and Limanjaya, 2005). The companies which high growth rates tend to have a low dividend payout ratio, therefore at the start-up stage the company does not pay or distribute dividends (Gup and Agrawal, 1996).

The company cycle theory states that every company have experiences four stages in its development including the introduction stage, growth, mature, and decline. Weston and Brigham (1975) at the stage of introduction (start up) companies require high costs to introduce products, and face intense competition so that the possibility of failure is relatively high. In this phase the company tends not to distribute dividends, because the level of profitability generated tends to be low or the

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company in this phase has not generated profit. The next phase, growth phase, the company experienced increased sales, profits and increased liquidity. In the growth phase, companies tend to pay dividends. The third phase is mature, this phase the company is already known by the market and competition with competitors is low, the level of sales tends to increase. When increasing sales, it will increase profitability and pay higher dividends. The fourth phase is the decline, this phase the level of sales tends to decrease because there are new products. This phase will be experienced by companies that do not innovate their products. In this phase the company tends not to pay dividends. The company life cycle is one of the determining factors in the company's dividend policy. Gumantri and Puspitasari (2005) developed a method for determining the categorization of the company's life cycle used by Black (1998) and Gup and Aggrawal (1996) using the 4-stage sales growth percentage method, namely start-up, growth, mature and decline. Where in the start-up phase the average sales growth is more than 40%, for the growth phase the average sales growth is 20% to 40%, in the mature phase the average sales growth is 1% to 20% and for decline phase the average sales growth is less than 1%.

According to DeAngelo, DeAngelo & Stulz, (2006) company life cycle measured by low retained to common equity ratios tend to be in the growth phase and depend on external capital funding, while companies with high ratios tend to is at on phase which more mature with high profit, so that more likely for pay dividend. Consistent with theory the company's life cycle this evidence identifies that the ratio between retained earnings and common equity has a positive relationship with the probability that the company will pay dividend. Companies with low ratios tend to still be in the stage of relying on external injections of funds, while companies with high ratios tend to have reached the mature stage with sufficient cumulative profits, so they rely more on self-financing, and make these companies better candidates for dividend payments (DeAngelo, DeAngelo & Stulz, 2006).

Previous research conducted by Lestari (2017) showed that there was a significant positive effect of retained earnings on total equity (RETE) on dividend payments in the mature stage, while in the early stages, growth and decline, retained earnings on total equity (RETE), has no significant effect on dividend payout. Nur and Koe (2016) found that the life cycle as a moderating factor significantly moderates the effect of leverage, profitability, and size on dividend policy, but does not moderate the effect of liquidity on dividend policy. Wang et al. (2011) stated tha younger firms with higher growth potential but lower profitability tend to distribute more stock dividends than cash dividends. When a company becomes more mature, which is characterized by lower growth potential but higher profitability, it tends to distribute more cash dividends than stock dividends. Miletic (2015) stated that investment opportunity has a significant positive effect on dividend policy. RETE has a significant positive effect on dividend policy.

### **H1: Company Life Cycle has a significant negative effect on Dividend Policy**

Profitability measures the success of a company's operational activities over a certain period of time. Dividends paid by the company come from a portion of the profits earned by the company. The higher the profit generated by the company, the higher the level of dividends paid. This is consistent with the results of research conducted by Meidyna & Mertha (2019) that profitability has a positive effect on dividend policy.

### **H2: Profitability has a significant positive effect on dividend policy**

Institutional ownership of share ownership percentage held by institutions. The greater the percentage of institutional ownership will increase the monitoring process carried out by the institution so that it will reduce the deviant behavior of managers, when the monitoring process run well, management will maximize company profits to improve company welfare. The higher the percentage of institutional ownership, the dividends distributed will increase. This is consistent with the results of research conducted by Nurwani (2018) and Kurniawati et al. (2015) which explained that institutional ownership has a positive and significant effect on dividend policy.

### **H3: Institutional ownership has a significant positive effect on dividend policy**

## **III. RESEARCH METHODS**

This research is quantitative research with secondary data. According to Sugiyono (2018) quantitative approach it is called a quantitative method because the research data is in the form of numbers and analysis uses a statistic. The secondary data that has been collected for purposes other than adjusting the problem. This data can be found quickly. In this study, the sources of secondary data were theses, articles, journals, and sites on the internet related to the research (Sugiyono, 2013).

The research population is a generalized area consisting of objects/ subjects that have certain qualities and characteristics determined by the researcher to be studied and then drawn conclusions while the sample is part of the number and characteristics possessed by the population. In this study, the authors used a nonprobability sampling technique with the

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incidental sampling method to determine the research sample. The population in this study were all companies listed on the Indonesia Stock Exchange for 2016-2020. The sampling using purposive sampling method. Purposive sampling is a sampling method with certain criteria, where the sampling criteria are as follows:

1. Companies listed on the Indonesia Stock Exchange consecutively except for the Finance sector in 2016-2020
2. Companies that publish financial reports during the study period
3. Companies that distribute dividends during the 2016-2020 period
4. Companies that have complete data according to research needs

Based on the sample criteria, there were 164 companies with 5 research periods, so a total of 820 data. The data analysis technique uses multiple linear regression analysis of panel data with evIEWS software. The dependent variable in this study is the dividend policy as measured by the dividend payout ratio (DPR). The independent research variable is the company's life cycle which is divided into 4 categories, namely startup, growth, mature, and decline. The company's life cycle is classified based on sales growth with the criteria in the start-up phase the average sales growth is more than 40%, for the growth phase the average sales growth is 20% to 40%, in the mature phase the average sales growth is 1% to 20%. The last for the decline phase, the average sales growth is less than 1%. After classification based on sales growth, the ratio used to measure the company's life cycle includes calculating the company's life cycle based on sales growth, after being classified based on sales growth, it is measured by return earnings for total equity (RETE), profitability is measured by return on assets (ROA). Institutional ownership is measured by the percentage of institutional ownership. The control variables in this study are company age, company size, and asset growth. The data analysis method uses multiple linear regression analysis using the evIEWS application.

### IV. RESULTS

Based on the results of data processing, the following descriptive statistical results are obtained.

**Table 1. Descriptive Statistics Results**

Variable	Number of Observations	Means	Median	Maximum	Minimum	Standard deviation
<b>Independent Variable</b>						
DPR	820	0.216	-0.909	18,503	-9.015	3,930
<b>Dependent Variable</b>						
RETE	820	1.038	0.537	422,164	-423,300	25,307
ROA	820	0.549	0.057	84,523	-0.030	5.211
INST_OWN	820	72,000	0.244	14329.00	0.001	998,978
AGE	820	37,225	36,000	114,000	3,000	17,033
SIZE	820	28027	28,924	33,906	18,083	3,482
AST_GROWT	820	1,348	0.075	1014649	-0.907	35,430

Based on the results of descriptive statistics in Table 1, it was found that as many as 1755 company data, 820 company data distributed dividends and 935 company data did not distribute dividends during the research period from 2016 to 2020. The dependent variable dividend payout ratio (DPR) has a minimum value of -9.015 and the maximum value is 18.503 with an average of 0.215 and a standard deviation of 3.930. The independent variable, namely RETE, has a minimum value of -423,300 and a maximum value of 422,164%. The average RETE value is 1.038% with a standard deviation of 25.307%. Profitability as measured by return on assets (ROA) has a minimum value of -0.030 and a maximum of 84.523 with an average of 0.549 with a standard deviation of 5.211. Institutional ownership as measured by institutional ownership has a minimum value of 0.001 and a maximum of 14329 with an average of 72.00 and a standard deviation of 998.978. The control variable in this study is firm age with a minimum value of 3,000 and a maximum of 114,00 with an average value of 37,225 and a standard deviation of 17,033. Firm size with a minimum value of 18.083 and a maximum of 33.906 with an average of 28.027 and a standard deviation of 3.482. Asset growth with a minimum value of -0.907 and a maximum of 1014.649 with an average of 1.348 with a standard deviation of 35.430. The amount of data in this research is 820 companies.

The company's life cycle is classified based on sales growth with the criteria in the start-up phase the average sales growth is more than 40%, for the growth phase the average sales growth is 20% to 40%, in the mature phase the average sales

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growth is 1% to 20% and for the decline phase, the average sales growth is less than 1%. The results of the company's life cycle classification based on sales growth from 820 data are as follows.

**Table 2. Company Life Cycle Classification**

Company Classification	Amount of data
Start-up	41
Growth	96
Mature	394
Decline	294
<b>Total</b>	<b>820</b>

The classification of companies based on sales growth from 820 company data shows that companies in the start-up stage are 41 data, the growth are 96 data, mature are 394 data, and decline are 294 data. The total of this study of 820 data, which the most companies are in the mature cycle. The mature stage is the company's stability stage. At this stage, the company's opportunity to low grow so that the company tends to pay dividends.

This study using multiple linear regression analysis using eviews software with the GLS model. The results of multiple linear regression analysis are as follows.

**Table 3. Regression Results**

Independent Variable	Dependent Variable DPR
Constant	15,536 *** (24,615)
RETE	-0.002 ** * (-2.825)
ROA	-0.068 ** * (-3.254)
INST OWN	0.0006 ** * (4.257)
AGE	0.0059 *** (2,651)
SIZE	-0.5675 ** (-26.145)
AST GROWTH	-9,760 (-0.1815)
R Square	0.468

Based on the results of data processing, it was found that the company's life cycle as measured using retained earnings to total assets (RETE), found that RETE had a significant negative effect on dividend policy with a coefficient of -0.002. This shows that the higher the company's RETE level, the lower the level of dividends that will be distributed. A high RETE indicates the company is in the start-up stage, so the company tends to retain the profits. Profitability as measured by return on assets (ROA) has a significant negative effect on dividend policy with a coefficient value of -0.068. It indicates that the higher the return on assets (ROA), the smaller the dividend paid. Institutional ownership has a significant positive effect on dividend policy with a coefficient of 0.0006. This shows that the more institutional ownership remains, the higher the dividend distribution of the company.

The control variable in this study is firm age as measured by age which has a significant positive effect on dividend policy with a coefficient of 0.0059. This shows that the longer the age of the company, the higher the dividends distributed. Firm size as measured by the natural logarithm of total assets has a significant negative effect on dividend policy with a coefficient of -0.5675. This shows that the higher the size of the company, the lower the dividends distributed. Asset growth has no effect on dividend policy. The R-Square value in this study is 0.468, it's meaning that the independent variable can explain the dependent variable by 46.8 %. The results of multiple linear regression with the company's life cycle classification are as follows.



**Table 4. Regression Results of Company's Classification Cycle**

Independent Variable	Dependent Variable DPR			
	Startup Stages	Growth Stages	Mature Stages	Decline Stages
Constant	-33,963 ** (-2.120)	-3,735 (-0.610)	-0.417 *** (-100,154)	8,838 *** (14.326)
RETE	-0.0221 * (-1.8599)	2.152 (1.406)	-0.052 *** (-42.375)	-0.001 (-1.395)
ROA	-0.1820 *** (-2.9008)	-0.106 * (-1,793)	-0,000 (-0.229)	-0.078 * (-1,823)
INST_OWN	-0.0553 (-1.1394)	0.112 *** (3.147)	0.0009 *** (32709)	0.004 *** (3,098)
AGE	0.0387 (1.0242)	-0.020 (-0.888)	-0.0008 *** (-4,995)	-0.010 *** (-2.663)
SIZE	1.1446 ** (2.1011)	0.105 (0.521)	0.011 *** (92514)	-0.325 *** (-15,778)
AST_GROWH	-0.625 2 (-0.9463)	-1,493 (-0.758)	-0.0001 *** (-47.425)	-0.826 (-1,580)
R Square	0.2648	0.1509	0.999	0.4987

The results of the regression analysis for each stage of the company's life cycle show that RETE has a significant negative effect on dividend policy at the start-up and decline stages. The higher the retained earnings (RETE), the smaller the dividends distributed. RETE has no effect on dividend policy at the growth and decline stages. Return on Assets (ROA) has a significant negative effect on dividend policy at the start-up, growth, and decline stages. The higher the rate of return on assets (ROA), the smaller the dividends paid. Return on Assets (ROA) has no effect on dividend policy at the mature stage. Institutional ownership has a significant positive effect on dividend policy at the stages of growth, maturity, and decline. This shows that the higher the institutional ownership, the greater the dividends distributed. Institutional ownership has no effect on dividend policy at the start-up stage.

Firm age has a significant positive effect on dividend policy at the start-up and mature stages and a significant negative effect on dividend policy at the decline stage. The longer the company's life, the dividends distributed will increase in the start-up and mature stages, while in the decline stages, the longer the company's life, the smaller the dividends distributed. Firm age has no effect on dividend policy at the growth stage. Asset growth has a significant negative effect on dividend policy in the mature and decline stages. This shows that the higher the asset growth, the dividend will increase. Asset growth has no effect on dividend policy.

**V. DISCUSSION**

The results showed that the company's life cycle as measured using retained earnings (RETE) has a significant negative effect on dividend policy. The higher the company's RETE, the lower the level of dividends paid. This is in accordance with the dividend *Life Cycle Theory* which stated that the distribution of company dividends follows the company's life cycle (De Angelo et al., 2006). Companies that are in the mature stage are more likely to pay dividends because companies at this stage have a low opportunity to grow, so retained earnings tend to be lower. Companies in the mature stage obtain a higher profitability compared to the other three stages, but in this cycle the company is no longer focused on investment activities. Companies with high retained earnings tend to be in a group of more established companies with high profit levels so that companies tend to distribute dividends. According to Singla and Samanta (2018), the company's life cycle is a determining factor between retained earnings and distributing dividends. Companies in the mature stage have low retained earnings so companies tend to pay dividends. This is in accordance with research conducted by Nurfatma (2020) which stated that RETE has a negative effect on dividend policy. The profitability has a significant negative effect on dividend policy. This shows that the higher the profitability, the smaller the dividends paid. Profitability is a ratio that measures the success of a company's operations over a certain period of time.

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Companies with high profitability utilize company profits as retained earnings so that the dividends distributed are smaller. Companies that are stable in earning profits are companies that are in the growth and mature stages so that the level of dividends distributed is smaller. This is consistent with the results of research conducted by Lopulus (2013) which found that the profitability variable had no significant negative effect on dividend policy. Research conducted by Sugiharto & Amanah (2020); Anam, Arfan, & Shabri (2016) found that profitability has a negative effect on dividend policy.

The results of the study show that institutional ownership has a significant positive effect on dividend policy. This shows that the higher the share ownership by an institution, the dividends distributed will also be higher. This is in accordance with agency theory which stated that when high institutional ownership, the company's monitoring of company management will be better.

### VI. CONCLUSION

The results showed that the company's life cycle as measured by retained earnings to total assets (RETE) has a significant negative effect on dividend policy as measured by the dividend payout ratio (DPR). This is consistent with the dividend *life cycle theory* which stated that companies tend to pay dividends when the company is at an established stage. When high retained earnings, the dividends distributed will be smaller. when the company is in the mature stage, the company's opportunity to grow is small, so retained earnings will also be small. Companies tend to pay dividends at the mature stage. Profitability as measured by return on assets (ROA) has a negative significant effect on dividend policy. This is contrary to the theory which stated that Return on Assets (ROA) has a significant positive effect on dividend policy. Institutional ownership has a significant positive effect on dividend policy.

The control variables firm age and firm size have a significant negative effect on dividend policy while asset growth has no effect on dividend policy. The practical benefit of this research is as input for companies and investors in making decisions regarding dividend policy. Companies should pay attention to the company's life cycle so that it becomes a material consideration for determining the proportion of retained earnings and the level of dividends distributed. For the development of science, our finding of research can become a material for further research by adding other factors that influence dividend policy and increasing the research period.

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## Implementation of Linear Regression to Predict New Student Admissions as a First Step to Determine Campus Marketing Strategy



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**ABSTRACT:** New student Admission is a routine activity carried out by all educational institutions in Indonesia every year. One of the educational institutions in Indonesia is a private university. Predictions of the development of new student admissions so far have only been made based on speculation using data from previous years. Linear regression is one method that can be used to predict good results. Therefore, this study uses a linear regression method. The test results in this study indicate that the linear regression method has a low error value measured by the error rate using the Mean Absolute Percentage Error (MAPE), which is an average of 2.76%. This proves that using the linear regression method can predict new student admissions well so that it can assist universities in developing various strategies to maintain their existence, especially marketing strategies.

**KEYWORDS:** Prediction, Linear Regression

### I. INTRODUCTION

Admission of new students is an agenda that is routinely carried out by a higher education institution. The number of new student admissions can increase or decrease each year. A decrease in the number of new student admissions can certainly have a negative impact on the sustainability of tertiary institutions, while an increase in new student admissions also has the potential to have a negative impact on tertiary institutions if not addressed properly. Campus managers must be sensitive to consumers in the marketing process, students are an important asset in college life [1]. Therefore, it is necessary to have an effort to predict the number of new student admissions so that the tertiary institution can determine what policy direction will be taken regarding the condition of the number of new student admissions that will be faced. Prediction can be done by various methods, one of which is linear regression. This method is a method of forecasting techniques that will describe the relationship between at least one/more independent variables and one dependent variable with the aim of predicting the value of the dependent variable in relation to the value of certain independent variables [2] [3]. Linear regression has the advantage of being simple in application, good results in predicting, as well as being able to see the effect of one parameter on another.

Research on predicting the number of new students has been carried out before. Like research [4] which conducted research on forecasting the number of prospective new students who will register in the next period. This research uses the Single Exponential Smoothing algorithm, according to his research the single exponential smoothing method is a procedure for continuous improvement in forecasting of the latest observation objects. Where this method will focus on decreasing priority exponentially on the object of previous observations. Based on the research results, the best forecast to predict the number of prospective students who register for the following year is to use  $\alpha = 0.1$ .

Another research was conducted by [1] predicting new student admissions with the concept of artificial intelligence using a multi-layer perceptron. Based on the results of the experiment, a Neural Network with 5-9-1 architecture is the best architecture for predicting the number of new student admissions at the University of Semarang. From the results of testing this method can produce the minimum MSE of 0.1. Thus, this method can be used as an alternative solution for setting targets for new student admissions. by Semarang University Public Relations.

In addition to research on new student admissions, there is also quite a lot of research on the use of the linear regression method for the need to make predictions/forecasting, such as research conducted by [2] discussing opening new classes at STIKOM Bali using linear regression. The purpose of his research is to find out the number of opening classes in the next period.

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The research uses historical data from the previous 3 years. The researcher concluded that by applying linear regression to support the class opening system, it was able to provide convenience in carrying out calculations and reduce the occurrence of class drops.

Another study was conducted by [5] regarding the prediction of volume and circulation of waste management in the city of Bandung. This study uses a linear regression method. The results of this study tell us that the prediction results for the volume of waste in 2021 and 2022 using the linear regression method based on data for 2011-2020 are 489,148 tons and 506,709 tons. The predicted results for waste transportation trips for 2020 are 100,042 times or an average of 274 repetitions/day and 103,819 times for 2022 or an average of 284 repetitions/day. The average volume of waste transported/ritated is 4.89 tons for 2021 and 4.88 tons in 2022. Linear regression can be used as a tool that can predict waste transportation cycles so that it can be used as a basis for compiling a budget, planning availability and the capacity of TPS, TPA and cleaning staff.

Research conducted by [6] applied the linear regression method to predict stock availability of tablet-type drugs. Based on the analysis of drug sales transaction data at the Banten Bay Clinic using a simple linear regression method, the results obtained an accuracy of 98.505%. So it can be concluded that the simple linear regression method can determine accurate prediction results for predicting drug stocks in the management of tablet-type drug supplies (ibu profen) which can be applied to the Banten Bay Clinic.

Research conducted by [7] concerning predicting the number of patient visits at Cilacap Hospital, states that the linear regression prediction method can produce predictions with several criteria, where there are 26 linear regression prediction models that have an error value of less than 20%, meaning it has an accuracy of 80%. or included in the very good and good category. Then there are 3 linear regression prediction models that fall into the bad category, namely the error value is more than 50%. And there is 1 linear regression prediction model which is included in the sufficient category or has an error value of 20% to 50%. In future research it is hoped that it will produce better MAPE, and there are no predictive results with MAPE in the poor category. In future research, it is necessary to pay attention to external factors such as the weather which can be used to predict the number of outpatient, inpatient and emergency patient visits more accurately.

Subsequent research [8] applied linear regression to predict sales and cash flow in restaurant point of sales applications. The results of this study explain that linear regression is able to produce information in the form of predictive results for drug supply in the process of selling tablet-type drugs. Based on calculations using the linear regression method, an accuracy of 98.505% is obtained, which means that this method can be implemented in making predictions of tablet-type drug stocks (profen mother) at the Teluk Clinic.

Based on the history of previous research, this study tries to apply the linear regression method to predict the number of new student admissions at private universities based on historical data available at each university.

## II. METHODOLOGY

This research was conducted in several stages, including: Data Collection, Data Preparation, Modeling, and Evaluation. These stages can be seen in the following figure:

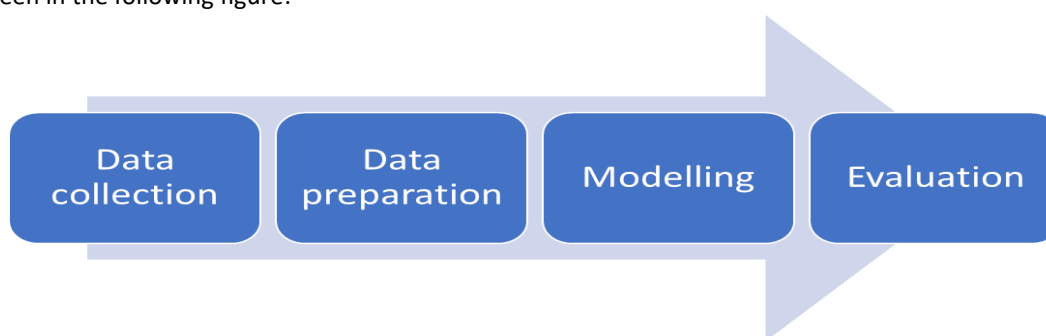


Figure 1. research methodology

### A. Data Collection

This stage is carried out by collecting data related to the number of new students who register, re-register, and students who are active/continue to continue studying after 2 semesters. Data were obtained directly from private universities in Aceh, including: Al Muslim University, UNIKI, and Cut Nyak Dien University. The data collected is data from the last three years.

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## B. Data Preparation

The data that has been obtained is then cleaned, and prepared for processing according to the selected model

## C. Modelling and implementation

Data modeling was carried out using the linear regression method. This model was chosen in order to be able to make predictions about the potential number of new students in the following year, as well as to see the magnitude of the influence of the variables used on the results obtained. Regression analysis is a form of relationship between the independent variables on the dependent variable whose equation is  $Y = f(X)$ . the formula for the simple regression model is as follows:

$$Y_t = \alpha + \beta X_1 + e_i; \quad i = 1,2,3, \dots, n$$

- Calculating  $\alpha$

$\alpha$  is calculated using the following equation:

$$\alpha = \frac{(\sum Y)(\sum X^2) - (\sum Y)(\sum X^2) - (\sum X)(\sum XY)}{n \cdot \sum X^2 - (\sum X)^2}$$

- Calculating  $\beta$

$\beta$  is calculated using the following equation

$$\beta = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n \cdot (\sum X^2) - (\sum X)^2}$$

## D. Evaluation

At this stage an analysis of the results obtained is carried out, in accordance with the model that was planned in the previous stage. Model analysis is carried out by looking at the magnitude of the standard error which is calculated by the following equation:

$$S_e^2 = \frac{\sum Y^2 - \beta^2 \cdot \sum X^2}{n-2}$$

In addition, a correlation analysis will also be carried out using equations:

$$r = \frac{n \sum XY - \sum X \cdot \sum Y}{\sqrt{[(n \cdot \sum X^2 - (\sum X)^2) - [n \cdot \sum Y^2 - (\sum Y)^2]}}$$

Meanwhile, the coefficient of determination is calculated using the formula:

$$r^2 = \left( \frac{n \sum XY - \sum X \cdot \sum Y}{\sqrt{[(n \cdot \sum X^2 - (\sum X)^2) - [n \cdot \sum Y^2 - (\sum Y)^2]}} \right)^2$$

## III. RESULT AND DISCUSSION

This study uses data sourced from 3 private universities in aceh, namely: Al Muslim University, Indonesian National Islamic University (UNIKI), and Cut Nyak Dhien University. The data used is student enrollment data for the last three years starting from 2020, 2021 and 2022. Each university has a different number of study programs. Al Muslim University has 25 study programs, UNIKI has 11 study programs, and Cut Nyak Dhien University has 13 study programs. A recap of total student admissions for each university is shown in the following table:

**Table 1. Recapitulation of student admission data for the last 3 years**

No	University	Year	Registration	Re-Registration
1	Al Muslim	2019	6766	5665
2	Al Muslim	2020	6945	5853
3	Al Muslim	2021	7705	6504
1	Cut Nyak Dhien	2019	1726	1421
2	Cut Nyak Dhien	2020	1725	1377
3	Cut Nyak Dhien	2021	2116	1728
1	UNIKI	2019	3571	2981
2	UNIKI	2020	3835	3283
3	UNIKI	2021	4848	4008



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Each university has different achievements every year. Prediction results will of course also be different. The forecasting results for each university are shown in the following table:

### a. Forecasting results for Al Muslim University

**Table 2. Al Muslim University**

No	Year	Regist (X)	Daftar (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	Yt	e	PE
1	2019	6766	5665	45778756	32092225	38329390	5710.82	45.82	0.81
2	2020	6945	5853	48233025	34257609	40649085	5861.18	8.18	0.14
3	2021	7705	6504	59367025	42302016	50113320	6499.58	4.42	0.07
<b>Total</b>	<b>48399</b>	<b>40570</b>	<b>317189769</b>	<b>224205054</b>	<b>266668009</b>	<b>18071.58</b>	<b>58.42</b>	<b>1.02</b>	<b>1.02</b>

$$\alpha = 27.38$$

$$\beta = 0.84$$

$$\text{MAPE} = 1.02 / 3 = 0.34 \%$$

### b. Forecasting results for Cut Nyak Dhien University

**Table 3. Cut Nyak Dhien University**

No	Year	Regist (X)	Daftar (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	Yt	e	PE
1	2019	1726	1421	2979076	2019241	2452646	1501.17	80.17	5.64
2	2020	1725	1377	2975625	1896129	2375325	1500.34	123.34	8.96
3	2021	2116	1728	4477456	2985984	3656448	1824.87	96.87	5.61
<b>Total</b>	<b>32550</b>	<b>27074</b>	<b>174243120</b>	<b>122454558</b>	<b>146060633</b>	<b>4826.38</b>	<b>300.38</b>	<b>20.21</b>	<b>20.21</b>

$$\alpha = 68.59$$

$$\beta = 0.83$$

$$\text{MAPE} = 20.21/3 = 6.74 \%$$

### c. Forecasting results for UNIKI

**Table 4. UNIKI**

No	Year	Regist (X)	Daftar (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	Yt	e	PE
1	2019	3571	2981	12752041	8886361	10645151	2989.97	8.97	0.3
2	2020	3835	3283	14707225	10778089	12590305	3209.09	73.91	2.25
3	2021	4848	4008	23503104	16064064	19430784	4049.88	41.88	1.04
<b>Total</b>	<b>39237</b>	<b>32820</b>	<b>214773333</b>	<b>151281718</b>	<b>180242454</b>	<b>10248.94</b>	<b>124.76</b>	<b>3.59</b>	<b>3.59</b>

$$\alpha = 26.04$$

$$\beta = 0.83$$

$$\text{MAPE} = 3.59/3 = 1.2 \%$$

Based on the prediction results that have been made on each university data, it can be seen that the error rate obtained is below 7%. For the prediction results from the Al Muslim university, there was a prediction error of 0.34%, the prediction for Cut Nyak Dien University was found to be an error of 6.74%, and for predictions from the Indonesian National Islamic University, there was an error of 1.2%. The mean error of the three predictions is 2.76%. This error rate is classified as a very low error rate, which means that the prediction results have a fairly high degree of truth.

## V. CONCLUSIONS

Linear regression can predict student acceptance well with very low errors. Linear regression can be implemented in the case of new student admissions, so that it can assist universities in developing various strategies to maintain their existence, especially marketing strategies.

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## Understanding the Idiostyle Phenomenon

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**ABSTRACT:** This article describes how the concept of idiostyle and its place in the literary world appeared in modern Uzbek linguistics. Also, the article will consider the assessment of idiostyle in Uzbek and world literary criticism and various approaches to this phenomenon, as well as the scientific work done.

**KEYWORDS:** idiostyle, idiolect, individual style, conceptual field, cognitive linguistics, style, speech.

### INTRODUCTION

The content of the text or work, its compatibility with the times, is of course very important. However, in addition to the above, the manifestation of the personal characteristics of the author's style in the text also gives the work a special meaning. The individual character of the author is of particular importance in the interpretation of the text, in its linguistic and stylistic design. Naturally, it is very relevant to create works of non-traditional speech and compositional design, emotional-expressive elements. The author's individuality is clearly felt in the content of the artistic text, the character of the work's images, his attitude to social reality, the use of artistic image tools, the literary form, and the level of idiostyle. So, what does the term idiostyle, which has been used for a long time in literature, mean?

Idiostyle - the individual authorship style of a writer and poet; the originality of the discourse of the artistic work; stylistic subject. When studying the author's idiostyle, it is necessary not only to understand the peculiarities of his use of language tools, but also to be familiar with the criteria of literary studies.

### THE MAIN FINDINGS AND RESULTS

The rare similes and images in the poem "Izhar" included in the collection "Dil Fasli" by the national poet of Uzbekistan Sirojiddin Sayyid stir the reader's feelings towards the nation, motherland, motherland. The following similes in the first stanza of the poem are unique and popular and clearly show Sirajuddin Sayyid's unique style:

#### One slice of handalak, one slice of hilal

Don't leave my sight for a thousand years [1].

Or the following verses in the second stanza remind us of the bitter past and encourage us to give thanks for the present. In Uzbek literature, the image of a crow comes in the sense of an invader, and the metaphorical meaning of the crow evokes a cold imagination in a person. In the next stanza, the combination "My beautiful sky for nightingales" creates a warm feeling towards the motherland.

*Ketdi bog'laringni bosgan qarg'alar,  
Azal bulbullarga go'zal oshyonim.  
To'rg'aylarga o'ng'ay makonim dedim,  
Seni bag'rim dedim, osmonim dedim. [6]*

Gone are the crows that raid your gardens,

My beautiful sky for nightingales.

I said it's a good place for the torgays,

I called you my heart, I called you my sky

Idiostyle (individual style) is a system of meaningful and formal linguistic features characteristic of the works of a certain author, which creates a linguistic expression method that is uniquely reflected in these works. In practice, this term is applied to works of art (both prose and poetry). The mental basis of the poetic idiostyle is the individual conceptsphere. It can be presented in the form of two-level education: at the first level, concepts are distinguished as a cognitive-perceptual-affective formation of the

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author's mind, at the second level, they are combined into cognitive structures, the result of the interaction of these concepts, the form of their mental organization (frames, scenarios, metonymic and metaphorical models, conceptual fields) [2].

In the following linguistic poetic expressions in Sirojiddin Sayyid's poem Nuqtai Nazar, the poet's individual similes make any reader think:

- 1) **What is the motherland** is a melon that made Shah's poet cry in **Longing**.
- 2) Although the **poem** burns in the poet's chest, **the fire** that burns his throat is his.
- 3) Poetry is not a flower, it is not a pox, it is actually a dirty soap of the soul and hearts. [53]

The poet encourages the reader to purify his heart by referring to melons as longing for the homeland, fire to the sufferings of the heart, and cleaning the soul through dirty soap.

In linguistics, the concept of idiostyle is primarily related to the defined choice, the selection of language tools (words) and their combination, interaction methods. On the other hand, although there are no specific ways of expressing personal meanings, it is easy to identify their predominant use [3]. This means that idiostyle can be associated not only with the choice of language tools, but also with the frequency of their use, which gives us the opportunity to use a dominant functional approach.

S.Umirova's dissertation can be cited as the first research work in Uzbek linguistics aimed at studying the idiosyncratic style of the author [4]. In his research, the author examines idiostyle under the term poetic individuality and "due to the individual skill of the creator, each language material used in the text can become a poetic unit and an individual tool unique to this creator's style. "Linguopoetic research is a unique peak of general philological research, and for it, the highest potential of language, which is a high expression of human feelings, is taken as an object of observation," he says. It shows that the study of this issue is very relevant for modern linguistics.

Along with artistic allusions, words, especially poetic words, play an important role in increasing poetic effectiveness, attractiveness, and ensuring the uniqueness of the expression method. It should be noted that only words selected and sorted based on the essence of the speech lead to a real illumination of the poetic thought.

Analyzing the language of a writer or poet, studying his artistic works begins with the concept of idiostyle. In researching the changes taking place in the poetics of our modern poetry, the generosity and intellectuality of Usman Azim's poetry, the folkliness of Iqbal Mirza's poetry, the modern and postmodern features of Fakhriyor's work, the priority of mystical tones in Abduvali Qutbiddin's style of expression, the frequent use of dialectism in the works of Togay Murad, the unique poetic expression of deep philosophical thoughts in the poems of Sirojiddin Sayyid The number of stanzas at the level clearly shows the individual style of each creative representative.

*Men bu chaman sahnasiga oshiq bo'lib kelgan edim,  
Gul rangiga tushundim-u dil zangiga tushunmadim [179]*

I fell in love with this chaman scene,

I understood the color of the flower, but I didn't understand the rust of the heart

In the blessed hadiths, "When a person commits a sin, a black spot appears in his heart. If he earnestly repents of his sin, this black spot will go away". If he continues to commit sins without repentance, the number of black dots will also increase. The fact that the content of the hadith has found a poetic expression in these verses written by S.Sayyid is a proof of the strong influence of enjoying the blessings in the poet's poetry.

The fact that hypocrisy and despondency cause the heart to rust in the poet's work is described by means of images and symbols, which clearly shows the author's idiostyle.

Linguistic-stylistic tropes are used in the text of a work of art in new meanings, helping the reader to perceive the idea figuratively. They are an integral part of any literary work, and the author is able to make his creative text uniquely individual. Therefore, every author, be it a poet or a novelist, always uses tropes to convey the thoughts and feelings he wants to express in his work. In the following verses of Sirojiddin Sayyid, tropes increase the expressiveness of speech and clearly show the poet's individuality:

*Ko'z oldinga keltirsang  
Bo'ylari-yu ko'z qoshin,  
To'rt yuz ellik ming lola –  
Ko'kragida qo'rg'oshin [5].*

If you bring it to the front  
Height and eyebrows,  
Four hundred and fifty thousand tulips -  
Lead in the chest

## Understanding the Idiostyle Phenomenon

It seems that the poet avoids the waste of words and goes on a “diet” by filling each word in the artistic text with a rich meaning. In these verses of the poet, the entire tragedy of the Second World War is clearly, impressively and uniquely expressed through tropes.

The term ‘idiostyle’ is also related to the term ‘idiolect’. The lack of clear definitions of the terms “idiostyle” and “idiolect” has led linguists to a theoretical debate on this issue. Despite the fact that there is no single position both in defining the important features of the idiostyle category and in the use of the term (idiostyle, idiolect, individual style, speech style), this problem is easily explained by its relative “newness”. Among the many views on the interrelationship of terms such as poetic language, poetic text, poetic idiostyle, and idiolect, there are two main approaches. First, idiolect and idiostyle are considered interrelated as surface and deep structures in descriptions of the “meaning-text” type, or form the triad “Subject-expressive technique-text” [6].

Of course, all levels of the language, such as phonetic-phonological, morphemic, lexical, morphological, syntactic and even supersyntactic, are involved in the expression of artistic content. But it is worth noting that all of these units, without exception, do not directly and uniformly serve the artistic intention of the creator. Some of these units receive special artistic-aesthetic emphasis in a certain favorable artistic context created by the artist according to his skill level. This same unity is called idiostyle and serves to spread the author's works in the world of literature.

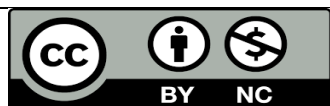
Therefore, the idiosyncratic style of the author of the work and its study is one of the topical issues of linguistics. Today, studying the poet’s idiom in both world linguistics and Uzbek linguistics helps to fully and deeply understand the content of the work: it reveals the author’s artistic goal.

## CONCLUSION

In short, it should be noted that new lexical units, means of expression, tropes that create uniqueness, that is, individuality in the speech of the wordsmiths, creators, scientists and publicists, who are the creators of a certain language, after the passage of time, are absorbed into the national language and become language wealth. Therefore, both theoretical and practical study of idiostyle is of great importance in linguistics.

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## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?



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**ABSTRACT:** This article identifies related research developments related to Digital Entrepreneurship. It is hoped that this article will pave the way for future studies. Bibliometric analysis is used to determine research developments related to Digital Entrepreneurship. Digital entrepreneurship is a new research area. The first article related to "Digital Entrepreneurship" was published in 2000. Many articles with this theme were published only in 2019. The results of the Overlay Visualization analysis show that almost all of the keywords that become nodes are new themes or variables. This is reinforced by the results of the Density visualization, showing that all the keywords that make up the node are basically still very feasible to be used as research themes.

**KEYWORDS:** Entrepreneurship, Publication, Bibliometric, Digital.

### 1. INTRODUCTION

Digital entrepreneurship is conceived as a new research field, given its unique characteristics (1,2). The existence of internet technology, which is supported by the rapid development of digital technology, triggers disruption in business management activities. It takes much research to be able to provide guidance or guidance to be able to create digital entrepreneurship. For this reason, a mapping analysis is needed to determine what extent to research developments related to Digital entrepreneurship are required to pave the way for future studies.

### 2. LITERATURE STUDY

In this section, the theoretical basis that supports this research is presented. The focus theme is Digital Entrepreneurship. Entrepreneurs are currently facing the challenges of environmental changes that require them to have knowledge, skills, and insights related to digital technology. Knowledge, skill, and understanding of digital technology will increase their survival ability during increasingly accelerated environmental changes. Digital entrepreneurship is needed to be able to increase agility in capturing business opportunities and continue to maintain the sustainability of the businesses they have.

In general, digital entrepreneurship is an entrepreneurial activity in digitally offering assets, services, or most business activity processes (3). Digital entrepreneurship can also be interpreted as selling digital products or services using internet network technology.

Digital entrepreneurship can also be said as the ability to seize business opportunities with innovative and radical offers using digital technology (4,5). Digital entrepreneurship is different from traditional entrepreneurship. Digital entrepreneurs can take advantage of digital technology in producing digital products and marketing activities by utilizing digital technology and their ability to work remotely.

Large companies utilize business applications to support their business activity processes. These applications are applied in various fields of business activities such as sales and marketing, data analysis, manufacturing movements, and risk assessment (6–8). On the other hand, SMEs use typical applications such as social media for promotional and marketing activities and e-commerce applications such as Tokopedia, Bukalapak, and others for trading activities. They also use online forums to increase their knowledge, skills, and insights to innovate and transform in this digital era. The goals of large companies and SMEs are the same, namely how they can quickly innovate and maintain a competitive advantage (9).



## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

Knowledge, skills, and insights related to the use of digital technology are considered necessary by both individuals and companies (10). Through good competence in utilizing digital technology, they hope to apply digital entrepreneurship in carrying out work activities, managing business, increasing their ability to solve problems, and seizing opportunities in this digital era (11–13).

### 3. METHODOLOGY

The research methodology in this article uses qualitative methods. The approach used is historical. Refers to research activities carried out through a series of "systematic collection and evaluation of objective data related to past events to find trends from current events. So that it can help explain current events and anticipate future events.

This research has an approach that focuses on analyzing published research articles related to "Digital Entrepreneurship". The results of this analysis can be used to find out how to research future development trends related to "Digital Entrepreneurship". The methodology in this article uses two stages. The first stage collecting research data relevant to "Digital Entrepreneurship". The second stage is the bibliometric analysis of research data pertinent to "Digital Entrepreneurship".

#### 3.1. Collecting Data Method

The data from this study are articles that have been published by reputable journal publishers. Data search using the *Publish or Perish application* (software). This software helps find relevant research related to the research title ["**Digital Entrepreneurship**"]. The stages of data collection are as follows:

1. Initial-year searches are not limited, while end-year searches are limited to 2022. The goal for the early year is not limited to finding information about when an article with the title "**Digital Entrepreneurship**" was first published.
2. The title word used as the keyword ["**Digital Entrepreneurship**"].
3. The keywords used as composed words ["**Ecosystem; Creativity; Education; Skills**"].
4. Articles submitted are limited to those that use English and source articles from reputable journals ( *Scopus, Emerald, Springer, ProQuest, Web of Science, and Science Direct* ).

#### 3.2. Data Analysis Method

The analysis tool uses VOSviewer. VOSviewer is software that visualizes maps and bibliometric networks. VOSviewer analyzes trends and patterns of scientific research developments related to existing fields of study.

The output of VOSviewer displays maps and networks based on co-citation data or keyword maps based on very detailed co-occurrence and keyword relevance data. The map and keyword network visualizations have different colors for each data cluster (14–17). The VOSviewer application displays an overlay network that shows the development of articles from time to time. An overlay network presents the period (years) in which the linkages of each keyword are presented in the form of a network. Based on the visualization of the overlay network, it is known how far the development of related studies is in Digital Entrepreneurship. Furthermore, there is density visualization. The density visualization display shows the high or low frequency of the concept or constructs used as research.

## 4. RESULTS

### 4.1. Numbers of Publication Years

Search for published articles using the Publish or Perish application. The search start time is not specified. The goal is to increase browsing search periods. The search results show that the first article related to "**Digital Entrepreneurship**" was published in 2000. Most articles with this theme were only published from 2019 to 2022.

The article search results only yielded 365 published articles. But only 163 came from *Scopus, Emerald, Springer, ProQuest, Web of Science, and Science Direct*. So only 163 of the data to be analyzed using bibliometrics came from reputable publishers.

2019 was the start of a significant increase in research with the theme of Digital Entrepreneurship. Where in that year the world faced the Covid 19 pandemic, forcing everyone around the world to be able to optimally use digital technology. Whether it's for daily activities, learning activities, work activities, and business activities. This situation has encouraged more and more research related to Digital Entrepreneurship.

## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

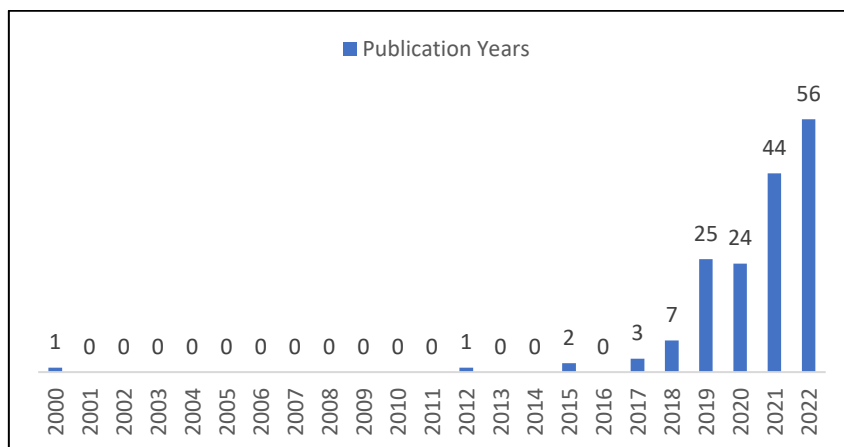


Figure 1 Number of "Digital Entrepreneurship" articles published between 2000-2022

### 4.2. Author Analysis

Author analysis using Google Scholar (GS) ratings. The GS rating has the same function as the annual *Journal Impact Factors* (JIF), which evaluates the impact factor of articles (18). GS has the opportunity to be used as a research reference from various parties because it can be downloaded for free. Table 1 shows the authors who contributed articles each year according to their GS rating (19).

Table 1 Active Publication Per Year From 2000-2022.

No.	Author	title	GSRank
1	S Nambisan, M Wright, M Feldman (2019)	The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes	183
2	S Kraus, C Palmer, N Kailer, FL Kallinger, Jonathan Spitzer (2018)	Digital entrepreneurship: A research agenda on new business models for the twenty-first century	15
3	G Elijah, A Margherita, G Passiante (2020)	Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process	1
4	P Rippa, G Secundo (2019)	Digital academic entrepreneurship: The potential of digital technologies on academic entrepreneurship	28
5	JM Sahut , L Iandoli , F Teulon (2021)	The age of digital entrepreneurship	2
6	YJ Hsieh, YJ Wu (2019)	Entrepreneurship through the platform strategy in the digital era: Insights and research opportunities	156
7	H Zaheer, Y Breyer, J Dumay (2019)	Digital entrepreneurship: An interdisciplinary structured literature review and research agenda	68
8	R Bouncken , M Ratzmann , R Barwinski , et. al (2020)	Coworking spaces: Empowerment for entrepreneurship and innovation in the digital and sharing economy	301
9	A Geissinger, C Laurell, C Sandström, et. al (2019)	Digital entrepreneurship and field conditions for institutional change—Investigating the enabling role of cities	92
10	T Le Dinh, MC Vu, A Ayayi (2018)	Towards a living lab for promoting the digital entrepreneurship process	39
11	V Jafari-Sadeghi, A Garcia-Perez, E Canelo, et. al (2021)	Exploring the impact of digital transformation on technology entrepreneurship and	193

## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

No.	Author	title	GSRank
		technological market expansion: The role of technology readiness, exploration and, et. al	
12	G Secundo, M Gioconda, P Del Vecchio, et. al (2021)	Threat or opportunity? A case study of the digital-enabled redesign of entrepreneurship education in the COVID-19 emergency	20
13	R Balocco , A Cavallo, A Ghezzi, et. al (2019)	Lean business models change the process of digital entrepreneurship	116
14	T Beliaeva , M Ferasso , S Kraus, et. al (2019)	Dynamics of digital entrepreneurship and the innovation ecosystem: A multilevel perspective	18
15	M McAdam, C Crowley, RT Harrison (2019)	"To boldly go where no [man] has gone before"-institutional voids and the development of women's digital entrepreneurship	96
16	G Secundo , P Rippa , R Cerchione (2020)	Digital Academic Entrepreneurship: A structured literature review and avenue for a research agenda	29
17	W Li, W Du, J Yin (2017)	Digital entrepreneurship ecosystem as a new form of organizing: the case of Zhongguancun	10
18	JQ Dong (2019)	Moving a mountain with a teaspoon: Towards a theory of digital entrepreneurship in the regulatory environment	151
19	B Paek, H Lee (2018)	Strategic entrepreneurship and competitive advantage of established firms: evidence from the digital TV industry	213
20	M McAdam, C Crowley, RT Harrison (2020)	Digital girl: Cyberfeminism and the emancipatory potential of digital entrepreneurship in emerging economies	226
21	G Quinones, B Nicholson, R Heeks (2015)	A literature review of E-entrepreneurship in emerging economies: Positioning research on Latin American digital startups	133
22	W Ben Arfi , L Hikkerova (2021)	Corporate entrepreneurship, product innovation, and knowledge conversion: the role of digital platforms	285

### 4.3. Citation Analysis

Based on the results of the citation analysis, it is known that the research by S Nambisan, M Wright, and M Feldman in 2019 with the title " The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes " was the most referenced article, until November 2022. The journal is referenced up to 854. The second most referenced articles are those written by S Kraus, C Palmer, N Kailer, FL Kallinger, et. Al in 2017. The journals whose articles are often referred to based on data are Technological Forecasting and Social Change. Table 2 shows data on the 22 most frequently referred articles up to November 2022.

**Table 2 Top 22 Authors and Articles Cited In Digital Entrepreneurship Publication**

Authors	title	year	Cites	Publishers
S Nambisan, M Wright, M Feldman	The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes	2019	854	Research Policy

## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

Authors	title	year	Cites	Publishers
S Kraus, C Palmer, N Kailer, FL Kallinger , et. al	Digital entrepreneurship: A research agenda on new business models for the twenty-first century	2018	403	International Journal of Entrepreneurial Behavior & Research
G Elijah, A Margherita, G Passiante	Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process	2020	385	Technological Forecasting and Social Change
P Rippa, G Secundo	Digital academic entrepreneurship: The potential of digital technologies on academic entrepreneurship	2019	244	Technological Forecasting and Social Change
JM Sahut , L landoli , F Teulon	The age of digital entrepreneurship	2021	158	Small Business Economics
YJ Hsieh, YJ Wu	Entrepreneurship through the platform strategy in the digital era: Insights and research opportunities	2019	156	Computers in Human Behavior
H Zaheer, Y Breyer, J Dumay	Digital entrepreneurship: An interdisciplinary structured literature review and research agenda	2019	155	Technological Forecasting and Social Change
R Bouncken , M Ratzmann , R Barwinski , et. al	Coworking spaces: Empowerment for entrepreneurship and innovation in the digital and sharing economy	2020	120	Journal of Business Research
A Geissinger, C Laurell, C Sandström, et. al	Digital entrepreneurship and field conditions for institutional change– Investigating the enabling role of cities	2019	114	Technological Forecasting and Social Change
T Le Dinh, MC Vu, A Ayayi	Towards a living lab for promoting the digital entrepreneurship process	2018	113	International Journal of Entrepreneurship
V Jafari-Sadeghi, A Garcia-Perez, E Candelo, et. al	Exploring the impact of digital transformation on technology entrepreneurship and technological market expansion: The role of technology readiness, exploration and, et. al	2021	113	Journal of Business Research
G Secundo, M Gioconda, P Del Vecchio, et. al	Threat or opportunity? A case study of the digital-enabled redesign of entrepreneurship education in the COVID-19 emergency	2021	100	Technological Forecasting and Social Change
R Balocco , A Cavallo, A Ghezzi, et. al	Lean business models change the process of digital entrepreneurship	2019	87	Business Process Management Journal
T Beliaeva , M Ferasso , S Kraus, et. al	Dynamics of digital entrepreneurship and the innovation ecosystem: A multilevel perspective	2019	86	International Journal of Entrepreneurial Behavior & Research

## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

Authors	title	year	Cites	Publishers
M McAdam, C Crowley, RT Harrison	"To boldly go where no [man] has gone before"-institutional voids and the development of women's digital entrepreneurship	2019	71	Technological Forecasting and Social Change
G Secundo , P Rippa , R Cerchione	Digital Academic Entrepreneurship: A structured literature review and avenue for a research agenda	2020	70	Technological Forecasting and Social Change
W Li, W Du, J Yin	Digital entrepreneurship ecosystem as a new form of organizing: the case of Zhongguancun	2017	65	Frontiers of Business Research in China
J Q Dong	Moving a mountain with a teaspoon: Towards a theory of digital entrepreneurship in the regulatory environment	2019	54	Technological Forecasting and Social Change
B Paek, H Lee	Strategic entrepreneurship and competitive advantage of established firms: evidence from the digital TV industry	2018	51	International Entrepreneurship and Management Journal
M McAdam, C Crowley, RT Harrison	Digital girl: Cyberfeminism and the emancipatory potential of digital entrepreneurship in emerging economies	2020	48	Small Business Economics
G Quinones, B Nicholson, R Heeks	A literature review of E-entrepreneurship in emerging economies: Positioning research on Latin American digital startups	2015	45	Entrepreneurship in BRICS
W Ben Arfi , L Hikkerova	Corporate entrepreneurship, product innovation, and knowledge conversion: the role of digital platforms	2021	39	Small Business Economics

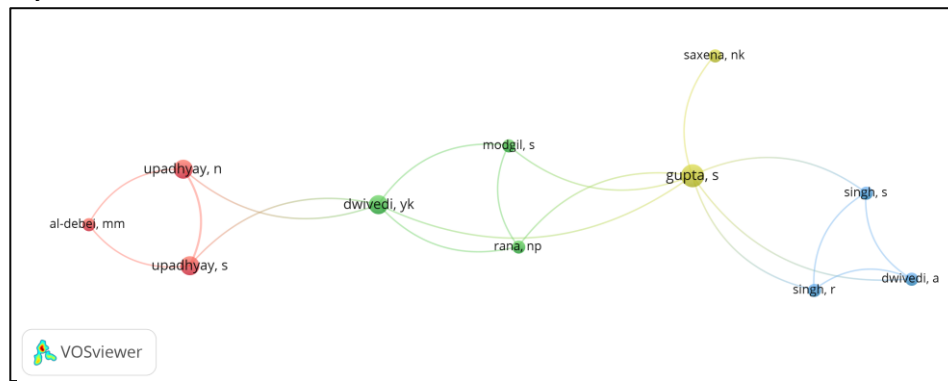
### 4.4. Bibliometric Analysis

Bibliometric analysis was carried out using the VOSviewer application. Through this application, it will be known how the co-occurrence and interrelationships of each keyword are contained in the title and research abstract, as well as the author of the published article.

The results of Bibliometric analysis using VOSviewer help researchers to identify relevant and up-to-date research themes or variables, thus clarifying the potential for future research development (20).

## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

### 4.4.1. Co-authorship Analysis



**Figure 2** Author network digital entrepreneurship

Co-authorship analysis shows the collaboration of 11 authors in research with the theme of Digital Entrepreneurship. Gupta, S, who has collaborated most with other authors. Based on the visualization Author Network Gupta has 3 articles. The first is the result of collaboration with Saxena, the second is the result of collaboration with Modgli, Rana, and Dwivedi, and the third collaboration is with Singh S, Singh R, and Dwivedi A. The Author Network can also show the high commitment of researchers to continue conducting studies related to digital entrepreneurship.

### 4.4.2. Network Visualization Analysis Bibliometric

The analysis results with VOSviewer conducting co-occurrence analysis found 1,037 keywords related to digital transformation. To produce more specific keywords in the keyword analysis of titles and abstracts, keyword occurrences are limited to 3 circumstances. From the limitation of nine events, 55 keywords were obtained, divided into 7 clusters.

**Figure 3** Keywords clustering

Clusters	Keyword
cluster 1	culture, digital academic entrepreneurship, digital ecosystem, dynamics, entrepreneurship skills, influence, innovation ecosystem, relation, student, <b>transformation</b> , value
cluster 2	case study, conceptual model, country, digital entrepreneur, higher education, practice, service, success, theory, communication
cluster 3	communication, <b>development</b> , digital innovation, sustainable digital entrepreneurship, infrastructure, school, sustainability, sustainable entrepreneurship
cluster 4	artificial intelligence, case, covid, digital entrepreneurial ecosystem, <b>digital platform</b> , entrepreneur, machine learning, use
cluster 5	<b>age</b> , digital era, effect, gender, importance, technology entrepreneurship, trend
cluster 6	analysis, collective intelligence, creative destruction, digital entrepreneurship education, <b>entrepreneurship ecosystem</b> , open data ecosystem
cluster 7	digital marketing, digital world, paper, social entrepreneurship, <b>university</b> , venture

The larger keyword node indicates the number of keyword nodes associated with that node. The largest cluster 1 node is transformation, the second cluster of nodes is almost evenly distributed, the three node's largest cluster is development, the four nodes' largest digital platform cluster, the 5th node's largest cluster is Age, and the 6th node's largest cluster is entrepreneurship ecosystem. The 7th node is the largest university cluster. . These nodes have far more links between nodes in their cluster and with other clusters.



## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

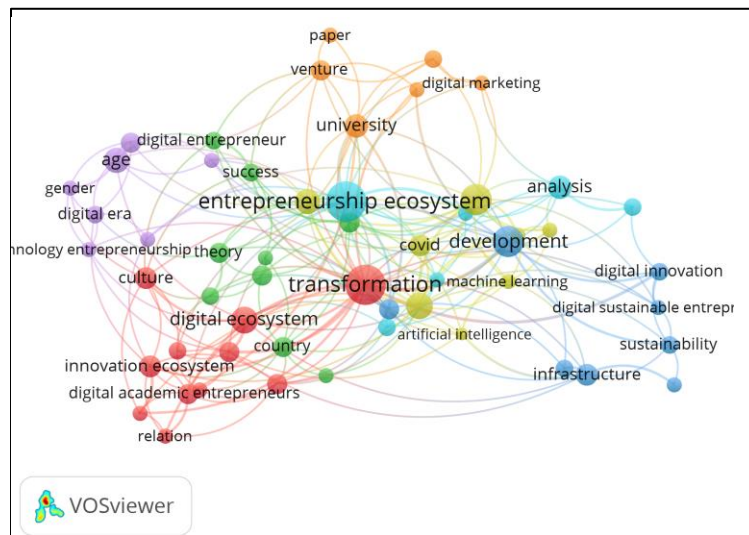


Figure 4 Network visualization in digital entrepreneurship publications.

### 4.4. 3. Overlay Visualization Analysis

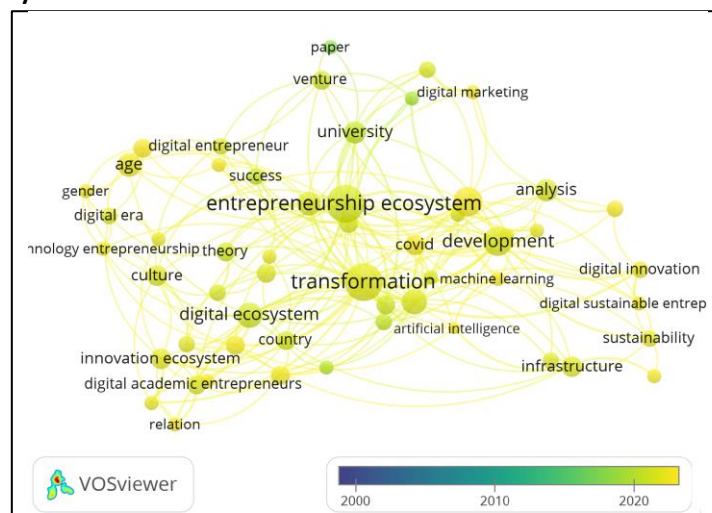


Figure 5 Overlay Visualization In digital entrepreneurship Publications

Based on the overlay analysis, it can be seen that almost all keywords have a high level of novelty. Each node in yellow indicates this condition. While only a few nodes are greenish-yellow. Yellow and greenish-yellow nodes indicate keywords taken from 2020 to 2022.

## How to Develop of Digital Entrepreneurship Publication Using Brief Bibliometric Analysis?

### 4.4.4. Density Visualization Analysis

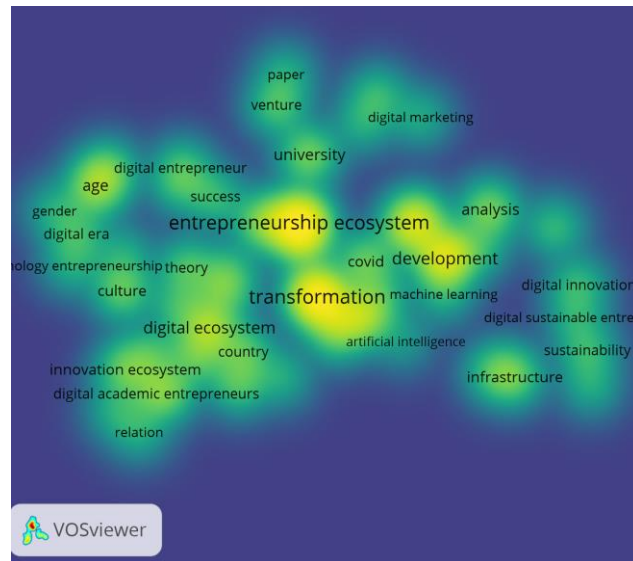


Figure 6 Density visualization in digital entrepreneurship publications.

Keywords that are in the yellow area fade to a darker color, indicating that there are still few researchers whose articles discuss this theme. Meanwhile, the thick yellow suggests that many researchers have taken the research theme with this word. As with discussions related to digital entrepreneurship, there are still a few researchers who discuss this. At the same time, the debate about entrepreneurship ecosystem and transformation is more extensive than digital entrepreneurship. But overall, the research using the themes in each cluster still needs to be saturated. Further research can still conduct studies related to these themes.

## 5. CONCLUSIONS

Bibliometric research helps understand the mapping of the results of scientific publications and research developments related to the theme of digital entrepreneurship. The results of this study can help further researchers develop research related to the music of digital entrepreneurship. The results of this study can also help practitioners to find guidelines for implementing digital entrepreneurship based on scientific knowledge derived from currently available research articles so that practitioners can implement digital entrepreneurship better.

Bibliometric analysis using VOSviewer is carried out for quantitative analysis and to visualize the mapping of the results of scientific publications and the development of scientific knowledge related to digital entrepreneurship. Network visualization refers to forming themes based on the keywords that appear in the VOSviewer output. At the same time, the existing clusters show a sequence of network formation based on keywords that become nodes. Larger nodes indicate that the theme has more links than smaller nodes.

Overlay Visualization shows when these keywords often appear in the article being analyzed. Looking at the results of the Overlay Visualization, almost all of the keywords that become nodes are new themes or variables in research related to digital entrepreneurship. This is understandable because the theme of digital entrepreneurship was only recently published in 2019.

The results of the Density visualization show that all the keywords that become nodes are still very feasible to be used as research themes. Research related to the music of digital entrepreneurship still has to be studied to produce scientific knowledge.

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## Principals' and Teachers' Perception of the Impact of Conflict Management Strategies on Effective Teaching in Secondary Schools in Enugu State, Nigeria



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**ABSTRACT:** This study investigated principals' and teachers' perception of the impact of conflict management strategies on effective teaching in secondary schools in Enugu State. The main problem of the study is the mismanagement of school conflict that leads to nonchalant attitude of school members and rebellious behaviour towards instructions. The study objective is to examine principals' and teachers' perceptions of the impact of the two conflict management strategies on effective teaching in secondary schools in Enugu State. Two research questions and two hypotheses guided the study. Krejcie and Morgan technique was employed to select the sample size at 669 respondents. A self-developed Questionnaire on Principals' and Teachers' Perception of the Impact of Conflict Management Strategies on Effective Teaching was used for data collection. The data was subjected to analysis using SPSS and Cronbach Alpha statistics was applied. The findings revealed that the 6 items of the instrument yielded reliability co-efficient of .837, at 95% level of confidence, 0.05. Conflict management strategies have significant perceptions on effective teaching. The study concluded that, there is no one conflict management style that can be exclusively attributed to teaching effectiveness. Principals and teachers have to blend them well in their daily managerial activities in school for quality results to be realized. The study recommended that principals' and teachers' education curriculum at all levels of training should include conflict management in order to empower principals and teachers to handle the same when in the field.

### INTRODUCTION

The diversity of human beings is one of their most outstanding traits. Human beings have distinct methods of being, thinking, and living, as well as different demands, worldviews and ethical perspectives, all of which influence how individuals interact. In this view, conflict is defined as tension between opposing interests or positions that exists in human relationships and is prevalent in a variety of social organizations, including the educational system. Conflict, according to Ignace (2014), has become an inextricable feature of human organizations all over the world. The issue of managing conflict has become a contradiction due to the sheer amount of time and resources spent by school organizations to resolve it. In our schools, school organizational conflict is a problem that requires systematic control in order to achieve effective teaching.

Conflict management has been a hot topic in human organizational life around the world, particularly in the twenty-first century. There are numerous domestic, societal, national, and international news stories concerning conflict, wars, dissension, fights, quarrels, and other issues, but the process of settling those conflicts has become a challenge (Iravo, 2012). However, in order to settle conflict in schools, specific management measures must be implemented in order to encourage teaching, training, and peaceful cohabitation among those concerned. Secondary school conflicts can be addressed by school organizational leaders through provision of effective communication in the workplace, avoiding unequal treatment, and keeping consistency in dealing with employee welfare, among other things. When school personnel are aware of the factors that contribute to conflict, they can exert control over the issue before it becomes a dispute. However, the problem with conflict is not the conflict itself, but rather the incapacity to handle conflict. For the purpose of this study, negotiation and collaboration approaches to conflict management were adopted and investigated with regards to their impact on teaching effectiveness.

The negotiation conflict management style involves an honest discussion, identification of the conflict issues and its causes, and acknowledgement of the problem in order to satisfy the concerns of both parties. This strategy also allows all parties to express themselves, allowing them to concentrate on the problem rather than the individuals, and so forth (Iravo, 2012).

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Secondary school principals and teachers can use this strategy by negotiating and implementing a solution that benefits both parties.

Collaboration as a conflict management strategy is an approach which secondary school principals and teachers can adopt. According to Aniefiok et al. (2017), this strategy allows the opposing parties with a favourable attitude to develop the communication necessary to overcome any misunderstanding and to find the best possible solution. This research will delve more into the two key conflict management tactics discussed above.

Effective teaching as a dependent variable in this study means the best way in which school administrators' and teachers' coach and impart actual knowledge to the learners. It is also a way of having the best results in the school's curricular activities and the ability to meet the school's teaching objectives. Teaching, as one of the core activities of secondary schools, can be hampered by acts of conflict. Therefore, teaching can only be effective in a safe school environment free of fights, quarrels, and other forms of animosity. According to Fabunmi and Alimba (2021), teaching process can be obstructed by conflict. For example, due to the high prevalence of conflict in secondary schools, school administrators and instructors devote a greater part of their time and energy on resolving or managing conflicts at the expense of teaching.

Secondary school principals and instructors in Enugu State face variety of conflicts that obstruct their efficiency and effectiveness thereby harming the school's academic success. The researcher's interest in carrying out this study stemmed from personal experience and observation of a range of disputes that exist among administrators and teachers, among instructors, the P.T.A., the school and the host communities. As a result, the goal of this research is to look into principals' and teachers' perceptions on the impact of conflict management practices in secondary schools in Enugu State in order to improve teaching. In the following statement, the study is able to express the essential challenges that need to be investigated in this research.

### **STATEMENT OF THE PROBLEM**

Due to the increase in various school personnel conflicts, which is a normal scenario in every educational system, the burden of controlling secondary school conflicts in order to achieve efficient teaching is a massive one. Researchers have expressed worry about the need for conflict management skills to be integrated into secondary school administration. Conflicts in secondary schools have led to unpleasant relationships between principals and teachers and among teachers. Some conflicts have resulted in struggles for power in schools. Such state of affair has disrupted teaching especially when the school head is unable to manage conflict issues adequately. In some instances, conflicts have culminated in physical destruction of school buildings, loss of lives of certain school members, nonchalant attitude of teachers towards instructions, poor lesson plan preparation, indiscipline, rebellious behaviour, open fight before the students and many others. It was observed that most times, when school conflicts are among students, it does not affect teaching unlike when conflict is between or among principals and teachers, it obstructs school activities which teaching is one of the centers. Moreover, when conflicts are not well managed, they tend to impede teaching effectiveness in secondary schools. With such conflicts, teachers cannot contribute meaningfully to teaching-learning process which is central to the provision and actualization of qualitative education and goals of education as enshrined in the Nigerian National Policy on Education (NPE, 2013).

### **OBJECTIVES OF THE STUDY**

The wide objective of the study is to investigate principals' and teachers' perception of the impact of conflict management strategies on effective teaching in secondary schools in Enugu State Nigeria.

Specifically, the study seeks to:

1. ascertain principals' and teachers' perception of the impact of negotiation conflict management strategy on effective teaching in secondary schools in Enugu State.
2. find out how principals and teachers perceive the impact of collaboration conflict management strategy on effective teaching in secondary schools in Enugu State.

### **RESEARCH QUESTIONS**

At the end of the study, the following research questions are to guide the study for the achievement of the objectives.

1. How do principals and teachers of secondary schools in Enugu State perceive the impact of negotiation conflict management strategy on effective teaching?
2. How do principals and teachers of secondary schools in Enugu State perceive the impact of collaboration conflict management strategy on effective teaching?

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## **RESEARCH HYPOTHESES**

The following null hypotheses are meant to be tested at p-value < 0.05 level of significance:

Ho 1: There is no significant perception of the impact of negotiation conflict management strategy on effective teaching among principals and teachers of secondary schools in Enugu state.

Ho 2: There is no significant perception of the impact of collaboration conflict management strategy on effective teaching among principals and teachers of secondary schools in Enugu state.

## **LITERATURE REVIEW**

### **Conceptual Framework**

A conceptual framework is a collection of broad global views, concepts and principles drawn from various fields that are used to organize a future presentation (Suraju, 2019). The study's topics were clarified and placed within their proper context.

### **Perception of Principals and Teachers of the impact of conflict management strategies on effective teaching**

Achike (2016), opined that effective administration of Nigerian secondary school system, to a large extent, depends on a cordial and cooperate working relationship among the principals, teachers, parents, communities and learners. The school managers through their experiences are aware that harmonious working relationship, mutual implementation of decisions and peaceful academic environment will be jeopardized, if the school and members of the school community are often in conflict. Nkomo et al. (2020), asserted that, conflict creates social change and balance, creates an environment where staff members got to know each other well if controlled within limits and that it assists in the smoothening and running of the institutions. Principals and teachers get to know each other's strengths and weakness through act of conflict as long as it is handled properly. In consent to this, Obizue et al. (2020), added that appropriate use of conflict management strategies put chaotic school climate in order. Conflict management is in the list of administrative roles of school administrators and requires rap attention at every given crisis's situation in schools. According to Oresajo (2015), conflict management as perceived by school managers entails putting in place tactics to lessen the negative impact of conflict while raising the positive aspects of it to a level equal to or higher than where the dispute is occurring. The impact of conflict management, moreover, improves teaching and overall school outcomes.

### **Concept of Conflict**

Various scholars have defined conflict in different ways depending on the situation and their perception of the idea. It is necessary to separate the concept of conflict from its etymological and definitive viewpoints in order to better describe it. The etymological aspects raise questions and examine the language, whereas the definitive features are based on the experts' ideas. Conflict is derived from the Latin word *conflictus*, which is the past participle of *confligere* and means to strike together, to be in opposition, to be at odds with or at loggerhead with, an armed encounter, a battle, a fight, a struggle, a quarrel, a sense of discord of action, and the clashing of opposed principles (Fabunmi & Alimba, 2021). Moreover, Bakwaph and Ghibi (2020), opined that, despite the fact that the process of settling the conflict between two factions in the school has numerous challenges, effective conflict management techniques are the workable choices and de-escalation resolutions for various parties to consider.

### **Conflict Management**

Conflict management refers to attempts to control or regulate conflict through a number of measures. Successful conflict management occurs by listening to and providing opportunities to meet the needs of all the parties and to adequately address interests, so that, each party is satisfied with the outcome. Conflict management as a process entails assembling of activities of planning and monitoring the performance of a process, especially in the sense of a conflict resolution process. It involves the application of knowledge, skills, tools, techniques and systems to define, visualize, measure, with the goal to harmonious environment of co-existence. In managing conflicts, it is pertinent to know the causes of such conflicts and the influence it will have on the school system, as well as the methods of resolving conflicts which may include; negotiation, collaboration, compromising and so on. Conflict management is the ability to deal with every situation that involves personal interactions involving differences of opinions. Hence, it is a process of designing plans and implementing strategies to ensure that conflicts are contained or resolved effectively. This can be achieved by the use of appropriate strategies (Oresajo, 2015).

### **Effective Teaching**

Teaching effectiveness is a process of making a connection between what the teacher should teach and the new information that he or she would like the learners to grasp (Munna & Kalam, 2021). In other words, teachers need to be helped by making sure that they co-exist in a conducive teaching environment in order for them to activate what they have already planned to



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teach as new information. Once teachers coexist amicably in the teaching space, learners tend to get information from their previous knowledge. Onayase (2007), pointed out that, teachers should be able to build mutual understanding of individual differences through the teaching process, encourage a conflict-free environment, or, better yet, try to do their work effectively and maintain peace in the school environment and in the presence of learners. In this case, teaching will be more meaningful, and better results will be achieved (Munna & Kalam, 2021). Teaching is effective when learners are able to experience change in behaviour and teachers are appropriately evaluated. Furthermore, Sequeira (2012), opined that teaching is a method or sequence of events that results in positive changes and experiences in students' behaviour. When there are no obvious conflicts in the school, teaching becomes successful, and the changes made can lead to the development of a new skill, knowledge of a scientific law, and a change in attitude. Obviously, the school principals' and teachers' ability to manage the welfare of teachers by ensuring that conflict is successfully managed in the school system is the most important factor in improving teaching (Munna & Kalam, 2021).

### **Types of Conflict among Principals and teachers in Secondary Schools**

In both public and private secondary schools, several sorts of disputes exist between principals and teachers, as well as when two or more personnel disagree over problems concerning the school or when they encounter emotional antagonism with one another (Ignace, 2014). Principals and instructors must understand and learn how to properly manage them. Some common types of disputes in secondary schools are described briefly:

#### **1. Intra-personal Conflict**

This is internal tension that might occur as a result of a lack of clarity regarding school expectations. This form of conflict, according to Ignace (2014), is seen inside the individual teacher or principal in a school system (intrapersonal). Intrapersonal conflict, is also known as intra-individual conflict.

#### **2. Inter-personal Conflict**

This is a disagreement between two or more people which is frequently triggered by personality differences, such as a conflict between a manager and his or her subordinates. Because of the disparities that exist in them as individuals and in the school, there is going to be conflict when individuals relate and interact in the same school structure in order to achieve defined objectives. Interpersonal conflict, according to Majola (2013), is defined as, disagreements, irreconcilable interests about goals, regulations, rules and discordant behavior that cause anger, distrust, fear, rejection and hatred in a school system.

### **POSSIBLE CAUSES OF CONFLICT IN SECONDARY SCHOOLS**

Conflict arises when real or perceived interests collide. Conflict, on the other hand, is founded in tasks, values, interests, goals, and norms (Rahim, 2010). More specifically, according to Saiti (2015), the following are the sources of conflicts in schools:

#### **1. Problem in Communication**

Poor message encoding, poor human relations among school organizational members, a lack of an appropriate information process, and bad timing may be some of the factors that prevent school members from communicating with one another, resulting in opposition and conflicts in the school working environment. Indeed, a lack of openness and a policy that is unresponsive to others' needs cannot sustain effective dialogue, and as a result, can disrupt the communication process, resulting in confusion and conflict in the school system (Suraju, 2019).

#### **2. Role Ambiguity**

In every formal organization like educational institutions, individuals occupy job positions that have been defined on the basis of the organizational needs. Job analysis technique is used to derive job descriptions and specifications. Employees are expected to perform various roles based on work criteria (Mullins, 2007 cited in Ignace, 2014). When the position and job criteria are unclear, the employee is thrust into a new working environment, which can lead to fear and other unanticipated patterns of behavior or disagreement among school workers.

### **Impact of conflict management on teaching effectiveness in secondary schools in Enugu State**

In Enugu State's secondary schools, conflict manifests itself in an almost limitless variety of ways. In Enugu State's secondary school system, the problem of fighting has continued to grow. It has become a source of concern as to whether secondary school principals and teachers in Enugu State adopt and use appropriate conflict management tactics in secondary schools as needed. Due to principals' and teachers' inability to manage competing situations in the school system, there is a gap in assuring effective teaching in secondary schools in Enugu State. When conflicts are poorly managed, they have an adverse effect on the

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achievement of school-set goals due to stress, hostility, and other negative factors (Oboegbulem & Alfa, 2013). Saiti (2015), held that teachers' frustration, dissatisfaction, low morale, formation of cliques and poor academic performance of both teachers and learners are all possible consequences of conflict in secondary schools in Enugu State. Cliques are common in schools, and they try to protect their members' interests. Cliques could be factions within the teachers or factions against the principal or school administration. These cliques lead to conflict, and conflict in the school creates stress which has a negative impact on educational goals (Nwangwu & Chidiobi, 2014). Most of the time, repercussions of conflict become serious, especially when school authorities do not properly address dispute (Adenaiya & Adejugalbe, 2017).

### **Conflicts management strategies and effective teaching in secondary schools**

Conflict management strategy refers to the numerous approaches attempted to control conflict. It's a tactic employed by principals and teachers to deal with disputes between themselves and the teachers in charge of the school. Majola (2013) and Saiti (2015) presented the following conflict management methods or approaches that secondary school principals and teachers can apply thus:

#### **Negotiation or Problem-solving conflict management strategy**

Negotiation entails an attempt to address both parties' problems through open and honest dialogue (Iravo, 2012). The goal of this technique is problem solving, with solutions that work for all parties. According to Steyn and Van-Niekerk (2007), problem-solving is often difficult to achieve, but when it is, it produces new results. Moreover, for Steyn and Van-Niekerk (2007), problem-solving is the most effective form and strategy of conflict management in the school system because the basic goal is to discuss the concerns in order to permanently resolve the conflict. Because the problem-solving strategy requires a significant amount of time, it cannot be used in isolation and must be combined with other conflict-management techniques. Problem-solving is seen as a core skill in most school-based conflict resolution programs (Majola, 2013). It encompasses taking a methodical approach to resolving disagreements, finding solutions, or determining the source of issues.

#### **Impact of Negotiation conflict management style on teaching effectiveness**

Negotiation, involves the process of looking for a middle play ground that will favour all members. In practice, school administrators should not be afraid to address conflicting concerns among school staff by employing a negotiating style of conflict resolution. When there is a round table discussion where all of the opposing groups are represented and the subject is openly discussed, parties tend to resolve their issues and move on with their teaching activities with mutual cooperation. Negotiation style of managing conflict in school opens up an opportunity for both disputing parties' concerns to be heard fairly; this approach according to Suraju (2019), improves teaching quality.

#### **Collaboration or Integration conflict management strategy**

Collaboration as a method of resolving conflict is an approach that school principals and teachers can use to allow opposing parties to build the required communication in order to clear up any misunderstandings and reach the best possible solution. According to Human Resource Personality (2022), the collaborative method of conflict management entails attempting to engage with the other party to develop a win-win solution, which is the one that best addresses both sides' interests as well as the problem at hand. Furthermore, if the plan is to succeed in creating innovative solutions and encouraging justice and fairness, which are two essential characteristics of successful school teamwork, it must include confrontation and open discussion of the problem (Saiti, 2015). Principals may utilize this strategy to resolve conflicts and disagreements in the school. This must be a joint effort in which everyone works together to reach an agreement. The process itself will act as a tool for developing teams in the school provided everyone engaged works together to address disagreements, agree to seek common ground, and prioritize the organization's best interests.

#### **Impact of Collaboration conflict management style on effective teaching**

Collaborative style of managing conflict places emphasis on corporative assertion in order to protect both parties' interest, this is an integrating approach (Nwite et al., 2020). This approach helps to find integrative solutions in which everyone wins. When school administrators are able to challenge issues when employees are in conflict situation people do not meddle with such situation because they are aware that the school head is proactive and can sanction the rebels. The impacts of collaboration strategy of conflict management keep the school teachers on track in their teaching job because the strategy gives room for teamwork and partnership among school staff. According to Akinfolarin (2017), ability to engage the conflicting parties in an open discussion about the problem is another way of practically dealing with conflict in schools. He maintained that dialogue

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helps the conflicting parties to succeed in generating innovative solutions towards conflict for achieving teaching effectiveness in schools (Akinfolarin, 2017).

### RESEARCH METHODOLOGY

The study adopted quantitative research design and use descriptive survey method. And the research technique was a questionnaire. According to Nworgu (2015), descriptive survey designs are used to characterize things as they are at the time of the research. The population of the study comprised of 11,873 instructors and 292 principals for a sum of 12,165, in the seventeen local government areas (PPSMB, 2022). Purposive sampling technique was used to select one senatorial zone that has six LGA's out of three senatorial zones in the State. Krejcie & Morgan (1970) cited in Ahmad & Halim (2017), was used to select 59 schools out of 292 secondary schools and the sample size is 669 respondents.

#### Sampling of Principals and teachers in the Six LGA'S by Male and female

S/N	LGA's	No of secondary schools	Total no of principals	No of male teachers	No of female teachers	Total no of male and female teachers
1.	Enugu North	10	10	45	62	107
2.	Enugu East	10	10	43	70	113
3.	Enugu South	10	10	53	54	107
4.	Isi uzo	10	10	43	60	103
5.	Nkanu East	10	10	52	60	112
6.	Nkanu West	9	9	33	35	68
<b>Total</b>		<b>59</b>	<b>59</b>	<b>269</b>	<b>341</b>	<b>610</b>

Source: Field Survey, 2022.

The instrument for data collection was a self-made, structured questionnaire with the following title: "Questionnaire on; Principals and Teachers Perception of the Impact of Conflict Management Strategies on Effective Teaching (QTPICMSET)". The survey was of the closed-ended variety, and respondents were only allowed to select one response from a formatted 4-point Likert scale that was customized to have the following four categories: Strongly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SD=1). The instrument had two sections to it. The biographical information for the respondents, including gender and status, was in Section A. Section B contained statements based on the perceptions of principals and teachers regarding the influence of conflict management strategies on efficient instruction. The respondents were asked to score the items in the section according to their opinions of how conflict management techniques have impacted effective teaching in secondary schools in Enugu State. A total of 669 questionnaires were distributed and all were recovered. A trial testing was carried out using thirty respondents from two different secondary schools not covered in the sample area and who were not participants in the main study but were of an equivalent status in respect to academic background. The data was subjected to analysis using SPSS for analyzing data for social sciences and applying statistics of Cronbach Alpha. The whole instrument of 6 items yielded reliability co-efficient of .837. The data analysis for this investigation was subjected to SPSS. Using mean rating, standard deviation and one sample T-test to provide answers for the research questions and hypotheses at 95% level of confidence, (0.05). The items of the questionnaire were scored based on the four-point Likert scales. With 2.50 criterion level of acceptance.

#### Descriptive analysis of research questions

The sourced data were analyzed and discussed in respect to the objectives of the study, research questions and hypotheses of the study.

**Research Question One:** How do principals' and teachers of secondary schools in Enugu State perceive the impact of negotiation conflict management strategy on effective teaching? The answer to the above research question is provided in table 4.1 below.

**Table 4.1:Principals' and teachers' perception of the impact of negotiation conflict management strategy on effective teaching in secondary schools in Enugu State, N=668).**

S/N	Item statements	Mean	Std. Dvt.
1.	There is always an attempt to satisfy the concerns of both	3.6063	.71758

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	conflicting parties through honest discussion in our schools for quality teaching.		
2.	There is a focus on the problem not on the people during conflict in our schools for effective teaching.	2.8772	.89471
3.	Ability of both conflicting parties to listen to each other's story provides them with a resolution which enhances effective teaching.	3.1213	.83870

The above table showed that principals and teachers of secondary schools in Enugu state have positive perception of the impact of negotiation conflict management strategy on effective teaching. The mean scores for all the responses to the item variables are between 2.8772 to 3.6063 which are above the 2.50 decision point.

**Research Question Two:** How do principals' and teachers of secondary schools in Enugu State perceive the impact of collaboration conflict management strategy on effective teaching? The answer to the above research question is provided in table 4.2 below.

**Table 4.2: Principals and teachers' perception of the impact of Collaboration conflict management strategy on effective teaching in secondary schools in Enugu State, (N=667)**

S/N	Item statements	Mean	Std. Dvt.
1.	Confrontation of issues when employees are in conflict situation promotes teaching in our schools.	3.2804	.86522
2.	Open discussion of the conflict problem leads to quality teaching process in our schools.	2.8396	1.00138
3.	Dialogue helps the parties to succeed in generating innovative solutions towards conflict which promotes teaching.	3.1889	.83126

The above table showed that principals and teachers of secondary schools in Enugu state have positive perception of the impact of collaboration conflict management strategy on effective teaching with mean score between 2.8396 to 3.2804 which are above the decision mean score of 2.50.

### Hypotheses Testing

**Hypothesis One Stated that:** There is no significant perception of the impact of negotiation conflict management strategy on effective teaching among principals and teachers of secondary schools in Enugu State. Table 4.5, below provides answer to the above research hypothesis.

**Table 4.5: Significant perception of Principals and teachers of the impact of negotiation conflict management strategy on effective teaching in secondary schools in Enugu State.**

S/N	Item Statements	N	Mean	Std. Dev.	Std. Error mean	T	DF	P	Remarks
1	There is always an attempt to satisfy the concerns of both conflicting parties through honest discussion in our schools for quality teaching.	669	3.6054	.71743	.02774	129.983	668	<.01	Highly Sig

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2	There is a focus on the problem not on the people during conflict in our schools for effective teaching.	669	2.8774	.89405	.03457	83.245	668	<.01	Highly Sig
3	Ability of both conflicting parties to listen to each other's story provides them with a resolution which enhances effective teaching.	669	3.1211	.83808	.03240	96.323	668	<.01	Highly Sig

The results of the above table show that principals' and teachers' perception of the impact of negotiation conflict management strategy on effective teaching in Enugu State is highly significant. T-test values = (129.983, 83.245 and 96.323), for items 1 to 3 respectively with degree of freedom (df) = 668,  $P < .01$ ; highly significant. The probability associated with the t-test value (000), is less than .01, which is less than the 0.05 level of significance, the null hypothesis is therefore not accepted (rejected). This means that negotiation conflict management strategy has significant influence on effective teaching in secondary schools in Enugu State.

**Hypothesis Two Stated that:** There is no significant perception of the impact of collaboration conflict management strategy on effective teaching among principals and teachers of secondary schools in Enugu State. Table 4.6, below provides answer to the above research hypothesis.

**Table 4.6: Significant perception of Principals and teachers of the impact of Collaboration conflict management strategy on effective teaching in secondary schools in Enugu State.**

S/N	Item Statements	N	Mean	Std. Dev.	Std. Error mean	T	DF	P	Remarks
1	Confrontation of issues when employees are in conflict situation promotes teaching in our schools.	669	3.2810	.86444	.03342	98.172	668	<.01	Highly Significa
2	Open discussion of the conflict problem leads to quality teaching process in our schools.	668	2.8413	1.00163	.03875	73.316	667	<.01	Highly Sig
3	Dialogue helps the parties to succeed in generating innovative solutions towards conflict which promotes teaching.	669	3.1898	.83064	.03211	99.328	668	<.01	Highly Sig

The results of the above table show that principals' and teachers' perception of the impact of collaboration conflict management strategy on effective teaching in secondary schools in Enugu State is highly significant. T-test values = (98.172, 73.316 and 99.328), for items 1 to 3 respectively with degree of freedom (df) = 668,  $P < .01$ ; highly significant. The probability associated with the t-test value (000), is less than .01, which is less than the 0.05 level of significance, the null hypothesis is therefore not accepted (rejected). This means that collaboration conflict management strategy has significant influence on effective teaching in secondary schools in Enugu State.

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## MAJOR FINDINGS OF THE STUDY

The following are the major findings of this study:

1. Principals' and teachers' perception of the impact of negotiation conflict management strategy on teaching effectiveness in secondary schools in Enugu State is highly significant.
2. Principals' and teachers' perception of the impact of collaboration conflict management strategy on effective teaching in secondary schools in Enugu State is highly significant.
3. There is a very high significant in the mean ratings of principals' and teachers' perception of the impact of conflict management strategies on effective teaching in secondary schools in Enugu State.

## DISCUSSION OF FINDINGS

The first research question in table 4.1 stated: how do principals' and teachers of secondary schools in Enugu State perceive the impact of negotiation conflict management strategy on effective teaching? And the conforming hypothesis to this research question in table 4.5 stated that; there is no significant perception of the impact of negotiation conflict management strategy on effective teaching among principals and teachers of secondary schools in Enugu State. The answer to the first research question found that principals and teachers of secondary schools in Enugu state clearly portrayed a significant perception of the impact of negotiation conflict management strategy on effective teaching. The mean scores for all the responses to the item variables are between 2.8772 to 3.6063 which are above the 2.50 decision point. And the results of the corresponding hypothesis showed that principals' and teachers' perception of the impact of negotiation conflict management strategy on effective teaching in Enugu State is highly significant. One sample t-test values = (129.983, 83.245 and 96.323), for items 1 to 3 respectively with degree of freedom (df) = 668,  $P = < .01$ ; highly significant. The probability associated with the one sample t-test value (000), is less than .01, which is less than the 0.05 level of significance. The null hypothesis is therefore not accepted (rejected). This means that principals and teachers have significant perception of the impact of negotiation conflict management strategy on effective teaching in secondary schools in Enugu State.

Principals and teachers were of the opinion that teaching processes are hampered when issues are not duly discussed during conflict situations. The result of this finding is in line with Miller (2003), cited in Ignace (2014), who posited that negotiation is a direct process of dialogue and should be applied in conflict resolution. This was also supported by Edo and Omunakwe (2021), who conducted research on Principals' Conflict Resolution Strategies on Effective Management of Secondary Schools in Port Harcourt Metropolis. Their work used Cronbach Alpha statistical method to test the reliability of the instrument and a co-efficient of 0.78 was obtained. Mean and Standard Deviation were used to analyze their research questions, while z-test was used to test their study hypotheses.

Research question two of this study in table 4.2 stated as follows; how do principals and teachers of secondary schools in Enugu State perceive the impact of collaboration conflict management strategy on effective teaching? And the corresponding hypothesis to this research question in table 4.6 stated that; there is no significant perception of the impact of collaboration conflict management strategy on effective teaching among principals and teachers of secondary schools in Enugu State. The answer to the second research question found that principals and teachers of secondary schools in Enugu state clearly showed a significant perception of the impact of collaboration conflict management strategy on effective teaching with mean score between 2.8396 to 3.2804 which are above the decision mean score of 2.50. And the results of the corresponding hypothesis showed that principals' and teachers' perception of the impact of collaboration conflict management strategy on effective teaching in secondary schools in Enugu State is highly significant. With one sample t-test values = (98.172, 73.316 and 99.328), for items 1 to 3 respectively with degree of freedom (df) = 668,  $P = < .01$ ; highly significant. The probability associated with the one sample t-test value (000), is less than .01, which is less than the 0.05 level of significance, the null hypothesis is therefore not accepted (rejected). This means that collaboration conflict management strategy has significant perception on effective teaching in secondary schools in Enugu State.

It was observed that principals and teachers clearly expressed that when concerns of the conflicting individuals or group are identified to meet the parties' interests there is always a peaceful cooperation and effective teaching activities in schools.

## CONCLUSION

Principals and teachers should be ready to adapt their conflict management strategies depending on the situation, as no certain managerial style was found to be the most effective. Because of this, school administrators should involve everyone who is



## Principals' and Teachers' Perception of the Impact of Conflict Management Strategies on Effective Teaching in Secondary Schools in Enugu State, Nigeria

interested in making decisions and running the schools. More importantly, there should be good interactions between principals and teachers as well as among instructors in order to control conflict in the school for teaching-learning efficiency. The study's findings demonstrated that some of the strategies used by secondary school principals and teachers to resolve conflicts were negotiation, collaboration, compromise and domination. Furthermore, principals and teachers approach to managing conflict with the conflicting parties through negotiation, collaboration, compromise and domination strategies had a high response which is a good indicator that if adequately applied would produce quality result on teaching effectiveness in secondary schools in Enugu State.

### RECOMMENDATIONS

On the basis of the analysis of the data gathered from the questionnaire and in the light of the findings of the study and conclusion presented above, the study recommends that:

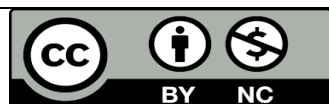
- Principals and teachers should be sensitive to school members grievances before the grievances get out of hand by having open discussions with all staff on pressing issues in the school and by allowing staff to participate in decision-making.
- Principals and teachers should employ the strategies as found out by this study to resolve conflicts, as there is no one best way of conflict management that fits to all situations. In addition, principals and teachers should be sponsored and mandated by the Enugu State government to attend conferences, seminars and symposia to keep themselves abreast of the current global conflict management practices that achieve results for teaching effectiveness in secondary schools in Enugu State.

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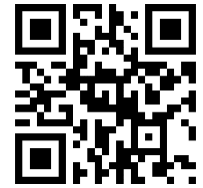
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## Health Care Personnel in Nigeria: Do HEXACO Attributes Influence In-Role Performance?



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**ABSTRACT:** The impact of HEXACO traits on in-role performance of health workers in Nigerian is investigated in this study. The study focused on seven types of healthcare workers in a few public health facilities in Lagos, Nigeria. Data was collected from 526 health workers in Nigerian public health facilities using a descriptive design. Structured tools were used to assess HEXACO traits (honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience), as well as in-role performance. Pearson correlation and stepwise regression were used to examine the study's data. The findings revealed that performance is significantly and positively linked with four HEXACO factors: honesty-humility, emotionality, extraversion, and agreeableness, but not significantly with conscientiousness and openness to experience. It also show that physicians are more extraverted and conscientious than other health professionals, while radiographers and physiotherapists are more open and agreeable. However, the best performers include pharmacists, physiotherapists, and medical records officers. The study provides new insight into the association between personality traits and in-role performance among health professionals, particularly in public health contexts. Workplace personality traits (particularly emotionality and extraversion) should be developed by employers to improve employee performance.

**KEYWORDS:** HEXACO-60, In-role performance, Healthcare workers.

### INTRODUCTION

Most governments around the world are concerned about citizens' health and well-being. Goal 3 of the United Nations' 17 Sustainable Development Goals, "Ensure healthy lives and promote well-being for all at all ages," adequately documents this. This is why, in addition to the active participation of private health providers, governments around the world allocate a major portion of their annual budget to the health sector. It is one thing to offer cash for health facility infrastructure expansion; it is quite another to ensure that health workers have the necessary personality traits that will move the health sector forward. Otherwise, all of your efforts could be for naught. For a long time, personality has been regarded as a major determinant of job performance and success, especially in a fast-changing environment (Beer & Nohria, 2000). It's no surprise that the majority of enterprises, including health-care organizations, are currently confronting significant hurdles in managing an ever-changing environment (Atta, Ather, & Bano, 2013). Global competition, rapid technological advancement, unfavorable business policies, increased demand for qualified personnel, changing nature of the economy, government regulation, and the Covid-19 pandemic are all factors that contribute to the upheaval and high level of uncertainty in the twenty-first century. All of this has resulted in increased workplace emotions, as employees who are anxious, frightened, or apprehensive are unable to perform efficiently or productively, focus and pay attention to their tasks, or enjoy or be pleased with their work.

Personality refers to the attributes that characterize an individual's unique ability to adapt to his surroundings (Allport, 1961). It is the "habitual manner of thinking, feeling, perceiving, and reacting to the world" of an individual (Manavita, 2002). This means that managers who have a firm grasp of their employees' personalities will engage them more effectively and productively.

Numerous studies have established the critical importance of personality characteristics in determining job performance (Barrick and Mount, 1991). Goldberg, 1990 classified several of these characteristics as the 'Big Five' personality dimensions, which are frequently abbreviated as "OCEAN" (Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism).

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Assessing performance at work using the Big Five personality variables is considerably easier when goals and objectives are well defined, but can be extremely onerous when they are not (Delima, 2019). However, different people have distinct personality traits that influence their performance. For example, Barrick and Mount (2005) discovered that conscientiousness, extraversion, agreeableness, and openness to experience are all significant personality traits that positively affect workers' performance. This suggests that people with a low personality would perform poorly, which will inevitably result in inferior organizational performance (Delima, 2019).

In addition, all dimensions of personality tests do not influence performance same way across segments of employees. For instance, from the HEXACO, extraversion was the single strongest correlate of well-being, while Humility-Honesty was unrelated to well-being (Aghababaei and Arji, 2014). In addition, consciousness have been found to have significant influence on future performance of sales employees (Hurtz and Donovan, 2000); conscientiousness, agreeableness, and openness to experience correlates well with customer service job performance (Barrick and Mount, 1991); conscientiousness, emotional stability, and agreeableness correlates with productivity in Call Center employees (Skyrme, Wilkinson, Abraham and Morrison, 2005); conscientiousness and low but significant emotional stability determines productivity in skilled and semi-skilled employees, while consciousness alone determine performance among the Professionals (Ones, Dilchert, Viswesvaran, and Judge, 2007); conscientiousness and extraversion influences leadership emergence but less significant in determining leadership effectiveness and performance (Judge, Bono, Ilies, and Gerhardt, 2002).

Although the above appears to bolster the claim that the Big Five is unquestionably the most extensively used personality model (Lee & Ashton, 2004; Ashton, Lee, & Goldberg, 2007), interest in the HEXACO Model as a possible alternative to the Big Five solutions has developed in recent years (Saucier & Goldberg, 1998). As with the Big Five, the HEXACO model argues that personality is composed of a variety of higher-order qualities. It is composed of six fundamental personality characteristics: Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeability (A), Conscientiousness (C), and Openness to Experience (O). However, the inclusion of an Honesty-Humility component differentiates the HEXACO model from the Big Five model, enabling it to make significant contributions to industry and academia, particularly in the areas of job performance (Johnson, Rowatt, & Petrini, 2011), workplace delinquency (Lee, Ashton, & De Vries, 2005), entrepreneurial performance (Rafi, Arzu, Khan, ul Haq, & Kashif, 2013), and counterproductive work behaviours (Lee, Ashton, & De Vries, 2005).

The HEXACO-60, which is the major focus of this study, is a 60-item shortened version of the original HEXACO Personality Inventory-Revised (HEXACO-PI-R: Lee and Ashton 2004). It was created to address the scarcity of short inventory capable of assessing the six HEXACO model personality traits described earlier (Ashton and Lee 2009).

According to Ashton and Lee (2009), who describe the structure of HEXACO-60, each HEXACO factor has four distinct facets, all of which are major drivers of work performance (see table 1).

**Table 1. HEXACO Factors and their Facets**

HEXACO Factors	Facets of HEXACO Factors
Honesty-Humility	Sincerity, Fairness, Greed avoidance, Modesty
Emotionality	Fearfulness, Anxiety, Dependence, Sentimentality
Extraversion	Social self-esteem, social boldness, sociability, liveliness
Agreeableness	Forgiveness, Gentleness, Flexibility, Patience
Conscientiousness	Organization, Diligence, Perfectionism, Prudence
Openness to Experience	Aesthetic Appreciation, Inquisitiveness, Creativity, Unconventionality

As a result, the value of personality traits in evaluating persons for job-related competence cannot be emphasized. Multinational organizations are increasingly using personality tests in the hiring and selection process because they can forecast an employee's ability to handle the demands of their job.

Work performance is defined as the behaviors or actions that help an organization achieve its objectives (Koopmans, Bernaards, Hildebrandt, Schaufeli, de Vet Henrica & van der Beek, 2011).

Job performance is divided into two categories by Borman and Motowidlo (1997): in-role performance and extra-role performance. While the former refers to actions that are related to an employee's formal job responsibilities, the latter (also known as organizational citizenship behavior) refers to individual behavior that is unrelated to the employee's formal job responsibilities but is beneficial to the organization's success. The focus of this study is on in-role performance in particular. This study was done to address the information gap on HEXACO traits in relation to in-role performance among health care employees, especially in a developing nation like Nigeria, due to a shortage of literature on the subject.

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As of the time this study was conducted, Lagos State has 27 recognized general hospitals, 256 public healthcare centers, 2,886 private hospitals, and other health-related facilities (Lagos State Health Service Commission 2021). Although the general hospitals and public healthcare centers classed as public health facilities (PHFs) in this study have improved significantly in terms of facility, equipment, maintenance, and hard skill training, there is still room for improvement. Regardless of the variety of the workforce, finding the proper individuals with the right personality traits has been a significant difficulty in these institutions. It is impossible to overstate the impact of these shortcomings on end users (mainly patients) and government spending.

As a result, managers could benefit from this research when making judgments about the various health-care professions. HEXACO personality traits were examined to see if they are linked to healthcare workers' performance in the workplace; if there are differences between healthcare workers on HEXACO personality traits and on measures of performance; if HEXACO personality traits and performance are linked; and if one trait has a greater impact on a worker's performance than the others. We also wanted to look into the role that a person's profession plays in explaining the wide range of personality differences among health care employees. Hospital managers, social scientists, and health specialists could use these to construct a framework for strategic human resource management.

### METHOD

#### Participants

This study enrolled 526 health care employees in a convenience sample (Doctors -36, Nurses -205, Pharmacists -53, Physiotherapists -42, Laboratory Scientists -83, Radiographers -31, and Medical records officers -78). They were chosen from 52 general hospitals and medical facilities throughout Nigeria's Lagos state. The participants ranged in age from 21 to 52 years (mean = 33.2 and standard deviation = 9.93). The sample size provides an adequate platform for testing the study hypotheses and drawing conclusions about the sample variables without having an adverse effect on the respondents. The city of Lagos was chosen for this study due to its cosmopolitan nature, owing to its prominence as Nigeria's commercial nerve center and largest city, with a 'population of 15.3 million as of 2022'.

#### Measures

The personality characteristics of respondents were measured using HEXACO-60 with just minor modifications. It consists of six scales, each with ten items. Each scale has four facets, and each facet is represented by a minimum of two items in each scale. The HEXACO-60 measure was graded on a 5-point Likert scale, with 1 indicating strongly disagree (SD) and 5 indicating strongly agree (SA). All of the items were rearranged in the order that the attributes appear on the page (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience). In accordance with the HEXACO-60, some of the objects were scored in reverse order (Table 2). Internal consistency for the six HEXACO-60 variables of Honesty-Humility, Emotionality, Extraversion, Agreeableness, Consciousness, and Openness to Experience was 0.74; 0.73; 0.73; 0.75; 0.76; and 0.80, according to Ashton and Lee (2009), who administered the instrument to a community sample.

Table 2.

HEXACO Factors	Item Numbers on the Original Version of HEXACO-60 (Ashton and Lee, 2009)	Item Numbers in Order of Administration	Items in reverse score in Order Administration
Honesty-Humility	6,12,18,24,30,36,42,48,54,60	1-10	2,4,5,7,8,10
Emotionality	5,11,17,23,29,35,41,47,53,59	11-20	16,17,19,20
Extraversion	4,10,16,22,28,34,40,46,52,58	21-30	22,25,28,29
Agreeableness	3,9,15,21,27,33,39,45,51,57	31-40	32,33,34,40
Conscientiousness	2,8,14,20,26,32,38,44,50,56	41-50	43,44,45,46,48,50
Openness to Experience	1,7,13,19,25,31,37,43,49,55	51-60	51,54,56,59,60

In-role performance was assessed using a Williams and Anderson (1991) seven-item scale. The rating ranged from strongly disagree (1) to strongly agree (5). However, items 6 and 7 were scored in reverse. A score above the mean on this scale shows that respondents feel they are meeting their obligations. It has a rating of 0.91 for reliability (Williams and Anderson, 1991). The appendix contains all measurement tools.

### RESULTS

According to the demographic statistics, 77.6 percent of respondents are between the ages of 21 and 40, 49.6 percent are married, and 80 percent have worked for one to 10 years.



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**Table 3. Descriptive Statistics and Correlation coefficients for all Variables (N=526)**

Variables	Mean	SD	P	H	E	X	A	C	O
Performance -P (%)	58.64	17.90	1.000						
Honesty-Humility-H (%)	56.71	9.16	.118**	1.000					
Emotionality-E (%)	52.50	11.88	.216**	.394**	1.000				
Extraversion-X (%)	53.38	9.45	.279**	.122**	.153**	1.000			
Agreeableness-A (%)	54.41	10.94	.098*	.280**	.345**	.119**	1.000		
Conscientiousness-C (%)	52.12	10.65	.049	.064	.171**	.356**	.255**	1.000	
Openness to Experience-O (%)	51.99	9.00	.082	.024	.022	.226	.182	.106	1.000

Source: Field Survey (2021)

A closer examination of the means, standard deviations, and inter-factor correlations for the variables in the study (Table 2) reveals that in-role performance had a mean score of 58.64 percent (sd =17.90 percent); honesty-humility had a mean score of 56.71 percent (sd = 9.16 percent); emotionality had a mean score of 52.50 percent (sd = 11.88 percent); and extraversion had a mean score of 53.38 percent (sd =9.45). Additionally, the mean score for agreeableness was 54.41 percent (sd.10.94 percent), conscientiousness was 52.12 percent (sd. 10.65 percent), and openness to experience was 51.99 percent (sd. 9.00 percent).

The study also found that performance is significantly connected with honesty-humility, emotionality, extraversion, and agreeableness ( $p < 0.05$ ), but not with conscientiousness and openness to experience ( $p > 0.05$ ). Honesty-humility is significantly connected with emotionality, extraversion, and agreeableness ( $p < 0.05$ ), but not with conscientiousness and openness to new experiences ( $p > 0.05$ ).

Emotionality is also strongly connected with extraversion, agreeableness, and conscientiousness ( $p < 0.05$ ), but not with openness to experience ( $p > 0.05$ ).

The study also found that extraversion is significantly, positively but weakly linked with agreeableness and conscientiousness ( $p < 0.05$ ). Even though openness to new experiences is favorably but weakly connected with all other variables, it has no significant relationship with other variables including performance ( $p > 0.05$ ).

**Table 3. Measure of the goodness of fit**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.340 <sup>a</sup>	.116	.105	16.93

a. Predictors: (Constant), Honesty-Humility (%), Emotionality (%), Extraversion (%), Agreeableness (%), Conscientiousness (%), Openness to Experience (%)

b. Dependent Variable: Performance (%)

The fitted model had a coefficient of determination (R<sup>2</sup>) of 0.116 and an adjusted R<sup>2</sup> of 0.105, implying that all personality (HEXACO) concepts account for just 10.5 percent of the overall variability in health professionals' performance (Table 3).

**Table 4. ANOVA Table**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	19449.889	6	3241.648	11.305	.000 <sup>b</sup>
Residual	148815.223	519	286.735		
Total	168265.112	525			

a. Dependent Variable: Performance (%)

b. Predictors: (Constant), Honesty-Humility (%), Emotionality (%), Extraversion (%), Agreeableness (%), Conscientiousness (%), Openness to Experience (%)

The combined effect of HEXACO components on in-role performance (Table 4) demonstrates that at least one of the HEXACO personality measures has a significant effect on health workers' performance ( $p < 0.05$ ).



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**Table 5. Composite model of the contribution of HEXACO factors to performance.**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	19.128	7.265		2.633	.009	4.855	33.401
Honesty-Humility (%)	.029	.089	.015	.319	.750	-.147	.204
Emotionality (%)	.265	.071	.176	<b>3.749</b>	<b>.000</b>	.126	.405
Extraversion (%)	.519	.086	.274	<b>6.024</b>	<b>.000</b>	.350	.689
Agreeableness (%)	.030	.076	.018	.393	.694	-.119	.179
Conscientiousness (%)	-.146	.077	-.087	-1.906	.057	-.296	.005
Openness to Experience (%)	.042	.086	.021	.495	.621	-.126	.211

a. Dependent Variable: Performance (%)

$$\text{Performance} = 19.128 + 0.029*\text{H-H} + 0.265*\text{Emotionality} + 0.519*\text{Extraversion} + 0.030*\text{Agreeableness} - 0.146*\text{Conscientiousness} + 0.042*\text{Openness to Experience}$$

Following the discovery that the combined influence of HEXACO factors on in-role performance is significant (see table 4), the study went on to develop a composite model of the contribution of six HEXACO elements to performance (Table 5). This reveals that a 1% increase in honesty-humility improves performance by 0.03 percent, which is not statistically significant ( $B_1 = 0.029$ ,  $p > 0.05$ ).

The model also shows that an increase of one percent in emotionality boosts performance by 0.27 percent ( $B_2 = 0.265$ ;  $p < 0.05$ ). Similarly, increasing extraversion by 1% increases performance by 0.52 percent ( $B_3 = 0.519$ ,  $p < 0.05$ ), whereas increasing agreeableness by 1% only increases performance by a non-significant 0.03 percent ( $B_4 = 0.030$ ;  $p > 0.05$ ). Furthermore, a one-percent rise in conscientiousness reduces performance by a non-significant 0.15 percent ( $B_5 = -0.146$ ;  $p > 0.05$ ), but a one-percent increase in openness to experience raises performance by a non-significant 0.04 percent ( $B_6 = 0.042$ ;  $p > 0.05$ ).

**Table 6. Mean and standard deviation of the percentage ratings of the variables by profession**

Profession	N	Honesty-Humility		Emotionality		Extraversion		Agreeableness		Conscientiousness		Openness to experience		performance	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Doctors	36	57.36 <sup>a</sup>	10.23	55.97 <sup>a</sup>	13.88	56.81 <sup>a</sup>	11.80	53.33 <sup>ab</sup>	14.34	58.75 <sup>a</sup>	14.24	53.26 <sup>ab</sup>	12.10	53.87 <sup>c</sup>	19.61
Nurses	205	56.66 <sup>a</sup>	8.91	52.00 <sup>a</sup>	11.68	52.44 <sup>b</sup>	8.77	55.05 <sup>a</sup>	10.41	51.35 <sup>b</sup>	9.59	51.56 <sup>b</sup>	8.05	57.86 <sup>c</sup>	18.15
Pharmacists	53	58.25 <sup>a</sup>	6.44	53.35 <sup>a</sup>	4.07	52.55 <sup>b</sup>	6.03	56.08 <sup>a</sup>	8.34	49.06 <sup>b</sup>	5.55	50.28 <sup>b</sup>	4.89	63.68 <sup>ab</sup>	7.98
Physiotherapist	42	54.35 <sup>a</sup>	11.69	50.12 <sup>a</sup>	17.68	54.94 <sup>a</sup>	12.38	49.76 <sup>b</sup>	11.81	52.44 <sup>b</sup>	12.66	55.59 <sup>a</sup>	13.71	65.31 <sup>a</sup>	18.49
Laboratory Scientists	83	55.30 <sup>a</sup>	10.61	52.44 <sup>a</sup>	15.37	55.69 <sup>a</sup>	11.83	53.01 <sup>ab</sup>	13.06	56.44 <sup>a</sup>	14.00	53.92 <sup>ab</sup>	11.60	55.59 <sup>b</sup>	22.51
Radiographers	31	57.90 <sup>a</sup>	8.24	53.55 <sup>a</sup>	10.24	51.85 <sup>b</sup>	6.29	57.10 <sup>a</sup>	9.06	51.21	7.55	50.73 <sup>b</sup>	5.21	55.76 <sup>b</sup>	17.68
Medical Records Officers	76	57.83 <sup>a</sup>	7.68	52.56 <sup>a</sup>	5.87	52.14 <sup>b</sup>	7.39	55.03 <sup>a</sup>	9.03	48.68 <sup>b</sup>	6.37	50.13 <sup>b</sup>	5.16	60.29 <sup>abc</sup>	13.65
Total	526	56.71	9.16	52.50	11.88	53.38	9.45	54.41	10.94	52.12 <sup>b</sup>	10.65	51.99	9.00	58.64	17.90
F (p)		1.360 (0.229)		0.939 (0.466)		<b>2.616 (0.017)</b>		<b>2.256 (0.037)</b>		<b>7.379 (&lt;0.001)</b>		<b>2.978 (0.007)</b>		<b>2.864 (0.009)</b>	

NB: Professions with the same superscript on each column are not significantly different at 5%

We are particularly interested in the disparities that occur across healthcare employees on personality and in-role performance measures, as this study recognizes the fact that distinct professionals exist among healthcare workers (Table 6). The results show that pharmacists have the highest mean honesty-humility ratings of 58.25% (sd = 6.44%), while physiotherapists have the lowest mean ratings of 54.35 percent (sd = 11.69%), and the means are not substantially different ( $p > 0.05$ ). It also shows that doctors

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have the greatest mean emotionality ratings of 55.97 percent (sd = 13.88 percent), while physiotherapists have the lowest mean emotionality ratings of 50.12 percent (sd = 17.68 percent), and the means are not substantially different ( $p > 0.05$ ).

Furthermore, the study discovered that doctors have the highest mean extraversion ratings of 56.81 percent (sd = 11.80 percent), while radiographers have the lowest mean extraversion ratings of 51.85 percent (sd = 6.29 percent), and the means are significantly different ( $p < 0.05$ ). On the agreeability component, Radiographers have the greatest mean rating of 57.10 percent (sd = 9.06 percent), while Physiotherapists have the lowest mean rating of 49.76 percent (sd = 11.81 percent), and the means differ considerably ( $p < 0.05$ ).

Furthermore, doctors have the greatest mean conscientiousness ratings of 58.75 percent (sd = 14.24 percent), while pharmacists have the lowest mean ratings of 49.06 percent (sd = 5.55 percent), and the means are substantially different ( $p < 0.05$ ). Similarly, when it comes to openness to experience, Physiotherapists have the greatest mean rating of 55.59 percent (sd = 13.71 percent), while Medical Records Officers have the lowest mean rating of 50.13 percent (sd = 5.16 percent), with the means significantly different ( $p < 0.05$ ).

On measures of in-role performance the study found that Physiotherapists have the greatest mean ratings of 65.31 percent (sd = 18.49 percent), while Doctors have the lowest mean ratings of 53.87 percent (sd = 19.61 percent), and the means differ considerably ( $p < 0.05$ ).

### DISCUSSION

The purpose of this study was to determine the effect of personality characteristics (as measured by the HEXACO-60) on the in-role performance of professional healthcare employees in Nigerian public health institutions. Except for openness to experience, all HEXACO characteristics correlate with one another. Except for humility and emotionality; emotionality and agreeableness; and extraversion and conscientiousness, this connection was less than 0.40. This findings support Ashton and Lee (2009). Additionally, we discovered that the HEXACO concept as a whole accounts for 11% of the variance in performance of healthcare workers, leaving the remaining 89 percent to factors other than personality, such as aptitude, need for achievement, self-esteem, and locus of control (Delima, 2019). This implies that we cannot discount the role of workers' personalities in understanding their performance.

Additionally, extraversion and emotionality are the largest significant predictors of in-role performance, accounting for 51% and 27% of inputs, respectively, whereas conscientiousness has a detrimental effect on in-role performance. Nonetheless, this study demonstrated the HEXACO traits of honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience as predictors of in-role performance among Nigerian healthcare personnel. The discovery that humility-honesty is positively associated with in-role performance confirms Zettler, Friedrich, and Hilbig's (2011) findings.

Then we tried to anticipate our readers' questions on if there is a substantial difference in personality traits and in-role performance of healthcare workers based on their career. We discovered that doctors are similar to other health professionals in terms of honesty-humility, and emotionality. They also don't differ from Nurses in terms of in-role performance. Moreover, doctors are more extraverted and conscientious than other health professions, while radiographers and physiotherapists are more open and agreeable. However, the best performers include pharmacists, physiotherapists, and medical records officers.

### RECOMMENDATIONS

Our experiences during this investigation have equipped us to give some beneficial advice. To begin, it has been established that higher emotionality and extraversion among healthcare personnel improves performance. As a result, institutions should invest in attempts to improve additional HEXACO personality traits. Second, because the number of test items is significantly less than that of the HEXACO personality inventory-revised (HEXACO-PI-R) or the BIG Five, and because the component of personality measured by the honesty-humility version of HEXACO-60 has only been measured in part by other personality inventories, we recommend HEXACO-60 for use in situations where the level of apathy is relatively high and time for administering the test is limited.

Third, Human resource management in the modern era has progressed beyond pure guesswork. Organizations are now focusing on specificity in all aspects of human resource management. The use of personality tests ensures that recruiting and placement procedures are error-free. When public health facilities use this information, they will be able to make more accurate predictions about their workforce and the ultimate beneficiaries will be the members of the public who use such services.

### CONTRIBUTION TO KNOWLEDGE

Given the critical role of public health facilities in the economy, the conclusions of this study would have far-reaching and life-changing implications. To begin, it would assist facility managers in developing a more productive staff. Second, it would provide

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benchmark studies to help the health care sector better understand its employees. Thirdly, it would supplement existing research and initiate fresh discussions among academics and researchers on HEXACO characteristics and their effect on in-role performance. Fourth, the model developed in this study will serve as a novel paradigm for assessing the association between in-role performance and HEXACO qualities and will also be extremely valuable for health care worker recruiting. Fifth, the study contributed to a better understanding of two organizational behavior concepts: HEXACO traits and in-role performance, while also lending credence to the former's unique contributions to the latter. Sixth, this study makes a distinctive contribution to the United Nations' Sustainable Development Goal No. 3 implementation.

### LIMITATIONS

The breadth of this study is limited by its focus on a subset of public health institutions in Lagos state, Nigeria. A sample drawn from additional cosmopolitan cities in Nigeria, such as Port Harcourt and Kaduna, would strengthen the result and facilitate generalization. Additional research should be conducted by broadening the study's scope. The cross-sectional aspect of this study may have undermined the significance of follow-up with participants, particularly those from diverse demographic groups, as well as the stability of HEXACO characteristics across time. This may imperil the tendency to generalize the current study's findings. Additionally, using self-report to assess both personality and in-role performance can introduce response bias into the study (Bland and Altman, 1986), but using observer report can boost its acceptance and provide more disclosures. Additionally, the study's sample was drawn from healthcare employees. Comparing this sample to others drawn from non-health sectors may yield more illuminating findings.

### SUGGESTIONS FOR FUTURE RESEARCH

This study evaluated the six HEXACO qualities independently of their facets. It may be worthwhile to conduct further research into the effect of the 24 HEXACO aspects on performance. Second, assuming that men and women differ significantly across several HEXACO dimensions (Lee and Ashton 2004, Manson 2015), future research can examine the effect of gender on the link between HEXACO components and performance. Thirdly, comparative study between nations or states can be conducted to obtain a better grasp of the subject and to boost the findings' generalizability. Fourthly, this study took a purely quantitative approach, with the primary data gathering instrument being a questionnaire. Future research may employ qualitative techniques or a combination of quantitative and qualitative techniques to gain more precise data and findings.

Finally, because this study examined only one aspect of performance, it may be worthwhile to examine the effect of HEXACO on extra-role performance, sometimes known as organizational citizenship behavior. These findings may serve as a springboard for more research on personality factors and role performance.

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## Analysis of Tarung Derajat Athletes Ability Bantul Regency (Correlational Study in terms of Eye-Hand Coordination, Arm Length and Arm Power)



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**ABSTRACT:** The purpose of this study was to find out the analysis of the Tarung Derajat ability of athletes in Bantul Regency (correlational study in terms of eye-hand coordination, arm length and arm power). This study uses a descriptive research design with a survey method. The population of this study was 24 Tarung Derajat athletes in Bantul Regency. The sample in this study used a total sampling technique totaling 24 Tarung Derajat athletes in Bantul Regency, both male and female. Data collection techniques used in this study were tests and measurements. Data analysis in this study used SPSS version 25. From the results of the study showed the value of Sig, F change  $0.00 < 0.05$ , it can be concluded that there is a correlation or relationship between the variables of eye-hand coordination, arm length, arm power, simultaneously to the variable hitting ability. The effective contribution to the highest variable is obtained from arm power. With a relationship degree of 0.923 which is very strong.

**KEYWORDS:** Eye-Hand Coordination, Arm Length and Arm Power, Athletes, Tarung Derajat

### INTRODUCTION

According to (Nugroho et al., 2020) sports are activities that teach honesty, respect for opponents or friends, accept defeat and fair play. Achievement sports are sports that start at a young age and are developed in a planned, tiered, and long-term manner (Falaahudin et al., 2021). Martial arts are one of the sports achievements (Triprayogo et al., 2020). Martial arts is a sport that combines elements of art, self-defense techniques, exercise, and mental training (Prayogo et al., 2021). Martial arts provide many advantages, including the ability to defend oneself from bad people, therefore it is important to have self-defense skills (Falaahudin et al., 2020).

According to (Ismoko & Sukoco, 2013) achievement is the level of success a person has achieved in a business as a result of learning or gaining experience. Resilience in dealing with all aspects of life situations and relying on intellectual, emotional, and spiritual abilities can bring success (Indrayana, 2012). According to (Wibowo & Hakim, 2019) to achieve a goal requires effort and strong commitment.

According to (Fadli, 2014) that Guru Haji Achmad Dradjat who is also known as AA Boxer is the creator of the Tarung Derajat martial arts. He declared the birth of the martial art form on July 18, 1972 in Bandung. According to (Jamaludin et al., 2019) Tarung Derajat is a martial art that requires quick reactions to move its limbs. The movement harnesses the combined powers of mind, body, and conscience. Especially in efforts to maintain health and life safety (Hasibuan et al., 2019).

As a sport, Tarung Derajat can be seen in terms of technical and non-technical effectiveness and productivity for sports actors (Jamaludin, 2017). Tarung Derajat is a martial arts sport that teaches and trains techniques and strategies for movements of the hands, feet, head and other parts (Hambali et al., 2015). This martial art has elements of movement such as patterns and forms of defensive and attacking exercises, coordination abilities, strength, speed, accuracy, courage, and tenacity (Syariofeddi et al., 2020).

### METHOD

The design or research design used is the correlation design method. In this study, we will describe the relationship and the amount of contribution between eye-hand coordination, arm length and arm power with the ability to hit the forehand in the Tarung Derajat sport. The independent variables in this study consist of:

Eye-hand coordination : X1

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Sleeve length : X2

Power arm : X3

While the dependent variable in this study consisted of front hitting ability (Y).

According to (Sugiyono, 2016) population is something or subject who lives in a certain area and meets certain criteria for research problems. 24 Tarung Derajat athletes in Bantul Regency became the sample of this study. (Suharsimi, 2013) says that the sample is part of the population with the characteristics or circumstances to be studied. In this study, 24 male and female Tarung Derajat athletes from Bantul Regency were used as samples using total sampling technique. Tests and measurements were used in this study to collect data namely eye-hand coordination tests. This test uses a test of throwing and catching a tennis ball. In this study, SPSS version 25 was used to analyze the data.

### RESULTS AND DISCUSSION

#### 1. Descriptive Analysis

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Arm Length	24	70	83	76,04	4,080
Eye Coordination Hand	24	5	19	11,38	3,888
Arm Power	24	3,0	6,4	5,104	0,8705
Hit	24	13	29	22,29	4,329
Valid N (listwise)	24				

Based on the research data description table above, information can be obtained: Data description for the arm length variable based on the results of the study with a sample of 24 tarung derajat athletes obtained an average arm length of 76.04 with a standard deviation of 4.080, the highest score is 83 and the lowest score is 70.

Data description for hand eye coordination variable based on research results with a sample of 24 tarung derajat athletes obtained an average hand eye coordination of 11.38 with a standard deviation of 3, 888 the highest score is 19 and the lowest score is 5.

The data description for the arm power variable is based on the results of a study with a sample of 24 tarung derajat athletes, obtained an average arm power of 5.104 with a standard deviation of 0.8705, the highest score is 6.4 and the lowest score is 3.0.

Description of the data for the punch variable based on the results of the study with a sample of 24 tarung derajat athletes obtained an average punch of 22.29 with a standard deviation of 4.329, the highest score was 29 and the lowest score was 13.

#### 2. Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Arm Length	,099	24	,200*	,950	24	,276
Eye Coordination Hand	,103	24	,200*	,966	24	,581
Arm Power	,202	24	,012	,932	24	,110
Hit	,107	24	,200*	,973	24	,748
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Based on the results of the Normality test above, it is known that the sig values of all variables show > 0.05, so it can be concluded that all data is normally distributed.

#### 3. Correlation Test

		ARM LENGTH	HANDS EYES COORDINATION	ARM POWER	HIT
ARM LENGTH	Pearson Correlation	1	,446*	,397	,482*
	Sig. (2-tailed)		,029	,055	,017
	N	24	24	24	24



## Analysis of Tarung Derajat Athletes Ability Bantul Regency (Correlational Study in terms of Eye-Hand Coordination, Arm Length and Arm Power)

HANDS EYES COORDINATION	Pearson Correlation	,446*	1	,486*	,595**
	Sig. (2-tailed)	,029		,016	,002
	N	24	24	24	24
ARM POWER	Pearson Correlation	,397	,486*	1	,923**
	Sig. (2-tailed)	,055	,016		,000
	N	24	24	24	24
HIT	Pearson Correlation	,482*	,595**	,923**	1
	Sig. (2-tailed)	,017	,002	,000	
	N	24	24	24	24

Based on the results of the Correlation test, it is known that the sig values of all variables are as follows:

1. Arm length with a punch of 0.017 < 0.05. this shows that there is a correlation/relationship between the arm length variable and the stroke variable. With a relationship degree of 0.482 which is quite strong.
2. Hand eye coordination with blows 0.002 < 0.05. this shows that there is a correlation/relationship between hand eye coordination variables and hitting variables. With a relationship degree of 0.595 which is quite strong.
3. Power arm with a punch of 0.00 < 0.05. this shows that there is a correlation/relationship between arm power variables and stroke variables. With a relationship degree of 0.923 which is very strong.

### CONCLUSION

From the results of the study showed the value of Sig, F change 0.00 < 0.05, it can be concluded that there is a correlation or relationship between the variables of eye-hand coordination, arm length, arm power, simultaneously to the variable hitting ability. The effective contribution to the highest variable is obtained from arm power. With a relationship degree of 0.923 which is very strong.

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## Impact of Public Service Motivation on Job Satisfaction and Performance of University Lecturers in Vietnam



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**ABSTRACT:** While the number of universities in Vietnam has increased dramatically over the past decade, the country's poor quality of higher education has received much attention in recent times. The increasing number of university graduates without jobs and the number of university lecturers switching to other jobs is attracting many studies to find the causes, including public service motivation, job satisfaction, and teaching performance of university lecturers. This study aims to enrich the research literature and examine the role of service motivation as a moderator variable in the relationship between job satisfaction and teaching effectiveness of Vietnamese university lecturers. This study was conducted through a cross-sectional survey using a purposive sampling technique (n=200). Multivariable linear regression analysis and moderator regression were applied to test the proposed research hypotheses. Research results show a positive and significant relationship between satisfaction at work, motivation to serve the public, and teaching effectiveness of Vietnamese university teaching. In particular, public service motivation moderates the relationship between job satisfaction and the teaching performance of university lecturers in this country.

**KEYWORDS:** Public service motivation, work enjoyment, teaching performance, biến điều tiết, giảng viên đại học, Vietnam.

### INTRODUCTION

The lecturer has the most important position and role in determining the development of the training institution. Since the Vietnamese government accepted the private university system in 1988 until now, many universities have been growing. Vietnam currently has 237 universities, including 172 public universities, 60 private universities, and 4 universities with 100% foreign-owned. The competition for high-quality human resources between public and private universities is fierce in response to the current need to improve the quality of higher education in Vietnam (Hung & Dung, 2020; Luan & Thanh, 2022). In response to the requirements of existence and development, universities in Vietnam are applying many strategic policies to attract highly qualified lecturers with extensive experience in research and teaching, creating motivation to work and letting them dedicate themselves to the school's development (Tan & Hoa, 2018).

The fact that lecturers in Vietnam are losing motivation to work, causing them to switch to work for private universities, has been discovered by some studies (Hung & Dung, 2020; Tan & Hoa, 2018; Giao & Tuyen, 2021). To help universities, the Vietnamese government has also recently developed many policies to improve the quality and attract good lecturers to work in universities, sponsoring tuition fees up to 25,000 USD/year for lecturers going to study for a doctorate abroad (Vietnamese Government, 2019). In 2000, the Government of Vietnam approved Project 322, "Training scientific and technical staff at foreign institutions with the state budget," for 5 years (2000 - 2005), but lasted for 10 years with total funding of 110,000,000 USD. Project 911, "Training lecturers with doctoral qualifications for universities and colleges in the period 2010-2020," was approved with a budget of 617,000,000 USD (Hung & Dung, 2020; Tan & Hoa, 2018; Giao & Tuyen, 2021). However, despite such policies, brain drain in universities is still widespread. This fact requires studies to discover the causes, in which it is necessary to study the work motivation of lecturers, their job satisfaction, and performance.

Human resource development in motivation is a fascinating topic from which organizations can explore the factors related to the inspiration and job satisfaction of lecturers (Munyengabe et al., 2017). The first studies to analyze faculty motivation looked for why the teaching profession was chosen (Hăn & Yin, 2016; Viseu et al., 2016). Universities have paid a lot of attention to work results but less attention to research on all the different angles related to factors that can cause a decrease in motivation and satisfaction levels lecturer's job satisfaction (Viseu et al., 2016). In addition, the researchers try to demonstrate solutions to

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increase the motivation of lecturers through good salary, service conditions, quick and regular promotion, recognition, and feedback, strengthening the need of teachers. However, job security, career development and empowerment programs, a good working environment, challenging and diverse work, participation in decision-making, and research funding are said to have significantly affected the level of motivation and job satisfaction with little regard to public service motivation (Munyengabe et al., 2017; Osakwe, 2014; Hill & Power, 2013; Munyengabe et al., 2016 ).

This growing scientific interest in faculty motivation has been addressed from various theoretical frameworks, such as achievement goal theory (Watt & Richardson, 2015). However, self-determination theory (Deci & Ryan, 1985) is most commonly used to analyze faculty motivational processes (Cheon et al., 2014; Roth et al., 2007; Thoonen et al. , 2011). Besides, studies on public service motivation of lecturers have found it meaningful to society and considered a valuable resource to improve teaching performance and job placement satisfaction (Perry & Wise, 1990; Brewer, 2008). Lecturers with a high public service motivation are expected to do well in teaching and research because they identify the values and purposes of their work and, therefore, work harder, put in more effort and provide better performance (Brewer, 2008; Vandenabeele, 2009). Socially meaningful work motivation is considered a valuable resource that public organizations can improve job satisfaction and performance (Perry & Wise, 1990; Brewer, 2008). Teaching is a demanding profession, with instructors showing higher levels of stress and burnout than in other occupations (Kinman, Wray, & Strange, 2011, Anaya & López, 2014). There is still a lack of research on the public service motivation of lecturers in the relationship between their job satisfaction and performance. This study aims to fill this theoretical gap and, at the same time, explore the evidence on the effectiveness of public service motivation of lecturers regarding job satisfaction and performance of current lecturers in universities in Vietnam in the recent fierce competition and brain drain.

### **LITERATURE REVIEW**

#### **Public Service Motivation**

Individuals motivated to serve public service exhibit compassion, which refers to an emotional response and identification with others as self-sacrifice that reflects a shared motivation to put social interests over personal interests (Perry, 1996), is the highest form of self-determination motivation (Deci & Ryan, 1985), a tendency of workers to contribute to society (Perry & Wise, 1990), beliefs, values, and attitudes that extend beyond individual interests and organizational interests (Vandenabeele, 2007), relating obligations, commitments, or identities to the importance of public service (Vandenabeele, 2013), expressed in an individual's desire to participate in and work to improve public services (Perry, 1996), a sense of duty and commitment that an individual may feel towards social (Perry, 1996), involves a variety of modifications and directs human behavior to desired patterns of work (Griffin, 2013), which can change over time (Jacobsen et al., 2013; Kjeldsen, 2013; Oberfield, 2014), which varies between types of public service providers and levels of professionalism (Kjeldsen, 2012). For example, the public service motivation of lecturers is the way lecturers behave with their teaching work, motivated by internal causes, so it directly interferes with the teaching-learning process and can then affect their performance and outcome (Roth, Assor, Kanat-Maymon, & Kaplan, 2007; Viseu, de Jesus, Rus, & Canavarro, 2016).

#### **Relationship between public service motivation and job satisfaction of university lecturers**

Job satisfaction is a happy or positive emotional state resulting from job evaluation or work experience (Locke, 1976), a condition related to complete dedication. It is inspiration, talent, all characteristics that constitute the work environment and the work itself (Churchil et al., 1974) about individuals' evaluations of their duties concerning problems essential topics for them (Sempañe et al., 2002). In addition, many studies have also found that employees with high public service motivation scores make more efforts and bring better job performance and satisfaction (Brewer, 2008; Vandenabeele, 2009; Munyengabe et al., 2016). Lecturer satisfaction can be viewed as a state related to satisfaction with emotional dedication, giving, all the characteristic features constituting the work environment and the work itself. (Churchil et al., 1974), a happy or positive emotional state resulting from job evaluation or work experience (Locke, 1976).

The job satisfaction of lectures is related to the ability of the teaching job to meet the expectations of the lecturers and increase their performance in teaching (Ololube, 2006). Individual lecturers with high public service motivation scored higher on their job performance and satisfaction with their job placement and organization (Andersen et al., 2014; Bellé, 2013; Brewer & Selden, 2000; Bright, 2007; Kim, 2005 & 2006; Leisink & Steijn, 2009; Naff & Crum, 1999; Vandenabeele, 2009; Bright, 2008; Kjeldsen & Andersen, 2012, Taylor, 2008; Gould -Williams et al., 2013; Naff & Crum, 1999). Job satisfaction is a more progressive and flexible view of changes in the education system (Han & Yin, 2016). It refers to engaging in behavior that inherently drives workers to s gratifying or enjoyable activities (Legault, 2016) as associated with autonomy, personal competence, and social relevance lead to feelings of personal happiness (Deci & Ryan, 1985).

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## Relationship between public service motivation and teaching performance

Public service motivation is considered an employee's tendency to contribute to society (Perry & Wise, 1990). Vandenberg (2007) defines public service motivation as beliefs, values, and attitudes that extend beyond faculty and organizational interests, involve the interests of a larger political entity, and promote instructors to act appropriately whenever appropriate. As a result, faculty in public schools often report higher levels of public service motivation than those working elsewhere (Houston, 2011). In addition, motivated people do not hesitate to put more effort and work more deeply into their activities to achieve their plans (Deci & Ryan, 1985; Piche, 2003).

Lecturer's public service motivation is intrinsic, but it does not necessarily derive from pleasure in performing job duties (Deci & Ryan, 2000). Job performance itself is a function of four variables: ability, task knowledge, environment, and motivation (Schraw, 2006), which relates to job satisfaction and organizational commitment. (Bright, 2008; Kjeldsen & Andersen, 2012, Taylor, 2008; Vandenberg, 2009; Bellé, 2013; Gould -Williams et al., 2013; Kim, 2006; Naff & Crum, 1999; Graham, 1982), In addition, individuals' evaluations of their duties on essential matters (Sempene et al., 2002) positively affect their behavior in the workplace (Beck, 1983; Buitendach, 2005). The relationship between public service motivation and teaching performance depends on the specific nature of the public service, with its multiple goals and stakeholders, teaching and research performance, and faculty satisfaction. The employment position of public service providers can be considered inherently multidimensional (Boyne, 2002; Brewer, 2006; Walker et al., 2011). There is a relationship between motivation to serve the public and job performance and job and organizational satisfaction (Boyne, 2002; Brewer, 2006; Walker et al., 2011; Legault, 2016; Chien & Thanh, 2022).

## Hypotheses

Based on the literature reviews, the following hypotheses have been formed:

- H1. There is a positive and meaningful relationship between public service motivation and teaching performance.
- H2. There is a positive and meaningful relationship between work\_enjoyment and teaching performance.
- H3. Public service motivation is the moderating variable for the relationship between work\_enjoyment and teaching performance.

## RESEARCH METHOD

### Surveyed Area

We conducted this research in Hanoi and Ho Chi Minh City in September 2021. The headquarters of most universities in Vietnam are there. The survey participants were full-time university faculty members. We conducted in-depth interviews with psychologists and administrators to adjust the scale to suit the characteristics of the survey area. The questionnaire was built based on literature reviews and expert advice and consisted of two parts. Part 1 collects information about the research participants' demographics, such as age, gender, education level, and occupation. Part 2 collects information about teaching performance, work\_enjoyment, and public service motivation. We used partially edited Brief Self-report Scales built by Ramos, Pedro, Juan Ramón, Elena, & Linda (2019) to collect data on teaching performance, consisting of 5 items. In addition, we use a modified portion of the scale developed by Johri, Misra, & Bhattacharjee (2016) to collect the work\_enjoyment data, consisting of 5 items. Finally, we partially edited Perry's Public Service Motivation Scale and reference (Kim, 2009) to gather data on public service motivation, consisting of 4 items.

The English questionnaire version was translated into Vietnamese by two professional interpreters. The translation process is carried out according to the rules to adapt to Vietnamese cultures. After the final discussion between the translators and the investigator, we create a final Vietnamese version. This final version was pre-tested on 40 participants selected to represent age, sex, education, and occupation demographically. Minor tweaks followed this to improve the question structure to make it easier to understand and apply the formal survey. The questionnaire was sent directly to the respondents by the purposeful sampling method. The results obtained were 200 valid, reaching a 100% response rate—demographic information of study participants (Table 1).

**Table 1. Demographic characteristics of survey participants**

	Occupation												
	Economics lecturer		Jurisprudence teacher		Linguistics lecturer		Math lecturer		Philosophy lecturer		Sociology lecturer		
	Count	Row %	NCount	Row %	NCount	Row %	NCount	Row %	NCount	Row %	NCount	Row %	N
Gender female	10	11.9%	7	8.3%	23	27.4%	20	23.8%	12	14.3%	12	14.3%	

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	male	25	21.6%	21	18.1%	9	7.8%	20	17.2%	19	16.4%	22	19.0%
Age	25-30 years	9	29.0%	3	9.7%	4	12.9%	6	19.4%	4	12.9%	5	16.1%
	31-35 years	3	10.3%	4	13.8%	6	20.7%	6	20.7%	6	20.7%	4	13.8%
	36-40 years	3	8.3%	6	16.7%	6	16.7%	9	25.0%	5	13.9%	7	19.4%
	41-45 years	6	16.2%	7	18.9%	3	8.1%	8	21.6%	6	16.2%	7	18.9%
	46-50 years	6	20.7%	4	13.8%	4	13.8%	4	13.8%	2	6.9%	9	31.0%
	above 50 years	8	21.1%	4	10.5%	9	23.7%	7	18.4%	8	21.1%	2	5.3%
	Education	BA	11	19.6%	7	12.5%	6	10.7%	13	23.2%	8	14.3%	11
MA		13	15.9%	12	14.6%	16	19.5%	12	14.6%	13	15.9%	16	19.5%
PhD		11	17.7%	9	14.5%	10	16.1%	15	24.2%	10	16.1%	7	11.3%

## RESEARCH RESULTS

### Analyzing the Reliability of the Scales

Testing the scales through Cronbach's Alpha reliability coefficient to identify and eliminate junk variables avoids creating misleading factors when analyzing exploratory factor analysis. Cronbach's Alpha coefficient has a variable value in the interval [0,1]. If a measurement variable has a total correlation coefficient of Corrected Item - Total Correlation  $\geq 0.3$ , that variable meets the requirements (Cronbach, 1951; Taber, 2018). The verification criterion is that Cronbach's Alpha coefficient must be greater than 0.6, and the correlation coefficient of the sum variable in each scale must be greater than 0.3 (Hair, Black, Babin, & Anderson, 2010). Table 2 shows that the scales of the factors all meet the standards. Therefore, all the rankings of the elements are reliable and used for subsequent factor analysis.

**Table 2. Summary of Reliability and Relative Minimum Variables of Scales**

Scales	Number of variables observed	Reliability coefficients (Cronbach Alpha)	The correlation coefficient of the smallest total variable
Task_performance	5	0.793	0.524
Work_enjoyment	5	0.819	0.569
Public service motivation (PSM)	4	0.781	0.572

After testing Cronbach's Alpha, we use exploratory factor analysis (EFA) to evaluate the factor's unidirectional, simultaneous, and discriminant values. EFA was used by extracting the Principal Components Analysis and Varimax rotation to group the factors. With a sample size of 200, the factor loading of the observed variables must be greater than 0.5 for the variables to converge on the same factor and be distinguished from other factors. In addition, the Kaiser-Meyer-Olkin (KMO) coefficient, which is an index used to consider the adequacy of factor analysis, must be in the range of  $0.5 \leq KMO \leq 1$  (Cerny & Kaiser, 1977; Kaiser, 1974; Snedecor, George, Cochran & William, 1989). Table 3 shows that all factor loading coefficients of the observed variables are greater than 0.5; Bartlett test with Sig. = 0.000 with KMO coefficient = 0.912. EFA extracted 14 items into 3 factors with Eigen Value  $> 1$  and cumulative percentage variance = 58.261%. Thus, the research model consisting of 2 independent variables and 1 dependent variable is used for multivariable linear regression analysis and detailed regression analysis to test the proposed hypothesis.

**Table 3. Exploratory factor analysis**

Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
Work_enjoyment4	.781		
Work_enjoyment3	.752		
Work_enjoyment1	.727		



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Work_enjoyment2	.713		
Work_enjoyment5	.622		
Task_performance1		.756	
Task_performance5		.741	
Task_performance3		.709	
Task_performance2		.679	
Task_performance4		.658	
PSM1			.769
PSM4			.749
PSM2			.722
PSM3			.670

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

### Pearson Correlation Analysis

The author uses Pearson correlation analysis to analyze the correlation between quantitative variables. Figure 2 shows, with the 95% significance level, that the correlation coefficient indicates that the relationship between the dependent variable and the independent variable is statistically significant (Sig. < 0.05). The magnitude of the correlation coefficients ensures that the multiple linear regression and the moderator regression model are valid in the next step.

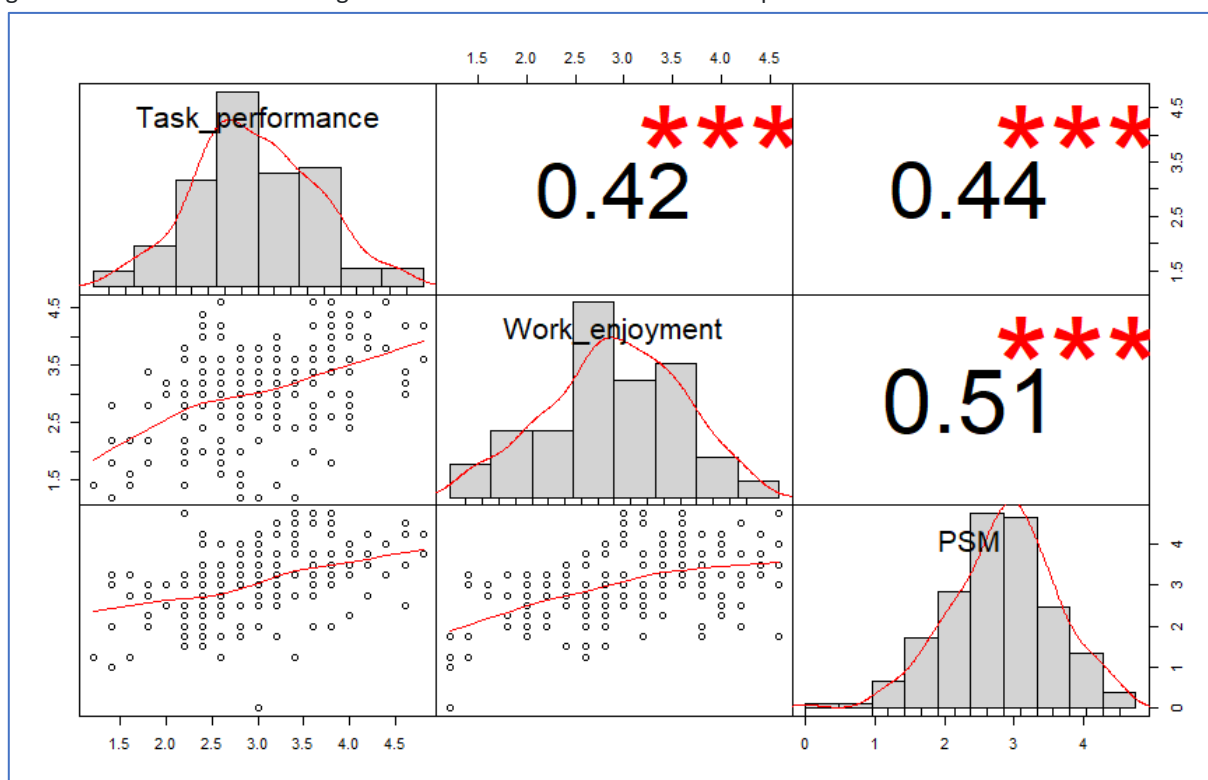


Figure 2. Pearson correlation analysis results

### Linear regression analysis and Moderation regression

The multivariable linear regression analysis determines the relationship between 2 independent variables, Work\_enjoyment, PSM, and the dependent variable, Task\_performance (model1). The moderation regression analysis determines the PSM variable that moderates the relationship between the variable Work\_enjoyment and Task\_performance (model2). The center data procedure transformed the independent variable data before moderator regression analysis. Table 4 shows that all the proposed hypotheses are accepted. Both the independent variables have a statistically significant effect on the dependent variable. Model1 has a coefficient of determination  $R^2 = 0.247$  and model2 has  $R^2 = 0.243$ . This result proves that both the multivariable linear regression and the moderation regression fit the data set (model 1 = 0.247 % and model 2 = 0.243%). Model2 shows that the PSM variable

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moderates the relationship between the variable Work\_enjoyment and Task\_performance positively. The increase or decrease of the variable PSM makes the relationship between the variable Work\_enjoyment and Task\_performance also increase or decrease.

**Table 4. The results of regression analysis**

		Dependent variable:	
		Task_performance	
		(Model1)	(Model2)
Work_enjoyment	0.239*** (0.066)		
PSM	0.283*** (0.065)		
PSM		0.276*** (0.060)	
Work_enjoyment		0.244*** (0.060)	
PSM:Work_enjoyment		0.126** (0.053)	
Constant	1.400*** (0.201)	2.953***	0.049)
Observations	200	200	
R2	0.247	0.243	
Adjusted R2	0.24	0.232	
Residual Std. Error	0.641 (df = 197)	0.644 (df = 196)	
F Statistic	32.379*** (df = 2; 197)	21.008*** (df = 3; 196)	
Note:	*p<0.1; **p<0.05; ***p<0.01		

Table 4 shows that, with 95% confidence, all hypotheses proposed are accepted. Firstly, there is a positive and meaningful relationship between public service motivation and teaching performance. Secondly, there is a positive and meaningful relationship between work\_enjoyment and teaching performance. Finally, public service motivation is the moderating variable for the relationship between work\_enjoyment and teaching performance. Model1 shows that PSM has the strongest effect on Task\_performance variable ( $\beta = 0.283$ ) and 95% confidence (p.value = 0.000). Next is the variable Work\_enjoyment ( $\beta = 0.239$ ) with 95% confidence (p.value = 0.000). Model2 shows that the variable E\_leadership moderates the relationship between Work\_enjoyment and Task\_performance ( $\beta = 0.126$ ) and 95% confidence (p.value = 0.001). The rise or fall of ethical leadership leads to a corresponding increase or decrease in the relationship between work enjoyment and teaching performance.

### DISCUSSION AND CONCLUSION

Firstly, the research results show that the public service motivation factor positively and significantly relates to teaching performance in Vietnam. This result is similar to previous findings in other countries (Naff & Crum, 1999; Steijn, 2008). Lecturers who reported high scores of public service motivation were more involved in their work (Cheon, Reeve, Yu, & Jang, 2014) and more dedicated to their work (Thoonen, Slegers, Oort, Peetsma & Geijssel, 2011), obligation, commitment (Vandenabeele, 2013). This result demonstrates that public service motivation focuses on the public good in general (Perry & Wise, 1990) and motivates individuals to promote their role in public service (Perry & Wise, 1990) the personal development (Piche, 2003).

Secondly, work enjoyment has a positive and meaningful relationship to teaching performance in the Vietnamese context. This result is similar to the findings of Kjeldsen & Jacobsen (2012) and Christensen & Wright (2011). Instructors with high work\_enjoyment scores tend to be more effective in teaching and less likely to burn out (van den Berghe et al., 2014). Factors affecting job satisfaction are related to improving the happiness of many people (Oshagbemi, 1999; Garcia et al., 2005; Deci & Ryan, 1985 & 1991). This finding further demonstrates that the relationship between public service motivation and performance can be determined (Brewer, 2008).

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Thirdly, public service motivation moderates the relationship between work\_enjoyment and teaching performance in the Vietnam context. This result shows that the increase or decrease in the public service motivation score of the lecturers will make the relationship between their work\_enjoyment and teaching performance increase or decrease similarly. This result further shows that lecturers with high public service motivation score higher in terms of teaching performance, research, and job satisfaction (Andersen et al., 2014; Bellé, 2013; Brewer & Selden, 2000; Bright, 2007; Kim, 2005; Leisink & Steijn, 2009; Naff & Crum, 1999; Vandenabeele, 2009).

Finally, the above results imply that universities in Vietnam need to pay attention to the public service motivation of their lecturers regarding their job satisfaction and job performance (Garcia et al. al., 2005). Universities cannot achieve a competitive level of performance, either at the product level or the customer service level, if their employees are unhappy or disagree with the organization (Garcia et al., 2005). Universities need to build an organizational culture that motivates public service as it is formed through socialization and social learning. Individuals acquire new social identities by working alongside others. Employees share a standard orientation to public service and to whom they feel they belong (Brewer, 2008; Vandenabeele, 2007; Herzberger et al., 1959).

Universities need to be careful in recruiting faculty. Although public service motivations attract faculty to public service providers, organizations do not necessarily select faculty based on their public service motivations (Kjeldsen & Jacobsen, 2012; Christensen & Wright; Thanh, Trung, Chien, Ha, Hien, & Thuy., 2021). Building a work environment to motivate public service is essential because public service motivations can change over time (Jacobsen et al., 2013; Kjeldsen, 2013; Kjeldsen, 2012; Nelson & Guick, 2013).

### LIMITATIONS

As with other pilot studies, this study has limitations that should be considered when discussing the results. First, our survey method reflects respondents' subjective perceptions of the investigated questions. The subjectivity of data has some inherent disadvantages that are unavoidable in surveys (Pakpour, Gellert, Asefzadeh, Updegraff, Molloy, & Sniehotta, 2016; Nguyen, Tran, & Tran, 2022). We collected data over a single period, so there are certain limitations in analyzing and evaluating the results (Xin & Zhanyou, 2019). Future research should combine cross-sectional and longitudinal studies. The purposive Sampling method has certain limitations, not fully reflecting population characteristics (Lin et al., 2016; Strong et al., 2018). We carried out this research in the context of Vietnamese culture. Therefore, asking for more general statements by applying development research models and research conclusions to other countries, regions, and cultures (Sun et al., 2012). Future research should combine cross-sectional and longitudinal studies. The purposive Sampling method has certain limitations, not fully reflecting population characteristics (Lin et al., 2016; Strong et al., 2018). We carried out this research in the context of Vietnamese culture. Therefore, asking for more general statements by applying development research models and research conclusions to other countries, regions, and cultures (Sun et al., 2012). Further research should consider demographic factors such as age, gender, and occupation to understand better the public service motivation of civil servants in Vietnam. In addition, further research should examine public service motivation concerning organizational identity (Naff & Crum, 1999) and organizational citizenship behavior (Koumenta, 2015; Steijn, 2008). Furthermore, Table 4 shows that the coefficient of determination ( $R^2$ ) of model 1 and model 2 has a low rate ( $<0.5$ ) that affects research reliability. Therefore, the following study will increase the sample size so that  $R^2$  has an appropriate ratio.

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### CONFLICT OF INTEREST

All authors declare that there is no conflict of interest.

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## Factors Affecting Attitude for Green Transformation Policy in Vietnam



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**ABSTRACT:** The Vietnamese government is interested in green energy transition through many international commitments to sustainable development. In the past time, the government of this country has developed many green energy transition policies. However, there is a lack of quantitative studies assessing the impact of this policy. To contribute to filling this gap, this study examines the influencing factors on the policy support attitude of the Vietnamese people. This study was conducted through a cross-sectional survey using Purposive Sampling (n=200). A multivariate linear regression analysis technique was applied to prove the hypotheses. The research results show that all three factors of awareness of economic benefits, perception of social benefits, and understanding of environmental benefits by green energy transition policies have positive and significant impacts on the environment policy support. Among them, the perceived factor of economic benefits has the most substantial effect. This study implies that the Vietnamese government needs to communicate the help of the green energy transition policy to the people in the coming time.

**KEYWORDS:** green energy; economic efficiency; social efficiency; environmental efficiency; policy attitude.

### INTRODUCTION

Green energy is essential for sustainable development, and the optimal selection of green energy sources remains a significant challenge for developing and developing countries (Iddrisu & Bhattacharyya, 2015). Green energy is generated from sustainable natural resources and non-fossil energy sources, such as solar, wind, hydro, biomass, geothermal, and solar power. These are energy sources that can be regenerated after a while. Humanity is witnessing a transition to a clean industrial civilization (Leggewie & Messner, 2012). The clean industry is a new sustainable development policy model that is a planned, policy-driven process (Schmitz, Johnson, & Altenburg, 2013).

The goal of the green energy transition model is that the transition towards a sustainable, low-carbon global economic system needs to be fundamental (Holstenkamp & Radtke Eds., 2017). The core of the transformation of the green energy model is profound innovation of economic structure, technology, and institutions. The energy sector plays a central role, responsible for government intervention as the driving force behind the green energy transition (Lederer, Wallbott, & Bauer, 2018). This is a particularly challenging task because market failures in limiting polluting technologies and excluding sustainable ones are numerous and particularly important (Altenburg & Pegels, 2012; Lutkenhorst, Altenburg, Pegels, & Vidican, 2014).

The Vietnamese government is very interested in green energy development. The evidence is that in the past, the Government of Vietnam has developed synchronous and consistent policies prioritizing the efficient use of green energy in association with the development of the renewable energy industry, limiting the investment in more power plants. Fossil fuel generators. Vietnam has 70 wind power projects (with a capacity of 3,987 MW) already in commercial operation; the electricity output in 2021 will reach 3.34 billion kWh, accounting for 1.3% of the total electricity output of the whole system. Regarding solar power, the electricity output from solar power sources in 2021 alone accounts for about 10.8% of the total electricity production of the entire system. The full installed capacity of biomass and garbage electricity will be 321 MW by October 2021. Vietnam has made strong commitments to respond to climate change, aiming for net zero emissions by 2050 at COP26. The latest Power Plan 8, submitted to the Government by the Ministry of Industry and Trade, predicts the maximum capacity (Pmax) in 2025 to reach about 59,300-61,400 MW; in 2030 is about 86,500-93,300 MW; year 2045 is about 155,000-189,900 MW. On that basis, this Ministry has proposed to select the planning option for the total power capacity of about 146,000 MW by 2030 and about 343,000 MW by 2045 (excluding the existing rooftop solar power source of about 7,755 MW and power sources for separate loads are about 2,700 MW in 2030 and 4,500 MW in 2045) (Luong Bang & Kien Trung, 2022).

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Many studies have been developed using a variety of policy models and frameworks that address the issues of green energy source selection and sustainable development for a cleaner future (Zhang et al., 2016). Many qualitative studies have shown that the reality of the green energy transition in Vietnam is still full of challenges, such as existing policies that have created conflicts over land, inequalities in livelihoods, and inequalities in legal opportunities. New cooperation of people and community groups. The energy transition in Vietnam will require a comprehensive approach with the participation of all economic sectors in society, along with many synchronous solutions (Khac Kien, 2022; Nghi, Thu, & Palace, 2022).

### LITERATURE REVIEWS

#### The role of green energy transition policy

The policy of diversifying green energy sources is critical, especially given the depletion of fossil fuels in both developed and developing countries. To achieve cleaner energy production in the future, there can be many different factors; environmental, social, economic, technical, and institutional aspects should be used as benchmarks for sustainable energy planning (Al Garni et al., 2016). Green energy is an essential input from the economic and human welfare perspective to build a common sustainability framework for a cleaner future (Iddrisu & Bhattacharyya, 2015). Technology plays a vital role in modern society in choosing green energy sources. With the development of new capabilities, technology also creates unknown risks to the surrounding environment depending on the mode of interaction (Yi, Sin, & Heo, 2011). Therefore, selecting optimal sources is one of the foremost vital things to steer the world toward social and environmental sustainability (Janeiro & Patel, 2015).

#### Green energy transition policy in Vietnam

Vietnam is taking the first steps in transitioning from traditional energy to green and cleaner renewable energy. This is also an inevitable trend to help ensure a sustainable economy. The proliferation of new power sources exposes the system to sustainability and stability challenges, requiring coordination of both policy and technology to provide reliable power (Vu Dung, 2022; Chien & Thanh, 2022). The policy of green energy transition in Vietnam kicked off when the Prime Minister of Vietnam issued Decision No. 2068/QĐ - TTg dated November 25, 2015, approving Vietnam's Renewable Energy Development Strategy until 2020, 2030, with a vision for 2050. In the following years, the Prime Minister of Vietnam also issued many green energy transformation decisions, such as Decision No. 39/2018/QĐ-TTg dated September 10, 2018; National electricity development planning period 2021 - 2030, vision to 2045; Decision No. 1264/QĐ-TTg dated October 1, 2019, on the National Energy Master Plan for the period of 2021 - 2030, with a vision to 205; The Politburo of the Communist Party of Vietnam also issued Resolution No. 55 - NQ/TW dated February 11, 2020, on orientations of Vietnam's national energy development strategy to 2030, with a vision to 2045. (Politburo, 2020; Thomas Kirchoff, 2014; Prime Minister, 2019a; 2019b; 2018).

Vietnam is taking the first steps in transitioning from traditional energy to green and cleaner renewable energy. The change will bring many opportunities to develop a sustainable green economy but poses significant challenges (Thuy Linh, 2022). In addition to the favorable factors, Vietnam must also implement solutions to solve the difficulties and challenges in ensuring energy security to minimize the environmental impacts of power generation activities. Furthermore, load growth at a high rate puts pressure on the energy industry's infrastructure, requiring significant investment capital and complex technical solutions (Pham Tuyen, 2022).

#### People's attitude towards transition policy

The impact of people's attitudes on policy is not new (Cochrane, 2015; Luo & Zhao, 2019). Policy development should refer to people's attitudes about the procedure (Sovacool, 2014). People's attitudes depend on fundamental values and beliefs that are general, enduring principles that individuals hold about desired outcomes or ways of life (Rokeach, 1973). They are deeply stored, stable over time, and found in similar forms in different cultures (Schwartz & Bilsky, 1987), and it leads to likes and dislikes for objects or specific policies (Rokeach, 1973).

Specific attitudes derived from values and beliefs highlight the relative importance that someone places on some issues over others (Gidengil et al., 2012). Therefore, the policy should refer to political orientations based on social group membership (Converse, 1964). Membership in a politically prominent group serves as an experience that helps someone decide whether to support a policy, primarily if their values and beliefs do not address the issue. On that topic, or they lack a consistent belief system (Campbell et al., 1960), through viewing policies through the lens of group interests (Converse, 1964), or through symbolic alignment of the effect of specific policies on specific groups (Conover & Feldman, 1981). People's attitudes about a particular policy depend on their social background, including personal characteristics such as gender, age, socioeconomic status, education, urban, rural, etc. (Brulle et al., 2012; Lee et al., 2015; Scannell & Gifford, 2013).

From the literature reviews, the authors have built a research model about what, as shown in Figure 1 below:

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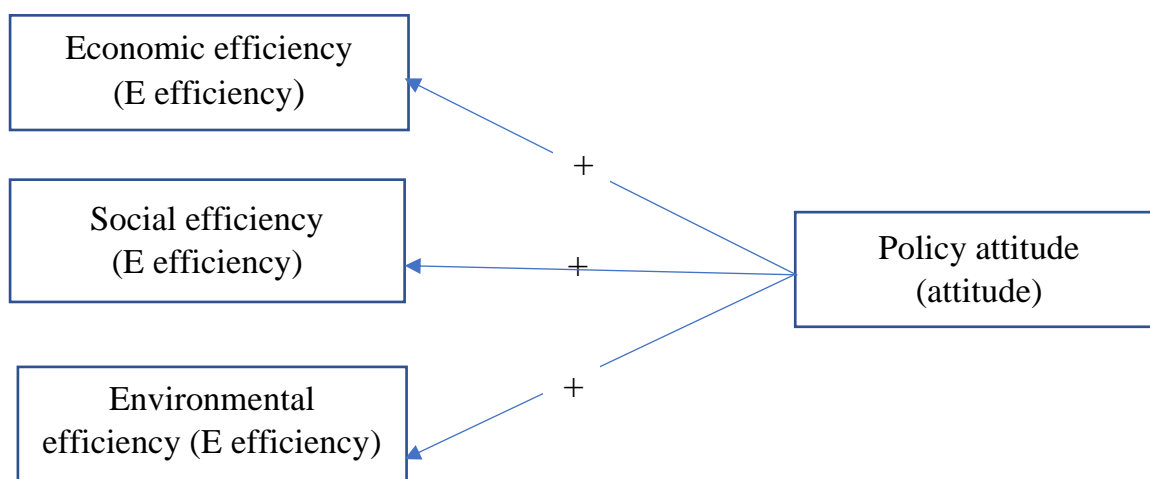


Figure 1. The Research Model

### HYPOTHESES

Based on the above documents, the following hypotheses have been formed:

H1. People's perception of the economic efficiency of green energy policy positively and significantly impacts their attitude toward the green energy policy transition.

H2. People's awareness of the social benefits of green energy policy has positive and significant impacts on the attitude toward green energy policy transformation.

H3. People's awareness of the environmental benefits of green energy policies has positive and significant impacts on the attitudes toward green energy policy transformation.

### RESEARCH METHOD

The study was conducted in Phu Yen Province and Quang Tri Province in September 2022. Phu Yen province has the largest Green Energy Urban Area in Vietnam, and Quang Tri province has the largest wind power project in Vietnam. These two provinces lead the country in green energy development. The research team used in-depth interviews with psychologists, economists, and environmental researchers to adjust the research scale and improve the questionnaire to suit the characteristics of the survey area. Close. The questionnaire was built based on the results of the research overview and experts' comments. It consists of 2 parts. Part 1 collects information about the demographics of the study participants, such as age, gender, and education level. Part 2 contains information about research participants about their perception of economic benefits, social benefits, environmental benefits, and their supportive attitude toward the government's green energy transition policy. Government of Vietnam (Table 1). The 5-point Likert scale was applied to build the questionnaire (Joshi, Kale, Chandel, & Pal, 2015).

After discussion and finally consensus among researchers, a preliminary questionnaire was created. A language expert then contributed to this version to create the final version. After that, this version was pre-tested on 40 demographically representative people by age, gender, education, and occupation. This was followed by minor tweaks made to improve the question structure to make the questionnaire easier to understand for formal surveying.

Table 1. Items in the questionnaire

Items	Factors
<b>E_efficiency</b>	<b>The level of awareness about the impact of the policy on the economic landscape</b>
<i>E_efficiency1</i>	Ensure fast economic development
<i>E_efficiency2</i>	Ensure stable economic development
<i>E_efficiency3</i>	Guaranteed economic safety
<i>E_efficiency4</i>	Create a change in consumption that does not harm biodiversity and the environment
<i>E_efficiency5</i>	Creating equality in access to resources
<i>E_efficiency6</i>	Hunger eradication and absolute poverty alleviation
<b>S_efficiency</b>	<b>Clean technology and industrial ecology</b>
<i>S_efficiency1</i>	Gradually reduce consumption of energy and other resources through eco-technology and lifestyle changes

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<i>S_efficiency2</i>	Create jobs for your locals
<i>S_efficiency3</i>	Increase income for your local workers
<i>S_efficiency4</i>	Promote full access to basic services in your local area
<i>S_efficiency5</i>	No harm to the economy and the environment
<i>S_efficiency6</i>	Create more jobs for you
<b>Ev_efficiency</b>	<b>Awareness of the policy's impact on environmental sustainability</b>
<i>Ev_efficiency1</i>	Rational use of natural resources
<i>Ev_efficiency2</i>	Overexploitation of renewable resource systems
<i>Ev_efficiency3</i>	Maintain biodiversity
<i>Ev_efficiency4</i>	Limit the problem of environmental pollution including urban and industrial pollution
<i>Ev_efficiency5</i>	Good management and treatment of solid waste and hazardous waste
<i>Ev_efficiency6</i>	Prevent and mitigate the effects of climate change and natural disasters
<i>Ev_efficiency7</i>	Atmospheric stability and other ecological activities
<b>Attitude</b>	<b>Policy attitude</b>
<i>Attitude1</i>	I'm interested in green energy transition policy
<i>Attitude2</i>	I support the green energy transition policy
<i>Attitude3</i>	I will support my organization to participate in the policy if possible.
<i>Attitude4</i>	I encourage others to get involved in the policy.

The questionnaire was sent directly to the respondents by purposeful sampling method. As a result, 200 satisfactory votes were obtained, achieving a response rate of 100%. Demographic information of study participants (Table 2).

**Table 2. Demographic characteristics of survey participants**

		Education							
		Bachelor		College		Master		Ph.D	
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Gender	Female	17	53.1%	8	25.0%	3	9.4%	4	12.5%
	Male	58	49.2%	24	20.3%	20	16.9%	16	13.6%
Age	<30 years old	3	25.0%	2	16.7%	4	33.3%	3	25.0%
	>55 years old	5	55.6%	2	22.2%	2	22.2%	0	0.0%
	31-35 years old	31	46.3%	15	22.4%	10	14.9%	11	16.4%
	36-40 years old	8	34.8%	6	26.1%	4	17.4%	5	21.7%
	41-45 years old	14	82.4%	2	11.8%	1	5.9%	0	0.0%
	46-50 years old	8	66.7%	2	16.7%	1	8.3%	1	8.3%
	51-55 years old	6	60.0%	3	30.0%	1	10.0%	0	0.0%

### RESEARCH RESULTS (KẾT QUẢ NGHIÊN CỨU)

R Programming is used to analyze the reliability of the scale, exploratory factor analysis, and regression analysis.

#### Reliability analysis

Cronbach's Alpha coefficient has a variable value in the interval [0,1]. If a measurement variable has a total correlation coefficient of Corrected Item - Total Correlation  $\geq 0.3$ , then that variable meets the requirements (Cronbach, 1951; Taber, 2018). The verification criterion is that Cronbach's Alpha coefficient must be greater than 0.6, and the correlation coefficient of the sum variable in each scale must be greater than 0.3 (Hair, Black, Babin, & Anderson, 2010). Table 3 shows that the rankings of the factors are all standard. Therefore, all the items are reliable and used for subsequent factor analysis.

**Table 3. Reliability analysis**

Scales	Number of variables observed	Reliability coefficients (Cronbach Alpha)	The correlation coefficient of the smallest total variable
E_efficiency	8	0.891	0.648
S_efficiency	6	0.833	0.551

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Ev_efficiency	7	0.856	0.538
Attitude	4	0.782	0.667

### Factor analysis

After testing Cronbach's Alpha, the author uses exploratory factor analysis (EFA) to preliminary evaluate the scales' unidirectional, convergent and discriminant values. EFA was used by extracting the Principal Components Analysis Factor and Varimax rotation to group the factors. With a sample size of 200, the factor loading of the observed variables must be greater than 0.5; variables converge on the same factor and are distinguished from other factors. In addition, the Kaiser-Meyer-Olkin coefficient (KMO), which is an index used to consider the adequacy of factor analysis, must be in the range of  $0.5 \leq KMO \leq 1$  (Cerny & Kaiser, 1977; Kaiser, 1974). The analysis results in Table 3 show that all factor loading coefficients of the observed variables are greater than 0.5, Bartlett test with sig. = 0.000 with KMO coefficient = 0.936. All 25 items in the EFA analysis were extracted into 4 factors with Eigenvalues greater than one and Cumulative variance percent = 0.570.8%. Thus, the research model consisting of 3 independent and 1 dependent variable is used for linear regression analysis and subsequent hypothesis testing.

**Table 3. Rotated Component Matrix**

Rotated Component Matrix <sup>a</sup>				
	Component			
	1	2	3	4
E_efficiency5	.707			
E_efficiency3	.669			
E_efficiency4	.662			
E_efficiency7	.654			
E_efficiency1	.648			
E_efficiency6	.629			
E_efficiency8	.596			
E_efficiency2	.588			
Ev_efficiency3		.709		
Ev_efficiency4		.677		
Ev_efficiency7		.673		
Ev_efficiency1		.637		
Ev_efficiency6		.616		
Ev_efficiency5		.607		
Ev_efficiency2		.582		
S_efficiency4			.737	
S_efficiency5			.685	
S_efficiency6			.665	
S_efficiency3			.649	
S_efficiency1			.575	
S_efficiency2			.559	
Attitude2				.766
Attitude4				.671
Attitude3				.621
Attitude1				.613
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Extraction Sums of Squared Loadings =0.570				
a. Rotation converged in 6 iterations.				

### Pearson correlation analysis

The author uses Pearson correlation analysis to analyze the correlation between quantitative variables. Figure 2 shows that, at the 5% significance level, the correlation coefficient indicates that the relationship between the dependent and independent variables is statistically significant (Sig. < 0.05). The magnitude of the correlation coefficients ensures that multicollinearity does not occur. Therefore, other statistics can be used to verify the relationship between the variables.



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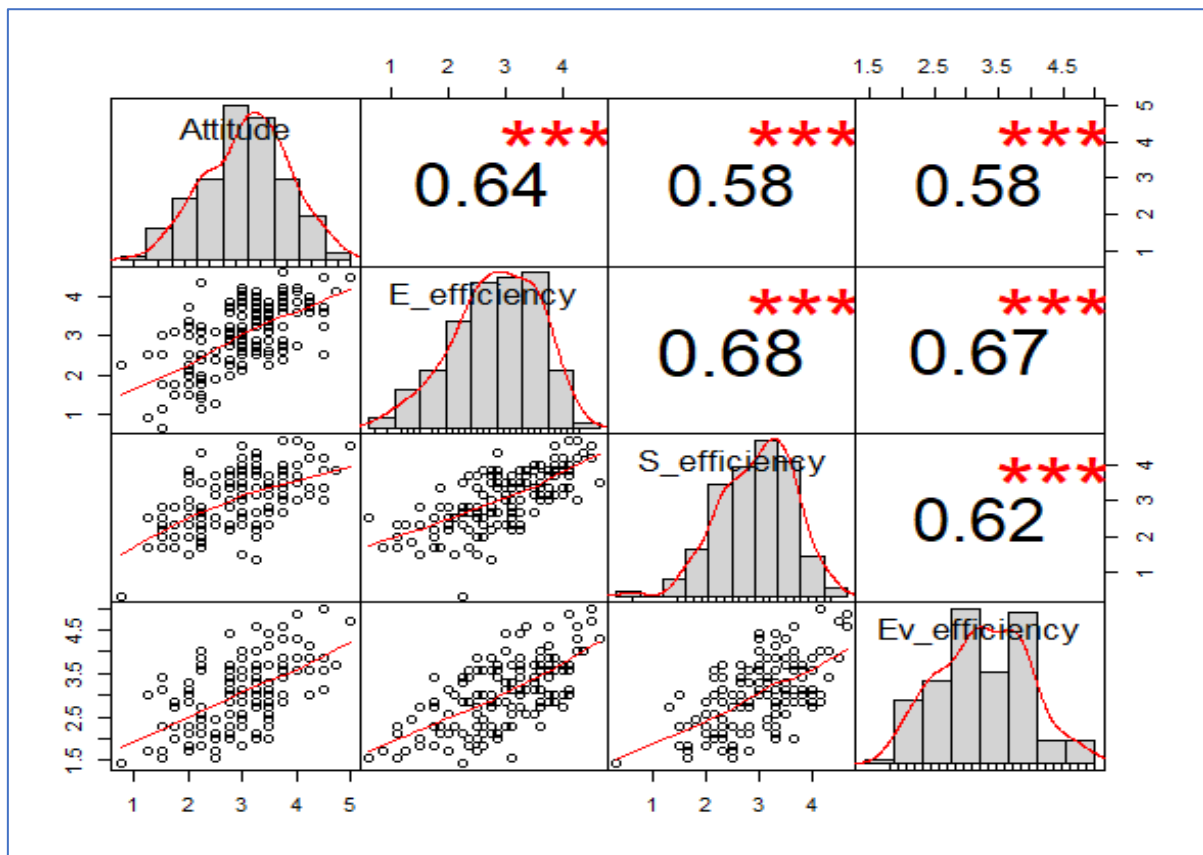


Figure 2. Pearson correlation analysis results

### Linear regression analysis

Next, the author conducts multivariable linear regression analysis on the relationship between three independent variables, E\_efficiency, S\_efficiency, Ev\_efficiency, and a dependent variable, Attitude. Table 4 shows that the regression model has  $R^2 = 0.470$ . This result indicates that the built linear regression model fits the data set = 0.470 %. Thus, all three independent variables have a statistically significant impact on the dependent variable. With the coefficient of VIF of 3 independent variables  $< 2.28$ , the ANOVA test of the model has a significant level of 95% ( $p.value = 0.000$ ). This result shows that the regression model is valid in explaining the study results (Hair, Black, Babin, & Anderson, 2010).

Table 4. The results of multiple linear regression analysis

Dependent variable:	
Attitude	
E_efficiency	0.356*** (0.089)
S_efficiency	0.209** (0.090)
Ev_efficiency	0.223** (0.090)
Constant	0.606*** (0.222)

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Observations	150
R2	0.470
Adjusted R2	0.459
Residual Std. Error	0.601 (df = 146)
F Statistic	43.175*** (df = 3; 146)

=====

**Note:** \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 5 shows that, with 95% confidence, the hypotheses proposed by the research team are accepted. Specifically, the variable E\_efficiency has the most potent effect on the Attitude variable with  $\beta = 0.356$  (p.value = 0.000), the second is the Ev\_efficiency variable with  $\beta = 0.223$  (p.value = 0.001), and the lowest is the S\_efficiency variable with  $\beta = 0.209$  (p.value = 0.001). Furthermore, this result shows that if other conditions are excluded, the increase or decrease of the variables E\_efficiency, S\_efficiency, and Ev\_efficiency both positively and significantly affect the dependent variable Attitude.

### DISCUSSION AND CONCLUSIONS

**Firstly**, the research results (Table 4) show that people's awareness of the economic benefits of green energy policies positively and significantly impacts attitudes toward a green energy policy transition. With this result, hypothesis H1 is accepted. The results of this study are similar to the findings of previous studies that the green energy transition policy receives support from the people because it is related to sustainable development (Ukaga, Maser, & Reichenbach, 2011; Basiago, 1999). The green energy transition policy is committed to improving and maintaining a healthy economy and ecological and social systems for human development (Grey & Milne, 2013; Tjarve & Zemite, 2016).

**Secondly**, the research results (Table 4) show that people's awareness of the social benefits of green energy policies has a positive and significant impact on favoring the transition of green energy policies. With this result, hypothesis H2 is accepted. This result supports the view that a green energy transition policy is associated with sustainable development. The social benefits of the community are derived from the efficient and equitable distribution of resources within and between generations with the operation of socio-economic activities within the limits of an ecosystem. finite state (Mensah & Emu-Kwesi, 2018; Thomas, 2015; Stoddart, 2011).

**Thirdly**, the research results (Table 4) show that people's awareness of the environmental benefits of green energy policies has a positive and significant impact on the attitude of favoring a green energy policy transition. With this result, hypothesis H3 is accepted. This finding further supports previous findings that most policy tools are used today to guide economic activity toward environmental sustainability, such as regulation, subsidies, and environmental sustainability. And tax incentives are familiar with industrial policy. This is not unreasonable; the industrial approach has been used for decades to initiate and facilitate structural change (Chaudhary, Narain, Krishnan, & Sagar, 2014; Dai & Xue, 2015); Morris & Martin, 2015; Schmitz, 2017; Shen, 2016). The environmental benefits brought about by the green energy transition policy are reflected in the procedure of satisfying the needs and desires of local people without depleting or depleting production resources (Thomas, 2015).

**Fourthly**, the research results support the view that economic efficiency, social efficiency, and environmental performance are the three main factors affecting the support for the national green energy transition policy. The three main sustainable development issues are economic growth, environmental protection, and social equality. On this basis, it can be argued that the concept of sustainability rests on three conceptual pillars. These pillars are "economic sustainability," "social sustainability," and "environmental sustainability" (Taylor, 2016). Thus, the role of government is to not only play a more active role in guiding the market but also in providing additional and fundamental new policy instruments (Altenburg & Lutkenhorst, 2015; Johnson, Altenburg, & Schmitz, 2014; Pegels, 2014; Rodrik, 2013; Schmitz et al., 2013; Hallegatte, Fay, & Vogt-Schilb, 2013; Altenburg & Assmann, 2017).

**Finally**, the results of this study imply that developing a national green energy transition policy requires the participation of a third party. It would be impractical for the government to trigger green energy development alone. It should have a role in leading social forces in green energy development Smith, Sterling, & Berkhout (2005). The Vietnamese government should play a controlling position in management, taxation, subsidies, or investment. However, in addition to the government, some factors have changed the policy of green energy development. These groups of actors may be in favor of or against the policy change. The government, therefore, mobilizes these forces (Love, Mickwitz, & Heiskanen, 2011; Schmitz, 2017; Hess, 2014). The role of the Vietnamese government stems from non-economic actors related explicitly to the development of green energy (Newell & Paterson, 2010), reflected in the decision-making framework of stakeholders. Participation, shifting incentives, and capital allocation to redistribute profit opportunities and share responsibilities (Krueger, 1974; Tullock, 1967).

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### LIMITATIONS

As with other empirical studies, there are limitations to this study that should be considered when discussing the results. First, our survey method reflects the subjective perception of the respondents toward the questions being investigated. Subjective data has some inherent disadvantages that are hard to avoid in surveys (Thanh, Tung, Thu, Kien, & Nguyet, 2021). Our data is collected over a single period. Cross-sectional data do not allow a dynamic assessment of changes in students' intentions and related behaviors regarding their college admissions, which may affect their applicability (Xin, Liang, Zhanyou, & Hua, 2019). Future research should combine cross-sectional analysis and long-term research.

The purposeful sampling method has certain limitations, not fully reflecting population characteristics (Strong et al., 2018). Our survey was conducted in a Vietnamese political and cultural context and therefore requires more general statements than can be made by applying the development research model and research conclusions to other countries and cultures (Sun et al., 2012; Thanh, Hiep, & Tung, 2021). Future research should also include moderating variables such as ethnicity, ethnicity, religion, and occupation differences. The coefficient of determination  $R^2$  of the model is still low ( $R^2 = 0.487 < 0.50$ ), leading to a decrease in the significance of the model. In future studies, it is necessary to increase the sample size to improve the model.

### ACKNOWLEDGMENTS

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### CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

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## Evaluation of Opportunities Provided Under the Normative Frameworks for Protection of Persons with Disabilities in Nigeria and Indonesia



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**ABSTRACT:** The United Nations General Assembly adopted the Convention on the Rights of Persons with Disabilities (UN CRPD) and its Optional Protocol in 2006 towards the promotion and protection of the rights of persons with disabilities (PWDs) and to support the respect for their innate dignity. Nigeria and Indonesia have signed and ratified the UN CRPD as well as domesticated it in their respective domains. The purpose of this article was to evaluate how the global and relevant national instruments have been implemented in Nigeria and Indonesia to protect the rights of PWDs against discrimination and transform their fortunes. The article adopted library-based doctrinal and comparative research methods. This is in addition to employing some theoretical analytical models of disability to further explicate the perception or attitude of people towards PWDs in these countries. The findings of the article revealed that to certain extents, there have been some prospects and achievements recorded by reason of the extant normative frameworks guaranteeing the rights of PWDs in Nigeria and Indonesia; though the fundamental rights of PWDs have not been entirely fulfilled despite the optimistic clauses in the examined laws. The authors therefore, recommended that a lot more are still required to be done by relevant stakeholders in both countries under reference for the full realisation or accommodation of the protected rights of PWDs in Nigeria and Indonesia.

**KEYWORDS:** Indonesia, Nigeria, Normative Frameworks, Persons with Disabilities

### INTRODUCTION

Prior to the adoption of the United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) and its Optional Protocol in 2006, the major global human rights instruments like the Universal Declaration on Human Rights (UDHR) 1948,<sup>1</sup> the International Covenant on Economic, Social and Cultural Rights (ICESCR),<sup>2</sup> the International Covenant on Civil and Political Rights (ICCPR),<sup>3</sup> and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW),<sup>4</sup> among others, merely made general provisions regarding the inbuilt dignity and value of the human person, equality, inalienable rights, including civil, political, economic, social and cultural rights of every individual. There were no explicit provisions relating to the rights and protection of disabled persons in these prominent international bills of human rights and CEDAW. The UN CRPD and its Optional Protocol therefore, became the foremost binding universal instruments to provide for a wide spectrum of human rights and fundamental freedoms that guaranteed, protected, and respected the rights of persons with disabilities (PWDs) on an equal basis as those enjoyed by individuals who live without disabilities.<sup>5</sup> Nigeria and Indonesia have each signed and ratified the UN CRPD in addition to replicating its provisions as domestic laws to demonstrate their respective national commitments to safeguard the rights of disabled persons. The Nigerian law is regulated by the Discrimination against Persons with Disabilities (Prohibition) Act No. 2 of 2019. On the other hand, the primary legislation on disability rights in Indonesia is the Law on Persons with Disabilities 2016 (Law No. 8 of 2016).

<sup>1</sup> Universal Declaration of Human Rights, GA Res 217A (III), UNGAOR, 3<sup>rd</sup> Session, Supp No. 13, UN Doc A/810 (1948) 71; adopted by the United Nations General Assembly (UNGA) on 10 December 1948.

<sup>2</sup> Adopted by the UNGA Resolution 2200A (XXI) of 16 December 1966 (entered into force on 3 January 1976).

<sup>3</sup> Adopted by the UNGA Resolution 2200A (XXI) of 16 December 1966 (entered into force on 23 March 1976).

<sup>4</sup> Adopted by the UNGA on 18 December 1979 (entered into force on 3 September 1981).

<sup>5</sup> United Nations Convention on the Rights of Persons with Disabilities (UN CRPD), (A/RES/61/106), UNGAOR, 61<sup>st</sup> Sess., Suppl. No. 49 (2006), Article 1, para. 1; adopted by the UNGA on 13 December 2006.



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Disability, in the perception of the UN CRPD, is a budding notion that results from the intersection between persons with impairments and the attitudinal behaviour as well as unreceptive environmental limitations that impede their complete and effective participation in society on equal basis with others.<sup>6</sup> Joanna Bodio also indicates that disability is not limited to “only a physical, mental and intellectual state that violates the body’s performance, but also hinders, restricts or prevents the playing of social roles as part of participation in society”.<sup>7</sup> The concept of disability is therefore, open-ended as the UN CRPD itself uses the term “include”,<sup>8</sup> which imports that “disability” is not a rigid or watertight term but can be adapted according to the prevailing environment in a given society. Thus, individuals with long or short term physical, mental, intellectual and sensory impairments can benefit from the provisions of the Convention.<sup>9</sup>

Recent research observation regarding disability rights in Indonesia has indicated that the rights of PWDs in that country has not been absolutely actualised regardless the concerted efforts by the Indonesian government, especially as it relates to accessibility to public facilities in the healthcare sector.<sup>10</sup> Another study conducted on the level of financial inclusion in relation to PWDs in Nigeria revealed that PWDs are marginalised in various ways such as inability to access banking facilities and physical structures, despite complaints by disability rights movements.<sup>11</sup> Our present research however goes beyond the limited areas of the mentioned studies in Indonesia and Nigeria.

World Health Organisation (WHO) estimates that more than one billion persons are living with some type of impairments, out of which approximately 200 million encounters significant challenges in functioning; with a caveat that its prevalence was on the increase.<sup>12</sup> However, there is absence of comprehensive data on the actual number of persons with disabilities (PWDs) in either Nigeria or Indonesia. A report indicates that about 25 million Nigerians are living with one type of disability or the other,<sup>13</sup> out of which an estimated 13 million of this population constitutes women and girls.<sup>14</sup> On the other hand, a research conducted by the Australia Indonesia Partnership for Economic Governance in 2017 revealed that at least 10 million people suffered from one form of disability or the other, representing about 4.3% of the Indonesian population.<sup>15</sup> Considering the staggering statistics in the two countries under reference, the article seeks to conduct an in-depth examination of the various normative frameworks recognised by the two countries with a view to discovering how the countries have utilised the possibilities offered by these laws to enhance the rights and protection of PWDs.

The study is divided into some sections. The first part forms the introductory section; the theoretical explanations or models of disability constitute the second part of the study. Some worldwide instruments on disability rights which are ratified by Nigeria and Indonesia are discussed in the third part of the work; while key national disability normative frameworks in Nigeria and Indonesia are examined in the fourth section of the study. Prospects of disability rights in Nigeria and Indonesia are the focus of the fifth section. The study ends with a conclusion and recommendations.

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<sup>6</sup> *Ibidem*, Preambular para. (e).

<sup>7</sup> Joanna Bodio, “Guardian Appointed for Disabled Person and Guardian Appointed for a Partially Incapacitated Person” (2021) 30:4 *Studia Iuridica Lublinensia* 49 at p. 53.

<sup>8</sup> UN CRPD, *supra* (note 5) at Article 1, para. 1.

<sup>9</sup> United Nations Human Rights Office of the High Commissioner, *The Convention on the Rights of Persons with Disabilities: Training Guide, Professional Training Series No. 19*, HR/P/PT/19, (New York: United Nations Publications, 2014) 1 at 25.

<sup>10</sup> Mohammed Dahlan, Prisca Listiningrum & Dio Priagung Wicaksana, “Rights to Access of Public Facilities in Health Services for People with Disabilities” (2022) 3: 1 *Indonesian Journal of Law and Society* 25-48 at 25.

<sup>11</sup> Kinsley Imandojemu, Akinlosotu Nathaniel Toyosi & Odigie Joseph Ndidi, “Financial Inclusion and People Living with Disabilities (PLWDs) in Nigeria: A Disaggregated Analysis” (2018) 42: 4 *Bullion* 60-82 at 61-62.

<sup>12</sup> World Health Organisation & The World Bank, *World Report on Disability* (Geneva: World Health Organisation, 2011), p. xi. Online: <[https://www.who.int/disabilities/world\\_report/2011/report.pdf](https://www.who.int/disabilities/world_report/2011/report.pdf)> (accessed 24 February 2022).

<sup>13</sup> O. Uduu, “Over 25 million Nigerians excluded due to disability”. Online: <<https://www.daraphyte.com/latest-reports/governance/over-25-million-nigerians-excluded-due-to-disability/>> (accessed 24 February 2022).

<sup>14</sup> Federal Ministry of Health, “National Policy on Sexual and Reproductive Health and Rights of Persons with Disabilities with Emphasis on Women and Girls, June 2018,” p. 2.

Online: <[https://health.gov.ng/doc/NATIONAL\\_POLICY\\_ON\\_SRH\\_OF\\_PWD\\_GWD.pdf](https://health.gov.ng/doc/NATIONAL_POLICY_ON_SRH_OF_PWD_GWD.pdf)> (accessed 16 June 2022). See also National Population Commission (NPC)/ICF, *Nigeria Demographic and Health Survey 2018* (Nigeria and Rockville, Maryland, USA: NPC and ICF, 2019) 1 at 457-458.

<sup>15</sup> L. Cameron & D. C. Suarez, *Disability in Indonesia: What can we learn from the Data?* (Australia Indonesia Partnership for Economic Governance, Monash University Business School, August 2017). Online: <[https://www.monash.edu/\\_data/assets/pdf\\_file/0003/1107138/Disability-in-Indonesia.pdf](https://www.monash.edu/_data/assets/pdf_file/0003/1107138/Disability-in-Indonesia.pdf)> (accessed 12 June 2022).

# Evaluation of Opportunities Provided Under the Normative Frameworks for Protection of Persons with Disabilities in Nigeria and Indonesia

## I. METHODS

The article adopted conceptual-analytical legal research methodology whereby library-based doctrinal and comparative methods were employed to critically examine both primary and secondary sources of information. The primary sources of information included the examined legislative instruments like the global treaties, national laws and case laws. The secondary sources were the available literature, newspaper reports and other related reports by national governments, the World Health Organisation and the World Bank, among others. The methods adopted were able to evoke certain perceptions that are associated with disability rights and aided in supporting the study and the premise it was built upon.

## II. THEORETICAL MODELS OF DISABILITY

Before a discussion on the normative frameworks for protection of the rights of PWDs in Nigeria and Indonesia, it is worth examining briefly some theoretical models of disability which could influence the perception or attitude of people or the government towards persons with impairments.

### A. The Medical Model (MM)

The spotlight of the model is majorly on the individual's impairment which is considered as a basis for inequality.<sup>16</sup> Disability is portrayed as a personal challenge which is caused by disease or other health conditions that makes the victim to constantly depend on medical care from health care professionals or providers.<sup>17</sup> Since MM is perceived as an individual's private problem, it proves ineffective in assisting PWDs to surmount environmental limitations towards the full enforcement of their rights and involvement in political, socio-economic and cultural life of the society.<sup>18</sup>

### B. The Charity Model (CM)

The CM views PWDs as inactive objects that cannot provide for themselves and are in need of welfare rather than as individuals empowered with rights to take active part in the socio-political, cultural life and the development of their societies. Like the MM, no environmental factors are taken into account under the CM. Hence, CM tends to widen the existing gap between PWDs and the society in which they live as the model leaves PWDs at the margins of the society because it fails to support PWDs' dynamic involvements in their communities.<sup>19</sup>

### C. The Social Model (SM)

SM views "disability" as a socially created problem and a subject of total assimilation of individuals into the society. Disability, from the perception of this model, is not a trait of an individual but is a multifaceted collection of situations, many of which are caused by the social environment and correspondingly requires a social approach to address the problem.<sup>20</sup> In other words, since disability is a social construct, it is imperative on the society to put in place restructured policies, practices, attitudes, environmental accessibility, political structures, legal and regulatory frameworks, among others, to eliminate the various restrictions that prevent PWDs from fully participating in their environmental activities.<sup>21</sup> Thus, SM recognises disability as resulting from the societal connection between personal conditions and environmental factors. This view finds support in Katerina Kazou's contention that economic and social oppressive factors cause disability and as a result, the proper response towards its eradication is by removing the disabling difficulties to participation of PWDs in the society.<sup>22</sup>

### D. Bio-Psycho-Social Model (BPSM)

BPSM perceives disability as occurring from the league between an individual's functional constraints and the environment s/he finds himself/herself. For example, an individual may have a mobility impairment, but according to the BPSM, what actually renders the individual disabled is an inaccessible physical environment, lack of assistive devices, and negative mindsets that construct

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<sup>16</sup> United Nations Human Rights Office of the High Commissioner, *supra* (note 9) at 9.

<sup>17</sup> *Ibidem*, at pp. 8-9. See also Disabled World, "Models of Disability: Types and Definitions." Online: <<https://www.disabled-world.com/definitions/disability-models.php>> (accessed 21March 2022).

<sup>18</sup> Sri Moertiningsih Adioetomo, Daniel Mont & Irwanto, *Persons with Disabilities in Indonesia: Empirical Facts and Implications for Social Protection Policies* (Jakarta Pusat: Demographic Institute, Faculty of Economics, University of Indonesia in Collaboration with the National Team for the Acceleration of Poverty Reduction, September 2014) 1 at 130.

<sup>19</sup> United Nations Human Rights Office of the High Commissioner, *supra* (note 9) at p. 9.

<sup>20</sup> *Ibidem*, at p. 10.

<sup>21</sup> *Ibidem*. See also Jerome E. Bickenbach, "Disability and Equality" (2003) 2:1 Journal of Law & Equality 7 at 11.

<sup>22</sup> Katerina Kazou, "Analysing the Definition of Disability in the UN Convention on the Rights of Persons with Disabilities: Is it Really Based on a 'Social Model' Approach?" (2017) 23 International Journal of Mental Health and Capacity Law 25 at 31.

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limitations for his/her dynamic involvement in the society.<sup>23</sup> Thus, BPSM does not envisage disability to be equipollent with a medical judgment but considers it as arising from a relationship between a person's functioning and the physical environment. As a matter of fact, the UN CRPD 2006 adopts the BPSM in its definition of PWD to include individuals that "have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others".<sup>24</sup>

### E. Moral/Religious Model (M/RM)

The M/RM conceptualises disability as a form of punishment from God or a product of supernatural intervention and that PWDs or their family members are ethically accountable for the consequential disability.<sup>25</sup> This line of theoretical explanation is common among religious traditions, including Judeo-Christian tradition. Echoes of this form of thinking, for instance, could be found in the *Holy Bible* when the disciples of Jesus saw a blind man and questioned Jesus, "Master, who did sin, this man, or his parents, that he was born blind?"<sup>26</sup> The response of Jesus to the fact that neither the man nor his parents were morally responsible for his disability<sup>27</sup> supports the view that neither PWDs nor members of their families should be stigmatised by reason of their physical condition.

### F. The Human Rights Based Model (HRBM)

HRBM draws strength from both the SM and BPSM as it advocates that PWDs have fundamental rights and that the State or society has obligations to recognise and protect their rights. Such recognised rights are not anchored on mere ethical empathy but on the inherent dignity and freedoms which PWDs are entitled to. In this way, HRBM tends to make the State or society accountable both in terms of protecting, endorsing and advancing these fundamental rights as well as stopping the infraction of those rights.<sup>28</sup>

The aim of the HRBM is further reinforced by the UN CRPD 2006 which *inter alia*, seeks to "promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity".<sup>29</sup> Thus, this theoretical model does not portray PWDs as mere "passive objects of charitable acts", but provides them with the enabling opportunities to participate in societal activities, in education, in gainful employment, in political and cultural life and to defend their rights through access to justice in the event of any infraction thereof.<sup>30</sup>

Having discussed the above theoretical orientations which account for the society's perception and treatment of PWDs, this article adopts the HRBM (human rights based model) as it is the only possible all-encompassing approach that supports and affords the means through which the guaranteed rights of PWDs could be implemented, advanced and protected on equal basis with other individuals without disabilities (IWDs) in Nigeria, Indonesia and globally.

## III. SOME GLOBAL INSTRUMENTS ON DISABILITY

### A. ILO Discrimination (Employment and Occupation) Convention 1958 (No. 111)<sup>31</sup>

This Convention perceives discrimination as an infringement of the rights recognised under the UDHR 1948<sup>32</sup> which is capable of invalidating or undermining equal advantage or dealings in employment or occupation.<sup>33</sup> ILO member countries are required to design national policy framework that are suitable to their domestic State in order to promote equal opportunity and treatment in relation to the world of work, with a goal of abolishing any form of discrimination in the labour market.<sup>34</sup>

<sup>23</sup> Sri Moertiningsih Adioetomo, Daniel Mont & Irwanto, *supra* (note 18) at p. xiv.

<sup>24</sup> United Nations Convention on the Rights of Persons with Disabilities, 2006, Article 1; Joanna Bodio, *supra* (note 7) at p. 51.

<sup>25</sup> United Nations Human Rights Office of the High Commissioner, *supra* (note 9) at p. 89; Edwin Etieyibo & Odirin Omiegbe, "Religion, Culture, and Discrimination against Persons with Disabilities in Nigeria" (2016) 5: 1 African Journal of Disability 192-197 at 193.

<sup>26</sup> *The Holy Bible, Life Application Study Bible*, Tyndale House Publishers Inc, 2004, The Book of John, Chapter 9: 2 (King James Version).

<sup>27</sup> *Ibidem*, The Book of John, Chapter 9:3.

<sup>28</sup> Secretariat for the Convention on the Rights of Persons with Disabilities of the Development of Economic and Social Affairs; United Nations Population Fund; Wellesley Centers for Women, *Disability Rights, Gender, and Development: A Resource Tool for Action* (UN CRPD/DESA, UNFPA, Wellesley Centers for Women 2008), Module 1, p. 4.

<sup>29</sup> UN CRPD, Article 1. It is submitted that HRBM is also adopted in a number of national laws, including under Nigeria's Discrimination against Persons with Disabilities (Prohibition) Act 2018 and the Indonesian Law on Persons with Disabilities No. 8 of 2016.

<sup>30</sup> United Nations Human Rights Office of the High Commissioner, *supra* (note 9) at p.10.

<sup>31</sup> Adopted by the General Conference of the International Labour Organization on 25 June 1958 (entered into force on 15 June 1960). While Indonesia ratified the Convention on 7 June 1999, Nigeria ratified it on 2 October 2002.

<sup>32</sup> *Ibidem*, preambular para. 6.

<sup>33</sup> *Ibidem*, Article 1.

<sup>34</sup> *Ibidem*, Article 2.

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### B. United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) 2006<sup>35</sup> and the Optional Protocol<sup>36</sup>

This is the first legally binding global agreement that holds national governments answerable to the rights of individuals with impairments.<sup>37</sup> The Convention's clauses marked a clear departure from the paradigm attitude of "medical and welfare" models to perceiving PWDs as rights holders who are capable of claiming those entitlements granted to them by law.<sup>38</sup> The Convention regards discrimination on grounds of disability as any distinction, segregation or constraint by reason of disability which has the effect of limiting or nullifying the acknowledgement, enjoyment or implementation, on equal footing with others, of every protected human rights and fundamental liberties in every sphere of life, including denial of reasonable accommodation.<sup>39</sup> State parties are therefore, required to abolish every form of exclusionary and discriminatory practices against PWDs in all spectrum of life.<sup>40</sup>

While the principles of the Convention provide vital directions towards the interpretation and implementation of the rights and clauses of the treaty,<sup>41</sup> the general obligations identify the "obligation-holders" who are accountable for the fulfilment of the guaranteed rights and the necessary steps to be adopted in order to discharge such responsibilities.<sup>42</sup> Although the duties of implementing the Convention's commitments are obligatory on State parties, a number of clauses in the Convention also mentioned some definite areas for implementation by private entities, professionals and service providers towards the full operation of the rights of PWDs under the Convention.<sup>43</sup> Provisions are also made for national<sup>44</sup> and global<sup>45</sup> monitoring mechanisms; however, the established national framework must adhere to internationally acceptable standards of independence, plurality and operating as stipulated under the Paris Principles.<sup>46</sup>

The specific rights protected under the Convention include the rights to life,<sup>47</sup> equality before the law,<sup>48</sup> liberty and security of the person,<sup>49</sup> freedom from torture or cruel, inhuman or degrading treatment or punishment,<sup>50</sup> freedom from exploitation, violence and abuse,<sup>51</sup> protection of the physical and mental integrity of the individual,<sup>52</sup> freedom of movement and nationality,<sup>53</sup> right to living independently and being included in the community,<sup>54</sup> freedom of expression and opinion, including the right to seek,

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<sup>35</sup> As at March 2022, UN CRPD had 164 signatories and 185 State Parties (including European Union that ratified it on 23 December 2010). While Nigeria became a signatory to the Convention on 30 March 2007 and ratified same on 24 September 2010, Indonesia became a signatory on 30 March 2007 and ratified it on 30 November 2011. Online: <[https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtmsg\\_no=IV-15&chapter=4&clang=\\_en](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtmsg_no=IV-15&chapter=4&clang=_en)> (accessed 31 March 2022).

<sup>36</sup> The Optional Protocol (A/RES/61/106) was adopted by United Nations General Assembly (UNGA) on 13 December 2006 at New York (entered into force on 3 May 2008). As at March 2022, the Optional Protocol to the UNCRPD had 94 signatories and 100 State Parties. Nigeria became a signatory to the Protocol on 30 March 2007 and subsequently ratified same on 24 September 2010. Unfortunately, Indonesia has neither signed nor ratified the Optional Protocol.

Online: <[https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtmsg\\_no=IV-15-a&chapter=4&clang=\\_en](https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtmsg_no=IV-15-a&chapter=4&clang=_en)> (accessed 31 March 2022).

<sup>37</sup> Jayna Kothari, "The UN Convention on Rights of Persons with Disabilities: An Engine for Law Reform in India" (2010) 45:18 *Economic and Political Weekly* 65-72 at 65.

<sup>38</sup> *Ibidem* at p. 67. This is unlike the earlier soft law instruments, for example, the Declaration on the Rights of Mentally Retarded Persons, 1971 and the Declaration on the Rights of Disabled Persons, 1975 that were fashioned after the medical model and consequently made the PWDs to be reliant on social security and welfare thereby constantly requiring isolated services and institutions- see Theresia Degener, "International Disability Law-A New Legal Subject on the Rise" in P. Black (ed.) *Disability Rights: International Library of Essays on Rights* (Hong Kong: Proceedings of the Interregional Experts' Meeting, December 1999) 180-195.

Online: <<https://lawcat.berkeley.edu/record/1117172/files/fulltext.pdf>> (accessed 13 August 2022).

<sup>39</sup> UN CRPD, Article 2.

<sup>40</sup> *Ibidem*, Article 5.

<sup>41</sup> *Ibidem*, Article 3.

<sup>42</sup> *Ibidem*, Articles 8, 9, 11, 13 and 20(d).

<sup>43</sup> *Ibidem*, Article 4(1)(e); Article 9(2)(b); Article 20(d); Article 21(c); Article 25(d); Article 27(1)(h); Article 24; and Articles 12 and 19.

<sup>44</sup> The three identified national mechanisms are: focal point(s) mechanism; coordination mechanism; and independent monitoring mechanism- See *Ibidem*, Articles 33(1) and (2).

<sup>45</sup> See *Ibidem*, Articles 32, 34-40.

<sup>46</sup> The United Nations General Assembly (UNGA) adopted Resolution 48/134 on 20 December 1993 concerning National Institutions for the Promotion and Protection of Human Rights with an annex which sets out the Principles Relating to the Status of National Institutions (the Paris Principles) in which national governments were encouraged to create independent human rights institutions (NHRIs). Online: <<https://www.ohchr.org/en/instruments-mechanisms/instruments/principles-relating-status-national-institutions-paris>> (accessed 26 March 2022).

<sup>47</sup> UN CRPD, Article 10.

<sup>48</sup> *Ibidem*, Article 12.

<sup>49</sup> *Ibidem*, Article 14.

<sup>50</sup> *Ibidem*, Article 15.

<sup>51</sup> *Ibidem*, Article 16.

<sup>52</sup> *Ibidem*, Article 17.

<sup>53</sup> *Ibidem*, Article 18.

<sup>54</sup> *Ibidem*, Article 19.

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receive and impart information and ideas,<sup>55</sup> right to privacy,<sup>56</sup> respect for home and family life,<sup>57</sup> rights to education,<sup>58</sup> health,<sup>59</sup> work and employment,<sup>60</sup> and the right to adequate standards of living and social protection.<sup>61</sup> As could be inferred from the relevant clauses, the UN CRPD is an all-embracing package as it is applicable to all PWDs, inclusive of individuals with protracted physical, mental or psychosocial impairments.<sup>62</sup>

The Convention particularly identifies women and girls with disabilities (WGWGs), in addition to children with disabilities (CWDs), as the most vulnerable groups that suffer most from multiple discriminations, abuses and violations of their rights.<sup>63</sup> As a matter of fact, the UN Committee on the Rights of Children with Disabilities, General Comment No. 9 of 2006<sup>64</sup> admitted that CWDs are still facing severe social, cultural, attitudinal and physical obstacles to the full realisation of the rights contained in the Convention on the Rights of the Child (CRC) on daily basis.<sup>65</sup> To protect these vulnerable groups of persons, it would be imperative for State parties to the UN CRPD to employ relevant mechanisms, including but not limited to the utilisation of the clauses of the Convention on the Elimination of All Forms of Discrimination against Women 1979 (CEDAW) and the CRC to defend their rights.<sup>66</sup> Such measures would go a long way in ensuring the total freedom, growth, advancement and empowerment of CWDs and women with disabilities (WWDs) for the purpose of guaranteeing them the exercise and enjoyment of human rights stipulated under the UN CRPD.<sup>67</sup>

On the other hand, the Optional Protocol is a distinct global legal agreement attached to the UN CRPD and requires a separate ratification or accession, though it was adopted on the same date with the Convention. The optional nature of the Protocol implies that State parties are not under obligation to ratify it when they ratify the Convention. Nonetheless, the right to seek for remedy or redress is vital for the total enjoyment of all recognised rights under human rights instruments, including the ICCPR and UN CRPD. Thus, it is a positive step for State parties to ratify the Protocol to ensure that PWDs have comprehensive protection of the guaranteed rights. It is noteworthy that Article 34 of the Convention creates the Committee on the Rights of Persons with Disabilities, a global committee of independent experts, and saddles it with various roles. The Optional Protocol in its Article 6 empowers the Committee to embark on investigations if it receives dependable information which shows serious or systematic infraction of Convention by a State party.

### IV. KEY DISABILITY LEGISLATION IN NIGERIA AND INDONESIA

This section of the work examines some normative frameworks in Nigeria and Indonesia focusing on disability rights with a view to discovering the opportunities offered towards the promotion, advancement and protection of the rights of PWDs.

#### A. Nigerian National Legal Instruments

##### 1. Discrimination against Persons with Disabilities (Prohibition) Act (DPDP Act) 2019<sup>68</sup>

Apparently, the Constitution of the Federal Republic of Nigeria 1999 (as amended) and the domesticated African Charter on Human and Peoples' Rights (Ratification and Enforcement) Act 1990<sup>69</sup> made broad-spectrum provisions for the guaranteed rights of every

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<sup>55</sup> *Ibidem*, Article 21.

<sup>56</sup> *Ibidem*, Article 22.

<sup>57</sup> *Ibidem*, Article 23.

<sup>58</sup> *Ibidem*, Article 24.

<sup>59</sup> *Ibidem*, Article 25.

<sup>60</sup> *Ibidem*, Article 27.

<sup>61</sup> *Ibidem*, Article 28(2)(a) (b) and (c)); Article 29 and Article 30.

<sup>62</sup> *Ibidem*, Article 1. See also Katerina Kazou, *op. cit.*, at p. 26.

<sup>63</sup> *Ibidem*, Articles 6, 7 and preambular para. (q).

<sup>64</sup> United Nations Committee on the Rights of the Child, General Comment No. 9 (2006): The Right of Children with Disabilities, CRC/C/GC/9 of 27 February 2007; adopted by the Committee at its 43<sup>rd</sup> Session in Geneva held on 11-29 September 2006. Online: <<https://www.refworld.org/docid/461b93f72.html>> (accessed 25 March 2022).

<sup>65</sup> *Ibidem*, para. 5, page 2.

<sup>66</sup> It is noteworthy that CEDAW and CRC are part of the global treaties recalled under UN CRPD. See UN CRPD, preambular para. (d).

<sup>67</sup> UN CRPD, Article 6(2).

<sup>68</sup> Some Nigerian States' governments have also enacted similar laws to prohibit and prevent discriminatory and harmful practices against PWDs and to expressly accord them with some fundamental rights. Such sub-national statutes have legislative competence only within the domain of such legislating States. See for example, Special People's Law 2010, Cap. S9, Vol. 10, *Laws of Lagos State of Nigeria, 2015*, sections 26-38; Discrimination against Persons with Disabilities (Prohibition) Law No. 3 of 2020 (Ekiti State); Disability Rights Law of Plateau State 2005; Disability Rights Commission Law 2018 (Nasarawa State); People with Disabilities (Amendment) Law 2017 (Kwara State); Disability Rights Law 2010 (Bauchi State); and Disability Rights Law 2018 (Anambra State) These are in addition to governmental policy frameworks like, National Policy on Disabilities 2018; National Policy and Implementation Guidelines on Albinism in Nigeria 2013, among others.

<sup>69</sup> Now Cap. A9, Laws of the Federation of Nigeria 2004.



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Nigerian citizen without special mention of persons with impairments.<sup>70</sup> Thus, DPDP Act 2019 is the primary legislation that deals expressly with issues bothering on the rights and protection of PWDs in Nigeria. The statute was enacted to fulfil Nigeria's commitment under the UN CRPD and other related global and/or regional treaties.<sup>71</sup> The law outlaws discrimination, either by individuals or organisations, against PWD on account of his/her physical, mental, intellectual or sensory impairment.<sup>72</sup> The protected rights under the statute include the right of access to accessibility of physical structure,<sup>73</sup> rights to goods, services and facilities, including accessibility of vehicles and reserved spaces,<sup>74</sup> ease of access and use of seaports, railways and airport facilities,<sup>75</sup> unfettered right to inclusive education<sup>76</sup> and healthcare facilities<sup>77</sup> along with priorities in queues,<sup>78</sup> first considerations are to be accorded to PWDs in accommodations and risky cases of humanitarian emergencies.<sup>79</sup> PWD enjoys equal right to work<sup>80</sup> with employers of labour in the public sector mandated to reserve a minimum of 5% employment opportunities for PWDs,<sup>81</sup> but the employment of a PWD with the aim of exploiting him/her for solicitation of alms is outlawed.<sup>82</sup>

PWDs are also encouraged to actively participate in politics and public life.<sup>83</sup> The right to political inclusion is further strengthened by the recently enacted Electoral Act 2022 which mandates officials of the electoral body, Independent National Electoral Commission (INEC), to render necessary assistance to PWDs, special needs and vulnerable individuals at polling stations by providing them with relevant means of communication like Braille, large embossed print, electronic devices, sign language or in appropriate situations, off-site voting to enable them perform their civic responsibilities.<sup>84</sup>

However, the DPDP Act 2019 gives a five year transitory period within which public buildings and structures, whether mobile, immobile or automobile could be modified and brought into full conformity with the requirement of the law.<sup>85</sup> Subsequent public buildings which are designed in brazen disregard of the stipulated conditions are to be denied requisite approval and any official who approves same would be sanctioned appropriately.<sup>86</sup> With respect to providers of goods and services, the law prevents them from discriminating against PWDs either in the manner or state for providing such goods or rendering the required services and/or declining in making the facilities available to PWDs.<sup>87</sup> The Act further makes provisions for the full assimilation of PWDs into the society in addition to creating the National Commission for Persons with Disabilities (NCPWD) and saddled it with duties for the education, health care, social, economic and civil rights of PWDs.<sup>88</sup> Violation of the rights or provisions of the statute attracts various sanctions such as jail terms and/or payment of prescribed fees.<sup>89</sup> This is without prejudice to a PWD instituting a civil action in court against the violator of his/her guaranteed rights.<sup>90</sup>

### B. Indonesian National Instruments

#### 1. Law on Persons with Disabilities (Law No. 8 of 2016)

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<sup>70</sup> Ibrahim Imam & M. A. Abdulraheem-Mustapha, "Rights of People with Disability in Nigeria: Attitude and Commitment" (2016) 24: 3 African Journal of International and Comparative Law 439-459 at 440-441.

<sup>71</sup> Joseph Onyekwere, "Passage of Disability Bill is Fulfillment of Nigeria's Obligation to International Treaties", *The Guardian* (1 May 2018). Online: <<https://m.guardian.ng/features/passage-of-disability-bill-is-fulfillment-of-nigerians-obligation-to-international-treaties/>> (accessed 6 April 2022).

<sup>72</sup> Discrimination against Persons with Disabilities (Prohibition) Act (DPDP Act) 2019, sections 1(1) and 57.

<sup>73</sup> *Ibidem*, sections 3-8.

<sup>74</sup> *Ibidem*, sections 9-12.

<sup>75</sup> *Ibidem*, sections 13-15.

<sup>76</sup> *Ibidem*, sections 17-18.

<sup>77</sup> *Ibidem*, section 21.

<sup>78</sup> *Ibidem*, section 26.

<sup>79</sup> *Ibidem*, sections 25- 27.

<sup>80</sup> *Ibidem*, section 28.

<sup>81</sup> *Ibidem*, section 29.

<sup>82</sup> *Ibidem*, section 16.

<sup>83</sup> *Ibidem*, section 30.

<sup>84</sup> Electoral Act 2022, section 54(2).

<sup>85</sup> DPDP Act 2019, section 6.

<sup>86</sup> *Ibidem*, sections 7 and 8. Unfortunately, no corresponding provision is made in the statute regarding private enterprises. It is common knowledge that individuals with impairments can also be employed by private establishments or visits such places to transact businesses. Thus, the law should have taken such situations into consideration to ensure that PWDs are not confronted with accessibility problems thereat.

<sup>87</sup> DPDP Act 2019, section 9. For detailed special facilities to be provided for ease of accessibility of physical structures, see First Schedule to the Act.

<sup>88</sup> See the Explanatory Memorandum to the DPDP Act 2019.

<sup>89</sup> See DPDP Act 2019, sections 1(2), 7(3), 8(2), 12(3)(4) & (5), 16(2), 23, 26(2) and 28(2) & (3).

<sup>90</sup> *Ibidem*, section 1(3) and section 8.



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Law No. 8 of 2016 was enacted to domesticate the UN CRPD 2006 which was ratified by the Indonesian government in 2011 vide Law No. 19 of 2011 on Ratification of the UN CRPD and to further repeal Law No. 4 of 1997 on Handicapped Persons.<sup>91</sup> Akin to the UN CRPD and Nigeria's similar statute, the extant Law No. 8 of 2016 identified PWDs to comprise of those with physical, intellectual, mental and sensory disabilities.<sup>92</sup> The statute targets the exercise and fulfilment of the rights of PWDs towards *inter alia*, realising the respect, progress, protection and implementation of human right and fundamental freedom of persons with disabilities in complete and equal manner as well as ensure that the exercise of respect, advancement, protection and commensurate with the rights of PWDs to develop themselves and utilise all their potentials according to the their talents and interest so as to enjoy, participate and contribute maximally in a safe, flexible and dignified state and to fully integrate into every area of the society.<sup>93</sup>

The rights acknowledged under Law No. 8 of 2016 include the right to life;<sup>94</sup> freedom from harassment and stigmatisation;<sup>95</sup> right to privacy, including respect for family life and protection on confidentiality of personal data, correspondence and other medium of private communication, inclusive of medical data and information;<sup>96</sup> right to justice and legal protection with equality before the law, including access to banking and non-banking services.<sup>97</sup> Other rights include the rights to education, either in inclusive or special schools,<sup>98</sup> employment, entrepreneurship and cooperative (including career development), whether by the government or with private individuals without discrimination.<sup>99</sup> The right to health covers the right to obtain accessible health care information and communication, equal opportunity and access to affordable, safe and quality health services along with protection from medical experimentation.<sup>100</sup> The right to politics by PWDs entitles them to vote and be voted for and to access all facilities and infrastructures in relation to elections.<sup>101</sup>

Moreover, the right to accessibility under the legislation include the utilisation of public facilities and reasonable accommodation as means of ensuring accessibility for PWDs.<sup>102</sup> In situations of disasters or emergencies, PWDs are to be prioritised and evacuated as well as sheltered in refugees' facilities or infrastructures.<sup>103</sup> They are likewise entitled to freedom from discrimination, abandonment, abuse and exploitation, whether psychologically, economically and/or sexually.<sup>104</sup> PWDs have a right to social welfare, inclusive of social rehabilitation, insurance, empowerment and protection.<sup>105</sup> The statute creates a National Commission on Disability (KND) as an independent non-structural body with the responsibilities of *inter alia*, monitoring, evaluating and advocating for the respect, protection and actualisation of the rights of PWDs<sup>106</sup> as well as formulation of activities plan and liaising with other related stakeholders in issues connected with PWDs.<sup>107</sup>

### 2. Law Concerning Human Rights (Law No. 39 of 1999)

The equal right to dignity recognised under this law covers the right of everyone, including PWDs, to be protected and treated fairly before the law and without any form of discrimination.<sup>108</sup> Every PWD has the right to demand and obtain equal treatment and protection before the law as befits his/her human dignity. Consequently, the law postulates that all members of disadvantaged group in the Indonesian society such as children, the underprivileged and the disabled individuals are entitled to more protection of human rights.<sup>109</sup> All relevant provisions stated in global human rights instruments, to which the Indonesian government has ratified, such as UN CRPD, CRC, CEDAW and Beijing Platform for Action, are recognised under the law and are legally binding on Indonesia.<sup>110</sup>

<sup>91</sup> Law No. 8 of 2016, preambular para (d) and Article 151.

<sup>92</sup> *Ibidem*, Article 4.

<sup>93</sup> *Ibidem*, Article 3(a) & (e).

<sup>94</sup> *Ibidem*, Articles 5(a) & 6.

<sup>95</sup> *Ibidem*, Articles 5 & 7.

<sup>96</sup> *Ibidem*, Articles 5 & 8.

<sup>97</sup> *Ibidem*, Article 9.

<sup>98</sup> *Ibidem*, Article 10.

<sup>99</sup> *Ibidem*, Article 11.

<sup>100</sup> *Ibidem*, Article 12.

<sup>101</sup> *Ibidem*, Article 13.

<sup>102</sup> *Ibidem*, Article 18.

<sup>103</sup> *Ibidem*, Article 20.

<sup>104</sup> *Ibidem*, Article 26.

<sup>105</sup> *Ibidem*, Article 17.

<sup>106</sup> *Ibidem*, Article 131.

<sup>107</sup> *Ibidem*, Article 133.

<sup>108</sup> Law No. 39 of 1999, Article 3.

<sup>109</sup> *Ibidem*, Article 5.

<sup>110</sup> *Ibidem*, Article 7.

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Law No. 39 of 1999 also recognises that children's rights are human rights and correspondingly accords them the rights to protection by their parents, family, society and the government.<sup>111</sup> In the case of CWDs, the law entitles them to the right to special care, education, training and assistance at the expense of the government. CWDs have the right of existence that is worthy of their human dignity and capable of building their self-esteem and the capacity to be fully integrated into the Indonesian society at any level.<sup>112</sup> The law goes further to create the National Commission on Human Rights (NCHR) with the primary goal of developing conditions suitable for the execution of human rights in compliance with the provisions of the 1945 Indonesian Constitution and global human instruments.<sup>113</sup> Human rights violations are to be entertained by the Human Rights Tribunal (HRT) established under Law the legislation.<sup>114</sup>

### V. PROSPECTS OF DISABILITY RIGHTS IN NIGERIA AND INDONESIA

The article has shown that both in Nigeria and Indonesia, the domestication of the UN CRPD crystallised in the recognition of a number of identified rights in the spectrum of civil, political, economic, social and cultural rights of PWDs in addition to general clauses and punishments for infractions of the examined statutes.

In relation to Indonesia, Law No. 8 of 2016 seeks to translate governmental efforts in actualising the rights of PWDs by *inter alia*, reinforcing legal mechanism towards actions that hinder or deny PWDs of their rights; contribute towards the re-direction of the focus of policy makers, governmental authorities and law enforcement agencies from viewing issues bothering on disabled persons from charity or medical-based perceptions to rights-based approach in order to empower them and to ensure that they are fully integrated into the society.<sup>115</sup> In this way, the law ensures that there is collaborative machinery between national and local governments in its implementations.<sup>116</sup> This synergy has the tendency of enabling governmental agencies at all levels to execute programmes capable of improving the regulatory and institutional framework, implementation mechanisms, monitoring and evaluation of policies for PWDs.<sup>117</sup>

The establishment of the Indonesian National Commission for Disability (KND)<sup>118</sup> has also contributed significantly towards the actualisation of the mandate of Law No. 8 of 2016. Recently in February 2022, the KND, in an attempt to provide an inclusive world of work in Indonesia signed a joint commitment with the International Labour Organisation (ILO) towards the respect, protection and fulfilment of the rights of PWDs at workplace.<sup>119</sup> The joint commitment underscored seven areas towards the achievement of inclusivity at work environment in the spirit of implementation of Law No. 8 of 2016, namely, (a) partnership with relevant stakeholders;<sup>120</sup> (b) promotion of rights; (c) abolition of discrimination; (d) equal opportunity and treatment; (e) focus on all kinds of disabilities; (f) sharing of information; and (g) active involvement of PWDs. No doubt, the joint executed declaration is not only a welcome development as it seeks to support coordinated attempts to establish all-encompassing decent work environment in Indonesia but is also in agreement with Indonesia's G20 Presidency in 2022 which buttresses the inclusion of PWDs in every area of live, including in the world of employment.<sup>121</sup>

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<sup>111</sup> *Ibidem*, Article 52.

<sup>112</sup> *Ibidem*, Article 54.

<sup>113</sup> *Ibidem*, Article 75.

<sup>114</sup> *Ibidem*, Article 104.

<sup>115</sup> See, United Nations Committee on the Rights of Persons with Disabilities, *Initial Report Submitted by Indonesia under Article 35 of the Convention, due in 2013*, CRPD/C/IDN/1(8 March 2019), paras. 3-5. Online: <<https://www.ecoi.net/en/file/local/2005785/G1906297.pdf>> (accessed 15 March 2022).

<sup>116</sup> For example, the national and local governments are mandated to *inter alia*: provide accessible pedestrian facilities that can be easily accessible by PWDs (Law No. 8 of 2016, Articles 101-102); facilitate accessible residence for PWDs (Article 104); provide accessible public services by PWDs based on prevailing laws (Article 105); facilitate or provide habilitation and rehabilitation services for PWDs (Article 110); guarantee access to information and information centres for PWDs and rapid response units for WGWDs as well as special protection for WGWDs based on existing laws (Articles 123, 125 and 126).

United Nations Committee on the Rights of Persons with Disabilities, *Initial Report Submitted by Indonesia under Article 35 of the Convention, due in 2013, supra* (note 115) at paras. 6-7.

<sup>118</sup> The Commission is further strengthened by the Presidential Regulation No. 68 of 2020 on National Committee for Disabilities (NCD).

<sup>119</sup> See Declaration of Joint Commitment to Promote Inclusive Decent Work for People with Disabilities in Indonesia (Deklarasi Komitmen Bersama Untuk Mempromosikan Kesempatan Kerja Untuk Penyandang Disabilitas). The document was signed on 8 February 2022 by the Country Director of the ILO in Indonesia, Michiko Miyamoto and the Head of KND, Dante Rigmalia. See, "ILO and Indonesia's National Commission for Disability join forces to promote inclusive workplaces". Online: <[https://www.ilo.org/jakarta/info/public/pr/WCMS\\_837289/lang--en/index.htm](https://www.ilo.org/jakarta/info/public/pr/WCMS_837289/lang--en/index.htm)> (accessed 16 June 2022).

<sup>120</sup> For example, the government at all levels, private sector, trade unions, PWDs to improve their capacity, the society/community, and educational institutions.

<sup>121</sup> ILO and Indonesia's National Commission for Disability join forces to promote inclusive workplaces, *supra* (note 119).

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Thus, the Indonesian normative frameworks on disability rights have provided the government with the solid base and opportunity to put together superior national legal instruments and policies aimed at positively altering the mindsets of policy makers and the society as a whole towards PWDs. As a matter of fact, the government now mainstreams a right-based approach in its developmental planning and in the execution of applicable policies and programmes in order to surmount obstacles and exclusionary or discriminatory practices against PWDs as well as contain the rights and protection of persons with impairments.<sup>122</sup>

In the same way, the enacting of explicit disability laws by the Nigerian government at the national and sub-national levels has recorded some gains in the country. In an attempt to combat conventional or stereotypes discriminations and harmful practices against PWDs, the government and other relevant stakeholders, including Non-governmental Organisations (NGOs) have organised sensitisation and educational campaigns to create awareness and educate people on disabilities, capabilities and skills of PWDs.<sup>123</sup> PWDs have also been educated on their human rights and guaranteed fundamental freedoms to empower them to maintain positive self image.<sup>124</sup>

Such efforts have strengthened the campaigns of civil societies and disabled persons' organisations as well as enhanced government attempts to tackle related issues that constantly hamper the protection of the rights of PWDs.<sup>125</sup> With this in place, the Nigerian government has a strong foundation to devise better regulatory and policy frameworks on disability. A case in point is the earlier mentioned amendment introduced to the Electoral Act 2022 which saddles the Nigerian national electoral body, INEC, with the responsibility of rendering necessary assistance to enable PWDs discharge their civic obligations at voting units.<sup>126</sup>

Also, the Nigerian national statute creates the National Commission for Persons with Disabilities (NCPWD) which is placed under the Presidency and charged with the responsibility of ensuring that PWDs have access to housing, education and healthcare.<sup>127</sup> The NCPWD is empowered to also receive complaints of rights infractions and support PWDs who may be victims of such infringement to seek legal remedy in the court as well as liaise with the media to make information available in accessible manner for PWDs and to procure assistive devices for all kinds of disability.<sup>128</sup> Perhaps, with a view to keeping the Nigerian President abreast of issues relating to PWDs, President Buhari recently appointed some persons as senior special aides on disability matters.<sup>129</sup> And to further encourage PWDs to get involved in Nigerian politics, some political parties have encouraged PWDs to pick up party nomination forms to contest for positions under the party's platform free of charge.<sup>130</sup> These are salutary developments that were not common before the enactment of the disability statute in Nigeria.

Regardless of the above mentioned positive contributions that have taken place in Nigeria and Indonesia as a result of the examined legal frameworks, the fact remains that the rights and protection of PWDs in both countries have not been entirely attained. Segregated and prejudiced practices against PWDs still persist in various forms. For instance, architectural designs of most academic institutions fail or neglect to take into account the challenges such structures pose to PWDs.<sup>131</sup> Buildings and physical structures that are inaccessible to PWDs are required to be modified in a manner that makes them accessible to and usable by PWDs.<sup>132</sup> This requirement has not been complied with by most public institutions although the five years transitional period granted under the Nigerian disability law is running out in 2024. This is highly discriminatory against PWDs or CWDs.<sup>133</sup>

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<sup>122</sup> United Nations Committee on the Rights of Persons with Disabilities, *Initial Report Submitted by Indonesia under Article 35 of the Convention, due in 2013, supra* (note 115), paras. 1-2.

<sup>123</sup> S. Omolaoye, "INEC Assures Persons with Disabilities of Full Participation", *The Guardian* (29 January 2022). Online: <<https://guardian.ng/news/inec-assures-persons-with-disabilities-of-full-participation/>> (accessed 13 August 2022).

<sup>124</sup> See, National Human Rights Commission, "Human Rights Council Resolution 37/22 Concerning the Rights of Persons with Disabilities- Input by National Human Rights Commission". Online: <<https://www.ohchr.org/Documents/Issues/Disability/Article8/NHRI/Nigeria.docx>> (accessed 16 June 2022).

<sup>125</sup> Kemi Falodun, "Nigerians with Disabilities seek Inclusion in Electoral Process", *Al Jazeera* (8 June 2022). Online: <<https://www.aljazeera.com/features/2022/6/8/nigerians-with-disabilities-see-inclusion-in-electoral-process>> (accessed 27 June 2022).

<sup>126</sup> Electoral Act 2022, section 54.

<sup>127</sup> DPDP Act 2019, Explanatory Memorandum; section 31.

<sup>128</sup> *Ibidem*, section 37.

<sup>129</sup> Johnbosco Agbakwuru, "Buhari re-appoints Ankeli, Garba as aides on Disability Matters", *Vanguard* (21 January 2020). Online: <<https://www.vanguardngr.com/2020/buhari-re-appoints-ankeli-garba-as-aides-on-disability-matters/>> (accessed 5 July 2022).

<sup>130</sup> Yekini Jimoh, "PWDs Appreciate APC, Buhari, Yahaya Bello for Free Nominations, Appointments", *Nigerian Tribune* (4 June 2020). Online: <<https://tribuneonline.ng/pwds-appreciate-apc-buhari-yahaya-bello-for-free-nomination-forms-appointments>> (accessed 5 July 2022).

<sup>131</sup> Edwin Etieyibo, "Rights of Persons with Disabilities in Nigeria" (2020) 33: 1 *Afrika Focus* 59-81 at p. 70. See also Ibrahim Imam, M. A. Abdurraheem-Mustapha, *supra* (note 70) at p. 451. See also Bukola Ruth Akinbola, "The Right to Inclusive Education in Nigeria: Meeting the Needs and Challenges of Children with Disabilities" (2010) 10 *African Human Rights Law Journal* 457 at 474, 476.

<sup>132</sup> DPDP Act 2019, sections 3-8; Law No. 8 of 2016, Articles 97 and 98.

<sup>133</sup> Richard Rieser, "Disability Equality: Confronting the Oppression of the Past," in Mike Cole (ed.) *Education, Equality and Human Rights: Issues of Gender, 'Race', Sexuality, Disability and Social Class*, 2<sup>nd</sup> ed. (Routledge, 2006) at 118.

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Similarly, in Indonesia the right of every citizen, including PWDs, to access quality education without discrimination or exclusion, is clearly stated in the 1945 Constitution of the Republic of Indonesia (as amended);<sup>134</sup> Law No. 20 of 2003 on National Education System;<sup>135</sup> and Law No. 8 of 2016.<sup>136</sup> However, according to the Indonesian Ministry of Education, Culture, Research and Technology (MoECRT), about 70% of CWDs lacked access to education.<sup>137</sup> Hidayatulloh has also lamented that Indonesians with severe disabilities (PWD-severe) only attend schools for 2.8 years on average and 4.4 years for people with moderate disabilities (PWD-moderate), which by far is lower than the required national mean years of schooling being 8 years.<sup>138</sup> Besides, special schools in Indonesia are mostly situated in urban areas which make them inaccessible to CWDs in rural areas.<sup>139</sup> The high costs of attending tertiary institutions along with lower educational rewards in the labour market for PWDs also discourage them from pursuing higher education.<sup>140</sup>

Significantly, the MoECRT has encouraged inclusive education in order to tackle concerns confronting children with impairments. This has resulted in raising inclusive schools from 3,610 to 28, 778 between the period of 2015 and 2020.<sup>141</sup> This is a major breakthrough because as at 2016, it was reported that there were only about 9,130 inclusive schools at the primary to senior secondary schools levels and 2,186 special need schools in Indonesia.<sup>142</sup> This does not mean that the difficulties connected with inclusive education have been fully settled in Indonesia. In actual fact, inclusive education in the country is still confronted with the problem of lack of qualified teachers who are trained in inclusive education. It is reputed that below 13 per cent established inclusive schools have trained educators in the field of inclusive education and are willing to educate and provide needed supports to children with disabilities. This is apart from lack of facilities and support mechanisms in the communities.<sup>143</sup>

Another associated hindrance to school enrolment in Indonesia is the problem of securing birth certificates for CWDs which is a basic requirement for school admission and for accessing other services in Indonesia.<sup>144</sup> Without birth registration, CWDs are unrecognisable by law and are “invisible in government statistics.”<sup>145</sup> Appropriate measures should therefore, be adopted by the Indonesian government for effective system of birth registration of CWDs, including opening mobile birth registration bureau and registration units in schools. Also failure of the Indonesian government to sign and ratify the Optional Protocol to the UN CRPD implies that the clauses of the treaty may not be binding on it.

## VI. CONCLUSION

Findings of the article support the view that the UN CRPD offers hopes and opportunities as binding global treaty for the protection and promotion of the rights of PWDs in Nigeria and Indonesia, more so, as it has been domesticated by both countries.<sup>146</sup> The examined national laws equally offer firm bedrock for the formulation of enhanced national policies and plans for action on disability

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<sup>134</sup> See Article 31.

<sup>135</sup> Article 5 of Law No. 20 of 2003 endorsed the rights of PWDs to education, inclusive of education which concerns their peculiar needs in relation to their interest and ability.

<sup>136</sup> Law No. 8 of 2016, Article 10.

<sup>137</sup> Sri Moertiningsih Adioetomo, Daniel Mont and Irwanto, *supra* (note 18) at p. 58.

<sup>138</sup> Muhammad Ammar Hidayatulloh, *Making Real the Rights of Persons with Disabilities in Indonesia: Issues, Policies and Future Policy Recommendations* (Australia: Proceedings of International Conference of Indonesian Students, 17-18 April 2020), pp. 64-73. Online: <[https://www.researchgate.net/publication/350104245-Making\\_Real\\_the-Rights\\_of\\_Persons-with\\_Disabilities\\_in-Indonesia\\_Issues-Policies\\_and-Future\\_Policy-Recommendations](https://www.researchgate.net/publication/350104245-Making_Real_the-Rights_of_Persons-with_Disabilities_in-Indonesia_Issues-Policies_and-Future_Policy-Recommendations)> (accessed 16 June 2022).

<sup>139</sup> *Ibidem* at p. 66.

<sup>140</sup> International Labour Organisation, *Final Report-Mapping Persons with Disabilities (PWD) in Indonesia Labour Market*. Online: <[https://www.ilo.org/jakarta/whatwedo/publicationa/WCMS\\_587669/lang--en/index.htm](https://www.ilo.org/jakarta/whatwedo/publicationa/WCMS_587669/lang--en/index.htm)> (accessed 16 June 2022).

<sup>141</sup> See, The World Bank, “Realizing Schools that Unlock the Potentials of Indonesian Children with Disabilities.” Online: <<https://www.worldbank.org/en/news/feature/2021/10/19/realizing-schools-that-unlock-the-potentials-of-indonesian-children-with-disabilities>> (accessed 23 November 2022).

<sup>142</sup> See, United Nations Committee on the Rights of Persons with Disabilities, *Initial Report Submitted by Indonesia under Article 35 of the Convention, due in 2013, supra* (note 115) at para. 145.

<sup>143</sup> The World Bank, “Realizing Schools that Unlock the Potentials of Indonesian Children with Disabilities,” *supra* (note 141).

<sup>144</sup> L. Cameron & D. C. Suarez, *supra* (note 15) at p. 14.

<sup>145</sup> General Comments No. 9 of 2006 on the Rights of Children with Disabilities, *supra* (note 64) at para. 35.

<sup>146</sup> Noor Sidharta, “Laws of Ratification of an International Treaty in Indonesian Laws Hierarchy” (2017) 3:2 Constitutional Review 171-188 at pp 178-181; Simon Butt, “The Position of International Law within the Indonesian Legal System” (2014) 28: 1 Emory International Law Review 1-28 at p. 28. See also F. A. Onomrerhinor, “A Re-Examination of the Requirement of Domestication of Treaties in Nigeria” (2016) 7 Nnamdi Azikiwe University Journal of International Law and Jurisprudence 17-25; M. O. Okome, “Domestic, Regional, and International Protection of Nigerian Women against Discrimination: Constraint and Possibilities” (2002) 6: 3 African Studies Quarterly 33-63; CFRN 1999, section 12; *The Registered Trustees of National Association of Community Health Practitioners of Nigeria & 2 Ors. v. Medical & Health Workers Union of Nigeria* (2008) All FWLR (Pt. 412) 1013 at 1056-1057 (decided by the Nigerian Supreme Court on 11 January 2008).

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rights. Undertaking such legislative task at the national and sub-national levels have assisted in reshaping the mindsets of the government, decision makers, educationists, the society and PWDs, among others, from the hitherto “charity and medical” theoretical orientations to considering PWDs as individuals who have bundle of fundamental rights and inherent dignity but are limited by the oppressive social and environmental barriers.

The Nigerian and Indonesian governments still need to take more proactive steps to actualise the full implementation of the rights of PWDs. Strict adherence to the clauses of the laws on disability would go a long way to assist in this wise. On the part of Nigeria, there is also need for a constitutional amendment to incorporate clear provisions relating to the rights and protection of PWDs as are obtainable under the Ugandan,<sup>147</sup> Rwandan<sup>148</sup> and South African<sup>149</sup> Constitutions, among others. On the other hand, the Indonesian government should promptly take steps towards signing and ratifying the Optional Protocol to the UN CRPD. This is because both administratively and considerably, the Optional Protocol constitutes a potential significant instrument for defending PWDs and for reinforcement of national capacities. Similarly, the Optional Protocol requires the Convention’s Committee to authenticate or question rulings of national courts as well as provide appropriate guidance to national courts.

### CONFLICTING INTERESTS

The authors declare that they have no conflicts of interest.

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<sup>147</sup> See the Ugandan Constitution 1995, Article 35, which states that “Persons with disabilities have a right to respect and human dignity, and the State and society shall take appropriate measures to ensure that they realise their full mental and physical potential; and Parliament shall enact laws appropriate for the protection of persons with disabilities.”

<sup>148</sup> See Rwandan Constitution 2003, Article 11.

<sup>149</sup> See South African Constitution 1996, sections 9(3)-(5).



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## The Effect of Elderly Yoga on Blood Pressure

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**ABSTRACT:** Yoga carried out 4 times in 2 weeks has proven that this therapy can relieve physical and psychological fatigue so that the sympathetic nervous system experiences a decrease in activity which can ultimately reduce blood pressure. Stimulation will increase impulses on the nervous system which will be forwarded to the central nervous system. The purpose of this study was to Analyzing the effect of yoga on blood pressure in the elderly at the Alyssa Medika Clinic, Tangerang in 2021. The research method used a quasi-experimental design with a pretest-pottest with control design. Interventions in the form of elderly yoga and exercise were given to the elderly at the Alyssa Medika Tangerang clinic for  $\pm$  25 minutes, activities carried out 4 times for 2 weeks. Pre-test blood pressure was measured before and after the intervention was carried out, at the time before the next intervention, a post-test was carried out for measuring blood pressure on the respondents of both groups. The results showed the average age of respondents in the intervention and control groups was 62 years, with a minimum age of 61 years and a maximum of 68 years. Most of the intervention and control respondents did not have hypertension. The majority of intervention and control respondents had normal BMI and moderate activity. Based on the results of data analysis with dependent t test a significance value of 0.000 was obtained. Based on this value, because the p value  $<$  0.005, it can be concluded that the elderly yoga has an effect on blood pressure. The results of the multivariate analysis showed that elderly yoga given to respondents can reduce blood pressure 4.14 times higher than that given elderly exercise. Elderly yoga given to respondents can reduce anxiety levels 11.42 higher than that given elderly exercise. It is recommended that midwives teach elderly yoga at integrated development post or in clinics every month to maintain the stability of elderly blood pressure. Keywords: Yoga, elderly, blood pressure

### I. INTRODUCTION

Hypertension is the third biggest risk factor that causes premature death, hypertension results in congestive heart failure and cerebrovascular disease. The risk factors for hypertension can be divided into 2 groups, namely the unmodified risk factors, which consist of age, gender and heredity factors and the modifiable factors, namely, obesity, stress, smoking, exercise, excessive alcohol consumption, excessive salt consumption and hyperlipedemia<sup>1</sup>. The habit of consuming saturated fat is closely related to increased body weight which is at risk of hypertension. Consumption of saturated fat also increases the risk of atherosclerosis which is associated with increased blood pressure<sup>2</sup>.

Pharmacological management of high blood pressure (BP) or hypertension in the elderly can be done such as exercise or gymnastics. Yoga practice in the elderly can stimulate the release of endorphins. Endorphins are neuropeptides produced by the body when relaxed / calm. Endorphins are produced in the brain and spinal cord. This hormone can function as a natural sedative produced by the brain which conveys a sense of comfort and increases the levels of endorphins in the body to reduce high blood pressure.

In a previous study conducted by Devi Oktavia in 2011 it was proven that after doing yoga exercises in the elderly who had hypertension, it was found that most respondents experienced a decrease in systolic blood pressure after doing yoga exercises 3 times a week. Yoga interventions are generally effective in reducing body weight, blood pressure, high glucose and cholesterol as well as mind, physical and emotional relaxation. In addition, yoga exercises can also improve blood flow in the body. So that the body becomes healthy<sup>3</sup>.

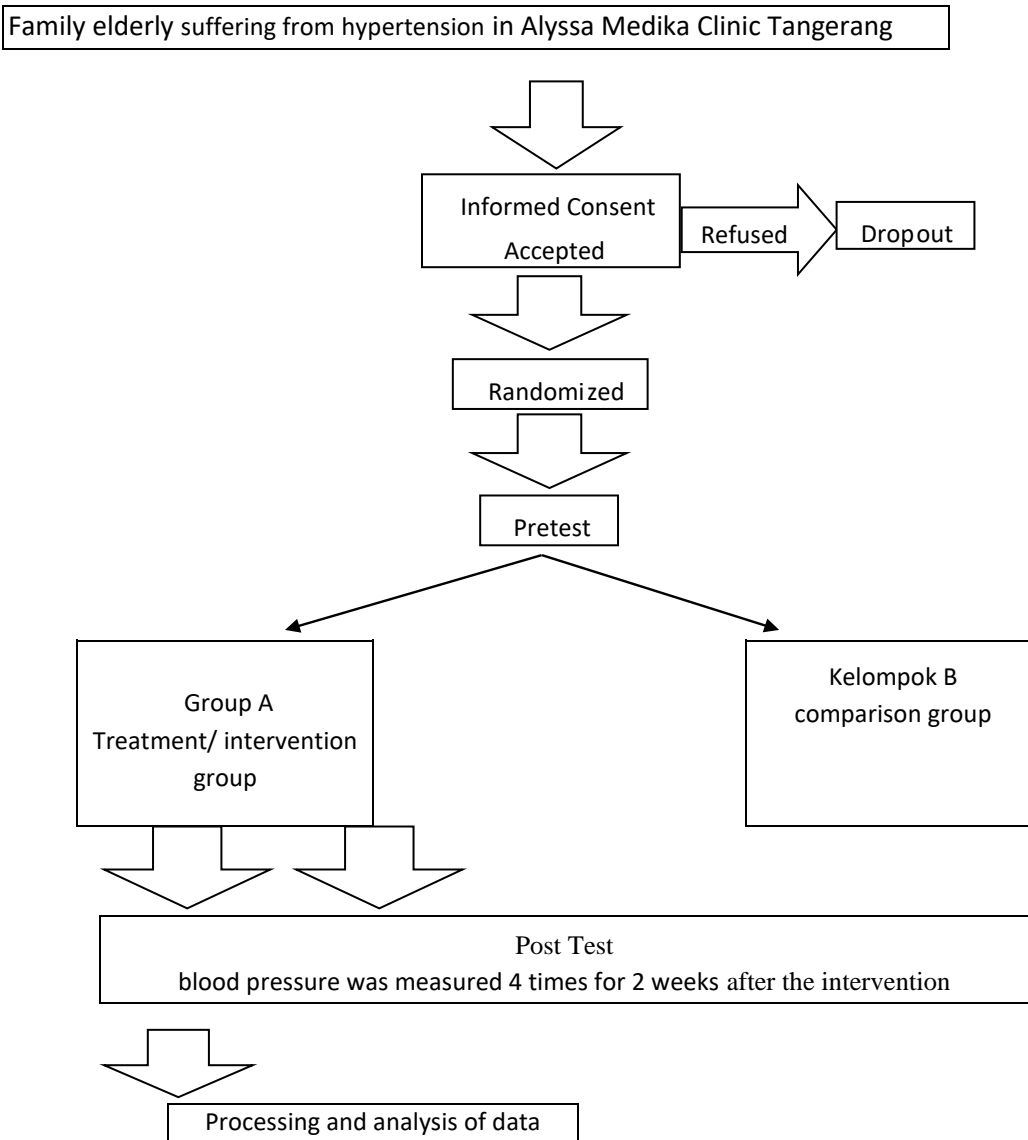
The purpose of this research are Analyzing the effect of yoga on blood pressure and differences in blood pressure of the elderly before and after treatment in the control and intervention groups at the Alyssa Medika Clinic Tangerang.

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## II. METHOD

This research method is Quasi Experimental with Pretest-Pottest With Control Design. This study aims to analyze blood pressure of the elderly before and after treatment in 2021. The population in this study were the elderly at the Alyssa Medika Clinic, South Tangerang. The inclusion criteria for this study included: Elderly aged 61-68 years, suffering from hypertension, namely systolic BP  $\geq 140$  mmHg and diastolic  $\geq 90$  mmHg, taking hypertension drugs. The exclusion criteria for this study included: Elderly who are male, have had a stroke.

The research instrument in this study for elderly yoga interventions was videos made by researchers based on existing theory. The data collection instrument used a questionnaire that was given directly by the researcher. The questionnaire used is by referring to the existing theory.



Gambar 1. Alur Penelitian

## III. RESULTS

This research is a Poltekkes Kemenkes Jakarta 1 which aims to analyze The Effect of Elderly Yoga on Blood Pressure. This research was conducted by taking data from Alyssa Medika Clinic Tangerang who were given treatment in elderly for the intervention group yoga and the control group and who was given gymnastics.

Table 1. Univariate analysis of respondent characteristics based on age, age, genetics, BMI and physical activity.

Age elderly	62.82	61	68	2.31	33	62.91	61	68	2.21	3 (years)
Variable	Intervention Group					Control Group				

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	Frequency (n =3 3)	%	Frequency (n=33)	%
Genetics:				
No	23	69.7	21	63.6
Yes	10	30.3	12	36.4
BMI:				
Normal	18	54.5	19	57.6
Less	4	12.1	3	9.1
More	4	12.1	5	15.2
Obesity	7	21.2	6	18.2
Physical Activity:				
Low	5	15.2	4	12.1
Moderate	21	63.6	20	60.6
High	7	21.2	9	27.3

In table 1, it can be concluded that the average age of respondents in the intervention and control groups was 62 years, with a minimum age of 61 years and a maximum of 68 years. Most of the intervention and control respondents did not have hypertension. The majority of intervention and control respondents had normal BMI and moderate activity.

**Table 2. Bivariate analysis of correlation genetic, BMI and physical activity with elderly blood pressure**

Variable	Blood Pressure (Hypertension)	P Value Light	Moderate	Heavy	Very Heavy
Genetics:					
• No	12 (18.9)	7 (10.6)	5 (7,6)	3 (4,5)	0.001
• Yes BMI:	7 (10.6)	18 (27.3)	8 (12.1)	6 (9.1)	
Physical activity :					
• Normal	7 (10.6)	3 (4.5)	2 (3.0)	1 (1.5)	0.002
• Less	4 (6.1)	2 (3.0)	(1.5)	(1.5)	
• More	8 (12.1)	6 (9.1)	(3.0)	(3.0)	
• Obesity	11 (16.7)	8 (12.1)	3 (7.6)	5 (7.6)	
Physical activity :					
• Low	6 (9.1)	11 (16.7)	8 (12.1)	5 (7.6)	0.001
• Moderate	8 (12.1)	5 (7.6)	4 (6.1)	1 (1.5)	
• High	5 (7.6)	7 (10.6)	3 (4.5)	3 (4.5)	
<b>Variable</b>	<b>Mean</b>	<b>Min-Max</b>	<b>SD</b>	<b>P Value</b>	
Age	62.86	61-68	2.246	0,002	

Based on table 2 above, it can be seen that the results of the analysis have a significant correlation between genetics, BMI, physical activity and elderly blood pressure ( $p$  value  $<0.05$ ).

**Table 3. Bivariate analysis of the differences in elderly blood pressure pre and post intervention in both groups**

Variable	Group	Mean	SD	95% CI	t	P value*
Systolic Blood Pressure	Intervention group					
	Before	140.09	0.384	17.707-23.565	14.351	<b>0.000</b>
	After	119.45	8.482			
	Difference	20.64				
	Control group					
	Before	159.15	17.128	21.733-32.692	10.166	<b>0.000</b>
After	131.94	11.782				
Difference	27.21					
Diastolic Blood Pressure	Intervention group					
	Before	90.00	6.213	9.272-13.455	11.066	<b>0.000</b>
	After	78.64	5.899			

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Difference	11.36				
Control group					
Before	98.97	7.728	12.812-17.854	12.390	<b>0.000</b>
After	83.64	6.284			
Difference	15.33				

From table 3, it is known that there is significant differences in systolic blood pressure and diastolic blood pressure in the intervention and control groups before and after the intervention (p value = 0.000).

**Table 4. Multivariate Analysis of the Influence of yoga on blood pressure in the elderly**

Variable	B	SE	Wald	p-value*	Exp (B)	95%CI
<b>Tekanan Darah</b>						
Yoga and gymnastics	1.421	0.645	4.863	<b>0.027</b>	4.14	1.171-14.653
Konstanta	-1.981	0.533	13.795	0.000	0.138	

From table 5 above, showed that elderly yoga and acupressure given to respondents could reduce blood pressure 4.14 times higher than those given yoga exercises. Elderly yoga and acupressure given to respondents can reduce anxiety levels 11.42 higher than gymnastics.

## IV. DISCUSSION

Based on the results of this study, the average age of respondents in the intervention and control groups was 62 years, with a minimum age of 61 years and a maximum of 68 years. Most of the intervention and control respondents did not have hypertension. The majority of intervention and control respondents had normal BMI and moderate activity. There is a significant relationship between genetics, BMI and physical activity with elderly blood pressure (p value <0.05).

In the elderly stage, individuals experience many setbacks in the various functions and abilities they once had. Changes in physical and mental appearance, especially the decline in the various functions and abilities they once had. Elderly is the final stage of the human life cycle, is part of a life process that cannot be avoided and will be experienced by every individual<sup>4</sup>.

Based on the results of the analysis performed, it showed that there were significant differences in systolic and diastolic blood pressure before and after the intervention of elderly yoga and acupressure and elderly exercise (p value = 0.000). The results of the analysis also showed that there were differences in blood pressure between the intervention group and the control group after the intervention of elderly yoga and acupressure and elderly gymnastics with a p value <0.05.

If hypertension is not cured immediately, in the long run it can cause damage to the arteries in the body to the organs that get blood supply from it, such as the heart, brain and kidneys<sup>5</sup>. There are two factors that cause hypertension, namely essential hypertension or primary hypertension, 90% of cases of hypertension are essential hypertension which is defined as an increase in blood pressure with no known cause (idiopathic). Several factors are thought to be associated with the development of essential hypertension, including genetics, gender, age, diet, body weight, and lifestyle. The second cause is secondary hypertension. cases of secondary hypertension as much as 10% of all cases of hypertension. Secondary hypertension is an increase in blood pressure due to a preexisting physical condition such as kidney disease or thyroid disorder.

The elderly are at risk for suffering from hypertension, this is caused by various factors such as a decrease in the anatomical and physiological structure of the cardiovascular system due to degenerative processes in the elderly. The high hypertension is in line with increasing age which is caused by structural changes in the large blood vessels, so that the blood vessels become narrower and the blood vessel walls become stiff, as a result is an increase in systolic blood pressure<sup>6</sup>. Physical activity (exercise) can improve the blood fat profile, namely lowering total cholesterol, LDL and triglycerides and even more importantly, exercise can improve HDL. The right dose of exercise can reduce hypertension, obesity, and diabetes mellitus. Yoga exercise is the activity of a person concentrating the whole mind to control the five senses and the body as a whole. This causes a person to be able to control, regulate, and concentrate to harmonize body, soul, and mind. In addition, yoga exercises can also expedite the flow of oxygen in the body(7). Yoga practice in the elderly can stimulate the release of endorphins. Endorphins are neuropeptides produced by the body when relaxed / calm. Endorphins are produced in the brain and spinal cord. This hormone can function as a natural sedative produced by the brain which conveys a sense of comfort and increases the levels of endorphins in the body to reduce high blood pressure.

According to the journal put forward by Hagins, et.al (2013) by combining 3 elements of yoga practice (postures, meditation, and breathing) involving 18 adults with hypertension, it can reduce systolic blood pressure by 7 mmHg, and diastolic pressure by 5 mmHg. In this study, the exercise that was carried out was yoga which included sitting movements in a yoga sitting

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posture to practice breathing (training the lungs and calming the heart, as well as a mind concentration technique), followed by doing light asanas as a warm-up, followed by Savasana (Corpse Posture) and ends with returning to the Sitting Posture to silence the mind (Meditation). The decrease in blood pressure is caused by relaxation in yoga, the principle is to position the body in a calm condition, so that it will experience relaxation and in the end will experience a state of balance, thus relaxation in yoga is centered on breathing which will increase oxygen circulation to muscles, so that the muscles will relax, blood pressure will decrease<sup>3</sup>. The results of Pangaribuan's research (2016) explain that yoga exercises are effective in reducing blood pressure in the elderly<sup>8</sup>.

Based on the results of multivariate analysis, it showed that elderly yoga given to respondents could reduce blood pressure 4.14 times higher than physical activity. The decrease in blood pressure is caused by relaxation in yoga, the principle is to position the body in a calm condition, so that it will experience relaxation and will eventually experience a state of balance, thus relaxation in yoga focuses on breathing which will increase oxygen circulation to the muscles, so that the muscles will relax. relaxes, blood pressure will decrease<sup>9</sup>. This is in accordance with the journal put forward by Cramer., et al., (2014) that regular yoga practice, namely for 8 weeks, can significantly affect changes in blood pressure in people with hypertension<sup>10</sup>.

### V. CONCLUSION

The conclusion from this study was that the average age of the respondents was 62 years, most of the intervention and control respondents did not have hypertension, had normal BMI and moderate activity and suffered from mild hypertension, there was a significant difference between blood pressure and yoga for the elderly, there was an effect of yoga on lowering blood pressure blood in the elderly.

Suggestions from this study are that it is expected that the elderly routinely screen for non-communicable diseases, especially measuring blood pressure every month and it is hoped that midwives teach elderly yoga exercises at integrated service posts or in clinics every month in order to maintain the stability of the elderly's blood pressure.

### VI. ACKNOWLEDGMENT

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## The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Profitability in Banking Companies on the Indonesia Stock Exchange



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**ABSTRACT:** Banking is a financial institution that has a role in the financial system in Indonesia. The existence of the banking sector has a fairly important role, where in public life most of it involves services from the banking sector. The main objective of bank operations is to achieve maximum profitability. The profitability ratio is the ratio to assess the company's ability to make a profit. This study aims to examine the effect of Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), and Loan To Deposit Ratio (LDR) on Profitability in Banking Companies Registered on the Indonesia Stock Exchange (IDX) for the 2018-2020 period.

The population used in this study were 43 banking companies listed on the Indonesia Stock Exchange (IDX). The sampling technique used purposive sampling method and obtained as many as 35 samples of companies with 3 years of observation, then the number of samples under observation was 105. This type of research is a quantitative study using multiple linear regression analysis methods.

The results of the study show that the Capital Adequacy Ratio (CAR) has a positive and significant effect on Profitability in Banking Companies listed on the Indonesia Stock Exchange (IDX), Non Performing Loans (NPL) has a negative and significant effect on Profitability in Banking Companies listed on the Indonesia Stock Exchange (IDX), and Loan To Deposit Ratio (LDR) have a positive and significant effect on Profitability in Banking Companies listed on the Indonesia Stock Exchange (IDX). Suggestions for further research are expected to add other variables that affect the level of banking profits such as external factors (inflation, interest rates, and exchange rates).

**KEYWORDS:** Capital Adequacy Ratio, Non-Performing Loans, Loan To Deposit Ratio, Profitability.

### I. INTRODUCTION

Financial institutions in carrying out their business provide trust and services, each bank tries to attract as many new customers or investors as possible, increase its funds and also expand its credit and services. So that banking has a very strategic role. However, the health and stability of the banking system is very vital. Where a healthy bank, both individually and as a whole as a system, is a necessity for an economy that wants to grow and develop properly. However, the disruption of the banking intermediary function following the banking crisis in Indonesia has resulted in sluggish investment activity and economic growth.

The main objective of bank operations is to achieve maximum profitability. The profitability ratio is the ratio to assess the company's ability to make a profit. This ratio also provides a measure of the effectiveness of a company's management. The point is that the use of this ratio shows the efficiency of the company (Kasmir, 2018: 126). Based on (Almunawwaroh, 2018) profitability is a comparison made to assess the company's expertise to determine profit.

The profitability measure used is Return On Assets (ROA). Return on Assets (ROA) focuses on the company's ability to generate income in the company's operations. ROA is the ratio between profit before tax to total assets. The greater the ROA, the better the financial performance, because the rate of return is greater. If ROA increases, it means that the company's profitability increases, so that the final impact is an increase in the profitability enjoyed by shareholders. The factors that influence profitability in this study are the Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Loan to Deposit Ratio (LDR).

The first factor that can affect profitability is the Capital Adequacy Ratio (CAR). According to Avrita and Pangestuti (2016), CAR is a capital ratio that indicates a bank's ability to provide funds to accommodate the risk of loss of funds caused by bank operations and the company's business development needs. Regarding the Capital Adequacy Ratio (CAR) with a value of 8%, it means that the result is 8% of the RWA, or it could be the other way around, the result of the RWA is 12.5 times the capital

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available or owned by the related bank. (Hasanah, et al 2019). Various previous studies related to CAR showed several results. These studies were conducted by several researchers, namely, among other things, research conducted by Korri and Baskara (2019) states that CAR has no effect on profitability. However, it has different results from the research conducted by Paramita and Dana (2019) which states that CAR has a positive and significant effect on profitability.

The second factor that affects profitability is Non Performing Loans (NPL). According to Kasmir (2018: 127), the notion of Non-Performing Loan (NPL) is credit in which there are obstacles caused by 2 elements, namely from the banking side in analyzing and from the customer who intentionally or unintentionally does not make payments in his obligations. Non Performing Loan (NPL) is the ratio of bad loans to total loans and down payments. Based on PBI No. 17/11/PBI/2015 dated 25 June 2015, Bank Indonesia has set a maximum Non Performing Loan (NPL) standard of 5%, if it exceeds it it will affect the rating of the soundness of the bank concerned, which will reduce the value it gets. According to previous research conducted by Korri and Baskara (2019) stated that NPL had a negative and significant effect on profitability. Meanwhile, research conducted by Praja and Hartono (2019) states that Non-Performing Loans (NPL) have an effect on profitability.

The third factor that affects profitability, namely the Loan to Deposit Ratio (LDR), is one of the assessments of the soundness of a bank from the aspect of liquidity. LDR is the ability of a bank to provide funds to its debtors with capital owned by the bank and funds that can be collected by the public (Sudarmawanti and Pramono, 2017). Based on Bank Indonesia Regulation Number 15/7/PBI/2013 the LDR standard is 78% -92%. If the LDR ratio is below or less than 78%, it means that the bank is unable to properly channel all the funds that have been raised. If the LDR ratio is above or more than 92%, then the total credit disbursed by the bank has exceeded the funds raised (Putri and Dewi, 2017). According to previous research conducted by Korri and Baskara (2019) stated that LDR has a positive and significant effect on profitability. Meanwhile, research conducted by Praja and Hartono (2019) states that LDR has no effect on profitability.

This research was conducted on banking companies on the Indonesia Stock Exchange because banking companies that offer shares on the Indonesia Stock Exchange where banking companies are one of the sectors that are expected to have quite bright prospects in the future, because currently the daily activities of Indonesian people cannot be separated from banking services. . The financial performance of banking companies can be seen from the financial reports of companies listed on the Indonesia Stock Exchange. The following is data on the development of the financial performance of banking companies for 2018-2020 seen from table 1.1 as follows:

**Table 1.1. Development of Financial Performance of Banking Companies on the Indonesia Stock Exchange 2018-2020**

Year	Profitability (ROA)	Capital Adequacy Ratio (CAR)	Non Performing Loans (NPL)	Loan to Deposit Ratio (LDR)
2018	2.55%	22.97%	2.37%	94.78%
2019	2.47%	23.40%	2.53%	94.43%
2020	1.59%	23.89%	3.06%	82.54%

Source: [www.ojk.co.id](http://www.ojk.co.id) (data processed)

Based on table 1.1 it shows that Profitability proxied by Return On Assets (ROA) has decreased from 2018-2020. In 2018 the data was 2.55%, decreased in 2019 to 2.47%, and decreased again in 2020 to 1.59%. The Capital Adequacy Ratio (CAR) has increased from 2018-2020. In 2018 it was 22.97%, increasing in 2019 to 23.40%, and in 2020 it increased again by 23.89%. Non-Performing Loans (NPL) have also increased from 2018-2020. In 2018 it was 2.37%, in 2019 it increased to 2.53%, and in 2020 it increased by 3.06%. The Loan to Deposit Ratio (LDR) has decreased from 2018-2020. In 2018 it was 94.78%, decreased in 2019 to 94.43%, and decreased again in 2020 to 82.54%.

Based on the description above, the authors are interested in conducting further research by taking the title "The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Loan To Deposit Ratio (LDR) on Profitability in Banking Companies Listed on the Stock Exchange" Indonesia Period 2018 – 2020"

## II. LITERATURE REVIEW

### Signal Theory (Signalling Theory)

Signaling theory or signaling theory explains how companies should be able to provide signals to interested parties such as investors regarding information data or company statements which can be in the form of company policy information, financial report data, and other information related to the company. In signal theory, there is the term information asymmetry which was put forward by George Akerlof in one of his works entitled *The Markets for Lemons* (1970). Information asymmetry can occur in

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capital markets and money markets if investors get more company information data than other investors. This can happen because investors have different abilities in understanding company information (Muhammad and Biyantoro, 2019).

## Profitability

According to Wicaksono (2016) the potential for success in the company is reflected in the company's financial statements in the form of profitability. Profitability of a company is not only seen from increasing the amount of profit and total assets each year, but profitability is seen from how the company manages and makes all existing assets efficient for use in its operational activities in order to obtain maximum profit (Putri and Dewi, 2017). Profitability is the bank's ability to earn profits from its operations. The profitability measure used is Return on Assets (ROA). If ROA increases, it means that the profit in a company increases which has an impact on increasing the profitability itself (Kasmir, 2018: 202).

## Capital Adequacy Ratio (CAR)

According to Warsha and Mustanda (2016) Capital Adequacy Ratio (CAR) or what is commonly referred to as the capital adequacy ratio is a ratio that reflects a bank's ability to cover the risk of loss from the activities it carries out and the bank's ability to fund its operational activities. All banks in Indonesia are required to provide a minimum capital of 8% of RWA. The greater the CAR, the greater the bank's profit. In other words, the smaller the risk of a bank, the greater the profit the bank will get.

## Non Performing Loans(NPL)

According to Kasmir (2018: 127), the notion of Non-Performing Loan (NPL) is credit in which there are obstacles caused by 2 elements, namely from the banking side in analyzing and from the customer who intentionally or unintentionally does not make payments in his obligations. Based on PBI No. 17/11/PBI/2015 dated 25 June 2015, Bank Indonesia has set a maximum Non Performing Loan (NPL) standard of 5%, if it exceeds it it will affect the rating of the soundness of the bank concerned, which will reduce the value it gets.

## Loan to Deposit Ratio (LDR)

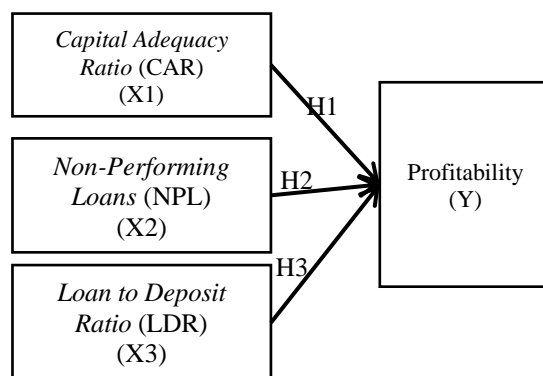
The distribution of credit to a bank can be seen from the value of the Loan to Deposit Ratio (Utami, 2016). According to Kasmir (2018: 16), the Loan to Deposit Ratio (LDR) is a ratio that aims to measure the composition of the amount of credit provided compared to the amount of public funds and own capital used. This ratio is also used to assess the liquidity of a bank by dividing the amount of credit extended by the bank to third party funds.

### III. FRAMEWORK FOR THINKING AND HYPOTHESES

#### Framework of Thinking

The framework of thinking in this study is as follows:

Figure 3.1. Framework of thinking



Source: Researchers' thoughts (2022)

#### HYPOTHESIS

H1: *Capital Adequacy Ratio* has a positive effect on Profitability at Commercial Banks Listed on the Indonesia Stock Exchange.

H2: *Non-Performing Loans* has a negative effect on Profitability at Commercial Banks Listed on the Indonesia Stock Exchange.

H3: *Loan to Deposit Ratio* has a positive effect on Profitability at Commercial Banks Listed on the Indonesia Stock Exchange.

### IV. RESEARCH METHODS

#### Research Sites

This research was conducted at Commercial Banks listed on the Indonesia Stock Exchange. The data used in this study were obtained through [www.idx.co.id](http://www.idx.co.id).

# The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Profitability in Banking Companies on the Indonesia Stock Exchange

## Object of research

This research takes objects in the form of financial aspects at Commercial Banks listed on the Indonesia Stock Exchange during the 2018 – 2020 period, specifically regarding the Effects of Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), and Loan to Deposit Ratio (LDR) on Profitability

## Population and Sample

The population in this study are all Commercial Banks listed on the Indonesia Stock Exchange for the period 2018 – 2020. The number of Commercial Banks during this study period were 43 Commercial Banks.

The sampling technique used in this study is a purposive sampling technique, namely a sampling technique with certain considerations, where sample members will be selected in such a way that the sample formed can represent the characteristics of the population (Sugiyono, 2013: 120). Based on the criteria, the data obtained from the Indonesia Stock Exchange contained 43 Public Banks listed on the Indonesia Stock Exchange, only 35 Commercial Banks met the criteria proposed by the researcher.

## Data Analysis Technique

The data analysis technique in this study consisted of descriptive analysis, classical assumption test (normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test), multiple linear regression analysis, partial test (t test), simultaneous significant test (F test). , and Test the Coefficient of Determination ( $R^2$ ).

## V. RESULTS AND DISCUSSION

### Assumption Test Classic

#### 1. Normality test

Table 5.1. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residuals
N		105
Normal Parameters, b	Means	.0000000
	std. Deviation	.55852762
Most Extreme Differences	absolute	.147
	Positive	.093
	Negative	-.147
Test Statistics		.147
asympt. Sig. (2-tailed)		.055c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Processed data, 2022

Based on the results of the normality test in table 5.1, it can be explained that the normality test results in the calculation results using the Kolmogorov-Smirnov Test can be explained that the test results show the value of *Unstandardized Residuals* in the Asymp column. Sig. (2-tailed) which is equal to 0.055 greater than 0.05 so that the data used in this study can be said residual data is normally distributed.

#### 2. Multicollinearity Test

Table 5.2. Multicollinearity Test Results

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		tolerance	VIF
1	(Constant)		
	CAR	.245	4,075
	NPLs	.979	1,022
	LDR	.243	4,114
a. Dependent Variable: ROA			

Source: Processed data, 2022

## The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Profitability in Banking Companies on the Indonesia Stock Exchange

Based on the results of the multicollinearity test in table 5.2 it is known that the tolerance value that can be obtained from each variable is greater than 0.10. The same result seen from the value (VIF) in this study also fulfills other requirements from this multicollinearity test that the value of VIF must be <10.00. Thus, it can be concluded that there are no symptoms of multicollinearity between the independent variables in this study.

### Autocorrelation Test

**Table 5.3. Autocorrelation Test Results**

R	R Square	justed R Square	std. Error of the Estimate	Durbin- Watson
.908a	.824	.819	.56676	1,754

Source: Processed data, 2022

The results of the autocorrelation test using the Durbin-Watson Test (DW-test) in table 5.4 obtained a value of 1.754 with the number of independent variables 3 and N = 105, then the value of  $dU = 1.6237$  and  $dL = 1.7411$ , so:

$$du < dw < 4-du$$

$$1.7411 < 1.754 < 4-1.7411$$

$$1.7411 < 1.754 < 2.2589$$

Based on the calculation results above, it shows that the Durbin-Watson value (d-count) is 1.938 and the location is at  $du < d < 4-du$  ( $1.7411 < 1.754 < 2.2589$ ), it can be concluded that the data does not have autocorrelation

### Heteroscedasticity Test

**Table 5.4. Heteroscedasticity Test Results**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	std. Error	Betas		
1	(Constant)	.230	.068		1,378	.104
	CAR	.027	.005	.685	.838	.488
	NPLs	.015	.002	.622	.918	.319
	LDR	-.008	.001	-.763	-.956	.379

a. Dependent Variable: ABSRESS

Source: Processed data, 2022

The results of the heteroscedasticity test using the Glejser test in table 5.5 show that the Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Loan to Deposit Ratio (LDR) each have a significance value greater than 0.05, so it can be it was concluded that there were no symptoms of heteroscedasticity.

### Multiple Linear Regression Analysis

**Table 5.5. Recapitulation of Multiple Linear Regression Test Results**

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	std. error	Betas		
(Constant)	-1,595	.150		-10,623	.000
CAR	.068	.011	.507	6018	.000
NPLs	-.014	.003	-.178	-4,229	.000
LDR	.015	.003	.401	4,737	.000
R	0.908				
R Square	0.824				
Adjusted R Square	0.819				
F	157,802				
Sig.	0.000				

Source: Processed data, 2022

Based on the values in table 5.5, the multiple linear regression equation in this study becomes:

$$Y = -1.595\alpha + 0.068CAR - 0.014NPLs + 0.015LDR + e$$

## The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Profitability in Banking Companies on the Indonesia Stock Exchange

- $\alpha = -1.595$ ; this value means that if the Capital Adequacy Ratio, Non-Performing Loans and Loan to Deposit Ratio is zero, then the profitability value is -1.595.
- $\beta_1 = 0.068$ ; means that every time there is an increase of 1 unit in the Capital Adequacy Ratio, there will be an increase in profitability of 0.068. Assuming other variables remain (other variables equal to zero).
- $\beta_2 = -0.014$ ; means that every time there is an increase of 1 unit in Non-Performing Loans, the value of profitability will decrease by 0.014. Assuming other variables remain (other variables equal to zero).
- $\beta_3 = 0.015$ ; means that every time there is an increase of 1 unit in the Loan to Deposit Ratio, there will be an increase in profitability of 0.015. Assuming other variables remain (other variables equal to zero).

### t test

The results of the t-test for the effect of Capital Adequacy Ratio, Non-Performing Loans and Loan to Deposit Ratio on profitability in table 5.5 show that:

- The effect of the Capital Adequacy Ratio on profitability shows a tcount value of 6.018 and a significant value of  $0.000 < 0.05$ , it can be concluded that the Capital Adequacy Ratio has a positive and significant effect on profitability, so the first hypothesis (H1) is accepted.
- The effect of non-performing loans on profitability shows a tcount of -4.229 and a significant value of  $0.000 < 0.05$ , so it can be concluded that non-performing loans have a negative and significant effect on profitability, so the second hypothesis (H2) is accepted.
- The effect of the Loan to Deposit Ratio on profitability shows a tcount value of 4.737 and a significant value of  $0.000 > 0.05$ , it can be concluded that the Loan to Deposit Ratio has a positive and significant effect on profitability, so the third hypothesis (H3) is accepted.

### F test

The F statistical test basically shows whether all the independent variables or independent variables included in the model have a joint effect on the dependent variable or the dependent variable.

The results of the F test in table 5.5 show a calculated F value of 157.802 with a significant value of  $0.000 < 0.05$ . This value means that the Capital Adequacy Ratio, Non-Performing Loans and Loan to Deposit Ratio simultaneously influence profitability.

### Determination Analysis (R<sup>2</sup>)

The coefficient of determination (R<sup>2</sup>) essentially measures how far the model's ability to explain the variation in the dependent variable. Table 5.5 shows that the value of R<sup>2</sup> is 0.824. This means that 82.4% of profitability is influenced by the Capital Adequacy Ratio, Non-Performing Loans and Loan to Deposit Ratio, while 18.6% is influenced by other factors outside this study. This value is also close to one, meaning that the variables Capital Adequacy Ratio, Non-Performing Loans and Loan to Deposit Ratio provide almost all the information needed for variations in profitability.

## RESEARCH DISCUSSION

### 1) Effect of Capital Adequacy Ratio (CAR) on Profitability

Based on the results of the partial test (t test) it can be seen that the Capital Adequacy Ratio (CAR) variable has a tcount of 6.018 with a significant level of 0.000. The significant value of CAR is lower than the expected significant value  $\alpha = (0.05)$ , so that shows that *Capital Adequacy Ratio* (CAR) positive and significant effect on profitability, so the first hypothesis (H1) is accepted. That is, the higher the CAR achieved by a commercial bank listed on the Indonesia Stock Exchange, the better the bank's performance in protecting its customers. This can increase customer trust in banks which in turn can increase company profits. The higher the CAR, the higher the ROA because the bank's profits will be higher, so the bank's management needs to increase its capital, because with sufficient capital, banks can expand their business safely.

This is supported by research from Erma Setiawati, et al. (2017) and Praja and Hartono (2019) state that CAR has an effect on Profitability. The same results were obtained by Putri and Dewi (2017), Ambarawati and Abudanti (2018), Paramita and Dana (2019), Aprilia Suciety, et al (2019), Rivandi and Gusmariza (2021), Izza and Utomo (2021), and Sihite and Wirman (2021) obtained the result that CAR has a positive effect on Profitability.

### 2) The Effect of Non Performing Loans (NPL) on Profitability

Based on the results of the partial test (t test) it can be seen that the Non Performing Loan (NPL) variable has a tcount of -4,229 with a significant level of 0,000. The significant value of NPL is lower than the expected significant value  $\alpha = (0.05)$ , so that shows



## **The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Profitability in Banking Companies on the Indonesia Stock Exchange**

that Non-Performing Loans (NPL) have a negative and significant effect on Profitability, so the second hypothesis (H2) is accepted. This result means that the higher the NPL ratio of a commercial bank listed on the Indonesia Stock Exchange, the higher the bank's credit risk, resulting in a bank's income originating from loan interest not being optimal and decreasing profitability. This ratio shows the number of non-performing loans. According to Dewi, et al (2015) credit risk proxied by NPL is a bank that is capable of managing problem loans experienced by banks. There are Bank Indonesia criteria that determine the NPL so that the company's value is still said to be good, namely below 5% (Arifianto, 2016).

The results of this study are supported by research conducted by Setiawan and Diansyah (2018), Ambarawati and Abudanti (2018), Korri and Baskara (2019), Aprilia Suciaty, et al (2019), and Wiranthie and Putranto (2022) showing that non-performing loans have an effect on significant negative effect on profitability.

### **3) The Effect of Loan to Deposit Ratio (LDR) on Profitability**

Based on the results of the partial test (t test) it can be seen that the Loan to Deposit Ratio (LDR) variable has a tcount of 4,737 with a significant level of 0,000. The significant value of LDR is lower than the expected significant value  $\alpha = (0.05)$ , so that shows that the Loan to Deposit Ratio has a positive and significant effect on Profitability, so the third hypothesis (H3) is accepted. This means that the higher the LDR, the profit earned by a commercial bank listed on the Indonesia Stock Exchange will increase, with the assumption that the bank is able to distribute credit effectively so that it is expected that the number of bad loans will be low, so that it will have an impact on increasing profitability (ROA). LDR is a ratio that measures a bank's ability to issue credit from third party funds accumulated at the bank. LDR provides an indication of the amount of third party funds disbursed in the form of credit (Pratama, Mubaroh, and Afriansyah, 2021).

This is supported by research from Putri and Dewi (2017), Ambarawati and Abudanti (2018), and Paramita and Dana (2019) showing that the Loan to Deposit Ratio has a positive and significant effect on profitability.

## **VI. CONCLUSIONS AND SUGGESTIONS**

### **Conclusion**

- 1) The effect of Capital Adequacy Ratio (CAR) on Profitability shows that Capital Adequacy Ratio (CAR) has a positive and significant effect on Profitability in banking companies listed on the Indonesia Stock Exchange. Thus it is stated that the higher the CAR achieved by a commercial bank listed on the Indonesia Stock Exchange, the better the bank's performance in protecting its customers.
- 2) The effect of Non-Performing Loans (NPL) on Profitability shows that Non-Performing Loans (NPL) have a negative and significant effect on Profitability Profitability in banking companies listed on the Indonesia Stock Exchange. This result means that the higher the NPL ratio of a commercial bank listed on the Indonesia Stock Exchange, the higher the bank's credit risk, resulting in a bank's income originating from loan interest not being optimal and decreasing profitability.
- 3) The effect of the Loan to Deposit Ratio (LDR) on Profitability shows that the Loan to Deposit Ratio (LDR) has a positive and significant effect on Profitability Profitability in banking companies listed on the Indonesia Stock Exchange. This means that the higher the LDR, the profit earned by a commercial bank listed on the Indonesia Stock Exchange will increase, with the assumption that the bank is able to extend its credit effectively so that it is expected that the number of bad loans will be low, so that it will have an impact on increasing profitability (ROA).

### **Limitations**

This research has limitations which can also be a direction for further research. Based on the results of the research and discussion, the limitations in this study can be stated as follows:

- 1) This research only takes a period of 3 years, namely from 2018 to 2020, so the data taken may not reflect the company's condition in the long term.
- 2) This research only examines the Capital Adequacy Ratio, Non-Performing Loans, and the Loan to Deposit Ratio as the independent variable in explaining Profitability as the dependent variable.

### **SUGGESTION**

- 1) The company optimizes the Capital Adequacy Ratio (CAR), because CAR is the main proxy for bank capital, banks with high capital are considered relatively safer than those with low capital.
- 2) Companies must also pay attention to and maintain Non-Performing Loans (NPL) so that they are always below 5%, so that they can provide a positive signal to investors regarding the soundness of a good bank.

## The Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Profitability in Banking Companies on the Indonesia Stock Exchange

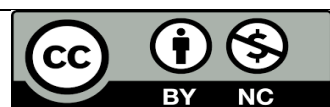
- 3) *Loan to Deposit Ratio*(LDR) should also be maximized, so that the bank will be considered capable of managing funds collected from customers effectively.
- 4) Future research is expected to develop research sites to examine other places and is also expected to expand the number of research samples and add other variables that affect the level of banking profits such as external factors (inflation, interest rates and exchange rates).

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## Analysis of Factors that Cause Career Development and Performance in the Health World



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**ABSTRACT:** The research here will examine the effect of work motivation, work discipline and career development on employee performance. This study is a literature review study of 37 articles. The results show that Work motivation and work discipline have a positive and significant effect on career development. Work motivation and work discipline have a positive and significant effect on employee performance. Career development has a positive and significant effect on employee performance.

**KEYWORDS:** work motivation, work discipline, career development, employee performance.

### INTRODUCTION

One of the national problems faced by the Indonesian people today is the handling of the low quality of human resources. Human resources are the most important asset in an organization, because they are the human resources that control the organization and maintain and develop the organization in facing the demands of the times. Therefore human resources must be considered, maintained and developed. The formation of reliable human resources within the organization begins with the process of hiring employees (recruitment), selecting, classifying, placing employees according to the abilities, expertise and skills of these employees.

According to Torang (2013), performance is the quantity and or quality of the work of individuals or groups within the organization in carrying out basic tasks and functions that are guided by norms, standard operating procedures, criteria and measures that have been set or that apply in the organization. Meanwhile, Hasibun (2010), stated that performance is a result of work achieved by someone in carrying out the tasks assigned to him based on skill, experience, sincerity and time. Having good performance will create harmonious relationships, a very pleasant working atmosphere in creating goals.

Improving good employee performance will bring progress to an organization or government agency to be able to achieve organizational goals, therefore various efforts are made to improve performance. Employees are the most serious thing, because success in achieving goals and the survival of an organization or government agency depends on the human resources that exist within an organization or government agency. Good employee performance is expected by an organization or government agency. Because more and more employees have high performance, the productivity of an organization as a whole will increase so that goals can be achieved and realized. Mangkunegaran, (2012) performance can be influenced by several factors, namely internal factors and external factors. Internal factors are factors that come from within the employee. While external factors are factors supporting employees in work that come from the environment, for example career development.

According to Mangkunegara, (2012) Career development is an employee activity that helps employees plan their future careers in the organization so that the organization and the employees concerned can develop themselves to the fullest. Individuals who want their careers to develop must work as much as possible, namely by showing good performance. Sunyoto (2012: 164), leaders as parties who facilitate employee career development should be able to provide clear career development paths in order to achieve organizational goals and employee career development activities are very important in efforts to improve employee performance. In a company, a leader is not merely an object in achieving goals, but also a subject or actor.

Based on the explanation above, it is in accordance with the problems that occur at the Tembuku I Health Center, Bangli Regency, namely career development that hinders performance improvement. Therefore the authors are interested in conducting research with the title: "analysis of factors that influence career development and performance in the world of health".

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### LITERATURE STUDY

*Grand Theory*The theory used for this study uses two theories. The first theory is Abraham Maslow's Hierarchy of Needs Theory, and the second theory is Goal Setting Theory. This theory underlies the variables of this study, namely Work Motivation, Work Discipline, Career Development, and Employee Performance. Performance is the result of work that is produced both in terms of quality and quantity of work and can be accounted for in accordance with its role in the organization or company, and is accompanied by abilities, skills and skills in completing work within a certain period. The success of an employee at work will be known if the company implements a performance appraisal system (Baroroh, 2012). Caroline & Susan (2014) stated that a leader who expects to achieve maximum performance in his organization must pay attention to the factors that affect the performance of the employees themselves, one of which is career development.

### RESEARCH METHODS

The research design is a flow of research activities to provide solutions using a qualitative approach with a literature review study. This literature study research explains the main research instruments of the variables studied, namely work motivation and work discipline on career development and employee performance. There are 37 articles reviewed to get a relationship result for each variable.

The entire research process will produce a conclusion as an answer to the problems studied. These conclusions will later be used as material for evaluating decision making. The series will produce a thesis concept. The concept of the thesis provides a new finding that can be used and contributes to new theories or the development of science in research.

### RESEARCH RESULT

Previous research has become one of the references in conducting research so that it can enrich the theory used in studying the effect of work motivation and work discipline on career development and employee performance. The following is previous research in the form of several journals related to the research carried out, namely as follows:

1. The Effect of Work Motivation on Career Development
2. The Effect of Work Discipline on Career Development
3. The Effect of Work Motivation on Employee Performance
4. Effect of Work Discipline on Employee Performance
5. The Effect of Career Development on Employee Performance

**Table 2.1. Previous Research**

No	Name/Year/Title	Variables				Research result
		X 1	X 2	Y 1	Y 2	
1	Agustina Rahmi, et al (2020) "The Effect of Leadership and Empowerment Style and Motivation on Work Discipline and Employee Performance in Sungai Kunjang Subdistrict, Samarinda City"	√	√		√	The results of research on the factors that influence work discipline, all independent variables show a positive but not significant effect on work discipline. Results In research on the factors that affect employee performance, only the leadership style variable shows a significant positive effect on employee performance. While the work discipline variable shows influencepositivewhich is not significant to employee performance. Sungai Kunjang, Kota Samarinda District in terms of improvementdisciplinework and employee performance, it is necessary to pay attention to the variables examined in work activities in the sub-

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					district, based on research only leadership style has a significant effect on employee performance. This shows that the leadership style of Sungai Kunjang Subdistrict, Samarinda City can influence employees at work.	
2	Wahyudi, et al (2020) "Influences of work discipline, motivation and Non-physical Working Environment on Civil Apparatus Performance"	√	√	√	The research results show: . DisciplineWork has a positive and significant effect on ASN performance at the Maros Regency Financial Management Board, . Work Motivation, has a positive and significant effect on ASN performance at the Maros Regency Financial Management Agency, . The work environment has a positive and significant effect on ASN performance in Maros Regency, the Financial Management Agency.	
3	Muhammad Fauzi, Nurul Wakhidah (2020) "The Effect of Work Discipline, Work Motivation and Career Development on Employee Performance at Pt. Semarang Autocomp Manufacturing Indonesia".	√	√	√	. The results of the study show that Work Discipline influences the performance of employees at PT. SAME . Work motivation affects the performance of employees of PT. SAME . Career Development affects the performance of employees of PT. SAME	
4	Zaenudin Tachyan, et al (2021) "The Effect Of Career Development And Employee Discipline On Employee Performance In The Covid-19 Pandemic Period At The South Cimahi District, Cimahi City"		√	√	√	The result of multiples Linear regression analysis shows that simultaneously and partially career development and work discipline variables have a significant effect on employee performance.
5	Sonny Hersona, Iwan Sidharta (2017) "Influence Of Leadership Function, Motivation And Work Discipline On Employees' Performance"	√	√		√	This study uses verification research method using path analysis. The results show that the functions of leadership, motivation, and work discipline have a significant effect either partially or simultaneously on employee performance. By increasing the function of leadership, employee motivation and work discipline, it can improve employee performance at the Office of Manpower and Transmigration of Karawang Regency
6	Jufrizen, Fadilla Puspita Hadi (2021)	√	√		√	The research results show that:



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	"The Influence of Work Facilities and Work Discipline on Employee Performance Through Work Motivation"					<ul style="list-style-type: none"> <li>. The effect of work facilities on employee performance is positive and significant;</li> <li>. The effect of work discipline on employee performance is positive and significant;</li> <li>. The effect of work motivation on employee performance is positive and significant;</li> <li>. The effect of work facilities on work motivation is positive and significant;</li> <li>. The effect of work discipline on work motivation is positive and significant;</li> <li>. Work motivation as a mediating variable does not act as a mediation on the effect of work facilities on employee performance;</li> <li>. Work motivation as a mediator does not act as a mediation on the effect of work discipline on employee performance.</li> </ul>
7	Rahman Muhammad Ihsan (2021) "The Effect of Applying Authentic Leadership Style, Work Motivation, Work Discipline, and Career Development on Employee Performance"	√	√	√	√	The results show that Authentic Leadership with a value of 0.19, Motivation with a value of 0.47 & Career Development with a value of 0.04 has a significant effect on employee performance. While the Discipline variable does not have a significant effect on employee performance.
8	Kevin J Pesik, et al (2019) "The Effect Of Working Discipline And Career Development To Employee Performance In Pt. Bank Sulutgo Manado"		√	√	√	Results Analysis simultaneously work discipline and career development have a significant effect on employee performance, while partially work discipline and career development have a significant effect on employee performance at PT. Bank Sulutgo Manado. All variables in this study show a positive and significant effect.
9	Muhammad Sofyan, et al (2016) "The Effect Of Career Development And Working Discipline Towards Working Satisfaction And Employee Performance In The Regional Office Of The Ministry Of Religious Affairs In South Sulawesi"		√	√	√	The results of this study are theoretical findings indicating that there is a direct and significant positive effect of career development on performance through job satisfaction, while the effect of work discipline on satisfaction, career development on performance and work discipline on performance are not significantly correlated.
10	Yessy Yovina Vanesa, et al (2019)	√	√			The results of this study indicate that there is a positive and significant

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	“The Influence Of Organizational Culture, Work Environment And Work Motivation On Employee Discipline In PT Jasa Marga (Persero) TBK, Medan Branch, North Sumatra, Indonesia”				influence between Organizational Culture on Employee Discipline. There is a positive and significant influence between the Work Environment on Employee Discipline. There is a positive and significant influence between Motivation on Employee Discipline. There is a positive and significant influence of Organizational Culture, Work Environment, Motivation on Employee Discipline at PT. Jasa Marga (Persero), Tbk Medan Branch.
11	Mochamad Mochklas, Budi Wahyu Mahardhika (2018) “Effect of Work Discipline, Career Development, Work Motivation and Work Load on the Loyalty of Women Workers in South Korean Companies”	√	√	√	The results of this study show that work discipline has an effect on loyalty, career development has an effect on loyalty, work motivation has an effect on loyalty and workload has no effect on loyalty.
12	Muhammad Ramdhan (2021) “The Effect of Motivation and Discipline on Employee Performance at PT. Keb Hana Bank Serpong Branch Office”	√	√	√	Results of this study that motivation has a significant effect on employee performance, Discipline has a significant effect on employees, Motivation and discipline simultaneously have a significant effect on employee performance
13	Sutrisno, Denok Sunarsi (2019) “The Effect of Work Motivation and Discipline on Employee Productivity at PT. Great Award in Jakarta”	√	√	√	The results of this study has a significant effect on employee work productivity of 48.6%, hypothesis testing obtained a significance of 0.000 <0.05. Work discipline has a significant effect on employee productivity by 44.6%, hypothesis testing obtained a significance of 0.000 <0.05. Motivation and work discipline simultaneously have a significant effect on work productivity by 56.2%, hypothesis testing obtained a significance of 0.000 <0.05.
14	Muhammad Iqbal, Amirulmukminin (2020) “The Effect of Work Discipline and Work Motivation on Employee Performance at UPT Puskesmas Ambalawi District”	√	√	√	. Partial analysis results show that work discipline affects employee performance, while work motivation does not affect employee performance. . Simultaneously work discipline and work motivation affect employee

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					performance at UPT Puskesmas Ambalawi District, Bima Regency.
15	Indra Prasetyo, et al (2021) "Effect of Compensation and Discipline on Employee Performance: A Case Study of Indonesia"	√	√	√	Previous studies looked at the relationship or relationship between compensation and discipline affect employee performance in manufacturing companies on the Indonesia Stock Exchange, although in the health sector which concludes different results that work discipline does not affect employee performance, but overall The results of the study concluded that compensation and work discipline affect the performance of company employees.
16	Ryani Dhyana Parashakti, Muhammad Ekhsan (2020) "The Effect of Discipline and Motivation on Employee Performance at PT Samsung Elektronik Indonesia"	√	√	√	The results of this study indicate that partially and simultaneously the variables of discipline and motivation affect the performance of PT Samsung Elektronik Indonesia's employees.
17	Sonny Hersona, Iwan Sidharta (2017) "Influence Of Leadership Function, Motivation And Work Discipline On Employees' Performance"	√	√	√	The results showed that the functions of leadership, motivation, and work discipline have a significant effect either partially or simultaneously on employee performance.
18	Raniasari Binti Esthi, Inggritz Savhira (2019) "The Influence Of Work Training, Competence And Discipline Of Work On Employee Performance In Pt. Lestarindo Mighty"	√	√	√	. The first hypothesis is accepted and partially shows that there is positive and significant influence between job training on employee performance. . The second hypothesis is accepted and shows that there is a positive and significant influence between competence on employee performance. . The third hypothesis is accepted and shows that there is a positive and significant effect of disciplined work on employee performance.
19	Ramona Octaviannand, et al (2017) "Effect of Job Satisfaction and Motivation towards Employee's Performance in XYZ Shipping Company"	√	√	√	The results of the study prove that there is a positive and significant relationship between job satisfaction and motivation on employee performance.

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20	Achmad Rozi, Denok Sunarsi (2019) "The Influence of Motivation and Work Experience on Employee Performance at PT. Yamaha Saka Motor in South Tangerang"	√		√	The results of this study have a significant effect on employee performance, Work experiences significant effect on employee performance. Motivation and work experience simultaneously have a significant effect on employees.	
21	Ikhwana Pitaloka (2020) "The Effect Of Discipline And Work Motivation On Employee Performance At Pt. Cipta Prima Kontrindo Palembang"	√	√	√	partially there is the influence of discipline and work motivation on the performance of employees of PT. Cipta Prima Kontrindo Palembang.	
22	Ni Komang Sisi Sania Natalia, I Gusti Salit Ketut Netra (2020) The Effect of Work Motivation in Mediating the Effect of Career Development on Performance	√		√	The results of this study found that career development has a positive and significant effect on employee motivation. Career development has a positive and significant effect on employee performance. Work motivation has a positive and significant effect in mediating the influence of career development on employee performance.	
23	Maskarto Lucky Nara Rosmadi, Zaenudin Tachyan (2018) The Influence of Training, Discipline, and Career Development on Employee Performance		√	√	√	Based on the results of the research, that training is at a good level, work discipline is at a bad position, and career development is at a good level. In general, training, work discipline, and career development have an effect on employee performance, and the effect of training is the most significant effect on employee performance.
24	Abraham Samuel Kaengke, et al (2018) The Effect Of Career Development, Training And Motivation On Employees Performance Of Pt. Manado Water	√		√	√	. The research results show career development, training and motivation simultaneously have a significant effect on the performance of employees of PT. Air Manado. Furthermore, . Career development and training partially have a significant effect on the performance of employees of PT. Air Manado; . While motivation has no significant effect on employee performance.
25	Leti Marjanuardi, Sri Langgeng Ratnasari (2019) The Effect of Work Discipline, Loyalty, and Career Development on Employee	√		√	√	. The results of the study show that work discipline has a significant effect on employee performance variables . loyalty variable t value $0.410 < 1.679$ t table with a significant value of $0.684 > 0.05$ , meaning that work discipline

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	Performance at the Raudlatul Qur'An Batam Foundation			<p>has no significant effect on employee performance variables (Y),</p> <ul style="list-style-type: none"> <li>. career development variable t value <math>1.776 &gt; 1.679</math> t table with a significance of <math>0.684 &gt; 0.05</math>, meaning that career development has no significant effect on employee performance variable (Y),</li> <li>. F test results (simultaneous) <math>2.722</math> (F count) <math>&lt; 2.81</math> (F table) and a significant probability value of <math>0.055 &gt; 0.05</math> means that work discipline, loyalty, and career development have a significant effect simultaneously on employee performance variables.</li> </ul>
26	Noviyanti Rianti Putri, Sri Langgeng Ratnasari (2019) The Effect of Level of Education, Training, and Career Development on Employee Performance at Pt. Batam Takaful Insurance	√	√	<ul style="list-style-type: none"> <li>. The results of this study indicate that the level of education has no effect on employee performance.</li> <li>. The training variable shows that training has no effect on employee performance.</li> <li>. The career development variable shows that career development has no effect on employee performance.</li> <li>. While the results of the F test simultaneously indicate that the level of education, training, career development has no effect on employee performance variables.</li> </ul>
27	Muhammad Dedi Syahputra, Hasrudny Tanjung (2020) The Effect of Competence, Training and Career Development on Employee Performance	√	√	<ul style="list-style-type: none"> <li>. The results of the study show that partially competence has a significant influence on employee performance.</li> <li>. Partially, training does not have a significant effect on employee performance.</li> <li>. Partially career development has a significant influence on employee performance.</li> <li>. And simultaneously competence, training and career development have a significant influence on the performance of employees at PT. Angkasa Pura II (Persero) Kualanamu Branch Office.</li> </ul>
28	Abdul Haeba Ramli, Rizki Yudhistira (2018) The Effect of Career Development on Employee Performance through Organizational Commitment	√	√	<p>The research results provide evidence that high career development has a significant impact on organizational commitment. Likewise, high organizational commitment will have a significant impact on employee</p>

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	at PT. Infomedia Humanika Solutions in Jakarta				performance. And finally the indirect test results on career development can significantly improve employee performance which is supported by high employee organizational commitment.
29	Sefrida Yanti, Novi Yanti (2020) Effect Of Work Behavior And Work Discipline On Development Of Employee Career In Premier Basko Hotel Padang	√	√		Work behavior variables have a positive and significant effect on employee career development at the primary basko hotel padang and work discipline variables have a positive and significant effect on career development at the primary basko hotel padang.
30	Allendia Traviana, et al (2021) The Effect of Self-Leadership, Work Environment on Pilot Career Development in Indonesia with Motivation as an Intervening Variable	√	√		The overall results of the variables have a positive and significant effect partially or simultaneously.
31	Rosmawati, et al (2019) The Influence of Education and Training (Training), Work Discipline on Career Development Through the Performance of Bissappu District Office Employees in Bantaeng Regency	√	√	√	The influence of training and work discipline has a significant effect on employee performance. The influence of training and work discipline also has a significant effect on career development.
32	Sugito Efendi, et al (2021) The Influence of Leadership Style, Organizational Culture and Work Discipline on Career Development and Their Impact on Employee Performance Institution of Cooperative Marketing Services and Small and Medium Enterprises (Llp-Kukm)	√	√	√	In this study, it was found that leadership style and work discipline had a direct positive and significant effect on LLP-KUKM employee performance, as well as a positive and significant effect on career development, while organizational culture had a direct positive and significant effect on LLP-KUKM employee performance but not effect on career development.
33	Muhammad Muhlis, et al (2018) Training and Motivating Employee Career Development	√	√	√	The results of the study show that there is a significant relationship between training and motivation on employee career development.
34	Edward Efendi Silalahi (2019) The Effect of Work Experience and Work Discipline on Career Development with Work Achievement as an Intervening Variable at Pt Roh Semesta Marine Safety in Jakarta	√	√		This study proves that partially and simultaneously the variables of work experience, work discipline and work performance have a significant effect on career development. While work experience partially does not have a significant effect on achievement.



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							Meanwhile, work discipline partially has a significant and positive effect on work performance. While simultaneously work experience and work discipline have a significant and positive effect on work performance.
35	Julkarnain, Alfath Saied Alqhudri Sr. (2021)	√	√	√			Compensation has a positive and significant effect on employee performance at PT. Domas Agroiinti Prima. Work motivation has a positive and significant effect on employee performance at PT. Mighty Industrial Facilities.
36	Manahan P. Tampubolon, et al (2020)	√	√				this study concluded that there is a positive and significant influence between work motivation and career development there is a positive and significant influence between work skills and career development there is a positive and significant influence between cognitive behavior and career development.
37	Lapius Yikwa, et al (2017)	√	√	√			The results of data processing show that there is a significant positive influence exerted by Transformational Leadership on Employee Performance at PT. Bank Sulut Go Kawangowan Branch.

Career development is a formal approach taken by organizations to ensure that people in the organization have the right qualifications, abilities, and experience when needed (Regina, 2013). Clear career planning and development within the organization will be able to increase employee motivation in carrying out their work, thus creating a sense of satisfaction in carrying out their work (Nugroho & Kunartinah, 2013). Research conducted by Arifin (2015) states that motivation has a positive and significant effect on employee performance. Employee motivation is needed to improve the performance of the employees themselves. These employees do not have the enthusiasm and drive to carry out all the tasks given if they are not given motivation.

Efforts to improve employee performance cannot be separated from employee discipline (Maharani, 2010). Discipline is an attitude of action and behavior that must be in accordance with existing regulations. If employees are not disciplined, it will interfere with work results and routine employee activities, work should be completed on time. With this discipline, it is hoped that the rules and regulations can be implemented properly so that they do not interfere with company activities, thus employee performance will be easier to improve.

An organization succeeding in achieving its goals cannot be separated from the role of human resources in it which is one of the organization's assets. Several factors that can influence the success of organizational goals are how work motivation and work discipline affect career development and employee performance. This is of course very important to be considered by management in order for the stability and development of the organization.

## CONCLUSIONS AND SUGGESTIONS

### Conclusion

Based on the discussion of research results, it can be concluded that the influence of work motivation and work discipline on employee performance through career development, is as follows:

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1. Work motivation has a positive and significant effect on career development, this indicates that the higher the work motivation, the clearer the career development.
2. Work discipline has a positive and significant effect on career development, this indicates that the higher the work discipline, the clearer the career development of employees.
3. Work motivation has a positive and significant effect on employee performance, this indicates that the higher the work motivation, the higher the employee performance.
4. Work discipline has a positive and significant effect on employee performance, this indicates that the higher the work discipline, the higher the employee performance.
5. Career development has a positive and significant effect on employee performance, this indicates that the clearer career development, the higher the employee performance.

### 1.1 Suggestion

Based on these conclusions, the following suggestions can be given:

1. Respondents' evaluation of the work motivation variable in this study was in the high category, but the indicators that needed to be increased were motivation Y by increasing self-control, being more responsible and more innovative.
2. The assessment of the work discipline variable in this study is high, but it needs to be increased, especially on the indicator that is rated the lowest by respondents, namely ethical work, for this it is expected that employees mutual respect among fellow employees, building cooperation in carrying out tasks.
3. The career development variable assessment in this study was in the good category, but the lowest respondent's rating was known to be a work performance indicator, for this reason employees should increase their self-skills to support their daily work.

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## Determinants of the Fraud Triangle in Detecting Fraudulent Financial Reporting in Banks Listed on the Indonesia Stock Exchange



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**ABSTRACT:** The purpose of this study is to determine the determinants of the fraud triangle, namely pressure, opportunity, and rationalization of fraudulent financial reporting in banks listed on the IDX. This research is an associative research. The sample of this research was 15 banks listed on the Indonesia Stock Exchange which were taken using a purposive sampling method. The data analysis method used is quantitative analysis using a logistic regression analysis model. The data used is in the form of secondary data in the form of banking financial reports listed on the Indonesian Stock Exchange from 2018 – 2020. The results of the study show that pressure, opportunity, and rationalization together have a significant effect on fraudulent financial reporting.

### 1. INTRODUCTION

*Fraud* is an act of fraud or a mistake made by a person or entity who knows that this mistake can result in some unfavorable benefits for the individual or entity (Tiffani and Marfuah, 2015). Besides that, it can produce misleading information for users of financial statements, which in turn will affect the wrong decision making. Auditors should be able to detect fraudulent activity before it eventually develops into a very detrimental accounting scandal (Shinta, 2015). One form of fraud is fraudulent financial reporting, in which reports are consciously provided that are not in accordance with applicable accounting standards and are aimed at the interests of certain parties (Agustina & Pratomo, 2019).

*Fraudulent financial reporting* is intentional misrepresentation of the company's financial condition due to incorrect calculation of amounts or negligence in disclosing financial statements with the aim of deceiving stakeholders. Falsification, manipulation, changes to accounting records and supporting data that are incorrectly presented and deliberately omit important information and transactions from financial reports are included in fraudulent financial reporting activities (Bawekes et al, 2018)

*Fraudulent financial reporting* is a major risk in business and can have a long-term impact on success, thus requiring companies to develop preventive measures to ward off fraud. In order to provide a solution to fraudulent acts that occur, a world organization, namely the American Institute Certified Public Accountant (AICPA) issued Statement of Auditing Standards No. 99 (SAS No. 99) regarding Consideration of Fraud in a Financial Statement Audit. With the aim of increasing the effectiveness of the auditor in detecting fraud by assessing the risk factors for fraud that occur in the company. Fraud risk factors taken from SAS No. 99 is based on the fraud risk factor theory discovered by Cressey, known as the Fraud Triangle. (Tiffani, 2015).

*Fraud Triangle* is a theory developed by Donald R. Cressey in 1950 based on his research on the causes of people deciding to commit fraud which he called trust violators. (Gugus iraianto & Nurlita Novianti, 2018). According to Karyono (2013) explains that in the fraud triangle, fraudulent behavior is supported by three elements, namely pressure, opportunity and rationalization.

Based on the survey results, there are not a few fraud cases that occur in banking, including fraud cases in 2011 PT. Maybank Indonesia (Persero) Tbk has had customers' funds embezzled due to wrong operational standards (CNBCIndonesia, 2011). This case indicates that fraud also occurs in banking.

Several studies on fraudulent financial statements have been conducted by previous researchers using financial targets as a variable for detecting fraudulent financial statements. Research by Indarto & Ghazali (2016), Santoso (2019) and Vivianita & Indudewi (2019) shows that financial targets have a significant effect on fraudulent financial statements. This is based on management as an agent trying to show the best possible company performance and when the company cannot meet the target. then management is forced to manipulate the financial statements. However, this research is not in line with Thereskia et al (2020), which states that pressure has no significant effect on fraudulent financial reporting.

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Previous research was conducted by Tiffani (2015), Utomo (2018) and Thereskia regarding opportunity, Ulfah et al (2017), Faradiza (2017) and Thereskia et al (2020) regarding the rationalization variable showing that opportunity has an effect on fraudulent financial reporting. However, this study is different from Yesiariani et al (2017), Rahayu (2019), Samuel et al (2021) which show that opportunity has no effect on fraudulent financial reporting because supervisory actions carried out by an independent board of commissioners cannot be ascertained whether it has been running effectively or not and not ensure that other parties do not interfere. Likewise with research conducted by Apriliana & Agustina (2017) and Nuryuliza & Triyanto (2019) which obtained the result that changing auditors had no effect,

In the preliminary survey of banks listed on the Indonesia Stock Exchange, there were around 31% or as many as 15 banks that indicated they were experiencing fraudulent financial reporting. There were 4 (four) banks with negative financial targets and the rest had low financial targets. There are 11 banks that have an independent board of commissioners less than 60% of the total board of commissioners, which means that the level of ineffective monitoring is low and there are 11 banks that have indications of frequent auditor changes. Of course, all of the above can encourage fraudulent financial reporting.

Based on the description of the phenomenon above, this study aims to examine the determinants of the Fraud Triangle (Pressure, Opportunity and Rationalization) in detecting Fraudulent Financial Reporting in Banks listed on the Indonesia Stock Exchange by looking at the effect of Pressure, Opportunity and Rationalization on Fraudulent Financial Reporting both together – equally or partially

### Fraudulent Financial Reporting

Fraudulent Financial Reporting is a fraudulent act committed by company management in the form of a material misstatement in the financial statements so that the truth cannot be relied upon which can mislead users of financial statements in making decisions (Damayani, 2017). The consequences arising from fraudulent financial reporting can weaken the reliability of the company's financial statements and can reduce the level of trust in the financial market. more severe manipulation of accounting information can also cause doubts by users of financial statements for the decision-making process (Nasir et al, 2018).

According to Siddiq (2015) in Lailatul Imtikhani (2021) financial statement fraud can be measured by earnings management through discretionary accruals. Total accruals are classified into discretionary and non-discretionary components by measuring the actual total using the motivated Jones model. If the value of discretionary accruals is positive, it means that the company is not indicated for committing fraudulent financial reporting, conversely, if the discretionary accruals are negative, then the company is indicated for committing fraudulent financial reporting. In this study earnings management is measured using a dummy variable. If the value is 1 for negative discretionary accruals and a value of 0 for positive discretionary accruals

### Fraud Triangle Theory

According to Cressey (1953) Fraud Triangle Theory is an idea about the causes of fraud called the Fraud Triangle. Fraud Triangle Theory is influenced by three dimensions, namely Pressure, Opportunity, Rationalization.

#### a. *pressure*(Pressure)

Pressure is a factor that drives fraud, pressure arises because of financial needs, lifestyle, and pressure from other parties (Dien Noviany Rahmatika, 2020). There are several reasons someone commits fraud due to pressure, namely (Marshall B. Romney, 2018):

- 1) Financial pressure, often motivates someone to commit fraud. someone who is under pressure cannot share the pressure he feels with others, so he believes that the wrong way out of this difficult situation is to commit fraud.
- 2) Emotional, motivated by greed which causes them to believe that they never feel enough for what they already have.
- 3) Lifestyle, such as gambling habits, drug and alcohol dependence.

The most frequent pressure is the pressure of financial needs. this need is often considered a need that cannot be shared with other people to jointly solve it so that it must be adjusted in secret and ultimately leads to fraud (Dwi Fitrianiingsih, 2021). According to SAS No.99 there are several general conditions that occur under pressure which result in cheating. One of them is Financial Targets. Financial Targets are proxied by Return on Assets (ROA). ROA is a profitability ratio used to assess how efficiently assets are used (Skousen and Twedt, 2009). ROA can be calculated by the formula:

$$ROA = \frac{Net\ Profit}{Total\ Assets}$$

#### b. *Opportunities* (Opportunity)

Opportunity is a person's personal circumstances that have indications of committing fraud driven by certain situations and conditions. (Marshall B. Romney, 2018). Opportunities arise due to weak sanctions, a malfunctioning internal control system (SPI)

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in detecting and preventing fraud and evaluating poor performance quality (Arum Ardianingsih, 2018). According to Priantara (2013), one of the opportunities for someone to commit fraud is influenced by the ineffectiveness of the internal control system (Ineffective Monitoring). Ineffective Monitoring is proxied by IND which is the ratio of independent commissioners which can be calculated by the formula:

$$IND = \frac{\text{The Number of Independent Commissioners}}{\text{Total Commissioner Council}}$$

### c. Rationalization (Rationalization)

Justification (rationalization) is an attitude of someone who defends or justifies his own behavior even though what he is doing is a mistake. (W. Steve Albrecht, 2009). This justification (rationalization) allows fraud perpetrators to justify their illegal behavior. as shown by the Fraud Triangle dimension, rationalizations for example "all I take is their debt to me", attitudes such as "rules apply to other people, not me", low personal integrity for example "being an honest person is not important, the most important thing is get what I want." that is, perpetrators of fraud rationalize dishonesty, where honesty and integrity are unnecessary. Justification is defined as the behavior of looking for excuses that the actions they are taking are correct and are used to in society (Arum Ardianingsih, 2018). According to (Ardianingsih, 2018:80). Justification is a dimension of the fraud triangle that is not easy to measure. Because perpetrators who are used to dishonesty will find it easier to rationalize fraud, but perpetrators who have better morals may find it difficult to do so.

In this study, rationalization is measured by looking at the change of auditors. Auditor switching is used by companies to eliminate fraud trails found in previous auditors. The replacement of independent auditors is carried out by management as a justification or rational reason in justifying the fraudulent actions they have committed (Septriyani & Handayani, 2018). Auditor turnover in this study was assessed through changes in public accounting firms (KAP). Companies that change Public Accountant Offices (KAP) in the research process will be coded 1, and if there is no change of KAP in the research process they will be coded 0. Furthermore, the input results from the dummy data will be used as a nominal scale to test how big the company's tendency is to replace or change KAP every year.

## 2. METHODOLOGY

This research is an associative research. Case studies on banking listed on the Indonesia Stock Exchange (IDX) with a website [www.idx.co.id](http://www.idx.co.id). Operational Definition The variable in this study is Pressure (X1), which is a factor that drives the emergence of fraud. The highest pressure is the financial target. Opportunity (X2) is a condition that gives a person the possibility to commit fraud. Rationalization (X3) is a search for justification for activities that contain fraud. Fraudulent Financial Reporting (Y) is an intentional act of manipulation and material misstatement of the financial statements.

The population used in this study is all banks listed on the Indonesia Stock Exchange for the period 2018 – 2020, totaling 48 banks. The sampling technique uses Side Purpose so that the research sample obtained is 15 banks. The use of data in this study is secondary data in the form of secondary data in the form of financial reports from 2018 – 2020. This research uses quantitative data analysis. The data analysis technique used was logistic regression analysis assisted by the statistical program for science (SPSS).

The stages in logistical regression analysis consist of descriptive statistics in the form of mean, median, mode, percentile, decile, quartile in the form of numerical and image analysis. The next stage is hypothesis testing. Feasibility Testing of the Logistic Regression Model with the Goodness of Fit Test and then the Wald Test. After testing the hypothesis, then do parameter estimation and logistic regression tests and test the Odds Value.

## 3. RESULTS AND DISCUSSION

### Descriptive Statistics

Banking Listed on the IDX, period 2018 - 2020



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**Table 1. Descriptive Statistics**

Descriptive Statistics									
	N	Minimum	Maximum	Means	std. Deviation	Skewness		kurtosis	
	Statistics	Statistics	Statistics	Statistics	Statistics	Statistic	std. Error	Statistics	std. Error
Pressure	45	-.09230	.06778	.0022047	.02769353	-0.1602	.354	0.4604	.695
Opportunities	45	-3108.92945	154.00828	-99.2960887	522.66742067	-0.5147	.354	2.7439	.695
Rationalization	45	.00000	1.00000	.5111111	.50552503	-.046	.354	-2.093	.695
Y	45	.00000	1.00000	.6888889	.46817937	-.844	.354	-1.349	.695
Valid N (listwise)	45								

Source: Author Processed, 2022

Table 1 shows the number of respondents (N) there are 45, of these 45 respondents the smallest (minimum) pressure value is -0.09230 with the largest (maximum) value of 0.06778, the average value is 0.0022047 with a standard deviation value of 0.02769353. The smallest (minimum) Opportunity value is -3108.92945 with the largest (maximum) value of 154.00828, the average value is equal to -99.2960887 with a standard deviation value of 522.66742067. The smallest (minimum) Rationalization value is 0.00000 with the largest (maximum) value of 1.00000, an average value of 0.51111 with a standard deviation value of 0.50552503. The smallest (minimum) Y (Fraudulent Financial Reporting) value is 0.00000 with the largest (maximum) value of 1.00000, the average value of 0.68889 with a standard deviation value of 0.46817.

From the Skewness Value of each ie -0.1602, -0.5147, -.046 and -.844 and Kurtosis shows respectively 0.4604, 2.7439, -2.093 and -1.349 so that it can be concluded that the data for all variables is normal

### Feasibility of Logistic Regression Model (Goodness of Fit Test)

#### 1. Value -2 Log Likelihood (-2LogL)

**Table 1. -2LogL Value Consists Only Of Constants**

The -2LogL statistic is used to determine if the independent variable is added to the model whether it significantly improves the model fit, resulting in a -2LogL difference between the model consisting only of constants and the estimated model consisting of constants and independent variables following the chi square distribution with degrees of freedom (degrees of freedom).

Iteration History<sup>a,b,c</sup>

Iterations	-2 log likelihoods	Coefficients
		Constant
Step 0	61,827	.222
	61,827	.223

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 61,827

c. Estimation terminated at iteration number 2 because parameter estimates changed by less than .001.

Source: Author Processed, 2022

Table 1 explains that result the initial -2Log Likelihood value before being included in the independent variable is 61,827, then a chi square is 60.48. The -2Log Likelihood value is greater than the chi square value (61,827 > 60.48), then it shows that the previous model included the independent variable is still not fulfilling

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test conditions whereas if based on -2LogL value consisting of constants and variables as shown in table 2 below:

**Table 2. -2LogL Value Consists of Constants and Variables**

Iteration History a,b,c,d						
Iterations		-2 log likelihoods	Coefficients			
			Constant	X1	X2	X3
Step 1	1	50,904	-1,232	2,336	2,909	-.388
	2	48,709	-1,823	4,028	4,250	-.491
	3	48,082	-2,123	5,506	4,906	-.528
	4	47,884	-2,169	6,771	4,999	-.526
	5	47,808	-2,162	8052	4,975	-.515
	6	47,787	-2.155	9.135	4,952	-.506
	7	47,785	-2.153	9,507	4,945	-.503
	8	47,785	-2.153	9,527	4,945	-.503
	9	47,785	-2.153	9,528	4,945	-.503

Source: Processed by the Author, 2022

Table 2 the output results above show that the final -2Likelihood value is 47.785, then the chi square table obtained is 56.94. so that H0 is accepted because  $47.785 < 56.94$ . This shows that the model after inputting variable X meets the test requirements.

### 2. Omnibus Test of Model Coefficient

**Table 3. Omnibus Test Of Model Coefficient**

#### Omnibus Tests of Model Coefficients

		Chi-square	Df	Sig.
Step 1	step	14,041	3	.003
	blocks	14,041	3	.003
	Model	14,041	3	.003

Source: Processed by the Author, 2022

This test is conducted to test whether the independent variable is simultaneously on the dependent variable.

Table 3 shows that the output results in this study have a calculated chi square value of 14,041, then the chi square table obtained is worth 7.81 and  $14,041 > 7.81$ , so the significant value is 0.003 and smaller than 0.005, if the calculated chi square value is greater compared to the chi square table, the conclusion is that simultaneously variable x has a significant effect on variable Y.

### 3. Cox and Snell's R Square and Nagelkerke's R Square coefficients

This coefficient is used to find out how much the contribution of the independent variables, namely the Fraud Triangel (pressure, opportunity, rationalization) together with fraudulent financial reporting.

**Table 4. Cox and Snell's R Square and Nagelkerke's R Square**

#### Summary models

step	-2 log likelihoods	Cox & Snell R Square	Nagelkerke R Square
1	47.785a	.268	.359

a. Estimation terminated at iteration number 9 because parameter estimates changed by less than .001.

Source: Processed by the Author, 2022

Table 4 above is the coefficient used to find out how much the contribution of the independent variables, namely the Fraud Triangel (pressure, opportunity and rationalization) together with fraudulent financial reporting. The output results above present

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a Nagelkerke's R Square value of 0.359 or equivalent to 35.6%. So the conclusion is that the X variable in this study has the ability to explain the Y variable by 35.6%. And 64.4% is explained by other factor variables that are not taken by the researcher.

### 4. Hosmer and Lemeshow's Test

**Table 5. Hosmer and Lemeshow's Test**

Hosmer and Lemeshow's Testtest H<sub>0</sub> that the empirical data fits or fits the model (there is no difference between the model and the data so that the model can be said to be fit).

**Hosmer and Lemeshow Test**

step	Chi-square	Df	Sig.
1	12,758	7	.078

Source: Processed by the Author, 2022

Based on the output results above, it shows that the calculated chi square value is 12,758 which is smaller than the chi square table, which is equal to 14.07 with a significant value of 0.078 greater than 0.05. So that H<sub>0</sub> is accepted because there is no significant difference between variables.

### Testing with the Wald Test

**Table 6. The Wald test is carried out by entering the pressure, opportunity and rationalization variables one by one to determine the effect of each independent variable on the dependent variable.**

**Variables in the Equation**

	B	SE	Wald	Df	Sig.	Exp(B)	95% CI for EXP(B)	
							Lower	Upper
StepX1	9,528	10,732	.788	1	.375	13732720	.000	18751570023801.242
1 <sup>a</sup> X2	4,945	2,473	3,997	1	046	140,452	1.102	17895.756
X3	-.503	.771	.425	1	.514	.605	.134	2,739
Constant	-2.153	1,188	3,282	1	.070	.116		

Source: Processed by the Author, 2022

Table 6 shows that variable pressure obtained regression coefficient of 9.528 with a significant level of 0.375 > 0.05. Because the significant level is greater than  $\alpha = 0.05$ , this means that pressure has no significant effect on fraudulent financial reporting, while the opportunity variable obtains a regression coefficient of 4.945 with a significant level of 0.046 < 0.05. Because the significant level is less than  $\alpha = 0.05$ , this means that opportunity has a significant effect on fraudulent financial reporting. on variables *rationalization* a regression coefficient of -0.503 is obtained with a significant level of 0.514 > 0.05. Because the significant level is greater than  $\alpha = 0.05$ , this is significant *rationalization* no significant negative effect on fraudulent financial reporting.

### Parameter Estimation and Logistic Regression Test

Based on table 6 it shows the significance value of the variable Pressure and variables *Rationalization* > 0.05 so it can be concluded that there is no significant effect between the variables Pressure and *Rationalization* on Fraudulent Financial Reporting while in the Opportunity variable there is an influence on Fraudulent Financial Reporting, the logistic regression equation model is formed as follows:

$$\pi = \frac{\exp(-2.153 + 4.945X_2)}{1 + \exp(-2.153 + 4.945X_2)} = \frac{e^{-2.153 + 4.945X_2}}{1 + e^{-2.153 + 4.945X_2}}$$

### Odds Value Test

Odds value is a way of presenting probability which explains the probability that the event will occur if divided by the probability that the event will not occur. Based on table 6 it is known that the exp value (B) of variable X1 or *pressure* as big 13,732,720 and this indicates that if there is Pressure, Fraudulent Financial Reporting will increase by 13,732,720 times compared to that without Pressure. Then for a B value of 9,528 this indicates that there is Pressure, it has a positive relationship with an increase in Fraudulent Financial Reporting.

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The output results for variable X2 or Opportunity show that the value of exp (B) is 140,452 and this indicates that if there is an Opportunity, Fraudulent Financial Reporting will increase by 140,452 720 times compared to that without Opportunity. Then for a B value of 4,945 this indicates that there is an Opportunity that has a positive relationship with an increase in Fraudulent Financial Reporting. Output results for variable X3 or *Rationalization* shows that the value of exp (B) is 0.605 and this indicates that if there is *Rationalization* then Fraudulent Financial Reporting will increase by 0.605 times compared to the absence of *Rationalization*. Then for a B value of -0.503 this indicates that there is *Rationalization* then it has a negative relationship with the increase in Fraudulent Financial Reporting.

### **Effect of Pressure, Opportunity and Rationalization on Fraudulent Financial Reporting.**

Based on test results *Omnibus Test Of Model Coefficient* shows that Pressure, Opportunity and Rationalization together have a significant effect on Fraudulent Financial Reporting listed on the Indonesia Stock Exchange (IDX) in 2018-2020 so these results show that the higher the Pressure, Opportunity and Rationalization, the higher the level of Fraudulent Financial Reporting.

This research is in line with Tran (2020) Agency theory is part of the classic problem that there are different ways between managers and investors in terms of taking risks in investment strategies. Managers prefer much lower risk than investors because investors can diversify their assets into several types of financial assets while managers take full risk of their human resources with their current companies.

The agency theory also provides a boundary between the interests of the principal and the agent, in which the principal compensates the agent for his services managing the company and incurs monitoring costs to limit the activities of the agent so that they do not deviate, while the agent is responsible to the principal managing the company. These results are supported by research conducted by Thereskia Pinta Nauli Pane, et al (2020) examining fraudulent financial statements from a Fraud Triangle perspective. With results that prove there is an effect of pressure, opportunity and rationalization on fraudulent financial reporting.

### **Influence pressure towards Fraudulent Financial Reporting.**

Based on the results of the Wald test hypothesis test, Pressure has no effect on *Fraudulent Financial Reporting* listed on the Indonesia Stock Exchange (IDX) in 2018-2020. The test results state that Fraudulent Financial Reporting in Banking listed on the IDX when viewed from the pressure as measured by financial targets through ROA calculations, most produce positive ROA which means the possibility of Fraudulent Financial Reporting in Banking is smaller so that it can be seen that the financial condition Banking is in good shape. These results are supported by research conducted by Thereskia Pinta Nauli Pane, et al (2020), Ni Kadek Yulik Eachandewi, et al (2020) and Dwi Fitrianiingsih, et al (2021) researched financial statement fraud in the perspective of the fraud triangle. found results that pressure (financial target) has no effect on *fraudulent financial reporting*

The results of this study are not in line with Dien Noviany Rahmatika, (2020) which states that pressure is a factor that drives fraud, pressure arises because of financial needs, lifestyle, and pressure from other parties and according to Statement of Auditing Standards (SAS) No. 99, states that financial targets are under pressure which can lead to fraud

### **The Effect of Opportunity on Fraudulent Financial Reporting.**

Based on the results of the Wald test hypothesis test (partial test), states that H0 is accepted and H1 is rejected. This means that Opportunity or ineffective monitoring has a positive and significant effect on *fraudulent financial reporting* in banks listed on the Indonesia Stock Exchange (IDX) in 2018-2020. These results are in accordance with the theory put forward by Marshall B. Romney which states that fraudulent financial reporting can arise if it is driven by certain situations and conditions, for example weak sanctions, a malfunctioning internal control system in detecting and preventing fraudulent financial reporting and also reinforced by Priantara's opinion. (2013) who said the opportunity to commit fraud, one of which is the ineffectiveness of the internal control system or *Ineffective Monitoring*.

These results are in line with the research conducted by Tiffani (2015), Utomo (2018) and Thereskia et al (2020) show that ineffective supervision has a significant effect on fraudulent financial statements because there are many independent commissioners, supervision within the company can be carried out effectively thereby reducing management opportunities to commit fraud because they feel there is no loophole in doing so. In contrast to the research conducted by Yesiariani et al (2017), Rahayu (2019) and Samuel et al (2021) shows that the ineffectiveness of oversight does not affect the independent board of commissioners who cannot ensure that oversight is carried out effectively and avoids interference from other parties.

### **Influence Rationalization towards Fraudulent Financial Reporting.**

Based on the results of the Wald test hypothesis test (partial test), *rationalization* no effect on *fraudulent financial reporting* listed on the Indonesia Stock Exchange (IDX) in 2018-2020. These results are in line with research conducted by Apriliana & Agustina

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(2017) and Nuryuliza & Triyanto (2019) who obtained the result that auditor changes had no effect, because auditor changes could have been caused by other things such as dissatisfaction with auditor performance.

In addition, the results of this test prove that *rationalization* hard to measure. According to Beneish et al (2005), measurement of rationalization can use total accruals to assess the probability of manipulation. In research conducted by Dwi Fitriyaningsih et al (2021) which measures rationalization using total accruals and the results also show that total accruals have no effect on fraudulent financial reporting. In contrast to research conducted by Ulfah et al (2017), Faradiza (2017) and Thereskia et al (2020) regarding auditor turnover, it states that auditor turnover has a significant effect on financial statement fraud, this is because companies that frequently change auditors are attempt to cover up fraud discovered by the old auditors.

### 4. CONCLUSION

Based on the explanation of the results of the previous discussion, the following conclusions can be drawn:

- a. *Pressure*, *Opportunity* and Rationalization together have a significant effect on Fraudulent Financial Reporting so these results show that the higher the Pressure, Opportunity and Rationalization in Banking, the higher the level of Fraudulent Financial Reporting so it can be said that Pressure, Opportunity and Rationalization can be used as instruments in detecting Fraudulent Financial Reporting in Banking listed on the Indonesia Stock Exchange
- b. *pressure* and Rationalization does not have a significant effect on Fraudulent Financial Reporting in Banking. The Pressure variable cannot be used as a tool for detecting Fraudulent Financial Reporting if the bank's financial condition is stated to be good so that the possibility of Fraudulent Financial Reporting is getting smaller while the Rationalization variable cannot fully be used as a Fraudulent Financial Reporting detection tool because Rationalization is difficult to measure.
- c. *Opportunity* has a significant effect on Fraudulent Financial Reporting, which means that this variable can be used as a tool to detect Fraudulent Financial Reporting in banks listed on the Indonesia Stock Exchange.

### 5. SUGGESTION

Based on the research results above, here are some suggestions related to the research results obtained, among others

- a. This study measures the Fraud Triangle by using a dummy proxy for ordinary proxies, so it is recommended that future researchers use proxies others in full to determine the effect.
- b. This research only measures *Financial Targets*, *Ineffective Monitoring* and Change in Auditor is suggested by future researchers to be able to measure using other ratios such as Financial Stability, External Pressure, Nature of Industry, Quality of External Audit, Organizational Structure, Frequent Number of CEO's Picture (CEO) and many more.
- c. This research can be used as one of the considerations for investing, it is suggested that investors in making investments should pay attention to the information in financial reports, especially the fraud triangle which is measured by ratios as a material consideration in making investment decisions and to find out whether there is fraud in financial reporting. .
- d. Future researchers are expected to use a wider scope by taking samples of other sector companies to obtain the results of their influence.

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## Histopathological Changes in Female uterus with Postmenopausal Vaginal Bleeding in Benghazi Medical Center (2019-2021)



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**ABSTRACT:** Postmenopausal bleeding is an important symptom and requires careful and timely assessment to eliminate the possibility of malignancy. A thorough examination may help in the diagnosis of vulval, vaginal, cervical, or pelvic pathology. This study was carried out to find the probable causes in patients presenting with postmenopausal bleeding. The study included 55 women with postmenopausal bleeding and was conducted in the department of Obstetrics and Gynaecology of Benghazi medical center from January 2019 to December 2021. Diagnostic curettage and cervical biopsy were done and histopathology report was collected. The mean age of the patients was 57.74 years (range 45-75 years), and the median age of menopause was 60 years. Among the patients 5 (9.3%) had only diabetes and 3 (5.6%) patients had hypertension. fifty patients (90.3%) were multipara, about (87%) were had no family history of same illness. by diagnostic curettage and cervical biopsy revealed suspected endometrial sarcomas in 1 cases (1.9%) and fibroid in 1 case (1.9%). The most common clinical finding was endometrial adenocarcinoma in 50 patients (92.6%). About 76% (of patients with adenocarcinoma present with postmenopausal bleeding, and three patients (3.7%) had hyperplasia.

**KEYWORDS:** Menopause, post-menopausal bleeding, endometrial carcinoma, multiparous, nulliparous

### INTRODUCTION

Abnormal uterine bleeding is a common gynaecological symptom. Postmenopausal bleeding (PMB) is defined as bleeding that occurs 12 or more months after the last menstrual period. The average age of menopause is fifty-one years. Menopause occurs when the ovaries cease making estrogen, and the patient is no longer ovulatory (1). Many women who experience postmenopausal bleeding may not have other symptoms. Etiology of PMB include: non gynaecological causes like trauma or a bleeding disorder, use of hormone replacement therapy. Other causes include vaginal atrophy, endometrial hyperplasia, endometrial polyps or cervical polyps, carcinoma of cervix, uterine sarcoma, ovarian carcinoma (especially oestrogen-secreting ovarian tumors), vaginal carcinoma and carcinoma of vulva (2). Endometrial cancer usually presents as PMB. Malignancy must be excluded as a cause of bleeding in postmenopausal patients as PMB is the most important presenting symptom of endometrial cancer (3). PMB accounts for approximately 5% of gynecologic office visits. About 1-14% of postmenopausal bleeding will be secondary to endometrial cancer. Endometrial cancer is the most common gynecologic malignancy in the United States. In 2017, there were over 61,000 new cases of uterine cancer; there were almost 11,000 deaths. Most cases of uterine cancer are endometrial in origin (92%). Vaginal bleeding is the presenting sign in more than 90% of postmenopausal women with endometrial cancer (4). In Benghazi reports taken from 2002-2011 indicated that a 52% of female genital cancer cases were endometrial cancer followed by cervix cancer 30.9% (5).

The primary evaluation of postmenopausal women who present abnormal uterine bleeding includes a medical history and a pelvic examination, as well as a Pap smear if appropriate, to look for vulvar or vaginal lesions, signs of trauma, and cervical polyps or dysplasia (6). Cervical dysplasia seldom causes abnormal uterine bleeding, but it may be associated with postcoital bleeding. Investigative studies, such as a uterine biopsy, ultrasound, hysteroscopy or dilation and curettage, may be required. Cervical cultures may be indicated if the patient is at risk for infection or if symptoms of infection are present, treatment will depend on the cause determined (1) (2).

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## AIM AND OBJECTIVE

This study was carried out to find the probable causes of patients presenting with postmenopausal bleeding and to investigate the clinical significance of postmenopausal bleeding in terms of risk factors, the incidence of endometrial carcinoma and histopathological evaluation of endometrium.

### Patients and Methods:

A retrospective observational study conducted at Benghazi Medical Center (BMC), Benghazi, Libya. A review of documents was carried out from files of PMB patients who were admitted to the hospital from January 2019 through to December 2021. Factors that are usually associated with PMB were studied (age, parity, menopausal duration, past medical history, family history, drug history and the number of PMB episodes). This study included 55 women with postmenopausal bleeding. Diagnostic curettage and cervical biopsy were done and a histopathology report was collected. Menopause is defined as the permanent cessation of menstruation for at least one year at the end of reproductive life. In the history, emphasis was given on the patient's age, socioeconomic status, the interval between menopause and the onset of abnormal vaginal bleeding, obstetric history, pharmacological therapy, and family history of malignancy.

Statistical analysis, data were evaluated statistically by using the SPSS statistical package version 20, independent Chi-square test was used to test whether two categorical variables are related to each other, a Q value of less than 5 was considered as statistically significant. Microsoft Word and Excel have been applied to make tables, graphs, pie diagram, etc.

## RESULTS

The total number of cases included in this study were 55 cases diagnosed over the period (2019 –2021). Figure 1 shows that the highest frequency of post menopausal bleeding cases was admitted during the year 2019 (n:22, 38.9%), followed by the year 2020, where (n:20, 37.0%) of cases were admitted. The lowest frequency (n:13, 24.1 %) of admitted cases was during the year 2021.

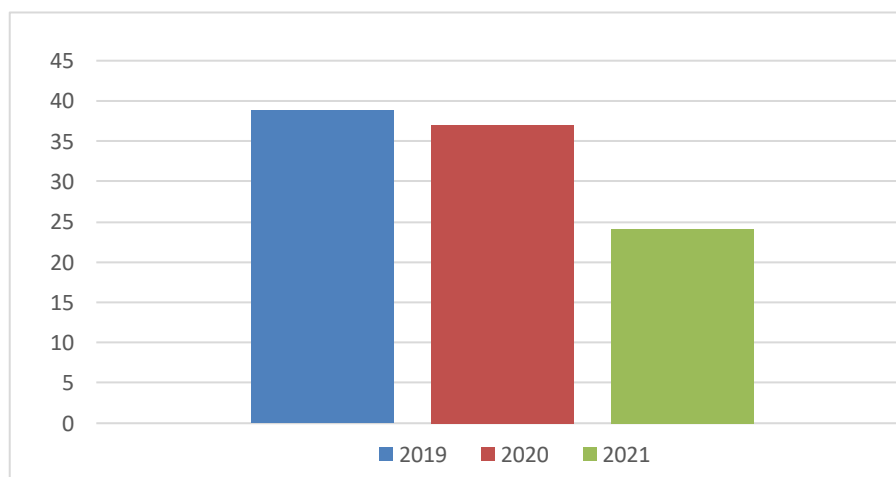


Figure 1. distribution of PMB cases according to year of admission

Patients' characteristics of PMB patients are shown in Table 1. Most of postmenopausal bleeding patients were between 51-60 years (38.9%) as the youngest case aged 45 years and the eldest one was 75 years old. The highest proportion of cases (38.9%) were aged 51 years and above, while the cases aged 50 years and less and above 70 represented (14.8%) of the cases.

Table 1: Age category of postmenopausal women

Age	No. of cases	Percentage%
45 - 50	8	14.8 %
51 - 60	22	38.9 %
61 -70	17	31.5 %
70<	8	14.8 %

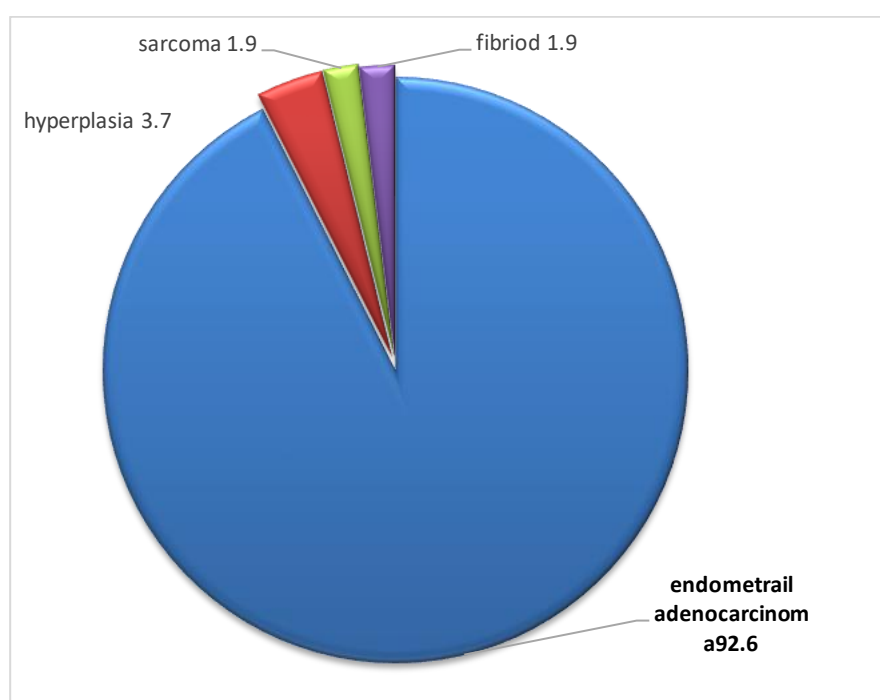
In Table 2. Most of the postmenopausal bleeding patients were multiparous (90.7%). 9.3% and 5.6% of patients were having diabetes mellitus and hypertension and on treatment, respectively. 85.1% of women had no drug or medical history and 87% had no family history of the same illness.

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**Table 2. Distribution of parity, medical and drug history and family history of menopausal women**

	No. of patients (N=55)	Percentage (%)
<b>Parity</b>		
Nullipara	5	9.3%
Multipara	50	90.7%
<b>Past medical and drug history</b>		
Hypertension	3	5.6%
Diabetes mellitus	5	9.3%
no illness	47	85.1%
<b>Family history</b>		
Yes	8	13 %
No	47	87%

Figure 2. shows that majority of the cases (n= 50, 92.6%) were diagnosed as endometrium adenocarcinoma, followed by cases diagnosed as endometrial hyperplasia (n= 3, 3.7%). Endometrial sarcoma cases represented (n=1, 1.9 %) and fibroid (n=1, 1.9%). Table 3. illustrates that a higher proportion of cases aged between 51 - 60 years and less (n=25, 50%) compared to (n=14, 28%) among cases aged between 61 - 70 years and >70 had endometrial adenocarcinoma, while the cases aged 50 and less had low proportion (n=5, 10%).



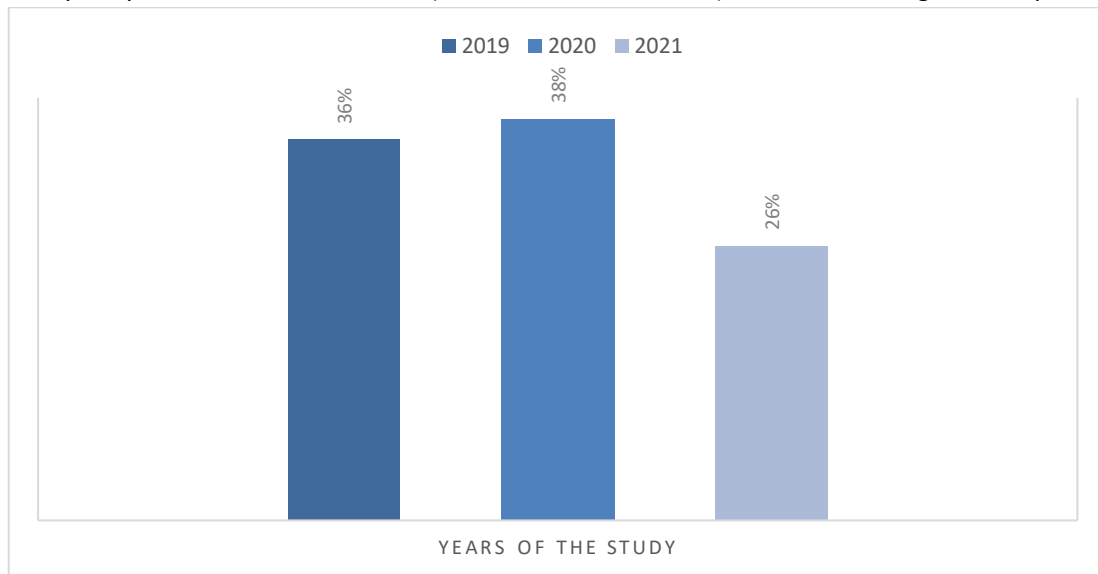
**Figure 2. Distributions of type of histopathological finding**

**Table 3. Showing the relationship between age categories and histopathological finding of endometrial adenocarcinoma.**

Age categories	Endometrium adenocarcinoma	
	No	percent%
45-50	5	10%
51-60	25	50%
61-70	14	28%
>70	6	12%

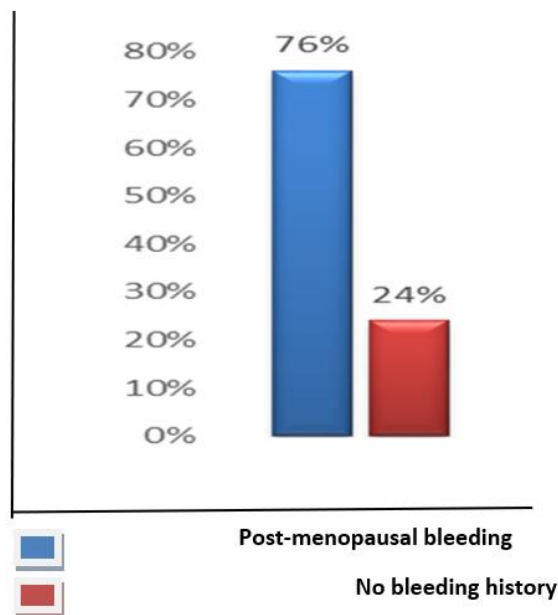
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Figure 3. illustrates that the highest frequency of diagnosed endometrial adenocarcinoma cases was during the year 2020 (n=19, 38.0%), followed by the years 2019 and 2021 where (n=18, 36.0%, n=13, 26.0%) of cases were diagnosed respectively.



**Figure.3 distribution of endometrial adenocarcinoma according to year of diagnosis**

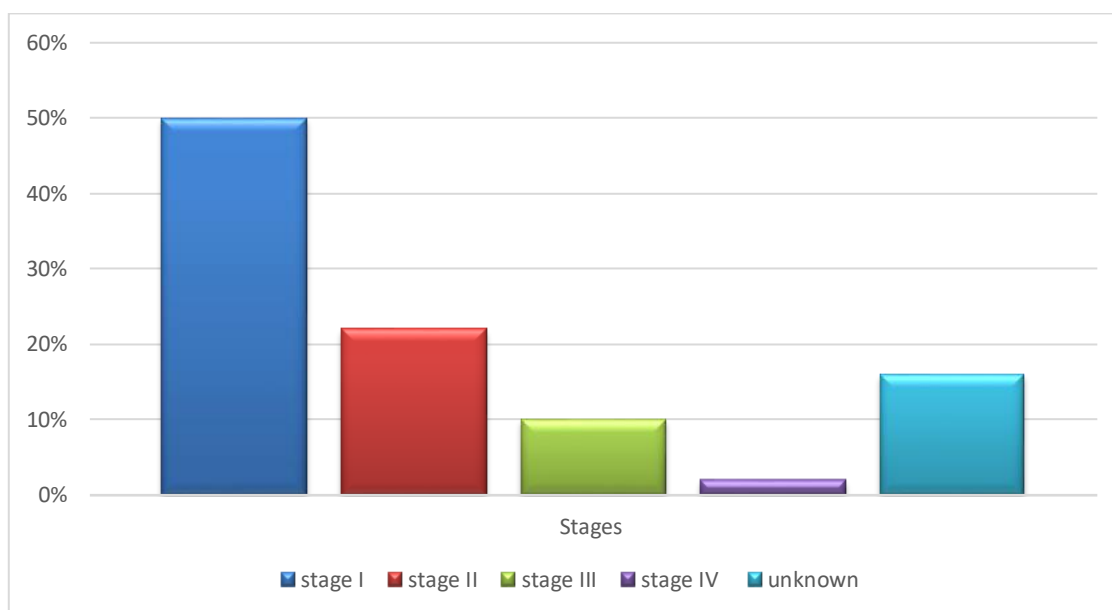
Figure 4. shows that (n=38, 76%) of endometrial adenocarcinoma cases had postmenopausal bleeding, while (n=12, 24 %) had no bleeding symptom.



**Figure.4 Distribution of endometrial adenocarcinoma cases according to the patient's symptoms.**

Figure 5 reveals that the stages of the majority of the endometrial adenocarcinoma cases (n= 25, 50%) were stage I and (n= 11, 22%) of the cases were diagnosed at stage II and (n= 5, 10%) were at stage III and only (n=1, 2% at stage IV and about) n=8, 16% were unknown.

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**Figure 5: Distribution of endometrial adenocarcinoma cases according to Stages.**

Table 4 reveals that (45%) and (36%) of cases aged 51 years and above had stage II and Stage I respectively, equal proportions of cases (50%) aged 51 years and above and 61 years and above had stage III. This difference was not statistically significant, and all the cases (100%) at age 61 and above had stage IV.

**Table 4. Relationship between age categories of endometrial adenocarcinoma cases and their stages**

Age categories	Endometrial adenocarcinoma stages							
	Stage I		Stage II		Stage III		Stage IV	
	NO	%	NO	%	NO	%	NO	%
<b>45-50</b>	4	16%	0	0%	1	20%	0	0%
<b>51-60</b>	9	36%	5	45%	2	40%	0	0%
<b>61-70</b>	7	28%	4	36%	2	40%	1	100%
<b>70&lt;</b>	5	20%	2	18%	0	0%	0	0%

### DISCUSSION

Postmenopausal bleeding is a common complaint of postmenopausal women. The present study revealed that the incidence of PMB was common in the 5th to 6th decades of life. However, other studies (7) (8) showed a different range, they reported that the incidence of PMB is common in the 5th to 7th decades. Furthermore, earlier study (9) reported that the incidence of postmenopausal bleeding decreases with increasing age and this trend was similar in our study. This might be due to less sample size for histopathological diagnosis.

It is evidence-based that PMB is associated with diabetes, hypertension and obesity and these are independent risk factors for endometrial carcinoma (9). In this study only 5.6% subjected were hypertensive and 9.3% were diabetic. However, Rekha et al (10) found that 50% of PMB patients had multiple medical disorders, like diabetes and hypertension. Furthermore, obesity and hormone replacement therapy is the commonest cause/risk factor of PMB and it is commonly used by affluent society. However, in this study there was limitations in patient' file regarding these data.

Kothapally et al (11) study showed that most of PMB patients were multiparous, which is consistent with our observation. In comparison other study (12) revealed that more than 70% of the cases were nulliparous at diagnosis, this may be explained by the fact that in the current era women delay their childbearing. Postmenopausal bleeding is more likely to be caused by pathologic disease than bleeding in younger women. The common histopathological picture of endometrium in this study was endometrial adenocarcinoma, next common was hyperplasia, with 1 patient were diagnosed as fibroid and 1 patient with endometrial sarcoma. In the present study 55 patients (92.6%) had endometrial adenocarcinoma this is dissimilar with numerous studies, Gredmark et al (13) that reported 44 patients only (18%) had malignancy and with earlier studies (14) found endometrial carcinoma in 9.5% out of 629 PMB cases.



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The endometrial malignancy is more common in postmenopausal age. The peak incidence of malignancy was observed in this study was between the age group of 51-60 years similar to a result that has been previously reported (15).

In this study, most of the cases were in stage I )50% and stage II )22 (% , this is similar to other observations (12) (16) which found that the majority of endometrial cancers are diagnosed at early stage (80% in stage I). By considering International Federation of Gynecology and Obstetrics defined grades 1 and 2 tumors as “low grade” and grade 3 tumors as “high grade, Type I endometrial carcinoma has a favorable outcome due to minimal myometrium invasion (17).

Endometrial hyperplasia (3.7%) were the other frequent causes of PMB in this study. These results are similar to those found by Bafna et al (18) where endometrial hyperplasia constituted one of the causes of postmenopausal bleeding. While another study (14) found endometrial hyperplasia is the main Cause of PMB. Whereas endometrial sarcoma has been reported to be less detectable by screening and this was in agreement with our study.

### Conclusion:

The postmenopausal bleeding is an important symptom and requires careful and timely assessment to eliminate the possibility of malignancy as soon as possible. In this study found that endometrial adenocarcinoma cases were more common in relatively middle-aged women and was grade I endometrial carcinoma, the majority of cases presented with bleeding per vagina so the prognosis for endometrial carcinoma is usually good as most patients present with early stage disease due to the early symptom of postmenopausal bleeding.

### LIMITATIONS

Due to retrospective, the taken data from patients' files, relatively less number of cases and less information in file about risk factor like hormonal therapy and BMI.

### Recommendation:

Postmenopausal bleeding should always be investigated, as more than 50% of patients will have endometrial carcinoma. Active screening programs in Libya is essential to screen, control and prevent endometrial adenocarcinoma among women and to predicting the cases at early stages, also Public health education, including awareness of women about PMB as a serious sign of cancer.

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## Online Learning Evaluation of Physical Education in State Elementary Schools in Bantul District



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**ABSTRACT:** This study aims to evaluate the implementation of physical education online learning in public elementary schools in Bantul Regency based on the aspects of Context, Input, Process, and Product. The evaluation model that will be used in this study is the CIPP model. The subject of this evaluation is Public Elementary Schools in Bantul Regency, totaling 273 schools. The sampling technique used the Slovin formula with a sampling error of 10% in 73 schools. Furthermore, the sample in this study was determined using a purposive sampling technique, with the following criteria: the researcher took 1 physical education teacher, 1 school principal, and parents of students who were willing to become samples and filled out questionnaires from researchers. Data collection techniques used observation, interviews, questionnaires, and documentation. The data analysis technique in this study is descriptive quantitative and qualitative analysis. The results showed that the evaluation of the implementation of physical education online learning in public elementary schools in Bantul Regency was 2.41 in the poor category. Based on each evaluation component, the following conclusions are obtained. (1) Context evaluation of the implementation of physical education online learning in public elementary schools in Bantul Regency, at 2.59, is in the good category. The physical education learning philosophy indicator is 2.57 in the good category and the physical education learning objectives are 2.61 in the good category. (2) The input for evaluating the implementation of physical education online learning in public elementary schools in Bantul Regency, amounting to 2.39, is in the poor category. The teacher profile indicator is 2.44 in the less category, the student profile is 2.25 in the less category, and learning facilities and infrastructure is 2.49 in the less. (3) The process of evaluating the implementation of physical education online learning in public elementary schools in Bantul Regency, amounting to 2.38, is in the poor category. The RPP indicator is 2.56 in the good category and the implementation of online learning is 2.20 in the less category. (4) Product evaluation of the implementation of physical education online learning in public elementary schools in Bantul Regency, amounting to 2.29, is in the poor category. The learning process evaluation indicator is 2.26 in the less category and the evaluation of learning outcomes is 2.31 in the less category.

**KEYWORDS:** Evaluation, physical education online learning, the Covid-19 pandemic.

### INTRODUCTION

Online learning is a new way of teaching and learning that utilizes electronic devices, especially the internet, in the delivery of learning. Online learning completely depends on internet network access. As revealed by Hazaymeh (2021: 501); Muraveva (2020: 6) that online learning is a form of delivery of conventional learning that is poured into a digital format via the internet. Online learning is considered to be the only medium for delivering material between teachers and students, during a pandemic emergency (Almazova, et al., 2020: 368; Chansanam, et al., 2021: 349). Various media can also be used to support the implementation of online learning. For example, virtual classes use Google Classroom, Edmodo, and Schoology services, and instant messaging applications such as WhatsApp (Nadeak, 2020: 1764; Reyes-Chua, et al., 2020: 253; Huang et al., 2020: 3). Online learning can even be done through social media such as Facebook and Instagram (Kumar & Nanda, 2018: 3; Saho & Gupta, 2020: 163). One of the subjects affected by the Covid-19 pandemic is learning of Physical Sports and Health Education. Physical Education is an educational process that utilises systematically planned physical activity aimed at developing and improving individuals organically, neuromuscularly, perceptually, cognitively, and emotionally within the framework of national education (Walton-Fisette & Wuest, 2018: 12). Physical Education is not only an important part of human life. Physical Education is also an important part of the educational process. That is, through well-directed physical education, children will develop skills that are useful for filling their free time, engaging in activities that are conducive to developing healthy lives,

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developing socially, and contributing to their physical and mental health (Razouki, et al., 2021: 201). Physical activity is the main and dominant thing in Physical Education learning (Petrie et al., 2021: 103; Terekhina et al., 2021: 2272; Rud et al., 2019: 1630). Online learning has been widely carried out in an educational context, as evidenced by several studies that explain this (Mukhtar et al., 2020: 4; Bączek et al., 2021: 2; Zilfyu et al., 2020: 2; Hussein et al. al., 2020: 12; Dung, 2020: 45), online learning provides benefits in helping to provide access to learning for everyone, thereby removing physical barriers as a factor for learning within the scope of the classroom (Ahmed, 2018: 2; Pei & Wu, 2019: 4), even this is seen as something that is effective to implement, but according to Pilkington (2018: 214), it is undeniable that not all learning can be transferred into an online learning environment.

Evaluation is very closely related to the learning process. Evaluation is useful as a way to obtain learning development and to find out how far the learning objectives that have been formulated are met. In line with that, the 2013 National Education Standards (SNP) reveal that evaluation is an effort to collect and process information to increase the effectiveness of implementation at the national, regional and educational unit levels. There are many evaluation models with their respective formats and systematics, although sometimes they are found in several models that are the same as other evaluation models, one of which is the Context, Input, Process, Product (CIPP) evaluation model. This evaluation model was developed by Stufflebeam, and is oriented towards a decision (Birgili, 2021: 204; Finey, 2020: 27; Erdogan & Made, 2021: 2).

### METHOD

This type of research is evaluation research using a mixture of quantitative and qualitative methods. Sukmadinata (2017: 68) states that evaluative research is a research activity that evaluates an activity/program that aims to measure the success of an activity/program and determine the success of a program and whether it is as expected. This research is also directed to assess the success of the benefits, uses, contributions and feasibility of a program of activities from a particular unit/institution. This research refers to a systematic scientific procedure carried out to measure the results of a program or project (effectiveness of a program) in accordance with the planned goals or not, by collecting, analyzing and reviewing the implementation of programs that are carried out objectively. Then formulate and determine policies by first considering the positive values and benefits of a program. This research is to evaluate Physical Education online learning in public elementary schools in Bantul Regency.

**Table 1. CIPP Evaluation Instrument Grid**

Factor	Indicator	Σ Item	Respondents
<i>Context</i>	Physical education learning philosophy	5	Teacher
	Physical education learning objectives	5	Teacher
<i>Input</i>	Teacher profile (Teacher professionalism)	6	Teacher
	Profile of students (characteristics of students' affective, cognitive, and psychomotor abilities)	5	Parents
	Learning facilities and infrastructure	5	Teacher, principal
<i>Process</i>	Lesson plan	10	Teacher, principal
	Implementation of Learning	14	Guru
<i>Product</i>	Evaluation of the Learning process	4	Teacher, principal
	Evaluation of learning outcomes	4	Teacher, principal

Determining success criteria is very important in evaluation activities because without criteria, an evaluator will have difficulty considering a decision. Without criteria, the consideration that will be given has no basis. Therefore, determining the criteria to be used will make it easier for the evaluator to consider the value or price of the program components being assessed, whether they are in accordance with what was previously determined or not. Criteria for success need to be made by the evaluator because the evaluator consists of several people who need an agreement in assessing.

**Table 2. Success Criteria**

No	Interval	Criteria
1	3,26-4,00	Very Good
2	2,51-3,25	Good
3	1,76-2,50	Bad
4	1,75-1,00	Very Bad

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### RESULTS

#### 1. Context Evaluation

Context evaluation in this study consisted of Physical Education learning philosophy indicators and Physical Education learning objectives. The research results for each indicator on the context component are explained in Figure 1 as follows.

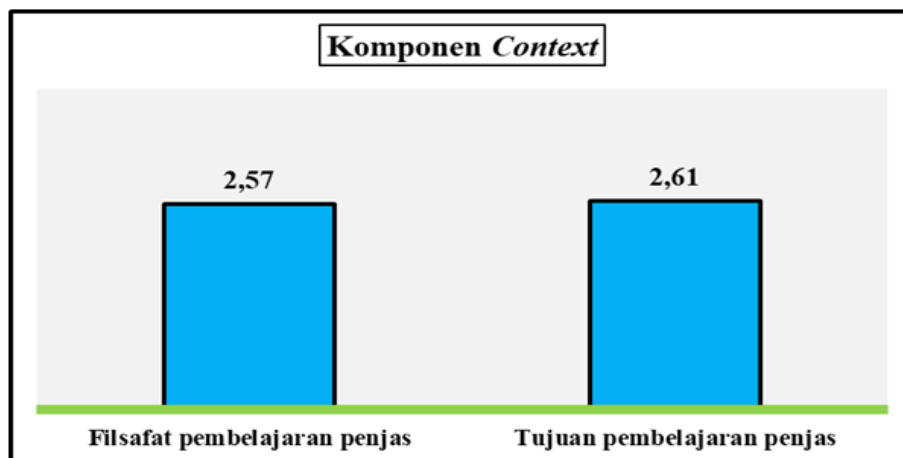


Figure 1. Evaluation Context Bar Chart

Based on Figure 1 above, it shows that the Physical Education learning philosophy indicator is 2.57 in the good category and the Physical Education learning objectives are 2.61 in the good category. Based on these results, it shows that the Contexts evaluation of the implementation of Physical Education online learning in public elementary schools in Bantul Regency is 2.59 in the good category.

#### 2. Input Evaluation

Input evaluation is related to the various inputs used to fulfill the process which can then be used to achieve the goal. The second component is input, which refers to all plans, strategies and budget approaches selected for implementation.

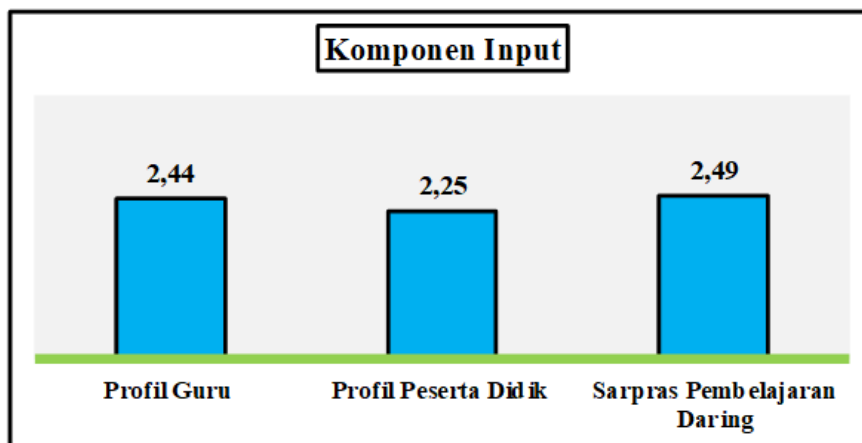


Figure 2. Evaluation Input Bar Chart

Based on Figure 2 above shows that the teacher profile indicator is 2.44 in the less category, the student profile is 2.25 in the less category, and learning facilities and infrastructure are 2.49 in the less. The input for evaluating the implementation of PHYSICAL EDUCATION online learning in public elementary schools in Bantul Regency is 2.39 in the less category.

#### 3. Process Evaluation

Process evaluation is directed at the extent to which the planned activities have been implemented. When a program has been approved and started, it needs to evaluate the process of providing feedback to the person responsible for implementing the program.

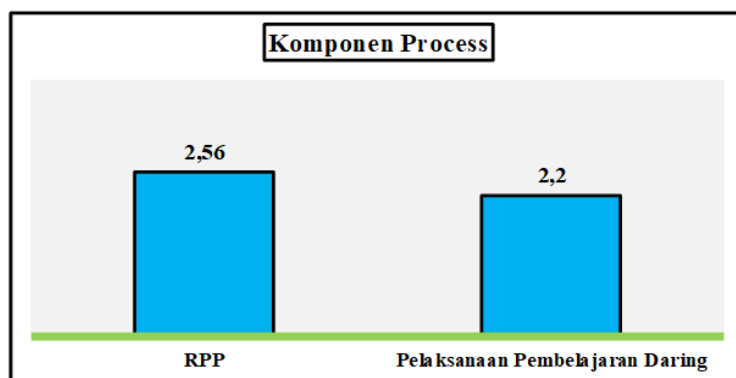


Figure 3. Evaluation Process Bar Chart

Based on Figure 3 above, it shows that the RPP indicator is 2.56 in the good category and the implementation of online learning is 2.20 in the less category. The process of evaluating the implementation of PHYSICAL EDUCATION online learning in public elementary schools in Bantul Regency is 2.38 in the less category.

#### 4. Product Evaluation

Product evaluation seeks to accommodate information to ensure the achievement of goals under any circumstances and also to determine what strategy to use regarding the procedures and methods applied, whether to stop doing it, modify it, or even continue it in its current form.

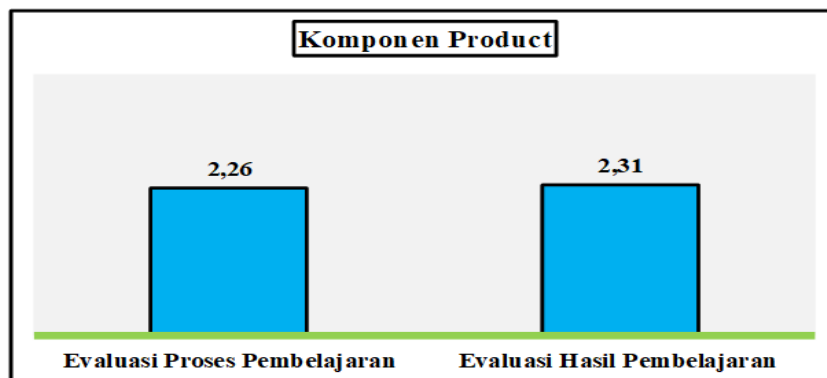


Figure 4. Evaluation Product Bar Chart

Based on Figure 4 above shows that the learning process evaluation indicator is 2.26 in the less category, and the evaluation of learning outcomes is 2.31 in the less category. The product evaluation program for evaluating the implementation of Physical Education online learning in public elementary schools in Bantul Regency is 2.29 in the less category.

#### DISCUSSION

Evaluation is a systematic and subjective assessment of an ongoing or completed object, program or policy, both in terms of implementation design and results, where the purpose of program evaluation is to determine the relevance and achievement of objectives, efficiency, effectiveness, impact and sustainability, in where an evaluation must provide reliable and valuable information to be able to draw lessons for the decision-making process. The study results showed that the evaluation of implementing Physical Education online learning in public elementary schools in Bantul Regency needed to be in a better category.

Online or online learning is a form that uses the internet, so it can connect students with their learning resources separately and even far apart but can communicate with each other directly (synchronously) or indirectly (asynchronously). With online learning, students can interact with teachers using several applications or websites such as video conference zoom, Google Classroom, telephone or live chat, email or via WhatsApp. That is, the implementation of online learning utilises digital devices as a means and the internet as a system (Zuliyanti et al., 2021: 1462). The evaluation of the implementation of PHYSICAL EDUCATION online learning in public elementary schools in Bantul Regency based on the components of context, input, process, and product results are explained as follows.



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### 1. Context Evaluation

Based on the results of the study, showed that the evaluation of the implementation of Physical Education online learning in public elementary schools in Bantul Regency was in a good category. The Physical Education learning philosophy indicator is 2.57 in the good category. The teacher's ability to formulate learning objectives is a teacher's ability/mastery which includes the potential, knowledge, and skills possessed by the teacher in formulating behaviour or abilities that students want to achieve when the learning process is carried out. The expected capabilities must be formulated specifically and operationally so that later they can be measured (value).

The Physical Education learning objective indicator is 2.61 in the good category. The teacher's ability to formulate learning objectives is a teacher's ability/mastery which includes the potential, knowledge, and skills possessed by the teacher in formulating behaviour or abilities that students want to achieve when the learning process is carried out. Physical Education contribution will only be meaningful when the experiences in Physical Education are related to a person's life process. **If the** Physical Education experience does not contribute to other educational experiences, then there must be a mistake in implementing the Physical Education program (Budi et al., 2020; Nur et al., 2020; Suhartoyo et al., 2019). Meaningfulness in the Physical Education learning process will be realised if the teacher understands the goals of physical education and applies them to students in learning.

The purpose of physical education includes four aspects (1) Physical development. This goal is related to the ability to perform activities that involve the physical strength of several organs of a person's body (physical fitness). (2) Movement development. This goal relates to the ability to move effectively, efficiently, smoothly, beautifully, and perfectly (skillfully). (3) Mental development. This goal relates to the ability to think and interpret the overall knowledge about physical education in the environment. (4) Social development. This goal relates to students' ability to adapt to a group or society (Mustafa & Dwiyojo, 2020).

In order to help carry out the Physical Education learning process, especially in learning sports games, even though the learning facilities are less supportive, the learning process must still be given and carried out according to the curriculum. Effective Physical Education learning is reflected when students can be actively involved during learning, and students can gain successful and satisfying experiences in every learning activity (Budi, Hidayat et al., 2019). Physical education learning programs given to students should pay attention to the level of growth and development of students' abilities so that students learn effectively and experience success (Sayfei et al., 2020).

### 2. Input Evaluation

Based on the results of the study showed that the evaluation of the program input for evaluating the implementation of Physical Education online learning in public elementary schools in Bantul Regency was good. Haryanto (2020: 97) explains that input evaluation provides information about the selected input, strengths and weaknesses, strategies, and designs to realise goals. The goal is to help manage decisions, determine what alternative sources to take, what plans and strategies to achieve needs, and what work procedures to achieve them. The input evaluation component itself consists of several, namely human resources, supporting facilities and equipment, funds or budgets, and various procedures and rules needed.

The teacher profile indicator is 2.44 in the less category. Teachers are required to be innovative in using online learning models. Apart from that, plus many teachers still need to be proficient in teaching using internet technology or social media, especially in various regions. This can be one of the reasons for low online learning. This is in line with Soetban's opinion (2021: 9) that teachers only facilitate class libraries, modules, textbooks, supporting books, and, most importantly, internet access and provide several computers for students who do not carry laptops. The form of e-learning (electronic-based learning) will continue to grow. As computer ownership grows rapidly in the world, e-learning is becoming more and more developed and accessible. Internet connection speeds are increasing, and opportunities for more multimedia training methods are emerging. The hope for learning with the online model is to become a solution that can help to learn in the midst of the Covid-19 pandemic.

Indicators of student characteristics of 2.25 at less. During the Covid-19 pandemic, online learning has been carried out in almost all corners of the world, but so far, learning with an online system has never been carried out simultaneously (Sun et al., 2020: 688). In this online learning process, all elements of education are asked to provide learning facilities so that they remain active even though it is carried out without face-to-face meetings. Parents are required to be able to guide their children to learn from home and be able to replace teachers at school, so the role of parents in achieving online learning goals and guiding children while studying at home becomes very important. The reason is that not all students are used to learning online (Purwanto et al., 2020: 4). Students do not yet have a distance learning culture because so far, the learning system has been carried out face-to-face, in Indonesia the use of e-learning is still relatively slow, in contrast to developed countries outside which are already using e-learning at a more advanced stage. Firman & Rahayu (2020: 12) argues that in areas that do not have

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good internet network connectivity, online learning shows a different trend, areas that are not covered by the internet network must go to certain areas.

The indicator for online learning facilities and infrastructure is 2.49 in the less category. Online learning is a distance learning system that uses computer network media or devices and internet access. Online learning can be carried out well if it is supported by its constituent components. Huzaimah & Amelia (2021: 535) explain that online learning requires adequate facilities and infrastructure, such as laptops, computers, smartphones, and internet networks. Obstacles faced in online learning are inadequate supporting facilities and infrastructure (Suherman, 2021: 123), lack of skills in mastering technology by teachers (Maphalala et al., 2021: 31; Pandey et al., 2021: 11), limited internet network (Simamora, 2020: 86). Various limitations in online learning and physical education naturally encountered various obstacles and obstacles during the Covid-19 pandemic.

### 3. Process Evaluation

Based on the results of the study, showed that the process of evaluating the implementation of Physical Education online learning in public elementary schools in Bantul Regency resulted in the poor category. The RPP indicator is 2.56 in the good category. In the implementation of online or online learning, obstacles or discrepancies are often found with proper learning. Many assume that the responsibility of teachers in carrying out online learning is much lighter than face-to-face learning (Semradova & Hubackova, 2016: 11). What's more, Saefulmilah & Saway (2020: 393) explain that online learning conducted by teachers is currently only limited to knowledge transfer activities. Students lack an in-depth understanding. The level of thinking declines, and the teacher's failure to see the extent to which teaching materials can influence behaviour is a new challenge for teachers.

The fact that happened in the field, there are still many teachers who still have difficulties in compiling and preparing lesson plans and teaching materials during a pandemic like today. The difficulties faced by teachers included the following: 1) distinguishing online lesson plans and lesson plans which were usually used in face-to-face learning in class before the pandemic; 2) in general, teachers have never participated in RPP preparation training for online (online) learning, so teachers find it difficult to design online learning activities; 3) teachers also encounter difficulties in how to assess online learning activities; 4) other difficulties for teachers are the difficulty of finding main references for designing online learning lesson plans; 5) Teachers also still find it difficult to determine online learning strategies. In addition, teachers also still find it difficult to prepare online teaching materials. Is the teaching material the same as the teaching material that is usually used in class, or is there really a difference. The constraints experienced by the teacher became one of the problems in the life of the teacher's learning process during the Covid-19 pandemic.

Referring to factors in general, the obstacles to online learning involve many basic aspects, which in essence, are related to equity and readiness, such as supporting devices such as information media and the ability of teachers to learning participants. Even though later the elements of its implementation were successfully fulfilled both in terms of supporting aspects such as technology and network, it will still only be easier for urban areas where the level of facilities is adequate. Even if it goes on later, there will always be gaps causing obstacles in the implementation process because the facts show that the problems of online learning systems are indeed quite complex where. The impact is not only on teachers and students but also parents.

The indicator for implementing online learning is 2.20 in the less category. Educators' efforts to create the expected conditions will be effective if: first, the factors that can support the creation of favourable conditions in the teaching and learning process are known precisely. Second, it is known for the expected problems that usually arise and can damage the teaching and learning climate. Third, mastery of various approaches to classroom management and knowing when and for which problems an approach is used. Therefore the teacher's skill to read the classroom situation is very important so that what is done is effective. Examining the basic concepts of classroom management, studying various management approaches and trying them out in teaching and learning situations.

### 4. Product Evaluation

Based on the results of the study, it was shown that the evaluation of the program for evaluating the implementation of PHYSICAL EDUCATION online learning in public elementary schools in Bantul Regency still needed to be improved. The learning process evaluation indicator is 2.26 in the less category. A good and careful assessment will provide an objective description of the process and output of learning outcomes. In this regard, Mardapi (in Jumaeda & Alam, 2020: 4) says that the assessment system used in educational institutions must be able to: (1) provide accurate information, (2) encourage students to learn, (3) motivate educators to teach, (4) improve the performance of institutions, and (5) improve the quality of education. Assessment by the teacher can be known in terms of planning, implementation and reporting of student learning outcomes. Assessment planning can be detected through the teacher's syllabus, lesson plans, and assessment questions. The implementation of the assessment can be seen in the student documents and the teacher's assessment book. Reporting of student learning outcomes

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can be seen from the report book (report) of student learning outcomes.

The learning outcomes evaluation indicator is 2.31 in the less category. The benchmark for the success of a lesson depends on the achievement of the learning competency goals of students, which include cognitive, affective, and psychomotor competencies and the embodiment of the application of values both in thinking and acting. Ensuring that all students have mastery of competence in teaching material and then continue to the next material is the purpose of learning completeness. This learning mastery refers to the competencies achieved and is supported by indicators to measure the level of achievement. All aspects of learning completeness can only be achieved by collaboration and cooperation between the two parties, namely teachers and students.

Ignorance of students about the assignments given by the teacher and not collecting assignments is a problem considering the learning material must continue. Teachers cannot always force students to do assignments and wait for students to submit assignments. Teachers cannot control students to really study at home and do the assignments given by the teacher. Learning material at school cannot always be learned through the material, but it also must be carried out directly so that students understand and understand the material being studied.

Students who have limited time to use gadgets during face-to-face learning, they change to using gadgets every day. Online learning changes exams that should be carried out in normal conditions by students in practice to only sending videos of practicals carried out by students. Even exams that should have been done could have been cancelled. This online learning also has an impact on lessons that require a lot of practice during the learning process under normal conditions. The skills that students should master during learning are less than optimally accepted by students. The collection of assignments that are only in the form of videos or photos makes it difficult for the teacher and causes fatigue when correcting the results of assignments from students. Especially if there are students who do not collect the assignments given, the teacher cannot give grades if this keeps happening.

### CONCLUSION

Based on the study results, it can be concluded that the evaluation of the implementation of Physical Education online learning in public elementary schools in Bantul Regency is 2.41, in the poor category. Based on each evaluation component, the following conclusions are obtained. (1) The context of evaluating the implementation of Physical Education online learning in public elementary schools in Bantul Regency, at 2.59, is in a good category. The Physical Education learning philosophy indicator is 2.57 in the good category, and the Physical Education learning objectives are 2.61 in the good category. (2) The input for evaluating the implementation of Physical Education online learning in public elementary schools in Bantul Regency, amounting to 2.39, needs to be in the better category. The teacher profile indicator is 2.44 in the less category, the student profile is 2.25 in the less category, and the learning facilities and infrastructure is 2.49 in the less. (3) The process of evaluating the implementation of Physical Education online learning in public elementary schools in Bantul Regency, amounting to 2.38, is in the poor category. The RPP indicator is 2.56 in the good category, and the implementation of online learning is 2.20 in the less category. (4) Product evaluation of the implementation of Physical Education online learning in public elementary schools in Bantul Regency, which is 2.29, is in the poor category. The learning process evaluation indicator is 2.26 in the less category, and the evaluation of learning outcomes is 2.31 in the less category.

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## Optimization Design of Reducing Co & HC Gas through Alloy Converter Catalyst Prototype Model



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**ABSTRACT:** Technological developments have an impact on increasing the number of motorized vehicles such as motorcycles, cars, and other modes of transportation. This causes air pollution impacts such as gas emissions from fossil fuels. Substances from hazardous exhaust gases consist of carbon monoxide (CO), carbon dioxide (CO<sup>2</sup>), nitrogen oxides (NO or NO<sub>x</sub>), and hydrocarbons (HC). Therefore, the purpose of this research is to design a catalytic converter through a mixture of several metals obtained from various wastes in Small and Medium Enterprises. A mixture of copper, brass, aluminium and zinc to be created as a muffler or exhaust on the test vehicle, namely the 2005 Car. The observed exhaust emissions are CO & HC using a Gas Analyzer. Measurements were observed at vehicle rotation of 1000 rpm, 2000 rpm, 3000 rpm, 4000 rpm and 5000 rpm. The results showed that the highest proportion of reduced CO levels was the use of a catalyst at 2000 rpm engine speed, which was 5.23 with Pertamina fuel, while petrolite fuel using a catalyst with 2000 rpm engine speed was 5.5. The highest percentage reduction in HC levels was when using a catalyst with engine speed of 1000 rpm of 645% with Pertamina fuel, while for pertalite fuel using a catalyst with engine speed of 1000 rpm was 705.5%

**KEYWORDS:** Copper, Aluminum, Zinc, Catalytic Converter, Gas Analyzer

### 1. INTRODUCTION

A healthy and comfortable living environment is one of the humans needs to live life in society. A healthy environment is created as a result of a balanced ecological relationship between humans and their environment (Flamarz et.al, 2019). Healthy environmental conditions are indicated by low pollution. Pollution has an impact on the disruption of human activity and health. Pollution is a substance, energy or component that is destructive, pollutes and disrupts the balance when it enters the environment (Dewanto et.al, 2021). The impact of pollution is contaminating the environment and can cumulatively damage human health.

Pollution can contaminate air, sound, water and soil. One of the pollutions that affect humans is air pollution. Air pollution is a source of pollution that is harmful to humans which can cause 41-53 percent of cases of premature death related to air quality (Jaichandar et.al, 2012). The transportation sector is the biggest contributor to environmental pollution, which is around 83% (Hasan et.al, 2018). Vehicles with conventional engines or vehicles with a carburettor system are not widely used by Indonesian people. In general, Indonesian people switch to using machines with Electronic Fuel Injection systems. or EFI not only cars but also motorcycles (Disel et.al, 2016). In general, Indonesian people use motorbikes a lot in their daily activities because motorbikes are more practical to use than cars. The fuel used for motorcycles is liquid mineral fuel. The results of the combustion of fuel coming out of the engine are a source of air pollution that disturbs the environment and human health (Amin & Subri, 2016). According to Mohanti et.al (2020) Burning fossil fuels produce pollutants that can cause smog, acid rain, global warming and climate change. At a certain concentration level, the effects of the gas will be inhaled by humans continuously. This can endanger the health and cause death. According to Primasanti & Aryani (2022) Gas is exposed to the body and inhaled by humans causing respiratory tract irritation, eye irritation and skin allergies to cause lung cancer. Source and health standards for exhaust emissions are presented in the table, while the standards for health or thresholds for health are shown in Table 1 below:



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Table 1. Pollutant Threshold Value for Health (Twigg, 2011)

Pollutant	Description
Carbon dioxide(CO)	Health standard: 10 mg/m <sup>3</sup> (9 ppm)
Sulfur oxide (SOx)	Health standard: 9 ug/m <sup>3</sup> (0.03 ppm)
Particulate matter	Health standards: 50 ug/m <sup>3</sup> for 1 year; 150ug/m <sup>3</sup>
Oksida nitrogen (NOx)	Health standard: 100 pg/m <sup>3</sup> (0.05 ppm) for 1 hour
Ozone (O <sup>3</sup> )	Health standard: 235 ug/m <sup>3</sup> (0.12 ppm) for 1 hour

The catalytic converter is a tool that is installed on the muffler or after the exhaust manifold. This tool serves to reduce pollution from incomplete fuel combustion results when the gas comes out of the exhaust will be more perfect. According to Hamid et.al (2022) a catalytic converter is a tool used to reduce imperfect exhaust emissions in motorized vehicles. Installing a catalytic converter aims to reduce excess pollution, especially in older model vehicles, for example in vehicles manufactured under 2005. Vehicle with years of manufacture under 2005 are included in the category of vehicles with older years, so they are more wasteful in fuel consumption. However, this type of vehicle is still widely used for transportation facilities on the island of Java. More pollutant gases produced by older model vehicles are caused by an imperfect combustion process

(stoichiometry) due to the age of vehicle components (Chen & Lv, 2015). Besides that, gasoline-powered four-wheeled vehicles with years of manufacture under 2005 have not been equipped with a catalytic converter and require a special design that must be adapted to transportation type. The catalytic converter is a device that is installed in the exhaust (muffler) of a vehicle to filter certain gases contained in the exhaust gases. Initially catalytic converters were used break down CO and HC gases. HC and CO gases are catalyzed into CO<sub>2</sub> which plants can use as a basic ingredient for photosynthesis (Naufal et.al, 2022). As the research progresses, it resulted that catalytic converters can also reduce NO<sub>x</sub> levels by converting to N<sub>2</sub> (Telaoembanoea, 2016).

In the catalytic converter, the exhaust gas passes through a large surface with a certain model that has been coated with a catalyst. Alternative materials to replace palladium and rhodium, which are often used for catalysts, are ceramics monolith, aluminum, copper, or other transition metals (Dedoussi, 2020). Transition metals and metal materials are effective for reducing and oxidizing CO and HC (Majedi & Puspitasari, 2017; Ghaly & Winoko, 2019). To replace precious metals which are quite expensive, in this study a combination of aluminum, brass, copper and zinc materials was used as a catalytic converter material. This study aims to review the effectiveness of these materials in reducing CO and HC exhaust gases (Istiqomah & Marleni, 2020). From this research it is hoped that the exhaust gas produced will be more environmentally friendly because there are 4 absorbent metal materials. The aims of this research using variations of the catalytic converter material are: to analyze the effect of the combined arrangement of catalytic materials on CO emissions, to analyze the effect of the combined arrangement of catalytic materials on HC emissions and to analyze the amount of exhaust gas reduction and its effect on environmental health.

## 2. MATERIAL AND METHOD

### 2.1 MATERIAL

#### The catalytic converter manufacturing process

1. The steps of the catalytic converter manufacturing process: *Preparation of Design Drawings*

The catalytic converter design drawings used for research are in accordance with Figure 1

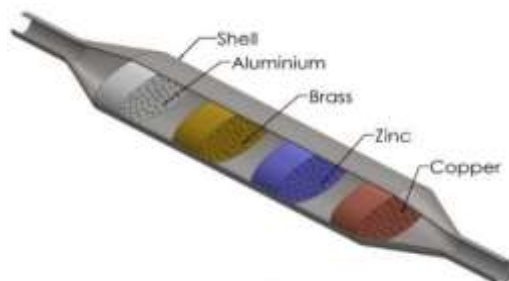


Figure 1. Catalytic Converter Image Design

2. The materials used as catalytic converters are aluminum, brass, copper and zinc, respectively. Each material is cast with a thickness of 50 mm then drilled with a hole diameter of 3mm with a distance between the holes 3 mm after finishing the edges drilled with a diameter of 2 mm with a depth 4 mm as much as 6 points.

3. Cut a stainless steel sheet with a size of

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300 mm x 700mm as a cover and connection directly with the converter catalytic material.

4. Assemble the catalytic converter material by stainless steel sheet with size fixing bolts 2mm by 4mm deep.
5. Cut a low carbon steel plate with a size of 310 mm x 710 mm then form the outer cover with an oval shape with the road connected by the SMAW welding process then raft between the materials catalytic converter which has been discovered stainless steel with inserted into the outer cover and fastened with bolts 3 mm in diameter and 5 mm in depth.
6. Weld the top and bottom covers of the assembled catalytic converter sections
7. Connect the top and bottom ends with a 3 inch steel pipe.
8. Install the catalytic converter device that has been made on the exhaust system on the front

### 2.2 METHODS

This research includes survey and laboratory research, namely research that takes samples from a field and laboratory test as the main data collection tool. The research flow can be seen in the following

flowchart:

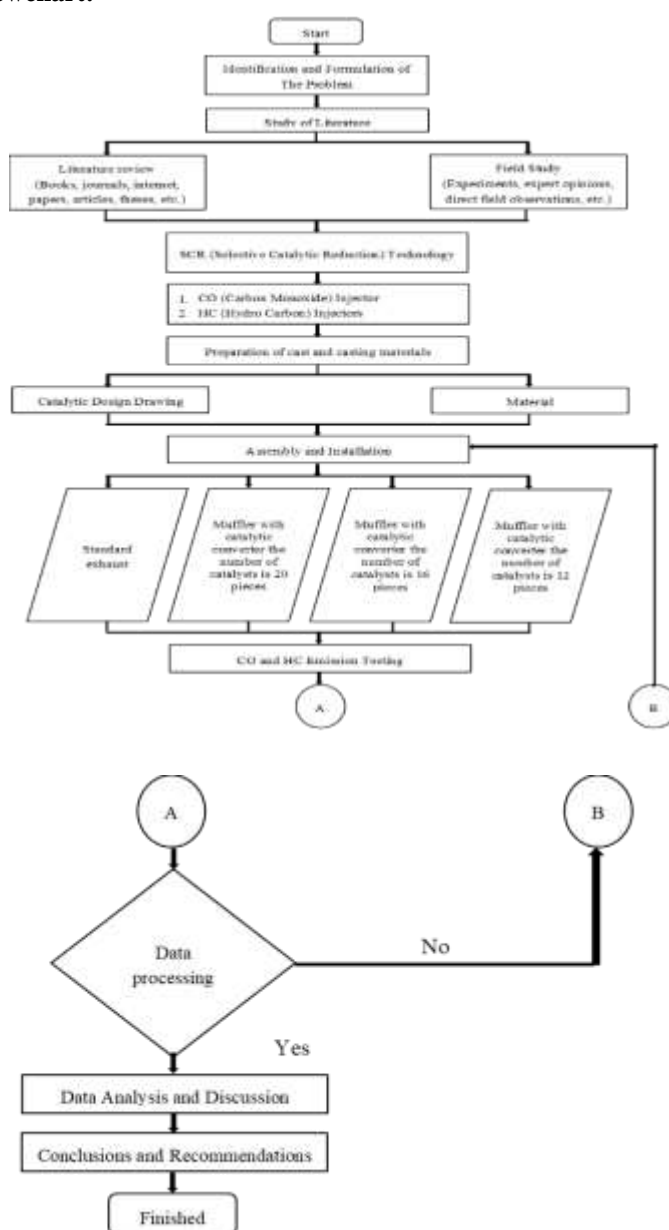


Figure 2. Research Flowchart

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### 3. RESULTS AND DISCUSSION

#### 3.1 CO testing with a catalytic converter and not using a catalytic converter

The exhaust emission test results for CO catalytic converters used and no catalytic converters used can be seen in Tables 1 and 2.

**Table 1.** Exhaust Emission Test Results in not used Catalytic Converter for CO Testing on 2005 Cars with Petrolite fuel

Machine Rotation	Experimenta I				Total	Average
	1st	2nd	3rd	4th		
1000	2,2	2,8	2,5	2,7	10,2	2,55
2000	5,14	5,23	6,12	5,62	22,11	5,53
3000	1,29	1,35	2,01	1,72	6,37	1,59
4000	0,29	0,32	0,26	0,33	1,2	0,3
5000	0,47	0,36	0,38	0,42	1,63	0,41

**Table 2.** Exhaust Emission Test Results with Catalytic Converter for CO Testing on 2005 Cars with Pertamina Fuel

Machine Rotation	Experimental				Total	Average
	1st	2nd	3rd	4th		
1000	1,29	1,5	1,69	2,66	7,14	1,79
2000	4,6	5,45	4,44	6,44	20,93	5,23
3000	0,39	0,39	1,83	1	3,61	0,9
4000	0,21	0,19	0,24	0,2	0,84	0,21
5000	0,19	0,27	0,24	0,27	0,97	0,24

Tables 1 and 2 show the test results for CO exhaust emissions using a catalytic converter and without using a catalytic converter. In general, there is a decrease in exhaust emissions for both 1000 rpm, 2000 rpm, 3000 rpm, 4000 rpm and 5000 rpm engine speed by using a catalytic converter. In detail, for the 1000 rpm rotation, the decrease is around 29.8%, for the 2000 rpm rotation the decrease is around 5.4%, for the 3000 rpm rotation the decrease is around 44.2%, and for the 4000 rpm rotation the decrease is around 30%. As for the 5000 rpm rotation, the decrease is around 17%.

#### 3.2 HC Testing with a Catalytic

#### Converter and Without Using a Catalytic Converter

The exhaust emission test results for HC catalytic converters used and no catalytic converters used can be seen in Tables 3 and 4.

**Table 3.** Exhaust Emission Test Results in not used Catalytic Converter for HC Gas Tests on 2005 Cars with Pertamina Fuel

Machine Rotation	Experimental				Total	Average
	1st	2nd	3rd	4th		
1000	788	621	769	652	2830	707,5
2000	601	751	676	533	2561	640,25
3000	399	225	256	255	1135	283,75
4000	221	124	170	144	659	164,75
5000	444	110	142	116	812	203

**Table 4.** Exhaust Emission Test Results in Catalytic Converter used for HC Gas Tests on 2005 Cars with Pertamina Fuel

Machine Rotation	Experimental				Total	Average
	1st	2nd	3rd	4th		
1000	590	703	668	619	2580	645
2000	430	405	437	543	1815	453,75
3000	136	139	258	224	757	189,25
4000	84	102	101	142	429	107,25
5000	80	79	90	105	354	88,5

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Following are the results of emission tests for HC with and without catalytic converters as shown in Tables 3 & 4 above. In general, there is a decrease in HC exhaust emissions for engine speed of 1000 rpm, 2000 rpm, 3000 rpm, 4000 rpm and 5000 rpm by using a catalytic converter. In detail for the 1000 rpm rotation the decrease is around 8.8%, for the 2000 rpm rotation the decrease is around 29.1%, for the 3000 rpm rotation the decrease is around 33.3%, and for the 4000 rpm rotation the decrease is around 30%. As for the 5000 rpm rotation, the decrease is around 56.4%. These results are in accordance with research conducted by previous researchers that transition metals are very effective for reducing and at the same time for oxidizing CO and HC (Majedi & Puspitasari, 2017).

### 4. CONCLUSION

Based on the research data and discussion, several conclusions can be drawn. In the addition of catalytic converters made from waste metal copper, aluminum, brass and zinc in the form of a filter for carbon monoxide (CO) exhaust emissions, it is generally obtained that with catalytic converters there is a decrease in exhaust emissions, the greatest decrease occurs at 3000rpm of 44.2%. As for HC emissions, it is generally obtained that with a catalytic converter there is a decrease in exhaust emissions, the greatest decrease occurs at 5000 rpm of 56.4%.

### 5. ACKNOWLEDGMENT

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## Empirical Evidence on Analysing the Quality of Life of Informal Settlement for Regeneration Project: Case Study of Boa Wala Settlement, Lahore



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**ABSTRACT:** The empirical evidence from literature has disclosed that the extensive share of world's population continues to live in informal settlements due to extensive economic, social, and welfare disparities. These informal settlements possess the attributes of poor infrastructure and utilities services. In reality, due to excessive housing prices, economic incapacity, and insufficient technical abilities among poor people, they are forced to live in such dilapidated settlements. However, over the times, governmental institutes have adopted several distinct strategies to enhance the quality of life (QOL) of inhabitants living in informal settlement. Therefore, this research study intends to examine the contemporary living conditions in informal settlement using multi-indicator analysis. To assess the QOL, five leading indicators including building density, utilities services, road infrastructure, urban furniture, and social services and their associated 29 sub-indicators was identified and Bao wala as informal settlement in Lahore, Pakistan has been selected as case study area. A semi structured questionnaire was formed and sample size of 99 was calculated to perform socio-economic surveys. In the surveys, proportionate and random sampling technique was used to gain diverse outcomes. In the data analysis, descriptive analysis technique was used to examine the public perceptions regarding contemporary utilities services and regression analysis techniques was used to explore the relation between perceived and dependent variables. The results outcomes have shown that majority of the population of Bao wala settlement express extreme dissatisfaction regarding all the perceived indicators based on the provision, maintenance, and operation quality; however, the regression analysis indicates that all the five leading indicators have strong and significant relation with the dependent variable.

**KEYWORDS:** Informal settlements, Quality of Life (QOL), Public Perception, Regression Analysis, Multi-indicator Analysis, Urban Regeneration

### I. INTRODUCTION

The past literature has revealed that only 13% of the world's populace lived in urban areas before the commencement of the industrial era, but these numbers have increased dramatically in the 20th and 21st centuries (Das, 2015). However, the world population that reached till 8 billion (Gan, et al. 2023) has only a small share of 3.1 billion people that live in the rural settlements (Ghaderpour, 2021). As a result, metropolitan regions have received significant attention, financial assistance, and services that leaved the rural communities more impoverished. The previous century has seen an increase in the economic, social, and welfare disparities between urban and rural regions, making the metropolitan atmosphere more appealing to immigrants. Most of these immigrants now prefer to reside in the city's shantytowns instead of in rural areas. In reality, because of excessive price of housing, economic incapacity, and insufficient technical abilities among immigrants, most immigrants unintentionally live in urban areas with poor infrastructure, utilities, and environmental quality (Sarkar, 2020).

The empirical evidence from literature has disclosed that the extensive share of world's population continues to live in informal settlements, served with the dilapidated facilities. According to an estimate of UN Habitat report, in 2015, about 25% (one quarter) of world's population was inhabited in slums which is approximate to one billion slum inhabitants (UN-Habitat, 2020); however, this proportion has continued to aggravate further. Across the world, just in past 3 decades (since 1990), 213 million dwellers have further been added to the slum's population (UN-Habitat, 2015). It is estimated that, based on the persistent proliferation of informal settlements, the number of people living in slums will nearly be 2 billion by 2030 and 3 billion by 2050 (UN-Habitat, 2020).

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In the one billion inhabitants of world's slum population, a predominant proportion of 881 million population lives in informal settlements of developing world, which was escalated from 689 and 791 million residents in 1990 and 2000, respectively (United Nations Habitat, 2015). Important thing to mention here is that about 50% of world's slums dwellers are still residing in the Asia-Pacific region of global south (Arif et al., 2022; UN-Habitat, 2004). Just in Asia, 30% of urban population is living in slums and informal areas (United Nations Habitat, 2015); however, in Africa, this proportion is even worse, where more than half of urban population (61.7%) is residing in slums, which is estimated to escalate from 400 million to 1.2 billion by 2050 (United Nations Habitat, 2015).

In current realities, such as large number of populations is still residing in informal areas due to their impoverishment and inability to transition to a formalized urban environment due to the city's competitive market dynamics (Okurut & Charles, 2014). Due to the impoverishment and inability to transition to a formalized urban environment due to the city's competitive market dynamics, many individuals still reside in subpar housing (Okurut & Charles, 2014). As a result, the massive growth of urban slums has been identified as a worldwide concern for decades since poor urban environmental variables and their continuous effects on the standard of living in informal housing have emerged as the most contentious issue in cities. Additionally, in slum areas, density of population, physical infrastructural developments, and environmental attributes have all surpassed the acceptance criteria for population safety, environmental protection, and long-term economic growth. As a result, the quality of life is much worse than it is elsewhere (Amao, 2012).

In order to deal with such challenges, over the times, governmental institutes have adopted several distinct strategies to enhance the living standard of the population living in slums and informal settlements. Distinct approaches were adopted by government institutes in different time eras with unique aim and objectives, such as, Reconstruction in 1950s, Revitalization in 1960s, Renewal in 1970s, Redevelopment in 1980s and Regeneration in 1990s (Roberts, 2017).

One of the primary objectives of urban regeneration strategies over the past few decades has been to pay close attention to uplift the quality of life and the surroundings in poor neighbourhoods. The phrase "quality of life" is utilized to measure people's overall wellbeing in communities, but it has a very broad and complicated definition that changes through time and with people's views (Amao, 2012). The idea of quality of life serves as a guide for meeting human needs and a yardstick for assessing satisfaction or dissatisfaction with many facets of life (Pourtaheri, et al. 2011). Therefore, the primary goal of this research is to examine the living conditions in unplanned settlements using multi-indicator analysis, as well as the influence of quality-of-life factors on improving the current situation in such neighbourhoods. To attain this goal, five leading indicators and 29 sub-indicators were used in this research project to investigate various aspects of quality of life in informal settlements.

### **II. CASE STUDY AREA**

This research's case study location is Bao Wala, an informal settlement in Lahore's metropolitan area. Lahore, Pakistan's second most populous city, has 11.12 million residents in 2017, with a 3% annual growth rate (Statistics, 2017), and is expected to reach 12.89 million by 2022. Lahore, Pakistan's largest city, has 1.7 million people living in more than 300 informal settlements, both legal and unregulated (Ahsan, 2019). In Pakistan, these informal settlements are known as Katchi Abadies. Out of the 300 informal communities, the Bao wala neighbourhood on Lahore's eastern outskirts has been chosen as a case study location. The spatial location of Bao wala is illustrated in Figure 1.

As a case study location, Bao wala has an estimated geographical size of 119.6 Acres (about 0.48 km<sup>2</sup>) and comprises of 2,720 property lots. Only a few informal communities in the Lahore metropolitan area are spread out on such a huge scale, and Bao walla is one of them. Bao wala is situated a few kilometres away from Lahore's main airport. The informal community of Bao walla is situated between two major roads in Lahore: The Lahore Ring Road and the Barki Road. Furthermore, the limits of the Bao wala informal community are shared with a diverse urban fabric of planned communities, including the Aksary X housing project, the DHA Defence Housing scheme, Eden City, Green City, and Paragon City (shown in Figure 2). All the above-mentioned characteristics of Bao wala settlement make it the finest case study region for investigating the quality of life on residents using multi-indicator analysis.



# Empirical Evidence on Analysing the Quality of Life of Informal Settlement for Regeneration Project: Case Study of Boa Wala Settlement, Lahore

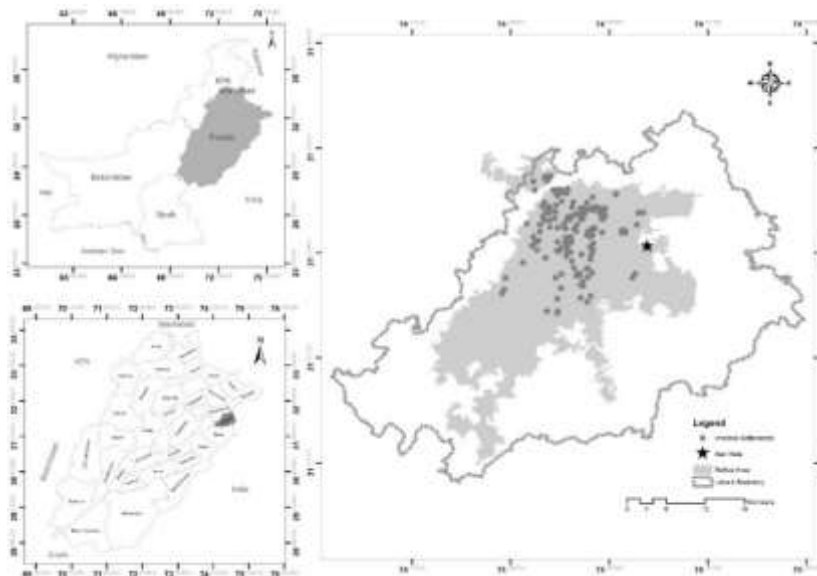


Figure 1. Spatial Location of Bao Wala in Lahore



Figure 2. Surrounding Characteristics of Bao Wala Settlement

### III. MATERIAL AND METHODS

After selecting Bao wala informal settlement as case study for this research, the next important task was the identification of diverse indicators to investigate the quality of life. Following that, the questionnaire was formed and socio-economic surveys of the selected settlement was conducted. To conduct survey, sample size was calculated. All these steps are discussed in detailed in below sections:

#### A. Indicators Identification

In this research study, wide range of indicators are selected to investigate the quality of life in Bao wala informal settlement. These identified indicators encompass the five leading indicators including building density, utilities services, road infrastructure, urban furniture, and social services and 29 sub-indicators.

Building density indicator has further been divided into three sub-indicators which are the fragility of building structures, floor area ratio (FAR) and living space as overcrowding. These indicators largely describe the quality and density of built-up structures in the neighborhood. The utilities service is the next key indicator created in this research, which is further subdivided into eight sub-indicators. Safe drinking water, electricity, solid waste management, and sanitation are major indicators proclaimed in the UN Habitat recommendations for upgrading slums and informal settlements, which are also mandated as fundamental human necessities (Winston, 2010). Aside from the improvement of these utility services, drainage flow management, gas supply, and firefighting have all been prioritized in the redevelopment of any location (reference are illustrated in

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TABLE 1).

Another key indicator used for this research study is road infrastructure, which is further subdivided into three sub-indicators: road pavement, pedestrian walkways, and parking space. It was vital to compute the qualities of road infrastructure since it connects different communities and determines our commuting routes; also, it has a substantial influence on the economic sustainability of the societies (Ben, 2019). Another significant indication of this research is urban furniture, which is divided into five sub-indicators: streetlights, street plantation, street cleanliness, sitting benches, and bus stops/ shelters. Incorporating urban furniture as a key indication in this research was critical because it helps enliven public areas, which is seen to be a construction technique for sustainable urban development.

The final indicator chosen in this study is social services, which is comprised of ten sub-indicators: health services, educational institutes, recreational places, parks and green spaces, public transportation, workplace, administrative centers (town hall), sport facilities, cultural and religious places, and shopping centers. The wide variety of variables listed above were chosen based on their significance and relevance to the urban regeneration process of any settlement and will thus help in the detailed investigation of the quality of life in Bao wala informal settlement.

**Table 1. Perceived Indicators To Investigate The Quality Of Place**

Main Indicators	Abb.	Sub-Indicators	Sources
Building Density	BD1	Fragile Building Structure	Samper, et. al, 2020; Shahraki, et. al, 2020; Habitat, U.N., 2018; Jones, P., 2017; Habitat, U.N., 2013; Ratti, et. al, 2005.
	BD2	Floor Area Ration (FAR)	
	BD3	Living Space (Person per Room)	
Utilities Services	US1	Safe Drinkable Water	Samper, et. al, 2020; Shahraki, et. al, 2020; Patel, 2019; Habitat, U.N., 2018; McCartney and Krishnamurthy, 2018; Numbeo, 2018; Jones, P., 2017; Taubenböck and Kraff, 2014; Dovey and King, 2011; Martinez, et.al, 2008; Njamwea, M.M., 2003
	US2	Electric Supply	
	US3	Solid Waste Management	
	US4	Sanitation and Sewerage	
	US5	Drainage Flow	
	US6	Gas Supply	
	US7	Telecommunication	
	US8	Firefighting	
Road Infrastructure	RI1	Road Pavement	Dovey, et. al, 2020; Kamalipour, H., 2020; Elfouly, H.A., 2017; Kamalipour, H., 2017; Dovey and King, 2011; Bhatt and Rybczynski, 2003.
	RI2	Walking Footpaths	
	RI3	Parking Space	
Urban Furniture	UF1	Streetlights	Allahdadi, M. (2017) , Kamalipour, H., 2020; Arora and Kalra, 2018; Dovey and King, 2011; El-Osta, H.S., 2007; Bhatt and Rybczynski, 2003.
	UF2	Street Plantation	
	UF3	Street Cleanliness	
	UF4	Sitting Benches	
	UF5	Bus Stops/ Shelters	
Social Services (Access to ...)	SS1	Health Services	Arora and Kalra, 2018; Faria, et al. 2018; Habitat, U.N., 2018; Kaklauskas et. al, 2018; Dovey, K., 2015; Sirgy, et. al, 2009; El-Osta, H.S., 2007; Njamwea, M.M., 2003; Hillier, et al, 2000.
	SS2	Educational Institutes	
	SS3	Recreational Places	
	SS4	Parks and Green Spaces	
	SS5	Public Transport	
	SS6	Workplace	
	SS7	Administrative Centers (Town Hall)	
	SS8	Sport Facilities	
	SS9	Cultural and Religious Places	

**B. Structured Questionnaire**

A HIGHLY STRUCTURED QUESTIONNAIRE WAS DEVISED FOR THIS STUDY TO COLLECT DETAILED DATA FROM THE BAO WALA SETTLEMENT. THIS STUDY'S QUESTIONNAIRE WAS BROKEN INTO THREE MAJOR SECTIONS. THE FIRST SECTION OF THE QUESTIONNAIRE FOCUSED ON THE RESPONDENTS' PERSONAL INFORMATION, THE SECOND SECTION GATHERED INFORMATION ABOUT THE RESPONDENTS' SOCIOECONOMIC STATUS, AND THE THIRD SECTION CONTAINED LIKERT SCALE-BASED QUESTIONS TO ASSESS THE RESPONDENTS' PERCEPTION OF THE EXISTING SERVICES IN THE SETTLEMENT IN ORDER TO UNDERSTAND THE QUALITY OF LIFE OF THE INHABITANTS.

**C. Sample Size Calculations**

The estimated population of Bao wala settlement is 16,947, which is calculated by multiplying the number of housing units of Bao wala with the average household size of the settlement. The sample size of Bao wala settlement has been quantified with the help of Slovin's formula, that is mentioned below:

$$n = \frac{N}{1 + Ne^2}$$

In the above-mentioned Slovin's formula, *n* indicates the sample size, *N* portray the estimated population of Bao wala settlement, and *e* denotes the marginal error. The calculated sample size of Bao wala settlement is 99, corresponds to the estimated population of 16,947 and 10% of marginal error.

**D. Socio-Economic Surveys**

To get diverse and realistic information from the various segments of the settlement, the combined method of proportional and random sampling techniques is used at the Bao wala colony to perform socioeconomic surveys. To accomplish this goal, the sample size was geographically dispersed over the settlement using GIS tools, as shown in Figure 3. Because the complete people of the particular settlement was simple to reach at this time period due to the winter holidays, socioeconomic surveys of Bao wala village were conducted in January and February 2022.

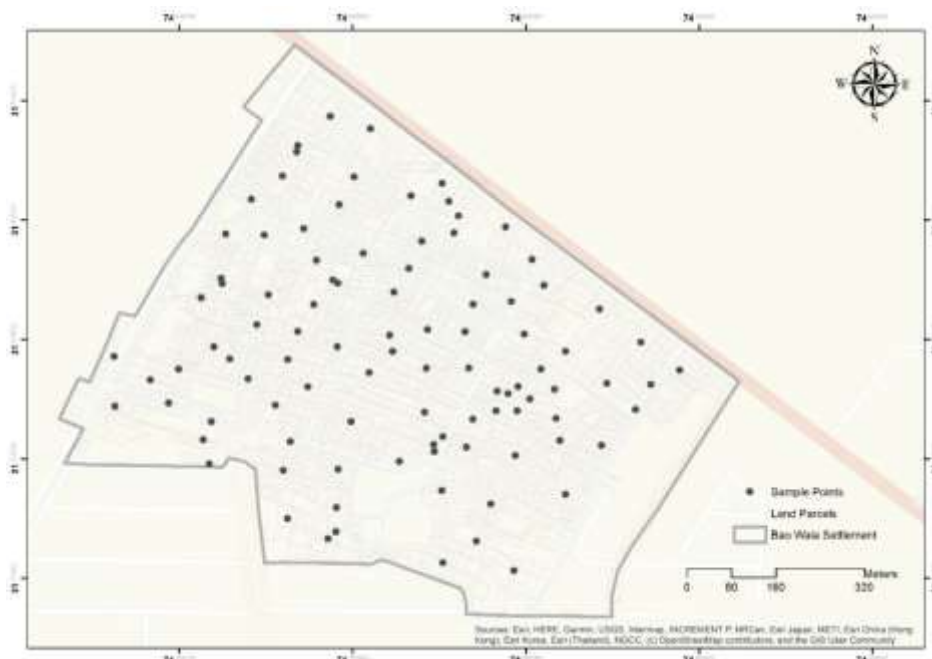


Figure 3. Spatial Distribution of Sample Size in Bao wala Settlement

**E. Data Analysis**

The data analysis in this research study is categorized in two different sections. In the first section, the respondent's characteristics have been analyzed and descriptively illustrated in the form of frequencies and percentages. The second section illustrates the quantitative analysis conducted in this study. The quantitative analysis initiates with descriptive illustrations of

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public perception regarding the perceived potential indicators. Following that, the linear regression analysis has been performed to understand the relation of perceived variables with the dependent variable of quality of life in Bao wala settlement.

### IV. RESULTS

The first section of results elaborates the respondent's characteristics, that participated as interviewee in the socio-economic surveys. In the second section, the results of quantitative analysis are explained, including descriptive calculations besides regression analysis.

In this study, the respondents with different age groups, educational and professional background participated in the surveys (which is shown in Table 2). The result shows that, in the socio-economic surveys, 56.6% male and 43% female population has participated. It also shows that 39.4% of the respondents belonging to 20 to 40 years of age bracket, whereas the 36% respondents had the age of more than 40 years. It has also shown in the results that 33% of the society have the education level of above graduation, while majority have their education level of below matriculation. 28.3% population of Bao wala settlement is working in the private section, 20.2% in government sector, and 17.2% have their own private business. It is also important to mention that a significant portion of this society (23.2%) is unemployed, either searching for work opportunities. Results shows that around 60.6% of the population belongs to the low-income class of the society, while 36.4% and 3% of the population of the Bao wala settlement belongs to middle-income and high-income classes, respectively.

**Table 2. Respondent's Characteristics Of Bao Wala Settlement**

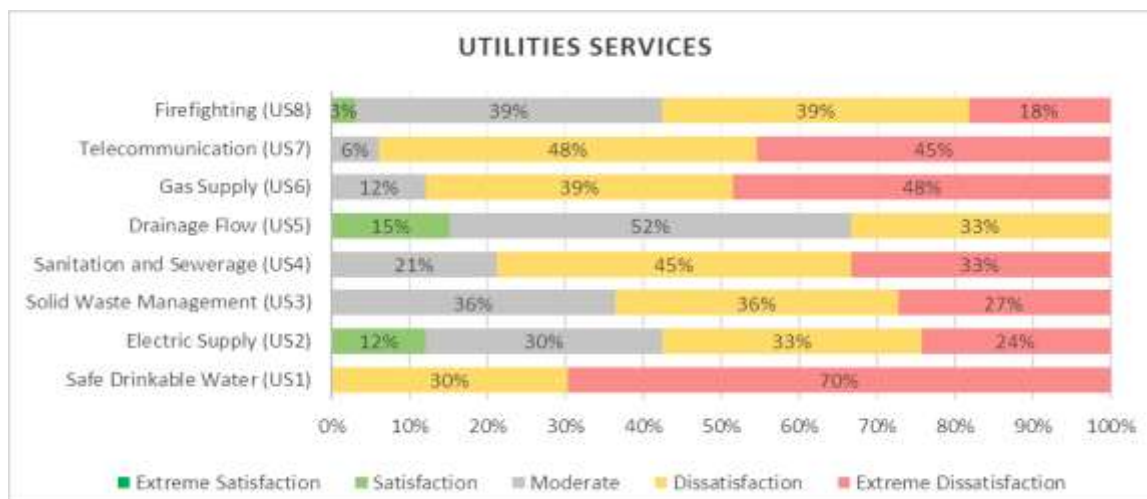
Estimated Population of Bao Wala		16,947					
Sample Size		99					
Characteristics	Freq.	Perc.	Characteristics	Freq.	Perc.		
<b>Gender</b>	Male	56	56.6%	<b>Education</b>	Under Matric	22	22.2%
	Female	43	43.4%		Matriculation	23	23.2%
<b>Age</b>	Less than 20 years	24	24.2%	Under-Graduate	21	21.2%	
	20 - 40 year	39	39.4%	Graduate	16	16.2%	
	More than 40 years	36	36.4%	Post-Graduation	17	17.2%	
<b>Profession</b>	Government / Semi-Govt. Employee	20	20.2%	<b>Duration of Stay</b>	< 5 years	6	6.1%
	Private Employee	28	28.3%		6-10 years	21	21.2%
	Private Business	17	17.2%		11-15 years	18	18.2%
	Student	11	11.1%		16-20 years	15	15.2%
	Unemployed	23	23.2%		> 20 years	15	15.2%
<b>Income</b>	No Income	24	24.2%	<b>House Ownership Status</b>	Since Birth	24	24.2%
	<14,000	15	15.2%		Owned	62	62.6%
	14,001-30,000	21	21.2%		Rented	37	37.4%
	30,001 - 60,000	21	21.2%				
	60,001 - 120,000	15	15.2%				
	>120,000	3	3.0%				

The below illustrated results illustrate the public perceptions regarding the provision, operation, maintenance, and quality of contemporary utilities services, road infrastructure, urban furniture, and social services in Bao wala settlement. These public perceptions are measured based on a 5-point Likert scale varies from extreme dissatisfaction to extreme satisfaction. The below illustrated results shows that majority of inhabitants in Bao wala settlement are either extremely dissatisfied or shows moderate behavior towards the contemporary conditions, however only minimal segment of the society shows satisfactory behavior toward existing services.

Figure 4 shown below demonstrate the public perception regarding existing utilities services in Bao wala settlement. For the facility of safe drinkable water, 70% inhabitants of Bao wala settlement shows extreme dissatisfaction while other 30% shows dissatisfaction and not express the satisfactory behavior toward this service due to the presence of extremely bad quality of water supply services. Moreover, 24% and 33% of the population of Bao wala settlement express extreme dissatisfaction and dissatisfactory behavior toward the presence and maintenance of electricity infrastructure in the locality. Whereas 30% portion

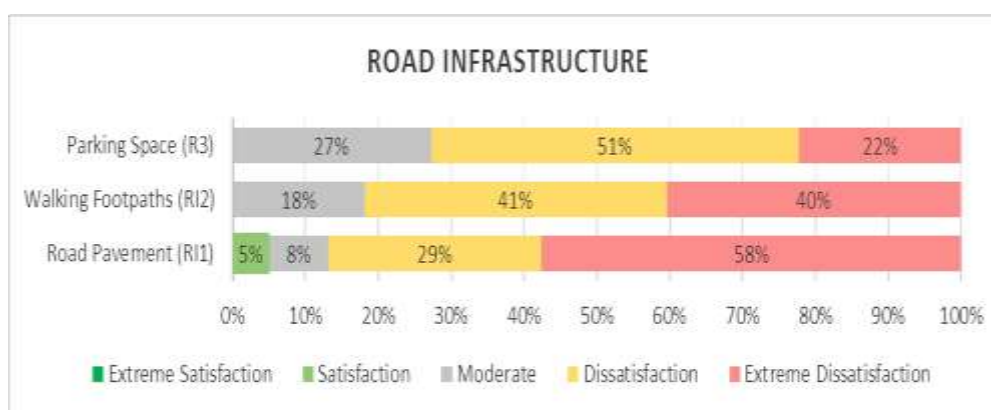
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of the settlement show moderate while only 12% population indicate satisfactory attitude towards this utility services. Almost 64% of the population of Bao wala settlement express extreme dissatisfactory and dissatisfactory while only 36% segment of the society shows moderate behavior toward solid waste management in the vicinity. However, for sanitation and sewerage facilities, 79% of the inhabitants in the settlement shows dissatisfactory while only 21% of the population express a moderate attitude. 88%, 94% and 57% of the population of Bao wala settlement shows either extreme dissatisfactory or dissatisfactory while 12%, 6% and 39% of inhabitants shows moderator perception towards gas supply, telecommunication, and firefighting services, respectively.



**Figure 4.** Public Perception Regarding Utilities Services in Bao Wala Settlement

Similar to the public perception regarding utilities services, the public behavior towards the presence, quality, and maintenance of road infrastructure in Bao wala is experienced as extreme dissatisfactory. It has been observed in the result presented in Figure 5 that 58% and 29% of the population of Bao wala settlement expresses extreme dissatisfaction and dissatisfaction while only 8% and 5% inhabitants have shown the expression of moderate and satisfactory toward the presence of road pavement in their respective neighborhoods. Similarly, for the other sub-indicators of road infrastructure, 82% and 73% of the population expresses extreme dissatisfaction and dissatisfaction while only 18% and 27% inhabitant's express moderate behavior toward the presence, quality and maintenance of walking footpaths and parking space in the settlement, respectively.

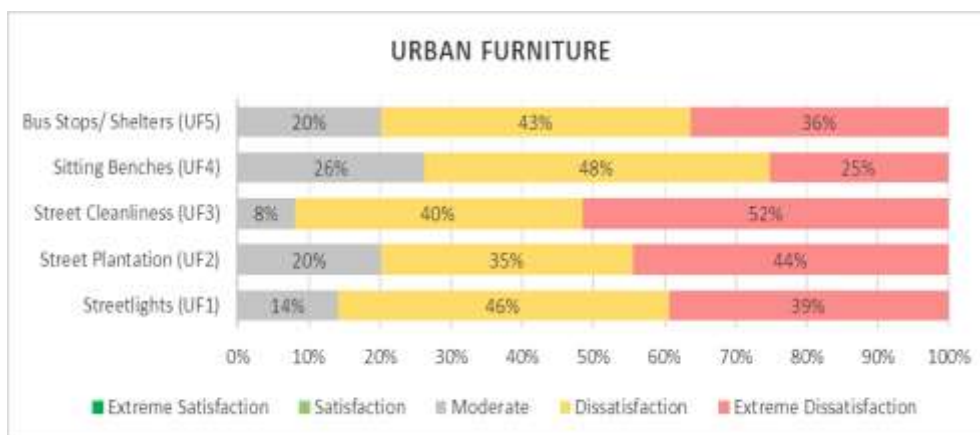


**Figure 5.** Public Perception Regarding Road Infrastructure in Bao Wala Settlement

The alarming results presented in Figure 6 elucidate that none of the sub-indicator of urban furniture gained the satisfactory public perception in the Bao wala settlement. Results presented in Figure 6 illustrate that street cleanliness is the indicators toward which 92% of the residents shows extreme dissatisfaction while only 8% expresses the moderate expressions. Similarly, 86%, 80% 74% and 80% of the population of Bao wala settlement shows extreme dissatisfaction, and dissatisfaction while only 14%, 20%, 26% and 20% inhabitants express moderate opinions towards streetlights, street plantation, sitting benches and bus stops, respectively.

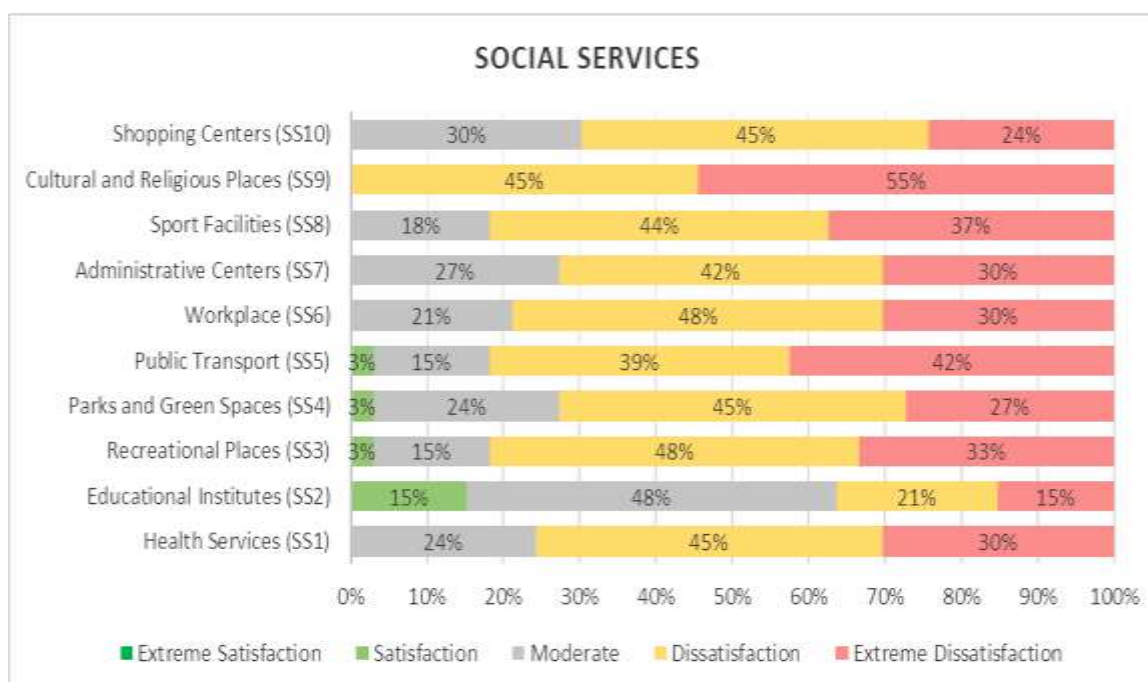


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**Figure 6.** Public Perception Regarding Urban Furniture in Bao Wala Settlement

Furthermore, the public perception regarding the indicators of social services is exhibited in Figure 7. The results presented in Figure 7 has also illustrated that most of the population of Bao wala settlement has again expressed dissatisfactory behavior for these indicators as well. For health service facilities in the settlement, 76% of the population expresses dissatisfaction while only 24% of residents have shown moderate behavior. While analyzing the quality and access to educational institutes, only 15% of the population from high-income class has shown the satisfactory while other 85% of the population belonging to low and middle-income group exhibited either moderate or dissatisfactory behavior, respectively. The presented results have shown that only 3% of the population of Bao wala settlement has shown satisfactory expression for access to recreational place, parks and green spaces and public transport, however, 81%, 72%, and 82% of residents has expressed dissatisfactory attitude towards these services, respectively. Similarly, a terrible public perception as dissatisfactory from the significant proportion of the population of Bao wala settlement has been observed for other sub-indicators of social services. It has been observed that 79%, 73%, 82%, 100% and 70% of the population of Bao wala has exhibited extreme dissatisfactory and dissatisfactory while only 21%, 27%, 18%, 0%, and 30% of the population has elucidated the moderate expressions toward the presence, quality and access to workplace, administrative centers, sports facilities, cultural and religious places, and shopping centers, respectively. It is essential to mention that none of the respondents from Bao wala settlement has conveyed satisfactory expressions for these mentioned services due to the bad quality and maintenance of these respective social services.



**Figure 7.** Public Perception Regarding Social Services in Bao Wala Settlement



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### V. REGRESSION ANALYSIS

In this section of quantitative analysis, linear regression method is used to determine the relation between perceived and dependent indicators. In this research study, the perceived indicators illustrated in Table 1 were independent variables while the quality of life is adopted as dependent indicator.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.883 <sup>a</sup>	.780	.774	.362

a. Predictors: (Constant), BD3, BD2, BD1

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.317	.274		1.155	.251
	BD1	.455	.047	.589	9.689	.000
	BD2	.200	.059	.187	3.417	.001
	BD3	.302	.056	.301	5.433	.000

a. Dependent Variable: QOL

**Figure 8.** Regression Analysis of Building Density with QOL

The regression analysis of building density with QOL is illustrated in Figure 8. The beta coefficient of the sub-indicators of building density varies from 0.20 to 0.45 which illustrate their greater impact on the quality of life whereas the R<sup>2</sup> value depicting the strong relationship between building density and quality of life.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.952 <sup>a</sup>	.906	.897	.244

a. Predictors: (Constant), US8, US1, US5, US3, US7, US4, US6, US2

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.965	.326		-2.963	.004
	US1	.249	.096	.151	2.586	.011
	US2	-.030	.064	-.038	-.463	.644
	US3	.279	.055	.292	5.042	.000
	US4	.257	.060	.247	4.307	.000
	US5	.186	.058	.166	3.197	.002
	US6	.147	.084	.133	1.742	.085
	US7	.010	.070	.008	.146	.885
	US8	.178	.061	.185	2.905	.005

a. Dependent Variable: QOL

**Figure 9.** Regression Analysis of Utilities Services with QOL

The regression analysis of utilities services with quality of life of Bao wala settlement is shown in Figure 9, where R<sup>2</sup> value is showing the strong relation between utilities services and quality of place. However, the results have also depicted that all four sub-indicators of utilities services including US3, US4, US5, and US8 have highly significant while US1 has significant relation with the dependent variable, and their beta coefficient values varies from 0.178 to 0.279. However, the sub-indicator of gas supply (US6) and telecommunication (US7) has no significant relation with dependent variables, furthermore, have low value of beta coefficient.

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**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.905 <sup>a</sup>	.819	.813	.329

a. Predictors: (Constant), RI3, RI2, RI1

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.183	.216		-.849	.398
	RI1	.256	.058	.284	4.426	.000
	RI2	.299	.058	.289	5.116	.000
	RI3	.501	.070	.465	7.181	.000

a. Dependent Variable: QOL

**Figure 10.** Regression Analysis of Road Infrastructure with QOL

The relation of sub-indicators of road infrastructure with the dependent variable has also been analyzed, which are shown in Figure 10. In the results, R<sup>2</sup> value of 0.819 shows the strong relation between the perceived indicators of road infrastructure and quality of place of Bao wala settlement, whereas the values of Beta coefficient vary from 0.256 to 0.501 that shows the greatest impact of sub-indicators on the dependent variables.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.913 <sup>a</sup>	.833	.824	.319

a. Predictors: (Constant), UF5, UF4, UF3, UF2, UF1

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.991	.264		-3.756	.000
	UF1	.362	.074	.328	4.880	.000
	UF2	.175	.054	.177	3.218	.002
	UF3	.185	.065	.156	2.827	.006
	UF4	.144	.057	.136	2.530	.013
	UF5	.361	.063	.350	5.701	.000

a. Dependent Variable: QOL

**Figure 11.** Regression Analysis of Urban Furniture with QOL

The regression analysis of urban furniture with QOL of Bao wala settlement is shown in Figure 11, and value of R<sup>2</sup> which is 0.833 depict the extremely strong relation between them. Furthermore, all these sub-indicators also have the strong impact on the quality of place of Bao wala settlement, possessing the high beta coefficient values that varies from 0.144 to 0.362.

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**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.972 <sup>a</sup>	.946	.939	.187

a. Predictors: (Constant), SS10, SS5, SS8, SS3, SS9, SS7, SS2, SS4, SS1, SS6

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.399	.188		-2.118	.037
	SS1	.226	.060	.219	3.729	.000
	SS2	.099	.039	.119	2.520	.014
	SS3	.112	.042	.114	2.671	.009
	SS4	.294	.052	.310	5.630	.000
	SS5	.113	.043	.120	2.597	.011
	SS6	-.019	.071	-.018	-.272	.786
	SS7	.080	.047	.080	1.699	.093
	SS8	.101	.040	.096	2.525	.013
	SS9	.041	.062	.027	.659	.512
	SS10	.096	.056	.093	1.698	.093

a. Dependent Variable: QOL

**Figure 12.** Regression Analysis of Social Services with QOL

The regression relation between social services and the dependent variables has shown in Figure 12. The value of  $R^2$  between social services and quality of place is highest (0.946) than the other leading indicators, that shows the extremely strong relation between the indicators of social services and dependent variable. However, the results have also shown that the three sub-indicators (SS1, SS3, and SS4) of social services have highly significant, further three sub-indicators (SS2, SS5, SS8) have significant relation, while indicators SS7, SS9 and SS10 have no significant relation with the dependent variable.

### VI. CONCLUSIONS

In this research study, quality of life of the inhabitants that live in informal settlements has been examined based on multi-indicator analysis. Bao wala an informal settlement has been selected as case study area in this study. To perform multi-indicator analysis, five leading indicators including building density, utilities services, road infrastructure, urban furniture and social services has been identified besides other 29 sub-indicators. Results has illustrated that majority of the population of Bao wala settlements have expressed extreme dissatisfaction with the provision, maintenance, and operation of all leading indicators. Furthermore, while summarizing the regression analysis of perceived and dependent variable, it has been observed that majority of sub-indicators of five leading indicators have highly significant and strong impact on the dependent variable, whereas few has significant and moderate impact on dependent variable. In the results, indicators having neither significant relation nor good impact on the dependent variable have also been observed, however the number of such perceived indicators are few. The results also depict that all the five leading indicators including building density, utilities services, road infrastructure, urban furniture and social services have strong relation with the quality of place of Bao wala settlement, possessing the  $R^2$  values varying from 0.780 to 0.946. Among all these five leading perceived indicators, access to social services has the strongest relation with the quality of place of Bao wala settlement. This also demonstrates that the quality of social services in the settlement is extremely poor due to inefficient provision and maintenance of these respective services.

### ACKNOWLEDGMENT

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## Chinese blind Marriage (Muhallil) as an Effort to Legalize Marriage after three Divorces in Acehese Society



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**ABSTRACT:** Blind Chinese marriage is never regulated in the National Marriage Act, however, marriage between a man (muhallil) and a woman who has been rejected by her husband for the purpose of justifying the woman's able to remarry by her former husband (muhallah), this often happens to communities in Aceh. This kind of marriage practice is a grave sin. It is classified as a heinous act, which is not allowed, whether the two men concerned determine the conditions when the marriage contract or they both agree before the marriage contract occurs to return immediately, or one of the two intends in his heart to divorce him again. The deed is haram for those who do (Muhallil and Muhalla lah), and even Allah will circumcise it, as the Hadith of Ahmad's History which means "Allah circumcises Muhallil (who married in blind China) and his muhallal (the former husband who told people to be muhallil)". (HR. Ahmad). This kind of marriage has never been banned by the authorities, even though this marriage is legalized, especially by the kadhi/ guru ngaji who are in the gampong of the muhallil marriage partner. The purpose of this paper is to find out and explain the Chinese blind marriage as an attempt to justify marriage after talak three in some communities in Aceh and What factors cause the occurrence of Chinese blind marriage.

**KEYWORDS:** Blind Chinese Mating; attempts to justify marriage

### A. INTRODUCTION

Basically, marriage is a contract that justifies association, limits rights and obligations, and helps between a man and a woman who is not a mahram, because marriage is one of the most important principles of life in society. (Sulaiman Rasyid, 2000: 397). Marriage also has agreements and agreements (commitments), to carry out the obligations and responsibilities of each one (husband and wife), one of the purposes of carrying out marriage is to justify something that is forbidden by religion (sex / bodily relationship), diin addition also to get offspring and build a family. The purpose of marriage can be achieved if the marriage carried out is permanent and is based on provisions in accordance with existing religious rules, norms and traditions. Getting married is the most *afdhal* path, in an effort to realize the purpose of marriage and maintain honor. Islamic teachings encourage young men to marry immediately, in order to protect them from various kinds of moral decay. Rasulllah ﷺ which means; "O young men, whoever of you has been able to marry, then should marry. So indeed mating hinders the view (of those forbidden by religion) and nourishes the pubic. And whoever is unable should fast. Because that fast is a shield for him". (H.R. Bukhari and Muslims). "(<http://liza-fathia.com>)

The noble purpose of marriage is for a husband and wife to practice Islamic Sharia in their household. In the opinion of Imam Shafi'i, the law of enforcing households based on Islamic Sharia is mandatory, therefore every Muslim and Muslim woman is obliged to build an Islamic household. (<http://liza-fathia.com>) The national marriage law also emphasizes that a marriage is eternal, as mentioned in Article 1 of Law Number 1 of 1974 concerning Marriage, namely Marriage is a bond born between a man and a woman as husband and wife with the aim of forming a happy and eternal family (household) based on the One True Godhead.

According to Chief Justice Rifyal Kabah who stated, that in principle marriage is a contract, but marriage is not a contract alone. Marriage is a sacred contract because it promises in front of guardians, witnesses and also before God, that he will treat his spouse well. The problem arises, if the marriage is performed within a certain time limit (Contract Marriage) for biological and material satisfaction, perhaps this kind of marriage proves to be quite appropriate and well-founded, but what about the survival of a family, this is almost the same as a blind Chinese marriage (*muhallil*), whether happiness will be created turns out that there is a certain time limit in living a domestic life. (Teuku Edi Faisal Rusydi, 2007: 3).



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Regarding Chinese blind marriage (contract) in Islamic law is known as *muhallil*. The meaning of *muhallil* itself based on the Big Dictionary of Indonesian is: a person who marries a woman who has been rejected by her husband three times, after which she divorces so that the woman can remarry with her former husband who is *terdahulu*.

If the woman was married by another man correctly, after a long time and coincidentally a divorce, then the marriage with her original husband is considered valid by Islam. This is explained by the Messenger of Allah ﷺ in the hadith which means "The wife of Rifa'ah al Qardh once came to the Messenger of Allah ﷺ, then said I used to be his wife Rifa'ah, then I was rejected by him (divorces has been three times), then I married Abdurrahman bin Zubair, but unfortunately he was like the tip of the cloth (weak shahwat), then the Prophet smiled, as he said: do you want to return to Rifa'ah? yes, no, before you actually taste his little honey (Abdurrahman bin Zubair) and he tastes your little honey."

According to KH. Husein Muhammad explained that blind Chinese marriage is a popular term in a number of regions in Indonesia, including Aceh. The prevailing custom in Acehese society concerns blind Chinese marriage (*muhallil marriage*) which is still a pro and con, which allows a husband to return to his wife who has been rejected three times after the *iddah* period.

Based on the urian above, the problem in this study is;

1. What is the legality of Chinese Blind Marriage as an effort to legalize marriage in the community in Aceh?
2. What factors cause the occurrence of Chinese Blind Mating?

### B. TEORI FOUNDATION

#### a. The Meaning Of Blind Chinese Marriage

Mating china blind in Islamic literature is called *nikah muhallil* (justifying), and also istilah *cina buta* comes from the Malaysian Society. There are two interpretations of the word blind Chinese; **First**, *cina buta* in the true sense i.e. a descendant (Chinese) citizen who is blind in his eyes, and **Secondly**, *cina buta* in the figurative sense i.e. a person who becomes a temporary marriage redeemer (*muhallil*) with a former wife who has *ditalak* three, with a covenant Mating china blind in Islamic when it is *disetubuhi* (intercourse) must be re-rejected, so that the first husband can remarry his former wife who has been sentenced to *talak tiga (bain kubra)*". (<http://www.butang-emas.net>).

#### b. Legal Basis Of Muhallil Marriage

Muhalil marriage is strongly reproached in Islam and the law is haram and void according to *jumhur ulama*, Islam desires that the conjugal relationship in the marriage ark be eternal and lasting forever, until the time comes that only death separates, the temporary marriage (*mut'ah*) has been annulled by Islam in *ijma'*. Islamic Shari'a does not want a divorce even if *talaq* is justified, *k* the *talaq* work itself is very hated by Allah Swt. Muhalil marriage is only a quasi-marriage and has a period of time, so the purpose of marriage desired by Islam is not achieved, and even received strong condemnation from the Messenger of Allah ﷺ. As *Hadiś Rasulullah* ﷺ, said about the marriage of muhalil these include: *Hadith of Abdullah bin mas'ud* narrated by Imam Tirmizi which means: From Abdullah bin Masu'd that he has said, "Messenger of Allah ﷺ, Allah circumcises muhalil (the man who justifies) and muhalil lahu (the man he kosher)". (HR, Tirmizi And He Said This *Hadiś Sahih*) (Ibn Katsir, 1999: 414).

#### c. Causes Of The Occurrence Of Blind Chinese Mating

A marital bond often occurs *talaq* three, but it is not uncommon for it to cause *sedition*. The household established by a husband and wife in the course of their lives was harmonious and peaceful, because of the *spele* thing that was forced to leave the bond. Often divorce occurs outside of careful consideration and thought, usually when there is a conflict that seems to be just a mistake, but if it is divorced, remember the kindness that exists. In Islamic Sharia it is possible to return to the original marriage, provided that the wife must establish a valid marital relationship with another man, Then the path that is tried to be taken in order to reunite is by the path of marriage muhalil. The causes of muhalil marriage are inseparable from the emergence of divorce between husband and wife. The marriage desired by religion is an eternal marriage, but in certain circumstances sometimes in the marriage there are several challenges that must be faced by the husband and wife. (Moh. wahyul Huda, thesis, 2017: 21).

#### d. The Practice Of Blind Chinese Mating In Aceh

The practice of blind Chinese marriage is a blend of forced divorce and forced marriage. Blind Chinese marriage is believed to be mandatory for women who want to reconcile with their husbands after the husband and wife declare divorce up to three times. This divorce is considered valid even without prior ratification and reference process from the assigned party, namely the *Syar'iah* Court or the *KUA* officer. Because it has been divorce up to three times, in order to be able to refer back, both the husband and wife must first marry someone else. With polygamy allowed, the husband can keep his new wife, while for the wife's side the marriage must end in divorce. This deed is haram for those who do (Muhallil and Muhallah) and even Allah will circumcise it.

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In order to enter into the marriage, the woman must provide all the costs of the marriage including dowry and "wages" to carry out the process of the husband and wife relationship before finally divorcing. The woman also has to wait for the iddah period (3 months and 10 days) before being able to reconcile with her first husband. The practice of marriage that must be carried out by the female side is referred to as a blind Chinese marriage. (<http://www.komnasperempuan.or.id>).

### C. RESEARCH METHODS

This research uses normative research methods, namely legal research by examining library research, (Peter Mahmud Marzuki, 2005: 35), namely research related to library data collection methods, or research whose research objects are explored through various library information (books, encyclopedias, scientific journals, newspapers, magazines, and documents), The description is contained in the theoretical framework used to discuss in the presentation of data. Material analysis uses content analysis with the aim of limiting the findings of literature information so that it becomes an orderly and organized and more meaningful material. From the findings of the literature, it is connected with the existing theoretical foundations. In this case it is material related to the law of marriage.

### D. RESULTS AND DISCUSSION

#### 1. Legality of Chinese Blind Marriage As An Effort To Legalize Marriage In The Community In Aceh.

Establishing a household is based on a marriage between a man and a woman who meets the pillars and conditions of marriage, in which case the community strongly adheres to the provisions of the Islamic law, and also by getting closer to the Ulama or Teungku, through recitation institutions or direct consultation when they face problems surrounding the household. The domestic life built by a human life partner does not always go smoothly, even resulting in divorce, even though divorce is a lawful act but is hated by God.

Marriage for the people in Aceh is very much attached to religion and customs, but sebahagian small community is very thick with its customs, as occurs in the practice of blind Chinese marriage. This situation is already a custom in life for households, which proves that they performed the blind Chinese mating as had been done by earlier people.

The practice of blind marriage is part of the forced marriage, this is mandatory for women who want to return with their husbands, after the husband has declared divorce up to three times. This divorce is considered valid even without prior ratification and referral process from the assigned party of the Syariah's Court or the KUA officer. Since there have been three talaks, then to be able to refer to is not justified by law, unless the wife must first marry another man. In the case of a blind marriage, the woman must provide all marital expenses including dowry and "wages" to carry out the conjugal relationship process before finally divorcing. The woman also has to wait for the iddah period (3 months and 10 days) before being able to reconcile with her first husband.

Basically a blind Chinese marriage (Muhallil marriage) occurs naturally as Allah explains in the Qur'an surah al-Baqarah verse 230, it is clear that if the husband is mentally ill (after the second divorces), then the woman is no longer lawful to her, the former husband must wait for his former wife until he remarries another husband, which here there is no coercion against the former wife. If the former wife has married another man, then the former husband may return to his former wife, and if the second husband divorces her, then it is not a sin for the two to remarry.

Furthermore, the Messenger of Allah ﷺ, in the hadith, which means "The wife of Rifa'ah al Qardh once came to the Messenger of Allah ﷺ, then said I used to be his wife Rifa'ah, then I was rejected by him (divorces has been three times), then I married Abdurrahman bin Zubair, but unfortunately he was like the tip of the cloth (weak shahwat), then the Apostle also smiled, as he said do you want to go back to Rifa'ah? yes, no, before you actually taste his little honey (Abdurrahman bin Zubair) and he tastes your little honey."

The practice is to tell a man (*muhallil*) to marry his former wife. Previously, an agreement was made between her former husband/*muhallal lah* (the one who was justified) and the *muhallil* (the one who justified), that a few days later it should be divorced by her new husband (*muhallil*) and then *muhallal lah remarried* to his former wife.

The agreement is made outside the marriage contract and should not be mentioned in the marriage contract. The agreement is merely a commitment or desire whose execution should not be imposed and does not cause any consequences. (Sayyid Sabiq, 2007 : 134). Article 2 paragraph 1 of Law Number 1 of 1974 concerning Marriage, where marriage is valid if it is carried out according to the laws of each religion and belief. If the marriage has been legalized in shari'a, then the marriage has no hindrance, so it should not be prevented or prohibited, such as blind Chinese marriage. According to him, the marriage can be carried out as long as it is in accordance with applicable regulations. (Rahman I Doi, 1996: 185).

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Blind Chinese marriage includes sinful/haram acts, when referring to the Qur'an and the Hadith, that the marriage is haram if it is performed in willful ways, as Allah says in the Qur'an Surah Al-Baqarah Verse 230 which means; Then if the husband is mentally ill (after the second Talak), the woman is no longer kosher to her, until she marries the other husband. Then if the other husband divorces her, there is no sin for the two (the former first husband and wife) to remarry if both believe they will be able to live the laws of God. Those are the laws of God, he explained to those who (will) know. (Al-Baqarah: 230). This deed is haram for those who do (Muhallil and Muhallal lah) and even Allah will circumcise it, as the Hadith of Ahmad's History which means "Allah circumcises Muhallil (who married in Blind China) and his muhallal (ex-husband who told people to be muhallil)". (HR. Ahmad).

From the description above, when viewed from the roots of social and culture that blind Chinese marriage can be acceptable and relevant, but from a legal point of view it does not have the power/legalization between the two of them.

### 2. What Factors Cause the Occurrence of Blind Chinese Mating

A couple involved in a muhallil marriage is a couple who have children. Former husbands and wives want to build a once-ruined home and nurture children. The only way to be able to reunite between a divorced husband and wife with a triple divorce is to have a muhallil marriage first

#### 1. Factor Muhallil

A divorced husband with three can only remarry his former wife if the former wife has been married to another man and then divorced. In his position, the man serves as the one who justifies the ex-husband to remarry with his ex-wife.

#### 2. Educational Factors

Orang is poorly educated, poor, and is at the bottom of the structure of society. The reason for getting rewarded for his role as a muhallil is the most dominant factor. In addition, they are also not afraid or embarrassed over the negative stigma that develops in society.

#### 3. Children's Factors

The existence of children is a strong motivation for divorced couples with three talaks to perform muhallil marriages in order to return to their original partners. The wife is willing to perform a muhallil marriage because of her desire to be able to remarry her ex-husband in order to continue and build a household, and the most important thing is to jointly care for and educate their children.

## E. CONCLUSION

1. The legality of blind Chinese kawin that occurs in people's lives in Aceh, more to customs, only aims to save the family, even the possibility of negative things arising in the eyes of the people. If by law religion can cause monasticism in domestic life, because the methods carried out are not in accordance with the pillars and requirements based on Islamic law

2. There are several influencing factors, firstly the muhallil factor itself, because there are people who are willing to marry a former wife who is rejected by three, secondly the educational factor, all couples who perform blind Chinese marriage, both muhallil and muhallal lahu never acquire knowledge. The three factors of children, children are the hope of the future for the family, but because of the marriage law that makes the couple of three unable to return again, so they have to resort to the methods of forced marriage (blind Chinese marriage).

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## Methods of Cadastral Assessment of Real Estate Objects



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**ABSTRACT:** The article analyzes the improvement of the cadastral valuation system based on market principles and equal for all the procedure for allocating land plots, ensuring stability in property and legal relations in the field of land use and the need to carry out methods for calculating the cadastral value within the framework of the income approach.

**KEYWORDS:** land market, land plots, cadastral value, engineering infrastructure, accounting and registration of real estate objects, comparative approach, revenue approach, expenditure approach, estimated value.

### INTRODUCTION

The development of the real estate market is the process of regulating society's needs for real estate. This development takes place in the conditions of market relations and is closely connected with the right of ownership [12].

Land, as a real estate object, has a unique key importance in market relations in the entire system of human entrepreneurial activity, being the only place where peoples live, the main and natural factor in any business area, directly or indirectly participating in the production of all other goods and benefits [5,8].

The cadastral value of a piece of land should always be considered in terms of its use as free and available for the best and most efficient use.

Land is primarily entitled to the income generated by the entire property, so real estate appraisal reads that land has a value, while improvements are a contribution to value.

When determining the cadastral value of land, the following factors should be considered:

- ◀ Location of the land;
- ◀ The state of the object's market demand;
- ◀ Physical characteristics of the site;
- ◀ Financial feasibility of the project.

In addition, in order to study real estate objects, it is necessary to determine the classification of objects. For these purposes, different classification principles can be applied depending on their origin and purpose.

As the analysis of literary sources showed, when developing a methodology for cadastral valuation of real estate, the definition of the classification of real estate objects serves as a link between cadastral valuation as a way to determine the tax base and taxation in terms of setting tax rates, A.V. Pylaeva formed in her works "Models and methods of cadastral valuation of real estate". [9,10]

Also in his article Egorov E.V. "Problems of determining the cadastral value of land in property taxation" [11] analyzed the problems of the cadastral value of real estate in the taxation of property, in which the cadastral valuation of the land plot should not be either overestimated or underestimated, because the object of assessment may lose, in the first case, its investor, in the second case, incentives for its rational use, and then the approved cadastral prices for land plots can only be used for fiscal purposes, that is, for calculating land tax, and not for managing land resources.

Thus, depending on the type and classification, the cadastre acquires different meanings, corresponding to the purposes for which it is created.

### RELEVANCE OF THE TOPIC

One of the real estate objects is a land plot. And in connection with ensuring stability in property and legal relations in the field of land use, land protection, guaranteeing the property rights of landowners, as well as introducing them into free circulation as an object of civil law relations by determining the economic value of land by Decree of the President of the Republic of Uzbekistan

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dated June 8, 2021 year UP-6243 "On measures to ensure equality and transparency in land relations, reliable protection of land rights and their transformation into a market asset" [6], the task was to study the best foreign experience in the field of rational land use and prepare proposals for its implementation with taking into account national characteristics and the introduction of a mechanism for the allocation of land plots to the private sector - on the basis of ownership, non-agricultural land to sell through electronic online auctions based on ownership and lease rights.

To fulfill these tasks, it is necessary to determine the cadastral and market value of land, and also to determine the difference between the cadastral value and the market value of land.

Therefore, in our studies, the **purpose of the study** is to determine the market and cadastral value of a land plot of 8 categories of the land fund of the Republic of Uzbekistan.

Based on the above, we set the task to collect the necessary information and the necessary materials to carry out preparatory work. The purpose of the preparatory work is as follows:

- collection of general information about the territory of the located land plot, climate, hydrography, ecology, engineering and geological characteristics of the area;
- determination of the boundaries of the district (city) in accordance with the master plan for the development of the district (city);
- land classification by land users, legal regime; land classification according to functional use;
- classification of land according to urban development value, types of real estate objects and main types of current use with allocation of appraisal microzones;
- determination of typical land plots included in the appraisal microzones;
- collection, validation and grouping of land market data by estimated microzones.

## OBJECTS AND METHODS OF RESEARCH

The cadastral and market value of a land plot is relevant today more than ever. With the adoption of the law of the Republic of Uzbekistan "On the privatization of land plots for non-agricultural purposes" [4], it became necessary to improve the cadastral valuation of land plots. As we know, according to Art. 8 of the Land Code of the Republic of Uzbekistan, the land fund is divided into 8 categories [1,2,8]:

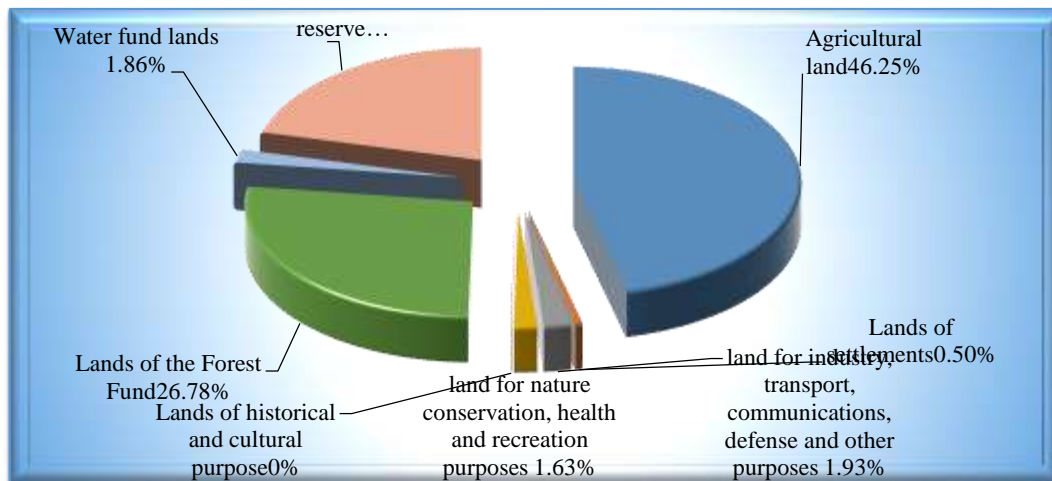


Fig. 1-diagram of the land fund as a percentage

The main methods of market valuation of land are:

1. Comparative approach - a set of valuation methods based on obtaining the value of the appraised object by comparing the appraised object with analogue objects.
2. Income approach - a set of valuation methods based on the determination of expected income from the use of the object of valuation.
3. Cost approach - a set of methods for assessing the value of the object of assessment, based on the determination of the costs necessary for the acquisition, reproduction, or replacement of the object of assessment, taking into account wear or obsolescence [11,12].



## Methods of Cadastral Assessment of Real Estate Objects

### RESEARCH RESULTS AND DISCUSSION

Based on the above methods, we have scientifically and practically substantiated the principles of segmentation of agricultural objects of the republic.

Based on the data, the principles of segmentation of agricultural objects are given in table 1.

The cadastral value of a real estate object is a calculated value determined for the purposes provided for by the legislation of the Republic of Uzbekistan, including for taxation, based on market information and other information, real estate, without taking into account property rights to this object, other than the right of ownership, and represents the most probable price of the object at which it can be acquired (created) based on the possibility continuation of the actual type of its use, regardless of the restriction on the disposal of this object [3, 4,5,9,10].

If it is impossible to continue the actual use of the property, the cadastral value is determined based on the intended, documented type of its use, regardless of restrictions on the disposal of this property.

**Table 1. Principles of segmentation of agricultural objects**

Code (numerical designation) of the type of permitted use of the land plot	Name of the type of permitted use of the land plot	Description of the type of permitted use of the land plot
1	2	3
1.0	<b>Agricultural use</b>	Farming. The content of this type of permitted use includes the content of types of permitted use with codes 1.1-1.20, including the placement of buildings and structures used for the storage and processing of agricultural products
1.1	crop production	Implementation of economic activities related to the cultivation of crops.
1.2	Gardening	Carrying out economic activities, including on agricultural land, related to the cultivation of perennial fruit and berry crops, grapes and other perennial crops
1.3	animal husbandry	Carrying out economic activities related to the production of livestock products, including haymaking, grazing of farm animals, breeding of breeding animals, production and use of breeding products (material), placement of buildings, structures used for keeping and breeding farm animals, production, storage and primary processing of agricultural products.
1.4	Fish farming	Implementation of economic activities related to the breeding and (or) maintenance, cultivation of fish farming (aquaculture); placement of buildings, structures, equipment necessary for the implementation of fish farming (aquaculture)
1.5	agricultural production	Implementation of activities related to agricultural production, storage and processing of agricultural products
1.6	nurseries	Cultivation and sale of undergrowth of trees and shrubs used in agriculture, as well as other crops for seedlings and seeds; placement of facilities necessary for the specified types of agricultural production
1.7	Scientific support of agriculture	Implementation of scientific and selection work, farming to obtain scientifically valuable samples of flora and fauna; housing collections of plant genetic resources

When determining the cadastral value, the calculation technique (method) of at least one of the valuation approaches should be used: comparative, costly, profitable.

In the course of the study, it turned out that the determination of the cadastral value should be carried out on the basis of the unity of the fate of the land plot and the real estate objects located on it.

A land plot as an object of cadastral valuation is characterized by its intended purpose and (or) permitted use, as well as the type of activity carried out or proposed to be carried out on it (actual or intended) use.

The determination of the cadastral value is carried out without taking into account the encumbrances (restrictions) of the property, with the exception of restrictions on rights arising in connection with the establishment of zones with special

## Methods of Cadastral Assessment of Real Estate Objects

conditions for the use of the territory, other public restrictions established by the current legislation of the Republic of Uzbekistan. [9,11,12,] .

According to the results of the study of determining the cadastral value, a mandatory quality control of the results obtained is carried out based on the current price situation in the real estate market. It is mandatory to analyze the quality indicators of models, including format-logical control of the influence of pricing factors determined within the framework of the calculation (the degree and vector of their influence), as well as checking the results of determining the cadastral value for compliance with the real estate market in order to prevent unreasonable excess of the cadastral value the average level of market prices of similar objects. [8,9,10,14,] .

The results of individual calculations can be used to improve the quality of the models determined in the framework of preliminary calculations.

Analysis of the results of determining the cadastral value includes an analysis of the quality of the models for assessing the cadastral value obtained in accordance with the above paragraphs, as well as verifying the results of determining the cadastral value by analyzing the ratios of the minimum, average and maximum CCL in the context of price zones and territories, taking into account the administrative-territorial division of the Republic of Uzbekistan , including by comparing price and economic (estimated) zoning maps [ 5,6,7] .

Based on the results of determining the cadastral value of objects , a report is drawn up on determining the cadastral value [3,4] .

To determine the cadastral value of land, information was collected on all categories of land and an electronic database of land cadastre records was created - the information system “ UzKAD ”

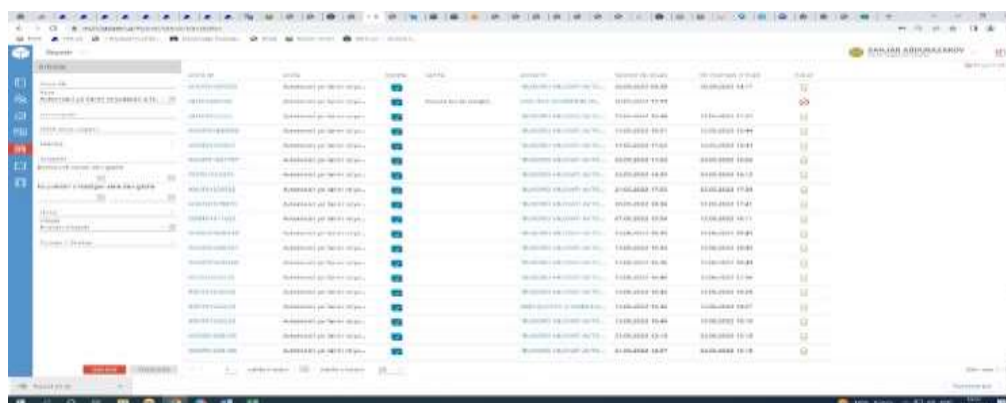
The image shows a screenshot of a web-based information system interface. The interface is in Russian and displays a table with multiple columns. The columns include various identifiers, descriptions of land plots, and numerical values. The table is organized into several sections, with a left-hand sidebar containing navigation icons. The overall layout is typical of a data management or reporting application.

Fig.2. Information system “ UzKAD ”

The traditional land fund accounting information is prepared once a year and published in paper format, and the electronic information system is updated online based on the inventory and registration of land rights.

## CONCLUSION

1. According to the results of the study , the methods of cadastral valuation of real estate objects of the Republic of Uzbekistan are justified according to the principles of segmentation of agricultural objects. It defines the descriptions of the types of permitted use of the land plot( s ) .

2. According to the description of agriculture, including the content of this type of permitted use includes the content of types of permitted use with codes 1.1-1.20, including the placement of buildings and structures used for the storage and processing of agricultural products.

3. Improving the methodology for the mass valuation of real estate for tax purposes to bring its results closer to market indicators of the value of objects of taxation.

4. Improving the automated system of cadastral valuation based on the use of modern digital technologies and artificial intelligence.

5. Improving the methods and methods of information support for cadastral valuation in terms of automating the processes of field and cameral collection of market information and methods for identifying objects of mass valuation.

6. Work out a grouping option that is necessary and sufficient to determine the cadastral value of real estate objects, based on the type of use (purpose) of the objects, the type of activity carried out

7. Improving calculation methods using cost modeling, including statistical processing of objects due to insufficient information about the market (market segment) of real estate objects determination of the cadastral value of land.

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## Thematic Analysis of Knowledge Management Practices and Performance of Multinational Manufacturing Firms in Nigeria



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**ABSTRACT:** Knowledge generation includes all activities which bring to light knowledge which is new, whether to the individual, to the group, or to the world. Multinational manufacturing corporations in South-western, Nigeria have not created responsiveness, acquisition, innovation, protection, integration, and dissemination of information needed to add value to their public image and job creation. This study adopted qualitative research design; eight respondents were interviewed to complement the findings of the questionnaire. Thematic analysis was used to analyze the interview data with the aid of Nvivo, the interview process involved recorded data which were then transcribed based on the responses of each of the participants. Majority of the respondents agree that top management of their company invests much human and financial resource for knowledge management. Top management of multinational manufacturing firms emphasizes the importance of knowledge management to organizational members. Top management of their company participates in and leads knowledge management activities (e.g., knowledge sharing and utilization). The study concluded that Knowledge generation and sharing improves public image and increases job creation through techniques, in form of acquisition of smaller companies. The multinational manufacturing firms' experiences public image through international standard, corporate social responsibility, and reputation. Multinational manufacturing firms' policy are designed to boost public image and prestige thereby ensuring sustained product value growth and development. The study recommends that Multinational manufacturing firms need to have an accurate, accessible and knowledge generation and storage to improve public image and increase job creation. Multinational Manufacturing corporations in Nigeria should encourage the creation of knowledge by supporting research activities and encouraging collaborations and teamwork.

**KEYWORDS:** Knowledge Generation, Knowledge Storage, Knowledge Management Practices, Public Image, Job Creation and Multinational Manufacturing Firms

### INTRODUCTION

Knowledge management practices is one of the most critical resources of multinational corporations in Nigeria, they need to be properly managed to survive in the intensely competitive business environment. Demchig (2015) posits that multinational corporations are more concerned with knowledge embedded in individuals and tend to neglect knowledge at the organizational level. Multinational firms in developed economy have traditionally been leaders in the field of knowledge production, research, and societal development. Knowledge management practices is all about getting information from those who have it to those who need it to improve organizations effectiveness. It is the collection of processes that govern the creation, dissemination, and utilization of knowledge. Githinji (2014) studied the effect of knowledge management on firms' innovation performance and found that knowledge management practices are highly linked with innovative performance of firms, however the study employs the following elements of knowledge management leadership policies and strategies, training and mentoring reward system and communication.

Knowledge generation is important for Nigerian multinational manufacturing corporations to achieve their goals of meeting societal needs, at the same time internally improving the quality of education delivered. Knowledge generation processes have significant effects on knowledge management success and that IT impact on knowledge management success is not direct but mediated through knowledge management process. Knowledge generation includes all activities which bring to light knowledge which is new, whether to the individual, to the group, or to the world. Multinational manufacturing corporations in Nigeria have not created responsiveness, acquisition, innovation, protection, integration, and dissemination of information needed to add value to their public image. Knowledge generation focuses on knowledge generated for exploration and exploitation.

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Therefore, it is against this background that this study intends to make an in-depth and critical analysis of knowledge generation and storage with a view of knowing its influence on the public image and job creation of selected multinational manufacturing firms in Nigeria.

## **STATEMENT OF THE PROBLEM**

Knowledge resides in the user and happens only through the processing, analyzing, and filtering of data via humans. On the other hand, information refers to refined data that can be re-used. Because of their large benefits from trade and their small number, they also may not be able to avoid collective action problems (Kim 2017). The two are not the same yet many Nigerian multinational manufacturing corporations fail to understand the difference and become frustrated when significant investments in technology fail to build their public image. There is not much interest in decision-making system within the multinational manufacturing corporations which has led to poor implementation of knowledge management life cycle. Where knowledge generation is seen as an end in themselves, failure is guaranteed.

Knowledge storage have not been utilized to turn it into corporate knowledge that can be widely shared, strategic thinking and planning must come into play. Without a strategic plan or a guiding strategy for increasing margins, knowledge management and information systems are bound to fail. Dhamdhare (2015) on why knowledge management practices is of the opinion that Knowledge management can transform company's new levels of effectiveness, efficiency, and scope of operation, using advanced technology, data and information are made available to users for effective productivity. Knowledge management practice is thus crucial to the progress of firms, industries, and multinational corporations for harnessing its knowledge for possible gains.

## **STUDY OBJECTIVES**

- I. what is the effect of knowledge generation on public image of selected multinational manufacturing firms?
- II. how does knowledge storage affect job creation of selected multinational manufacturing firms?

## **LITERATURE REVIEW**

### **Knowledge Management Practices**

Knowledge management practices are the mechanism by which an organization's knowledge and information is developed, exchanged, used, and managed. Management of information is seen as a mechanism in which several processes are developed to carry out key elements of the knowledge management policy and operations of an organization. Knowledge management practices improves organizational' performance through increased efficiency, productivity, quality, and innovation. It enhances better decision-making, streamline process time, reduces re-work, ensures high data integrity and greater collaboration. Knowledge management practices has become a priority for organizations' competitiveness and advantage because of the benefits it accrues.

Knowledge management practices is the information within the companies with respect to influencing three corporate building blocks, that is, corporate strategy, corporate culture, and systems. Knowledge management practices is the systematic coordination of knowledge processes by which knowledge is created. However, the process of systematically and actively managing the stores of knowledge leveraged in organizations is called knowledge management, (Ajiboye, Oyebanji & Awoniyi, 2017). Knowledge management practices are tool for managing and monitoring the organizations' tangible and non-tangible information assets. Therefore, knowledge management will entail all the processes required to effectively utilize these potentials in organizational members for success, survival, and sustainability.

### **Knowledge Generation**

Knowledge generation strategies are effective acquisition and utilization of new knowledge are a source of flexibility and competitive advantage and hence associated with multinational firms' performance and indeed may be the most important aspect of innovation process influencing the performance of small firms. The adoption of adopting excellent practices by company is evident in their ability to create platforms for generating and sharing of knowledge. Knowledge generation causes significant influence on business management performance and competitive edges. Benson, Morgan, and Filipinos (2018) stated that social skill and inherent personal traits are more essential than technical or a degree qualification as results of these traits are pivotal to enhance training and career development.

Knowledge generation is the process of transforming information and intellectual assets into enduring value and of connecting people with the knowledge that they need to act when they need it. According to Fattahyan, Hoveida, Siadat and Tallabi (2017), in their study of an Iranian university, the above-mentioned researchers state that social capital and multinational firms' culture

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are two important facilitators of knowledge generation. Another means of identifying knowledge generation, especially for the purpose of encapsulating tacit knowledge, is through network analysis or brainstorming sessions. According to Adhikari (2016), the radical changes pervading the multinational firms' environment require concerted efforts at knowledge generation implementation to derive 'bottom-line benefits.

### **Knowledge Storage**

Knowledge storage provides tools to cope with increasing accountability demands and cost pressures, thus enabling greater efficiency in making the best use of available resources. One of the ways through which multinational corporations in Nigeria could increase job creation goals is through knowledge storage, (Marouf & Agarwal, 2016). Knowledge management may help improve business processes and strategies, enhance company reputation, and promote collaborations and knowledge storage. Knowledge storage involves the use of technological systems i.e., modern informational hardware/software and human procedures to classify organizational knowledge, then to code and index the knowledge for future recovery. There are problems of knowledge storage on the part of Nigerian multinational manufacturing firms, these ineffective practices have failed to create job opportunities. Also, there is poor performance of specific roles of evaluation of knowledge storage practice in multinational manufacturing firms. Storing knowledge can be easy through its automatic access and distribution to users based on their needs and interests; applying actions in support of decisions, problem-solving, providing job aids and training; creating, generating, or discovering new knowledge through research and development, experimentation, lessons learned, creative thinking and innovation. Caloghirou, Kastelli and Tsakanikas, (2016) posit that a relationship exists between strategic alliance and the extent of knowledge storage, including expertise and skills; capturing the existing knowledge through its formalized representation; acquiring necessary knowledge and information. Storage through knowledge management practices includes know-how; storing the existing, acquired, and created knowledge in properly indexed and interlinked knowledge repositories.

### **Performance of Multinational Manufacturing Firms**

Multinational Corporations are those enterprises which own or control production or service facilities outside the country in which they are based. In the context of organizational performance, performance is a measure of the change of the state of affair of an organization, or the total outcomes that results from management (Maâlej, Zaid, Louati, & Affes, (2015). Multinational Corporations are corporations registered and operating in more than one country at a time, usually with its headquarters in a single country (Odunlami & Awolusi, 2015).

### **Public Image Multinational Manufacturing Firms**

Nigerian multinational manufacturing firms' public image is extremely important in the business world. The term has evolved with the passage of time to become a strategic and intangible corporate asset and it has been used in daily life, business, and politics, etc. for a very long time. Public image is directly related to the core existence of organizations, and it is interpreted as an organization's ethos, goals and values that create a sense of belonging among institutions stakeholders (George, Owoyemi, & Onakala, 2012). Reputation matters and it explain why employees choose a particular organization in preference over others. It makes the difference between success and failure.

Public image has been achieved by setting and adhering to standards of quality and responsibility is verified through a strong orientation to service and values manifested through the multinational manufacturing firms' strong development and innovation policy credibility. The Nigerian economy witnessed nearly two decades of output and demand contractions in the face of increased volatility in inflation, devaluation, unemployment, and interest rates (Edwards, Marginson & Ferner, 2013).

### **Job Creation Multinational Manufacturing Firms**

Nigerian multinational firms are very essential to the economic growth of Nigeria, they provide employment, contributes significantly towards the industrial development. Erabaddage, Mohd and Ali (2015) stated that employees' employability was clearly recognized as one of the major goals and aim of organizations; accreditation of services clearly shows the measurement of quality of training and capabilities through the contribution made towards employability. They are the source of capital formation, an avenue to produce intermediate goods and help in the development of craftsmanship. Multinational corporations can create enough job opportunities for Nigerian graduate to overcome entrenched local interests by offering more revenue or employment (Jensen, Glen, Quan & Edmund 2012).

The purpose of organizational training of individuals are aimed at transition of emergent workforce success among employees, firms, and industries. The teaching of employability skills can be embedded in the school curriculum and should shares a similar view that enhance conference/seminar and employability skills approach in the school of taught, since many students leave education without the requisite skills to succeed in the labor market. It is very important to identify the roles of multinational



## **Thematic Analysis of Knowledge Management Practices and Performance of Multinational Manufacturing Firms in Nigeria**

manufacturing firms' collaborations in Nigeria in the empowerment and training of employees to be well equipped for any available job, since they have graduated, (Sodipo 2017).

### **Empirical Review**

Victoria, Olu-Daniels and Nwibere (2020) studied conducted a study on the Knowledge Management and Performance of Organizations in Nigeria: A Case Study of Selected Food and Beverage Firms. The objective of the study is to ascertain the effect of knowledge management on the performance of organizations in Nigerian food and beverage manufacturing sector. The study used survey research design, with 320 samples from a population of 1587 employees of selected food and beverage firms in Nigeria. A validated questionnaire was used to collect data and structural equation modelling was used to analyze the data. Results showed that knowledge creation had a significant negative effect on innovation and knowledge sharing had a significant positive effect on innovation. The findings also revealed that knowledge creation has a significant positive effect on job satisfaction while knowledge sharing had an insignificant negative effect on job satisfaction. The study concluded that the performance of the manufacturing sector in Nigeria and other developing countries by adopting knowledge management initiatives to enhance performance levels. Manufacturing firms can also adopt innovation as a channel for knowledge management to boost the performance of their businesses.

Naome (2020) studied the Impact of Knowledge Management on Organizational Performance: A Case of U.S. Retail Firms. The study investigated the influence of knowledge management on organizational performance in the case of U.S. retail firms. The study is based on secondary data analysis, which was collected through a critical review of the literature. The analysis has shown that knowledge management has a significant impact on the performance of organizations in the case of U.S. retail firms. The study found that, when the management of a firm gives importance to the effective management of knowledge, it ultimately helps to improve the performance of that firm. Knowledge management in an effective way is considered important for ensuring long-term prosperity. Knowledge-based capacity is considered to a large extent a strategic resource but not the most strategic resource as there were other resources such as men, materials, money time, energy, information, and infrastructure. It was concluded that as shared knowledge increased, the performance of the firms also increased. The study recommended tacit dissemination and development are significant to achieve sustainable competitiveness.

A study conducted by Jackline and Willis, (2018) titled Critical Review of Literature on Knowledge Management Strategy and Organizational Performance in New York. Knowledge is a critical asset in an organization thus there must be an effective identification, acquisition, storage, sharing and implementation to achieve a sustainable competitive advantage. The study reviewed the empirical studies on knowledge management strategy and organizational performance in New York. The study also includes a critic, identifies the research gap, concludes on knowledge management, and captures recommendations of the study. The study demonstrates knowledge management strategy as being a driver of organizational performance and a vital tool for an organization to survive, be competitive and make profits. The study recommends that organizations in America need to develop a policy on knowledge management to enhance an effective knowledge management to improve performance. The study concludes that there has been an expansion in the field of knowledge management strategy which has grown from serving only one type of organization that is, the organizations providing consulting and professional services to serving many other diverse organizations, there's still a dearth in this research field as knowledge management strategy is still a growing subject and thus requires further investigations. To gain an insight into an organization's operation and its challenges, an organization requires a knowledge management strategy that's well developed.

In a similar study by Kumarave and Vikkraman, (2018) titled Assessment of Knowledge Management Practices in Institutions in India: A Structural Equation Modeling Approach. Knowledge Management (KM) is a new emerging field of research in the educational environment. The main objective of the study which analyzed the knowledge management readiness in institutions in India. A survey has been conducted through questionnaire from 540 faculty members working in institutions in India through Knowledge Management Assessment Instrument (KMAI) and Knowledge Management Enablers Scale (KMES). Structural Equation Modeling has been used to analyze the data. The present study also tries to investigate the impact of Knowledge Management Enablers Scale (KMES) on Knowledge Management Assessment Instrument (KMAI). The research findings indicate that there is a strong positive impact of KMES factors on KMAI factors. Knowledge management enablers are the critical success factors of Knowledge management implementation in Higher Educational Institutions (HEIs). Therefore, the study recommended improving the knowledge management enabling factors in the institutions in order to enhance the knowledge management practices. The study concluded that the present research provides a unique perspective of knowledge management readiness in higher learning institutions in India, which is not much covered in the knowledge management literature. The recommended that institutions readiness for implementing the knowledge management has been examined with the help of faculty members' opinion on creating

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knowledge, capturing knowledge, organizing knowledge, storing knowledge, disseminating knowledge, and applying knowledge for effective implementation of knowledge management practices in institutions.

Ezinma and Ebele, (2015) conducted a study titled Knowledge Management and Organizational Performance in Selected Commercial Banks in Awka, Anambra State, Nigeria. The study examined the extent to which knowledge management improves the Performance of Selected Commercial Banks in Awka. The study specifically determined if there is a significant relation between knowledge identification and organizational performance. It also examined the extent to which knowledge acquisition affects the performance of an organization. The study employed descriptive research design; primary source of data is the major instrument used for the study. Pearson's product moment correlation was used to analyze the data. The findings reveal that there is a positive relationship between knowledge identification and organizational performance. It also reveals that knowledge acquisition has a positive effect on organizational performance. In conclusion, knowledge is the key resource needed if an organization intends to operate at a level that is equal to no other. The study therefore recommends that an effective system should be put in place to ensure that relevant knowledge that boosted performance. And, that knowledge acquisition is not only about acquiring mere knowledge but mindfully managing knowledge acquisition activities to tap into different kinds of knowledge. The study concluded that Organizations are often faced with the challenge of remaining competitive in a dynamic business environment and sustaining its comparative advantage which they hold over their competitors.

### Gaps in Literature

Knowledge management is an urgent and critical issue, to such an extent that Nigerian multinational manufacturing firms must efficiently manage their knowledge bases and repositories to earn long-term competitive advantage (Kabiru 2017). The application of knowledge management practices offers firms with active potentials for enhancing knowledge quality and for consolidating the value and applicability of knowledge (Andrej, 2017). Due to the imperative nature of knowledge, scholars and practitioners have reported knowledge management practices adoption as being widely recognized and practiced in diverse industry and established to a large extent it's significance in terms of performance (Tseng, 2014). It has become an essential issue for Nigerian multinational manufacturing firms to comprehend in what manner knowledge management would be employed to instigate, improve, and sustain customer relationships, and increased firm performance.

### METHODOLOGY

This study adopted qualitative research design; eight respondents were interviewed to complement the findings of the questionnaire. Thematic analysis was used to analyze the interview data with the aid of Nvivo, the interview process involved recorded data which were then transcribed based on the responses of each of the participants. Consequently, the study explored the opinions, practices, and understandings of critical participants because they signify the option of yielding most relevant facts for the study. The participants which covered eight operational and management staff of multinational manufacturing firms in Lagos State.

### Thematic Analysis

The interviewees were informed of the study's objectives, approaches, as well as assured confidentiality. They were assured that none of the information will be used against the companies. In view of this, each of the responses was recognized in the thematic analysis by codes. The whole study is built around four thematic questions which are; what is the effect of knowledge generation on public image of selected multinational manufacturing firms? how does knowledge storage affect job creation of selected multinational manufacturing firms?

**Table 1. Distribution of the Respondents' Demographic Information for Respondents**

List of Respondents	Occupation	Address of Respondents	Age	Date of Interview
Informant 1	Operational Staff	Lagos	31 years	5/5/2022
Informant 2	Operational Staff	Lagos	32 years	5/5/2022
Informant 3	Operational Staff	Lagos	25 years	6/5/2022
Informant 4	Operational Staff	Lagos	24 years	6/5/2022
Informant 5	Managerial Staff	Lagos	31 years	7/5/2022
Informant 6	Managerial Staff	Lagos	32 years	7/5/2022

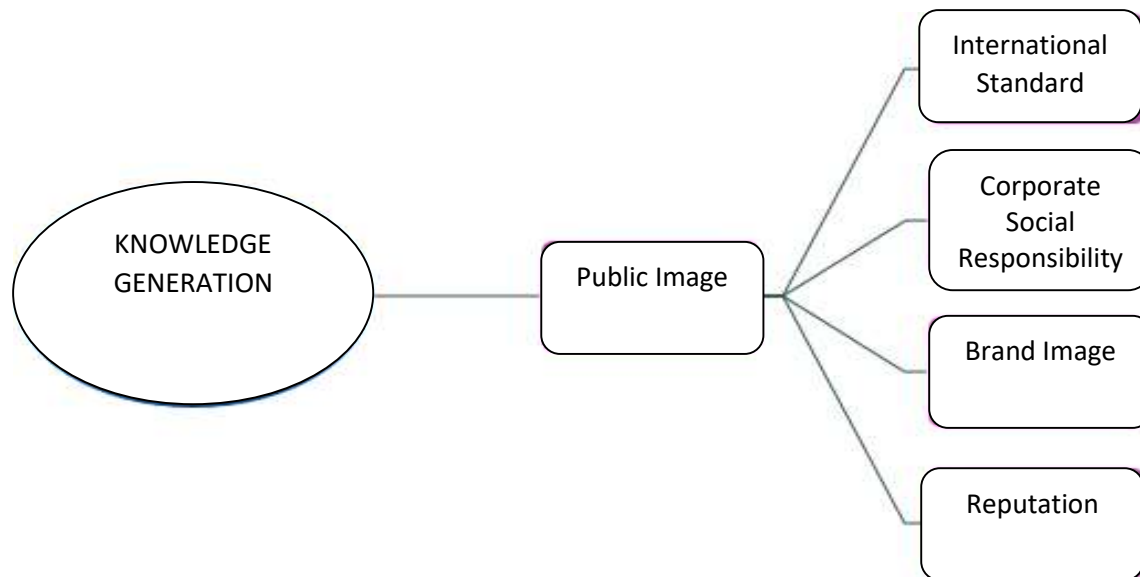
## Thematic Analysis of Knowledge Management Practices and Performance of Multinational Manufacturing Firms in Nigeria

Informant 7	Managerial Staff	Lagos	34 years	8/5/2022
Informant 8	Managerial Staff	Lagos	36 years	8/5/2022

Source: Field Survey, 2022

### Research Question One:

The first research question looked at what ways knowledge generation can improve public image of selected multinational manufacturing firms. Knowledge generation is the capture and representation of knowledge so that it can be re-used either by an individual or by an organization. This is evident from the responses of respondents coded Respondent 2 and Respondent 6.



**Figure 1. Theme on Knowledge Generation on Public Image of Multinational Manufacturing Firms**

Figure 1. reflects the outline of responses for the study. For example, informant coded Respondents 2 said that “knowledge generation can be influenced by public image through international standard and corporate social responsibility”. This lack of utilization of available knowledge generation in the sector has hindered the competitiveness of these firms’ products and services, while further reducing the contribution of the industry to the country’s Gross Domestic Product (National Bureau Statistics, 2015).

In other responses by Respondent 2, he suggested that;

*Public image involves international standard of multinational manufacturing firms and corporate social responsibility of the company. International standard puts the multinational manufacturing firms on the global platform for public image.*

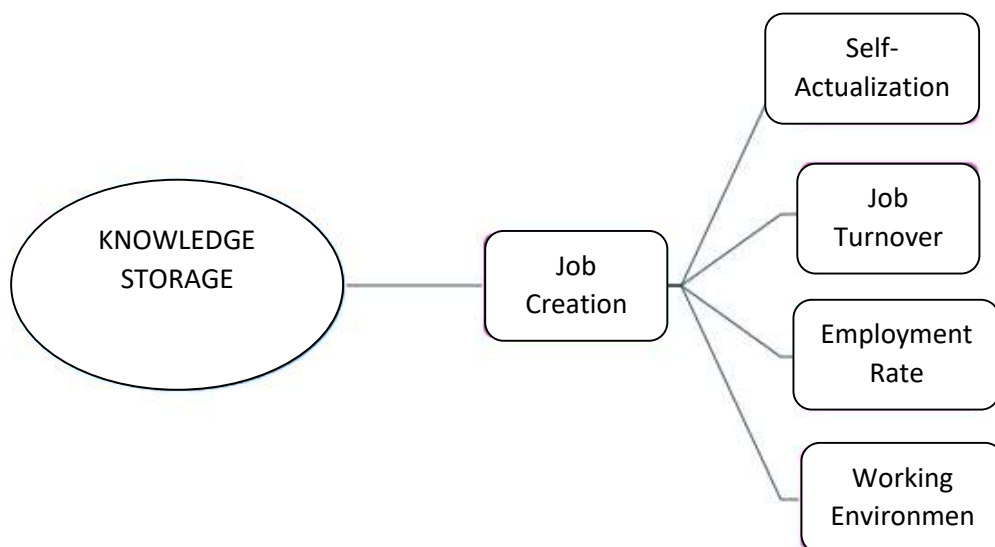
In other responses by Respondent 6, he suggested that;

*Multinational manufacturing firms emerged from superior efficiency, as an organizational vehicle, to transfer knowledge across borders. Brand image relates to reputation of the company, a good company reputation increases the public image of a multinational corporation.*

From Figure 1 knowledge generation have significant effect on the public image of a company. Foreign multinational firms build their services through international standard, corporate social responsibility, and reputation. Rosell, Lakemond, and Wasti (2014) asserted that knowledge generation and joint learnings with the market would provide a competitive advantage for the multinational corporation.

### Research Question Two:

The second research question states that; how knowledge storage increase job creation of selected multinational manufacturing firms can. Knowledge storage helps to interpret and mitigate ambiguity, provide depth about the business environment, construe cultural nuances, and alleviate subtle problematic challenges. Alan (2020) asserted that the survival in the knowledge economy is based on the ability of business to store knowledge and create jobs. This is evident from the responses of respondents coded Respondent 4 and Respondent 8.



**Figure 2. Sub-Theme on Knowledge Storage on Job Creation of Multinational Manufacturing Firms**

There is a strong emphasis on knowledge storage as a factor for success and innovation in the organization. Figure 2 recognizes as crucial the roles the multinational manufacturing firms plays in job creation. Knowledge storage of firm processes job related policies that encourage learning and developing employee skills. Knowledge storage equips the company to deal effectively with the challenges and gaps in its market and climate.

In other responses by Respondent 4, he suggested that;

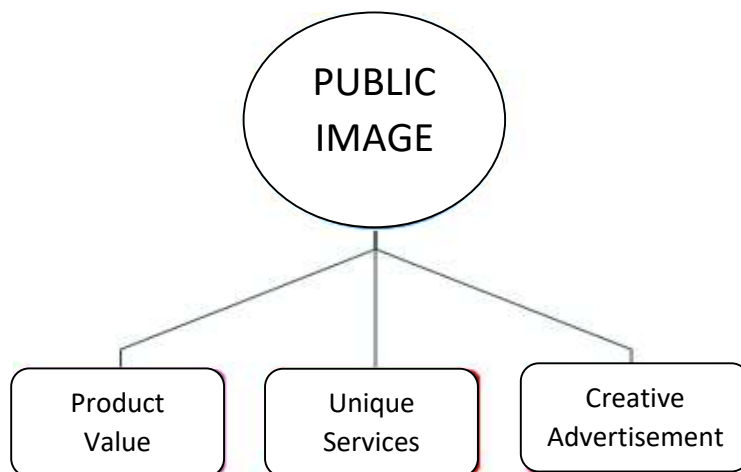
*The capacity to manage job creation flows from knowledge storage as to be adequately harnessed for organizational innovativeness. Self-actualization of employee enhanced the levels of performance which its technology proffers solutions to any business organization that has it. Multinational manufacturing corporations also have a well specified job turnover, this guides their employment principles.*

In other responses by Respondent 8, he suggested that;

*Multinational manufacturing firms employs the best of candidates that applies for their job vacancies. These employees are properly taken care of so that they will not move to work for another multinational companies. This is easy achieved by creating a conducive working environment. Every employee wants to work in a very encouraging atmosphere that will compensate for the level of commitment to the company.*

Knowledge storage as a fluid mix of practices, values, contextual information, and intuition that provides a structure to evaluate and incorporate job creation for talented employees. Knowledge storage is seen as the full utilization of information and data, coupled with the potential of people’s skills, competencies, ideas, intuitions, commitments, and motivations.

**Performance of Multinational Manufacturing Firms in South-Western Nigeria**



**Figure 3. Performance Variable of Public Image of Multinational Manufacturing Firms**

## Thematic Analysis of Knowledge Management Practices and Performance of Multinational Manufacturing Firms in Nigeria

From Figure 3 Respondents 1 established that;

*Multinational manufacturing firms' policy are designed to boost public image and prestige thereby ensuring sustained product value growth and development. However, this public image of the flows from the company's knowledge management practices which is the strong conditioned on the continuing importance of company's interest.*

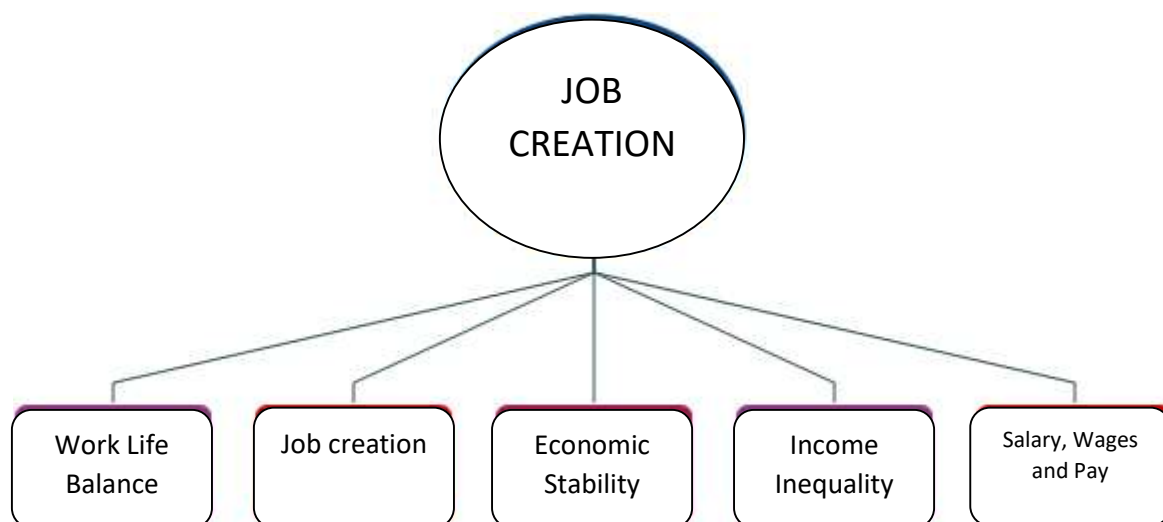
In other responses by Respondent 5, he revealed that;

*Our company utilize the existing market existed for quality products and unique services to reach out to public. Innovation through unique service addresses the change, which allows for a competitive advantage, but in services. Technological advantage ultimately enables the organization leverage on corporate knowledge to better meet the needs of its market base by reducing the cost of production.*

In other responses by Respondent 7, he established that;

*Improving public image ensures creative advertisement is put in place, employee satisfaction and customers' delight. Multinational manufacturing firms also leverage on technology to create a friendly public image. Innovation advertisement has been noted to facilitate the achievement of organization's objectives as it helps in the transformation of ideas into new, better-quality products, and services through enhanced processes.*

Knowledge management practices are increasingly recognized as the main source of competitive advantage in the knowledge-based economy. Unique services reflect a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes (Lim 2017).



**Figure 4. Performance Variable of Job Creation of Multinational Manufacturing Firms**

Multinational corporations now give increased attention to employing talented Nigerian graduates. So long as the value created using the contributed assets is equal to or greater than the value expected by those contributing the assets. The assets will continue to be made available to the organization and the organization will continue to exist (Parthasarathy, 2015). An organization's culture shapes behavior, and so it is vital that the culture facilitates job creation.

In other responses by Respondent 3, he admitted that;

*Managers of multinational corporations consider work life balance of their employees to stay ahead of the competition. Therefore, organizations adopt and institutionalize work life structures and features that focus more on improving their employee learning ability. Effective work life balance with the knowledge produces results.*

In other responses by Respondent 5, he suggested that;

*Promoting job opportunities gives room for employee learning processes and training or staff growth towards improving the organization's knowledge base. Multinationals typically pay at or above the going wage and provide superior training. In this sense, the multinational corporation acts as a training center in the developmental platform for Nigerian graduates.*

# Thematic Analysis of Knowledge Management Practices and Performance of Multinational Manufacturing Firms in Nigeria

## DISCUSSION OF FINDINGS

From the first objective which investigated the effect of knowledge generation on public image of selected multinational manufacturing firms. Majority of the respondents agree that top management of their company invests much human and financial resource for knowledge management. Top management of multinational manufacturing firms emphasizes the importance of knowledge management to organizational members. Top management of their company participates in and leads knowledge management activities (e.g., knowledge sharing and utilization).

From the findings, objective two which examined how knowledge storage affect job creation of selected multinational manufacturing firms. Majority of the respondents agree that data standards, metadata, document codes, subject indexes and filing systems are widely used to enable efficient information correlation, storage, and retrieval. The records, data, and logs are required to be complete, meaningful, accurate and accessible (e.g., logs, minutes, test results).

## CONCLUSION

Knowledge generation management improves public image of companies through techniques, in form of acquisition of smaller companies. The multinational manufacturing firms' experiences public image through international standard, corporate social responsibility, and reputation. Multinational manufacturing firms' policy are designed to boost public image and prestige thereby ensuring sustained product value growth and development. However, this public image of the flows from the company's knowledge management practices which is the strong conditioned on the continuing importance of company's interest. Multinational manufacturing corporations also have a well specified job turnover, this guides their employment principles.

## RECOMMENDATIONS

- i. Multinational manufacturing corporations should carryout knowledge generation to public image. There should be areas of operations to inculcate such knowledge management practices into their business activities.
- ii. Multinational manufacturing firms need to have an accurate, accessible and knowledge storage to increase job creation. Multinational Manufacturing corporations in Nigeria should encourage the creation of knowledge by supporting research activities and encouraging collaborations and teamwork.

## CONTRIBUTIONS TO KNOWLEDGE

The contributions to business practice, the findings of this study will present opportunities for knowledge management in the home and the host country. The host country (i.e., Nigeria) will benefit because of the increase in the performance of multinational manufacturing firms. The application of the knowledge generation from the study would serve as a means of equipping Nigerian multinational manufacturing firms through management practices. The study has also given multinational manufacturing corporations insight on how the important knowledge storage on to create jobs for Nigerian graduates. It will go a long way in reducing unemployment rate in Nigeria.

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## Constructing A Model of Factors Affecting the Effectiveness of Internal Auditors at Public Non-Business Units in Vietnam



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**SUMMARY:** The article presented the concepts of internal auditors, public non-business units and some related concepts. In order to meet the goal of constructing a model of factors affecting internal audit effectiveness, the research team has applied background theories and research models on internal audit of authors around the world. With four factors inherited from the study of Alzeban et al (2014), the research team has introduced two new factors, namely political institutions and group interests, into Constructing a Model of influencing factors. Affecting the effectiveness of internal audit at public non-business units in Vietnam. Constructing a Model suitable for the Vietnamese context will be one of the factors that help propose solutions to increase the efficiency of internal audit at public non-business units in Vietnam.

**KEYWORDS:** Internal auditors; Model, Public non-business units, Vietnam

### 1. THE PROBLEM

According to the IIA Association of Internal Auditors, "Internal Auditors are independent, objective assurance and consulting activity designed to add value and improve an organization's operations. Internal audit helps an organization achieve its objectives by applying a systematic and disciplined approach to evaluate and improve the effectiveness of its risk management, control and governance". From the above definition, it can be seen that internal audit supports the organization's risk management, ensures efficiency and brings high performance in operations. Currently, businesses and administrative and non-business units consider internal audit as a function of checking financial and accounting work. The internal audit department is similar to an extension of the finance and accounting department. Although it has been recognized for a long time in the world, the roles, functions and activities of multiple audits in Vietnam are mostly not really understood according to their inherent nature. Internal audit brings many benefits, but up to now, the number of enterprises and units applying internal audit in checking the compliance with control regulations related to some financial activities of the unit is still quite low. Many businesses in Vietnam and especially the public administration sector are not fully aware of the importance and effectiveness of Internal Auditors. Therefore, it is urgent to study and build a model to evaluate the effectiveness of internal audit and the factors affecting the effectiveness of Internal Auditors.

### 2. THEORETICAL BASIS

#### 2.1. Some concepts

##### *Public non-business units*

The Law on Public Employees took effect on January 1, 2012 and was amended on November 25, 2019 to define a public non-business unit as an organization operated by a competent state agency, a political organization, or a political organization, socio-political organizations established in accordance with law, having legal status, providing public services and serving state management.

##### *Effective*

According to Investopedia.com "Efficiency means the degree to which a process is performed that uses the lowest number of inputs to produce the greatest output. Efficiency involves the use of all inputs in the production of any given output, including individual time and energy. Efficiency is a measurement concept that can be determined by determining the ratio of useful outputs to

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total inputs. It minimizes the waste of resources such as physical materials, energy and time, to successfully achieve the desired output.”

### *Internal Auditors*

According to the Institute of Internal Auditors (IIA), internal audit is an independent, objective assurance and consulting activity designed to increase and improve activities within an organization. Internal audit contributes to the achievement of an organization's objectives by applying systematic and disciplined approaches to evaluate and improve the effectiveness of its risk management, audit and control processes. control and administration.

## **2.2. Background theory**

### *New theory of public administration*

This theory was promoted by Hood (1991) with a focus on the New Public Management model. For the Government of traditional public administration: All public affairs are performed and handled by the Government in accordance with the law. The function of the Government is heavy on social administration, directly participating in social work. The government's function is purely administrative and not directly related to the market. Meanwhile, for the Government of the development administration: The public affairs are more political, the influence of politics is increasing in the administration. The function of direct participation in public services is increasingly reduced, but through the socialization of those services to manage society, but still under the management of the State. Government function faces market challenges. The administrative development of all countries must pay attention to and shoulder the common responsibility for human problems such as poverty, epidemics, environment, drugs, crime... In short, New Public Administration (Development Administration) has a new approach to traditional public administration. The emergence of this model has changed the way the public sector operates significantly. With the characteristics of the new model: effective management, deregulation, decentralization, application of some elements of the market mechanism, political attachment, and partial privatization of operations. State, applying many methods of enterprise management, internationalization trend; The development administrative model appeared to overcome the inappropriate weaknesses of the traditional administrative model. Vietnam's economy is operating according to the market mechanism and is increasingly integrating deeply into the global economy. The government function will inevitably face the challenges of the domestic market and the world market.

Therefore, along with the application of reasonable factors of the new model of Public Administration (Development Administration) to build a model with Vietnamese characteristics, promoting administrative reform to keep up with economic reform. it is necessary to evaluate the effectiveness of internal audit in public sector units, in order to evaluate the effectiveness of Internal Auditors, it is first necessary to identify the factors affecting the effectiveness of Internal Auditors.

### *Agency theory*

Agency theory has its roots in economic theory, developed by Alchial & Demsetz (1972), and further developed in 1976 by Jensen & Meckling. This theory emphasizes that the principal makes choices. the agent performs some tasks on their behalf, and the agent must provide a better choice for the principal. The performance of the executor's duties will be reviewed by a third party performing the role of monitoring and evaluating objectively or on behalf of the principal. Michael B. Adams, (1994) Arguing that Agency theory also provides a useful theoretical framework for studying the internal audit functions, he argues that delegation theory not only helps explain and predicts the existence of internal audit, which also helps to explain the roles and responsibilities assigned to the organization's internal auditors, and delegation theory also predicts the internal audit functions may be affected by organizational change. He also concluded that proxy theory provides a rich theoretical basis for research that will benefit both the academic community and the internal audit profession. Therefore, the author uses delegation theory throughout the thesis research process to analyze the responsibilities of the internal audit department in providing information about the performance of public sector units. In addition, the theory of delegation also helps the author to study the need to use information of the heads of the units to propose recommendations to improve the efficiency of internal audit at the unit to better meet the needs of the organization use of trustee information.

## **3. RESEARCH METHODS**

According to Creswell et al., (2003) there are three research methods commonly used when doing scientific research in the field of business: qualitative research, quantitative research and mixed research. To achieve the stated objective, the study uses qualitative research methods.

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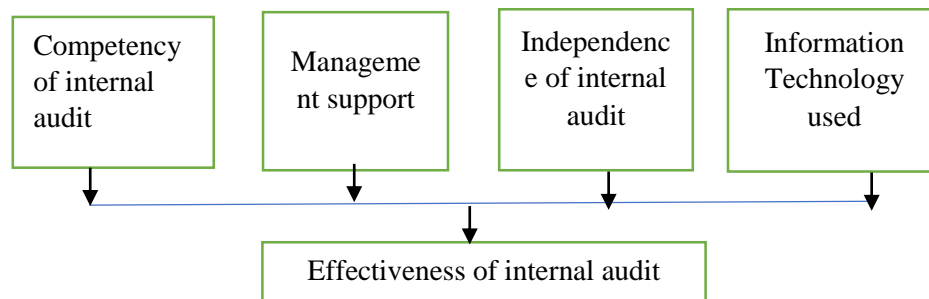
Data from the source is accessible to the author in the form of documents from domestic and foreign studies on internal audit in public administrative units in the form of articles, reviews, theses, public works, research programs at universities, the author collects during the research. These studies are grouped by topic and study period. Thereby, helping the author to summarize the theoretical issues of Internal Audit and the effectiveness of Internal Audit, combined with the experience gained from the practice of teaching and working in related fields to help the author have can understand and solve research related work conveniently.

### 4. CONSTRUCTING A MODEL

#### 4.1. Overview of related research models

Research by Zulkifli Baharud-din et al (2013), "Factors that Contribute to the Effectiveness of Internal Audit in Public Sector" (International Proceedings of Economics Development Research, 2013, Vol. 70, p126).

This paper examines the factors that contribute to the effectiveness of internal audit in the Malaysian public sector. It is to determine the auditor's perception of the effectiveness of the internal audit work, influenced by the quality of the audit work to effectively perform as a control tool in public financial management. It also aims to identify the relationship between factors that contribute to the effectiveness of internal audit in promoting better transparency and integrity of public management. The scope of this study includes internal auditors working in ministries in Putrajaya. This study uses a cross-sectional survey to investigate the effectiveness of internal audit. Several statistical techniques such as statistical, correlation and regression descriptive analysis are used to analyze the data from surveys. The results of the study show that the factors analyzed in this study such as auditor's capacity, auditor's independence and objectivity, and management support all affect the effectiveness of the audit. internal. In addition, the results of the study also found that high internal audit effectiveness depends on audit capacity and management support, any negative factors affecting these factors will give a significant change in the effectiveness of internal audit. Management support is the most influential factor among the factors that contribute to the variation of audit work quality and is a clear factor influencing the effectiveness of internal audit.

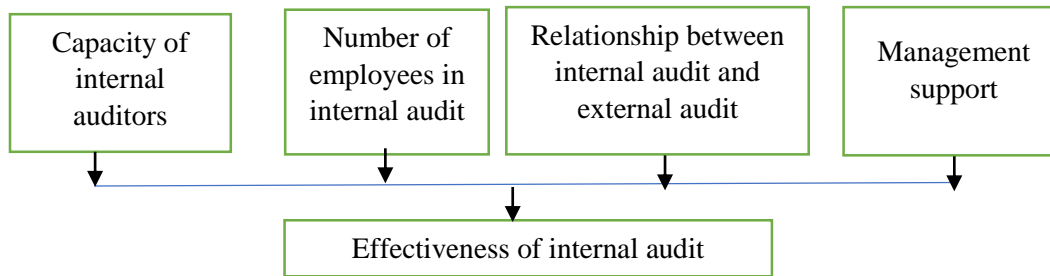


**Figure 1. Conceptual framework of Zulkifli Baharud-din et al (2013)**  
**Sources: Researcher Zulkifli, Alagan and Mohd, 2013**

Research by Abdulaziz Alzeban et al (2014), "Factors Affecting the Internal Audit Effectiveness: A survey of the Saudi Public Sector" (Journal of International Accounting, Auditing and Taxation Volume 23, Issue 2, 2014, Pages 74–86).

Using data obtained from two surveys, separate questionnaires were sent to 223 managers of audited divisions in 79 Saudi public sector organizations and 396 auditors. auditors in these organizations are subject to audit by the GAB. The results of this study suggest that factors such as: capacity of internal auditors, number of employees in internal audit department, relationship between internal audit and external audit, independence of Internal audit and the level of management support for internal audit functions influence the effectiveness of internal audit functions in the public sector in Saudi Arabia. At the same time, the author's research results highlight the role of support management for internal audit functions as the main driver of internal audit. This study further elaborates on the current internal audit literature in Saudi Arabia. Given the importance of the public sector in the Saudi economy, this study enhances understanding know about the nature of internal audit in Saudi Arabia and the basic factors affecting internal audit effectiveness.

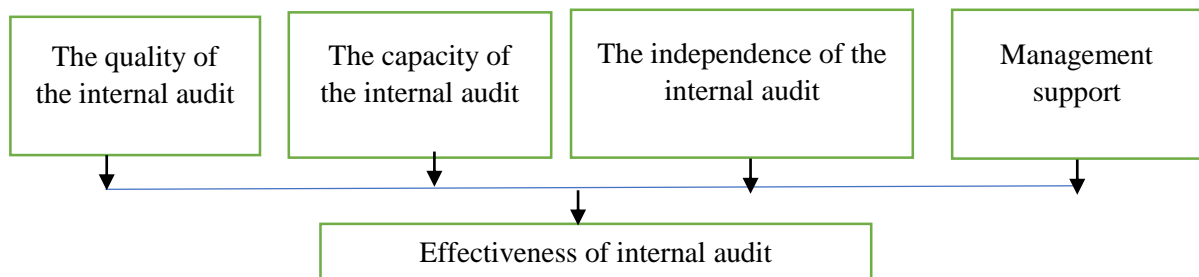
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**Figure 2. Conceptual framework of Abdulaziz Alzeban et al (2014)**  
**Sources: Researcher Abdulaziz Alzeban et al (2014)**

Research by Drogalas George (2015), "Factors associated with Internal Audit Effectiveness: Evidence from Greece" (Journal of Accounting and Taxation, Vol. 7(7), pp. 113-122, July, 2015).

In this study, the author investigates the specific factors associated with the effectiveness of internal audit in the Greek business environment. Empirical evidence is gathered by a survey. The author uses the dual factor analysis method and regression analysis to prove the collected information. The results show that the main factors affecting the effectiveness of internal audit are: (1) the quality of the internal audit, (2) the capacity of the internal audit team, (3) the independence of the internal audit and (4) support from management. More specifically, the author's results also suggest that the independence of internal audit is the foundation of internal audit effectiveness, as it is the most important factor in the model. Finally, the author concludes that internal audit is of great importance for Greek businesses.

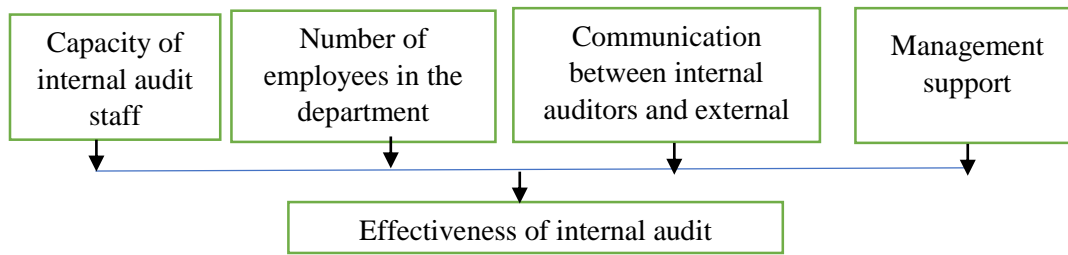


**Figure 3. Conceptual framework of Drogalas George (2015)**  
**Sources: Researcher Drogalas George (2015)**

Research by Tabandeh Salehi (2016), "Investigation Factors Affecting the Effectiveness of Internal Auditors in the Company: Case Study Iran" (Review of European Studies; Vol. 8, No. 2; 2016).

The study develops and tests through 5 hypotheses, collects data through a questionnaire survey to 355 internal audit managers and 272 internal audit staff. The author uses a multivariate regression model to test the relationship between internal audit effectiveness and four main influencing factors, which are: Capacity of internal audit staff, number of employees in the department internal audit, communication between internal auditors and external auditors, management support for the internal audit department. These factors were identified by the author based on a review of previous studies (Alzeban & Sawan, 2013; Soh & Bennie, 2011; Ahmad et al, 2009; Mihret & Yiamaw, 2007; Ali et al, 2007); Sarens & Beelde, 2006; Carcello et al, 2005; Brierley et al, 2001, 2003). The results of the study show that internal audit effectiveness is more strongly influenced by 3 factors: trained and experienced internal audit staff, management support, resources of the internal audit department. The author's findings also highlight management's support for performing internal audits, as an important leader in internal audit performance.

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**Figure 4. Conceptual framework of Tabandeh Salehi (2016)**

**Sources: Researcher Tabandeh Salehi (2016)**

Detecting the factors affecting the effectiveness of internal audit will help provide solutions to improve the efficiency of internal audit. From the research overview of related works, it can be seen that the research focuses on 4 factors summarized by the author in the following table:

**Table 1: Summary of factors affecting the effectiveness of internal audit**

Serial	Factor	Author
1	Capacity and number of internal audit	Baharud-din et al , 2013; Alzeban et al , 2013, 2014; Hailemariam, 2014; George, 2015; Salehi, 2016
2	Communication between internal auditors and external auditors	Alzeban et al , 2013, 2014; Salehi, 2016
3	Management support	Cohen & Sayag, 2010; Baharud-din et al , 2013; Alzeban et al , 2013, 2014; Hailemariam, 2014; George et al , 2015; Salehi, 2016
4	Independence of internal audit	Baharud-din et al , 2013; Alzeban et al , 2013, 2014; Hailemariam, 2014; George et al , 2015; Salehi, 2016

**Source: Synthesis of the research team**

In Vietnam, in-depth studies, using quantitative research methods and conducting surveys in Vietnam to determine the factors affecting the effectiveness of internal audit at regional units. Public and business alike are re-applying the model of international studies. Or studies in the field of internal audit are only qualitative studies aimed at perfecting the internal audit system at an enterprise or at a specific administrative and non-business unit, but not in depth. in building a research model suitable to the characteristics of Vietnam. Therefore, the construction of a research model of factors affecting the effectiveness of internal audit at public non-business units in Vietnam has practical and topical significance for Vietnam today.

### 4.2. Influence factor

#### *Capacity and number of internal audit staff*

Theoretical background shows that to be effective internal audit, the organization must have adequate resources to carry out the responsibilities appropriately and the lack of competent resources is also a challenging issue. large for the internal audit system in the unit. The internal audit team leader must ensure that internal audit resources are deployed appropriately, adequately and effectively to accomplish the approved plan. (ISPPIA, Standards 2030 and 2230). Alzeban (2014) he said that the capacity of internal auditors is measured through professional competence; work experience; the number of hours that internal auditors are trained and updated their specialized knowledge regularly.

#### *Relationship between internal auditors and external auditors*

Coordination and cooperation between internal and external auditors has long been considered important to the benefit of audits for organizations and external stakeholders. Examples of such coordination and cooperation include planning and exchanging information, opinions, and reports to facilitate higher quality audits and avoid unnecessary duplication of audit engagements. Professional standards address the relationship between internal auditors and external auditors. For example, ISPPIA, in its coordination standard, suggests that coordination should include information sharing and coordination of activities. The Standards require the establishment of a professional working relationship between the respective audit parties, which helps the internal auditors in achieving their objectives and providing better service to the organization. office. From the external auditor's point of view,



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the information provided by the internal auditor has the potential to assist in providing an audit opinion for greater audit effectiveness and thereby effective of greater resources in which case external auditors may rely on work done by internal auditors.

Academic research shows that the right partnership increases the economics, efficiency, and effectiveness of audits and helps manage the delivery of high-quality public services. The absence of cooperation between internal and external auditors is often identified as a factor in the deterioration of both forms of public sector audits in developing countries (Gwilliam et al. El-Nafabi, 2002; Brierley et al., 2001).

### *Management support for internal audit*

The IIA definition of internal audit embodies such things as good management, which in part relies on the professionalism of management to ensure a rigorous internal audit function. In recognition of this, senior managers place increased importance on the audit function and change their expectations about internal audit (Carcello et al., 2005). With the support of top management, internal auditors can obtain adequate resources to perform their duties and responsibilities, and the internal audit department can hire qualified staff and provide training and continuous development (Alzeban and Sawan 2013, Cohen and Sayag, 2010).

Previous studies have suggested that management support is of prime importance for the success of the internal audit function. Ahmed et al. (2009) found that management support is the second most important determinant of internal audit performance in the Malaysian public sector, and the study also shows that with support from management, audit recommendations are made. Internal audit will probably be done and the internal audit will be well resourced in terms of number of staff and budget.

### *Independence of internal audit*

The independence and objectivity of the internal audit department has been identified as an important factor in its effectiveness (CIPFA, 2003). Worldwide professional standards and ISPPA and IIA guidelines suggest that appropriate independence and objectivity can be achieved by reporting to levels within the organization that enable the Internal Audit departments to carry out their responsibilities. its responsibilities without management intervention; avoid conflicts of interest; have direct contact with the board of directors and senior management; have unrestricted access to records, employees and departments; has the right to appoint and remove the head of the internal audit who is not under his direct management authority; and does not perform non-audit work.

### *Research on political institutions*

According to the results from the studies of Zingales (1998), Beck et al. (2003), the political institutional factor has a direct influence on financial development. The authors Kaufmann et al. (2009) in their research have established the factors that reflect the political institution of a country including: regulatory quality factors, political stability factors, and factors. government effectiveness, policy accountability, and corruption control. The indicators used by the authors to reflect the political institutional factor have been calculated, published and updated annually by the World Bank.

### *Research on group interests*

The author Rawls, J.A (1971) when studying group interests, stated that a political institution is considered complete when there is a complete legal system, creating opposition between interest groups in the body. mechanism and proactively create a resistance mechanism through self-improvement and continuous renewal processes, and at the same time share power among different components of the government apparatus so that they can self-monitor and adjust the balance of power. power in that institution.

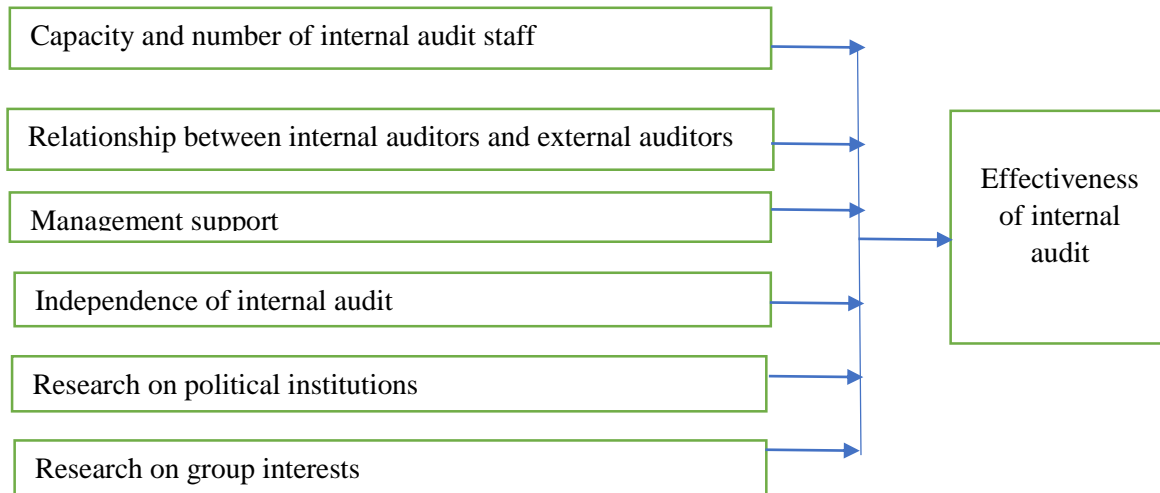
Research by author Frank Scarpatti (1977) shows that group interests have both positive and negative effects. Our task is to continue to establish and modernize the mechanism for controlling state power, to create an institution in which it will maximize the positive influence of group interests, and at the same time minimize the negative effects of group interests. Research by the authors Allan J.Cigler & Burdett A. Loomis (1995) shows that from group interests form interest groups. Our society is a complex set of interests, interests within groups, or between different groups that are constantly interacting in a state of constant competition for ownership, the right to distribute public resources and the right to participate in the process of shaping and formulating policies in order to bring the highest benefits to their groups. It is impossible for groups to exist outside of interests. The number of interest groups is regulated and limited by the interest index.

From the point of view of inheriting and continuing to develop previous studies, the study will continue to study the effectiveness of internal audit. In the research direction of the author, in addition to the factors that the authors have studied before that affect the effectiveness such as: Capacity and quantity of internal auditors; The relationship between internal auditors and internal auditors (external auditors); Management support for internal audit; Independence of the Internal Auditor. The author will pay attention to the specific factors of the Vietnamese economy that can affect the effectiveness of internal audit in public administrative

### Constructing A Model of Factors Affecting the Effectiveness of Internal Auditors at Public Non-Business Units in Vietnam

units such as: Vietnam's political institutions, group interests in the unit. Therefore, the author in addition to inheriting the research model of Alzeban et al (2014) and previous studies to determine the factors affecting the effectiveness of internal audit and build models of influencing factors The effectiveness of internal audit of public sector units in Vietnam needs to be verified, including 6 factors as follows:[1] Capacity and number of internal audit staff; [2] Relationship between internal auditors and external auditors; [3] Management support for internal audit; [4] Independence of internal audit; [5] Research on political institutions; [6] Research on group interests.

#### 4.3. Proposed research model



**Figure 5. Conceptual framework**  
Source: The research team

### 5. CONCLUSION

The article also provides background theories on public sector, internal audit and internal audit effectiveness, and provides background theories for research purposes. Besides, based on previous studies, the author inherits a research model consisting of 1 dependent variable (Internal audit effectiveness) and 4 independent variables (Capacity and number of employees of the internal audit department). internal audit; The relationship between internal audit and external audit; Management support for internal audit; Independence of internal audit) while adding two new factors: the main institution values and group interests to Constructing a Model of factors affecting the effectiveness of internal audit at public non-business units in Vietnam.

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## Analysis of the Implementation of Social Distancing at the Beginning of a Pandemic as a Response to Preventing the Transmission of Covid-19



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**ABSTRACT:** Coronavirus transmission is very fast, making the World Health Organization (WHO) establish the coronavirus as a pandemic on March 11, 2020. The spread of the virus leads to an acute health crisis, so the government issued a policy of limiting the distance and restrictions on human movement which became known as social distancing. This study aims to determine how the response of housewives to the application of social distancing as a preventive measure to prevent COVID-19. This research is quantitative research with a descriptive online survey design. The population in this study were all housewives and parents of the S1 Public Health Study Program Faculty of Health Sciences, Bhakti Kencana University, with a total sample of willing participants to fill in the google form containing 78 people. Based on the results of the study can be presented that almost all housewives respond well to the implementation of social distancing, both of the responses while maintaining a distance by saying hello when the mother sees a neighbor outside the house, waiting to take turns shopping when there is a vegetable seller on the front of the house, refusing to fine when guests are visiting the house with the reason being practiced to keep a distance and keep communicating and socializing with neighbors, relatives, colleagues and friends through social media such as WhatsApp, Line and so on and Most housewives can still forbid their children to come out home with creative activities in the house. The conclusion is that housewives who are part of the community have a good response to implementing social distancing during the COVID-19 pandemic.

**KEYWORDS:** social distancing; response; prevention of COVID-19; housewife; Pandemic

### I. INTRODUCTION

Pandemic Coronavirus Disease (COVID-19) spread in various countries in the first quarter of 2020. World leaders are calling on citizens to conduct social distancing and isolation to prevent transmission of the virus. In social networks, many things can spread contagiously, including viruses. And the way to prevent more widespread is to play a role as an isolate in social networks. This study shows that social networks without the role of isolates have high ties and densities so that there are many opportunities for viruses to spread to network members. Whereas social networks where many members are isolated have fewer ties and lower density which makes the opportunity for the spread of viruses between network members through ties to be lower[1]

Social distance or social distancing is the community asked to avoid attending large meetings or crowds of people. If you have to be around people, keep a distance from others people about 6 feet (2 meters). However, Gordon said, it was unclear how many of these "crowds" should be avoided. Are four people in the crowd? Or must there be hundreds? Social distancing is implemented by the government to limit human interaction and prevent people from the crowd to avoid the spread of co-19[2]

However, generally what is meant by a crowd is a shopping center, cinema, or stadium. "The crowd is a moving subject. Although the number 25 is often quoted (as an explanation for the crowd), there is currently no official definition, and that can change," Gordon said. While it might be disappointing to hear that so many sporting events, festivals, and other gatherings are canceled, there is a public health reason for this action. This cancellation helps stop or slow down the spread of the disease which allows the healthcare system to be better prepared to treat patients over time. Canceling events that tend to attract the attention of many people is an example of social distance. Social distance deliberately increases physical space between people to avoid the spread of disease.

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Task Force (Satuan Tugas) for overcoming COVID-19, conducts a series of activities to prevent transmission of the Coronavirus. One of them is to encourage policymakers to tighten the implementation of Social Distancing / Physical Distancing in the community. To strengthen, Social Distancing and also see the distribution of information circulating in the community related to this virus[3]

The number of coronavirus cases worldwide continues to increase, health officials are encouraging people to do anything to limit the spread of the disease. In addition to recommendations such as frequent hand washing and avoiding touching your mouth or eyes, more serious steps can be taken to stop the spread of COVID-19, such as self-quarantine. Although not everyone is advised to carry out self-quarantine, this tactic can be useful in protecting others from the spread of infectious diseases.

This study aims to determine how the response of housewives to the application of social distancing as a preventive measure to prevent COVID-19.

### II. STUDY METHOD

This research is quantitative research with a descriptive online survey design. This study describes the object or event that aims to determine the circumstances that occur at present. The population in this study were all housewives' parents/guardians of the S1 Public Health Study Program Faculty of Health Sciences, Bhakti Kencana University. The sample in this study was all housewives and parents of active students who were willing to take part in filling in the Google form containing a response analysis of the application of social distancing as a preventive measure to prevent COVID-19.

The data in this study were obtained through a Google form that was shared online with housewives. The instrument in this study was in the form of a questionnaire which included some questions regarding the response analysis about the application of social distancing as a preventive measure for COVID-19 prevention by using the Google form application.

### III. RESULTS AND DISCUSSION

Based on the results of the study, 78 housewives were willing and had the role to fill in the questionnaire via Google form were 78 people, with the results can be seen in the table below.

**Table 1** regarding housewife's responses to the application of social distancing during the COVID-19 pandemic

	Frequency	Percent
<b>When the mother sees a neighbor outside the house during the COVID-19 pandemic</b>		
greet by keeping a distance	76	97,4
invite to chat as usual while sitting in a park chair	2	2,6
<b>When there was a vegetable collector in front of the house during the COVID-19 pandemic</b>		
waiting for mom to finish new mother out of the house	71	91,0
waiting for the other mothers to come out too	2	2,6
waiting for another vegetable handyman	5	6,4
<b>When there are guests during the COVID-19 pandemic</b>		
refuse subtly doing distance	68	87,2
talk while keeping a distance	5	6,4
don't open the door	4	5,1
close the door	1	1,3
<b>Communication and socializing with neighbors, relatives, colleagues, and friends during the COVID-19 pandemic</b>		
social media like WhatsApp, line, etc	75	96,2
recitation	3	3,8
<b>When some mother's children want to leave the house during the COVID-19 pandemic</b>		
make a joint activity at home	56	71,8
scolded	18	23,1
delivered outside the house	3	3,8
left alone	1	1,3
Total	78	100,0

## **Analysis of the Implementation of Social Distancing at the Beginning of a Pandemic as a Response to Preventing the Transmission of Covid-19**

Social distancing can be done by everyone or directly coordinated by the local government. Forms of social distancing by individuals are not going to crowded places such as shopping centers, food courts, large events that are attended by many people, public spaces, places of tourism, and others. In addition, social distancing can be practiced by keeping a minimum distance of two meters from other people. With this distance, it is recommended not to do a handshake or hug when meeting each other. Meanwhile, social distancing is regulated directly by the government such as postponing large events and closing public spaces[4]

According to various sources, experts claim the practice of social distancing was successful based on studies in the 1918 Spanish influenza pandemic. A study released in 2007 stated that cities in Spain that practiced social distancing such as prohibiting meetings in public places to close schools, succeeded in suppressing the death rate significantly. For the coronavirus case itself, there is no scientific research that studies the effects of social distancing. However, when referring to the influenza pandemic experience in Spain, there is great potential that social distancing practices can reduce coronavirus transmission[5]

Based on the results of the study can be presented that almost all housewives respond well to the implementation of social distancing, both of the responses while maintaining a distance by saying hello when the mother sees a neighbor outside the house, waiting to take turns shopping when there is a vegetable seller on the front of the house, refusing to subtle when guests are visiting the house with the reason being practiced to keep a distance and keep communicating and socializing with neighbors, relatives, colleagues, and friends through social media such as WhatsApp, Line and so on.

The World Health Organization (WHO) has categorized the coronavirus as a pandemic. WHO defines a pandemic as the spread of new diseases throughout the world. WHO has also recommended Indonesia take urgent action to reduce transmission and prevent further spread. One of them, increasing the socialization of public health measures such as maintaining hand hygiene and practicing social distancing. Some countries have advocated the implementation of social distancing practices for their citizens, one of which is the US[6] Other examples of social distancing to avoid larger crowds or crowded spaces, as recommended by John Hopkins include working from home instead of at work, closing schools or switching to online classes, meeting others by telephone or video calls instead of directly and cancel or postpone conferences and large meetings[7]

Most housewives can still forbid their children to leave the house creatively to make activities in the house. In the family, mothers are expected to play a role as a strong and intelligent family support in the new normal era, because mothers play an important role in the future of the family and even this nation[8] Coronavirus is a pandemic that is easily spread contagiously. This virus can attack anyone who is connected with a virus carrier in a social network. Therefore, the people of Indonesia as one of the corona-affected countries must make efforts to prevent the spread, namely by social distancing and self-isolation. With this step, a person must assume the role of an isolate with a negative connotation: no power, loneliness, boredom, and so on. An isolate also makes the network density decrease and is not centered in the middle of the network. But the effort and sacrifice to be isolated are worth the risk that must be faced if ignored. Because we are unable to stop the coronavirus, what can be done is to prevent it from spreading more widely[1] The Minister invited all community leaders, traditional leaders, educators, religious leaders, officials at all levels, community leaders, celebrities, and social media activists to jointly campaign for health protocols to overcome the spread of the coronavirus[9]

The status of a global pandemic or epidemic indicates that the spread of COVID-19 took place so fast that almost no country in the world can ensure that they are protected from the coronavirus[10] This is what drives the government to improve social distancing prevention policies (social restrictions) based on the independent isolation of society which is then accompanied by law enforcement in preventing the occurrence of mass concentration and excessive social activities in the public sphere[11] Mothers in the household have more roles in striving for family health, mothers are managers in the household who ensure the health of family members in healthy and safe conditions[12] By continuing to ensure that all family members are healthy by limiting activities outside the home that are not necessary.

In fact yes, not only children who feel lost freedom of their daily activities. Adults and even the elderly are experiencing similar conditions. According to the CDC, people over the age of 60 and people with comorbidities should consider quarantining themselves if a coronavirus outbreak occurs in a community because older people are at higher risk of contracting the virus[6] Quarantine is one of the ways the government does to stop the spread of infectious diseases. Quarantine is generally carried out on people or groups who have no symptoms but are affected by the disease. Quarantine keeps them away from others so that they do not infect anyone. Quarantine is not the only way to protect yourself during an outbreak like this COVID-19 coronavirus. Infectious disease specialist Steven Gordon, MD from the Cleveland Clinic explains that there are several ways to keep away from disease, one of which is social distance or social distancing[13] Quarantine is carried out by people who show symptoms exposed to COVID-19, if they do not show any symptoms then there is no need to change their daily routine[14]

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There is a slight difference between self-quarantine and self-isolation. According to John Hopkins, people who have been exposed to the new coronavirus and who are at risk of COVID-19 can practice self-quarantine. Health experts recommend quarantining yourself lasts for 14 days. Two weeks is enough to know whether they will become sick and infect others[7] The World Health Organization (WHO) says quarantine can be recommended for individuals who are believed to have been exposed to infectious diseases such as COVID-19 but are asymptomatic. Besides monitoring, if symptoms develop, being in quarantine means that someone who might be exposed will not transmit the disease to others, because they live at home. For people who are confirmed to have COVID-19, isolation is the right step.

Isolation is a healthcare term that means to keep people infected with infectious diseases from those who are not infected. Isolation can occur at home or in a hospital or treatment facility. Special personal protective equipment will be used to treat these patients. Initially, WHO asked those who had traveled to countries with high coronavirus infection rates to quarantine themselves after they returned. However, the CDC also recommends that individuals quarantine themselves for people who are at moderate and high risk, meaning those who have had close contact with an infected person or have had limited contact with an infected person for a short period. Those who feel sick should also stay at home and consider quarantining themselves even though the symptoms appear mild[7]

Quoting Mike Ryan, Executive Director of the WHO Health Emergency Program, the most important thing is not on regional quarantine, but on effective public health measures, finding those who are sick, tracking social contacts, and isolating them[11]

There is no guarantee that the policy will be obeyed by the public, while social distance policy requires everyone's compliance to be effective. Given the culture in Indonesia which is very community-based. One of them is based on Indonesian characters who often do social interactions, people are accustomed to interacting both in their residential environment and in other places such as in the market (most markets in Indonesia are categorized as traditional markets where interactions between sellers and buyers, as well as in among fellow buyers is quite high, this differs from modern markets such as supermarkets where social interaction between sellers and buyers is very minimal), such conditions lead to high social interactions among people. Another example is the majority of Indonesian people who are Muslim, social interaction in places of worship (mosques) is carried out five times a day which opens opportunities for people to frequently interact with intensity. Based on cultural conditions as described above, the social distance policy is the right policy taken by the central government, this still directly provides access to the community to continue social interaction, regardless of whether there are limitations to the community to always maintain physical distance between fellow communities[15]

Other factors that contribute to the success of Covid-19 prevention are not solely due to the isolation of the area that stands alone, but the effectiveness in breaking the chain of virus transmission with rapid tests and door-to-door for case identification, contact tracing, isolation, and quarantine of infected and mass treatment, which supported by a massive repressive state apparatus in law enforcement through the arrest and censorship of freedom. This was later criticized as a violation of human rights by Western countries and did not get too much place in the publication of pro-government media in the RRC. The extent to which the effectiveness of the policy lies precisely in the participation of the support of all citizens and the role of the government apparatus to ensure social compliance[11]

The responses given by housewives varied. The COVID-19 pandemic has had an impact on freedom of activity. Moreover, the Indonesian people are known for their cooperation and caring for each other, this pandemic is very torturous in social interaction. Even residents are suspicious of each other and avoid each other for fear of infection. The knowledge that is still limited about the causes, effects, and ways to prevent transmission of COVID-19 has even led to prejudice as a disease that causes disgrace. Sufferers who die and their families will become conversation and shunned from society. So this needs to be addressed. The dissemination of information as education is expected to be a stimulus to change people's behavior, especially the perspective on the pandemic. Knowledge can change individual behavior. Where knowledge is a stimulus to change behavior with various methods or ways. The provision of massive information will increase knowledge which will be the driving force for lasting behavior change. So it needs effort with various media. Video can be an effective medium to change the way citizens view COVID-19[16]. Collaboration with all parties is needed in dealing with the COVID-19 pandemic. Partnerships need to be built properly, starting from advocacy, atmosphere building, and empowerment. It is necessary to build a sense of togetherness without carrying out activities that have the potential to cause the transmission of COVID-19. Advances in science and technology are developing rapidly, especially during the pandemic. The positive side in various fields by not giving up on circumstances. Health cadres can be agents of change who can directly touch the community, considering that health cadres are part of the community and most of the cadres are housewives[17]. Good knowledge will encourage good behavior. Print and electronic media are the right and easy media to access information about preventing the transmission of COVID-19. This experience can be a stimulus that will shape the



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process of thinking and analyzing concepts. The next process is the formation of behaviors to prevent the transmission of COVID-19. Indirectly, this process changes behavior, especially the motivation for implementing the COVID-19 transmission prevention protocol[18].

### IV. CONCLUSIONS

Most housewives have a good response in implementing social distancing during the COVID-19 pandemic. Given the role of mothers who must protect their families, mothers obey the government's recommendations to implement social distancing. To continue to prevent transmission of COVID-19, mothers must always remind their family members to always keep their distance, limit activities outside the home, always wear masks, and wash their hands with soap or by using hand sanitizers.

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## Effect of Capital Adequacy Ratio (CAR), Net Interest Margins (NIM), and Loans to Deposit Ratio (LDR) On Profitability (Case Study in Banking Companies Listed on the Exchange Effect Indonesia Period 2017-2019)



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**ABSTRACT:** The purpose of this study is to see and analyze the effect of Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Loan to Deposit Ratio (LDR) on the profitability (ROA) of banking companies listed on the Indonesia Stock Exchange (IDX) for the 2017 period. -2019. this type of research is a quantitative study using secondary data. The data research method in this research is the documentation method. the sample of this research is banking companies listed on the Indonesia Stock Exchange for the period 2017-2019 using purposive sampling. Samples that met the criteria in this study were 31 banks. The data analysis method in this research is multiple linear regression analysis, simultaneous test and partial test.

The results of the study simultaneously CAR, NIM, and LDR have a significant effect on banks profitability. Meanwhile, partially CAR has no effect on bank profitability (ROA), while NIM has a significant effect on bank profitability (ROA), and LDR has no effect on bank profitability (ROAs).

**KEYWORDS:** Capital Adequacy Ratio (CAR), Net Interest margins (NIM), loans to Deposits Ratio ,profitability (ROA)

### I. INTRODUCTION

In the economy of a country, the role of banks is very important as intermediary institutions finance. Banks play an important role as an intermediary party between parties with excess funds and party which lack fund. In except in Indonesia with through management fund which saved then the funds are used to improve the welfare of the community. So that its existence becomes the backbone that plays an important role as a support for the economy of a country country.

If there is a failure in the banking sector it can lead to financial instability which bother system economy national. By because that level health bank must attention for a better economy. Healthy or not a bank can be seen through performance something bank. Performance bank could be measured and seen through report finance with using the financial ratios method. The ultimate goal to be achieved by a company, no except company banking is obtain profit, level ability bank in generating profits can be measured using profitability ratios through financial reports bank which concerned.

Ratio profitability give size level effectiveness management something company. Profitability in the banking world can be calculated using *Return on Assets* (ROA). *Return on Assets* (ROA) focuses on the company's ability to earn deep *earnings* the company's operations by utilizing its assets. In this research factors that influence bank performance as measured by ROA ( *Return on Assets* ). ability to maintain sufficiency capital proxied by CAR ( *Capital Adequacy ratios* ), ability in manage ethnic group flower which proxied with NIM ( *Net Interest margins* ), and the ability to maintain its liquidity level which is proxied by LDR ( *Loan to Deposit ratios* ).

On table 1. dynamics movement ratios finance banking from period year 2017 until 2019 recorded in table following this:

# Effect of Capital Adequacy Ratio (CAR), Net Interest Margins (NIM), and Loans to Deposit Ratio (LDR) On Profitability (Case Study in Banking Companies Listed on the Exchange Effect Indonesia Period 2017-2019)

Table 1. Condition Bank General 2017-2019

Ratio	2017	2018	2019
ROA (%)	2.38	2.50	2.47
CAR (%)	23,18	22.89	23,40
NIM (%)	5,15	5.00	4.91
LDR (%)	89.56	94.04	94,43

Source: Reports Finance OJK Annual

From table 1., could is known that average ROA throughout year 2017 until 2018 ROA experience increase as big 0.12%. Ratio return on Assets (ROA) on year 2018 showing 2.50% and in year 2019 showing 2.47%, Thing this showing exists decline as big 0.03% on year 2019.

The average *Capital Adequacy Ratio* (CAR) in 2017 was 23.18%, then experienced decreased by 0.29% to 22.89% in 2018. In 2019 CAR increased by 0.51%, to 23.40%. Looking at the CAR and ROA movements, it can be seen that this has occurred inconsistency between the two ratios. Where in 2018, where CAR has decreased, but ROA experience increase.

If seen consistency data, score average ROA and NIM showing exists inconsistency. In year 2017 and 2018, ROA own connection which no consistent to NIM on year the, where ROA is experiencing an increase of 0.12%, but at the same time NIM experience a decrease of 0.15%.

The average *Loan to Deposit Ratio* (LDR) in 2017 was 89.56% and the LDR in in 2018 of 94.04%, it can be seen that the LDR throughout 2017 to 2018 experienced an increase of 4.48%. Throughout 2018 to 2019 the LDR has increased again by 0.39%. There is an inconsistent relationship between LDR and ROA. In the year of 2018-2019 when LDR has increased but at the same time ROA has decreased by 0.03%.

Based on the background above, the researcher is interested in taking the title, "The Effect of *Capital Adequacy Ratio* (CAR), *Net Interest Margin* (NIM), and *Loan to Deposit Ratio* (LDR) to Profitability (Studies Case on Company Banking which Registered in Exchange Effect Indonesia Period 2017-2019).

## II. LITERATURE REVIEW

### Ratio Profitability

The profitability ratio is a ratio to assess the company's ability to search profit. Use ratio profitability could conducted with use ratio Among various components that exist in financial reports, especially balance sheet financial reports and profit reports make a loss. Measurements can be made for several operating periods. The goal is to be visible the development of the company within a certain time span, either decreasing or increasing, all at once find the cause of the change (Cashmere, 2019: 198).

To measure the profitability ratios commonly used is ROA ( *Return on Assets* ). One measure to see banking financial performance is through ROA ( *Return on Assets* ). ROA ( *Return on Assets* ) is used as a measure of financial performance and is used as a variable dependent because ROA is used to measure the effectiveness of the company in producing profit with utilise assets which owned. According to Cashmere (2019: 203) ROA is results return investment or more known ROI ( *Return on investment* ) or *returns on total assets* which is ratio which show results ( *returns* ) on total assets which used in company. The greater the ROA, the better the financial performance, because of the rate of return ( *returns* ) the more big. If ROA increase, means profitability company increase, so that impact finally is welfare improvement which enjoyed by holder share.

According to Bank Indonesia circular letter number 13/24/DPNP dated 25 October 2011 The ROA set for banks in Indonesia is at least 1.5%. According to Dahlan Siamat (2005: 213) ROA could counted with the formula:

Factors affecting ROA which is a measure of profitability used by researchers, including: CAR ( *Capital Adequacy Ratio* ), NIM ( *Net Interest Margin* ), and LDR ( *Loan to Deposit Ratio* )

$$ROA = \frac{\text{Laba sebelum pajak}}{\text{Total aset}} \times 100\%$$

### CAR ( *Capital Adequacy Ratio* )

Bank Indonesia stipulates CAR ( *Capital Adequacy Ratio* ), namely the obligation to provide capital minimum that must always be maintained by each bank as a certain proportion of total assets Weighted According Risk (ATMR). According to Cashmere (2019:

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234) CAR is a ratio which used to measure capital and allowance for possible losses in bearing credit, especially risk which happen because flower fail billed. The more big ratio the will the more goodcapital position (Achmad, 2003).

The higher the capital ratio shows the higher the capital owned by the bank,so that the bank is stronger to bear the risk of each credit given. Bank capital increased and increased lending shows that banks are able to finance operation bank, and circumstances profitable this could give contribution to bank company profitability. However, according to Dahlan Siamat (2005:288), regardless of the amount of capitalbank, if the bank's productive asset portfolio is managed in an unhealthy manner, for example credit quality many are classified as unhealthy, it is difficult for a bank to survive. Bank Indonesia issuesregulation about standard level adequacy capital which where in Bank regulations Indonesia Number15/ 12 /PBI/2013 concerning the Minimum Capital Adequacy Requirement for Commercial Banks has been stated that the bank must provide minimum capital of 8% (eight percent) of the Weighted Assets By Risk (ATMR) for bank. According to bye Siamat (2005: 209) CAR countable with formula:

### NIM ( Net Interest Margins )

According to Dendawijaya (2006:122) *Net Interest Margin* (NIM) is the ratio used for measuring the ability of bank management to manage its earning assets to produce net interest income. The greater this ratio, the higher the interest income on assets productive which managed bank, so that's a possibility something bank in condition problem small.

$$CAR = \frac{\text{Modal Bank}}{\text{ATMR}} \times 100\%$$

Net interest income is obtained from interest income minus interest expense. For parties bank management, the NIM ratio shows how much net interest the bank earns, as distributor fund to party which need. Because activity effort the main thing is the, so ratioNIM is an important factor for the survival of the bank, and the management bank must always strive so that the NIM ratio is in a high enough position, so that profits are obtained will permanent tall. With height profit which obtained, so performance finance the willincrease also.

The standard set for the NIM ratio according to Bank Indonesia Circular No. 6/23/DPNP year 2004 is more from 3%. According to bye Siamat (2005: 213) for count NIM use formula:

$$NIM = \frac{\text{Pendapatan Bunga Bersih}}{\text{Aktiva Produktif}} \times 100\%$$

### LDR ( Loans to Deposit Ratio )

The main objective of banking is to generate profits from credit activities, so it is necessary noticed its liquidity. Wrong one ratio which often used for analyze level liquiditynamely LDRs. LDR ( *Loan to Deposit Ratio* ) is the ratio used to measure composition the amount of credit given is compared to the amount of public funds and their own capital used (Cashmere, 2019: 227).

According to Dahlan Siamat (2005: 344), if the value of the LDR ratio is high, it describes less good liquidity position of the bank. However, if the LDR ratio is low, it means that the bank cannot manage it its intermediary function optimally, due to the large number of idle *funds* so that zoom out chance bank for obtain reception which more big (Aulia Nazala:2016). Then Bank Indonesia issued a circular letter Number 6/23/DNDP year 2004 safe limit of a bank's LDR is between 85% to 100%. If a bank is in the range of 85% up to 100%, the bank is able to channel credit effectively, and profits are earned the bank will increase, so that profitability will also increase. So, the higher the *Loan to Deposit Ratio* (LDR), the bank's profit will increase (assuming the bank is able distribute the credit with effective), with increasing profit banks then performance banks too increase.

The LDR ratio is calculated by comparing credit with third party funds where credit isused is the total credit given to third parties, and does not include credit given to party other. Whereas fund party third is giro, savings, and deposit whichno including interbank. For count LDR using the formula:

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## Framework Thinking

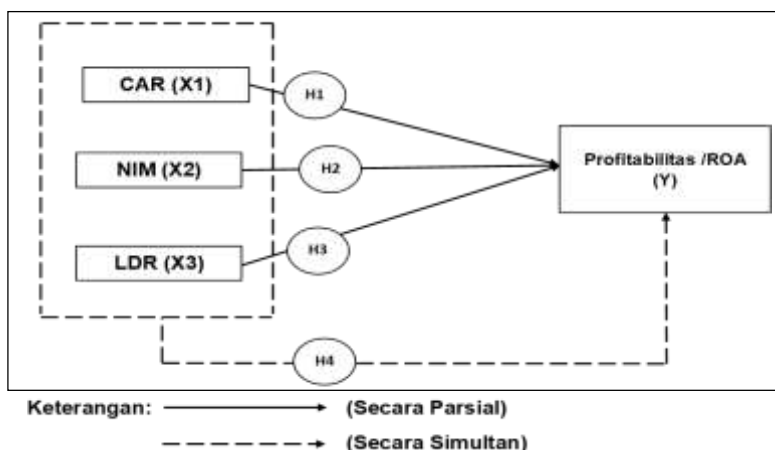


Image 1. Framework Thinking

## RESEARCH METHODS

### Type Study

The type of research used is descriptive quantitative research. Quantitative research is research that is completed with statistical calculations, while the type of research is descriptive research conducted to determine the value of each variable, either one variable or more its nature independent for get description about variables the (Wiratna, 2018:172).

### Definition operational Variable

On research this variable dependent is profitability (Y). Whereas variable (X) are *Capital Adequacy Ratio* (CAR) (X1), *Net Interest Margin* (NIM) (X2), and *loans to Deposit Ratio* (LDR) (X3).

### Population and Sample

The data population in this study is that there are 44 banking companies listed on the Stock Exchange Indonesia on year 2017-2019. And for sample in study this is 31 company banking listed on the Indonesia Stock Exchange that meets the criteria set for be a sample. The data collection technique used in this research is to use purposive sampling technique, the criteria for sampling were determined in this study are as follows: 1) Banking companies listed on the Indonesia Stock Exchange for three years consecutive years, namely from 2017 to 2019. 2) Banking companies that registered on the Indonesia Stock Exchange which has issued financial reports for 3 consecutive years also (2017-2019) accordingly with data which needed in variable study.

$$LDR = \frac{\text{Total Kredit}}{\text{Dana pihak ketiga}} \times 100\%$$

## RESULTS AND DISCUSSION

### Analysis Linear Regression Double

Analysis regression double useful for know there is nope connection variable independent of the dependent variable. The independent variables in this study are CAR, NIM, and LDR whereas variable dependent in study this is ROA. Based on results processing data using spss obtained summary as following:

Table 2. Linear Regression Test Double

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		standardized Coefficients	t	Sig.
	B	std. Error	Betas		
(Constant)	-.548	.710		-.771	.443

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1	CAR	-9.709E-005	.016	-.001	-.006	.995
	NIM	.282	.072	.391	3,930	.000
	LDR	.007	.007	.094	.950	.345

a. dependent Variables: ROA

Source: outputs spss 20.

Based on the results of the output table data above, the regression equation is as follows:  $Y = a + B_1X_1 + B_2X_2 + B_3X_3 + e$   
 $ROA = -3.831 + 0.228 X_1 + 1.059 X_2 + 0.375 X_3$

**Test Partial (Test t)**

In this study, the partial influence of each independent variable was tested formulated by CAR, NIM, and LDR on the dependent variable formulated by ROA. As for result test t of each variable is as following:

**Table 3. Test Partial (t test)**

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		standardized Coefficients	t	Sig.	
	B	std. Error	Betas			
1	(Constant)	-.548	.710		-.771	.443
	CAR	-9.709E-005	.016	-.001	-.006	.995
	NIM	.282	.072	.391	3,930	.000
	LDR	.007	.007	.094	.950	.345

a. dependent Variables: ROA

Source: outputs spss 20.

Based on t table provision  $\alpha = 0.05:2 = 0.025$  with  $df = n - 2$  ( $df = 93 - 2 \Rightarrow 91$ ) and from table t found at 1.98638. Then it can be seen the effect of each variable as follows:

1. Influence CAR (X1) on ROA (Y)

The statistical results of the t analysis test for the *Capital Adequacy Ratio* (CAR) variable were obtained t value count (-0.006) < t table (1.98638) and with a significance level of 0.995 > 0.05, it means H<sub>0</sub> be accepted and H<sub>a</sub> rejected. With results this could concluded that in a manner Partial variable CAR no effect on variable ROA.

2. Influence NIM (X2) to ROA (Y)

The statistical results of the t analysis test for the *Net Interest Margin* (NIM) variable obtained a value t count (3,930) > t table (1.98638) and with level significance 0.00 > 0.05, means H<sub>0</sub> rejected and H<sub>a</sub> be accepted. With results this could concluded that in a manner Partial variable NIM influential positive significant to variable ROA.

3. Influence LDR (X3) on ROA (Y)

The statistical results of the t analysis test for the *Loan to Deposit Ratio* (LDR) variable obtained a value t count (0.950) < t table (1.98638) and with a significance level of 0.345 > 0.05, it means that H<sub>0</sub> be accepted and H<sub>a</sub> rejected. With results this could concluded that in a manner Partial variable LDR no effect on variable ROA.

**Test Appropriateness Model (Test F)**

Test F used for test influence variable free in a manner together to variable bound. Test F can explained by using analysis of variance (ANNOVAS).



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**Table 4. Simultaneous Test (Test F)**

ANOVA <sup>a</sup>

Model	sum of Squares	df	Means Square	F	Sig.
1 Regression	25,602	3	8,534	6,285	.001 <sup>b</sup>
residual	120,852	89	1,358		
Total	146,454	92			

a. dependent Variables: ROA

b. Predictors: (Constant), LDR CAR, NIM

Source: outputs spss 20.

Based on table on, obtained test hypothesis in a manner simultaneous (Test F) score F count (6,285) > F table (2.71) and level significance  $\alpha = 0.001$ , so  $0.001 < 0.05$ . With results this could concluded that independent variables (CAR, NIM, and LDR) together have a significant effect on dependent variable (ROA).

### Analysis Coefficient Determination ( $R^2$ )

Under this results analysis coefficient determination is as following:

**Table 5. Coefficient Determination**

Model Summary <sup>b</sup>

Model	R	R Square	Adjusted R Square	Error of the Estimates
1	.418 <sup>a</sup>	.175	.147	1.16528

a. Predictors: (Constant), LDR CAR, NIM

b. dependent Variables: ROA

Source: outputs spss 20.

Based on the test results of the coefficient of determination in the table above, the value of R Square is in the regression model obtained 0.175. This means the contribution made to CAR, NIM, and LDR collectively to bank profitability of 17.5%. Hence the resulting influence the CAR, NIM, and LDR variables on ROA are as much as 17.5%. While the remaining 82.5% explained variable else that no put in model study this.

### Influence Capital Adequacy Ratio (CAR) To Profitability (ROA)

Based on table 3, it is known that the statistical results of the t analysis test for the Capital Adequacy variable are known Ratio (CAR) obtained score tcount (0.472) < ttable (2.04523) and with level significance  $0.641 > 0.05$ , so  $H_0$  be accepted and  $H_a$  rejected it means variable CAR no influential to variable ROA. However seen from capital Bank general on period research shows very good, where the value of the CAR ratio is more than far above the minimum bank CAR standard determined by BI. This matter in accordance with the theory of Dahlan Siamat (2005:288), regardless of the size of the bank's capital, if the portfolio productive assets of banks are managed in an unhealthy manner, for example, many credit quality is classified as no healthy, it is difficult for a bank to survive, in the sense that it will not be able to contribute to level profitability banking concerned. Results study this supported by study Praise sustainable (2018), Nyimas Villa goddess (2017) where variable CAR in a manner Partial no influential to ROA but different from the results of research conducted by Dewi Nurhayati (2012) who said that variable CAR influential positive and significant on ROA.

### Influence Net Interests margins (NIM) To Profitability (ROA)

Based on table 3 is known results statistics test analysis t for variable Net Interest margins (NIM) obtained score tcount (2,607) > ttable 56 (2.04523) and with level significance  $0.015 > 0.05$ , so  $H_0$  rejected and  $H_a$  be accepted it means variable NIM influential significant to variable ROA. Thing this corresponding with theory Dendawijaya (2006:122), that the more big ratio this so increasing income flower on asset productive which managed bank, so that possibility something bank in condition problem small, so profit bank (ROA) also will increase. Results study this the same as research conducted by Nurus Saadatul (2017), Ismadi (2019) where a NIM give that influence positive for ROA.

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### Influence *loans to Deposits Ratio* (LDR) To Profitability (ROA)

Based on table 3 is known results statistics test analysis t for variable loans to Deposits Ratio(LDR) obtained score tcount (0.516) < ttable (2.04523) and with level its significance 0.610 >0.05, so H0 be accepted and Ha rejected it means variable LDR no influential to variable ROA. Based on score ratio LDR on period study show fluctuating on each respectively company banking on every the year. There is company banking with score ratio LDR which low and there is company banking with score ratio tall. Thing this corresponding with theory Dahlan Siamat (2005: 344), if the ratio is high it describes the bad position of bank liquidity. However, if the LDR ratio is low, it means that the bank cannot manage its intermediary function properly optimal, because many fund which unemployed ( *idle fund* ) so that zoom out chance bank to obtain greater revenue (Aulia Nazala: 2016). Therefore Banks Indonesia issued a circular letter Number 6/23/DNDP of 2004 the safe limit of a bank's LDR is between 85% and 100%. In order for banking companies to obtain profitability, then the value ratio LDR must be guarded so that no too low and no too high.

The results of this study are the same as the research conducted by Puji Lestari (2018) and Nurus Saadatul (2017) which states that LDR has no effect on ROA. But different with results study which conducted by goddess Nur Biological (2012) which put forward that LDR has a positive influence on LDR.

### c. Influence CAR, NIM, and LDR kindly Simultaneous To Profitability

Based on the results of research and calculations obtained the magnitude of the simultaneous effect for CAR, NIM, and LDR to ROA is 0.257 or 27.5%. This means that 27.5% ROA is affected by third variable free CAR, NIM and LDR. Whereas for test hypothesis in a manner simultaneous obtained (Test F) Fcount (3.287) > Ftable (2.71) and a significance level  $\alpha = 0.037$ , so  $0.037 < 0.05$ . With From these results it can be concluded that the independent variables (CAR, NIM, and LDR) together significant effect on the dependent variable (ROA). The results of this study are in line with the results study before which conducted by Ismadi (2019), Praise sustainable (2018), and Maryati (2017) which state that CARs, NIMs and LDRs influential on profitability (ROAs).

The results of the t test showed that CAR did not affect ROA, while NIM influential positive significant to ROA, and LDR no influential to ROA. From From this explanation, it can be concluded that the CAR, NIM, and LDR t tests have an effect which different to price share. Ratio CAR no influential to ROA, because regardless of the size of the bank's capital, if the bank's productive asset portfolio is managed in an unhealthy manner, it is difficult for a bank to survive, in the sense that it will not be able to contribute to level profitability banking concerned. Whereas for ratio NIM influential positive significant to ROA, because the more big ratio this so increasing income flower on productive assets managed by the bank, the bank's profit (ROA) will also increase. And for the ratio LDR has no effect on ROA, because if the ratio value is less than and more than standard LDR value, so will difficult company banking will reach profitability which expected.

Whereas in the F test table it says that the ratio of CAR, NIM, and LDR to ROA. Thing This is a result which shows that to get profit by using ratio ROA must go hand in hand with CAR, NIM, and LDR, due to increased adequacy capital with ratio CAR, increase income flower on assets productive with ratio NIM, and increasing liquidity with the assumption that banks can channel their credit effectively with ratio LDR will support on income which later distributed to asset and Becomes adder for contribution profit.

## CONCLUSION

Based on the results of data analysis from research that has been conducted on CAR, NIM, and LDR to profitability banking which be measured with ROA, so study this could concluded as following: 1) Based on results test t, variable CAR and LDR no influential to profitability (ROA) of banking companies listed on the Indonesia Stock Exchange. Whereas for the NIM variable has a significant effect on profitability (ROA) in banking companies which are listed on the Indonesia Stock Exchange. 2) Based on the results of the F test, CAR, NIM, and LDR variables has a significant effect on profitability (ROA) in banking companies listed in Exchange Effect Indonesia.

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## The Effect of Human Resources Management Practices, Transformational Leadership on Turnover Intention Mediated by Work Engagement on State Owned Bank Employees



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**ABSTRACT:** This study aims to analyze the effect of human resources management resources practices, transformational leadership on turnover intention mediated by work engagement. The data used in this study is primary data that comes directly from the research object, state-owned bank in South Jakarta. The sample in this study was selected using a non-probability sampling method with a sample of 230 respondents. Data analysis used in this research is descriptive statistics by finding the average and standard deviation, and using the AMOS SEM for hypothesis testing. Previously the instrument was tested using validity and reliability tests where all statement items were valid and reliable. The research results show that human resources management practices, transformational leadership has positive effects on work engagement, human resources management practices, transformational leadership has negative effects on turnover intention, work engagement has a negative effect on turnover intention. Meanwhile, for the indirect effect, work engagement can mediate the influence of human resources management practices, transformational leadership on turnover intention.

**KEYWORDS:** Human resources management practices, Transformational leadership, Work engagement, Turnover intention.

### I. INTRODUCTION

In the present time, the business world is facing a very tight competition, doubled with technological developments that require organizations to respond quickly to environmental changes in order to achieve organizational goals (Nurfitriani, 2021). Banking makes a large contribution to state revenues, where banks have the role of regulating and managing the payment system to regulate financial balance. The results of research conducted by Astrianti et al. (2020) explained that to achieve the set goals in organizations it requires good quality human resources. The phenomenon of employee turnover in organization is one of the phenomena that has an impact on organizational performance. Every company face the turnover problem and state-owned or BUMN bank, which is the object of this study, is not an exception. Companies need to consider the risk of losing qualified employees moving to other companies due to better job opportunities (Dechawatanapaisal, 2018), managing employees must be considered so that company goals can be achieved and also be able to maintain a competitive advantage (Batoool, Shengbin, & Batoool, 2020). High employee turnover can have negative impacts, including a loss of tacit knowledge and social capital as well as significant recruitment costs (Rubenstein et al., 2017). Turnover intention is a response from employees who think about putting their position down on the job they are assigned, the tendency to get a new job, and the desire to leave the company permanently (Haque, 2021). Human resource management practices can retain qualified employees and make those employees willing to stay in the organization (Luo et al., 2016). Fabi et al. (2015) found that work engagement can mediate the effect of human resource management practices on employee's turnover intention. In a company that are not good enough in human resource management practices, the leadership style can be used to influence the behavior of others in order to achieve the goals that have been set. In a study by Garcia-Morales et al. (2012) stated that transformational leadership is a leadership style that can increase mutual interest between employees and the organization in order to achieve the goals that have been set. The results of research conducted by Sobaih et al. (2022) is transformational leadership has influence on employee's turnover intention. Apart from transformational leadership, what influences employees' desire to move to different company is employee engagement or work engagement. Demerouti et al. (2015) stated that work engagement is a positive attitude from an employee to give their best effort to achieve the goals and objectives of the company where the employee works.

# The Effect of Human Resources Management Practices, Transformational Leadership on Turnover Intention Mediated by Work Engagement on State Owned Bank Employees

## II. LITERATURE REVIEW

### A. Human Resource Management Practices

Kundu and Gahlawat (2016) explained that achieving organizational goals requires good human resource management. According to Jiang et al. (2012), human resource management practices is related to the ability of employees, motivation, and opportunities for employees to contribute to the company. Meanwhile, Delery and Gupta (2016) provides a definition of human resource management practices as human resource practices that can affect organizational performance through interaction that create good quality employees. In study conducted by Memon et al. (2021) explained that on individual human resource management practices, such as training satisfaction, performance appraisal satisfaction, and salary satisfaction, are used to enrich understanding of how these practices contribute to the outcome variables, like work involvement and turnover intention. Most of these studies use an overall approach by measuring human resource management practices through the factors in these practices. Kundu and Gahlawat (2016) stated that there are 3 factor that influence human resource management practices, such as: a. Extensive training, b. Challenging work assignments, and c. Greater empowerment. Research conducted by Santhanam et al. (2017) stated that if human resource management practices are not contributing to the progress and growth of employees, then it is considered as a reason to encourage employees to leave work. According to Aktar dan Pangil (2018), human resource management practices is a predictor of work engagement that makes employees involved in carrying out their roles. Yunikawati et al. (2021) explained that a good application of human resource management practices will affect the decrease in employees' turnover intention, while Gadi and Kee (2021) stated that human resource management practices can control turnover intention by making appropriate human resource managerial policies, in which work engagement acts as a mediator variable. In Aburumman et al. (2020) research, it was found that human resource management practices has effects on turnover intention, as well as in a research conducted by Santhanam et al. (2017) that found if human resource management practices not contributing to the progress and growth of employees is considered as a reason to encourage employees to leave the job or the organization.

### B. Work Engagement

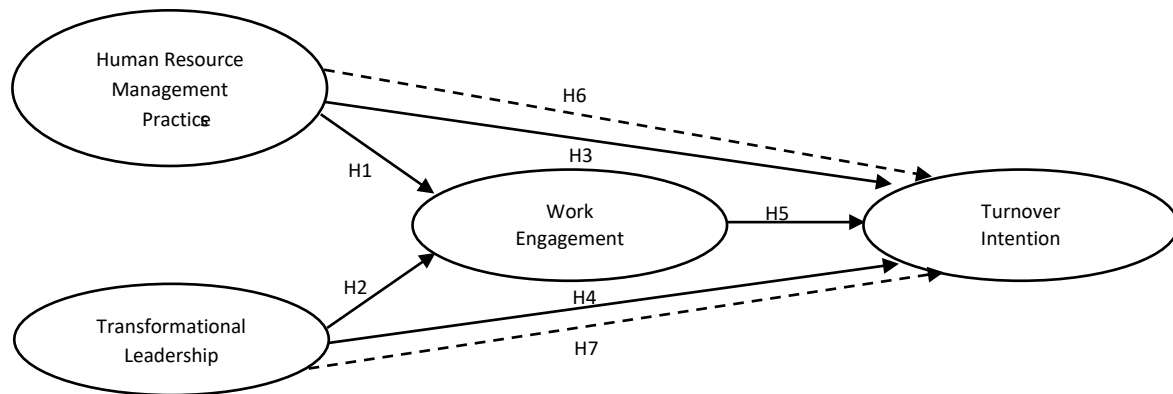
Chang et al. (2017) explained that transformational leadership is a leadership style that motivates subordinates to achieve good performance by making changes to attitude, beliefs, and values in employees. Mahmood et al. (2018) described transformational leadership as the process of leadership that provides a good role model, encouraging creativity, and giving motivation to subordinates in order to achieve organizational goals. According to Gyensare et al. (2017), transformational leadership is divided into four dimensions: 1. Idealized influence, it is related to emotions and strong employee identification between subordinates and superiors. 2. Intellectual stimulation, in which leaders find many ideas and provide ways to solve problems so employees are challenged in solving the problems they face. 3. Inspirational motivation, leaders give examples of good behavior to employees in an interesting way hence employees can follow the behavior of their superiors. 4. Individualized consideration, in which leaders provide support, reinforcement, and guidance by superiors in order to increase employees' confidence in leaders and have high work motivation. Gyensare et al. (2017) stated that the lower the impact of transformational leadership, it will create a feeling of dissatisfaction among employees and will ultimately lead to employees wanting to leave the company. Kara et al. (2021) explained that transformational leadership increase well-being as well as reducing the desire of employees to movie company effectively. Meanwhile, Meng et al. (2021) stated that transformational leadership has a positive influence on work engagement. Sultana and Jabeen (2018) found that work engagement can mediate the influence of transformational leadership on employee's turnover intention.

### C. Turnover Intention

Research conducted by Khawaldeh et al. (2014) stated that turnover intention is a desire to leave the company and work in another company. Meanwhile, according to Adam and Irvianti (2014) turnover intention is the desire of employees to leave their jobs due to bad human resource management practices. Chen and Wang (2019) define turnover intention as the intention of the company members to leave their current job and then look for a different job because there is a job dissatisfaction. According to Yucel et al. (2021), the influences and effects that arise from turnover intention are deviations and sabotage by employees against the company. Meanwhile, according to Kaur et al. (2013), the effect caused by turnover intention is the increase in recruitment costs, selection costs, and training costs for the new employees. The high level of turnover intention can affect the work environment, according to Al-Suraihi et al. (2021) the work environment can be a factor that can influence an employee's decision to remain in the organization or leave. Yunikawati et al. (2021) stated that the application of good human resource management practices will affect the decrease in turnover intention. Researches conducted by Gupta and Shaheen (2017) as well as Memon et al. (2021) found that work engagement has effect on turnover intention.



# The Effect of Human Resources Management Practices, Transformational Leadership on Turnover Intention Mediated by Work Engagement on State Owned Bank Employees



## I. Theoretical Framework

### D. Hypotesis

H1: There is an influence of human resource management practices on work engagement.

H2: There is an influence of transformational leadership on work engagement.

H3: There is an influence of human resource management practices on turnover intention.

H4: There is an influence of transformational leadership on turnover intention.

H5: There is an influence of work engagement on turnover intention.

H6: There is an influence of human resource management practices on turnover intention mediated by work engagement

H7: There is an influence of transformational leadership on turnover intention mediated by work engagement

## III. RESEARCH METHOD

This research is a quantitative research, conducting survey research on employees who work in state-owned bank, BNI area 10 in South Jakarta. Sekaran and Bougie (2020) explained that quantitative research is scientific method that has data in the form of numbers that can be processed and analyzed using mathematical calculations and statistics. The type of relationship between the variables that are studied is causal. Testing in this study is using hypothesis testing which is a provisional allegation that has been stated in the form of a statement (Sekaran & Bougie, 2020). The time horizon for this study is cross sectional and the unit analysis is permanent employees who have worked for at least 1 year at the state-owned bank in South Jakarta.

This study uses primary and secondary data. All variables in this study used an interval scale and all statement items were measured using a Likert scale from 1 to 5 with 1 indicates strongly disagrees and 5 indicates strongly agrees. Human resources management practices scale is adapted from Memon et al. (2021), transformational leadership scale is adapted from Lacap (2019), turnover intention scale is adapted from the study of Memon et al. (2021), and work engagement scale is adapted from Memon et al. (2021).

The population in this study were all employees who worked at state-owned bank, BNI area 10 in South Jakarta, which consisted of main branch offices (KCU), service offices (KCP), and cash offices (KK) with the total of more than 1500 employees. According to Hair et al. (2020), a minimum sample to have in research is 5 times the number scale items are used in the study and a maximum sample to have is 10 times the existing scale items, the number of samples taken was 230 samples using the purposive sampling method. All scale items used in this study were tested for validity and reliability, all of which were valid and reliable. Before testing the hypothesis, a model test was carried out using goodness of fit (GoF). The data analysis method used in this study is descriptive statistics, by calculating the average and standard deviation of each variable, and for testing the hypothesis the structural equation model (SEM) with AMOS software is used.

## IV. RESULTS AND DISCUSSION

The majority of respondents in this study are 64.1% male respondents, 75.1% aged between 31-50 years, 57.4% graduated with undergraduate and master degree, 60% worked for more than 10 years, with 49.8% in staff positions and 42.3% in the marketing field. Based on the statistical descriptive results of the human resources management practices scale, the average respondent's answers agree with the statement in the human resources management practices scale with a value of 4.02 with mean score 4.22, indicating that subordinates and superiors agree with what is meant by good performance at work, while the smallest mean score, 3.77, is found in the satisfaction with the difference in salary among workers in the company item. The results of the statistical



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descriptive of transformational leadership is that the average respondents agree with the statement items with the score of 4.22 and the largest score, 4.54, is found in the re-examining critical assumptions whether it is in accordance with the existing assumptions. The lowest mean value is 3.83, it is found in the looking for a different perspective when solving problems item. Statistical descriptive results for work engagement variable shows that the average respondent's answer agrees with the score of 4.19. The highest mean score in work engagement scale is 4.33 indicating that the respondent is proud of the work being done, while the smallest value with the score of 4.06 is in the wanting to work when getting up in the morning item. Turnover intention statistical description results, the mean score of the respondents is 1.78, indicating that the respondents has no desire to leave the company, the highest mean score is 1.89 stating that there is an urge to leave the company, and the lowest mean is 1.70 in the desire to move or leave the company in near future or in 6 months item.

**Table 1. Results of Hypothesis Testing for Direct Effect and Indirect Effect**

	Path	Estimates	p-value	Conclusion
H1	HRM practices → Work engagement	0.597	0.000	H1 supported
H2	HRM practices → Turnover intention	-0.625	0.000	H2 supported
H3	Transformational leadership → Work engagement	0.537	0.000	H3 supported
H4	Transformational leadership → Turnover intention	-0.516	0.000	H4 supported
H5	Work engagement → Turnover intention	-0.357	0.000	H5 supported
H6	HRM practices → Work engagement → Turnover intention	-0.326	0.000	H6 supported
H7	Transformational leadership → Work Engagement → Turnover intention	-0.450	0.000	H7 supported

Hypothesis 1: HRM practices has a positive effect on work engagement. HRM practices has a significant positive direct influence on work engagement. The test results are supported by research that has been conducted by Memon et al. (2021), Guan and Frenkel (2018), also Aktar and Pangil (2018). Companies can increase and maintain competitive advantage through effective human resource management, because the success of each company depends on the quality and efficiency of its human resources in which it will affect the level of work engagement which is created in the company environment (Sepahvand & Khodashahri, 2021). HRM practices implanted by the company act as a synergy that can increase work engagement by directing employees to be more active in work activities that have been planned by the company. Work engagement can be formed if HRM practices succeed in creating a strong atmosphere so that employees will have the behavior needed in the company in order to achieve company goals. Based on this, the human resources owned by the company must be managed strategically in order to get good work engagement so it can achieve the company's success. Therefore, work engagement within the company will increase if the implementation of HRM practices is getting better, especially in improving training procedures for employees.

Hypothesis 2: Transformational leadership has a positive effect on work engagement. This supports research conducted by Dartey-Baah (2016), Chaudhary and Sisodia (2022), and Meng et al. (2022) that stated transformational leadership influences work engagement. Research conducted by Chang et al. (2017) also support that transformational leadership has a positive effect on work engagement which is a set of behaviors that motivate followers to achieve performance beyond basic expectations by changing the attitude, beliefs, and values of their followers. This shows that when the leader's transformational leadership style increases, it will further increase employee engagement with work and the organization. For the company this is a positive thing that must be maintained so that the sustainability of the company is guaranteed. For the company, this is a positive thing that must be maintained, so that the sustainability of the company is guaranteed. In this case, employees consider that the role of the most important transformational leader and a responsive leader of the employees' need and able to courage employees to improve quality, skills, and better performance in the future is needed. As a leader in a company, it is required to be able to motivate and work together with the subordinates in the midst of many works demands. The better the leader's role in influencing employee's comfort, the employee will be more engaged with company where the employee works

Hypothesis 3: HRM practices have a negative effect on turnover intention. This founding supports the research of Aburumman et al. (2020), Santhanam et al. (2017), and Yunikawati et al. (2021). The past research found that HRM practices are created so that there is success in achieving the company's business strategy by optimizing available resources to motivate employees so it can increase work commitment which can later reduce turnover intention. Therefore, managers can apply HRM practices well within the company so that it can reduce turnover intention.

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Hypothesis 4: Transformational leadership has a negative effect on turnover intention. This supports research by Kara et al. (2021) and Gyensare et al. (2017), the research stated that the lower the level of transformational leadership then it will cause a feeling of dissatisfaction among employees and will ultimately increase the desire of employees to leave the company. To add another, these previous statements and research are in line with the results of this study, which found that there is an influence between transformational leadership on turnover intention BUMN banking employees. This shows that both the transformational leadership style of the BUMN banking leader will have an influence on the emergence of employee's intention to leave to company. It also can be said that transformational leadership in BUMN banking is the main factor determining the emergence of turnover intention. The role of the leader will pose a dilemma in achieving organizational effectiveness or organizational effectiveness will be seen from leaders who are successful in achieving goals.

Hypothesis 5: Work engagement has a negative effect on turnover intention. The result is in line with research conducted by Memon et al. (2021), Gupta and Shaheen (2017), also Guan and Frenkel (2018). This implies that employees who have high work engagement are less likely to have turnover intention. Therefore, turnover intention can be reduced if the company has attention and concentration in maintaining employee pride in work and strengthening employee morale in work engagement. This also implies that employees who have high work engagement are less likely to have turnover intention in employees who work in BNI. Likewise, if the employee's enthusiasm for work is low, they don't feel counted in their work, they feel burdened when going to work, feeling unproductive, then it will affect employees to think about leaving their job, thinking about finding a new job, and thinking about accepting a better job. So, turnover intention can be reduced if the company has attention and concentration in maintaining employee pride in work and strengthening employee morale in work engagement.

Hypothesis 6: Human resources management practices influences turnover intention mediated by work engagement. This result is in line with Gadi and Kee (2021) and Memon et al. (2021) that found employees with high level of involvement in the workplace will build quality relationships and mutual trust with superiors and co-workers. These employees tend to show more positive attitudes, behaviors, and intentions towards the company in achieving company goals so that human resources management practices can reduce turnover intention mediated by work engagement. Based on this, the attachment that is built and experience by employees while working at the company can intervene in HRM practices implemented by the company towards employee's turnover intention. Therefore, companies can decrease employee's turnover intention with the implementation of HRM practices that focuses on strengthening employee morale in work engagement.

Hypothesis 7: Transformational leadership influences turnover intention mediated by work engagement. This is in line with research conducted by Gyensare et al. (2017) which stated that transformational leadership will be more effective in reducing the level of turnover intention among employees, so work engagement can also be used to reduce turnover intention. In research conducted by Sultana and Jabeen (2018), work engagement is able to mediate the influence between transformational leadership on turnover intention. Further research conducted by Lacap (2019) also found that work engagement could mediate the influence between transformational leadership on turnover intention. This means that the increase and decrease in turnover intention will be in line with the increase and decrease in transformational leadership if the employee's work engagement also increases and decreases. This refers to the indicators for each variable where Bank BNI employees need leaders who are able to develop, be supportive and responsive to their employees. What is most needed by employees, especially in leaders, are leaders who are able to be ready to train employees in order to improve their performance, always consider the interests of employees in making decisions and the personal needs of employees, also always responsive in dealing with problems that exist in the workplace.

### **V. CONCLUSIONS**

The conclusions drawn from this study are that male respondents are more dominant than female, age of the respondents mostly over 40 years, have at least a bachelor's degree, with more than 6 years of service and the majority are staff and work in the marketing field. Statistical description for human resource management practices stated that the respondents as a whole agree with the statements so that it can be said that respondents have job satisfaction in terms of training, performance appraisal, and compensation given. The responses of respondents to the application of transformational leadership in the company have been good. Statistical description results for turnover intention find that the majority of the respondents have no desire to leave the company. As for work engagement, respondents' perceptions of work engagement agree with the existing statement. The hypothesis testing results obtained are human resource management practices, transformational leadership has a positive effect on work engagement is supported, human resource management practices, transformational leadership has a negative effect on turnover intention is supported, work engagement has a negative effect on turnover intention is supported, and work engagement can mediate the effect of human resource management practices, transformational leadership is supported.

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## How to Shape Purchase Decision? The Influence of Marketing Mix toward Purchase Decision on Food Product



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**ABSTRACT:** The aims of this to analyze the effect of the marketing mix of product, price, promotion, place, process, people, and physical evidence on the buying decision of processed food products at Erista Garden in Yogyakarta. This study focus on the Erista Garden's product which developed by using sprouts-microgreens into a variety of rice-based functional foods.

This study used a quantitative descriptive approach, using a descriptive test using SPSS statistics. The samples size is 55 respondents obtained by using non-probability sampling technique with accidental sampling. The results showed that the factors of product, price, promotion, place, process, people, and physical evidence are important determinants when buying processed food products at Erista Garden in Yogyakarta. The dominant factor influencing the decision to buy a product of Erista Garden in Yogyakarta, product quality that is beneficial to health and also relate to consumer tastes.

**KEYWORDS:** Erista Garden, Food Product, Marketing Mix, Purchase Decision

### I. INTRODUCTION

The Covid-19 pandemic has had an impact on decreasing the number of tourists visiting the Kaliurang area, one of the tourist attractions on the slopes of Mount Merapai, Special Region of Yogyakarta. Tourist attractions such as flower-vegetable gardens and restaurants are also got the impact with a decreasing of buyers. The pandemic has also had an impact on the increasing number of unemployed and the cessation of micro, small, and medium enterprises (MSMEs), one of which is Erista Garden.

Companies are still able to survive in very extreme conditions, therefore company management must be able to manage their company well, so that they can survive and make repeat purchases continuously, despite the pandemic conditions. Therefore, companies are required to innovate the products and holistic service innovations to make a company continues to exist during a pandemic. One of the innovations that must be carried out by business actors is innovation in marketing strategies that are more adaptive to environmental conditions. Iskandar and Andriyani (2014) stated that the marketing strategy used can guide managers or company owners in carrying out tactics and other activities to improve company goals.

Erista Garden innovates in processed products that are produced in the form of ingredients derived from nuts which are considered important for maintaining health during a pandemic. Products from bean sprouts show that sprouts have potential as a functional food for preventing cholesterol and diabetes (Kanetro et al., 2019; Kanetro et al., 2020). This is supported by the research of Wojdylo et al. (2020) who stated that some sprouts and microgreens (plants that grow a few days after sprouting) have antioxidant capacity, antidiabetic activity, antiobesity activity, and anticholinergic activity. Patents for dried oyek or growol products and rice analogues from growol are supported by the research of Wariyah et al. (2020) who showed that growol contains resistant starch as a functional food.

Sarjono (2011) found that the marketing strategy consisting of product strategy, price strategy, promotion strategy and distribution strategy simultaneously and partially had a positive and significant effect on increasing product sales. These results prove that the marketing strategy in this study consists of product, price, promotion, and place strategies which are important determinants in changing consumer behavior. However, this research has not examined the importance of other factors such as people, process, and physical evidence that can influence the decision to purchase. Therefore, it becomes important to analyze about the role of product, price, promotion, place, people, process, and physical on purchasing decisions.



## How to Shape Purchase Decision? The Influence of Marketing Mix toward Purchase Decision on Food Product

### II. LITERATURE REVIEW

#### Product

Product quality is an important thing that is considered by consumers in choosing a product. Tjiptono (2001: 95) defined that a product is anything that can be offered by producers to be noticed, requested, searched for, purchased, used or consumed by the market as the fulfillment of the needs or desires of the relevant market. Product quality is a conformity or expectation between the criteria desired by consumers and the goods offered.

The quality is the total characteristic of an entity in accordance with the needs and desires of consumers (Umar, 2003: 53). That is, product quality is a reflection of the desire for a product so that consumers or potential consumers want to buy the product.

#### Price

Price is a fairly sensitive consideration, especially for commodity goods. According to Kotler (2001: 41) price is the value of goods and services as measured by money. The price that has been set for a product must be paid attention in a detail, which must be adjusted to the quality of the goods and competitors.

Abubakar (2005) in his research found that purchasing decisions are influenced by elements in the marketing mix, and the price element has the strongest influence on product purchasing decisions. Research findings by Abubakar proved that price is an important consideration in deciding to buy a product.

#### Place (Channel)

Loekito et al. (2012), in his research proved that purchasing decisions are influenced by elements in the marketing mix, and the element that has the most positive and significant influence is place. That is, place is one of the key factors, especially for products sold in restaurants. The place reflects one of the qualities of the product to be offered.

These findings are in line with (Pertiwi et al., 2016), that purchasing decisions are influenced by elements in the marketing mix, and the most positive and significant influence is place. A place that supports both in terms of access and comfort will make consumers interested in buying the products or services offered.

#### Promotions

In an information disclosure era, the promotion of an item is important and becomes one of the important keys in introducing products and services. Tjiptono (2001: 219), defined that promotion is a form of marketing communication in the form of marketing activities that seek to disseminate information, influence/ persuade, and/ or remind the target market for the company and its products to try to receive, buy and be loyal to the products offered by the company.

According to Umar (2003: 36), communicate products to the public, it is necessary to develop a promotion mix. Promotion must be implemented properly to make a message to be conveyed to consumers can be achieved. In addition, promotions must be packaged attractively according to the target market for the product or service being offered.

#### People

Business owner must have good charisma in consumers sides so that products or services are easily accepted by them. Jeanette (2017), in her research proven that people have the most positive and significant influence on purchasing decisions. Business owner or service providers are factors that consumers pay attention.

Loekito et al. (2012), also found in his research that people have a significant effect on purchasing decisions. This reality proves that, consumers who come, will be indirect contact with businesses or service providers so that the impression must be positive and make consumers interested in the products or services offered.

#### Process

The service process must also make consumers feel valued and with a process that promotes ethics. Jeanette (2017) has found that process has a positive and significant effect on purchasing decisions. An important consideration by consumers is the service process provided because, without a good service process, consumers will feel less valued.

Penalosa (2019) proved that the process has a positive and significant influence on purchasing decisions. Good service will have an impact on the positive impression of the consumers. The service process provided to consumers will stick to their minds that they are valued and a person who must take precedence.

#### Physical Evidence

Kotler & Armstrong (2012: 62) defined physical evidence as real things that influence consumer decisions to buy and use the products or services offered. This statement is supported by research findings by Utami (2016), that physical evidence has a positive and significant effect on purchasing decisions.

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Display or physical evidence is an important concern to maintain consumer comfort. Consumers who come, not only enjoy the products or services offered, but also must be given a comfortable environment while obtaining the services provided by business owner.

### III. METHOD

This study was explanatory research using a quantitative approach. This study to analyze the marketing mix strategy in Erista Garden to make a purchase decision of the customer. The population in this study was local and society of Yogyakarta. The sample technique by using non probability sampling, which is accidental sampling. The sample size was 55 respondents that collected from offline survey to the respondent. The data were analyzed using the descriptive statistics. The instrument of marketing mix was adapted from Dewi and Sutanto (2018), by using likert scale 1-5 scale. The data analysis in this study used SPSS software.

### IV. RESULTS

This research is described using quantitative approaches. The discussion is also based on a qualitative approach, in which the data obtained is through respondents' answers to the questions contained in the questionnaire.

#### Respondents Characteristic

The results of data processing show that the characteristics of the respondents in Table 1. The male respondents were 20.36 % or 20 respondents. While the female respondents were 35.64 % or as many as 35 respondents. These reviews can be seen in Table 1.

**Table 1. Respondents Characteristic**

Type	Total
<b>Gender</b>	
Man	20
Woman	35
<b>Education</b>	
Senior High School	19
Diploma	13
S1	13
Postgraduate	10
<b>Age</b>	
20-25	18
26-31	7
32-37	5
> 38	25
<b>Status</b>	
Entrepreneur	21
Employee	13
Student	9
Civil servant	8
Housewife	4

Table 1 described that the most of the respondents were the last education of the respondents, senior high school 19.34% or 19 people. Meanwhile, the smallest percentage for recent education was postgraduate as much as 10.18% or as many as 10 people. Then, the number of graduates at the diploma and undergraduate levels is the same, which were 13.24% each (13) people. The most number of respondents age is > 38 years as many as 25.45% or 25 people. Then the age of the respondents in the second place is the age of 20-25 years as much as 18.33% or 18 people. The third place are respondents aged 26-31 years as much as 7.13% or 7 people. Finally, at least 5.9% of respondents aged 32-37 years or as many as 5 people.

The most respondents based on the status were as an entrepreneur as much as 21.38% or 21 people. Then the respondents in second place were employees as much as 13.24% or 13 people. The third place are respondents who are students as much as 9.16% or as many as 9 people. The fourth place are respondents of Civil Servants (PNS) as much as 8.15% or 8 people. Finally, the fewest respondents are housewives, as much as 4.7% or 4 people.

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### V. DISCUSSION

The data collected by the researcher is in the form of primary data obtained through a survey using *cross sectional data*. The distribution of the questionnaires uses the *self-administered survey questionnaire method*, which the questionnaires are distributed offline. The collected data is 55 respondents, then the data is processed using *SPSS software*.

**Table 2. Descriptive Statistics**

	N	Minimum	Maximum	sum	Means	std. Deviation	Variances	kurtosis	std. Error
	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics
X1.1	55	3	5	245	4.45	.571	.327	-.758	.634
X1.2	55	2	5	227	4.13	.771	.595	-.385	.634
X1.3	55	2	5	232	4.22	.738	.544	.148	.634
X1.4	55	3	5	243	4.42	.658	.433	-.513	.634
X1.5	55	3	5	241	4.38	.652	.426	-.599	.634
X1.6	55	2	5	222	4.04	.816	.665	-.288	.634
X1.7	55	2	5	216	3.93	.900	.809	-.481	.634
X1.8	55	2	5	234	4.25	.775	.601	-.125	.634
X1.9	55	2	5	224	4.07	.790	.624	-.643	.634
sum X1	55	26	45	2084	37.89	5043	25,432	-.528	.634
X2.1	55	2	5	232	4.22	.686	.470	.796	.634
X2.2	55	2	5	231	4.20	.678	.459	.870	.634
X2.3	55	2	5	226	4.11	.737	.543	.942	.634
X2.4	55	3	5	241	4.38	.593	.352	-.656	.634
sum X2	55	11	20	930	16.91	2,343	5,492	.051	.634
X3.1	55	3	5	232	4.22	.629	.396	-.533	.634
X3.2	55	2	5	231	4.20	.704	.496	.497	.634
X3.3	55	3	5	235	4.27	.651	.424	-.671	.634
X3.4	55	3	5	243	4.42	.534	.285	-1,207	.634
X3.5	55	3	5	245	4.45	.538	.290	-1,206	.634
X3.6	55	3	5	242	4.40	.531	.281	-1,185	.634
sum X3	55	20	30	1428	25.96	2,502	6,258	-.688	.634
X4.1	55	3	5	227	4.13	.695	.484	-.871	.634
X4.2	55	3	5	239	4.35	.552	.304	-.747	.634
X4.3	55	3	5	240	4.36	.589	.347	-.653	.634
X4.4	55	2	5	243	4.42	.629	.396	2,376	.634
X4.5	55	2	5	235	4.27	.706	.498	2,214	.634
sum X4	55	15	25	1184	21.53	2,567	6,587	-.920	.634
X5.1	55	3	5	240	4.36	.620	.384	-.612	.634
X5.2	55	3	5	235	4.27	.592	.350	-.476	.634
X5.3	55	3	5	236	4.29	.533	.284	-.520	.634
X5.4	55	4	5	241	4.38	.490	.240	-1,817	.634
X5.5	55	2	5	231	4.20	.650	.422	1,323	.634
sum X5	55	16	25	1183	21.51	2,324	5,403	-.708	.634
Valid N (listwise)	55								

Based on the data processing results of in Table 2, described that product quality was very high, based on the instrument results on product quality, a score above 4.00 for the average value. Meanwhile, the highest score is the quality of the product offered with a score of 4.45. It shows that almost close to 5.00. Therefore, the quality of the products is a good quality, which can be seen from the materials used and the appearance of the product. In addition, from the results of respondents' answers to open-

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ended questions, respondents considered that the products from Erista Garden were healthy food and suitable for those on a diet and diabetics.

Irianto and Giyatmi (2021) confirmed that there are several indicators to be considered in developing a new food product, as follows.

- 1) The impression of the product being developed can be directed according to the intended target consumers.
- 2) Product packaging can enhance the consumer's impression of a product. Therefore, it must be endeavored that the packaging used is as attractive as possible. Trademarks that are given to products are made to give a deep impression of the product and it can be a designation for similar products that have different brands.
- 3) After-sales services or facilities offered or owned by a product can be an added value that attracts consumers to buy a food product. For example, the guarantee given by the company for the products, that if it does not match what is advertised or what is stated on the label, consumers can get their money back.

The results of the respondents' answers are consistent with the World Health Organization (WHO) regarding a food product development, where WHO describes in general human demands for food which can be arranged as follows:

1) *Food Secure* (amount); 2) *Food Safety* (health); 3) *Food Nutrition* (activity); 4) *Food Palatability* (taste); 5) *Food Functionality* (fitness) (Pudjirahaju, 2018). Food products that have been developed by Erista Garden have fulfilled the elements of health, nutrition, and safety for consumers. The community is aware that health is an important factor in choosing a food product. Products of Erista Garden are also one of the non-cholesterol foods so they are safe for consumption by all groups.

Based on the answers from respondents to the development of food products carried out by Erista Garden, it is also unique and distinctive. This response is appearance and composition of the ingredients used in these food products. They also considered that the processed food at Erista Garden was considered to be different, it became one of the triggers for consumers to choose these preparations.

The prices provided to customers are determined by considering various instruments. The results of the data test show that the prices given are competitive and in accordance with the quality of the products. The results obtained prove that an average of 4.22 regarding the price given is in accordance with the quality. In addition, the results are quite large, namely the average payment method, which is 4.38. People want a flexible payment method, these considerations are of course very relevant to current conditions because in the 4.0 era, apart from the price and quality of goods offered, ease of transaction is also one of the considerations for people to buy a product. Prihatiningtyas and Chasanah (2022) in their research found that price has no significant effect on purchasing decisions. For now, the definition of price has indeed shifted slightly, because the main parameter is the problem of product quality in deciding a purchase. The products of Erista Garden use organic ingredients and without preservatives so that the price may be more expensive than competitors. However, a higher price, the quality provided by Erista Garden will be guaranteed.

The location of Erista Garden is considered strategic and comfortable. The highest average result is about a convenient business location of 4.45. The statistical results prove that the convenience of location of Erista Garden is considered very adequate. Pertiwi et al. (2016) found that the decision that place has a strong influence on purchasing decisions. Based on these findings indicate that the place of business is an important determinant. In addition, regarding the location, it is not only seen from the strategic location but also the comfort and safety factors which are the main things that must be considered. It has been implemented properly by Erista Garden. The place of Erista Garden certainly meets security standards because there are guards, especially vehicles for customers who come to the cafe.

Promotions of Erista Garden have been carried out optimally. The results of the data processing indicate that the highest average result is about the existence of a catalog that can make it easier for potential consumers to choose products of 4.42. Erista Garden has implemented a holistic promotion strategy, in which those who come to the place of business are also given the convenience of having an attractive menu catalog, the potential buyers make it easier to choose the product. Anindityo (2017) emphasized that promotion has a significant influence on consumer decision making. The promotion media needs to be attractive as possible to make a potential customers are interested in buying. Erista Garden has implemented various promotional strategies, one of which is through social media, and word of mouth.

Alma (2002) promotion is a communication activity that provides explanations and convinces potential customers about goods and services with the aim of getting attention, educating, reminding and convincing potential customers. Erista Garden has carried out promotions, both verbally and non-verbally so that potential customers will be more interested for the products offered. The catalog on the menu of Erista Garden is presented in an attractive way and also seems easy to understand, so that it becomes one of the important variables in increasing consumer interest to come and buy the products.

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The services of Erista Garden is very good. This is confirmed by statistical results which show that the highest average result is 4.38, regarding a friendly service process. Friendly service is key in giving a positive impression to customers, because a positive impression will also have an impact on the level of consumer loyalty. Prihatiningtyas and Chasanah (2022) stated that the process in services is a major factor in the service marketing mix such as service customers will be happy about the service delivery system as part of the service itself. The customers who come to Erista Garden will also receive a service process which they respond of friendly and in accordance with consumer needs.

### VI. CONCLUSION

Based on data analysis and discussion that the marketing mix strategy is one of the important determinants in making purchasing decisions. This research proves that product innovation at Erista Garden is one of the strongest factors in making purchasing decisions. Erista Garden innovates in processing the products offered to consumers. The main raw materials used are made from hygienic materials and do not contain preservatives. In addition, the appearance of the product also seems attractive and unique.

Erista Garden also carries out a marketing strategy in increasing sales activities for the products offered. The marketing mix carried out by Erista Garden is holistic to makes consumers buy products from Erista Garden. The limitation of this research is using descriptive statistics by using SPSS software to process data. The further research can use other approaches that are considered more powerful to make the research result can be generalized.

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## Inter-philosophical Analytical Role of Doctrine of Marxism and Doctrine of Mohism in Shaping International, Inter-civilisational Development and Multilevel Governance Mechanisms



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**ABSTRACT:** Both Doctrine of Marxism and Doctrine of Mohism had been exerting in-depth influences over nature and scope of individuality and collective being, the significance of labour and humanism, ethical and social status and collective, communal human development, which may be far more philosophically and ideationally and even institutionally indispensable in the contemporary international society of imbalanced uncoordinated, and unsustainable world system of remaining capitalistic production network and the comparative predominance of one singular superpower over the alternatives in relative terms. Both of these philosophical doctrines highlight neither narrow mindset nor self-centered preference over the interests of one dominant, privileged groups against those of the underprivileged and underdeveloped but rather, comparatively speaking, universal, communal fraternity and courage in the exchange of mutual benefit and production amongst the dispossessed groups and rejection of a kind of unfair governance mechanism and institution--provided that a set of criteria on international, inter-civilisational human development should be principally prioritised, for both of these philosophical schools fairly represent and serve the core interests of the underprivileged and the dispossessed in their corresponding, respective eras and their doctrines may have contradicted with the comparable interests of the privileged, powerful and aristocratic elite communities, who tend to launch profound vitriolic criticisms upon the exaggerated falsifiability, invalidity and non-sustainability of School of Marxism and School of Mohism. This analytical research essay manages to attach much considerable significance to the questions of whether both Doctrine of Marxism and Doctrine of Mohism can play considerable supplementary roles in constructivistically and creatively recapitulating, reconceptualising, reformulating and reconstructing the ready-made neoliberal international governance mechanisms, unconventional international affairs and transnational conundrums that the mainstream international-relations theory alone chiefly designed by the US academic communities may not be capable of effectively addressing in the contemporary planet of volatility, unpredictability, complexity and ambiguity. With the theoretical framework of School of Marxism and School of Mohism, this research analytical essay methodologically seeks to capitalise on certain representative case studies of the Belt and Road Initiative, Global Development Initiative and of the perception of a Global Community of Shared Future and Destiny for the Humankind, associated with much analysis of the updated IMF report evaluating and forecasting the up-and-down global economic circumstances, in an international reality where differentiated interests of development are interwoven, for the purpose of dialectically and comparatively gauging, evaluating and extrapolating a considerable number of inheritable, identifiable and ideational theoretical merits and constructively deconstructing and decomposing ideational deficiencies concerning School of Marxism and School of Mohism and hopefully institutionalising a more representative, collective, normative and civilisational global governance mechanism to address international development issues and international security issues that are confronting almost all state entities and non-state entities in avoidance of comeuppance and apocalypse in one way or another. Incidentally, not merely do these two philosophical teachings facilitate philosophers, social theorists, political economists, international relations connoisseurs and research analysts to undertake maximum rational and empirical observation of a complicated world system in a Newtonian sense as it literally is and has been, but more significantly they probably aggrandise the normative, progressive philosophical notion of systematically and institutionally reshaping an international arena on a normative basis of non-proliferation of predominant interests of major industrialised state powers and territorial expansion of monopolistic, oligarchic

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corporations and the alike.

**KEYWORDS:** Doctrine of Marxism, Doctrine of Mohism, international relations, international development, inter-civilisational studies, social science

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## 1. INTRODUCTION

Comparatively speaking, notwithstanding doctrine of Mohism and doctrine of Marxism, probably, not being the mainstream, cardinal philosophical schools within the classical Chinese philosophical and intellectual context (in comparison with School of Confucianism and School of Taoism) and the Western philosophical and intellectual context (in comparison with classical Greek philosophy), respectively, let alone corresponding to the generally-acknowledged mainstream international relations theory (i.e. realism, liberalism, etc.) (Reus-smit & Snidal, 2010), it could be observed that those two special philosophical schools had been, and still are, playing a philosophically consequential, progressive, and thought-provoking role in theoretically identifying crucial socioeconomic and politico-economic issues and conundrums that had been comprehensively confronting human development, international security and international development and so forth, and then their intellectual, ideational legacies have helped to provide certain theoretical, constructivistic guidelines and formulas corresponding to some above-mentioned issues (Fraser, 2020; Johnston, 2013). Doctrine of Marxism, chiefly initiated by Karl Marx and Friedrich Engels, may have naturally been the very product of Hegelianism, Feuerbach's materialism, Adam Smith's division of labour, and other comparable politico-economic theory and disruptive social unrest and progress in the European chronicle (McLellan, 2000). Likewise, Doctrine of Mohism, chiefly initiated by Mozi, followed by his disciples of craftsmen, carpenters and the like, may have been the comparable product of critical criticisms on Confucianism and multiple offensive interstate conflicts and warfare over the course of transition period between the Spring and Autumn Era and Warring-States Era (Johanston, 2010). It could be highlighted that both of those two philosophical doctrines are the consequence and ramifications of synthesis of alternative diverse schools and socioeconomic development trajectory and thus it may be problematic and controvertible to, in isolation, analyse, deconstruct, conceptualise and theorise many variables concerning two philosophical thoughts that a certain of philosophers and international research analysts may tend to blindly xerox and subjectify without regard to their special historical conditions, contexts and endogenous and exogenous factors that form the basis of them, literally. Otherwise, it would cause a deepening misinterpretation, misrepresentation, misjudgement, mismatched juxtaposition, and one-sided inheritance that help to accomplish little in philosophically and theoretically resolving international development and security issues and reformulating international, multilevel governance system and mechanism.

Nowadays, a series of issues of international security and international development highly probably necessitate a doctrinally supplementary theoretical framework as regards international relations and international development, e.g. high Engel's Co-efficient, interstate trust deficiency, imbalanced, unstable, unequal and unsustainable development and relationship between the Humanity and nature, a rising tide of aggressive and offensive interstate conflicts and confrontations, proliferation of weapons of mass destruction and unconventional weapons, regional geopolitical security dilemma, cross-cultural misunderstandings, cultural hegemony, sluggish economic recovery. Over two years of the global COVID-19 pandemic have witnessed millions of lost victims, followed by an unprecedented socio-economic and politico-economic impact (Chatterjee, 2022). The current crisis is threatening decades of development gains, further thwarting the urgent transition to the environmental-friendly, inclusive economies; additionally, the unprecedented climate crisis, regional, geopolitical conflicts, unanticipated inflation, digital divides, rising Engel's Co-efficient and starvation index, and structural disequilibrium at an interstate and intrastate level further exacerbate the dire situation (Chatterjee, 2022). It is fair to assume that these human development-relevant conundrums are by no means the very one-off issues. Instead, they necessitate an innovative philosophical, international-relations formula and institutional governance mechanism to substantively resolve these international security issues and international development issues, which may be the very philosophical issues by substance provided that they are researched deeply.

The paramount objective of this analytical research essay primarily seeks to inter-philosophically extrapolate, cogitate and appraise the potential theoretical formula and theoretical governance mechanism and ideational spotlights from School of Marxism and School of Mohism, which may be beyond the mainstream international-relations theoretical frameworks but may be

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supplementary and inspirational in response to deficiencies and loopholes of the mainstream international-relations theory, which may fall short of calibrating shared, collective, unconventional international security issues and international development issues and corresponding solutions in the contemporary world of profound unpredictability, volatility, contradiction, complexity, and ambiguity. This analytical research essay in parallel seeks to attach a considerable significance to their potential reciprocity and heterogeneity from these two historical, fairly non-mainstream (in comparison with Greek Philosophy and School of Confucianism and Taoism, comparatively speaking) but contemporaneous significant philosophical schools that have been making distinctive, corresponding differences on spatiotemporally differential territories, regions and civilisational entities, especially in some formerly-colonised state entities, regions and territories. When it comes to the research implications of this analytical research essay, certain underlying neoliberal governance mechanism and ready-made neoliberal institutions, whose theoretical foundations and sources may be subjected to mainstream international-relations theory like realism and liberalism alone from the Western Hemisphere, may be observed to fall short of theoretically, pragmatically, and thoroughly addressing unconventional, transnational conundrums and also there seem to be elusive theoretically-effective architectonic formula to be constructive to management and administration of a whole host of non-traditional international challenges as regards international security, international development, and international cooperation and very few, limited substantive and representative results can be thoroughly delivered afterwards owing to the concerns about the capitalistic production network system. Additionally, it could be observed that the traditional academic communities and policymakers tend to highlight Realism and Liberalism as part of mainstream international relations theory with downplaying the perennial significance of School of Marxism and School of Mohism within the international-relations framework; nevertheless, some of Marxist epistemologies and methodologies and the Mohist ones may be thought-provoking to the rebuilding of an international reality and international relations theoretical framework. The questions of a) in what direction the shared international hemisphere would be, and should be, advancing and of b) what kind of communal path may be more desirable and identifiable than ever before in connection with most state actors, economic entities and civilisational entities are the very urgent themes for philosophers, research analysts, social theorists, political theorists, and even senior policy decision makers to cogitate profoundly. Therefore, it is with such theoretical limitations and room for theoretical breakthroughs that core doctrines inherited from philosophy of Marxism (incidentally, this analytical research essay defines Marxism within the academic, philosophical and economic-science framework only rather than political and ideological framework) and philosophy of Mohism from the Western philosophical context and from the classical Chinese intellectual context respectively might be significant in unveiling alternative but elemental philosophical perceptions that the above-mentioned mainstream Western international relations schools alone chiefly designed by the US academic communities of international relations may be unable to better generate. Multiple rediscovery into philosophy, materialist and idealist alike, and into international relations matters to the intrinsic investigation into a more volatile, unpredictable, competitive, complex and ambiguous international society where a series of unprecedented transformations and adjustments are of that resurgence politically, economically, diplomatically, institutionally and territorially. To put it briefly, at a theoretical level, multiple maximum rediscovery of School of Marxism and School of Mohism might play a supplementary role in better theorising and conceptualising international security and international development and global transnational challenges; at a pragmatic level, multiple rediscovery of School of Marxism and School of Mohism might be constructivistic in ameliorating the decision making of senior state policy makers and reflections by international-studies research analysts, social scientists, economists, social theorists and political scientists at a critical juncture in a current world of volatility, unpredictability, competition and ambiguity and helps to re-territorialise, reconstruct, re-scale and remodel the underlying global capitalist production network, which, on the one hand, statistically speaking, facilitates and aligns the dynamic global economy in quantity and, yet, on the one hand, amplifies the widening gap in incremental developments between the privileged state actors and underprivileged state actors, especially between the most-favoured nations and non-most-favoured nations within the neoliberal trading system (Stiglitz, 2002; Wilkinson, 2014). Making no mistake, it may not be unrecognisable that neither School of Marxism nor School of Mohism in theory could completely deliver pragmatic solutions in response to a constellation of differential conundrums over international, global development issues in the varying contemporary era, and yet certain thought-provoking philosophical concepts may be applicable to an encyclopaedic philosophical, ideational and institutional formula and inter-civilisational governance mechanism that may see

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through the probable root causes, rather than the superficial symptoms, of these shared issues associated with international security and international development, and even global human civilisational development.

Here are a set of consequential research questions associated with potential intrinsic relationship between philosophy of Marxism and philosophy of Mohism in a context of international security and international development and inter-civilisational dynamics. To begin with, what dimensions and variables may be philosophically identified as the homogeneity and heterogeneity in theory between Doctrine of Marxism and Doctrine of Mohism from the contemporary perspectives? Second, in what ways can both Doctrine of Marxism and Doctrine of Mohism remain applicable to, and problematise, the management, administration and governance of international security and international development, the building and reform of international architectures and institutions, inter-civilisational dynamics, notwithstanding considerable theoretical epistemologies and detailed judgements being by no means incontrovertible owing to the phenomenal monetary, spatial and circumstantial alterations and vicissitudes? Third, is it highly likely that both Doctrine of Marxism and Doctrine of Mohism have a comparable supplementary role to play in generating supplementary, multilevel mechanisms that theoretically address the unconventional transnational challenges of international affairs that the mainstream international-relations theory and the existing neoliberal institutions alone may be unable to originally recapitulate and synthesise in the contemporary world of volatility, unpredictability, competition and ambiguity? Ultimately, what sorts of collective ideational, philosophical concepts from Doctrine of Marxism and Doctrine of Mohism combined may be encouraged to be in an innovative fashion inherited and re-initiated in the genuine pursuit of international security, international development and global civilisational development?

For the sake of hierarchising this analytical research essay, the architecture of this analytical manuscript could be compartmentalised into several parts as follows. To begin with, this analytical research manuscript tends to dialectically and materialistically undertake critical theoretical and philosophical rediscovery into School of Marxism and School of Mohism, respectively, especially their core doctrines to be deciphered on a qualitative basis of their original archives and alternative thought-provoking reviews from scholarships and academic reviews within the specific fields of philosophy, social science, international development and security and international relations. Second, this analytical manuscript seeks to recapitulate and reevaluate their theoretical, ideational legacies, particularly their used epistemologies and methodologies, notwithstanding being both inspirational and controvertible, probably, in accordance with the variations in ontology and context. Third, in comparison with certain mainstream international-relations theory, this analytical manuscript attempts to examine the feasibility, applicability and availability of philosophy of Marxism and philosophy of Mohism in a context of international security and development, with multiple representative cases, such as the updated IMF economic forecasts, the Belt and Road Initiative, the Global Development Initiative, and the innovative perception of a global community of a shared future for all the humankind, whose theoretical framework and nature may be intrinsically linked to 1) anti-capitalist exploitation system and anti-imperialist, anti-hegemonic world system from philosophy of Marxism, which should be inclusive and representative of most developing and underprivileged state actors rather than a few of capitalist industrial hegemonic powers, and additionally, unvarying applicability of historical materialism and dialectical materialism at a methodological level and 2) universal benevolence and fraternity with impartiality, meritorious exaltation and orientation, universal unity with a should-be meritorious leader endowed by the Heaven and refusal to interstate offensive warfare from philosophy of Mohism. Afterwards, this analytical research manuscript seeks to structuralise certain interdisciplinary discussions over both the usefulness and imperfections of research and experimentation of School of Marxism and School of Mohism, for instance, limited volume of breakthrough theorisation of Marxist philosophy over international relations, international security and international development, and the idealistic, non-empirical Mohist philosophy over those above-mentioned subjects, and limited representative cases to be sampled. In a nutshell, this research analytical manuscript does have the inclination to provide implicit theoretical recommendations for updated orientation of research by future international-studies scholars and academic communities, albeit in some ways the imperfect findings owing to limited database and samples and original ontology yet to be further evaluated pragmatically, and then launch certain expectations over a reforming global institutional framework and international human development beyond, or at least supplementary to, the ready-made neoliberal governance institutions and architectures singularly on a basis of mainstream international relations theory and mainstream philosophical frameworks.

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### 2. Integrated Scholarships of Literature Reviews on Theoretical Debate as Regards School of Marxism and School of Mohism

#### Integrated Scholarships of Literature Reviews on Theoretical Debate as Regards School of Marxism

Within this section, before we tend to theoretically conceptualise and creatively reformulate a necessarily updated, revised international governance institution and mechanism associated with Marxist perception of international relations and international systems, it is consequential to trace Marx's fundamental theory over political economic sciences, originating from Marx's analysis of division of labour from Adam Smith, quality of commodities and socially-necessary labour, and distribution of social wealth and resources. Afterwards, certain intrinsic factors and external factors shall be analysed regarding Karl Marx's interpretation of socialisation of labour, including 1) Marx's breakthrough initiation of alienation theory, which reveals and defines humans as the very instruments in front of the capitalistic production network and machinery just for the sake of means of physical subsistence, and identifies the negative correlation between social development and human worthiness in a capitalistic society where Marx identified the substance of classical capitalism as a system of exploitation by the bourgeoisie class over the dispossessed, the underprivileged and the impoverished as labour force, and 2) the intrinsic role of environmental factors, like natural resources, use value, exchange value and commodity prices and so forth. As a result of those analyses, it is naturally necessary to make a constructivistic bridge between Marx's theory over political economic sciences and international relations that Marx perceived as the internationalisation and transnationalisation of class relation, which may be in contradiction with mainstream international relations theoretical frameworks, i.e. realism, liberalism and constructivism (Reus-smit, Christian & Snidal, Duncan, 2010).

That sort of constructivistic bridge might generate profound expectation on deserving economic fairness and equality and value of labour in supplanting colonised vs imperial system, which may be regarded as invisible offensive warfare through system rather than armed force alone.

Karl Marx's analysis of economic development is in turn his development of the fundamental conclusion of Adam Smith, announced in the first sentence of the first chapter of *The Wealth of Nations* (Smith, 1982), the founding work of modern economics, from which the whole of the rest of that work flows: "The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgement with which it is directed, or applied, seem to have been the effect of the division of labour" (Smith, 1982: 1). The building on Adam Smith's interpretation by Karl Marx can be seen clearly in his initial works, for instance *The German Ideology* (2016), "in which the fundamental concepts of *The Communist Manifesto* and later analyses were developed" (Ross, 2019: 179). In later works, Karl Marx (2016) used the terminology of "socialisation of labour" or "socialised protection", in replacement of division of labour by Adam Smith, but this did not thoroughly alter the substance (Ross, 2019: 179; Marx and Engels, 2016).

Taking the concept of equality into account, Karl Marx analysed that commodities can be measured against each other because they are the expression of socialised human labour (Marx, 1990). Equal quantities of socially-necessary human labour exchange equally: exchange values and abstract human labour can share something in common in quantity (Ross, 2019; Marx, 1990). In compliance with Karl Marx's findings, socialised labour is tantamount to the most consequential productive force; thus amplifying socialisation of labour is the fundamental prerequisite to human progress (Ross, 2019; Marx and Engels, 2016). The crucial aspect of socialisation of labour, as Karl Marx shows, is that by producers interacting in their production the arriving productivity is much greater than the sum of their individual efforts (Marx and Engels, 2016). Within the international relations context, by engaging in division of labour, many sides can benefit from mutually-beneficial interstate engagement (Ross, 2019). Afterwards, international cooperation does not merely address a series of inherently international problems (e.g. the unprecedented climate crisis, transnational terrorism, etc), but its mutual advantages in the supreme living standards are rooted in, and singularly achievable through the means of international socialisation of labour (Ross, 2019: 179)<sup>1</sup>.

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<sup>1</sup> That only by interstate engagement can certain accomplishments be achievable is precisely expressed in the incumbent Chinese President Xi Jinping's concept of "a community of common destiny" (Ross, 2019: 179). Normally this concept of "a common" future for humanity" does by no means illusorily ignore the enormity and magnitude of



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In addition, Karl Marx never critically discussed the intrinsic implications for socialisation of labour in isolation without the analysis of external factors, for instance, natural environment and socioeconomic circumstances. Professor Zhu Jiefang from School of Finance and Economic Development of Northwest University of China argues that Marxist economic theory to a large degree comprises of natural-resources-relevant theory and economic-development theory (Zhu, 2018). Not merely did Karl Marx meticulously examine and calibrate the role of natural resources that are characteristic of the process of socioeconomic development trajectory, and also illustrated the fundamental approaches to natural-resources-relevant regulation and advancement (Zhu, 2018). In compliance with Karl Marx, natural resources are the indispensable components of social production and production costs can be guaranteed and profits can be on a rising track (Zhu, 2018). Henceforth, civil usage of natural resources should be followed by seamless anticipation upon potential, serious consequence, followed by a set of effective measures in prevention of demolition and degradation of natural resources for the sake of their exploitation and development. Figuratively speaking, the Marxist model of well-protecting and developing natural resources is compatible with the legendary vision of addressing unprecedented climate crisis.

In addition to the human labour force, the human beings should consist of two crucial parameters: the subject of labour, a subjective element in production process, and the means of labour, an objective factor there (Zhu, 2018). When civil production of commodities and production for commodity market lays a solid foundation for formation of comparable use value of the goods in which natural resources as the external factors are involved (Zhu, 2018). It is an indispensable element in the formation of use value, which is also organically associated with Karl Marx's analysis of the endogenous, abstract interrelationship amongst production, consumption, and value, which are significant to capitalistic economic production process and industrialisation.

Wherefore, except for the macroeconomic and microeconomic perspectives, the protections and regulations of environmental circumstances and environmental resources matter to international security and international development and even the potential dynamics of international relations because in no ways are natural resources are regarded as "products of people's labour", but they embrace use value, which helps to generate services for the formation of use value of products notwithstanding natural resources of zero value and free of charge (Zhu, 2018: 37). In what ways do natural resources literally matter to international production and even the potential international politico-economic and socioeconomic development, which some decision makers and classical intellectual relations analysts may ignore in one way or another? To begin with, natural resources provide free services for the production of goods and services, including the indispensable, irreplaceable services that require natural resources like precipitation, hydrogen and oxygen and ultraviolet rays and, on the other hand, the substitution of manpower in replacements of human force and manual force (Zhu, 2018). Furthermore, with the zero value of natural resources without intervening in the formation of production value, the replacement of manpower and alternative costly production conditions with natural resources can both cost-effective and even profitable (Zhu, 2018). Last but not least, the private-ownership-based commodity production negatively affects civic gratifications to monopolise, impede and exploit natural resources for the singular purpose of maximum profitability (Zhu, 2018). In that regard, in order to overcome the impediments of private ownership of natural resources to economic development, Karl Marx advocated that nationalisation of natural resources before the state disappears and land can singularly be the property of the state (Marx, 1990). Figuratively speaking, a kind of international ownership, collective management and redistribution of natural resources and wealth may help to pose a consequential restriction upon the potential abuse of natural resources and wealth in the hands of certain capitalistic industrial powers, without any alienation of the human beings or the natural environment.

Beyond the analysis of the singular necessity of natural resources, Karl Marx formulated his qualitative reviews concerning James Mill's work over the course of Marx's drafting the *Paris Manuscripts*, an important manuscript that may be a manifestation of the embryonic precursor to the emergence and sophistication of doctrine of Marxism. Tom Rockmore from Duguesne University in Pittsburgh in the United States observes that Karl Marx draws attention to the "distinction between production as a human being and its contrary" (Rockmore, 2018: 226). Karl Marx dialectically divided individuality as an independent human being and

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interstate conflicts, and instead indicates that the commonality of shared *raison d'états* partly lies in "international socialisation of labour, which creates the reality of a normative, representative international society" (Ross, 2019: 179-180).



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alternative individual's pleasure in utilising products of use value (Rockmore, 2018; McLellan, 2000). Philosophically, Karl Marx managed to theorise the Hegelian master-slave nexus and then transposed such master-slave nexus into a relation of production as the venue for deepening development as a realised human being in association with the relation of production (Rockmore, 2018: 226). That foreshadows Marxist philosophy for alienation theory, which deeply criticises the uncoordinated, unsustainable and unequal ties between production and human beings as individuality over the course of classical capitalistic production for the sake of primitive accumulation only without any regard to social welfare and human independent value and collective human freedom.

Such an orientation for development as the core nature of a freely-realised human being engenders Marxist theory of alienation associated with socialisation of labour, in a widely cited passage from *The German Ideology*, someone, though perhaps neither Karl Marx and Friedrich Engels, suggests that an individual can "function as a hunter, a fisherman, or a critic" without their specific identity (Rockmore, 2018: 227). *The German Ideology*, significantly the doctrinal standpoint of Karl Marx and Friedrich Engels, and their philosophical conscience for an original epistemology and an unspecified future period in which the division of labour will become obsolete is perceived in theory (Rockmore, 2018). In compliance with *The German Ideology*, there could a period when no pressure upon aggrandising economic production will be available because individual liberty to behave and travail may be indistinguishable with the hypothesis that much amplification of economic production and mercantilistic interests is, at least, developed with a cardinal concern (Rockmore, 2018; Marx and Engels, 2016). It could be predicted and expected that in a future society, there will be and should be no alienation of human beings as labour force and working instruments for the sake of merely physical subsistence rather than individual and collective liberty and independent will and promotion towards worthiness instead of worthlessness.

Likewise, as a social theorist and economic theorist, Karl Marx highlights that the labour process is the process of interpersonal production relations and nature is in parallel the process of the humanity-nature material transformation (Zhu, 2018; Marx and Engels, 2016; McLellan, 2000). Natural human exercise and human activity alter both natural matter and the substance of the Humankind, subliming civil potential and independent human will. Therefore, nature as well as independent human is an indispensable prerequisite to human practice and the process by which the Humankind alters natural matter forms the material basis for the existence of human beings towards social beings, unencumbered by human will (Zhu, 2018).

Here is a theoretical question of why Karl Marx as an economist and social theorist to a large degree attaches considerable importance to the nature and emancipation of the human beings and independent human will? That may be Karl Marx's primary concern: modern form of the ancient problem of human flourishing in a modern fashion interweaves with holistic philosophical tradition and custom of heterogeneous forms in differential periods (Rockmore, 2018; Marx and Engels, 2016; McLellan, 2000). "In ancient Greek philosophy, human flourishing concerns excellence of function discussed by Plato, Aristotle and other ancient figures" (Rockmore, 2018: 225). Afterwards, the rise of the modern industrial state generates much transmogrification of the problem of human flourishing from virtue or excellence of function; in ancient Greek context, to the capability to function as "a free individual within modern industrial society" (Rockmore, 2018: 225). One of the most remarkable intellectual instigators amid the Enlightenment Movement, Jean-Luc Rousseau attached much considerable significance to the specific nature and real possibility of human freedom over the course of the pervasive Industrial Revolution sweeping the modern world, which inadvertently resulted in variations in the nature of human freedom that Rousseau highlighted "in the context of different instantiations of modern capitalism" (Rockmore, 2018: 225). Partly and constructivistically inheriting from Rousseau's ideational legacies, Karl Marx proposed that the free and full development of man is the highest pursuit and the ultimate goal of man (Marx and Engels, 2016; McLellan, 2000). Meanwhile, the free and full development of man is the main line of Marx's thought and runs through the development of doctrine of Marxism.

After most abstract points concerning social theory and economic theory chiefly initiated and put forward by Karl Marx have been critically synthesised, it is philosophically and theoretically consequentially to make an organic, dialectical association of Marxist philosophy with international relations that matter to multiple theoretic analyses of the dynamics of international affairs and international governance institutions and mechanism, whose philosophy may be distinct from the mainstream international relations theoretical grounds. Professor Benno Teschke from University of Sussex emphasises that Marxist philosophical thought

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as regards international relations and Marxist philosophical integration into the Western canon of international relations disciplines and methodologies are the controvertible, imperfect product, symptomatic of the politics of social science over the course of the Soviet-US bipolar world system (Teschke, 2010). Marxist philosophy and Marxist social science regarding international relations was on the embryonic stage amidst of the interwar years and the preliminary bipolar-system period and the termination of the unchallenged US hegemonic status, and the intercontinental confrontation between the Global North and Global South did result in Marxist internal disciplinary differentiation and holistic consolidation as a unique, recognisable international relations discipline (Teschke, 2010). It could be observed that In the contemporary world, as a result of the devoid of the external restrictions upon geopolitics of bipolarity between the Soviet Union and the United States, the Marxist theoretical frameworks concerning international relations, international security and international development can present a supplementary counterweight to the chiefly-US-designed mainstream international relations discipline and theoretical frameworks, such as realism and liberalism and the like, including the substantial Marxist implications for the Belt and Road Initiative and Global Development Initiative, which will be further discussed in the successive sections.

Before Marxist prototype of international relations and international development disciplines, liberal cosmopolitanism influenced Karl Marx's perception of interstate activities on the theoretical grounds of the transnationalising power of capitalism and transnational commercial interdependence towards a probably post-capitalism world that Marx perceived (Teschke, 2010). This theoretical, epistemological perspective, primarily sketched in *German Ideology*, formed its canonical definition in *Communist Manifesto*:

“The need of a constantly expanding market for its products chases the bourgeoisie over the whole surface of the globe. It must be nestle everywhere, settle everywhere, establish connections everywhere. The bourgeoisie has through its exploitation of the world-market given a cosmopolitan character to production and consumption in every country. In place of the old local and national seclusion and self-sufficiency, we have intercourse in every direction, universal interdependence of nations.,, The bourgeoisie, by the rapid improvement of all instruments of production, by the immensely facilitated means of communication, draws all, even the most barbarian nations into civilisation” (Marx and Engels, 1998: 39).

It could be observed that such a statement upon the implicit nexus between capitalist production and interstate relations is the very product of the specific circumstance that the first sweeping Industrial Revolution and machinery advancement promoted the variations in the means of capitalist production and capitalist, bourgeoisie interests of domestic groups and state preferences. In compliance with to this statement by Karl Marx and Friedrich Engels, it could also be implicitly observed that the core dynamic behind this process was driven by the historically-facilitating universalisation of capitalistic production bearing the endogenous contradictory relation between waged workers and capitalists and bourgeoisie classes for the purpose of expanded reproduction through the means of competition and accumulation and at an interstate and intrastate level, a series of social transformations in non-capitalist societies towards the world market of competition was emerged externally and internally, vertically and horizontally (Teschke, 2010). Professor Benno Teschke from University of Sussex emphasises that “while this perspective retained the role of states as guarantors of exploitative and antagonistic class-divided societies, militarised interstate conflicts would be gradually replaced by the consolidation and polarisation of classes, leading to the intensification of class struggle on a global scale, culminating eventually in a synchronised proletarian world revolution” (Teschke, 2010: 164). To some extent, not merely does the unique, supplementary Marxist international relations theoretical framework challenge the US-designed mainstream international relations theoretical frameworks but more significantly Marxist international relations theoretical framework re-scales, re-align, re-fragment and re-territorialise different parts of intrastate class groups, intranational revolutionary groups, and even international revolution movements.

Furthermore, classical Marxist philosophical thoughts as regards imperialism and neo-imperialism seeks to systematically juxtapose the varying geopolitical dynamics and crisis of international system and international governance mechanism with capitalist development, including the scramble for natural resources and territories in the African continent, arms race and so forth (Teschke, 2010). During those moments and periods, generally, socialist tactics and strategy were redefined in the light of capitalistic economic downward trajectory (Mommsen, 1980; Brewer, 1990; Chilcote, 2000). As capitalism varied in form and nature for the time being, the capitalistic ends of expanded reproduction justified the notion of finance capital, an implicit bridge

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between banking capital and industrial, and state preference comprised of fractured capitalist interests through the profit-monopolising politicoeconomic means (Teschke, 2010). As a result of it, Professor Benno Teschke at University of Sussex points out that the inevitable trajectory of overproduction and overaccumulation (underconsumption) is partly characteristic of capitalism's long-term dynamics over the course of industrialisation (Teschke, 2010). At an interstate level, the predictable formation of interstate and regional rivalry resulted from the capitalistic interests of acquiring raw materials, expanding new markets and colonial territorialisation and politico-military predominance and monopoly; at a domestic level, trade protectionism manipulated the import of foreign trade and states played an intervening role in price setting in the domestic market above the level of world markets (Teschke, 2010). It could be implicitly inferred that probably Marxist thoughts concerning international relations may be a kind of extension of critique of spread of capitalism and bourgeoisie classes, whose core interests serve the capitalist-power-maximising interests and profit-maximising orientation and expansion of capitalist markets and world resources. To a large degree, Marxist theory of international relations may not have been part of mainstream international relations theory, or the politico-economic research over international affairs conducted by Karl Marx and Friedrich Engels cannot be distinguishable from their historical circumstances that influenced their research purpose.

### **Integrated Scholarships of Literature Reviews on Theoretical Debate as Regards School of Mohism**

Albeit in some ways School of Mohism to have been flourished over the course of the Warring States Era (475 BC -- 221 BC) immediately preceding territorial unification of an ancient China led by the first Emperor of the Chin Dynasty, it could be observed that Mozi and Mohists were ineluctable, indelible intellectual participants in the context of ideas of classical Chinese philosophy with that period (Johnston, 2013). In comparison with Western philosophy that to a large degree attaches much considerable importance to systematic analysis on the empirical grounds, the *Mozi* literally represents the preliminary experimentation and implementation in classical Chinese philosophy of systematic argumentation on a basis of certain criteria of validations, whose postulations pertain to natural sciences as well as epistemology and logic (Johnston, 2013). To a large degree, the significance of Mozi is highly acclaimed within the Western academic communities over China Studies (Johnston, Ian, 2013). For instance, Chad Hansen (1992: 95), in the opening to his chapter on Mozi, depicts that:

“He is the most important philosopher in the early half of the classical period. Analysing his thought carefully gives us a more accurate view of the direction of philosophical thought in China.. Writing argumentative essays and engaging in philosophical reflection both start with Mozi. He formulates a unique version of utilitarianism and argues for that theory and for an explicit political theory. He offers an interesting version of a state of nature justification for social organisation. He works out a coherent pragmatic epistemology and both an operational and a historical theory of language.”

Like an above-mentioned question as regards the emergence of School of Marxism from a set of industrial movements and sociopolitical movements against socially-disruptive development and predominance of bourgeoisie class, which put the working class and proletarian groups at a far disadvantageous position, here is a comparable question of how School of Mohism emerged amidst the Spring and Autumn Period and was discussed during the ensuing Warring-States Era. That may be dependent upon comparable exogenous factors like historical circumstances: with the birth of Mozi as recorded, the lord and ministers of State of Lu were “enjoying lives of extravagance and dissipation, indulging in pleasure and wallowing in debauchery” on an almost regular basis (Zhou and Cheng, 2010: 6). To the contrary, amidst the period of famine, the ordinary demographics suffered from insufficient food and clothes, starvation, extreme labour and so forth (Zhou and Cheng, 2010). Moreover, throughout the holistic society, “the strong pillaged the weak, the many tyrannised the few, the devious cheated the innocent, the noble lord over the lowly” (Zhou and Cheng and Honey, 2010: 6). The Spring and Autumn Period had witnessed an undeniable condition of facing intrastate rebellion and interstate attack (Zhou and Cheng, 2010). In the midst of such tumult that drove the *descendance* of royal power, the chances of keeping operating the government-run educational and academic institutions became slimmer and slimmer, which generated the rise and flourishing of private schools afterwards (Zhou and Cheng, 2010). Given this historical background of “the Son of Heaven having lost power and learning having shifted to the barbarous tribes all around,” small producers gained such rare opportunities to acquire cultural knowledge in the pursuit of senior prestige of the scholars (Zhou and Cheng, 2010: 6). As a result of it, it was under this grand historical circumstance that Mozi was a consequential, history-making intellectual thinker from among the common people who arose in response to the needs of times from the underprivileged background of small

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producers (Zhou and Cheng, 2010).

Whereas a Spring-and-Autumn-Period-and-Warring-States-Period-based historical background of phenomenal changes and social contexts necessitated much emergence of great intellectual thinkers left Mozi a rare opportunity to express his intellectual advocacy over social issues and interstate affairs, any alternative information with alternative aspects seems elusive and at least insufficiently limited: “the names are most easily discovered from the Mozi and from other works, and scholars have compiled lists that include the names of 34 to 39 possible Mohists| (Johnston, 2013: xii). some Mohists may have become the groups of Mozi-led official positions or defensive measures and other considered works (Johnston, 2013). Many hypotheses upon two or more separate philosophical schools of Mohism may have been associated with the pre-Han records, scripts and documents, and some modern scholars have sought to juxtapose the supposedly separate schools with specific variables of School of Mohism (Johnston, 2013: xii). Owing to the insufficiency of detailed evidence about the schools, the question of how separate they literally were and whether any separation that did exist was dependent upon doctrinal disparity or merely contingent external factors, e.g. geographical disadvantages or charismatic leadership in mobilising disciples (Johnston, 2013). On the question of background, Angus Graham (1978: 10) suggests that we should think of the Mohist movement as “a confluence of merchants, craftsmen and underprivileged nobles, briefly emerging as a power in the cities as the feudal order disintegrates, but soon to be thrust back by the new bureaucratized Empire into the station which it has pleased Heaven to decree for them”. Nevertheless, there is supporting evidence information next to nothing about the type of people who became an integral component and participant of the Mohist movement (Johnston, 2013).

Irrespective of limited evidence concerning Mozi’s background and identity of his disciples of Mohism, it could be argued that Mozi and his disciples exerted substantial accomplishments in certain philosophical and conceptual domains, for instance, “in science and logic” in particular (Zhou and Cheng, 2010: 6). His ideal of having much inclination to “undergo any hardship for the sake of the good” displayed a lofty character (Zhou and Cheng, 2010: 6). All of this made Mozi and the Mohist school which Mozi initiated have a high bearing upon an age of social transformation, in particular Spring and Autumn Period and Warring States Era (Zhou and Cheng, 2010). A considerable proportion of doctrinal significance and implication behind School of Mohism to the Chinese intellectual chronicle and to the contemporary world of incremental interstate, inter-regional and intercontinental geopolitical conflict, competition and complexity may necessitate the resumption and renaissance of ideational inspirations from Mohist thoughts as part of classical Chinese intellectual thoughts, of which part of Western philosophy, originating from ancient Greek civilisation and ancient Roman civilisation may have fallen short, in terms of universal fraternity, meritorious orientation, non-proliferation of offensive warfare and promotion of peace and stability and the like.

To start with, doctrine of Mohism profoundly advocates the principle of universal fraternity without partiality, which indicates that individuals, non-state actors and state actors alike, should bear obligations to universally cherish one another with zero partiality, stereotype or discrimination in the establishment and an authentic society towards authentic harmony (Johnston, 2013). Literally, it could be observed that this sort of philosophical concept -- albeit being to some extent Utopian on the ground of a disruptive, chaotic, transactional society -- could be regarded as an advanced representative manifestation and exemplification of “humaneness and benevolence”, which encompasses every solitary individual and “is manifested in practice by everyone” striving to safeguard and guarantee maximum individuals benefit on an equal footing (Johnston, 2013: xviii). When it comes to the question of whether this kind of philosophical conception concerning universal fraternity can be justifiable in terms of efficacy, through the means of offering representative historical cases and samples as regards those ancient state rulers who persuaded their subjects altogether for the sake of achieving challenging, improbable objectives, Mozi, this founding father of Doctrine of Mohism, resolutely countered the objection that it is falsifiable, problematic and unfeasible to disseminate universal fraternity (Johnston, 2013). For instance, in compliance with Mozi, their methodology to help to achieve universal fraternity was, on the one hand, to reward those officials and personnel who meticulously perform universal fraternity and, on the other hand, to sanction and denounce those perpetrators who actually do the contrary (Johnston, 2013). The intrinsic logic behind such of Mohist disposition may depend upon Mohist hypothesis and presupposition that it is highly likely that universal fraternity should collectively and inclusively “benefit the lover and the loved” whereas the failure to perform such universal fraternity is doomed to engender social turmoil (Wen, 2011: 74). Comparatively speaking, Mohist thought concerning universal fraternity “may be

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analogous to that of Christian doctrine” (Wen, 2011: 74; Zhou and Cheng, 2010: 92), albeit in some ways Mohist idealist philosophical conception partly serves to challenge the aristocratic ideas of Confucianism. School of Mohism indicates that all the creatures, which are believed to be “created by God in Christian sense from the *Holy Scripture*”, are of that equality (Wen, 2011: 74; Zhou and Cheng, 2010: 92). Likewise, the “charity” of Christians also advocated loving others as oneself, and loving all men equally (Zhou and Cheng, 2010: 92-94)<sup>2</sup>. It could be argued that part of intrinsic factors of Mohist advocacy for universal fraternity may be accidentally and coincidentally indistinguishable from the disposition that similar to Christianity and distinct from the kinship-oriented benevolence and refusal to the will of the Heaven by Confucianism, Doctrine of Mohism believes “in the will of Heaven, which possessed a will and disposition, and the rulers on Earth were its sons and Heaven could reward or punish humans for their performance, so rulers ought to be cautious in handling their duties” (Wen, 2011: 74).

If it is investigated in a further way, tightly interwoven with “embracing universal fraternity” is Mozi’s utilitarian ethical principle of engagement on a solid basis of mutual benefit (Zhou and Cheng, 2010: 94). In compliance with Mozi, “embracing universal fraternity” should be an intrinsic moral sentiment, and “engaging in what is mutually beneficial” may be the pragmatic performance and practice in expressions of such mores (Zhou and Cheng, 2010: 96). That could be a sort of progressive ideational legacy with Mohist unified view of righteousness and benefits that work for the communal, collective interests of the common people rather than private scheme and narrow self-interest (Zhou and Cheng, 2010)<sup>3</sup>.

As a result, the principle of universal fraternity may become the ideational prerequisite to Mohist condemnation of offensive, aggressive warfare (Wen, 2011). From *Mozi: The Book of Master Mo*, Mozi (2013: 91) argues that “in ancient times, kings, dukes and bureaucratic officials, if they genuinely desired success and abhorred failure and wished for peace rather than disliked danger, could not do otherwise than condemn offensive warfare”. Mozi managed to make an analogous juxtaposition with some individual behaviours at a micro level: “if there is one man who enters an orchard or garden of another and steals his peaches and plums, all who hear about it condemn him. If those above who conduct government get hold of him, they punish him” (Mozi, 2013: 91). Mozi points out that destroying others for the sake of own benefits is the root cause (Mozi, 2013). “When it comes to killing an innocent man, seising his clothes and fur garments, and taking his spear and sword, the lack of righteousness and justice is even greater than entering another’s animal enclosure and taking his horses and oxen” (Mozi, 2013: 91). Mozi highlighted the danger of devoid of benevolence and righteousness (Mozi, 2013). It may be praiseworthy for Mozi to have emphasised the significance of righteousness and justice, notwithstanding in Mohist sense rather than in contemporary sense, and of rarely aggressively attacking other states or their properties during the Spring and Autumn Period when there normally had been no warfare of righteousness or justice in absolute terms, strictly speaking. Mozi’s advocacy for the perceived normative behaviour of an enlightened ruler with a series of historical cases and examples can be the very inheritable treasure for advocating interstate, and interpersonal, peace and harmony, which may be corresponding to Mohist important ideational conception of universal fraternity irrespective of kinship, social status or territorial border and so forth, and that ideational aspect may be beneficial to the building of a universal-fraternity-oriented international society despite zero possibility of successfully achieving that overnight or within a short period.

On the other hand, it should be objectively recognised that Mozi literally may have idealistically subjectified the substance

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<sup>2</sup> Zhou Xian and Cheng Aimin quote the statement from *The Book of Matthew* writes, “in any circumstance, do unto others as you would have them do unto you, because this is the law and the prophets” (Zhou and Cheng, 2010: 94). It is just that the love of Christ goes one step further than ‘universal fraternity’ in requiring that people requite injury with virtue, and those whom should be love include one’s enemies and the evil (Zhou and Cheng, 2010: 94). Notwithstanding the author of this research analytical essay on the topic of School of Marxism and School of Mohism being an atheist or an agnostic, it could be observed that there are a certain of comparable, reciprocal elements between Mohism and Christianity when it comes to universal fraternity, compassionateness, generosity, and so forth.

<sup>3</sup> The implication behind may be that “Mohists advocated both love and profit being mentioned together, regarding such viewpoints of humaneness, rightness and love as directly linked with benefits and utility” (Zhou and Cheng, 2010: 96).



## Inter-philosophical Analytical Role of Doctrine of Marxism and Doctrine of Mohism in Shaping International, Inter-civilisational Development and Multilevel Governance Mechanisms

of righteousness without taking sufficient time and external conditions to empirically identify, examine or evaluate the definition, scope, feasibility or sustainability of righteousness without certain consequential frameworks and theoretical grounds and mechanisms, or to investigate the intrinsic disparities among unjust warfare, e.g. just warfare in pursuit of territorial unification, or unjust war for territorial separation and so forth, which it should have been considerable for Mozi or Mohist scholars to necessarily compartmentalise. Moreover, Mohism supporting and advancing interstate peace and harmony is in contradiction with Han Fei's *Realpolitik* framework in services of the ultimate interests of the supreme rulers, for the Mohist principle of condemning offensive warfare is to dismiss any form of warfare irrespective of its ends and its means in some circumstances (Johnston, 2013). In other words, Mozi's thoughts ridicule the rationalisation of war completely, and "no aggression" is the cardinal principle of his philosophical and political epistemology (Wen, 2011: 74). Nevertheless, being analogous to Doctrine of Marxism against imperialism and colonialism in services of formation of empire to exploit resources and forces, Mozi's position may be viewed as originally anti-imperialism by substance amid the chaotic Spring and Autumn Period and Warring-States Period (Johnston, 2013), because Mozi's argument may be philosophically applicable to this day that a great amount of socially-disruptive warfare destroys civics and resources and engender benefit next to nothing to the Heaven or ordinary people and instead is meant to jeopardise the physical existence of individuals (Johnston, 2013; Wen, 2011).

Beyond Mohist philosophical advocacy for universal fraternity without partiality and Mohist criticism on warfare in all sort of form, the principle of exalting worthiness, i.e. moral worth defined in a context of right action, righteousness and justice, is to recruit and promote somebody meritorious and competent and to jettison those who are to the contrary (Johnston, 2013). By presenting certain cases of failed governance by the rulers, Mozi argues that "it is because kings, dukes, and great officers who govern a state are unable to use exalting worthiness and utilising ability in their governing" (Mozi, 2013:31). To paraphrase Mozi's logical disposition, there is a positive correlation between the recruitment and promotion of meritorious, worthy bureaucratic officials and the stability and order of a state (Mozi, 2013). In compliance with *Mozi: The Book of Master Mo*, the administration of the state tends to achieve wealth, a large proportion of demographics and good order, which is the chief objective of sound bureaucratic and administrative governance (Johnston, 2013). Mozi did bear profound displeasure on the societal structure where he inhabited, and thus aimed to alter it by calling on his disciples in the establishments of new governance and the power of aristocratic families should be dissipated, "the shackles of family background shaken off" (Wen, 2011: 75). It was under this grand circumstance that for good rule of state, Mozi's suggestions comprise of "promotion of the virtuous and capable" personnel, and "much compliance to superiors", followed by Mozi's advocacy for enlightened rulers to launch recruitment of candidates for official posts merely on the basis of their own capabilities and worthiness (Wen, 2011: 75). It could be observed that Mozi may have been an expert in making an analogous comparison to vividly present his arguments. For instance, from Chapter Eight: Exalting Worthiness I, Mozi deduced that "Suppose you wish to increase the number of officers of the state who are skilled in archery and charioteering. You must enrich, ennoble, respect and praise them. Then officers of the state who are skilled in archery and charioteering can be obtained in large numbers. How much more so does this apply to officers who are worthy and good - men whose virtue is substantial, men who are discriminating in discussion and well versed in principle. Such men are certainly treasures of the state and worthy assistants at the altars of soil and grain (Mozi, 2013: 31-32). Mohist methodology to achieve the cardinal objective of selection of component officials depends upon mentor-ship and cultivation and rewards (e.g. stipend and emolument and promotion, etc.) of enlightened official and a guarantee of the consistency between bureaucratic position and intellectual acuity and talent in governance and promotion of worthy officers in golden times and perilous times. Comparatively speaking, it could be emphasised that this philosophical conception may to some extent be comparable and even diametrically analogous to Han Fei's legalist doctrines of jettisoning personal background, ethics, and morality as part of the criteria and standards of official recruitment and selection. Likewise, it could also be observed that Mohist disposition of exalting worthiness may be to a certain degree tantamount and comparable to Confucian notion of meritocracy (albeit Confucian orientation towards kinship and hierarchy), and the similarity between theirs lies in their emphasis over the defined virtue and worthiness and merits of the sage kings and rulers in ancient times. All of these may be a representative manifestation and indication of why School of Mohism should not be investigated and researched in isolation without specific historical context and logical prerequisite. Nevertheless, it should be recognisable that it is ambiguously unidentifiable for the School of Mohism in terms of how to dialectically formulate a



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generally-acknowledged criterion and formula on worthiness-relevant judgement and on identifying, evaluating and retrospectively the nature, scope and performance of the worthy as well as intrinsic elements and exogenous elements at a Newtonian, empirical, ideational and philosophical level.

Probably associated with the necessity of getting results ultimately done by meritorious personnel and enlightened rulers, Mohist principle of exalting unity or much compliance to superiors is that society should be bound together by an ideational unity or uniformity, especially ethical and social principles, extending through all its strata (Johnston, 2013; Mozi, 2013). Theoretically, this can be achieved by the means of institutionalising a hierarchy of leaders who profoundly adhere to these beliefs themselves and maintain unity by the means of rewards and punishments, determined by conformity with shared epistemology (Johnston, 2013; Mozi, 2013). In other words, this principle within the Mohist framework of exalting unity attaches much importance to organisational hierarchical order and even controversial unconditional obedience and implementation of the order of senior leaders within certain context, certain framework and logical premises. It could be briefly argued that on the one hand, the unity and integrity between the subordinates and the supreme leaders can strengthen the organisational structure. On the other hand, excessive passive, unconditional obedience towards the superior leaders or a singular dominant unipolar power inadvertently tends to engender rigidity, inflexibility, non-equilibrium, authoritarianism, totalitarianism and hegemony within a multipolar system.

### **3. RE-EVALUATIONS ON DIALECTICAL AND COMPARATIVE CRITIQUE OF EPISTEMOLOGICAL AND METHODOLOGICAL USAGE AS REGARDS MARXIST PHILOSOPHY AND MOHIST PHILOSOPHY**

#### **Observational Legacies of Methodological and Epistemological Merits and Limitations as Regards Marxism**

Marxist intellectual contribution to world philosophy and social science can be regarded as amongst the most influential philosophical accomplishments and philosophical enlightenment, free from religious dominance and religious hegemony as a result of Renaissance Movement, which generated a whole host of social activities in developments of philosophical revolution. Regardless of certain limitations in theoretical judgements made by both Karl Marx and Friedrich Engels owing to limited theoretical frameworks and insufficient findings subjected to their specific historical context and circumstance, technological advances and phenomenal changes and adjustments that only the successive generations could have made and would have made, or Marxist philosophy to have been highly ideologically utilised by third parties in services of contexts of corresponding social systems and political interests amid the period of global interstate warfare and bipolar systems, there is every reason to believe that a high proportion of intellectual nutritional legacies can be observed to be inheritable, identifiable, verifiable and even philosophically and theoretically justifiable, epistemologically, methodologically and ontologically. In general, Liu Xiaohua, from School of Marxism of Huaiyin Normal University in Huai'an, Jiangsu Province of China, and Huang Mingli, from School of Marxism of Hohai University in Nanjing, Jiangsu Province of China, highlighted that Karl Marx constructed his own theoretical model associated with philosophical criticism coupled with targeted social practice, to target unreasonable social systems by the grace of transformation from idealism to dialectical materialism (Liu and Huang, 2020). Wherefore, the unit of "critical weapon" and "weapon of criticism" was accomplished historically and logically, in services of Karl Marx's ultimate goal: a communal society (Liu and Huang, 2020: 212). Simultaneously, the weapon of criticism cannot play a role of substitute for the criticism by weapon. The formation and development of Karl Marx's critical theory is, on the one side, the product of Western classical culture, and on the other side, a result of the theoretical sublimation of the Western proletarian revolutionary experience to which Marx attached much importance in the response to certain demerits and deficiencies of non-Marxism and even anti-Marxism (Liu and Huang, 2020). Of course, some demerits and deficiencies of non-Marxist thoughts do not thoroughly suggest that every solitary philosophical, ideational element of the latter ones is theoretically and epistemologically invalid and problematic at anytime in any circumstance. Instead, just in services of changing the world through proletarian revolutionary means within certain historical contexts, a kind of comprehensive, advanced philosophical guidance should be the very antidote to the potential accomplishments of that.

When it comes to epistemology, Karl Marx theoretically problematised the relationship between human and nature, between self-alienation and human freedom, between value and production, between private property and interests of

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bourgeoisie conglomerates and so forth. Karl Marx's advocacy for positive abolition of private property as well as its substantive system and mechanism generates Karl Marx's conceptual orientation of the probable establishment of a communal society of common, collective interests in avoidance of the means of merely physical subsistence as the chief means by maximum alienation of the proletarians in services of the instruments of production singularly for the bourgeoisie, capitalistic conglomerates and associations and maximum alienation of individual in services of monarchical system. It could be argued that Karl Marx's discovery, empirical and deductive analysis of the substance of alienation and of classical, primitive capitalist system may offer alternative room and scopes for deconstructing and investigating the cloak of primitive accumulation and the substance behind the highly-irreconcilable contradiction between production and labour, between the exploiter and the exploited. Likewise, this kind of analysis forms the basis for revelation of authentic substance of a merely monarchical and bourgeoisie society where bourgeoisie conglomerates and monarchical interests inundate, followed by the necessary call for historical and social transformation of the proletarians and the underprivileged as the merely physical species into social being and the real human beings of human freedom and human intellectual and philosophical emancipation. If Marxism and Mohism are researched comparatively, it could be highlighted that Marx's argument for positive abolition of private property may be heteronymous with Mozi's doctrine of universal fraternity with impartiality for a common good whereas Marx's philosophy targets the root causes of social system and economic system and yet Mozi's philosophy tends to be on the ideational ground only without attaching much considerable significance to social system and economic system. One of the chiefest reasons for such juxtaposition may be that Mozi's calls for universal benevolence and humaneness bear a kind of implication behind the establishments of a communal society on a basis of communal benevolence rather than hierarchical love in accordance with the degree to which the people maintain the relationship with kinship and with private property, and Marx's consequential calls for positive abolition of private property theoretically literally serve the ultimate purpose of formulating a communal society of minimum narrow self-interests surrounding production of private property and no mechanistic alienation of the humanity.

Beyond the Marxist epistemology, it could be observed that the chief sources of School of Marxism methodologically rest from Hegelian dialectics and Feuerbach's humanism (McLellan, 2000). As for the intrinsic relationship of Hegelian dialectics to Karl Marx's theoretical research, by significantly inheriting the dual role of dialectics, Karl Marx managed to differentiate what really is empirically and what is ought to be, between what is finite and what is infinite, between what is real and rational and what is ideal and irrational, notwithstanding Marx's constructivistic criticism on Hegel's overemphasis of role of Absolute Spirit, which is literally distant from philosophy of dialectical materialism because the idea of dialectics may emphasise quantitative change and process and contradiction that drives qualitative changes in a world in flux (McLellan, 2000; Engels, 2012).

Karl Marx's materialist analysis of nature is a gradual product of Marx's constructive criticism upon Hegel and Feuerbach's theory of nature (Zhu, 2018). Hegel's theory of nature metaphorically changes the nature that deviates from humans, i.e. "the realistic people and realistic humanity" (Zhu, 2018: 79). Yet, certain demerits can be found. One refers to subjectivity that absolute spirit is the deterministic variable of the holistic nature; another one refers to non-practicality that life of humanity determines nature (Zhu, 2018). To the contrary, Ludwig Feuerbach (2021) believes that the being of the outside world is distant and distinguishable from sensuous human activities and highlights the singular importance of the outside world without attaching much importance to the human world because Feuerbach identifies the nature that has not yet been placed under the rule of man (Marx and Engels, 2016; Feuerbach, 2021). It is fair to say that Karl Marx dialectically conceptualises and theorises human history as essentially a history of practice (Marx and Engels, 2014). As one of major ontological objects of historical materialism, nature is by no means an abstract natural world decoupled from the human beings or social beings but rather the natural world of human reality intertwined with human practice (Zhu, 2018). Thus, "objectivity, social historicity and practicality are the essential features of Karl Marx's natural category" (Zhu, 2018: 79). It could in parallel be argued that objectivity, social historicity and practicality in international relations and international social system are indistinguishable from Marxist methodology of advanced dialectics and materialism that are constructivistically inherited and distinct from those of Hegel and Feuerbach.

By constantly sublimating, criticising and transcending the criticism of classical philosophy, Karl Marx established a thorough view of history and the dialectics of history and the epistemology of history significantly helped Marx as an enlightened philosopher to provide materialist analysis of problems of social reality rather than classical metaphysical methodology (Liu and

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Huang, 2020). The potential implication may be that the real connotation of Marxist philosophy may be that pure philosophical thinking alone would help next to nothing to analyse social life from the current, real, historical and concrete aspect (Liu and Huang, 2020). In other words, Doctrine of Marxism had been advancing on the track of transformation and realisation from pure idealism and abstract thinking and sensuous human consciousness to the down-to-earth orientation through the period of its cradle and initiation.

On the other hand, owing to the limitation in time, space and condition, it is fair to acknowledge that School of Marxism within the context of international relations discipline necessitates perfection and constructivistic rediscovery. Rarely did Karl Marx and Friedrich Engels systematically and empirically evaluate, let alone comprehensively resolve, the question of how society advances from the spatial and interspatial perspectives as time varies (Berki, 1971; Kandal, 1989; Harvery, 2001; Teschke, 2010). This dearth of theoretical exploration into political and economic communities of spatiotemporal diversity leads to limited conceptions of world history and capitalism, and may cause the dearth of the ready-made formula and resolutions in response to upgrading world affairs that follow (Teschke, 2010). For instance, Karl Marx and Friedrich Engels imputed a theoretical automaticity to a cross-border trajectory that discounted intrastate confrontation and geopolitical security dilemma without empirically defining the way that regional class relations and state forms would be transformed through the means of trade, commerce and expansion of markets towards capitalism (Teschke, 2010; Marx, 1990). Owing to the limited historical condition that capitalism and industrialisation just experienced a kind of preliminary transformation on Marx's day, Professor of University of Sussex Benno Teschke's argument may be understandable that classical Marxist conceptualisation and theorisation of imperialism may not be empirically incontrovertible specific to a circumscribed period or completely intertwined with Marxist theorisation and conceptualisation of international relations discipline and Teschke did representative case studies of price-setting and market-distorting monopolies, which were found to be comparatively elusive or insufficient in the international reality (Teschke, 2010). Probably, the implications behind Benno Teschke's research finding, which has been based on Teschke's sampling of cases and examples, may be that Marxist theorisation of capitalist production allowing price-setting state actors and bourgeoisie classes above the world-market levels within the domestic markets and national monopolies may contradict with Teschke's empirical, positivist observation that those manipulations and monopolistic activities may not be considerably invincible as imagined. Next, it is fair to observe that Karl Marx's sampling of capitalist cases and historical conditions may have become of that inadequacy and non-applicability to all states and communities of spatiotemporal diversity and complexity. The example that "the account of finance capital relied primarily on the example of the German and Austrian banking sectors, which contrasted strongly with more fragmented and competitive banking sectors in Britain and France" may be an exemplification of that historical and theoretical insufficiency (Teschke, 2010: 168). The smaller volume of capital exports to the colonial periphery in comparison with those of inter-imperialist trade and direct investments supports the special observation on the tiny influence of empire on the development of the imperialist state actor; albeit in some ways cumulative outcomes are unable to be "interpreted as nullifying the economic case for empire since profit expectations" may have incentivised "economic and political imperialism, "a simple cost-benefit analysis alone sheds insufficient light on the complexities involved" (Teschke, 2010: 168).

However, just as society and history advance, so is the case with conditions and factors, externally and internally; yet some changing conditions and factors may embrace certain invariable principles and guidelines. It could be argued that Benno Teschke's unique sampling of other different cases and examples to which Karl Marx did not methodologically attach a considerable significance for some historical and sociopolitical reasons does not thoroughly suggest that no longer is Marxist philosophy as regards social science, economic science and even international relations and international development disciplines applicable in the face of certain capitalistic economic crisis and unprecedented development crises in the contemporary world. Instead, to dialectically interpret the natures of internal, systemic loopholes and deficiencies and demerits within the capitalist production network cannot be distinguishable from multiple dialectical, materialist, and encyclopaedic implementation and performance of Marxist philosophy in general. For instance, Marxist philosophical frameworks can be relational to the remaining undesirable exploitation of natural resources in a series of periphery powers by certain dominant industrial powers through the political and economic means that may be distinct from classical capitalism that emerged over the course of industrialisation, to financial and economic conundrums like the sudden bankruptcy of Lehman Brother Holdings, much irresponsibility of numerous capitalistic

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oligarchic conglomerates, the manipulation of 1% of the wealthy and privileged through capitalistic means in a capitalistic society, which exacerbate income inequality and poverty alleviation among 99% of demographics in the US society (Sanders, 2016; Sanders, 2017). Furthermore, the ill-advised war in Iraq merely for the exploitation of petroleum and war in some periphery states in the African continent and Middle East continue to complicate interstate-relation dynamics in a US-hegemonic world system. In that sense, Marxist philosophy as regards international relations discipline against imperialism, new imperialism and transnationalisation of capitalistic groups and capitalistic interests is by no means obsolete in today's world of more capitalistic crisis and mismanagement. These above-mentioned phenomena in the contemporary world, to the contrary, is an exemplification and manifestation of constructivistic rediscovery and reinvestigation into Marxist philosophy in politico-economic principle and discipline as well as Marxist international relations discipline and subfield as the very theoretical and intellectual reciprocity with the mainstream international relations disciplines rather than the ready-made unchanged prescribed medications in response to the symptoms of capitalistic crises and relevant institutional, civilisational problems that follow.

### **Re-evaluation on Methodological and Epistemological Merits and Demerits as Regards School of Mohist Philosophy**

Mozi's philosophy on universal fraternity not merely has set a lofty example for the Chinese ethnics, but more significantly exemplified the enormous spiritual strength of humanity. In the contemporary world, given, and in the face of a rising tide of irreversible globalisation and modernisation and problematic extreme individualism and egoism, it could be argued that much multiple rediscovery into Mozi's philosophy and conception of universal fraternity in pursuits of a common good invariably bears extremely many remarkable pragmatic implications (Zhou and Cheng, 2010). Moreover, Mozi's conception of defining universal fraternity as a moral obligation and potential antidote is even more appropriate in response to the modern planet where technological advances help to re-align parties and groups and yet help to fragment the mutual understandings to some extent (Zhou and Cheng, 2010; Sun, 2000). This problematic situation, which is in parallel available in the dynamics of international relations and inter-civilisational nexus, necessitates such an idea of Mohist universal fraternity without partiality.

However, here is the question of why School of Mohism could not have been profoundly highlighted and defined as an enshrined cardinal bureaucratic framework and mechanism and even philosophical guidance throughout the ancient Chinese history provided that Mohist core doctrines literally embrace philosophical, and social implications. Much investigation and analysis, both in antique times and in modern times, have already pertained to certain logical and identifiable reasons for the descendance and weakening trajectory of School of Mohism (Zhou and Cheng, 2010). To begin with, it was opposed by a very strong alternative in Doctrine of Confucianism which the aristocratic, monarchical ruling elites must have appreciated more, especially during the monarchical period of ancient China (Johnston, 2013). Ian Johnston's potential implications may be that the ruling elites of classical Chinese chronicle were unable to, and had no inclination to, juxtapose Mohism and Confucianism as the guiding mainstream ideologies. Furthermore, Elevating the worthy, described in a more colloquial fashion is to respect, and recruit worthy personnel, who should be the "knights worthy and fine, replete in virtuous nature, discerning in words and speech, and broad in the techniques of the way" (Zhou and Cheng, 2010: 152). In other words, Mohists criticised favouritism-oriented recruitment and advocated meritocracy, no matter whether his or her background is wealthy or impoverished, privileged or underprivileged. This unique Mohist meritocracy explicitly demonstrates that elevating the worthy must deconstruct the system of hereditary inheritance, and and social rank in accordance with blood ties or kinship (Zhou and Cheng, 2010). However, this sort of philosophical conception may be more progressive than those of Confucianism, and yet may have been quixotic, Utopian owing to the historically-inherent blood ties of the patriarchal clan system in the Chinese society of the Spring and Autumn Period, Warring-States Period and even onward, it was fairly sociopolitically quixotic to diminish it completely and "a government thoroughly run by worthy men was impossible to exist" (Zhou and Cheng, 2010: 156). Furthermore, School of Mohism was a relatively complicated, idealistic classical Chinese philosophy bearing high individual and intellectual requirements (Johnston, 2013). This deficiency and demerit discovered by Ian Johnston may be implicitly associated with part of Mohist philosophy, which bear little empirical and realistic grounds: for instance, universal fraternity with impartiality may be resistant to human nature and a kinship-oriented classical Chinese society prior to Chinese modernisation. Actually, in a class society, this type of supra-class "universal fraternity" was merely a kind of hallucinatory phantasy with little solid social foundation.

Additionally, since rarely was School of Mohism implemented by a supreme ruler, "never has it achieved vindication" by

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constant implementation (Johnston, Ian, 2013: xxvi). It could be observed that “Mohism gradually faded away during the Han dynasty (206 BC - 219 AD)”, as multiple factors combined diminished its appeal and influence (Fraser, 2020: xiii). The stable, unified Han empire fragmented the social, political conditions that had fostered Mohism, attenuating their role as representatives of the middle class in small, endangered states and their utility as a social and military organisation (Fraser, 2020). The philosophy of Mohism must have lost its relevance to a significant degree as an achievable, accessible doctrine to resolve the bloodshed interstate warfare that characterised the Warring States Era when this culminated in “the formation of a unified empire, and skills in defensive warfare at a practical level were then no longer at a premium” (Johnston, 2013: xxvi).

Not with standing Mozi’s benign philosophical inclination and intention to redress a problematic society and interstate affairs, Mohist epistemologies and methodologies embrace certain intrinsic, inherent deficiencies in comparison with an authentically scientific epistemology, and the philosophy of Mohism is impossible to gauge the substance of objects because the sensory experience of the human beings is implausible to be tantamount to objective truth partly because human perceptions, to a large degree, will be erroneous and hallucinatory, containing multiple elements of probability index (Zhou and Cheng, 2010).

In addition to exalting the worthiness, Mohists demanded that identifying with one’s superior, was a comparable fundamental prerequisite to governing of the state, whose basic content was to require that all thinking and conduct of men be of no difference and inconsistency across all social strata (Zhou and Cheng, 2010). It is absolutely authoritative for the disposition and ideology initiated by the upper, senior level by which the subordinates and lower level must abide unconditionally (Zhou and Cheng, 2010). On the one hand, it is necessary to point out that Mozi’s ultimate prerequisite to exalting unity may be the organisational and individual orientation for the collective, communal interests of the people under the meritorious centralised leadership and management of a meritocratic, enlightened leader within. On the other hand, it must be critically recognised that this idealistic perception is intrinsically and epistemologically problematic: “because Mohists persistently stressed the obedience of the lower levels towards the upper ones, they ignored the restraints placed on the upper levels by the lower levels” (Zhou and Cheng, 2010: 158). The unrestricted expansion of absolute monarchy, dictatorship, authoritarianism, totalitarianism, to the extremity occurred afterwards.

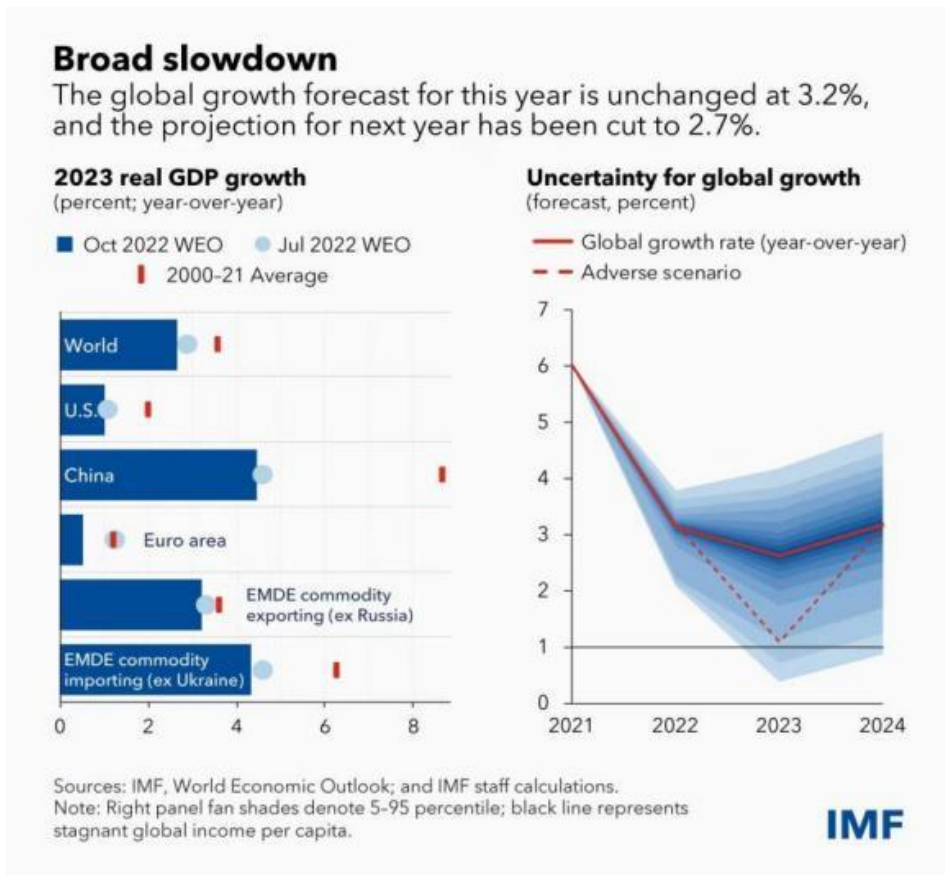
Nevertheless, regardless of Mozi’s historical deficiency and theoretic loopholes, Mozi’s doctrine remains one of the most consequential, thought-provoking ancient Chinese intellectual thoughts that could be organically associated with international relations theory and international development in a non-confrontational fashion as it ought to be rather than in a potential arena of Thucydides’ Trap as it is. Thus, part of Mohist philosophy could make up for the theoretical loopholes of mainstream international relations theory and of inter-civilisational relations and international development theory.

## **4. DIALECTICAL CASE STUDIES OF REPRESENTATIVE INTERNATIONAL DEVELOPMENT AND SECURITY MECHANISMS DESIGNED WITH MARXISM AND MOHISM IN COMPARISON WITH MAINSTREAM INTERNATIONAL RELATIONS THEORY**

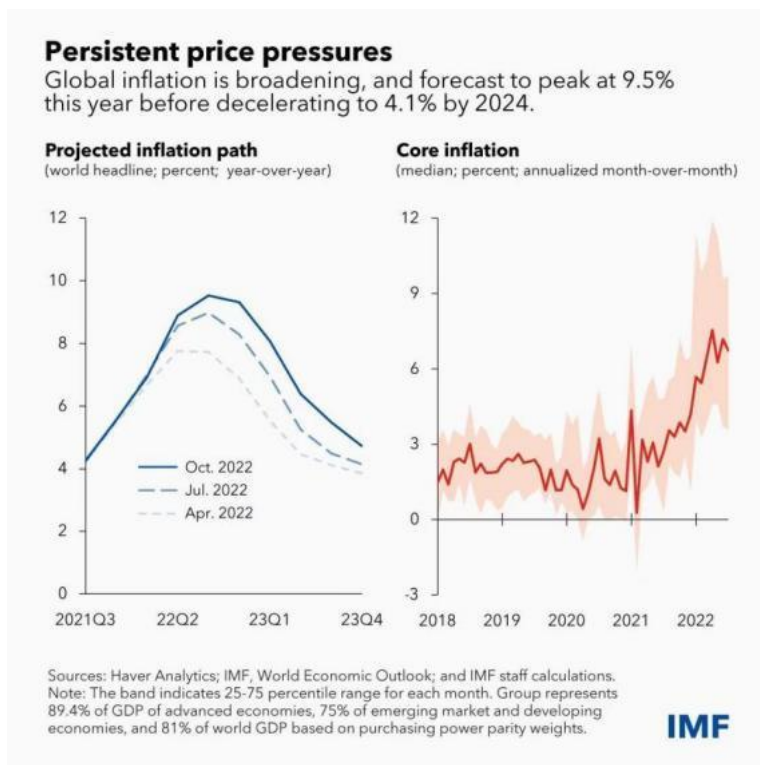
### **International Factors for Singular Necessity of New Civilisational, Institutional Governance Mechanism**

For what reasons does the world necessitate the above-mentioned supplementary global governance perceptions associated with the combination between Marxism and Mohism in a world of remaining neoliberal international order and mainstream international relations theory? Probably the more challenging international arena as the external factors facilitates the economic state actors to reflect those a set of international conundrums. According to the latest IMF report, the global economy confronts downward pressures, owing to Russia-Ukraine geopolitical security dilemma, heightened inflation, and so forth (Gourinchas, 2022). Global inflation is now expected to peak at 9.5 percent this year before decelerating to 4.1 percent by 2024 (Gourinchas, 2022). The global growth forecast set by the IMF for 2022 remains at 3.2 percent, whereas the IMF projection for 2023 is reduced to 2.7 percent (Gourinchas, 2022). The three largest economic state entities on the world stage, the United States, China and the European Union continue to confront monetary and fiscal challenges (Gourinchas, 2022).





**Note.** From IMF, World Economic Outlook; and IMF Staff Calculations. by P.O. Gourinchas. 2022. *Policymakers Need Steady Hand as Storm Clouds Gather Over Global Economy.* Copyright 2022 by the authors. Permission not sought.



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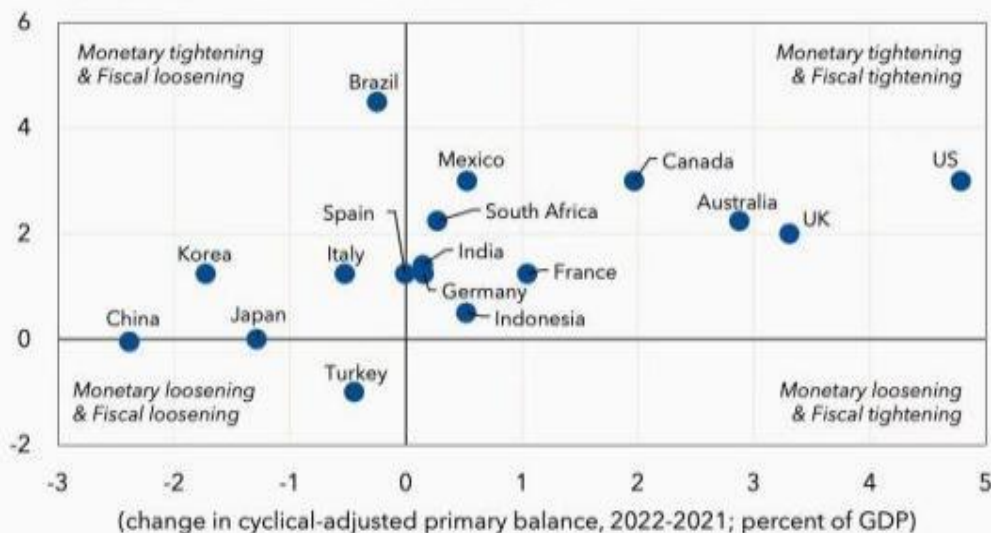


## Fiscal-policy conundrum

The cost-of-living crisis complicates fiscal policy formulation.

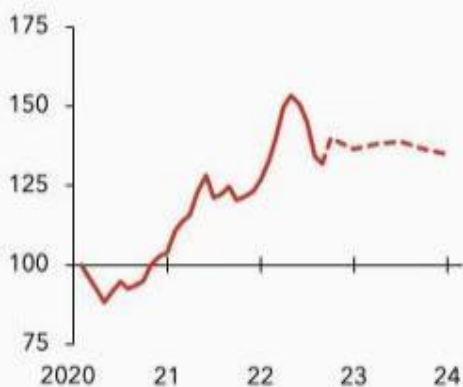
### G-20 fiscal and monetary policy mix\*

(change in policy rates, Jan. 22 - latest, percentage points)



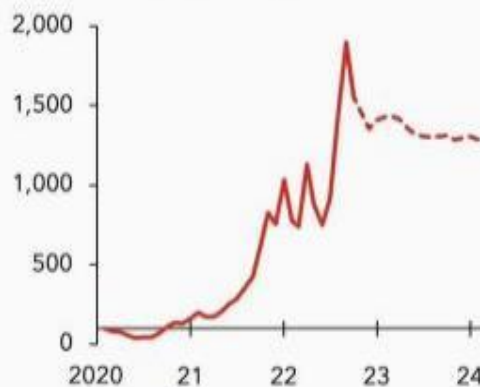
### Food price index

(Jan 2020=100)



### Natural gas prices

(Dutch TTF, Jan 2020=100)



Sources: Argus Direct; Bloomberg Finance L.P.; BIS; Haver Analytics; IMF Primary Commodity Price System; IMF, World Economic Outlook, October 2022; and IMF staff calculations. Note: \*Excludes Russia. Food price index includes cereal, vegetable oils, meat, seafood, sugar, and other food (apple (non-citrus fruit), bananas, chana (legumes), fishmeal, groundnuts, milk (dairy), tomato (veg)) price indices.



Note. From Argus Direct, Bloomberg Finance LP; BIS; Haver Analytics; IMF, World Economic Outlook; and IMF Staff Calculations. by P.O. Gourinchas. 2022. Policymakers Need Steady Hand as Storm Clouds Gather Over Global Economy. Copyright 2022 by the authors. Permission not sought.

## Latest World Economic Outlook Growth Projections

(real GDP, annual percent change)	PROJECTIONS		
	2021	2022	2023
<b>World Output</b>	<b>6.0</b>	<b>3.2</b>	<b>2.7</b>
<b>Advanced Economies</b>	<b>5.2</b>	<b>2.4</b>	<b>1.1</b>
United States	5.7	1.6	1.0
Euro Area	5.2	3.1	0.5
Germany	2.6	1.5	-0.3
France	6.8	2.5	0.7
Italy	6.6	3.2	-0.2
Spain	5.1	4.3	1.2
Japan	1.7	1.7	1.6
United Kingdom	7.4	3.6	0.3
Canada	4.5	3.3	1.5
Other Advanced Economies	5.3	2.8	2.3
<b>Emerging Market and Developing Economies</b>	<b>6.6</b>	<b>3.7</b>	<b>3.7</b>
<b>Emerging and Developing Asia</b>	<b>7.2</b>	<b>4.4</b>	<b>4.9</b>
China	8.1	3.2	4.4
India	8.7	6.8	6.1
ASEAN-5	3.4	5.3	4.9
<b>Emerging and Developing Europe</b>	<b>6.8</b>	<b>0.0</b>	<b>0.6</b>
Russia	4.7	-3.4	-2.3
<b>Latin America and the Caribbean</b>	<b>6.9</b>	<b>3.5</b>	<b>1.7</b>
Brazil	4.6	2.8	1.0
Mexico	4.8	2.1	1.2
<b>Middle East and Central Asia</b>	<b>4.5</b>	<b>5.0</b>	<b>3.6</b>
Saudi Arabia	3.2	7.6	3.7
<b>Sub-Saharan Africa</b>	<b>4.7</b>	<b>3.6</b>	<b>3.7</b>
Nigeria	3.6	3.2	3.0
South Africa	4.9	2.1	1.1
<i>Memorandum</i>			
<b>Emerging Market and Middle-Income Economies</b>	<b>6.8</b>	<b>3.6</b>	<b>3.6</b>
<b>Low-Income Developing Countries</b>	<b>4.1</b>	<b>4.8</b>	<b>4.9</b>

Source: IMF, *World Economic Outlook*, October 2022

Note: For India, data and forecasts are presented on a fiscal year basis, with FY 2021/2022 starting in April 2021. For the October 2022 WEO, India's growth projections are 6.9 percent in 2022 and 5.4 percent in 2023 based on calendar year.

Note. From Latest World Economic Outlook Growth Projections. IMF, *World Economic Outlook*, by P.O. Gourinchas. 2022. Policymakers Need Steady Hand as Storm Clouds Gather Over Global Economy. Copyright 2022 by the authors. Permission not sought.

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2023 is predicted to witness a slow growth to 1% owing to different circumstances in commodity markets and finances in the United States, and 2023 may mark 4.4% growth in the Chinese economy owing to the remaining global COVID-19 pandemic (Gourinchas, 2022). The European Union continues to suffer from energy crisis jeopardised by the Russia-Ukraine geopolitical security dilemma, which is expected to lower its economic growth to 0.5% in 2023 (Gourinchas, 2022). Under such an undesirable international environment, a kind of supplementary institution and inter-civilisational governance mechanism is needed in response to those economic, monetary, fiscal and institutional conundrums.

### **Conceptual Relationship between Philosophy of Belt and Road Initiative and Marxism and Mohism beyond Mainstream Theoretical Framework of International Relations**

It could be briefly argued that the philosophy behind the Belt and Road Initiative associated with 2030 UN Agenda for sustainable development goals bears certain implications and philosophical substance for School of Marxism and School of Mohism, which is distinct from, and in parallel complementary with, the mainstream theoretical framework of international relations, e.g. realism and liberalism in particular. First, the Belt and Road Initiative highlights the communal economic and infrastructural development without alienation of human beings as an instrument or unreasonable political strings and conditionality to the foreign economic state actors and economic entities without imperialism, which may be tantamount to the philosophical implications for social changes and social reform by Marxist philosophy. Moreover, the Belt and Road Initiative sticks to universal fraternity and coverage over the developing economic state actors and developed ones with impartiality without any means of offensive warfare, which may be significantly comparable to School of Mohism.

Before further discussing the distinction between the Belt and Road Initiative and the mainstream international relations theoretical framework, it is consequential to evaluate the natures and substances of certain mainstream international relations theoretical findings. It begins with realism within international relations theory. The realists within the context of international relations literally see states as the primary actors and believe in the deterministic role of power in influencing the “anarchic setting of international politics” (Stein, 2010: 206). On the other hand, the realists within the context of international relations profoundly question international institutions as an irrelevant component of international relations because only power and interest combined are the substances of international relations and international institutions are epiphenomenal (Stein, 2001b; Stein, 2010). Institutions created by the powerful in services of their own interests do not mitigate in any way the anarchy of the international system and dissolution may occur as a result of variations in power-interest nexus because realists argue that the existence of international institutions in the low-politics domains including mass transit, transaction, sanitation, and so forth outweigh that in the high-politics domains, including national security interest (Stein, 2010). In other words, international institutions can play limited roles in reflections of interests of great powers where states use variable power and bargaining power to influence and shape the choices for others (Stein, 2010). However, realism within the context of international relations cannot thoroughly explain the unique philosophy of the Belt and Road Initiative--notwithstanding its official establishment by China as the second largest economy so far--which does not view states as primary actors nor national security interests as the singular predominant political strings, nor an unique institution whereby bargaining power can be abused to influence or dictate other states. The core component of the Belt and Road Initiative comprises of infrastructural cooperation, on a basis of mutual benefit and civilisational exchanges, irrespective of international status of any state actor.

Beyond realism within the context of international relations, liberals within this context highlight international cooperation, which underlay the unprecedented postwar international and institutional arrangements and envisage the probability index of variation and amelioration in contrast to the realist emphasis on the unchangeable nature of the international anarchic arena that may generate interstate warfare (Stein, 2010). The cardinal argument that postwar international institutions constituted reciprocal arrangements exemplified the classically liberal doctrine of certain economic scientists paying much attention to individuals and corporations focussing upon mutually beneficial exchanges, including integration (Stein, 2010: 204-205). When it comes to classical economic theory, the three chief independent variables: the size of firm, economics of scale and efficiency improvements, shall be empirically and normatively discussed, and firms and corporate structure, which should matter to interstate and intrastate production in replacement of market transactions, epitomise hierarchy probably more efficient than the market (Stein, Arthur, 2010). This comparable argument “was appropriated by international relations scholars to explain

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international institutions” (Keohane, 1984; Lake, 1996; Weber, 2000; Stein, 2010: 205). Wherefore, an array of literature reviews of international institutions was considered as neoliberalism and neoliberal institutionalism within the international relations framework because of its emphasis on cooperation and institutions, notwithstanding their theoretical acknowledgement upon power bargaining and rational choice for maximum benefits (Stein, 2010). To put it briefly, the economic interests and mercantilistic interests of state actors and firms to a large degree mirror and reflect part of the substances of international neoliberal institutions, which international relations neoliberals conceptualise.

Furthermore, Andrew Moravcsik (2010), Professor of International Politics and Public Affairs at Princeton University, argues that the liberals within the context of international relations emphasise that states are the gradual product of a domestic and transactional society that incentivises its social entities to conduct the cross-border engagement at the economic, social and cultural levels and diverse demands from individuals and groups generating domestic representative institutions, which may form state preferences comprising of critical institutional purposes and influencing the state actors to take concerns about them associated with international issues. As a result of it, the necessity of state to be considerate of state preferences can impact interstate conflict, cooperation, or any alternative costly political foreign action (Moravcsik, 2010). Otherwise, states would fall short of the rational grounds to take a lead in international arena in isolation.<sup>4</sup> To some extent, the Belt and Road Initiative attaches a considerable significance to expansion of interstate and inter-corporate economic and commercial interdependence under the help of the second largest economic juggernaut of the largest accumulating foreign currency reserves in the East Asia to strategically engage with, and compete with, the remaining largest economic singular power, the United States. Nevertheless, the Belt and Road Initiative does by no means primarily seek corporate profits or domestic corporate institutional interests and singularly exclusive state preferences only that liberalism highlights. To the contrary, the Belt and Road Initiative pays much attention to economic and civilisational exchanges beyond merely corporate profits or shared domestic governance mechanism and shared governance institutions with alternative state powers and civilisational actors. Xia Yipu, an associated research fellow with the Research Centre of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era of Chinese Academy of Social Sciences, points out that the volume of trade and investment and upgraded infrastructure have been amplified with the broadening of interstate agreement, followed by “much remarkable progress in high-quality development, financial integration and people-to-people connectivity” (Xia, 2022: 52). Furthermore, beyond the framework of classical liberal theory alone, the Belt and Road Initiative permeates the continents of Asia, Europe and Africa with 64 state actors and 3.8 billion people, and 200 ethnic languages that help to juxtapose ancient human civilisations and profound cultural heritage (Qin, 2016). Additionally, the cumulative land territories of those regions represent over 60% global demographics and 32% of GDP (Xia, 2022: 53). Nevertheless, notwithstanding the unbalanced economic development at different regions, history, economy and culture of countries, the Belt and Road Initiative is established on the basis of mutual integration of diverse cultures and provides the indispensable institutional channels for interstate communications and thus many development opportunities are optimistically shared (Qin, 2016).

Different with realist pivot on power and state role and liberal pivot on singular state preference and mercantilistic interests of firms and corporations, the philosophy and nature of the Belt and Road Initiative attaches much importance to the strengthening of “policy coordination, infrastructure connectivity, unimpeded trade, financial regulation, and people-to-people bonds” (Xia, 2022: 53). For instance, “synergy has been established between the Belt and Road Initiative and the Bright Road Initiative of Kazakhstan, the Connecting Europe and Asia strategy of the European Union, and the UN 2030 Agenda for Sustainable Development Goals” (Xia, 2022: 53). The period between 2013 and 2021 has witnessed upgrading connections amongst China and Russia, Mongolia, Myanmar, Laos, India and alternative economic state powers in Southeast Asia, South Asia, Central and Eastern

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<sup>4</sup> Andrew Moravcsik argues that “The most fundamental theoretical task of liberal international relations theory is to define the impact of the shifting terms of economic, social and cultural globalisation on social actors and the competing demands they will thus place upon states” (Moravcsik, 2010: 236). It can be observed that liberal international relations theory and the experimental implementation of liberalism cannot be distinguishable from certain domestic interests of domestic representative social entities to inadvertently offer a legitimate licence to the political, economic, diplomatic and strategic decisions by states.



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Asia and European Continent (Xia, 2022). “Flagship projects include railways connecting China and Laos, China and Thailand, and Hungary and Serbia, and Jakarta-Bandung High-Speed Railway, Gwadar Port, Hambantota Port, as well as cross-border oil and gas pipelines built by China, Myanmar, Russia and other countries” (Xia, 2022: 53). Construction projects from the Belt and Road Initiative “such as the China-Maldives Friendship Bridge, the Addis Ababa-Djibouti Railway, the Gwadar Port and the Karot Hydropower Station” helped to reach US\$6 trillion in cumulative trade volume in goods between 2013 and 2018 over US\$90-billion direct investment and 40-economy-connected energy cooperation and have generated 300,000 employment positions (Wang and Ni, 2019: 89). Moreover, the development platforms and connectivity routes thus far have facilitated the Belt and Road Initiative to be predicted to help to increase US\$7.1 trillion per annum for global GDP by 2040 (Wang and Ni, 2019). In accordance with the statistics of Ministry of Culture and Tourism of China, 2018 witnessed an increase in domestic tourists by 10.8% (5.539 billion trips) in comparison with that in 2017; the tourist incomes represented 5.97 trillion yuan (Wang and Peng and Dong, 2020). In addition, the Belt and Road Initiative boots international educational exchanges: by February, 2019, China had signed agreements with 24 members of the Belt and Road Initiative on mutual recognition of academic certificates and degrees concerning tertiary education, 60 Chinese universities in partnership with the indigenous institutions in 23 state members of the Belt and Road Initiative (Xia, 2022). Furthermore, when it comes to cooperation upon global public sanitation, by September, 2021, China had provided 500 million doses of COVID-19-resistant vaccines to approximately 100 state actors and international organisations, associated with the Belt and Road Initiatives (Xia, 2022). All of these above-mentioned statistics have helped to quantify many BRI-inducing economic benefits that liberals highlight on the one hand and amplify the far-reaching implications beyond the framework of realism and liberalism and corporate profits. All of these above-mentioned optimistic prospects of partnership is an indirect manifestation of Marxist advocacy for collective, communal interests of the underprivileged and Mohist advocacy for universal fraternity without partiality in a non-aggressive fashion.

### **Conceptual Relationship of Global Development Initiative to Marxist Philosophy and Mohist Philosophy**

In addition to the philosophical substance behind the Belt and Road Initiative associated with Marxist philosophy and Mohist philosophy, in what ways can the renaissance of Doctrine of Marxism and Doctrine of Mohism dialectically interpret the comparable philosophical implications for the Global Development Initiative and concept of a global community of a shared future for the Humankind beyond the mainstream international relations theoretical frameworks? UN Resident Coordinator in China Siddharth Chatterjee (2022) defines the Global Development Initiative, put forward by the incumbent Chinese top policy decision-maker Xi Jinping in September in 2021<sup>5</sup>, as a promising response to address a set of global setbacks in services of speedy accomplishments of 2030 UN Agenda for Sustainable Development Goals, including poverty alleviation and eradication, food security, global public sanitation, financing for development, the effective climate action, industrialisation, digital economy, interdependence and so forth (Chatterjee, 2022). Taking the statements of Siddharth Chatterjee on the definition of the Global Development Initiative into much full consideration, it could be observed that the Global Development Initiative as the public goods pertains to cardinal conundrums that confront international development and international security through the means of institutionalising a broadening international consensus, including certain low-and-medium-GDP per capita economies as well as European and American economic state entities, and the Global Development Initiative unequivocally predominantly prioritises the position of development within the global macro-policy framework, especially economic policy continuity, stability, sustainability, equilibrium and balance (Academy of Contemporary China and World Studies, 2022). The Global Development Initiative is dedicated to modelling a shared, global community highlighting peace and development (Academy of Contemporary China and World Studies, 2022).

It could be observed that these above-mentioned ideational elements about peace, development and cooperation are indistinguishable from Mohist thoughts on criticism against offensive, aggressive warfare for the sake of narrow national interest and the very Marxist philosophy over communal development of collective interests and positive abolition of private ownership system in the hands of oligarchic bourgeoisie class. Therefore, albeit in most ways the original establishment of the United Nations, a successor to the League of Nations, on a basis of neoliberal institutionalism rather than Marxism or Mohism, the incumbent

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<sup>5</sup> Please see Xi, Jinping. (2022). *The Governance of China (Volume IV)*, Foreign Language Press.

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United Nations Secretary General Antonio Guterres has accentuated the necessity of offering necessary backings to the Global Development Initiative in coupled with 2030 UN Agenda for Sustainable Development Goals in the contemporary era (Academy of Contemporary China and World Studies, 2022).

The Global Development Initiative emphasises the battle against COVID-19 and economic recovery, with its focus on the most pressing issues currently facing humanity, such as poverty reduction, food security, and COVID-19 response. It could be observed that this sort of governance mechanism and governance target by the Global Development Initiative are profoundly distinct from those by the ready-made neoliberal financial institutions, especially the International Monetary Fund and the World Bank from the Washington Consensus-oriented international system and Bretton Woods system, which set political strings and policy conditionality, i.e. neoliberal structural adjustment (Stiglitz, 2002; Stiglitz and Charlton, 2007). If we investigate the key performance index and key behaviour index of China-West nexus on whether to efficiently address international challenges from the resulted-oriented perspective, which may be an important external variable of whether a new kind of global governance mechanism and a new kind of governance initiative are indispensable or not in a multipolar world in the contemporary era, then it could be observed that in 2020, China was the first economic state power to put COVID-19 under control and 2021 witnessed the positive development trajectory over the Chinese economy in comparison with the rest of the economies on the world stage: "its GDP exceeded the 110-trillion-yuan (US\$17.3 trillion), contributing approximately 25% of the global GDP growth" (Academy of Contemporary China and World Studies, 2022: 18). It could be argued that China's endeavour to achieve common prosperity not only sets a lofty, representative example for the low-GDP-per capita economies and emerging markets, it could also make the originally advanced economies re-investigate and re-contemplate their economic calamities that necessitate multiple structural and institutional reforms beyond mainstream international relations and international development theoretical frameworks. To the contrary, the United States has witnessed a larger wealth gap than almost a large number of other Western economies. The outbreak of the global COVID-19 pandemic since 2020 has been exacerbating Gini Co-efficient there, with the inflation rate at the highest point within four decades; today in the U.S., the top 0.1% of the demographics and conglomerates manipulate approximately 20% of the nation's wealth (The Washington Post, 2019; The Washington Post, 2017); the top 1% of earners hold more wealth than all of the middle class, which accounts for 60% of the population (Bloomberg, 2021; The Washington Post, 2017); the wealthiest 10% of households own 89% of all U.S. stocks (CNBC, 2021); a continued economic downturn shall exacerbate high Engel's Coefficient and Gini Coefficient and jeopardise the process of achieving sustainable development and combating anthropogenically-causing unprecedented climate crisis (Academy of Contemporary China and World Studies, 2022). "The United Nations report has also pointed out that a full economic recovery measured in terms of GDP per capita" will remain elusive for emerging markets and economies in the near term (Academy of Contemporary China and World Studies, 2022: 19-20; United Nations, 2022). Africa and Latin America and the Caribbean are expected to witness the sharp reduction in GDP by 5.5% and 4.2%, respectively, compared to pre-pandemic projections (United Nations, 2022). According to the World Bank report "Global Economic Prospects (January 2022)", all advanced economies will have achieved a full output recovery by 2023; yet output in emerging and developing economies will remain 4% below its pre-pandemic trend. For numerous vulnerable economies, output of fragile and conflict-affected economies will be 7.5% below its pre-pandemic trend, that of small island states 8.5% (World Bank, 2022). Notwithstanding the economic forecast upon advanced economies being controversially unverifiable and unidentifiable for time reasons, no singular economic state actor is capable of being immune to the suffering by the global COVID-19 pandemic alone and it may also be an exemplification of that potential epiphenomenal circumstance that classical realist theory and classical liberal theory within the contexts of international relations and international development may have fallen short of offering the maximum effective solution and remedies for the unprecedented crisis in low-politics domains in relative terms, e.g. the nexus between economic volatility and global public sanitation crisis.

In addition, both Marxist philosophy and Mohist philosophy can dialectically interpret the philosophical and ideational perspectives and implications for Global Development Initiative because this Initiative is a comprehensible exemplification of conceptualisation and extended implementation of a Global Community of a Shared Future for all the Humanity, "not singularly in classical Chinese philosophical thoughts but also significantly in Western philosophical thought" (Ross, 2019: 178). This conception of A Global Community of a Shared Future for all the Humanity is therefore shown to be an innovative development of School of



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Marxism: collective, communal development of the human beings as social beings without alienation, and School of Mohism: universal fraternity with impartiality and maximum exaltation of worthiness. Such conceptual and philosophical establishment of A Global Community of a Shared Future for all the Humanity associated with School of Marxism and “its accurate relation to economic reality, provides an exceptionally firm basis for” China’s management strategy over international affairs (Ross, 2019: 178). The economic foundation of the concept of A Global Community of a Shared Future for all the Humanity is China’s unequivocal advocacy and advancement for non-decoupling because economic globalisation is a result of growing social productivity, and a natural outcome of scientific and technological process (Xi, 2020; Xi, 2022). This analysis is, figuratively speaking, in line with the doctrinal thoughts of Karl Marx, who regarded the most fundamental force of human progress as “socialisation of labour” -- fully international socialisation of labour, and globalisation is the profoundest driving force of “the most advanced, scope of socialisation of labour” (Ross, 2019: 179). It could be observed that the universal circumstance in world affairs may be *globalisation*, which generates differentiated demands from societal individuals and groups with regard to international affairs and engenders the changing opportunities and incentives to engage in transactional economic, social, and cultural activity, which alters the prospects for achieving domestic objectives (Moravcsik, 2010). As has been indicated in the previous chapters, states remain, and invariably have been, embedded in a domestic and transactional society that creates incentives for its international players and international actors to engage in interstate, cross-border activities at the economic, social, and cultural levels (Moravcsik, 2010).

### **5. THEORETICAL DISCUSSION AND CONCLUDING REMARKS**

As a result of much rediscovery into theoretical debates over definitions, scopes and implications for School of Marxism and School of Mohism, it could be observed that most scholarly researches and findings pertain more to their philosophical conceptions, their epistemologies, methodologies, historical circumstances, social movements and technological advancements that drove the emergence of them than pay much attention to critical discussion on international relations, international development, international security, and the like, to which the modern international-affairs scholars and intellectuals attach much considerable significance in a more empirical and interdisciplinary fashion. However, it may be overwhelmingly far-fetched to thoroughly deny the validity of Marxist philosophy and Mohist philosophy just with certain sampling of different representative cases that Karl Marx and Mozi did not utilise because of their limitations in historical circumstances and condition and geographical and technological disadvantages, which are by no means their main faults albeit in some ways it is fair to acknowledge that they shed certain insufficient light on the empirical grounds and upgrading theoretical framework as regards international relations and international development. Nevertheless, the little, limited discussion over the latter ones from teachings of Marxism and teachings of Mohism is by no means tantamount to zero probability of dialectically inheriting and internalising considerable constructivistic ideational legacies from both Marxist philosophy and Mohist philosophy combined, especially some of which may remain applicable to an international arena of disorder and integration, between re-alignment and re-fragmentation, between cohesion and disruption, between unipolar hegemony and multipolar advancement, between power politics and interstate interdependence, and between unconventional economic conundrums and much necessity for reforming the ready-made neoliberal international economic, financial and public health institutions.

Furthermore, in the contemporary world, the risk of monetary, fiscal, or financial policy miscalibration and mismanagement over the course of profound uncertainty and growing fragilities keeps exacerbating global financial conditions and global investment panic, significantly causing inflation pressures and financial fragilities in the rest of the world market, especially emerging markets and low-GDP-per-capita and middle-GDP-per-capita economies (Gourinchas, 2022). Furthermore, the escalating Russia-Ukraine geopolitical security dilemma jeopardises the energy crisis especially in the Eurozone economies and American economy (Gourinchas, 2022). These unprecedented challenges necessitate a reformed, trans-disciplinary, architectonic, theoretical and inter-philosophical framework of international relations and international affairs, including different kinds of Marxist philosophy over international relations discipline and Mohist international relations disciplines, of which the mainstream international relations theory alone may have fallen short in response to enormous non-traditional conundrums in the contemporary world of more volatility, uncertainty, complexity and ambiguity. That may be because realism alone prioritises domestic national security

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interests alone by to a large degree disregarding the communal interests of alternative state actors that School of Marxism highlights, instead, and realism believes that war may be necessary to national security interest as it is an extension of politics, whose ideational points are in contradiction with Mohist philosophy and Marxist philosophy, which advocate communal, collective interests and peace and development without the means of imperialist offensive warfare. Additionally, liberalism, probably being more advanced than realism in terms of their different ontological pivots and subjects, stick to the neoliberal democratic institutions as a prerequisite to interstate cooperation and profoundly emphasises commercial and economic interdependence and the dissemination of corporate profits and mercantilism. On the one hand, this theory of international relations facilitates gradual evolution of the neoliberal international institutions and synergise interstate economic and commercial cooperation beyond narrow national security interests. On the other hand, much overemphasis on the uniformity and singularity of liberal democratic institutions in all state actors, irrespective of their national circumstances and national development objectives, as the singular premise to cooperation, may be an indirect exemplification of non-acclimatised prescription drugs to certain state actors and should-be normal international division labour. Likewise, much overemphasis on corporate interests and commercial independence may inadvertently make the dispossessed and proletarians alienated as the instruments for corporate production by disregarding the should-be benign international socialisation of labour and put them at a far disadvantageous, non-competitive position that School of Marxism deeply criticises and School of Mohism does not expect as a kind of intellectual thought which attaches considerable significance to labour and workers.

In a nutshell, much controversy over the definitions of exact influences of international institutions upon international relations remains under question and yet the increase in supranational governance, instrumentalised and institutionalised mainly by state actors of homogeneous and heterogeneous interests, is irreversible. That also applied to the constant disagreements upon Marxist philosophy and Mohist philosophy in spatiotemporally different contexts. In so far as to acquiring a deepening understanding of variable, sometimes abrasive international politico-economic affairs and international civilisational affairs necessitates a certain of effective international institutions of new ideational nutrition, an organic combination and amalgamation between Marxist philosophical principles and Mohist philosophical principles is less likely to make the changing international dynamics into an atrophy. In that regard, their ideational elements adding to the Belt and Road Initiative and Global Development Initiative as well as 2030 UN Agenda for Sustainable Development Goals facilitate such incorporating roles of international institutions and multilevel global governance mechanisms within the alternative normative theoretical subfields of Marxist philosophy and Mohist philosophy combined. Briefly speaking, international security within an effective international institution without being negatively distracted by certain privileged lobbying groups abusing that is a prerequisite for a kind of more collective, representative international development without alienation and confrontation through the means of warfare and exploitation of natural resources, and that kind of pursuit transcend doctrines, irrespective of doctrine of Marxism or doctrine of Mohism.

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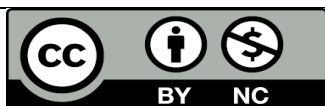
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## Development of Application-Based Self-Assessment for Basic Gymnastics Evaluation of Students of State Elementary School



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**ABSTRACT:** Basic gymnastics skills are needed in PJOK lessons. The purpose of the study is to develop an application-based self-assessment instrument to improve the ability to roll forward, roll backward, wax attitude, and kayang. The type of research is research and development (Research and Development) The population of this study includes all students of SD Negeri 2 Tanjung Gadang class VI as many as 25 students, and SD 15 Teratak Baru class VI as many as 30 students with a total of 55 students. The samples in the study were all students of SD Negeri 2 Tanjung Gadang class VI as many as 25 students, and SD 15 Teratak Baru class VI as many as 30 students. The sampling technique is total sampling. Analysis of research data is carried out after data collection is completed to find out the assessment of the products that have been developed. There are three steps in conducting data analysis, namely: (1) Preparation, (2) Tabulation, and (3) Application of data by the research approach. The instrument used to collect data in testing the development of this product is to use non-test instruments. The instrument is made in the form of a structured questionnaire. The results of research on the development of application-based self-assessment for basic gymnastics evaluation are basic gymnastics self-assessment application media with a validation rate according to experts an average of 83.8% so the media can be said to be feasible. Then the reliability rate was up to 0.982 in small group trials and 0.974 in large group trials, so the tool is said to be reliable in evaluating basic gymnastics based on self-assessment applications. The conclusion is that the name of the basic gymnastics self-assessment application media is said to be reliable in evaluating basic gymnastics based on self-assessment applications.

**KEYWORDS:** Development of Self Assessment, Application-Based, Basic Gymnastics

### I. INTRODUCTION

The implementation of continuous education is a process of human development that lasts a lifetime. Education includes a wide range of subject matter. One of them is Physical Education, Sports, and Health. Sports Physical Education and Health are very important subjects, as they provide opportunities for learners to engage directly in various learning experiences through physical activity, play, and sports that are carried out systematically. The provision of learning experiences is directed to foster, as well as form a healthy and active lifestyle throughout life. There have been many educational theories about learning and learners and finding strategies and methods that facilitate and organize teaching processes that align learners' abilities (Hussein et al., 2022).

The government has included sports as one of the physical education curricula in formal schools as a learning means to educate the nation's life and improve the quality of Indonesian people in realizing a just and prosperous society, as well as allowing its citizens to develop themselves and all aspects, both physical and spiritual. Law of the Republic of Indonesia No. 3 Article 1 of 2005 states that "Educational sports are physical sports that are carried out as part of an orderly and continuous educational process to obtain knowledge, personality, skills, health, and physical fitness". Gymnastics classes are an important lesson in sports education colleges because they have a great impact on students' mental preparation, physical, and Dynamic (Hasan et al., 2022). It is important to facilitate students in learning well-packaged and interesting gymnastic movements, especially those who use science and technology (Kurniawan, 2018). Adequate levels of physical activity and the development of basic motor skills since they are the basics of a healthy and active future lifestyle (Šalaj et al., 2019).

Gymnastics is considered a sport with a complex technique (Sukamti & Pranatahadi, 2019). Gymnastics is more related to biomechanics than any other sport, this science contributes to the analysis, illustration, understanding, and improvement of sports techniques (Hassan et al., 2015). One form of sport in schools is the sport of dexterity gymnastics. Agility gymnastics is a



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sport that requires flexibility and good coordination between limbs. Movement in dexterity gymnastics requires courage, the flexibility of the body as well as correct technique. Dexterity gymnastics is often said to be with match gymnastics or artistic gymnastics because the forms of movement must be by the rules that apply in the match both regarding the attitude at the time of going to do beauty, and the accuracy and balance in the final attitude. Dexterity gymnastics can be done without tools and with tools. Agility gymnastics without tools is called floor exercises, while dexterity gymnastics using tools is called tool gymnastics. Practicing Gymnastics skills will create a background of motor exercises in situations of rotation, body investment, and body sustainability, using all segments of the body (Ávalos-Ramos & Vega-Ramírez, 2020).

One of the forms of movement of floor gymnastics is the front roll. The forward roll movement begins with a squat attitude, the hands are raised straight up so that the body is straight from the hips to the fingertips of the hands. Raise your hips and move the weight forward, put both hands on the mat, touch your chin to your chest, and put your shoulders on the mat while rolling. Keep the body bent with both knees fixed on the chest and end with a squatting stance with both hands straight up. In-person front-roll gymnastics learning is difficult for elementary school students (Septiana et al., 2022). presents the basic approach adopted to develop young gymnasts' physical fitness (Mkaouer et al., 2018). Knowledge training affects performance and provides appropriate criteria for better identification of talents (Douda et al., 2008). International success in gymnastics requires hours of special practice (Pion et al., 2015).

PJOK learning for specific activities of floor gymnastics has various problems that must be faced (Nurseto & Saryono, 2020). Students, especially at the elementary level as equals, certainly have difficulty doing so, physical education teachers are required to be able to use appropriate methods in teaching exercise skills roll forward, roll backward, candle, and kayang attitudes such as using various teaching methods, so that in the learning process of physical education, especially in delivering the material of floor exercises roll forward, roll backward, candle and kayang attitudes can achieve the ultimate goal of learning, namely students can roll forward, roll backward, candle and kayaking attitudes well. Floor gymnastics is a gymnastics whose movements are performed on mats, the elements of which include jumping, rolling, jumping, and spinning in the air and support with hands and feet (Hidasari & Bafadal, 2020). Balance is also an important human ability that is used in our daily activities such as walking and standing as well as in most games and sports and dancing (Das & Sarkar, 2020). It is widely accepted that the evolution of the back-arc basin is closely correlated with the roll- of the back (Tao et al., 2020). The importance of gymnastics lessons, which is one important lesson in the faculty of physical education due to their great impact on preparing students mentally, physically, and kinesthetically through learning many basic skills in different devices (Hussein, Ghazi HasanLafta Hussein & Al-Jadaan, 2022).

Most educators in primary schools are less creative in providing learning models. Most physical educators only emphasize the result without paying attention to the learning process. This will have a bad impact on students because of the lack of knowledge provided and will indirectly affect the performance of educators physical education goals will not be achieved, and it will damage the image of the physical education teacher in the eyes of students. Elementary school children are at the age when children like and love playing (Andriadi & Saputra, 2021).

Teaching methods must be adjusted to the abilities of students, facilities and infrastructure, and the environment and conditions or circumstances. Self-assessment-based learning is considered suitable for this data condition, where the world is being hit by the Covid-19 pandemic, which makes the teaching and learning process experience obstacles in its implementation. Self-assessment is a character education-oriented assessment system that is associated with how well a person judges himself. Kemendikbud, (2013) states that: "Self-assessment is an assessment technique by asking learners to express their strengths and weaknesses in the context of achieving competencies". Thus, students in addition to being able to be actively involved in learning activities can also be active in assessing learning outcomes. Digital media is permeating the daily lives of children and adolescents. Various Technologies can change, but their general interpretation follows the same pattern with many positive attributes including educational innovation or even revolution (Jastrow et al., 2022).

*Self-assessment is a new vision in learning evaluation for the advancement of student studies. This assessment model requires learners to assess their work, based on clear evidence and criteria, to improve future performance* (McMillan & Hearn, 2015). Rolheiser & Ross, (2015) Self-assessment is a way to look within oneself. Through self-assessment, students can see their advantages and disadvantages, henceforth these shortcomings become improvement goals. Thus, learners are more responsible for the process and achievement of their learning goals. The classic method for describing virtual processes is the Feynman diagramming method (Petukhov et al., 2022).

Suerta & Dkk, (2015) The results of these descriptive statistics, in general, the ability of students to design databases conceptually and logically through the Authentic Self-Assessment Model is quite good. As many as 71.3% of students have abilities in the high and very high categories, while the remaining 28.7% have abilities in the low to medium categories. (Linda,



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2016) The results of the study stated that students' mastery of science literacy through self-assessment was in the high category with an average of 83.25%. Science as the torso of knowledge reaches 81%, science as a way to investigate reaches 85%, science as a way of thinking reaches 86% and the interaction between science, technology, and society reaches 81%.

Wahyuningsih, (2017) Self-assessment results in 61.9% of students having a scientific attitude with a good category, and 28.10% of students are very good, some students feel good about being tolerant and lacking in honesty and confidence. Wilujeng & Tunggal, (2016) Shows that there is a significant positive correlation between the self-assessment value and the value given by the lecturer to the student. So it can be concluded that in a limited scope, this method can be applied to writing courses as well as to other courses. Based on the results of observations and observations on students of SD Negeri 2 Tanjung Gadang from February 03, 2022 to February 11, 2022, it shows that there is no self-assessment instrument to help students assess themselves as learning evaluations.

In learning agility gymnastics on the front roll material, roll back, candle, and kayang attitude have been running, but have not shown maximum results. Of the 87 learners, only 37 learners were able to do the front roll, the rollback, the candle, and the kayaking attitude correctly. One of the dominant factors that cause the lack of optimal learning is that students feel afraid to do teaching materials. The fear of students is more important because they feel that they will not be able to perform the front roll movement, roll backward, candle, and kayaking attitudes that require flexibility, strength, and courage are quite large. When students get the task of doing teaching materials, they always show an attitude of asking their other friends to do it first. The low ability of students shows weaknesses as well as difficulty in teaching and learning front roll, roll backward, candle attitude, and kayang.

Departing from this, efforts are needed from teachers to be able to improve the ability of front roll, roll backward, candle, and kayang attitudes for students of SD Negeri 2 Tanjung Gadang. This rationale is the reason for learning with self-assessment to improve the ability to learn front roll, roll backward, candle and kayang attitudes for students of SD Negeri 2 Tanjung Gadang, with the hope that students can assess and evaluate themselves based on their observations and abilities. The purpose of the study is to develop an application-based self-assessment instrument to improve the ability to roll forward, roll backward, wax attitude, and kayang.

### II. MATERIAL AND METHODS

This research method is research and development (Research and Development). Research and Development research methods are methods used to produce a particular product and test the effectiveness of the product. There are several models in research and development including the ADDIE model which develops model models with stages of Analysis, Design, Development, Implementation, and Evaluation. Product trials are carried out through 2 stages, namely small-scale trials and large-scale trials. Collecting data is an important job in researching. To collect the necessary data, researchers use several methods, namely: (1) Observation, (2) Interviews, and (3) Questionnaires. The observations made are participatory observations, where researchers make direct observations and are involved in what data sources do. The instrument used to collect data in testing the development of this product is to use non-test instruments. The instrument is made in the form of a structured questionnaire.

Analysis of research data is carried out after data collection is completed to find out the assessment of the products that have been developed. Research data was obtained from questionnaires that had been filled out by media experts, students, and students. The development of instrument items is a parameter for explaining the results of measuring or scaling from the questionnaire, the data obtained from the questionnaire will be analyzed with percentage analysis techniques, while the data obtained from the likers-scale questionnaire will be analyzed using average analysis techniques.

Arikunto, (2013) There are three steps in conducting data analysis, namely: (1) Preparation, (2) Tabulation, and (3) Application of data by the research approach. The activities carried out in the preparation step include checking the name and identity of the filler, checking the completeness of the data, and also checking the types of data fields. At the tabulation stage, data analysis activities can be in the form of scoring items that need to be scored. In this development research, the instruments used were arranged on a Likert scale with intervals of 1 to 5.

### III. RESULTS AND DISCUSSION

#### Expert Review Results

##### 1. Expert Validity Test

##### a. Sports Evaluation and Measurement Test Expert

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The expert in the evaluation and sports measurement tests who are validators in the research on the development of basic gymnastics test instruments based on self-assessment applications is Dr. Damrah, M.Pd. He is one of the lecturers of Evaluation and measurement at the Faculty of Sports Science, Padang State University. This validation is carried out on November 14, 2022, by practicing in the field, describing the tools and how they work in the field accompanied by assessment instruments in the form of questionnaires.

### 1) Assessment from Evaluation Expert and Measurement Test Dr. Damrah, M.Pd

Based on the assessment from Dr. Damrah, M.Pd using the assessment questionnaire, the assessment results can be represented in the table below.

**Table 1. Media Self-assessment Validation Questionnaire Score By Sports Evaluation and Measurement Test Expert**

No	Aspects	Score	F. Relatif
1	Ease	7	9,3
2	Material suitability	13	17,3
3	Practicality	38	100,7
Value		58	77,33333333
Sum		75	100,0

In the input and advice box that has been provided by the evaluation and measurement test expert, Dr. Damrah, M.Pd does not provide input and suggestions.

**Table 2. Percentage of Media Self-assessment Results By Sports Evaluation and Measurement Experts**

No	Expert	<i>f</i>	<i>N</i>	<i>P</i> (%)	Eligibility Categories
1	Evaluation and Measurement Tests	58	75	77,4%	Excellent/Decent

Based on the table above, experts in the evaluation and test of sports measurements argue that the product of developing a basic gymnastics test instrument based on a self-assessment application developed by this researcher will already be able to operate properly and decently, the results of the validity test of evaluation experts and sports measurement tests obtained a percentage of 77.4%, so it can be interpreted that the basic gymnastics test instrument based on the self-assessment application has the category "Feasible".

### 2) Assessment from Evaluation Expert and Measurement Test Dr. Sazeli Rifki, S.Si., M.Pd

Based on the assessment from Dr. Sazeli Rifki, S.Si., M.Pd using the assessment questionnaire, the assessment results can be represented in the table below.

**Table 3. Media Self-assessment Validation Questionnaire Score By Sports Evaluation and Measurement Test Expert**

No	Aspects	Score	F. Relatif
1	Ease	9	12,0
2	Material suitability	15	20,0
3	Practicality	41	54,7
Value		65	86,66666667
Sum		75	100,0

In the input box and suggestions that have been provided by evaluation experts and measurement tests, Dr. Sazeli Rifki, S.Si., M.Pd gave the input "Adjust the writing of symbols on the Likert scale and adjust the numbers on the questionnaire grid".

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**Table 4. Percentage of Media Self-assessment Results By Sports Evaluation and Measurement Experts**

No	Expert	<i>f</i>	N	<i>p</i> (%)	Eligibility Categories
1	Evaluation and Measurement Tests	65	75	86,6%	Excellent/Decent

Based on the table above, experts in the evaluation and test of sports measurement argue that the product of developing a basic gymnastics test instrument based on a self-assessment application developed by this researcher will be able to operate properly and properly, the results of the validity test of the evaluation expert and the sports measurement test obtained a percentage of 86.6%, so it can be interpreted that the basic gymnastics test instrument based on the self-assessment application has the category "Decent".

### 3) Assessment from Evaluation Expert and Measurement Test Sepriadi, S.Si., M.Pd

Based on the assessment from Sepriadi, S.Si., M.Pd using the assessment questionnaire, the assessment results can be represented in the table below.

**Table 5. Media Self-assessment Validation Questionnaire Score By Sports Evaluation and Measurement Test Expert**

No	Aspects	Score	F. Relatif
1	Ease	9	12,0
2	Material suitability	14	18,7
3	Practicality	39	52,0
Value		62	82,66666667
Sum		75	100,0

In the input box and suggestions that have been provided by evaluation experts and measurement tests, Sepriadi, S.Si., M.Pd gave input "For videos, it is better to make a video slowly with the implementation step because this is to be easily understood by elementary school students".

**Table 6. Percentage of Media Self-assessment Results By Sports Evaluation and Measurement Experts**

No	Expert	<i>f</i>	N	<i>P</i> (%)	Eligibility Categories
1	Evaluation and Measurement Tests	62	75	82,6%	Excellent/Decent

Based on the table above, experts in the evaluation and test of sports measurement argue that the product of developing a basic gymnastics test instrument based on a self-assessment application developed by this researcher will be able to operate properly and properly, the results of the validity test of evaluation experts and sports measurement tests obtained a percentage of 82.6%, so it can be interpreted that the basic gymnastics test instrument based on the self-assessment application has the category "Feasible".

### b. Media experts

The media expert who became a validator in the research on the development of basic gymnastics test instruments based on self-assessment applications was Dr. Anton Komaini, S.Si, M.Pd. He is one of the futsal lecturers at the Faculty of Sports Science, Padang State University. This validation was carried out on March 26, 2021, by practicing in the field, describing the tools and how they work in the field accompanied by assessment instruments in the form of questionnaires.

#### 1) Assessment from media expert Dr. Anton Komaini, S.Si, M.Pd

Based on the assessment from Dr. Anton Komaini, S.Si, M.Pd using the assessment questionnaire, the assessment results can be represented in the table below.

**Table 7. Media Validation Questionnaire Score self-assessment By Media experts**

No	Aspects	Score	F. Relatif
1	Technical Quality	36	36,0

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2	Ease of Use and Navigation	21	21,0
3	Beauty	29	29,0
Value		86	86
Sum		100	100,0

In the input box and suggestions that have been provided by media experts, Dr. Anton Komaini, S.Si, M.Pd gave the input "Check the letters in the word again in the application and make them more colorful and interesting, for example, filled with spirit-enhancing music".

**Table 8. Percentage of Assessment Results By Media Experts**

No	Expert	<i>f</i>	<i>N</i>	<i>P</i> (%)	Eligibility Categories
1	Media	86	100	86%	Excellent/Decent

Based on the table above, media experts argue that the product of developing a basic gymnastics test instrument based on a self-assessment application developed by this researcher will be able to operate properly and feasible but has several revisions in components, the results of the futsal expert validity test obtained a percentage of 86%, so it can be interpreted that the basic gymnastics test instrument based on the self-assessment application has the category "Decent".

### 2) Assessment from media expert Dr. Aldo Naza Putra, S.Pd., M.Pd

Based on the assessment from Dr. Aldo Naza Putra, S.Pd., M.Pd using the assessment questionnaire, the assessment results can be represented in the table below.

**Table 9. Media Validation Questionnaire Score self-assessment By Media experts**

No	Aspects	Score	F. Relatif
1	Technical Quality	35	35,0
2	Ease of Use and Navigation	23	23,0
3	Beauty	29	29,0
Value		87	87
Sum		100	100,0

In the input box and suggestions that have been provided by media experts, Dr. Aldo Naza Putra, S.Pd., M.Pd gave input "There should be a place to upload student video files".

**Table 10. Percentage of Assessment Results By Media Experts**

No	Expert	<i>f</i>	<i>N</i>	<i>P</i> (%)	Eligibility Categories
1	Media	87	100	87%	Excellent/Decent

Based on the table above, media experts argue that the product of developing a basic gymnastics test instrument based on a self-assessment application developed by this researcher will be able to operate well and be feasible but has several revisions in components, the results of the futsal expert validity test obtained a percentage of 87%, so it can be interpreted that the basic gymnastics test instrument based on the self-assessment application has the category "Decent".

### 3) Assessment from media expert Ardo Okilanda, M.Pd

Based on the assessment from Ardo Okilanda, M.Pd using the assessment questionnaire, the assessment results can be represented in the table below.

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**Table 11. Media Validation Questionnaire Score self-assessment By Media experts**

No	Aspects	Score	F. Relatif
1	Technical Quality	33	33,0
2	Ease of Use and Navigation	22	22,0
3	Beauty	28	28,0
Value		83	83
Sum		100	100,0

In the input box and suggestions that have been provided by media experts, Ardo Okilanda, M.Pd gave input "At the end of the application there is no score of value".

**Table 12. Percentage of Assessment Results By Media Experts**

No	Expert	<i>f</i>	<i>N</i>	<i>p</i> (%)	Eligibility Categories
1	Media	83	100	83%	Excellent/Decent

Based on the table above, media experts argue that the product of developing a basic gymnastics test instrument based on a self-assessment application developed by this researcher will be able to operate well and be feasible but has several reviews in the components, the results of the futsal expert validity test obtained a percentage of 83%, so it can be interpreted that the basic gymnastics test instrument based on the self-assessment application has the category "Decent"

## 2. Reliability test

The following are the results of calculating the reliability of small group and large group data which were carried out twice and the data calculated the correlation between the two data.

**Table 13. Degree of Reliability**

Correlation Coefficient Intervals	Reliability
0,00-0,199	Very Weak
0,20-0,399	Weak
0,40-0,599	Keep
0,60-0,799	Strong
0,75-1,00	Very Strong

The following are the results of calculating the reliability of small group data which was carried out twice and the data was calculated the correlation between the two data.

$$r = \frac{\sum XY}{\sqrt{\{\sum X^2\}\{\sum Y^2\}}}$$

$$r = \frac{24069}{\sqrt{\{16951\}\{35371\}}}$$

$$r = \frac{24069}{24486.19}$$

$$r = \mathbf{0,982}$$

From the result of r 0.982, it can be said that it is very strong and significantly correlated. The reliability test data on this tool can be seen in the appendix. The reliability test data on this instrument can be seen in the appendix and reliability of this instrument is used to see the level of reliability of the instrument using the Small Group Test method and statistical calculations of the product moment, the following results are obtained:

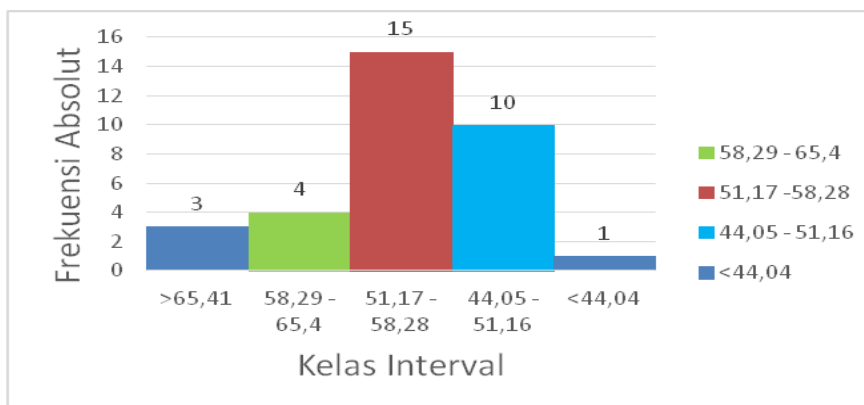
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**Table. 14. Small Group Frequencies Distribution**

No	class Interval	F. Absolut	F. Relatif	Information
1	>65,41	3	9%	Very High
2	58,29 - 65,4	4	12%	Tall
3	51,17 -58,28	15	45%	Keep
4	44,05 - 51,16	10	30%	Low
5	<44,04	1	3%	Very Low
Sum		33	100%	

Based on the table above, the basic gymnastics test data of elementary school students from 33 respondents, 3 people (9%) are in the very high classification, then as many as 4 people (12%) are in the high classification, as many as 15 people (45%) are in the medium classification, as many as 10 people (30%) are in the very low classification, and as many as 1 people (3%) are in the very low classification.

Then for more details on the results of the basic gymnastics test data of elementary school students in small groups can be seen on the histogram as follows:



**Figure 1. Histogram Data on the frequency distribution of basic gymnastics tests of small group elementary school learners**

Next is the result of calculating the reliability of large group data which was carried out twice and the data was calculated correlation between the two data.

$$r = \frac{\sum XY}{\sqrt{\{\sum X^2\}\{\sum Y^2\}}}$$

$$r = \frac{34028}{\sqrt{\{21704\}\{56198\}}}$$

$$r = \frac{34028}{34924.5}$$

$$r = \mathbf{0,974}$$

From the result of  $r$  0.974, it can be said that it is very strong and significantly correlated. The reliability test data on this tool can be seen in the appendix.

The reliability test data on this instrument can be seen in the appendix and reliability of this instrument is used to see the level of reliability of the instrument using the large Group Test method and statistical calculations of product moments, the following results are obtained:



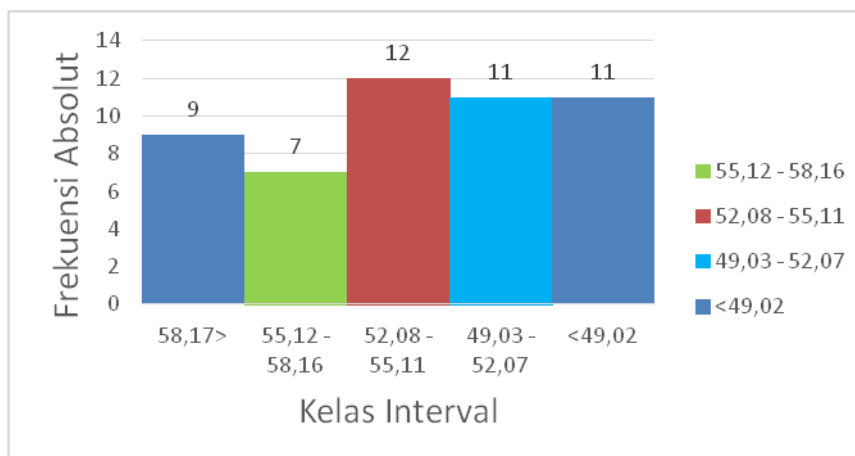
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**Table. 15. Frequency Distribution Large groups**

No	class Interval	F. Absolut	F. Relatif	Information
1	58,17>	9	18%	Very High
2	55,12 - 58,16	7	14%	Tall
3	52,08 - 55,11	12	24%	Keep
4	49,03 - 52,07	11	22%	Low
5	<49,02	11	22%	Very Low
Sum		50	100%	

Based on the table above, the basic gymnastics test data of elementary school students from 50 respondents, 9 people (18%) are in the very high classification, then as many as 7 people (14%) are in the high classification, as many as 12 people (24%) are in the medium classification, as many as 11 people (22%) are in the low classification, and as many as 11 people (22%) are in the very low classification.

Then for more details on the results of the basic gymnastics test data of elementary school students in large groups can be seen on the histogram as follows:



**Figure 2. Histogram Data on the frequency distribution of basic gymnastics tests of elementary school learners Large groups Discussion**

### 1. Empirical Validity of the First Stage of Expert Validity

**Table 16. Percentage and degree of eligibility from experts**

No	Expert	Percentage	Eligibility level
1	Evaluation and measurement tests of sports	77,4%	Excellent/Decent
2		86,6%	Excellent/Decent
3		82,6%	Excellent/Decent
4	Expert	86%	Excellent/Decent
5		87%	Excellent/Decent
6		83%	Excellent/Decent

From the validation results by these experts, if averaged, a percentage of 83.8% was obtained and it can be concluded that self-assessment media can be used in application-based basic gymnastics evaluations. Some suggestions and criticisms on the media created are as material for further development when going to mass production so that the media can be of economic value and can be used periodically.

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## 2. Reliability Test

**Table 17. Category Correlation Coefficient of Reliability of Small Groups**

N	Koofesien korelasi	Realibilitas
33	0.982	Very Strong

**Table 18. Large Group Reliability Correlation Coefficient Category**

N	Koofesien korelasi	Realibilitas
50	0.974	Very Strong

From the results of the table, the media developed as a self-assessment media can be used in application-based basic gymnastics evaluations said to be real and consistent in application-based basic gymnastics evaluations.

## 3. Practicality

According to the Big Indonesian Dictionary (KBBI), practicality is easy and happy to use (running and so on), in this case, practicality is the convenience possessed by the media in the evaluation of basic gymnastics based on self-assessment applications. In the assessment questionnaire conducted by experts, the practicality value of the tool was obtained as follows:

**Table 19. Percentage of Practicality from Expert Assessment**

Expert	F	N	Percentage	Eligibility level
Evaluation and measurement tests of sports	38	45	84,4%	Excellent/Decent
	41	45	91,1%	Excellent/Decent
	39	45	86,7%	Excellent/Decent
Expert	21	25	84,0%	Excellent/Decent
	23	25	92,0%	Excellent/Decent
	22	25	88,0%	Excellent/Decent

From the validation results by the three experts, if the average practicality value is obtained, a percentage of 87.7% is obtained and it can be concluded that the tool for the development of basic gymnastics test instruments based on self-assessment applications has a level of practicality "Very Good / Feasible".

## 4. Effectiveness

According to the Big Indonesian Dictionary (KBBI), effectiveness is the usefulness, activeness, and there is conformity in activity between a person who carries out a task to be achieved, in this study the meaning of effectiveness is the effectiveness of the media in the evaluation of basic gymnastics based on the application of self-assessment, then the effectiveness value is obtained as follows:

**Table 20. Percentage of Effectiveness of Expert Assessment**

No	Expert	F	N	Percentage	Eligibility level
1	Evaluation and measurement tests of sports	13	20	65,0%	Good/Decent
2		15	20	75,0%	Good/Decent
3		14	20	70,0%	Good/Decent
4	Expert	36	40	90,0%	Excellent/Decent
5		35	40	87,5%	Excellent/Decent
6		33	40	82,5%	Excellent/Decent

From the validation results by the three experts, if the effectiveness value is averaged, a percentage of 78.3% is obtained and it can be concluded that the media from the development of the basic gymnastics self-assessment application has a "Good / Decent" effectiveness.

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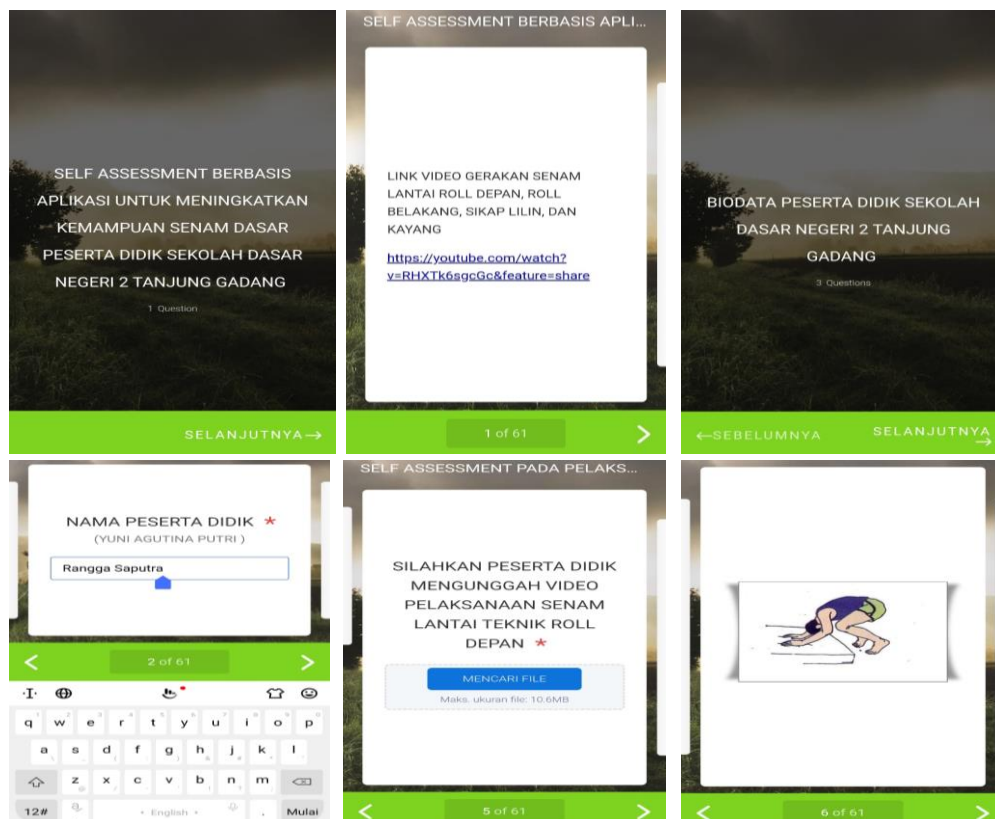
## RESULTING INSTRUMENTS

The resulting media is a form of application based on the analysis of theories and the need to evaluate the basic gymnastics of elementary school students that is more contemporary and renewable. The media named "basic gymnastics self-assessment application" is used as a medium for evaluating and learning basic gymnastics for students where the results of the evaluation of basic gymnastics movements carried out by students are directly recorded in the application and can be displayed from android. The data that has been displayed in the android application can be saved directly to Google. The display form of the resulting instrument is as follows:

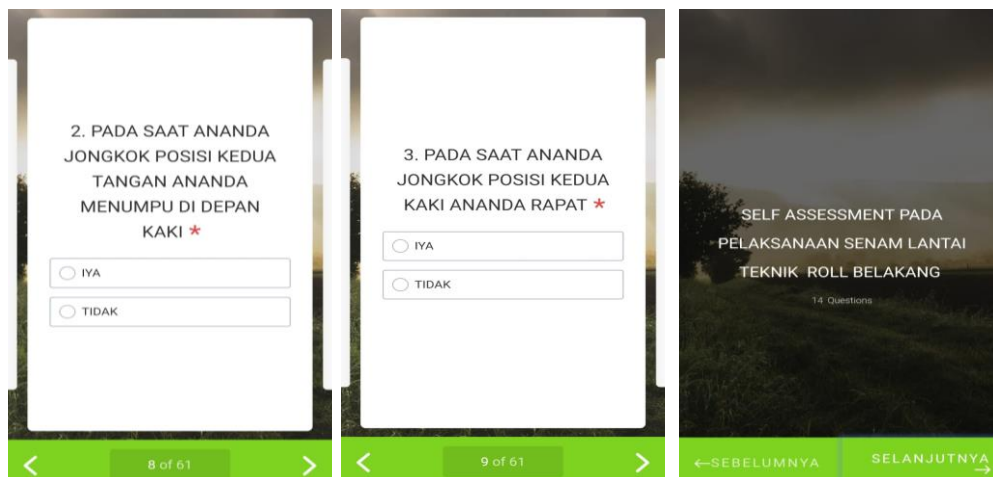


Gambar 21. Tampilan Halaman Depan Aplikasi

## OPERASIONAL APLIKASI



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### APP USAGE GUIDELINES

- 1) Turn on Android.
- 2) Open the Internet (Google Chrome, Firefox, or Internet Explorer).
- 3) Press search to enter a web address.
- 4) Type "https://form.jotform.com/223034259005042" in the search.
- 5) Press "Start".
- 6) Fill in the student's full name
- 7) The application is ready to use, fill in the statement by selecting one of the answers "YES" or "NO".

### MEDIA EXCELLENCE

The advantages of basic gymnastics media based on self-assessment applications include:

- 1) This media is a basic gymnastics evaluation media based on a self-assessment application that can be used for students to analyze their ability to do basic gymnastics.
- 2) Media can be used for students to evaluate their ability to do basic gymnastics.
- 3) Media has proven to be more effective to use because the use of applications can be carried out at home so it is more effective and efficient for learning at home.
- 4) Media has proven to be efficient in obtaining basic gymnastics data for students.
- 5) The media can facilitate the work of teachers and related parties in carrying out basic gymnastics studies.
- 6) The form of media attracts attention to motivate learners to learn independently.
- 7) The media used is very modern and renewable by using applications on android.
- 8) The output data is directly displayed in the form of an android application.

### TOOL FLAWS

- 1) Media must be operated by using android.
- 2) Media must be operated using the Internet so it requires quota.
- 3) If the use of media is not supervised by adults then the use of android can be abused like playing games.

### RESEARCH LIMITATIONS

This research resulted in a basic gymnastics self-assessment application that can find out the results of basic gymnastics skills of elementary school students, but in the implementation and results of the study, namely "validity testing is only limited to used validity tests".

## IV. CONCLUSION

Based on the results of data processing and analysis of the data from the research that has been carried out, regarding the development of application-based self-assessment for basic gymnastics evaluation, it was concluded that the name of the basic gymnastics self-assessment application media that functions as a medium for evaluating basic gymnastics in elementary school students with a validation level according to experts on average 83.8% so that the media can be said to be feasible. Then the reliability rate was up to 0.982 in small group trials and 0.974 in large group trials, so the tool is said to be reliable in evaluating

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basic gymnastics based on self-assessment applications. Media has several advantages, especially used for students to evaluate their ability to do basic gymnastics, as well as application-based media that can be used on Android.

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## **The Effects of Virtual Learning on the Mental Health and Academic Performance of the Tourism Students of Wesleyan University – Philippines**



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**ABSTRACT:** Students face educational hurdles while adjusting to virtual learning or distance learning. A greater retention percentage is hampered by a variety of factors, including mental health issues. This study was conducted to determine the effects of virtual learning on the mental health and academic performance of 158 Bachelor of Science in Tourism Management students at Wesleyan University – Philippines. One hundred twenty-four, or 78%, of the respondents were female, and the rest were male. The results of the study showed that the mental health of the tourism students during virtual learning was affected by the following: time management, focus/concentration, difficulties with internet connection, and gaining knowledge/developing skills. Those factors have an effect on the respondents' academic performance in their online classes. The idea of virtual learning while at home affects the mental health of learners, who experience stress, anxiety, depression, panic attacks, self-harming, and sleep deprivation due to the pressures of doing their assignments and submitting them immediately. In this way, the class must also formulate a way to ease those issues in order to regain the self-esteem of learners and uplift their emotional development.

**KEYWORDS:** virtual learning, mental health, academic performance, tourism students, Wesleyan University – Philippines

### **I. INTRODUCTION**

Coronavirus or COVID-19 is a virus that has a big impact on our lives and have caused a lot of changes in our everyday lives. Due to its rapid and massive spread, it has been declared a pandemic. Most countries all over the world have proclaimed lockdowns in various cities, and everyone, including those in the education sector, is required to work from home. Students have experienced a roller coaster ride as a result of the pandemic as they adjust to the abrupt shift from face-to-face classes to virtual learning. According to Chung et al. (2020a), the rapid transitions of the COVID-19 pandemic have impacted students and lecturers in education institutions critically. Teachers and students around the world have faced many challenges using online platforms for teaching and learning. This is abetted by Shahzad et al. (2020). The pandemic's impacts are unforeseeable, and they had an impact on education; most countries had to adjust to new teaching and learning methods.

The hasty changes could affect their mental health in some way. However, virtual or online learning helps to move education forward amidst the pandemic. Nonetheless, we must address any potential issues that may occur. Students are doing their best just to keep up with virtual learning, but then, having difficulties with technology and the internet are out of their hands, and that can affect their mental health in the fear of getting lower grades. Beforehand, most of the college students were already stressed and anxious. Now that we are dealing with this learning setup, they are even more stressed out. The main problem here is social interaction, which we are lacking due to the lockdown because of the pandemic. Students are struggling to study online as it has many aspects causing them problems that may trigger their emotions, affecting their mental health.

Technology has a lot of impacts, not just positive ones but also negative ones. In the situation today, because of the pandemic, technology plays an important role in our education. Thus, affecting the day-to-day lives of college students as virtual learning is the new normal today. Online classes has an impact on students' academics as well as to their health, particularly on IJMRA, Volume

the mental health of students in higher education. As more personal experiences are required for tourism students to be ready and well prepared to work in their sector in the near future. Tourism students struggled to adjust to the new class setup due to the abrupt transition from traditional to virtual classes. Their mental health is the most affected by virtual learning.

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According to Jamal & Budke (2020) when the COVID-19 arises, it has disrupted tourism and related industries. The effects of the pandemic on the tourism industry have been discussed and examined in the news media and academic research. However, nothing is known about the novel coronavirus's effects on tourism education. Seraphin and Yallop (2020) said that when tourism was impacted by large external causes such as over-tourism, academic or news media writing mostly focuses on the sector, overlooking the fact that tourism was also a topic of study. Discussing the impacts of COVID-19 on tourism education may be a reminder of the very fact that whatever happens within the industry impacts the education system and the other way around (Seraphin & Yallop, 2020). Tourism students in this new online learning environment may not learn at the same rate as students in a traditional classroom setting. Tourism students may face the high possibility of feeling isolated and more anxious about their education and future. The tourism industry has been affected since the pandemic worsened. As a result, the fear of tourism students may also arise as they don't have hands-on education and skills training that they can use as their foundation in applying for jobs in the future. Tourism students are experiencing pressure to learn everything in the virtual classes, which affects their mental health. In particular, college students are afraid to fail in their courses, and that's where they start using their gadgets for a long time to be able to comply with the activities to pass all the subjects. Too much time spent staring at a screen has ramifications for one's mental health. And there is a time when the homework is continuous, which leads to mental breakdowns.

The purpose of this study is to determine the effects of virtual learning on the mental health and academic performance of the tourism students. The researchers will analyze how virtual learning affects mental health, in what way it is affected, and how bad the impact is. This study was conducted to determine the factors causing mental breakdown among tourism students at Wesleyan University – Philippines. The researchers aim to identify the psychological effects of virtual learning, how it affects their daily life as well as their academic performance. Many people will benefit from this research as it will enable them to be more aware of their mental health during health crises. It could help colleges and universities build an academic basis for defining mental well-being and identifying evidence-based psychological intervention practices to provide students with the help they need in the event of future pandemics.

### **STATEMENT OF THE PROBLEM**

The primary concern of this study is to probe the effects of virtual learning on the mental health and academic performance of the tourism students of Wesleyan University – Philippines. Moreover, Its specific goal is to determine the answers to the following questions:

1. What is the profile of tourism students in terms of:
  - 1.1 age;
  - 1.2 gender;
  - 1.3 civil status;
  - 1.4 year level;
  - 1.5 number of subjects enrolled in this semester;
  - 1.6 gadget/s used in online class;
  - 1.7 estimated number of hours spent in a day in online class and in doing activities; and,
  - 1.8 extent to participation in synchronous and asynchronous class?
  
2. How does virtual learning affects the mental health and academic performance of the tourism students of Wesleyan University – Philippines in terms of:
  - 2.1 time management;
  - 2.2 focus/concentration;
  - 2.3 difficulties in internet connection; and,
  - 2.4 gaining knowledge/developing skills?
  
3. How does virtual learning create mental health issues that may experience by the tourism students of Wesleyan University – Philippines in terms of:
  - 3.1 stress;
  - 3.2 anxiety;
  - 3.3 depression;

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- 3.4 panic attack;
- 3.5 self-harming; and,
- 3.6 sleep deprivation?

## II. LITERATURE REVIEW

### Time Management

Miqdadi et al. (2014) looked into the relationship between time management and student academic performance through considering procrastination, workload pressure, distraction, and disorganization. Khanam et al. (2017) examined the impact of students' time management on their academic attainment. He came to the conclusion that students who manage their time effectively receive high grades, while those who do not manage their time effectively receive low grades.

Time management is important, especially for university students, because it will improve their grades and productivity (Laurie & Hellsten, 2002). However, most students struggle with task aversion and uncertainty, leading them to delay due to a lack of organizational abilities. As a result, learners will be unable to organize their responsibilities according to their priorities, becoming easily distracted and prone to procrastination.

Most students spend a majority of their study time on assignments and homework than studying the actual material necessary (Hanson et al., 2011) and some of them often find that they are not able to complete every task or job assigned to them (Nadinloyi, 2013). According to Lilam's (2019) research, time management has an impact on a student's academic achievement. A person who properly manages their time has less difficulties in coping with day-to-day tasks and moving on in life.

### Focus/Concentration

One of the most common educational issues is a lack of concentration in the classroom, particularly in student seminars and conferences. (Nojomi M. et. al., 2009). Lack of focus and attention is one of the reasons why students don't have a correct time management. One of the challenges students experience in both physical and online lectures is maintaining their focus on the subject delivered. Asynchronous and synchronous sessions are held in the online learning environment. Some students find a distraction on the internet or use social media to relieve boredom or tension in the classroom because they are free to utilize their devices (May, 2020). (Rosegard & Wilson, 2013).

Online learners are more likely to become sidetracked, lose concentration, or miss deadlines due to not having a right time management (Sadeghi, 2019). The lack of interaction in online classes, students are more likely to be distracted by smartphones, pets, deliveries, and other things other than the ongoing online class, according to Amadora (2020).

### Difficulties in Internet Connection

Students and teachers have limited access to the internet, and teachers' attempts at blended learning were frequently unsuccessful (Malang, 2018). Only a few students were able to maintain a consistent internet connection. Students may find it hard to understand the practical aspects of the courses, resulting in frustration. This could have affected the delivery of online courses and, as a result, the students' satisfaction with the online learning platform. Unfortunately, the Philippines' internet infrastructure continues to lag behind other Asian developing countries (Salac & Kim, 2016). According to a recent study, the impact of the COVID-19 pandemic on secondary education finds that nearly half of schools surveyed said that their students have lack of access to high-speed broadband and/or a lack of access to appropriate digital devices (Mohan et al., 2020).

The Philippines' poor internet connection posed a significant obstacle for pupils, particularly those from rural areas. The majority, though not all, of the students have been affected by the poor internet connection which is particularly bad in rural sections of the city. As a result, some students were absent for a portion of the class (Adonis, 2020). According to a DepEd poll reported by Santos (2020), 2.8 million pupils do not have access to the internet, particularly in rural areas where internet connection and speed are difficult to come by.

### Gaining Knowledge/Developing Skills

For many San Diego State students, online classes are just a way to complete course and unit requirements. There is a lack of enthusiasm and eagerness to learn. Students in online classes are simply unmotivated. They are normally easy A's and are time efficient, but student learning outcomes are generally poor. Students just finish their assignments in order to obtain credit for a passing mark, rather than actually engaging with the course subject. Many students, particularly procrastinators, may find themselves cramming for assignment deadlines and tests because they failed to schedule study sessions throughout the semester (Weele, 2020).

Students are frequently unsatisfied with distant learning in terms of study experience since they lack contacts with

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peers and teachers (de Haas et al., 2020). Due to the haphazard arrangement of online learning and the lower quality of online classes compared to traditional ones, they believe their academic experience to be more difficult and worse than before the epidemic (Wilczewski et al., 2020).

### **Stress**

Stressors are events that cause stress, and a rapid change in these stressors can have an impact on a person's physical or mental health. Students' pleasure and academic performance in online learning revealed a strong and negative inverse association with stress. Constant stress will have an impact not just on their academic performance, but also on their emotional wellbeing, since stress has been linked to a variety of physical and mental diseases. According to the research of Malik et al. (2021), a total of 966 valid replies were gathered. As per findings, 96.9 percent of participants (moderate stress = 82.5 percent, high stress = 14.4 percent) reported experiencing stress as a result of their participation in COVID-19 e-learning. The findings also revealed a strong negative significant relationship between perceived stress and students' academic performance. The effects of family and institutional support on students' stress perception were shown to be considerable.

### **Anxiety**

According to Huberty (2009), anxiety also has an impact on students' behavior, cognition, and physiology. High-risk testing, for example, can be extremely tough for students who suffer from anxiety. An in-depth examination of the findings in the University of Bahawalpur in Pakistan, Nadeem, Ali, and Zaidi (2012) revealed that anxiety had an impact on students' academic performance.

"Anxiety is a psychological concept that has a direct impact on the human race. Despite the fact that there are different debates regarding defining the construct, social scientists have successfully examined how anxiety is related to and influences human life" (Dowbiggin, 2009).

Additionally, the anxiety among United States college students has risen from 6.7 percent in 2000 (American College Health Association, 2000) to 12.9 percent in 2013. (American College Health Association, 2013). According to the American College Health Association, 23 percent of college students identified anxiety as a factor influencing their functioning in the previous year in 2014. (Holliday et. al, 2016).

### **Depression**

Depression is one of the most common mental health issues among students at various educational levels such as high school, college, and university (Arslan et al., 2009). Additionally, according to the World Health Organization and the Ministry of Health, Nutrition, and Indigenous Medicine, depression is one of the most frequent psychological problems that affects practically everyone from all walks of life and people all over the world; it can be personal or affect family members. No one is immune because it affects people of all ages, genders, and backgrounds, but the majority of those affected are teenagers.

Furthermore, according to the study conducted by Wechsler, Lee, Kuo, and Lee (2000), students who exhibit indications of depression perform worse in school and become less active in class than students who do not show these signs. Another noticeable effect of depression is that students who are depressed are more prone to lose academic enthusiasm and activity. Academic responsibilities are also challenging for depressed students (Khawaja & Bryden, 2008). It is worth mentioning that the most often reported depressed symptoms among young adults with moderate to severe depressive symptoms are those connected to loneliness (Li et al., 2019).

### **Panic Attack**

Panic attacks are one of the most common disorders among students nowadays. Panic attacks are unexpected bursts of extreme terror with at least four physiological or cognitive symptoms that peak within minutes (American Psychiatric Association [APA], 2013). An accelerated heart rate, sweating, trembling, shortness of breath, chest discomfort, nausea, dizziness, depersonalization, and dread of losing control, 'going crazy,' or dying are some of the symptoms (Macaulay and Kleinknecht 1989).

Another factor stated by Lister et al. (2021) on their research that the students specified why both the exam and the preparation for the exam could act as an alert for mental health problems; student 9 narrated her personal experience of 'panic attacks' in 'these vast exam halls,' and student 2 discussed about how being 'worried' and not feeling 'ready' for the exam led her to feel 'I can't do this,' provoking her depression and leading her to forego her module. Bad feedback and the fear of negative criticism were identified as impediments.

### **Self-Harming**

Self-harm, self-mutilation, and cutting are all terms used to describe self-injurious behavior. Self-harming has caused

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adolescents to struggle in the academic environment, missing school because of time spent in the hospital due to injuries, and have difficulties dealing emotionally with stress without the crutch of self-harm (Wilkinson, 2011).

In the Philippines, where college students are still considered teenage youth, the social and mental health components of student welfare in tertiary institutions have gotten more attention from education stakeholders. Suicide by college students is on the rise, with methods including jumping from a building and shooting oneself with a gun (Manila Bulletin, 2013) (PHnews, 2013). According to experts, one young person commits suicide every day (Tomacruz, 2018).

According to the results of the study of Hendrick (2016), 73% of the students agreeing that self-harm is used to calm themselves down, with 18% being undecided and 12% disagreeing. 53% of students agreeing that adolescents use self-harm just to feel something, with 12% undecided and 36% disagreeing. 83% of students agreeing that people use self-harm to deal with depression, with only 6% disagreeing. 77% agreeing that self-harm is used to reduce anxiety with only 6% disagreeing. Females agreed 82% of the time, while males agreed 66% of the time. 83% of students agreeing that self-harm is used to deal with anger with only 6% disagreeing- females agreeing 91% of the time with males agreeing 83% of the time.

In accordance to this, suicide is also a major public health problem across the world, accounting for around 1.5 percent of all fatalities (Denny et al., 2003). According to the most recent Global School-based Student Health Survey (GSHS), 11.6 percent of Filipino teenagers aged 13 to 17 pondered suicide, and 16.8 percent tried suicide at least once in the previous year [World Health Organization, 2018].

### **Sleep Deprivation**

Due to the pressures of academic work and social pursuits, sleep deprivation is prevalent among university students who live in a culture that encourages less sleep (Hershner et. al. 2014). Sleep deprivation has been linked to a lack of concentration, poor grades, anxiety, and sadness, according to a Stanford University study (Richter, 2015).

Poor academic performance is linked to sleep deprivation and to a variety of behavioral, physiological, cognitive, and emotional issues (Minkel et al., 2004). Suen, Hon, and Tam (2008) discovered that insufficient sleep causes exhaustion, poor focus, and frequent sleepiness, making analyzing and understanding difficult. Jovanovski and Bassili (2007) conducted a study to compare students' academic performance when they attended face-to-face lectures vs when they attended the class online. The study's 1,071 participants included 625 students who took an online introductory psychology course and those who took the same course in a face-to-face setting (446 students). The researchers find out that distractions trigger lessened memory functions, which contribute to a decline in mental processes and poor academic performance.

However, according to the National Sleep Foundation (2015) and the World Health Organization (WHO), teenagers aged 14-17 years old require 8-10 hours of sleep, whereas young adults aged 18-25 years old require 7-9 hours of sleep. Sleep has a crucial role in learning. To sleep poorly — a person who sleeps poorly may acquire both physical and mental problems. According to Toyong (2020), 88% of students were sleep deprived, and they typically slept for fewer than 6 hours. This revealed that less hours of sleep at night are associated with increased tiredness in class and bad classroom conduct. Students who got less sleep, on the other hand, performed poorly in school.

### **SYNTHESIS**

The journal articles that the researchers gathered and researched are mostly concerned with the effects of virtual learning on students' mental health. Each author of the articles from the credible sources also evaluated the effects of the mental health issues on the students' academic performance. Moreover, they outline the various problems and factors that the students faced before and during the COVID-19 pandemic that affects their mental health and academic performance. Similar studies, on the other hand, are connected to the objectives of the researchers in this study. These scholarly articles will serve as the foundation for the researchers' paper and provide them with information on the topic they intend to address.

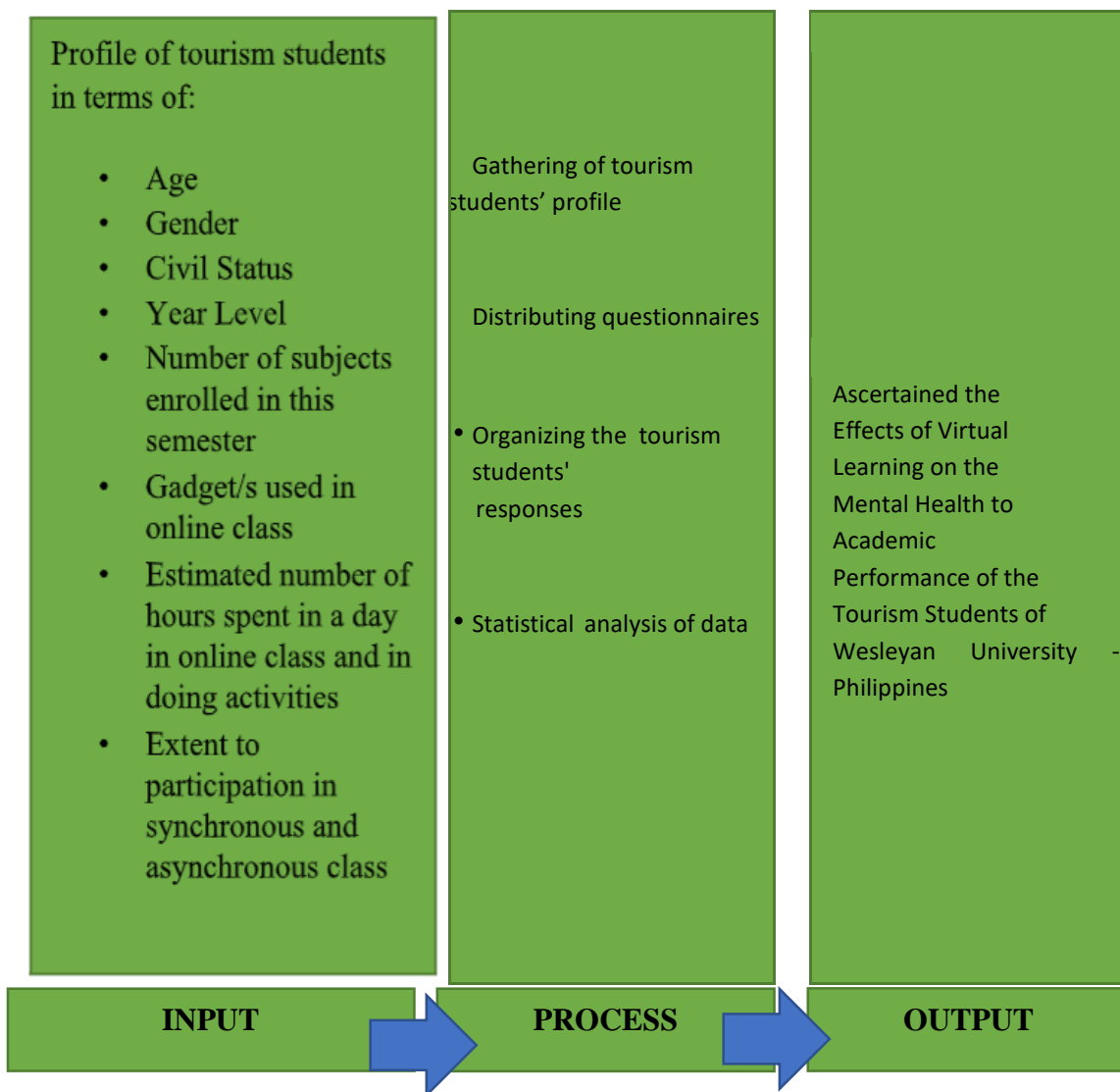
The researchers conducted this study to determine the effects of virtual learning on the mental health of the tourism students of Wesleyan University – Philippines, what are the factors that affects their mental health and academic performance, and what are the mental health issues that they may experience. The difference between this study from the other research is that the researchers focus on the different factors of virtual learning that affects mental health and academic performance. Moreover, our study's focal point is solely on college level, particularly in tourism students.

### **III. CONCEPTUAL FRAMEWORK**

The input, process, and output model (IPO) was used by the researchers in this study. The input includes the profile of tourism respondents and factors that affect mental health and academic performance, which the researchers used in making the output

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of the study. It includes the age, gender, civil status, year level, number of subjects enrolled in this semester, gadget/s use in online class, estimated number of hours spent in a day in online class and in doing activities, extent of participation in synchronous and asynchronous classes, time management, focus/concentration, difficulties in internet connection, and gaining knowledge/developing skills. These profiles of tourism respondents and factors that affect mental health will undergo processes such as gathering, distributing, organizing, and analyzing. Then, the output-ascertained the effects of virtual learning on the mental health and academic performance of the tourism students of Wesleyan University—Philippines will be the basis of the outcome of the study.



### IV. METHODS

The researchers applied the descriptive research design to describe the effects of virtual learning on Wesleyan University – Philippines’ tourism students. In this study, the researchers would determine the effects of virtual learning on tourism students’ mental health and their academic performance.

This study included 158 Wesleyan University - Philippines Bachelor of Tourism Management students (124 females and 34 males) as the samples using a stratified random sampling method. A researcher-created examination was used in this study, and it was validated by one of the statisticians at Wesleyan University - Philippines.

The instrument used is a Likert-scale type that consists of 57 research questions about virtual learning factors that affect the mental health and academic performance of tourism students at Wesleyan University - Philippines in terms of time management, focus/concentration, internet connection difficulties, gaining knowledge/developing skills, and mental health issues that they may encounter.



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The researchers obtained permission from the advisers of the various year levels of tourism management students at Wesleyan University—Philippines before collecting the data. After obtaining the necessary clearances and identifying the respondents, the researchers delivered the questionnaire individually with the help of certain counselors from the College of Hospitality and Tourism Management Department. Because of the pandemic, the researchers used a different method of data collection, sending the instrument via Google Forms. The data collection process took more than a week.

To analyze and interpret the data, the researchers used acceptable statistical approaches such as frequency, percentage, and weighted mean. Microsoft Excel 2019 and the Statistical Package for Social Sciences (SPSS) were also used.

## 1. PROFILE OF THE RESPONDENTS

Table 1.1 presents the age of the respondents.

Table 1.1 Age of the Respondents

Age	Frequency	Percent
20 years old and below	106	67.09
21 – 23 years old	52	32.91
24 years old and above	0	0.00
Total	158	100.00

Table 1.1 shows that 106 or 67 percent of the samples were belonged to 20 years old and below old age bracket. The rest of the respondents were belonged to 21 years old and above age bracket. Based on these findings, the respondent students were predominantly in the 20-year-old and below age bracket. This contradicts with the findings of the study by Sandberg (2016), which revealed that the majority of her respondents were in the 21-year- old and above age bracket.

Table 1.2 presents the gender of the respondents.

Table 1.2 Gender of the Respondents

Gender	Frequency	Percent
Male	34	21.52
Female	124	78.48
Total	158	100.00

Table 1.2 shows that 124 or 78 percent of the samples were female. The rest of the respondents were male. These findings indicate that the respondent students were mostly female. This is in line with the findings of Barrot et al. (2021), a study that included 200 students (66 males and 134 females) from a private higher education institution in the Philippines, which showed that the majority of their respondents were female.

Table 1.3 presents the civil status of the respondents.

Table 1.3 Civil Status of the Respondents

Civil Status	Frequency	Percent
Single	158	100.00
Married	0	0.00
Other	0	0.00
Total	158	100.00

Table 1.3 shows that 158 or 100 percent of the respondents were single. According to this data, it shows that all of the respondent students were single. This is consistent with the findings of the study by Kim (2019), which revealed that none of the respondents were married.

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Table 1.4 presents the year level of the respondents.

**Table 1.4 Year Level of the Respondents**

Year Level	Frequency	Percent
1 <sup>st</sup> year	44	27.85
2 <sup>nd</sup> Year	56	35.44
3 <sup>rd</sup> Year	28	17.72
4 <sup>th</sup> Year	30	18.99
Total	158	100.00

Table 1.4 shows that 56 or 35 percent of the samples were from second year college and 44 or 27 percent were from first year college. The rest of the respondents were from third to fourth year college. Based on these results, it may be concluded that the majority of the respondents were second-year Tourism Management students.

Table 1.5 presents the number of subjects enrolled in this semester of the respondents.

**Table 1.5 Number of Subjects Enrolled in this Semester of the Respondents**

Number of Subjects Enrolled in this Semester	Frequency	Percent
Less than 6 courses	5	3.16
6 – 8 courses	77	48.73
More than 8 courses	76	48.10
Total	158	100.00

Table 1.5 shows that 77 or 48 percent of the samples have six to eight courses enrolled in this semester. The rest of the respondents have less than six courses or more than eight courses. According to these findings, most of the tourism students at Wesleyan University – Philippines enrolled in six to eight courses this semester.

Table 1.6 presents the gadget/s used in online class of the respondents.

**Table 1.6 Gadget/s used in Online Class of the Respondents**

Gadget/s used in Online Class	Frequency	Percent
Cellphone	140	88.61
Tablet	12	7.59
Laptop	103	65.19
Desktop	11	6.96
Other	0	0.00

Table 1.6 shows that 140, or 88 percent, of the samples were using cellphones in online classes and 103, or 65 percent, were using laptops. The rest of the respondents were using tablets and desktops. Based on these findings, it can be deduced that the responding students primarily used their cellphones in online classes. This is congruent with the findings of Belgica's et al.'s (2020) study, which revealed the gadgets and technological equipment used by primary pupils in their online distance learning. The majority of the pupils, 22 in total, use cellphones, with 20 using laptops. Sixteen pupils use desktop computers, and 15 of them use tablets for their online class.

Table 1.7 presents the estimated number of hours spent in a day in online class and in doing activities of the respondents.

**Table 1.7 Estimated Number of Hours Spent in a Day in Online Class and in Doing Activities of the Respondents**

Estimated Number of Hours Spent in a Day in Online Class and in Doing Activities	Frequency	Percent
5 hours and below	28	17.72
5 – 7 hours	52	32.91

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7 – 10 hours	43	27.22
10 – 14 hours	18	11.39
More than 14 hours	17	10.76
Total	158	100.00

According to Table 1.7, 52, or 32 percent, of the samples spent five to seven hours a day in online classes and activities; 43, or 27 percent, spent seven to ten hours; and 28, or 17 percent, spent five hours or less. The rest of the respondents were working more than 10 hours. According to these results, respondent students spent an average of five to seven hours per day in their online classes accomplishing their activities. This is aligned with the findings of Oducado and Estoque's (2021) study, which indicated that their respondents spent an average of seven hours per day on online learning.

Table 1.8 presents the extent participation in synchronous and asynchronous class of the respondents.

**Table 1.8 The Extent to Participation in Synchronous and Asynchronous Class of the Respondents**

Extent to Participation in Synchronous and Asynchronous Class	Frequency	Percent
Always	101	63.92
Often	31	19.62
Sometimes	26	16.46
Never	0	0.00
Total	158	100.00

According to Table 1.8, 101, or 63 percent, of the samples always participated in synchronous and asynchronous classes, while 31 (or 19 percent) participated frequently. The rest of the respondents said they sometimes participated. These findings imply that respondent students are always present in class, whether synchronous or asynchronous.

## 2. Factors that Affect Mental Health and Academic Performance of the Tourism Students

Table 2.1 presents the factors that affect mental health in terms of time management.

**Table 2.1 Time Management**

Time Management	WM	Verbal Description
1. I get pressure when several activities are given at the same time.	3.43	At All Times
2. I do my assignments in rush because of fear of not being able to comply in all assignments.	3.06	Most of the Time
3. I do not get enough sleep due to school works.	2.99	Most of the Time
4. I have no time to eat due to busy schedule.	2.61	Most of the Time
5. It's hard for me to balance school and home at the same time.	2.96	Most of the Time
Overall Weighted Mean	3.01	Most of the Time

Table 2.1 shows that all the items in this section were described as "most of the time" except for one item, which was described as "at all times". This is "I get pressure when several activities are given at the same time." The results from this study indicate that the tourism students of Wesleyan University—Philippines were struggling most of the time in adjusting to the new normal set up and had poor time management. This contrasts the findings of Lilam's (2019) study, which found that senior high school students at Lambunao National High School have high time management abilities and appear to manage their time effectively in dealing with the many activities and tasks assigned to them.

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Table 2.2 presents the factors that affect mental health in terms of focus/concentration.

**Table 2.2 Focus/Concentration**

Focus/Concentration	WM	Verbal Description
1. I get distracted easily when there is noise around me while studying.	3.36	At All Times
2. I experience lose of interest in activities.	2.93	Most of the Time
3. Social media distraction affects my productivity.	3.07	Most of the Time
4. Lack of sleep give me a hard time to focus.	3.25	At All Times
5. I feel disengaged. I experience difficulty in regulating my thoughts and emotions.	3.09	Most of the Time
Overall Weighted Mean	3.14	Most of the Time

Table 2.2 shows that all the items in this section were described as "most of the time" except for two items, which were described as "at all times". These are "I get distracted easily when there is noise around me while studying" and "Lack of sleep gives me a hard time focusing". These findings intend to convey that the responding students were losing attention or concentration most of the time when studying or doing activities as a result of the new learning environment. This is congruent with the findings of Coman's et al.'s (2020) study, which found that students who answered their questionnaire felt it was more difficult to study and focus online. It is also related to the findings of Sadeghi (2019), Dhull et al., (2017), and Nazarlou (2013), who found that pupils quickly become distracted and lose attention owing to a lack of well-implemented tactics to keep them engaged, as well as a lack of expertise with this sort of learning. In addition to these factors, environmental disruptors such as noise from family members or neighbors, as well as a lack of suitable working space, have an impact on the length of time students can concentrate when learning online.

Table 2.3 presents the factors that affect mental health in terms of difficulties in internet connection.

**Table 2.3 Difficulties in Internet Connection**

Difficulties in Internet Connection	WM	Verbal Description
1. I experience coming in a synchronous class late due to poor internet connection.	2.84	Most of the Time
2. I experience passing an activity in the last minute due to unstable internet connection.	2.55	Most of the Time
3. I struggle downloading our online materials.	2.44	Sometimes
4. I worry a lot due to weak internet connection.	2.75	Most of the Time
5. I had missed a class because of bad internet connectivity.	2.66	Most of the Time
Overall Weighted Mean	2.65	Most of the Time

Table 2.3 shows that all the items in this section were described as "most of the time" except for one item, which was described as "sometimes". This is "I struggle to download our online materials". It can be inferred from these findings that the respondent students were experiencing problems in their virtual classes due to weak and unstable internet connections most of the time. This is consistent with the findings of the study by Mohan et al. (2020) on the impact of the COVID-19 pandemic on secondary education, which found that nearly half of the schools surveyed said that their students have a lack of access to highspeed broadband and/or a lack of access to appropriate digital devices. For disadvantaged schools and schools in catchment areas with lower than median household incomes, this figure rises to around 58% (Mohan et al., 2020).

Table 2.4 presents the factors that affect mental health in terms of gaining knowledge/developing skills.

**Table 2.4 Gaining Knowledge/Developing Skills**

Gaining Knowledge/Developing Skills	WM	Verbal Description
1. It's hard for me to complete a task.	2.42	Sometimes
2. It's difficult for me to follow virtual instructions of our teachers.	2.49	Sometimes

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3. The materials or equipment I used for studying is not enough.	2.44	Sometimes
4. I'm having a hard time in applying concepts taught in the subject.	2.57	Most of the Time
5. I'm not confident enough to handle difficult task with online learning mode.	2.75	Most of the Time
Overall Weighted Mean	2.53	Most of the Time

Table 2.4 shows that all the items in this section were described as "sometimes" except for two items, which were described as "most of the time". These are "I'm having a hard time applying concepts taught in the subject." and "I'm not confident enough to handle difficult tasks with the online learning mode." This study found that the respondent students had trouble absorbing sufficient information from their courses now that they had a new learning environment. This differs from the findings of Deshpande and Mhatre's study (2021). According to them, most of the students believe that the online mode of learning has improved their academic performance.

### 3. Mental Health Issues that the Tourism Students May Experience Amidst Virtual Learning

Table 3.1 presents the mental health issues that may experience by the tourism students amidst virtual learning in terms of stress.

**Table 3.1 Stress**

Stress	WM	Verbal Description
1. I'm experiencing headaches, dizziness or shaking in taking my exams.	2.99	Most of the Time
2. I overeat and developed an eating disorder due to my busy schedule in online class.	2.75	Most of the Time
3. I feel sad when I missed some tasks in school.	3.25	At All Times
4. I feel that my vision changed due to long exposure on screen.	3.26	At All Times
5. I feel exhausted due to several school activities/homework.	3.41	At All Times
Overall Weighted Mean	3.13	Most of the Time

Table 3.1 shows that all the items in this section were described as "at all times" except for two items, which were described as "most of the time." These are "I'm experiencing headaches, dizziness, or shaking while taking my exams." and "I overate and developed an eating disorder due to my busy schedule in online classes". Based on the findings, it can be deduced that the respondent students experienced health issues that were related to stress and caused them discomfort since the start of the virtual classes. This is similar to the findings of Kwaah's (2017) study. It has been discovered that heavy academic work and frequent tests are the biggest sources of stress for distance education students. In addition, according to Malik and Javed's (2021) study, students in general had moderate to high levels of stress throughout the pandemic-induced online teaching and learning. Students' mental health is greatly influenced by the support they feel from their family and the institution, which was found to be adversely connected with students' perceived stress. Despite the fact that academic, social, and psychological stressors have been found to have a negative impact on students' mental health (perceived stress), academic stressors were found to have a significantly greater negative correlation with students' stress levels than psychological and social stressors throughout COVID-19-induced online learning.

Table 3.2 presents the mental health issues that may experience by the tourism students amidst virtual learning in terms of anxiety.

**Table 3.2 Anxiety**

Anxiety	WM	Verbal Description
1. I worried and scared to fail my subjects.	3.63	At All Times
2. I feel nervous when there's an unexpected recitation or quiz.	3.44	At All Times
3. I overthink a lot about my school activities.	3.43	At All Times
4. I feel less confident about school than my classmates.	3.03	Most of the Time
5. I tend to find my classmates intimidating.	2.51	Most of the Time
Overall Weighted Mean	3.21	Most of the Time

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Table 3.2 shows that all the items in this section were described as "at all times", except for two items which were described as "most of the time." These are "I feel less confident about school than my classmates". and "I tend to find my classmates intimidating." According to this data, it can be stated that the respondent students were anxious about their virtual lessons most of the time, fearful of failing their topics. This is in line with the findings of the study by Ajmal and Ahmad (2019), which showed that the majority of students felt anxious during distance learning, but the factors that caused the anxiety were different, such as lack of time given to prepare assignments, due dates of activities, lack of interaction with fellow students, and so on.

Table 3.3 presents the mental health issues that may experience by the tourism students amidst virtual learning in terms of depression.

**Table 3.3 Depression**

Depression	WM	Verbal Description
1. I feel less interested in doing my activities.	2.73	Most of the Time
2. I feel like I don't have energy to study.	2.92	Most of the Time
3. I'm having a trouble in concentrating during class.	2.93	Most of the Time
4. I feel bad about myself or my life when I think of my failures/losses in school.	3.25	At All Times
5. I become pessimistic or believe that nothing good will ever happen when I fail in complying in my requirements in school several times.	2.97	Most of the Time
Overall Weighted Mean	2.96	Most of the Time

Table 3.3 shows that all the items in this section were described as "most of the time" except for one item, which was described as "at all times." This is "I feel bad about myself or my life when I think of my failures or losses in school." This finding aims to show that the responding students acquired sadness during the duration of their virtual learning. Due to depression, students usually think more negatively about things than before. This is consistent with the results of Field's et al. (2012) study. According to the study, depression causes a variety of mental disorders, which can lead to psychological, social, and physical issues for students both during and after their academic careers. Furthermore, Arslan et al. (2009) considered that the key difficulties in students' depression were poor self-assessment, a loss of joy and interest in daily life, eating and sleeping problems, and suicidal thoughts.

Table 3.4 presents the mental health issues that may experience by the tourism students amidst virtual learning in terms of panic attack.

**Table 3.4 Panic Attack**

Panic Attack	WM	Verbal Description
1. I get fidgety when I'm nervous.	2.74	Most of the Time
2. I panic when I hear my name being called during recitation.	2.89	Most of the Time
3. I am tense when I don't know about a particular lesson.	3.03	Most of the Time
4. I get agitated easily when I feel panic and bothered during my exams/quizzes.	2.92	Most of the Time
5. I feel dizzy due to difficult and synchronized school activities.	2.74	Most of the Time
Overall Weighted Mean	2.86	Most of the Time

Table 3.4 shows that all the items in this section were described as "most of the time". The overall weighted mean is 2.86. It can be inferred from these findings that the respondent students were having panic attacks most of the time in their online classes, quizzes, and exams due to various factors. This coincides with the findings of the study by Lister et al. (2021) on their research. It was stated there that the students specified why both the exam and the preparation for the exam could act as an alert for mental health problems; student nine narrated her personal experience of 'panic attacks' in "these vast exam halls," and student two discussed how being "worried" and not feeling "ready" for the exam led her to feel "I can't do this," provoking her depression and leading her to forego her module. Bad feedback and the fear of negative criticism were identified as impediments.



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Table 3.5 presents the mental health issues that may experience by the tourism students amidst virtual learning in terms of selfharming.

**Table 3.5 Self-Harming**

Self-Harming	WM	Verbal Description
1. I pinch myself when I can't understand a lesson.	2.02	Sometimes
2. I misuse alcohol due to stress in school.	1.84	Sometimes
3. I starve myself or binge eating due to stress in studying.	2.42	Sometimes
4. I have suicidal thoughts.	1.95	Sometimes
5. I isolate myself when I'm upset about my grades.	2.56	Most of the Time
Overall Weighted Mean	2.16	Sometimes

Table 3.5 shows that all the items in this section were described as "sometimes" except for one item, which was described as "most of the time". This is "I isolate myself when I'm upset about my grades." These results indicate that respondent students are prone to self-harm as a result of the stress they experience in their online studies. This is aligned with the findings of Hendrick's (2016) study. According to his survey, 83% believe that students use self-harm to deal with sadness, 77% agree that self-harm is used to relieve anxiety, and 73% agree that self-harm is used to calm oneself down.

Table 3.6 presents the mental health issues that may experience by the tourism students amidst virtual learning in terms of sleep deprivation.

**Table 3.6 Sleep Deprivation**

Sleep Deprivation	WM	Verbal Description
1. I stay up late at night due to my homework.	3.14	Most of the Time
2. I find it hard to form new memories, which can affect my learning.	2.92	Most of the Time
3. I cannot focus properly due to lack of sleep.	3.04	Most of the Time
4. I lose myself when I'm sleepless.	2.91	Most of the Time
5. I feel lousy during class when I don't get enough sleep.	2.99	Most of the Time
Overall Weighted Mean	3.00	Most of the Time

Table 3.6 shows that all the items in this section were described as "most of the time". The overall weighted mean is 3.00. These findings imply that the respondent students were no longer getting adequate sleep as a result of performing their assignments for their virtual classes at the same time. This is similar to the findings of Toyong's (2020) study. According to his study, assignments and homework are thought to be two of the three primary causes of students' staying up late. It also revealed that the three most common classroom behaviors were: students were drowsy during class discussions; they napped in class during free times; and they were exhausted during lessons.

## V. CONCLUSION

Based on the above findings, the following statement has been concluded:

1. According to the findings, the majority of the 158 respondents from Wesleyan University—Philippines tourism students were 20 years old or younger, female, single, in their second year, enrolled in six to eight courses this semester, mostly used their cell phones in online classes, spent five to seven hours a day in online classes and activities, and always participated in synchronous and asynchronous classes.
2. In conclusion, the mental health issues of the students matter and are affected by the sudden changes, especially in this new learning setup. Students' academic performance is highly affected by the negative effects of virtual learning and it is proven that the pandemic has become a barrier to them. Time management, focus/concentration, difficulties in internet connection, and gaining knowledge/developing skills are the factors that the researchers found that affect the tourism student's mental health and academic performance during virtual learning.
3. Students tend to have a major problem with their time management. They cannot properly balance the time spent studying and doing their responsibilities at home because they are in the same environment at school and at home. Tourism students

## **The Effects of Virtual Learning on the Mental Health and Academic Performance of the Tourism Students of Wesleyan University – Philippines**

feel pressured into doing their simultaneous activities in their online classes. In addition to this, they cannot separate the time of school from the time when they need to rest.

4. The learning environment is very important to the students. A little noise could be a distraction to a student who's studying. Another cause is a lack of sleep. When a student doesn't get enough sleep, they tend to lose focus in their online classes.
5. One of the biggest problems for most of the students is the poor internet connection. Tourism students have experienced issues in their online classes due to the weak internet. They had experienced passing their activities at the last minute before the deadline and had absences in their synchronous classes due to the poor internet connectivity.
6. Tourism students at Wesleyan University – Philippines were having a hard time adjusting to online learning in terms of gaining knowledge and developing skills. Answering difficult tasks from their online classes has become an issue due to their lack of confidence if they are doing it right. One reason could be that they do not fully understand what the teachers instructed them to do and need a deeper explanation, which cannot be answered immediately since the students and teachers are away from each other. Applying the concepts from online teaching was hard for them to retain since it has been said that there are many distractions in their environment.
7. As per the study, tourism students have experienced signs of stress, anxiety, depression, panic attacks, and sleep deprivation most of the time due to their online classes. Signs of these mental health issues also affect their academic performance in the new normal set up. The study also showed that self-harm among tourism students occurs sometimes.

### **VI. RECOMMENDATIONS**

1. Tourism students should stay on track by using a calendar and schedule of their dedicated time to studying and for their house responsibilities. Track which homework and activities should be done first so the students know where to begin and what to prioritize. They can also use a timer to divide their day so that they are not overburdened with schoolwork and studying. Tourism students can set a timer to remind them of things like toilet breaks, mealtimes, time to relax, and when it's time to study again.
2. Noise-canceling earphones can assist tourism students in keeping their focus while studying by blocking out unnecessary and distracting noises from their learning environment at home. Students should also keep their cellphones and other gadgets away from irrelevant purposes for them to avoid sleeping late.
3. Tourism students should always have a backup plan in place by having mobile data on their cellphone in case their Wi-Fi goes down.
4. Tourism students should practice taking notes during their classes. This is a good habit for the students to easily remember what the current lessons are from their classes. Students should widen their sources of knowledge. Surfing the internet for school purposes is very helpful for gaining a deep and broad understanding of their lessons. Studying for long hours is also exhausting. Thus, they should only allot four to five hours of studying to avoid the things that can trigger their mental health issues, which can also affect their academic performance. The new learning set up for the tourism students also needs to be enjoyable for them to be motivated. They should keep their study space more comfortable and welcoming as it can help the students maintain a good mood.
5. A good coping mechanism is essential to reduce stress. Tourism students should have some time for themselves, like rewarding themselves or hanging out with their friends or families.
6. Tourism students should do self-meditation such as deep breathing, yoga, and self-talk to help them alleviate anxiety.
7. Tourism students with signs of depression should avoid or reduce exposure to some common triggers. They should also stay connected to the people who care about them like their families, especially their parents or join a group as much as possible to support them emotionally. They should learn how to balance their time with studying by having bonding with their families where they can do board games, simple lunch or dinner at home.
8. Tourism students who have panic attacks should inform their teachers about their situation, as it can happen for no specific reason. They can also seek counseling, if needed.
9. Tourism students who have the possibility of self-harming should practice releasing their feelings or burdens in a safer way. Parents should be aware of the circumstances that may affect their children. Guardians should keep them away from hazardous things that they might use to harm themselves, like sharp objects.
10. Tourism students who are sleep deprived should establish a sleeping schedule to have a proper circadian rhythm. They can also try reading books or watching videos to fall asleep easily.

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## Prevalence of Intimate Partner Violence among women in Arumeru District



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**ABSTRACT:** Intimate partner violence has been prevalent worldwide. The extent of violence results in a number of physical, emotional effects and even death. In Tanzania the problem has been persistent for with grave consequences. It is with this concern that this study embarked on a research journey in order to assess the type of violence intimate partners experience and establish the determinants of Intimate Partner Violence in Arusha Region. The study adopted a Probability sampling technique where a total of 300 aged 15 to 60 were sampled for the study from Sing'isi and Akheri ward in Arumeru District. The study adapted the Validated Arabic Version of the NorVold Abuse Questionnaire (NORAQ) as a quantitative tool while a face to face interview was conducted as qualitative method. The study explored three types of violence experienced by the respondents that is emotional, physical and sexual violence. In each of the three violence types the extent of violence was measured through the questions established by the NorVold Abuse Questionnaire. The study revealed that majority of respondents (78%) had experienced mild emotional violence from their partners while only few of them (20%) had experienced mild sexual violence. Forty six percent of the respondents have experienced mild physical violence, making it the second type of violence experienced by many respondents while Seventy eight percent of respondents reported that they had experienced mild emotional violence in their relationship. For the case of factors for IPV the study shows that there is a significant relation between financial dependence, employment status, income per month, age at marriage and partner drink alcohol or use drugs with respect to Intimate partner violence in Arumeru District.

**KEYWORDS:** Intimate, Partner, Violence, Abuse, Women

### 1.1 BACKGROUND

Violence against Women has been categorized as grave unjust against human rights. To this, the General Assembly of the United Nations put forward a General Assembly resolution 48/104 of 1993 which required all member states to adopt the Declaration on the elimination of violence against women. Much as many countries have adopted the declaration to end violence against women, the statistics on women violence is still staggeringly high. According to UN data of 2021, it has been shown that one in every three women worldwide has experienced physical and or sexual violence. Africa and other low income countries are reported to have a large percentage of women violence as compared to higher income countries. WHO (2021) reported that Africa accounts for 31% of women violence while developed countries have 22% of women violence (UN, 2021).

Intimate partner violence; have been prominent among other forms of violence against women. Lancet (2022) reports that across the globe, 27% of women aged 15 to 49 years who have been in a relationship report that they have been subjected to some form of physical and/or sexual violence by their intimate partner. The extent of violence results in a number of physical, emotional effects and even death. Recently statistics has shown that Intimate partner homicide have been increasing with 82% of the victims being women (UN, 2021).

As elsewhere in the world, Tanzania faces this grudge against human rights. Women throughout the country encounter this problem as early as their infancy. According to the census findings of 2012, 1 in 3 women in Tanzania have experience either physical or sexual violence in their lifetime. Of women aged 15-49, 44% have experienced either physical or sexual violence by an intimate partner. Spousal violence prevalence is highest in rural areas, averaging 52% while the prevalence in urban areas averages 45%. Almost 30% of girls experience sexual violence before the age of 18 (World Bank Tanzania, 2022).

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Alcohol and drug abuse, low levels of education, low income levels, tradition and norms are among the determinants of intimate partner violence in Tanzania (Magombola and Shimba, 2020). According to Rugira (2015) Violence against women is caused by excessive alcohol consumption; economic conditions such as lack of food and other needs; denial of sex by a partner; extra-marital sexual relationships; use or abusive language; misuse of family income/property; failure to participate in household income generating activities and frustrations due to a decline in household income. Also traditional and cultural practices contributed much to violence against women. Complementing the above findings, Kinyondo et al (2021) states that IPV might be perpetuated by alcoholism, history of violence within the abusers family and polygamous situation. Moreover this study reveals that, women who accept wife beating in certain circumstances are more likely to experience IPV. In addition, women from middle income households were more likely to experience sexual violence compared to women from poorer households.

The Government of Tanzania, in efforts to curb violence against women have taken a number of steps including; Enactment and operationalization of relevant policies and laws to enhance policy, legal and institutional framework including coordination mechanisms, initiation and implementation of the National action plan to end violence against women and children and establishment of police gender desks in every district. Stipulation to end violence in the Development Vision 2025 and Enactment of Sexual Offence Special Provision Act 1998 (URT, 1999) also shows how the Government is committed towards ending violence against women in the country.

Despite these efforts by the Government of Tanzania, Violence against women is still persistent and feared to be on the increase side. Women are abused in both urban and rural areas around the country. Among those who are abused only few report to the authorities leaving the majority cases unreported. With this situation it becomes even hard to eliminate the problem, since the victims tend to hide the perpetrators. Arusha region, is among the mentioned regions in the country with many cases of violence against women. In Arusha 1 out of 3 women reported to be abused in the DHS of 2012. It is with this concern this study intended to assess (i) the type of violence intimate partners experience and (ii) the determinants of Intimate Partner Violence in Arusha Region.

### **THEORIES ON INTIMATE PARTNER VIOLENCE**

This study is guided by the system and resource theories (1973). Strauss in systematic theory considers intimate violence to emanate from the family systems. Strauss stresses that violence and conflict are systematic product of family systems rather than inadequate socialization. With this theory it becomes clear that within the course of life, spouses within a certain family argue or differ in different causes making them fight or get abused. The abuses become repetitive and the violence cycle might take years or a lifetime. Giles-Sims (1983) explained the intimate violence cycle devising six stages building on the systems theory. The stages by Giles-Sims included (a) the establishment of the family system (b) the first incident of violence (c) stabilization of the violence (d) the choice point (e) leaving the system, and (f) resolution to more of the same (Wright, 2002). These stages explain a lot on why women who are victims of violence from their spouse stay in the relationship regardless of the ill treatment from their partners. They further explain the reasons why the aggressor continues abusing the victim even in the presence of laws and other instruments condemning this act. This theory applies in the study area since the incidence of violence towards women and children within the families have been even higher when compared to the past years as Statistics show that in 2021 a whopping 3,949 people, mostly women and children were subjected to harsh acts such as physical, verbal, psychological, sexual, domestic, child marriage and early pregnancies as compared to a lower number of 3054 incidences in 2019. Violence within families is what Giles-Sims stresses in the six stages of violence. He stresses that a child from a violent family is likely to be perpetrator of violence since he/ she has passed through the six stages of violence cycle and have observed their parents (mostly mothers) being the victim of the violent act.

Complimenting the system theory, the study is also informed by the resource theory. The resource theory suggests that intimate partner violence is present in families due to presence or absence of resources. It argues that men with few resources become more violent as compared to men with resources hence those with few resources opt to use violence to become dominant and respected in the family (Cools and Andreas, 2017; Goode, 1971; and Vyas and Watts, 2009). Among the resources considered to reduce violence in household is education and finance.

Education and employment within a family has been regarded as assets. It is argued that if the family has these two assets the levels of violence become low and in many instances it becomes rare. According to SIDA (2015); Cools and Andreas (2017) and Rapp et al (2012) it has been proven that the number of years a person spends in school has been shown to have a positive correlation with a decrease in both future victimization and perpetration of physical and sexual violence. Further education increases employment

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opportunities and hence improves socio economic status of partners. The empowerment attained reduces the unequal power relationship

### METHODOLOGY

Probability sampling technique was applied to get women for the study. This technique was used on the basis that women 1 of 3 female members of community have faced violence. So if the respondent has never faced any form of violence then she had the right to withdraw from the research. A total of 300 aged 15 to 60 were sampled for the study from Sing'isi and Akheri ward in Arumeru District. The study adapted the Validated Arabic Version of the NorVold Abuse Questionnaire (NORAQ) as a quantitative tool while a face to face interview was conducted as qualitative method. The NorVold Abuse Questionnaire was selected since it was developed for the purpose of measuring prevalence of emotional abuse, physical abuse and sexual abuse; the severity and perception of victims. In order to establish if the respondent have experienced violence the tool used categorizes violence into three levels that is mild, moderate and severe. For the case of mild emotional violence the respondent were asked the following question *"Have you experienced anybody systematically and for any longer period trying to repress, degrade or humiliate you?";* for moderate violence the following question was asked *"Have you experienced anybody systematically and by threat or force trying to limit your contacts with others or totally control what you may and may not do?";* and for severe violence the following question was asked *"Have you experienced living in fear because somebody systematically and for a longer period has threatened you or somebody close to you?"* For the case of physical violence from their partners the respondents were also asked they have faced mild, moderate or severe form of physical violence from their partners. Mild physical violence was inquired by the following question *"Have you experienced anybody hitting you, smacking your face, or holding you firmly against your will?";* while moderate physical violence was inquired by *"Have you experienced anybody hitting you with his/her fist(s) or with a hard object, kicking you, pushing you violently, giving you a beating thrashing you, or doing anything similar to you?";* For the case of severe physical violence they were asked *"Have you experienced anybody threaten your life by, for instance, trying to strangle you, showing a weapon or a knife, or by any other similar act?";* Another type of violence experienced by the respondents was the sexual violence. It was also categorized into three levels as the other two types of violence. In order to know if the respondents have encountered mild form of sexual violence the following question was asked *"Has anybody against your will touched parts of your body other than the genitals in a "sexual way" or forced you to touch other parts of his or her body in a "sexual way"?";* and for moderate sexual violence they were asked *"Have you in any other way been sexually humiliated, eg, by being forced to watch a porno movie or similar against your will, forced to participate in a porno movie or similar, forced to show your body naked, or forced to watch when somebody else showed" and for the case of severe form of sexual violence the question was "Has anybody against your will touched parts of your vagina, mouth, or Has anybody against your will touched parts of your vagina, mouth, or rectum or tried any of this, put in or tried to put an object or other part of the body in to your vagina, mouth, rectum area".* The validity index of the Questionnaire adapted is 0.90 while the reliability coefficient was 0.75. Supplementing the NorVold Abuse Questionnaire, an interview guide was used to collect information to 10 respondents who have experienced a form of violence from their partners. The questions in the guide where formed in a way that they could answer questions to help find answers to the two objectives of the study.

### ETHICAL PROCEDURES AND DATA ANALYSIS

The study followed ethical principles since it was a very sensitive subject to discuss with the victims and survivors of violence. It is with this concern that the respondents had to agree and sign a consent form. The respondents were informed about their right to withdraw from the study. Confidentiality and anonymity were assured.

Data analysis was done for both quantitative and qualitative information collected. For the case of quantitative data, the data were analyzed using SPSS (Statistical Package Social Sciences) version 21.0. Since the study wanted to (i) assess the type of violence intimate partners experience and (ii) the determinants of Intimate Partner Violence in Arusha Region, the following analysis procedure was used. For the case of the type of violence experienced the study applied descriptive analysis to obtain frequency and percentage of respondents who have experienced emotional, physical and sexual violence. While for the determinants of IPV the study applied a multiple linear regression to test variables which might be the cause of violence to the respondents. The estimation of regression model for determinants of IPV is as follow:

$$Y = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + X_6\beta_6 + \epsilon;$$

Where:

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Y= Experienced IPV

X1= Age of respondent, X2= Financial dependency, X3= Employment status, X4= Income per month, X5= Age at marriage, X6= Partner drink alcohol, abuse drugs,  $\varepsilon$  = error term,  $\beta_0$  = Regression constant,  $\beta_1 - \beta_6$  = Regression coefficient in the model

For inferential statistics, Pearson's Chi-square was used to test the relation between IPV and the independent variables. The T-Test was used to test the relationship between IPV and the quantitative independent variables. A p-value < 0.05 was considered significant.

### RESULTS AND DISCUSSION

The results of this study are presented in three sections. The first section presents the characteristics of the respondents while the second section presents the type of violence experienced by the respondents and final part represents the determinants for IPV in the study area.

#### The characteristics of the respondents

The study had a total of 300 women who in a way have experienced different type of violence from their partners in their current or past relationship. The age, education level, marital status, occupation, residence status, education level of partner, income per month and type of house are presented in table 1.

**Table 1. Characteristics of Respondents (n = 300)**

Category	Frequency	Percentage
<b>Age of respondents</b>		
18-24	11	4
25-29	22	7
30-34	78	26
35-39	87	29
40-44	72	24
>45	30	10
<b>Education level of respondents</b>		
No formal education	39	13
Primary	210	70
Secondary	33	11
University	18	6
<b>Marital status of respondents</b>		
Single / cohabiting	81	27
Married	195	65
Divorced	15	5
Widow	6	2
Separated	3	1
<b>Occupation of respondents</b>		
Formal employment	51	17
Farming & livestock keeping	132	44
Housewife	105	35
Retired	12	4
<b>Education level of respondent's partner</b>		
No formal education	54	18
Primary	108	36

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Secondary	96	32
Tertiary	42	14
<b>Residence status</b>		
House owner	101	34
Rented house	147	49
Family house	52	17
<b>Income per month (Tshs)</b>		
Less than 100,000/=	108	36
Between 100,000/= and 200,000/=	132	44
Between 200,000/= and 500,000/=	54	18
Above 500,000/=	6	2

From Table 1 it is revealed that majority of respondents 237 were from 30 to 44 years. The study involved only female respondents who have encountered a certain type of violence, since it was based on probability sampling, those who have not encountered violence were not involved in the study. Only 11% of the respondents below the age of 29 were included in the study. This brings out two assumptions one being that this age group though in marriage or other intimate relationship are afraid to talk about this issue or they are forbidden to discuss this issue. Age has been regarded as a risk factor to violence as many study conducted have proved that female aged between 15 and 49 years encounter violence more than others (SIDA 2015; relief web, 2019; Cools and Andreas, 2017 and Rapp et al, 2012).

A good number of respondents have attained primary education (70%) and only 11% have attained secondary education. This is contrary to their partners' education level as 32% have obtained secondary education. However a good number of respondents partners' (18%) were illiterate. This might be a reason for higher incidences of violence among the respondents. Educations have been mentioned as a catalyst to reduce or increase domestic and intimate partner violence (SIDA, 2015). In a study by Plan International (2012) it was revealed that the number of years a person spends in school has been shown to have a positive correlation with a decrease in both future victimisation and perpetration of physical and sexual violence.

Sixty five percent of respondents reported to be married at the time the research was conducted. This implies that intimate partner violence do occur in marital homes more than in other form of relationship since the study dealt with women respondents who had experienced violence within their lifetime. These findings might be different from other findings who report that married couples have less violence incidence than unmarried couples. Frias and Angel (2005) conducted a study of violence among women who were married against those who where unmarried. The results of this study indicated that women who are married are less likely to experience violence than their unmarried counterparts.

A good number of respondents (44%) reported to earn between 100,000/= and 200,000/= TZS while 36% reported to earn less than 100,000/= TZS. This finding clearly shows that majority of respondents (80%) earns less than 6,700 TZS per day. Despite earning beyond the poverty line which is 3734 TZS a good number of these respondents might still be poor since World Bank report of 2019 reveals that Poverty in Tanzania remains at 49% of the population which is almost half the population. The report further reveals that poverty in Tanzania is substantial as three Tanzanians fell into poverty for every four. Income of partners plays a crucial part in family calmness and peace. Poverty has been associated by increased incidence of violence (Reis, 2019). According to this author poor households show higher rates of abuse and specifically women in poorer households are 3.5 times more likely to experience violence than women in slightly better off households. It is with this concern the study measured the income of the respondents aiming to know their income status.

### **Type of violence experienced by respondent.**

The study explored three types of violence experienced by the respondents that is emotional, physical and sexual violence. In each of the three violence types the extent of violence was measured through the questions established by the NorVold Abuse Questionnaire. The questionnaire intended to know if the respondents have experienced the violence mildly, moderately or severely. Table 2 reveals that majority of respondents had experienced mild emotional violence (78%) from their partners while only few of them (20%) had

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experienced mild sexual violence. Forty six percent of the respondents have experienced mild physical violence, making it the second type of violence experienced by many respondents.

**Table 2: Type of violence experiences by respondents (n=300)**

Type of Violence	Frequency	Percentage
<b>Emotional violence</b>		
Mild	234	78
Moderate	69	23
Severe	60	20
<b>Physical Violence</b>		
Mild	138	46
Moderate	150	50
Severe	48	16
<b>Sexual Violence</b>		
Mild	60	20
Moderate	33	11
Severe	30	10

Seventy eight percent of respondents reported that they had experienced mild emotional violence in their relationship. They explained that they have encountered repression, humiliation and sometimes they have been degraded by their partners and spouses. On another hand 288 respondents reported to have experience Mild to Moderate physical violence while 123 respondents revealed that they have been sexually abused by their partners in their lifetime.

According to Engel (2002) emotional violence is a nonphysical behavior or attitude that is designed to control, subdue, punish or isolate another person through the use of humiliation or fear. The respondents reported to have been emotionally abused consequently by their intimate partners in different ways. Threats of abandonment or abuse, confinement to the home, surveillance, threats to take away custody of the children, destruction of objects, isolation, verbal aggression and constant humiliation were the common type of emotional abuse experienced by the respondents as the following respondent in an interview states;

*“My husband controls my mobile phone. He bought the phone for me as a gift but he controls everything I do with that phone. He reads all the messages and even listens to the conversation I make with the phone while he is around. He interrogates every call I make and threatens to hit me if he does suspect that I am not telling him the truth”. (Interviewee 006, Arumeru, Arusha)*

Emotional abuse has been correlated with other types of abuse such as physical, economic and sexual abuse. The person who is isolated and is emotionally abused can easily be violated physically or sexually since they are controlled by the abuser. Gondolf et al (2002) substantiates this as they report that there is a high correlation between physical abuse and emotional abuse in batterer populations and verbal abuse early in a relationship predicts subsequent physical spousal abuse. This is further supported by Tracy (2022) who states that Physical and emotional abuse go hand-in-hand in many relationships. In fact, it is rare to find physical abuse without the presence of emotional abuse.

In the current study, about 288 respondents revealed that they have experienced mild and moderate forms of physical abuse. They reported Physical violence acts including punching, pinching, kicking, strangling, hitting (whipping), using weapons, throwing things and destroying properties among others. They blamed their cultures for the persistence of physical abuse within their society as one of the interviewee retorts;

*“In our culture, a husband is told to discipline the wife whenever she does something wrong. The wife on the other hand is not supposed to report this incident anywhere as it is forbidden. So the son grows seeing their mother being abused, what do you think? He will also end up being an abuser” (Interviewee 002, Arumeru, Arusha)*

Apart from the culture, poverty and financial dependency was also mentioned as a reason why the victims sustain the situation as this young wife reports;

*“In a week I can be abused once or even twice. When my husband goes drinking he comes home late. He wakes me up to prepare food and watch him eat. If I sleep while he is eating I get slapped, and if I do not prepare him the meal he likes I also get beaten. I am*



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*forbidden to complain this to anyone, so whenever I tell my mother about this she instructs me to calm down promising me that the situation will calm down eventually". (Interviewee 008, Arumeru, Arusha)*

Sexual abuse, like the other reported forms of abuse was reported. About 123 respondents revealed that they have been sexually abused by their partners or other male counterparts. Rape, inappropriate touching, being forced to kiss, being forced watching pornography and other illicit materials and fondling and also being forced into oral sex were among the forms of sexual abuse experienced by the respondents. They blamed sexual violence and especially rape to the culture. They reported that when a woman gets married in their culture, she can never deny her husband intimacy. She has to oblige regardless of any reason she has. This is what a respondent revealed during an interview;

*"In my culture, I am obliged to fulfill my partners urge for sex whenever he wants. It does not matter that I am sick or tired. Except when I am in my periods, so if I feel that I am not in the mood I just fake that I am in my periods so that he leaves me alone" (Interviewee 004, Arumeru, Arusha)*

### Factors associated with Intimate partner violence

A number of factors were associated with intimate partner violence in Arumeru district. After running a regression analysis it was learnt that at  $p = 0.05$  the t values for five factors become statistically significant because of their corresponding p value  $\leq 0.05$ . Therefore financial dependence, employment status, income per month, age at marriage and partner drink alcohol or use drugs are individually useful in the prediction of Y (Experienced Intimate Partner Violence) which is the dependent variable.

**Table 3: Regression coefficients**

Model	Unstandardized coefficients		Standardized coefficients		
	$\beta$	Standard Error	Beta	t	Significant
Constant	3.324	0.341		9.73	0.000
Age	0.74	0.91	0.14	0.53	0.562
Financial dependence	0.62	0.31	0.149	0.29	0.037*
Employment status	-0.081	0.028	-0.172	-0.285	0.005*
Income per month	-0.059	0.026	-0.126	-0.252	0.025*
Age at marriage	-0.122	0.027	-0.252	-0.458	0.000*
Partner drink alcohol or use drugs	0.104	0.052	0.109	0.208	0.004*

From the regression equation above, taking all the predictor variables constant (zero), the dependent variable is 3.324. From the findings in the regression equation above it can be deduced that one unit change in financial dependence results in 0.62 units increase in intimate partner violence. Thus, financial dependence a strong positive and significance influence on Intimate partner violence. Similarly, one unit change in employment status results in -0.081 units increase in IPV. Furthermore, one unit change in income per month result in -0.059 units increase in IPV. Basing on the rule for significance level, the study indicates that there is a significant relation between financial dependence, employment status, income per month, age at marriage and partner drink alcohol or use drugs with respect to Intimate partner violence in Arumeru District.

Financial dependence, employment status, income per month, age at marriage and partner drink alcohol or use drugs have been reported elsewhere as the risk factors associated with not only intimate partner violence but domestic violence as a whole. In a study conducted by Dhungel et al (2017) in Nepal it was deduced that women's economic dependence on their husband was a risk factor to psychological IPV as the adjusted odds of this violence in women who had economic dependence on husband was 3 times higher than the odds of women without dependence. In another study by Singh et al (2022) this was also the case since their study found out that women who were financial dependent on husbands were more likely to report experiences of IPV within the past 12 months than women who were not financial dependent on their husbands. This was also the case in Arumeru since the respondents reported the same. They reported that financial dependence makes them to be tied to their partners so that they can fulfill their basic needs and that of their children. The following case elaborates;

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*"In our culture a wife becomes obedient once she stays home while the husband works. I normally take care of the domestic animal and banana plot at home, on the market day I go and sell banana and if at all I have eggs. That is the only source of income I have as a wife. Apart from that I depend on my husband to provide for me and my kids every need we have."* (Interviewee 007, Arumeru, Arusha)

Age of marriage was also a risk factor to IPV since it was significant when tested. In Tanzania the age of marriage is at 15 years which indicates that the girl married at this age is still very young. She can be abused in many ways since she is still afraid and lack knowledge of her rights as a wife and human being. In Arumeru this is the case since the Maasai and Meru culture allows marriage at this age and even at a younger age than this. This has been a risk factor for husband abusing their wives. They are protected by the culture and the victims are denied the rights to report or leave the marriage by the same culture. Kidman (2016) substantiates this argument as their study reveals that child marriage also places young women at elevated risk for intimate partner violence (IPV), which is in turn linked to additional adverse physical and mental health outcomes. Men who marry very young girls may hold traditional masculine ideologies, and because of this be more likely to abuse their wives.

Another determinant of IPV was found to be alcohol and /or drug abuse. The respondents reported that their husbands or partners consume alcohol frequently and sometime they use marijuana or other hard drugs. They further emphasized that abuse in the household normally occurs once their partners are drunk, or have used the marijuana. Different studies worldwide have confirmed the relationship between alcohol and abuse. Dhungel et al (2017) in a study conducted in Nepal reports that alcohol use of the husband was a risk factor for psychological IPV. The odds of psychological IPV was about 5 times higher for women whose husbands used alcohol than those not drinking alcohol even after adjustment [Adj OR = 4.85, CI = 2.37–9.95]. Further Crane et al (2014) reveals the same as their study reports that alcohol and cocaine use disorders were significantly associated with IPV perpetration over the past year. A comorbid alcohol use diagnosis increased the likelihood of IPV perpetration among participants with either cannabis or a cocaine use disorder.

## CONCLUSION

The risks of experiencing Intimate partner violence increases in the communities as a result of financial dependence, employment status, economic status, age at marriage and partner tendency to drink alcohol or use drugs. This is the case in Arumeru but the study believes that it might be the case in other parts of Tanzania too. Women and girls in the country have been abused more as compared to the male counterparts. They encounter emotional, physical and sexual abuse. The findings from the current study indicate that women from the study area encountered emotional violence more as compared to the other forms of violence.

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## Quality of Services for Making Taxpayer Indication Number Through E-Registration System at Pratama Tax Service Office Surabaya Wonocolo



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**ABSTRACT:**The modernization of the tax system in the implementation of the tax self-assessment system in Indonesia has also affected the service model at the Directorate General of Taxes. One form of electronic-based service is the implementation of the E-Registration system for NPWP registration. NPWP registration through the E-Registration system is also carried out for taxpayers who are registered at KPP Pratama Wonocolo.

This study aims to analyze the quality of service for making NPWP through the E-registration system with a discussion regarding the fulfillment of service quality indicators and measurement of what are the inhibiting and supporting factors of implementing the quality of service for making NPWP through the E-registration system. This research method is descriptive research with a qualitative approach, and data collection is done by interview, observation, and documentation techniques. The results obtained are then collected, reduced, presented, and conclusions are drawn.

The results of this study indicate that the quality of NPWP Registration services through the E-Registration system at KPP Pratama Surabaya Wonocolo in general has met the criteria for service quality according to Tjiptono, but there are still things that have not been optimally implemented. Apart from that, there are several supporting and inhibiting factors in the implementation of NPWP registration through the E-Registration system at KPP Pratama Surabaya Wonocolo

**KEYWORDS:** Service Quality, system, tax, e-registration

### INTRODUCTION

Taxpayer compliance is influenced by several factors, such as the condition of a country's tax administration system, services to taxpayers, tax law enforcement, tax audits, and tax rates (Devano and Rahayu, 2006). According to research conducted by Kahono (2003); Sasmita (2015); Nurhakim and Pratomo (2015) state that the attitude of tax services influences the behavior of taxpayers. The easier it is to understand the tax service, the more obedient the taxpayer will be. Furthermore, Simon, James., and Alley Clinton (1999) explained that in order to increase taxpayer compliance in fulfilling their tax obligations, the quality of tax services must be improved by the tax authorities. Good tax authorities will provide convenience for taxpayers.

The main function of the Directorate General of Taxes (DGT) is service. This can be seen in the mention of his office, namely the Tax Service Office. Service is a process of helping others in certain ways that require sensitivity and interpersonal relationships to create satisfaction and success (Ni Luh, 2006). Taxpayers will comply in fulfilling their tax obligations depending on how the tax officials provide the best quality service to their taxpayers. Therefore, tax officials must always improve the quality of tax services with the aim of increasing taxpayer compliance by placing taxpayers as customers who must be served as well as possible, like customers in a business organization. However, what happened instead of serving tax officers, but instead asked to be served, perhaps because of the strong feeling of being a Civil Servant (PNS) (Fidel, 2010: 22).

The number of taxpayers (WP) registered in Indonesia continues to increase every year. Based on data from the Directorate General of Taxes of the Ministry of Finance (DJP Kemenkeu), there were 49.82 million WP registered in 2021. This number increased 7.42% compared to the previous year which amounted to 46.38 million WP. When compared to the previous decade, which was 22.32 million WP, the number has increased by 123.21%. Meanwhile, the ratio of individual taxpayers (hereinafter referred to as WP) to the working population has also experienced growth in the last 20 years. The ratio of individual taxpayers to the working population increased from 1.82 percent in 2002, growing to 34.66 percent in 2021. The number of individual taxpayers

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has experienced growth during this period. The biggest growth occurred in 2008, namely by 180 percent, which was caused by the sunset policy and higher PPh rates for taxpayers without NPWP. In line with the above, in 2021 the East Java DGT Regional Office I has a revenue target of IDR 44.8 trillion, which will be achieved by the end of 2021. Ranked 6th out of 33 Regional Offices in Indonesia. The level of compliance has increased compared to the same period in 2020. Of the 344,449 taxpayers who are required to report, there are 252,467 taxpayers who have submitted their annual income tax returns. Then in the city of Surabaya, the compliance rate of the taxpayer (WP) of Surabaya residents reaches 73.15 percent. Of the target of 344,449 WP, 251,960 WP have reported their Tax Returns (SPT) as of 1 April 2021 out of a total of 404,330 WP who are required to report. The number of tax returns submitted has increased by more than 34 percent compared to the same period last year.

E-Registration or Online Taxpayer Registration System is an application system part of the Tax Information System within the Directorate General of Taxes, Ministry of Finance, based on hardware and software connected by data communication devices used to manage the Taxpayer registration process. This system is divided into two parts, namely the system used by Taxpayers which functions as a means of online Taxpayer registration and the system used by Tax Officers which functions to process Taxpayer registration. Tax reform in the field of tax administration is a program that seeks to improve the tax administration system from the old system to a new system, namely a system based on information technology (Rahayu, 2010). This system is designed to facilitate tax administration activities, as experts say that information technology makes aspects of human life easier. Stair and Reynolds (2016) call the Information System (IS) a set of components that are related to the activity of collecting, manipulating, storing and disseminating data and information. The Information System also has a feedback mechanism in terms of meeting objectives. This mechanism assists organizations in achieving goals such as those carried out by the government in terms of tax administration. The information system is a combination of five conceptual frameworks, one of which is information technology. Another concept is the management challenge that addresses how deep the problem is in the activities of people using technology to support organizational operations and management.

Information technology-based tax administration system is a form of service to taxpayers that can provide satisfaction to taxpayers. Information technology (IT) or information technology is technology that helps humans create, change, store, communicate and disseminate information by utilizing increasingly advanced technology in this era of fast internet networks. DGT then creates an information technology-based application program to support service improvement for taxpayers. One of the applications made with the aim of improving services to prospective WP is registration of WP or NPWP. The procedures for registering a NPWP are regulated in the Directorate General of Taxes Regulation PER-38/PJ/2013. DGT itself has reformed tax administration by modernizing its tax administration by utilizing information technology.

Modernization aims to provide convenience to prospective new taxpayers who will register to obtain a NPWP through the electronic registration (e-reg) system. The existence of a way to register an online NPWP will certainly make it easier for taxpayers to take care of administration related to taxation. People no longer need to come and queue at the nearest tax office to make a NPWP. To register for an online NPWP, you can do it at home by following the following steps. Later, the NPWP will be sent to the home address written during the online NPWP registration process. It is known, NPWP is the identity of the taxpayer in exercising his tax rights and obligations. Indonesian citizens who already have an income above the average person must have an NPWP. One of the functions of the NPWP is as a means of tax administration which is used for personal taxpayers and corporate taxpayers. NPWP is usually a requirement before taxpayers report their annual tax return (SPT). NPWP is also a requirement in public services, such as making passports, applying for credit to banks, making trading business licenses, and so on.

Tax services in the form of physical facilities and services from good tax officials can increase the level of taxpayer compliance. The existence of services supported by facilities such as a large parking area, a comfortable and clean place, the availability of tax forms, the availability of a children's playground if there are taxpayers who bring children, the existence of electronic queue numbers, and IT or e-system support. In addition to the availability of comfortable physical facilities, the services provided by the tax authorities are very supportive, such as friendly and polite tax officers, tax officers who are quick to respond in providing information and solutions to help solve problems faced by taxpayers, tax officers who provide the best service in providing convenience in tax services, as well as tax officials who can uphold integrity, accountability, and transparency can generate trust from taxpayers. Every employee of the Argamakmur Primary Tax Service Office should continue to work hard to do their best in serving the public who want to make a Taxpayer Identification Number (NPWP) (Ramadhan, M, 2017)

The NPWP registration service through an electronic system such as E-Registration, in terms of the process it looks easy and takes place in accordance with procedures, problems related to terms and conditions for registration are no longer an obstacle based on the modernization of the electronic service system, but an assessment of the quality of service is not an assessment only based on procedures, in this writing the study of service quality is not only seen from products such as systems alone, but through

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an assessment of the fulfillment of indicators as stated by Tjiptono (2000) which states that service quality is assessed in a dynamic condition that influences products, services, people, processes, and the environment that meet expectations, so that service quality can be interpreted as an effort to meet the needs and desires of the public and the accuracy of their delivery in keeping with the expectations of service users. Based on the explanation by Tjiptono above, it can be concluded that service quality can be determined by comparing consumers' perceptions of the service they receive with the actual service they expect. If the service received is as expected, then the service quality is considered good and satisfactory.

There are several social phenomena from previous studies related to the modernization of the taxation system such as NPWP registration through E-Registration including (a) the relationship between service quality and the taxation e-system, towards taxpayer satisfaction and tax revenue (Afifah, L., & Susanti (2020)); (b) the dimensions of NPWP registration and tax services have a significant influence on taxpayer compliance by taxpayers in making tax payments (Prilia, S. (2021)), however, Ihsan, M. (2019) in his research stated that tax-making services Taxpayer Identification Number through the e-registration system has not been effective in its implementation both in terms of quality and quantity. The implementation of the service is still constrained in terms of registration procedures, the complexity of the application, and also the dissemination of socialization to the taxpayer community is still not appropriate.

Apart from the above, based on the author's analysis of observations in preliminary research at KPP Pratama Surabaya Wonocolo, there are several problems that arise as a result of implementing the modernization of the tax administration system for the E-Registration, namely

### **(1) Problems related to tax knowledge of taxpayers**

Enforcement of online registration is indeed a convenience in simplifying the tax administration system but this reduces the explanation of tax knowledge regarding the fulfillment of tax obligations. With the implementation of the E-Registration system, taxpayers are considered to have understood and are aware of the fulfillment of their tax rights and obligations. Things like explanations by Help Desk officers to newly registered taxpayers that were done after manual registration are no longer visible.

### **(2) Lack of Taxpayer Information regarding the implementation of the Self Assessment System in the taxation system in Indonesia**

The online registration system indirectly reduces the availability of direct information on submitting matters relating to the activities of calculating, deducting and reporting taxes, causing some taxpayers to not understand their obligations after registering an NPWP. This affects the level of taxpayer compliance, in implementing tax regulations and policies. Knowledge of tax regulations, the function of paying taxes, and the respective tax system have an important role to play in cultivating tax compliance behavior because how can taxpayers be told to comply if they don't know how tax regulations are, for example how taxpayers are told to submit SPT on time if they do not know when the SPT submission is due, what type of SPT to report, what tax obligations must be made. So that the quality of service on the registration of new taxpayers is one of the factors underlying taxpayer tax compliance.

## **RESEARCH METHOD**

This study used qualitative research methods. According to Creswell (2014) qualitative research is a method for exploring and understanding the meaning of discussing social or humanitarian problems from a number of individuals or groups of people. Furthermore Sugiyono in Zamroni et al (2019), explained that qualitative research is a research method based on the philosophy of postpositivism, used to research on natural object conditions, where researchers are the key instrument, data collection techniques are carried out by triangulation (combined), data analysis is inductive or qualitative, and the results of qualitative research emphasize meaning rather than generalization.

Creswell (2014) in his book entitled "Qualitative Inquiry And Research Design" reveals five qualitative research traditions, namely: biography, phenomenology, grounded theory, case studies and ethnography. Qualitative research in this research is used to be able to understand in depth the focus of the research in the form of service quality for making Taxpayer Identification Numbers (NPWP) through the E-Registration system at the Surabaya Pratama Tax Service Office Wonocolo. The focus of this research is the quality of the service itself, both in terms of location, programs, events or activities.

The data analysis technique used in this qualitative research is clear, namely by using qualitative analysis techniques, whereby data collection, observation, interviews and data conclusions are drawn. The model in data collection used in this study is the Miles and Huberman model. In more detail, the steps are according to theory (Huberman, 2014)



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## RESULTS AND DISCUSSION

### 1. Assessment of Service Quality

This research is a qualitative descriptive study regarding the quality of the NPWP Making Service through the E-Registration system at KPP Pratama Surabaya Wonocolo, so the researcher tries to show and describe it. The results of this study are in the form of data obtained through observation, interviews and documentation. The assessment of service quality at KPP Pratama Surabaya Wonocolo is carried out based on the theory of Fandy Tjiptono (2000), namely service quality is determined by five dimensions, namely Tangible, Reliability, Responsiveness, Assurance, and Empathy. The results and qualitative analysis on each dimension of service quality can be described with the following explanation:

#### a. Dimensions of Direct Evidence (Tangible)

To be able to realize quality public services, improvements need to be made that lead to service user satisfaction. In this study, the tangible dimension is determined from indicators, namely the appearance of employees in serving the community, the convenience of service places, the ease of service processes, and the discipline of officers. The quality of services provided is not yet optimal, in this case it is related to the tangible dimension of the E-Registration system, namely with regard to the lack of information regarding rights and obligations in registration through the E-Registration system, the existence of information or socialization related to several regulations that are not understood by the public. However, KPP Pratama Surabaya Wonocolo employees have provided a neat appearance when serving service users and making it easier for service users in the NPWP registration service process.

#### b. Dimensions of Reliability (Reliability)

Reliability is the ability of officers to provide promised services promptly and satisfy shipping companies or service users. The reliability of officers really helps service users in receiving services quickly and easily. All officers are expected to have the ability, expertise, independence, mastery and high work professionalism so that work activities can produce satisfactory forms of service without complaints and excessive impressions from service users. In this study, the reliability dimension is determined by indicators, namely the accuracy of officers in serving service users, having clear service standards, and the ability to use service tools. In practice, there are still indicators that have not worked, namely KPP Pratama Surabaya Wonocolo has not informed or provided socialization to the public or taxpayers regarding existing service standards, but KPP Pratama Surabaya Wonocolo employees have been careful in serving service users and have the ability to use service tools. good.

#### c. Dimensions of Responsiveness (Responsiveness)

The responsiveness dimension is giving a good, fast, and responsive response in receiving complaints from service users. Responsiveness to respond to service users is one of the drivers of service success. Because if the implementation of the service is based on the attitude, desire, and commitment to carry out the service well, it can create an increase in the quality of service that is getting better. Assessment of the quality of online NPWP registration services, in this dimension, uses several indicators, namely responding to each service user, the speed and accuracy of officers when carrying out services, and the response of officers when receiving complaints from service users. In the implementation of responsiveness indicators have shown good quality. KPP Pratama Surabaya Wonocolo has given a good response, providing fast and precise service, officers providing services at the right time, namely 10 - 15 minutes with a maximum completion time of 1 day, and providing a good response to any complaints from service users.

#### d. Dimensions of Guarantee (Assurance)

All forms of service require certainty or guarantees for the services provided by the service provider. The form of certainty of a service is largely determined by guarantees from officers who provide services, so that service users who receive services feel satisfied and believe that all forms of service affairs provided are completed with speed, accuracy, smoothness and quality of services provided. The assessment of service quality is measured using indicators, namely guarantees for timely service and guarantees for certainty of costs in services that have shown good quality. From several existing assessment indicators, KPP Pratama Surabaya Wonocolo can fulfill the guaranteed timeliness of service, namely 10-15 minutes in the service process and a maximum of 1 day, and there are no fees charged in the NPWP registration process.

#### e. Empathy Dimension

Every service activity requires an understanding and understanding in the togetherness of thoughts or needs on matters related to service. Services can run smoothly and have quality if all parties related to the service have a sense of empathy in each end or have the same principles for service. Empathy in a service, namely the presence of attention, seriousness, sympathy,

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understanding and involvement of parties related to the service to develop and carry out service activities in accordance with the level of understanding and understanding of each party. The party providing the service needs to have empathy to understand the problems of the party to be served. The party to be served should know the limitations and abilities of the serving officer, so that the integration between the party serving and receiving the service has the same feeling.

This means that every form of service provided to the community requires empathy for every problem faced by service users who require service. Service users who need service want a sense of concern for all forms of service management, by knowing and understanding the needs for fast service demands, understanding various forms of service change, so that the service takes place in accordance with the activities provided by service providers and those who need service. To be able to measure the dimensions of empathy, the authors based on several indicators including prioritizing the interests of service users, serving in a friendly and courteous manner, and officers not discriminating. From the assessment indicators used, there are several indicators that have been implemented and have met the expectations of service users. including prioritizing the interests of shipping companies or service users, officers serving with courtesy, officers not discriminating, and officers serving and appreciating service users.

### **2. Qualitative Analysis of the Implementation of Service Quality Analysis Assessment**

The quality of the NPWP registration service through E-Registration both as independent service users and the implementation of electronic registration at the TPT KPP Pratama Surabaya Wonocolo registration counter has basically shown fulfillment of the theoretical indicators of service quality of Tjiptono (2000) which became Based On Research from the research conducted. In addition to the use of service quality theoretical indicators from Tjiptono (2000), the discussion also deals with phenomena that were obtained when the research was conducted, such as:

- 1). The results of the Community Satisfaction Index Assessment released by the Ministry of Administrative and Bureaucratic Reform stated that KPP Pratama Surabaya Wonocolo had received a very good category with a score of 94, which involved 400 respondents in the 2022 period;
- 2). The internal data of KPP Pratama Surabaya Wonocolo based on respondents' answers at KPP Pratama Surabaya Wonocolo show that on Respondents' assessment of E-Registration the lowest score in Descriptive Statistics was 10.00 and the highest value was 25.00, and the mean obtained was 20.7449 with a standard deviation of 3.99048. The Mean value can be indicated that the answers obtained from respondents on the e-registration variable are relatively good.
- 3). Acceptance from the Private Sector mentioned in the research data grew by 171.77% and succeeded in meeting the achievement target of 91%, indicating a positive relationship with the increase in the use of electronic administration systems, in this case increasing the contribution of the NPWP registration system through E-Registration to acceptance in the private sector, this is based on qualitative reasons, that the object of registration by means of E-Registration is an Individual Taxpayer.

### **3. Inhibiting Factors and Supporting Factors**

The analysis of inhibiting factors and supporting factors in the study was based on the results of non-writing research carried out by researchers as supporting research in order not to eliminate the research focus by reading qualitative data on analysis of the quality of NPWP registration services through the E-Registration system at KPP Pratama Surabaya Wonocolo . The supporting research carried out is by conducting a SWOT analysis (strengths, weaknesses, opportunities, and threats). Head of KPP Pratama Surabaya Wonocolo regarding the criteria and level of significance in the implementation of services for NPWP registration at KPP Pratama Surabaya Wonocolo. The results of the analysis of supporting and inhibiting factors, qualitatively, can be presented as follows:

#### **1). Tangible Dimensions**

The supporting factors that exist are: a. There is support from the Central Government with uniform arrangements, and procurement of service tools in the taxpayer service room; b. Strong application / information system support from the central government, with strengthening in the field of training, improving service systems and governance of electronic file preparation and management

The inhibiting factors on this dimension are: a. Not optimal well-being of employees in conveying information to taxpayers; b. Not yet optimal implementation of best practice implementation of services from employees, due to the high quantity of work being done

#### **2). Reliability Dimension**

Supporting factors in this dimension are: a. Optimization of Information and Technology Systems in the E-Registration system that is connected to every line of DGT business processes; b. The process of integrating the management of the E-Registration system

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with the Tax Knowledge Based System was carried out, and redesigning the E-Registration system with governance of institutional capacity and services in DGT work units

The inhibiting factors on this dimension are: a. Internet System and Network Dependence; b. Limited number of human resources in E-Registration Registration Services at TPT Counters; c. Understanding Level of Taxpayers

### 3). Responsiveness Dimension

Supporting factors in this dimension are: a. Strengthening the implementation of extension services to fulfill taxation rights and obligations to taxpayers through the Tax Extension Functional; b. The existence of a supervisory system in various lines of the case management process (case management) in the service of taxpayers; c. Increasing internal and external collaboration functions through media centers and optimizing social media-based service channels.

Inhibiting factors in this dimension are: a. Collection of Evidence Based in each existing case must be done either electronically or manually; b. Completion of tiered cases adds to the longer completion time.

### 4). Assurance Dimension

Supporting factors in this dimension are: a. There are the values of the ministry of finance in the form of implementing the principles of integrity and professionalism; b. There are strict sanctions against other costs received during services that are not. While in the NPWP registration service, it is generally known that the inhibiting and supporting factors are as follows:

#### 1. Supporting Factors

##### a. As the NPWP Registration Authority

The Directorate General of Taxes has authority in determining the fulfillment of subjective and objective requirements for the tax obligations of a taxpayer, so that in this case the authority over the implementation of the E-Registration System registration is a factor that influences whether there is implementation of the policy

b. Simplification of the Modernization of the Tax System, registration as a tax subject by registering through NPWP registration can no longer only be done by coming to KPP Pratama Surabaya Wonocolo, but can be done wherever the tax subject is located. Information Systems and Tax System Modernization in terms of NPWP registration is a form of simplification of the Bureaucratic system in terms of fulfilling tax rights and obligations;

c. Support from external and internal factors, in this case synergy and collaboration between institutions in the Ministry of Finance in terms of collecting tax information and the Surabaya City Government which in this case provides space in providing counseling to the public regarding the registration of NPWP through the E-Registration system.

d. Time Efficiency, this NPWP registration service through E-Registration has one of the benefits, namely time efficiency required to complete the time. Fiskus only takes one working day to complete this service,

e. Public Awareness, Awareness of some people who are aware of taxes is one of the supporting factors for this service, if there is no public awareness this service cannot run well.

f. Consolidation of connected Business Intelligence, this supporting factor is a factor that provides support for system integration between E-Registration, E-Billing and E-Filling Systems in the Directorate General of Taxes business process line, so that easy access to information systems has the carrying capacity of carrying out NPWP registration through E-Registration System.

#### 2. Inhibiting Factors

a. Internet System and Network Dependence, the application of the NPWP registration service is an application that still depends on the existence of an internet network connection so that taxpayers and tax authorities cannot log in if they are not connected to an internet network;

b. The number of human resources, the number of tax officers, who only handle this service, is one of the inhibiting factors for the NPWP registration service by E-Registration at KPP Pratama Surabaya Wonocolo;

c. Understanding Level of Taxpayers, There is still a lack of awareness and understanding of the public, especially every individual whose income has actually exceeded the PTKP but still has not registered to become a registered taxpayer, prompting the tax authorities to conduct a re-socialization. In addition, there are still many taxpayers who do not understand how to use the internet which is also one of the inhibiting factors for tax authorities in carrying out NPWP registration services through E-Registration.

d. Not yet optimal Counseling and Outreach by KPP Pratama Surabaya Wonocolo, there is still a lack of socialization of the registration system through the E-Registration system, this is because the focus of socialization is directed at socializing rules relating to fulfilling tax rights and obligations;

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### CONCLUSION

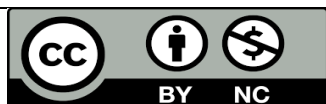
1. The quality of NPWP registration services through E-Registration both as independent service users and implementation of electronic registration at the TPT KPP Pratama Surabaya Wonocolo registration counter has basically shown fulfillment of the theoretical indicators of service quality Tjiptono (2000) which became Based On Research from research conducted conducted;
2. There are several supporting and inhibiting factors in the implementation of the NPWP registration service through E-Registration at KPP Pratama Wonocolo in each dimension contained in Tjiptono, which in general relates to Simplification of the Modernization of the Tax System, Support for external and internal factors, Time Efficiency, Public Awareness, and Consolidation of connected Business Intelligence and Factors of Internet System and Network Dependence, Number of Human Resources, Level of Understanding of Taxpayers, and Counseling and Outreach activities by KPP Pratama Surabaya Wonocolo

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## Analysis of Athletes' Anxiety Levels Before Special Matches in Martial Arts



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**ABSTRACT:** Anxiety in athletes before the game makes the athlete's performance not optimal and results in the athlete's performance decreases. This study aims to determine the level of anxiety of athletes before special matches in martial arts in sports that can arise in athletes and non-athletes studied through literature reviews. The method in this study uses a literature review with a qualitative approach from 15 research articles on pre-match anxiety in sports. The results of the literature review analysis conducted stated that the athlete's anxiety level increased higher before starting the game. It is concluded that in order for the athlete's performance to be maximized in the match, athletes must have good psychology before the match by paying attention to emotional factors, psychology, and athlete training that has been maximized.

**KEYWORDS:** Sports, Anxiety, Martial Arts

### I. INTRODUCTION

Sport is a complex thing, sports can be seen from various points of view, related to the achievement of achievements as one of the goals of sports (Hardiyono, 2020; Rohmansyah, 2017). There are many influencing factors in achieving these achievements, including physical, psychic, environmental, and other factors that can influence a person in the process of achieving achievements. Appearance at the time of exercise and furthermore, of course, the results or achievements in sports are greatly influenced by the presence of psychic factors, one of which is anxiety (Singgih & Gunarsa, 2008). In doing excessive exercise or when athletes do overtraining, it will experience physical fatigue and psychic factors, namely anxiety. Psychic factors originate within the athlete himself, such as emotional problems, motivation, intelligence, high anxiety, excessive stress (Verawati, 2016). These factors will certainly affect the athlete's performance, but in this case it will only be discussed about the problem caused, namely anxiety. Anxiety can affect the physical and mental condition of the athlete concerned such as increased heart rate, palms grinding, dry mulu which causes thirst, disturbances in the stomach or stomach and muscles of the shoulders and neck become stiff (Gunarsa, 2004).

In some areas there are still many coaches who do not understand about sports psychology so that coaches cannot see the psychological condition of their athletes both on and off the field. Therefore, the coach cannot overcome the anxiety of his athletes when attending the competition. Especially in Indonesia, there is still a lack of coaching staff who can read the situation of athletes' conditions on the psychological side so that it can affect team performance (A. Maulana & Rusdiana, 2019). In the world of sports that one of the components of sports psychology is anxiety. Anxiety is a problem arising from the emotions that often face athletes, especially in individual sports with fairly high difficulties (Setiabudi & Santoso, 2020). Human beings there are positive and there are negative feelings. Positive feelings such as happiness, joy, joy. Negative feelings such as disappointment, disappointment, worry and so on. Anxiety is a psychological aspect that is normal for a person to experience (Jannah, 2016).

Ali, (2012) Control of anxiety levels is very important to do. (Eskandari & Al, 2013) Anxiety control requires special methods. Anxiety in sports is related to mental toughness (Raynaldi et al., 2016). Many sports experts argue that the psychological factors that play an important role in the achievement of achievements are determined by maturity and mental toughness (Clarasati & Jatmika, 2017). Anxiety problems experienced by an athlete such as, problems caused by external factors, namely problems that come from outside the athlete, for example the presence of opponents, referees, spectators, and the environment (Verawati, 2016). The environment in this case of the sports field is always full of anxiety and conflicts, full of fear. At a game, it is clear that anxiety greatly affects the coaches and athletes' achievements. Although an athlete is a former champion, it is rare for the



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athlete to be able to control and adjust all his emotions in the face of a match. One of the emotional states that affect the performance of athletes is anxiety (Jannah, 2016; M. Y. A. Maulana et al., 2017). Anxiety as a lack of unpleasant feelings that can be caused by situations that are considered threatening. In the sphere of sports, the threat situation in question can be pressure directed at the athlete to perform at his best. Anxiety in the game will cause excessive emotional pressure so that the athlete's concentration to face the page will be reduced (Wismanadi, 2017). This means that the athlete's performance decreases, then anxiety will also increase and cause the athlete's performance to decrease. At the time of competing, a very decisive aspect is the mental or psychological athlete. Physical condition, technique, tactics are prepared long before the game, but all of that will be in vain if the athlete cannot control his anxiety.

In sports, anxiety exists within every athlete. "anxiety as an emotional reaction to a stimulus perceived as dangerous." Anxiety is an emotional reaction to a stimulus that is considered dangerous (Huber, 2013). Players who cannot overcome anxiety can certainly interfere with performance in the match. The player will think a lot about the things he will receive if he fails or loses. Anxiety also arises from thinking about things that are not desired to happen, including the player performing poorly, his opponent being seen as better than himself so that the athlete experiences anxiety in the game (A. Maulana & Rusdiana, 2019).

### II. MATERIAL AND METHODS

The method used in this study is literature review with a qualitative descriptive approach. Literature review is a method that prioritizes literature research, such as books and journals (Wirawan, 2021). Meanwhile, the qualitative descriptive approach is research carried out in the steps of compiling theories from data, where the design of qualitative approach methods is universal, flexible, and continues to be developed in the research process (Thomas et al., 2001).

The data used in this study is using secondary data. Sugiyono, (2015) states that secondary data is indirectly retrieved data that can provide information to the data collector. The source of the data obtained is in the form of original scientific reports derived from published scientific articles and accredited and indexed journals, both printed and non-printed, which are interrelated in the analysis of the anxiety level of athletes before special martial arts matches. The data collection method used in this study is the documentation method. The documentation method is a method of collecting data by digging and searching for data from the literature related to what is in the formulation of the problem. The data that has been obtained from various literature is then collected as a unit of documents that will be used in answering the problems that have been formulated.

The article search technique in this study is through web access mendeley, google scholar, and scinece direct as well as on other journal search access with keywords learning models, blended learning, and physical education in health sports. Articles or journals that match the criteria are then taken for further analysis and a journal summary is made including the name of the researcher, the year of publication of the journal, the study design, research objectives, samples, instruments, and a summary of the results or findings. The summary of the research journal is entered into a table sorted according to the alphabet and year of publication of the journal and according to the format mentioned above. This review literature uses literature that can be accessed in fulltext in pdf and scholarly formats (peer reviewed Journal). To further clarify the abstrack and full test journals are read and scrutinized. The journal summary is analyzed on the content contained in the research objectives and research results/findings. The analysis method used is the analysis of the contents of the journal.

### III. RESULTS AND DISCUSSION

This review of the literature review was conducted to determine the analysis of the anxiety level of athletes before a special martial arts match. The collected literature was analyzed with a critical Appraisal table to answer the measurement objectives compared to the results of simple measurements. There are as many as 15 literatures that discuss the anxiety level of athletes before a special martial arts match., all of these journals are nationally accredited journals as well as internationally accredited journals that are searched on the google scholar, mendeley, science direct.com portals by typing the keyword "analysis of the anxiety level of athletes before a special game of martial arts." which was then analyzed using critical apparsial analysis to analyze from the core of the journal, as well as the results or findings of those journals. The following is a table of critical apparsial analysis from 15 journals:

#### RESULT

No	Researchers	Article Title	Research Results
1	(González et al., 2020).	Resilient resources in young athletes and relationships with anxiety	The results of this study show that anxiety is negatively related to resilience in the dimension of acceptance. It can be seen

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		in different sports (2020)	that girls show higher levels of somatic anxiety, while boys show higher levels of acceptance. Statistically significant differences were found in resources for acceptance in favor of boys, while there were significantly different indicators in somatic anxiety Sports experiences that were positively related to resilience and negative to anxiety.
2.	(Verawati, 2016)	Athlete's Anxiety Level in Participating in Sports Matches (2016)	The results of this study concluded that anxiety can have both positive and negative influences. Positive influences can provide motivation and strength for athletes in competing. Negative anxiety can be detrimental to the alet itself because the athlete cannot control the anxiety he experiences. Athletes who can control their anxiety will show optimal performance.
3.	(Safitri & Jannah, 2020)	The Relationship Between Emotional Regulation And Sports Anxiety In Judo Athletes (2020)	The results showed that the results of the studies that had been carried out showed a correlation coefficient value of 0.387 with a significant level of 0.046 or ( $p < 0.05$ ). Based on the results of the hypothesis analysis carried out, it can be concluded that there is a relationship between emotional regulation and sports anxiety in judo athletes.
4.	(Auliani et al., 2021)	Anxiety Level of Garuda Sumbawa Dojo Karate Athletes at the 2020 Provincial Kosn Games	The results showed that the results of the anxiety level of the Garuda Sumbawa Dojo karate athletes at the 2020 Provincial Level KOSN Games in the "high (heavy)" category were 72.80%
5.	(Anira et al., 2017)	Athlete's anxiety level before, during breaks and after games	The results of the decision were based on a hypothesis test that showed significance ( $p < 0.05$ ), then $H_0$ was rejected, namely there was a significant difference between the level of anxiety before competing and after competing and there was a significant difference between the level of anxiety during the break of the match and after the match. While the results of the decision are based on a hypothesis test that shows significance ( $p > 0.05$ ), then $H_0$ is accepted, that is, there is no significant difference between the level of anxiety before competing with after the match.
6.	(Dongoran et al., 2021)	Analysis of Anxiety Levels and Aggressiveness of Pon Martial Arts Athletes	The results showed that the level of anxiety at a moderate level had an average score of 37.73 with a frequency of

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		Papua	36 athletes with the highest dimensions of cognitive anxiety. Likewise at the level of aggressiveness at a moderate level with an average score of 78.7 with the highest dimension of verbal aggression.
7.	(Rohman & Wahyudi, 2019)	Anxiety Level of Pencak Silat Athletes Fraternity Setia Hati Terate at Siti Aminah Junior High School Surabaya	The results of the study that the average total of all indicators obtained 43.6%, this shows that the Anxiety Level of Athletes of the Loyal Heart Terate Fraternity at Siti Aminah Junior High School Surabaya is included as having a rather low level of anxiety.
8.	(Loveyama & Achmad, 2019)	Anxiety Levels of Taekwondo Athletes of Lumajang Regency In Participating in the 2019 Provincial Championships	The results of research conducted by researchers show that overall taekwondo athletes in Lumajang Regency have a rather high level of anxiety with a score of 45.5%.
9.	(Hindiari & Wismanadi, 2022)	Karate Athlete's Anxiety Levels Ahead of Games On Koarmatim Chakra Members.	The results showed that the anxiety level of athletes before competing in the very low category was 13% (2 athletes), the low category was 7% (1 athlete), the medium category was 13% (2 athletes), the high category was 27% (4 athletes) and the very high category was 40% (6 athletes). From the results of the data, it can be explained that the level of anxiety in members of the Koarmatim Chakra ahead of the match in the category is very high.
10.	(Mahardika & Suropto, 2022)	Anxiety Levels of Salatiga City Judo Athletes Before Facing Match.	The results showed a concern rate of 73.5%, being in the high category. The rate of concentration disorders of 60.2%, is in the high category. And the somatic anxiety rate of 68.9%, is in the high category. Obtained data on the level of anxiety of athletes, 15 athletes (75%) were at high anxiety levels and 5 athletes (25%) were at very high anxiety levels. The average anxiety level of Salatiga City Judo athletes is 49.2, which is in the high category.
11.	(Soltani et al., 2016)	Comparative Analysis Of Competitive State Anxiety Among Team Sport And Individual Sport Athletes In Iran	The results indicated that the mean score of somatic anxiety and cognitive anxiety among individual sport athletes was significantly higher than that of team sport athletes ( $p < 0.05$ ). The levels of self-confidence of individual sports athletes was higher than that of team sports athletes, but the difference was not significant ( $p > 0.05$ )
12	(Dimiyati et al., 2020)	Exploring the Psychological	The results show that the psychological

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		Skills of Indonesian Pencak Silat Athletes at the 18 th Asian Games	skills of motivation, confidence, anxiety control, mental preparation, team emphasis, and concentration in a Pencak Silat athlete are high.
13.	(Widyastuti & Dimyati, 2019)	Comparison of Psychological Skills Between Pencak Silat and Karate	Result. The research showed the value of Mann-Whitney Count = 129 with the Sig.value = 0.914. So the Sig.value = 0.914 > 0.05. Conclusion. There are no significant differences in the characteristics of the psychological skills of pencak silat and karate athletes. However, by examining more deeply the psychological skills that can be used as a reference for developing strategies, and in order to obtain the best results in competition it is better to use an experienced psychology coach in martial art teams to prepare the athletes mentally and psychological
14.	(Nopiyanto & Alimuddin, 2020)	Are there difference the psychological characteristics of Indonesian sea games athletes in terms of team sports based on sex?	The research findings revealed that there were significant differences in the psychological characteristics of Indonesian SEA Games athletes in terms of team sports based on sex with the mean score of male athletes = 150.1395 and female athletes = 139.3500 and sig. values = 0.000 < 0.05. There were significant differences in the psychological characteristics of Indonesian SEA Games athletes in terms of team sports based on sex.
15.	(Yang et al., 2020)	The Influence of Positive Emotion and Sports Hope on Pre-competition State Anxiety in Martial Arts Players	The findings of the present study showed that (1) positive emotions have a significant positive correlation with path and emotive force ideas, anxiety orientation, ability to cope, goal attainment, and sense of control; (2) path and emotive force ideas were significantly positively correlated with anxiety orientation, ability to cope, goal attainment, and sense of control and significantly negatively correlated with anxiety intensity and self-handicapping; and (3) the path idea acted as a partial negative mediator between positive emotion and anxiety intensity, and the sense of control played a partial negative mediator between the emotive force idea and self-handicapping.

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### **PEMBAHASAN**

Within the world of sports today the problem of anxiety is the highlight of special attention of psychologists (Singgih & Gunarsa, 2008). It has been acknowledged that anxiety develops in line with sporting events and is certainly unavoidable. Anxious situations that cross the stress threshold will cause unfavorable things for the athlete in question. An athlete to achieve maximum achievement requires physical, technical, and tactical readiness, besides that psychological readiness is also needed to be able to achieve the best game ability (Verawati, 2016). In good or bad conditions, an athlete's ability on the field will affect the psychological state of the athlete, especially on feelings such as anxiety. Athletes who have been prepared with good conditions in good physique, technology and tactics but there is always a problem in the athlete when anxiety arises in the athlete.

Anxiety is a state of erratic feeling felt by a person in the face of something worrying. Anxiety can arise in the run-up to the game. Anxiety is the hardest thing for an athlete at every game that is done and must be prepared when facing any situation on the field (A. Maulana & Rusdiana, 2019). Husdarta, (2009) Anxiety can be divided into two, namely anxiety felt by athletes in the last time, such as during the approach to the game (state anxiety) and anxiety felt because athletes are classified as trait anxiety. Anxiety is formulated as a subjective feeling of apprehension and heightens physiological arousal (Setiabudi & Santoso, 2020). Anxiety is different from ordinary fear such as fear which as a threat is in the form of something objective, specific, and centered.

Sports anxiety is found to be one of the important factors in athletes (Kalinin et al., 2019). Sports anxiety there is a normal limit because it serves as a mechanism of self-control over what will happen. If an athlete feels a high level of sports anxiety, this will have the effect of making it difficult for the athlete to control movement to have a bad influence on performance. Inside an athlete must have a stable psychic meaning that the athlete can beat any non-technical pressure that comes to him. The level of achievement is largely determined by the maturity and mental toughness of the athlete in overcoming various difficulties in competing.

Rohmansyah, (2017) Anxiety has two components, namely cognitive anxiety and somatic anxiety. Cognitive anxiety is characterized by anxiety and fear of something that will happen, while the second is somatic anxiety characterized by the level of physical activation carried out. The signs shown are seepert, increased urinary frequency, dizziness, dry mouth and so on.

Symptoms of anxiety that can be used as an indicator of a person experiencing anxiety can be seen from the symptoms of physical, psychic and behavioral changes. Physical symptoms are changes due to physiological activation in a person experiencing anxiety. Such physical symptoms include: hands become cold, increased frequency of urination, sweating, fireflies, dry mouth, abdominal pain, increased pulse. Psychic symptoms are symptoms of anxiety that can be seen from a person's psychic changes due to anxiety. These psychic symptoms include reduced attention and concentration, decreased self-confidence, nervousness, worry. In addition to physical and psychic symptoms in anxiety, there are behavioral symptoms, namely anxiety symptoms that can be seen based on changes in the behavior of someone who experiences anxiety. Symptoms of such behavior include: biting fingernails, changing facial features, being quiet or talkative, moving or shaking feet (Rohmansyah, 2017).

Anxiety in sports that occurs in athletes is usually because the athlete feels afraid of failing a match, is afraid of experiencing injury, and considers his opponent better than himself. If the athlete is in a state of anxiety then the coach looks for ways to make the athlete able to put out his best performance by motivating his athlete to stay focused on the match to be held and focus on each match. Yane, (2013) There are five ways to overcome anxiety in sports, namely:

#### **Visualization**

This visualization is done by elite athletes to improve performance, develop trust, and manage the anxiety that exists within them. Visualization, also known as a method or way of mental exercise that involves imagining oneself successfully competing inside a match.

#### **Goal Setting**

From within the athlete determines a clear goal to be able to achieve the success to be achieved. The goals to be achieved become smaller parts with a series of short-term or near-term goals to be achieved.

#### **Relaxation Techniques**

Relaxation techniques are helpful to reduce physical fatigue from anxiety such as increased heart rate, tense muscles and rapid and shallow breathing. This technique can be used whenever going into a match or competition, and can be helpful when practiced the night before or in the hours before the game to help maintain nerves and muscles. Two of the most common relaxation techniques are diaphragmatic breathing and progressive muscle relaxation.

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### Cognitive restructuring

Cognitive restructuring refers to a change in the habitual way of thinking. In anxiety about sports activities, cognitive restructuring helps to evaluate the body in lowering the sense of anxiety and positive thinking can generate feelings of calm, controlled emotions and is also key to managing the cognitive symptoms of anxiety.

### Developing Self-Confidence

Developing self-confidence can be done by looking at the focus of past successes instead of failures that can improve training and priority preparation and continue to be carried out until there is no doubt about the abilities possessed at the time of the match to become a champion and can control the anxiety that exists in him. Verawati, (2016) Anxiety can have both positive and negative influences. Positive influences can provide motivation and strength for athletes in competing. Negative anxiety can be detrimental to the athlete itself because the athlete cannot control the anxiety he experiences. Athletes who can control their anxiety will show optimal performance. Cognitive anxiety can have a direct effect on an athlete's concentration, but somatic anxiety can also have an impact on decreasing the athlete's ability to concentrate.

Calming down from anxiety attacks is the task of the parasympathetic nervous system. In some people, especially when they are over-stimulated for a long time (such as by playing sports) calming down can become increasingly difficult. In cases like this, calming down may require exercises such as imagery exercises. It is generally agreed among neuroscientists that the long-term effects of anxiety on human cognition are detrimental. It can therefore be said that short-term anxiety may also have a negative effect on cognition, for example by making it more difficult to mentally focus on playing sports. The pressure that athletes feel makes them show physical symptoms of anxiety, namely somatic anxiety. One of the influences of somatic anxiety on the physical-physiological athlete can be seen from the restless and difficult look in his eyes staring at one object with focus in a certain time.

## IV. CONCLUSION

Anxiety as one of the psychic factors that can influence the appearance of athletes in games. High levels of anxiety can be fatal to the performance of athletes in training and matches. In order for the athlete's performance to be maximized in the match athletes must have good psychology before the match by paying attention to emotional factors, psychology, and athlete training that has been maximized.

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## Energy Drink Consumption Among Papuan Athletes

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**ABSTRACT:** This study aimed to determine the description of energy drink consumption in Papuan athletes. Energy drinks are popular, and their consumption is increasing in today's fast-paced and active era, including among active workers and athletes. This study used a cross-sectional survey design involving 146 athletes using an accidental sampling technique. The energy drink consumption was known by a questionnaire consisting of 9 questions. The data to be collected includes sample characteristics (age, gender, sports, and last education), consumption, form, time, the purpose of consumption, perceived effect, amount, and side effects. The results showed that 52.74% of Papuan athletes had never consumed energy drinks, while 47.26% said they had consumed energy drinks. The energy drink consumption habits were 1-4 times in the form of sachets consumed during the day with no specific purpose. The perceived effect was the loss of tiredness with the amount taken one can/sachet/portion without experiencing side effects.

**KEYWORDS:** consumption, energy drink, athlete, Papua

### I. INTRODUCTION

In this fast-paced and active era, energy drink consumption is in vogue. Energy drinks are the most consumed energy supplements compared to drug supplements or tablets (Putriastuti et al., 2007). Energy drink consumption is increasing among the general public and sports individuals. Data shows an increase in 100 mL packaged energy drink consumption occurred between 2014 and 2017 by 62.22%, from 1.59 per capita per year to 2.58 (Ministry of Agriculture, 2017). The 2018 National Health Survey (known in Bahasa Indonesia as *Riskesmas*) data occupies the second highest number in Indonesia. The proportion of energy drink habits in Papua province with a frequency of 1 time per day was 5.9% and 1-6 times per week was 13.28% (Ministry of Health, 2019). This increase was triggered by the community's need for additional energy, stamina, and fatigue recovery. In addition, advertising promotions, ease of access, practical packaging, and good taste are also triggered for increasing energy drink consumption (Putriastuti et al., 2007).

However, the consumption of energy drinks is still controversial worldwide (Higgins et al., 2018; Alsunni, 2015), especially in Indonesia. Energy drinks contain amino acids such as taurine, caffeine, sugar and B-complex vitamins. Currently, many questions arise regarding facts or myths related to energy drinks, the most popular of which is "is it safe to consume energy drinks?" "What are the implications and dangers?" On the other hand, awareness of meeting nutritional needs and maintaining public health is increasing. The Indonesian Food and Drug Supervisory Agency (BPOM) issued a distribution permit for energy drinks circulating in Indonesia. Research shows energy drinks harm health, such as cardiac arrhythmias, worsening the work of the liver and kidneys (Gutierrez-Hellin et al., 2021; Lasheras et al., 2021; Woolsey et al., 2010). Excessive energy drink consumption could be life-threatening and lead to several drawbacks, including anxiety, trouble sleeping, and seizures (Higgins et al., 2018). Continuous use can slowly damage the renal blood vessels (Erdmann et al., 2021). The sugar content can cause excess energy and diabetes, and dental caries (Ballard et al., 2010; Nowak et al., 2018).

Consumption has its consumption rules based on the composition of each package. Energy drinks are only recommended for high-activity individuals (Astorino et al., 2012). Knowledge and understanding of energy drinks also vary, especially when there are advertisements (Hardy et al., 2017). Each individual has a different tolerance for the content of energy drinks (Aulawi, 2005). The highest energy drink consumers are teenagers (52-68%), while adults are around 32% (Erdmann et al., 2021). Athletes are at risk of high energy drink consumption due to high sports activities, especially outdoors or under scorching heat compared to society in general (Giriwijoyo, 2012). Energy drinks are popular among workers and athletes to increase stamina, prevent sleepiness and maintain fitness (Pratiwi & Mu'in, 2017). Energy drinks contain ergogenic substances (caffeine, taurine) that

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make them more stamina or energy (Tabassum et al., 2021). However, research on female sprint athletes showed no ergogenic effect (Astorino et al., 2012). Other studies have found side effects that interfere with psychological performance in athletes, namely nervousness and insomnia (Salinero et al., 2014). Furthermore, there was no mental or physical improvement in performance among e-sport athletes (Thomas et al., 2019), though Simulescu et al. (2019) found the opposite effects. Sports drink beneficial for the physical performance of endurance in adult athletes. Energy drinks containing caffeine and taurine showed no impact on sprint athletes' performance (Jeffries et al., 2020).

Although the proportion of energy drink consumption habits in Papua is known, the proportion and description of its consumption among Papuan athletes have yet to be discovered. In contrast, information about Papuan athletes' energy drink consumption is essential. Furthermore, paying attention to the impact caused by excessive consumption of energy drinks is important to do this research.

## II. METHODS

This cross-sectional study used a questionnaire with 146 sample athletes. Accidental sampling was used in this study in Jayapura Papua between July and December 2022. The questionnaire was adopted from Singh (2010), consisting of 9 items questions regarding the consumption of energy drinks. We collected data including sample characteristics (age, gender, and sports), frequency of consumption, the amount of consumption, the reason for consumption, the situation of consumption, the time of the consumption and the way of serving. The SPSS program version 28 was used to process data using univariate analysis to describe the consumption of energy drinks. For example, the total of athletes who consume energy drinks, frequency of consumption, amount of consumption, the reason for consumption, consumption situation, time of consumption and method of serving.

## III. RESULTS

According to the data analysis, the study results are presented as follows.

### A. Subject Characteristics

Table 1. Subject Characteristics

Characteristics	Means ± SD	Total	Percentage (%)
Age	16.15±3.31		
Gender			
Male		99	67,81
Female		46	31,51
Characteristics		Total	Percentage (%)
Sports			
Athletics		21	14,38
Basketball		4	2,74
Hockey		7	4,79
Taekwondo		5	3,42
Martial Arts		7	4,79
Wrestling		5	3,42
Volley Indoor		6	4,11
Football		28	19,18
Karate		5	3,42
Judo		3	2,05
Tennis Court		3	2,05
Outdoor Volley		1	0,68
Anchovy		3	2,05
Rowing		9	6,16
Weightlifting		5	3,42
Boxing		6	4,11
Cycling		5	3,42

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Outdoor Hockey	1	0,68
Swimming	1	0,68
Rugby	21	14,38
Education		
Elementary	16	10,96
Junior High School	52	35,62
Senior High School	77	52,74
Bachelor's degree	1	0,68
Total	146	100

The above table shows the average age of the respondents involved in this study is 16.15 years, with a standard deviation of 3.31. Data based on gender, the respondents involved were dominated by male athletes (67.81%) who play football (19.18%). Based on educational background, most of the samples were at senior high school (52.74%).

### B. Energy Drink Consumption

The descriptive analysis is consecutively presented as follows.

#### 1. Energy drink consumption

**Table 2. Energy drinks consumption**

Consumption	Total	Percentage (%)
Yes	69	47,26
No	77	52,74
Total	146	100

The above table shows that 52.74% of respondents have never consumed energy drinks, while 47.26% stated that they had consumed energy drinks. Thus, more samples have never consumed energy drinks than those consumed.

#### 2. Frequency of consumption

**Table 3. Frequency of consumption of energy drinks**

Frequency	Total	Percentage (%)
1-4 time(s)	56	81,16
5-10 times	8	11,59
>11	5	7,25
Total	69	100

Based on the above table, the respondents who have consumed energy drinks are mostly consuming energy drinks at a frequency of 1-4 times (81.16%). Around 7.25% consumed energy drinks more than 11 times during the week.

#### 3. Drink shape

**Table 4. The shape of the energy drink**

Shape	Total	Percentage (%)
Sachet	47	66,67
Can	11	15,94
Bottles	12	17,39
Total	69	100

Table 4 shows that approximately 66.67% of respondents consume energy drinks in sachets, followed by cans and bottles; respectively, 17.39% and 15.94% of the total respondents.

#### 4. Time of consumption

**Table 5. Consumption time energy drink**

Time	Total	Percentage (%)
Noon (before lunch)	34	49,28

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Afternoon (after lunch before dinner)	21	30,43
Night (after dinner)	13	18,84
Noon (before lunch) and afternoon (after lunch before dinner)	1	0,01
Total	69	100

Table 5 informs that about half of the respondents (49.28%) consume energy drinks during the day or before lunch. One person (0.01%) is reported to consume energy drinks before lunch and in the afternoon.

### 5. Purpose of consumption

**Table 6. Consumption purpose**

Purposes	Total	Percentage (%)
To feel fresh and refreshed	1	1,45
To be able to stay up late (not easily sleepy)	2	2,90
Overcoming body fatigue due to lack of sleep	9	13,04
Fad (no specific purpose)	31	44,93
To get excellent stamina during exercise	20	28,99
To restore stamina	3	4,35
Stay fresh and fit all day / don't get tired easily	2	2,90
To refresh the body in hot weather	1	1,45
Total	69	100

Table 6 informs that the most frequent reasons given by respondents to consume energy drinks are for fun or not having particular goals (44.93%) and maintaining stamina during exercise (28.99%).

### 6. Consumption effect

**Table 7. Effect of energy drink**

Effects	Total	Percentage (%)
Enjoy the freshness	1	1,45
Fresh with stamina	1	1,45
Feel fresher	2	2,90
Increased body energy	22	31,88
Feel more awake	14	20,29
Increased concentration	3	4,35
Eliminate fatigue	20	28,99
Don't feel any difference before and after drinking	6	8,70
Total	69	100

Table 7 informs that the dominant effects felt by respondents after consuming energy drinks were increased body energy (31.88%), eliminating fatigue (28.99%), and feeling more awake (20.29%).

### 7. Amount of consumption to feel the effect.

**Table 8. Amount to feel energy drinks effects.**

Amount to feel the effect	Total	Percentage (%)
1 can/sachet/portion	49	71,01
2-3 can/sachet/portion	11	15,94
> 3 can/sachet/portion	9	13,04
Total	69	100

The table above shows the effect of energy drinks felt by respondents after consuming one can/sachet/portion (71.01%) and around 13.04% consuming more than three cans/sachet/portion to get the effect.

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### 8. Side Effects

Table 9. Effects felt after consuming energy drinks.

Side Effects	Total	Percentage (%)
Frequent urination	18	26,09
Heartbeats	3	4,35
headache	1	1,45
Did not feel any of the above side effects	46	66,67
Drowsy	1	1,45
Total	69	100

The data shows that 66.67% of respondents do not feel the side effects of energy drinks. Meanwhile, frequent urination (26.09%) and heart palpitations (4.35%) are the dominant side effects.

## IV. DISCUSSION

This study aims to provide an overview of Papuan athletes' consumption of energy drinks. This study found that 52.74% of Papuan athletes had never consumed energy drinks, while 47.26% stated they had consumed energy drinks. The dominant pattern of energy drink consumption is 1-4 times in the form of sachets consumed during the day. The most consumed reason was no specific purpose, where the perceived effect is the loss of tiredness with the amount taken one can/sachet/portion without experiencing side effects. Sequentially the findings will be discussed below.

The results showed that most athletes (52.74%) never consumed energy drinks, while 47.26% said they had consumed energy drinks. The dominant pattern of energy drink consumption is 1-4 times in the form of sachets consumed during the day. Consuming activity is the behavior or act of drinking energy drinks. Energy drinks included in supplements should be consumed in moderation because the aim is only to complete the insufficient nutritional needs. The function of a supplement is as an additional substance to improve and increase the body's resistance (Ambika, 2010). Data from *Riskedas* Papua shows that the proportion of energy drinks consumption in Papua is the second highest in Indonesia. The difference in results is probably due to the distribution of the data collection population: the general public or non-athletes. According to Woolsey et al. (2010), athletes are considered a high-risk group with adverse effects due to energy drink consumption combined with alcohol. The frequency of consumption is in line with the findings of *Riskedas*, which is more than one time with a frequency of 1-6 times (Ministry of Health, 2019).

Although the percentage of consumption is below 50% among Papuan athletes, 47.26% consume energy drinks. This amount is almost half of the samples. Research shows energy drinks are detrimental to health, such as diabetes, liver and kidneys damage, cardiac arrhythmias and dental caries (Erdmann et al., 2021; Gutierrez-Hellin et al., 2021; Lasheras et al., 2021; Woolsey et al., 2010; Ballard et al., 2010). Findings show that the most consumed brand in Indonesia contained ginseng extract, taurine, caffeine, royal jelly and vitamins. Harsh energy drinks may contain various ingredients. The most common ingredients are caffeine, amino acids, carbohydrates, herbs, and vitamins (Mora-Rodriguez & Pallares, 2014). Caffeine is the most common substance expected to provide ergogenic effects (Jimenez et al., 2021). Thus, the consumption might cause excess caffeine consumption (Rosenbloom, 2014; Sanctis et al., 2017). Easy access at the kiosk or grocery store and the marketing of this trademark advertisement on electronic and social media affect the products sale among vulnerable groups, including adolescents and young adults (Kraak et al., 2020; Harris & Munsell, 2015; Rambe & Jafeta, 2017).

This study also found that most athletes consume energy drinks without any specific purpose. The perceived effect is the loss of fatigue with the amount taken one can/ sachet/ portion without experiencing side effects. The motivation for consuming energy drinks is different for each individual. A study among US high-school athletes found that the highest percentage of reasons to consume energy drinks is to rehydrate and gain energy (Fields et al., 2015). Adolescents could recognise energy drinks, but they are reported to need more knowledge regarding the containing substances (Costa et al., 2014; Hardy et al., 2017). The samples of this study are dominantly adolescents in their 16s. In line with a study in Jeddah, adolescents' and young adults' energy drink consumption is at least one can per week (Alrasheedi, 2016). In line with Astorini et al. (2012), energy drink consumption has no side effects. Studies have found side effects of energy drink consumption among 11-18 years individuals, such as insomnia, headaches, stomach aches and hyperactivity (Visram et al., 2016). However, energy drinks could not increase neuromuscular performance.

Meanwhile, several studies found muscle strength and power (Mora-Rodriguez, 2014). Cardiac arrest, seizures and dental enamel erosion are also reported as energy drink consumption adverse effects among young athletes (Duchan et al., 2015).



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Thus, it is essential to conduct dissemination regarding energy drink consumption and the consequences due to excessive amount of consumption among athletes (Buxton & Hagan, 2012).

### V. CONCLUSIONS

This study concluded that 52.74% of Papuan athletes had never consumed energy drinks, while 47.26% stated that they had consumed energy drinks. The dominant pattern of energy drink consumption is 1-4 times in the form of sachets consumed during the day. They consume energy drinks with no specific purpose, where the perceived effect is the loss of tiredness with the amount taken in one can/sachet /portion and without feeling the side effects.

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## The Portrayal of the Student Movement's History in the Novel *Laut Bercerita* by Leila S. Chudori: A New Historicism Study



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**ABSTRACT:** This study intends to describe the form and historical portrayal of the student movement during the reform era in *Laut Bercerita* by Leila S. Chudori. This is an interpretive qualitative study employing the knife analysis of new historicism. The New Historicism approach is used to analyze Leila S. Chudori's novel *Laut Bercerita* which integrates non-literary texts into the literary texts to be analyzed. The results of the study identified four student movements depicted in the novel *Laut Bercerita* during the reform era: (a) discussion of the "*margin kiri*" book, which was considered an attempt by students to overthrow the government, (b) rejection of the dual function of ABRI, (c) the Blangguan incident as an act of rebellion students to defend corn farmers whose land will be confiscated, and (d) the Kamisan Action, which was carried out by the families of those who had been coerced into disappearances while they were all dressed in black and gathered in front of the State Palace in an attempt to uncover the truth about human rights violations. These events are reflected in the story through the experiences of the characters. The novel contextualizes actual historical events. According to New Historicism, socio-political historical events are presented to call into doubt previously recorded historical truths. It is expected that the results of the New Historicism study on Leila S. Chudori's novel *Laut Bercerita* will help individuals comprehend Indonesian history and allow them to learn from terrible historical occurrences so that they won't be repeated in the future.

**KEYWORDS:** Portrayal, the Student Movement, New Historicism

### INTRODUCTION

A country can never be separated from its history. Similarly, the Indonesian country has both recorded and unrecorded history. Literature is an art form that uses language media through a process of in-depth reflection in order to be appreciated and understood by the public. In accordance with this, Istiqomah asserted that literary works are fundamentally the embodiment of life, the product of authors' observations of life around (Istiqomah & dan Sumartini, 2014). In addition, Ernawati et al. noted that a literary work is a collection of images of the author's ideas that are derived from actual life and processed through an intelligent and vivid imagination (Ernawati et al., 2017).

Literature is created from the reality of people's lives, which is then combined with the author's imagination to create works of aesthetic value. The creation of works of literature is inextricably linked to the socio-historical conditions of the society that gave birth to them. Literary works are created by authors who are part of society and are based on social reality (Wiyatmi, 2013). Literature is a technique through which humans express their existence and respond to the issues that arise in society (Septianingsih, 2019). The author uses language media to represent truth and fantasy in a literary work that describes the relationships between humans and God, humans and each other, and humans and themselves.

Literature and history are like two distinct sides of a coin that cannot be separated. Given that history can serve as a source for literature, and literature can serve as a source for history. Not all offered literary works are real, but they are logical and grounded in historical fact. In this unusual circumstance, literature and history have a very close relationship.

Despite their close connection, literature and history remain independent. History is still history, and literature is still literature. History is based on factuality, while literature is based on fiction. History is still history, and literature is still literature. Literature is based on fantasy, whereas history is based on fact. These two opposing factors create a very distant connection between literature and history. In reality, however, history and literature are not entirely separate and can complement one another. A lot of literary works are produced as a result of historical reconstruction or history.

A novel is one sort of work of literature. A novel is one type of fictional or fictitious literary work (imaginary). The Latin word for novel is *novellus*, which is later discovered to be *novis*, meaning 'new.' A novel in English is a *novelette*, while the

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Indonesian term novelette refers to "a piece of prose fiction that is neither too long nor too short." Novels and literary works provide a larger, full, more vivid, and more dynamic picture of reality that surpasses common comprehension (Ayuningtyas, 2019). It is claimed to be a novel because it was published later than other literary genres including poetry, drama, and other forms of literary works. As a literary work, the novel has its own distinctive qualities; more precisely, the novel's plot is highly intricate or complex. Novels provide not just pleasure and artistic value, but also historical background. The *Buru Tetralogy* by Pramoedya Ananta Toer, the short story *Clara* by Seno Gumira Ajidarma, and the novel *Kubah* by Ahmad Tohari are known to have historical value. Through narratives that are dense with literary works, these works might jog our recollections of significant events from the past.

*Laut Bercerita* is a book written by the Indonesian author Leila Salikha Chudori. She is a journalist for the magazine *Tempo*. This novel, which was released in 2017, explores themes of friendship, romance, kinship, and loss. This novel, which is set in the 1990s and 2000s, is able to sedate its readers so they can reflect back on the events of the year in question without having to dig too deeply into the past. In this 394-page novel, the author reminds readers of the 1998 reformation era, which was terrible and cruel for people's defenders. In other words, the author combines the historical fact of the reform era with conflict, irony, symbolism, perspective, etc. Leila combines the lives of her characters into historical events with a smart mix of conflicts, using the points of view of the various characters she creates as if positioning them as sources and symbols conveyed by the characters to create romantic nuances, and there are many more things that are astonishing that history can be conveyed through history books or documentary films, but can also be conveyed through a series of words and the fabric of the plot in the novel.

Leila, as the author, highlighted that this novel is only historical fiction, however, she based her writing on actual historical events. Before writing this work, Leila conducted in-person interviews with survivors and relatives of the victims for research purposes. In addition, the author acknowledges that she needs to conduct a thorough examination of the current characters, locations, and past occurrences. Based on the factors that give the work a sense of life when it is read. The completion of this novel took roughly five years.

*Laut Bercerita* by Leila S. Chudori was published for the first time in early October 2017. This novel's plot begins with the birth of the protagonist, Biru Laut Wibisono. This character grew to be a student who was particularly concerned about the inequality he experienced under the presidential administration at the time. Biru Laut is a student as well as an activist involved in advocating cases of human rights violations. As portrayed in the novel, there were numerous violations of human rights during the New Order's establishment, including the kidnapping of student activists. Biru Laut's movement flung him to the bottom of the sea, dismissing him as a subject and student. This tragedy was also accompanied by the reaction of the family's parents and fellow activists, who demanded answers about the disappearance of their missing child in front of the State Palace.

In the novel *Laut Bercerita*, students were among the most dangerous groups during the Soeharto regime. The government pays special attention to students who belong to the extremist or left group. Constant government surveillance and threats blight their life. Students participating in radical movements, such as reading leftist literature and criticizing government policies, will be kidnapped, tortured, and murdered. Students engaged in several protests against government policies, which resulted in their detention and torture. This student effort is considered to be a lawsuit against the quasi-undemocratic New Order administration because they took rapid action with the community. The Biru Laut characters were born into a harmonious family, with the father as a journalist and the mother having a food catering business, and the younger brother works as a doctor. They grow into figures who are physically and mentally healthy. Biru Laut's involvement in the effort to reform Indonesia is regarded as a form of business, but it is viewed as a radical move against the government.

This novel by Leila, *Laut Bercerita*, reflects the sociopolitical circumstances of students as the pre-reform student movement that desired economic and political stability in Indonesia. The novel *Laut Bercerita* describes the student movements in Yogyakarta, in particular. The term New historicism was introduced by Greenblatt in the early 1980s in his studies of cultural poetry. Greenblatt opposes the ahistorical trend of formalist textual studies in the new criticism tradition. In addition, Greenblatt considers literature to be an autonomous aesthetic realm distinct from features that are regarded outside the work (Ardhianti, 2016).

New historicism is not a theology; rather, it is an operational model or best practice. In simple terms, new historicism is a way of researching the past based on the placement of historical and non-historical documents (literature) and written and non-written sources (images, anecdotes) as equally significant sources. Due to the multidisciplinary nature of the research, new historicism is more commonly associated with cultural studies or cultural studies. New historicism is a much diversified literary critique; thus, it cannot be defined in a standardized manner (Ardhianti, 2016). Nevertheless, according to Vesser, the new historicism includes five fundamental assumptions that connect its initiators and critics. Three of the five basic assumptions are

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as follows: (1) that every expressive action is closely related to a network of material cultural praxis; (2) that literary texts and non-literary texts circulate inseparably; and (3) that there is no discourse of any kind, whether fictional or factual, that gives access to absolute truth and cannot change or express human nature without another alternative.

The New Historicism Literary criticism is one of the criticisms and literary theories that believes that a literary work must be viewed as a product of its time, place, and environment, rather than as an isolated work of genius. Greenblatt highlighted in "The Touch of the Real" that the world described in the literature is not another universe, but rather a technique of amplifying the one world in which we live (Ardhianti, 2016). New historicism emphasizes the deological political dimension of cultural output while examining these networks.

Based on this background, this research focuses on the representation of the student movement in Leila S. Chudori's novel. A new historicism technique will be used to address this problem. This strategy was chosen due to the characteristics of Leila S. Chudori's novels, which have a tendency to reflect historical events in Indonesia.

### METHOD

The representation of historical events in Leila S. Chudori's novel is explored through descriptive qualitative research with a new historicism approach. The purpose of qualitative research is to describe and study occurrences, events, social activities, attitudes, beliefs, perceptions, and thoughts of individuals and groups of people (Muflihaini, 2017). The new historicism approach emphasizes the background of historical events in the creation of a literary work and then uses non-literary materials as a reference to relate historical events in literary works.

This method involves reading literary texts that portray historical events and historical documents that explain the same event in parallel. This method is utilized in this study to describe and interpret the portrayal of historical events of student movements in Leila S. Chudori's novel *Laut Bercerita*.

The source of the data in this research is Leila S. Chudori's novel published in 2017 entitled *Laut Bercerita* and Indonesian history books that are described in the novel. The documentation method was employed to collect data in this study. In this study, the processes for data collection are as follows: (1) reading the novel *Laut Bercerita*, (2) recording data in the form of sentences or paragraphs that correspond to the study's objectives, and (3) data classification by collecting data on literary works based on the study's objectives.

Data in the form of words, phrases, sentences, and plot units were extracted from the study novels and historical books that provided information relevant to the research subject. In addition, information about the representation of historical events in Leila S. Chudori's novel *Laut Bercerita* was collected.

### ANALYSIS AND DISCUSSION

The novel *Laut Bercerita* by Leila S. Chudori is based on the true event of activists kidnapped near the conclusion of the New Order period in 1998. Nine activists have been released, one activist has been found dead, and thirteen others have gone missing with no explanation till now. *Laut Bercerita* is a novel written by Indonesian author Leila Salikha Chudori. She also works as a journalist for Tempo magazine. This novel, released in 2017, explores themes of hardship, friendship, romance, kinship, and grief. This work, set in the 1990s and 2000s, can anesthetize its readers into breaking through the past and looking back at the events that transpired in the year in question.

The research results in the novel *Laut Bercerita* found four student movements in the reform era. The findings of the research are as follows.

#### a) Discussion of the book "Margin Kiri"

The novel *Laut Bercerita* is set in Indonesia during Suharto's reign. Its less-democratic power causes students to get fed up, so they carry out a movement. The initial action taken by students is to conduct discussions. Discussion with left margin books reading materials. Reading and discussing left-margin books during the Soeharto era was a criminal act because it threatened the stability of the government at that time (Agung & Wahyuni, 2020).

*The incident of the arrest of activists for possessing a number of prohibited books including the work of Pramoedya Ananta Toer which occurred three years ago still haunts us, especially students who really like to read literature or leftist books* (Chudori, 2017). *Because the events of the arrests of activists continue to loom over Yogyakarta, carrying photocopies of books by Pramoedya Ananta Toer is equal to carrying bombs: we will be regarded as dangerous and traitors to the nation* (Chudori, 2017).

Books by Ernesto Laclau, Ralph Miliba, Ben Anderson, Karl Marx's thought books, Tan Malaka's thought books, and even Pramoedya Ananta Toer's novels were mentioned as forbidden to read in the novel *Laut Bercerita*. Conducting discussion activities



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with the book's materials is regarded as dangerous and a traitor to the nation. According to the brilio.net website, 12 books are prohibited from being distributed to the general public. The Buru Tetralogy, Pramoedya Ananta Toer, the book *Demokrasi Kita* by Mohammad Hatta, the book *Friends* by Agam Wispi published by Lekra in 1959, the White book *Student Struggle 1978* by the ITB Student Council, and others were confiscated and prevented from being published. These books were banned from circulation and investigated for a number of reasons, including criticism of the President's authoritarian policies, revealing several indicators of the Suharto government's failure, opening readers' eyes to events that occurred from the early days of independence to recent conditions in Indonesia, and giving the impression that provocation and violence in 1965 came from the Indonesian military (Yusuf, 2010).

Students might be labeled traitors simply for reading books to gain knowledge, whilst those who eliminate students are lauded as heroes. This infuriated the students because heroes and bandits were selected solely by the regime's power. As a radical subject to all of its programs, the Soeharto government, as the regime's ruler, has stated that students are traitors.

*Ah... Sunu's hair is still short and neat. What year is it? My friends looked young, I was thrown into my student days when we were still looking for a place to discuss and spend the night in safety, away from the prying eyes of intelligence. The events of the arrest of three Yogyakarta activists three years earlier still feel hot and haunt us* (Chudori, 2017).

In the quote above, it is stated that Laut and his friends had a period when they had to look for a place to discuss and spend the night safely. The statement "all night at the same time" indicates that they had surely spent quite a long time discussing. They held long debates on important and serious matters, thus it took a lot of thought and time to reach an agreement and understanding on the topic of the discussion. The discussion was perilous at the time, especially when it came to the government and communist views that the administration believed could bring them down.

Discussion is perilous, thus it should take place away from authorities, such as in the middle of a forest or in an old building (Usman & Saguni, n.d.). The students had experienced the arrest of three Yogyakarta activists three years earlier (Kartikasari, 2014). Their voices were silenced so that only acceptance of government policies was expected by the rulers. Meanwhile, students must be cautious because some government policies are detrimental to the nation and state, particularly the regular people. One of the goals of the debate is to find solutions to problems that arise from studying left-hand books all at once before discussing them. Sitting together and risking their lives for the sake of debate has to have a good topic and foundation.

*I followed Sunu, and it felt like we both knew straight away that we needed to turn the large room into a secretariat, where we would later carry out administrative tasks for discussions and movement plans. The Winatra student movement has been declared in various cities at the same time. If we only talk for a century without doing anything, our feet will itch* (Chudori, 2017).

Laut and his friends held meetings and planned movement actions in a location known as the secretariat headquarters. They were chosen by the headquarters, activists, and students who were part of a single movement. "Winatra" is the name of their movement group. This group has declared its existence in numerous areas at the same time.

*If we only talk for a century without doing anything, our feet will itch* (Chudori, 2017).

According to the quotation above, this movement intends to take action in addition to discussing. With all of their action plans, the Winatra group looked mature and prepared. For them, discussions are merely for sitting and cannot help individuals with their problems. Of course, the government cannot hear their voices or their ideas, even through discussion. Time-consuming discussions will not change the fate of the Indonesian people, especially the lower middle class who were tortured and oppressed during the Suharto regime.

### b) rejection of the dual function of ABRI

In 1998, the Indonesian nation witnessed a bloody event, with protests from all groups of society, including farmers, factory workers, and students. Their goal is to reestablish the long-lost democracy that the New Order regime has destroyed (Sjamsuddin, 1998). The events that once occurred had a huge impact on society such as the conquest of the authoritarian regime by Indonesian students in 1998. The conquering of the authoritarian regime was inspired by the authoritarian attitude of the New Order, which made the Indonesian people upset since the government hired ABRI to control the social system that existed in society using violence (Azwar & Suryana, 2021). The violence took the form of kidnappings and killings of persons who resisted the New Order regime's policies. Students organized protests to bring down the New Order regime. People were upset with the past regime in power because of a lack of jobs and the loss of justice for the Indonesian people in 1998. The impact of the monetary crisis was too hard for the Indonesian people, the price of basic necessities increased and added to the burden of living for the Indonesian people in 1998, as well as the President's attitude of preferring silent voices who try to criticize him (Hasudungan, 2021).



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Using the power of ABRI, the New Order government enforced its will on the Indonesian people through violence. This is consistent with Max Weber's viewpoint, namely that immense power is expansive towards the people with the goal of expanding political influence through violence or threats (Weber, 2009: 193).

*Naratama's monologue is accurate, and we have often discussed it in Winatra management meetings. He was clearly not a member of the inner circle formed by Bram and Kinan. Tama may not have realized that we had already discussed the desire for the dual purpose of the Indonesian Armed Forces as well as five political laws that needed to be abolished. We just haven't launched this concept to campuses yet because we're now organizing for corporations to visit various campuses or perhaps Tama is protesting because he feels he is not welcomed* (Chudori, 2017).

*Laut Bercerita* by Leila S. Chudori is set during the events of the New Order regime's overthrow by students in order to re-establish democracy in Indonesia. Arbitrary regimes restrict students in every way, such as making anti-government comments, and reading and debating literature with leftist ideologies can deal with governmental apparatus. Limitations did not diminish the spirit of student resistance to overturn the state; instead, the campaign against New Order policies led to Biru Laut and his Winatra organization friends being kidnapped by military officers and drowned at the bottom of the sea (Chudori, 2017: 16 According to the description of the book's contents, *Laut Bercerita* shares a connection with historical occurrences in Indonesia, namely with those that led to Suharto's downfall as a result of his failure to run the country successfully under a corrupt system that inspired students to topple him through reform.

### c) Students Action for Blangguan

Protests are the most anticipated and real form of opposition from activists and students. This action represented the voice of the community's representative group. Wirasena, Jakarta Winatra, Semarang, Solo, Surabaya, and Taraka Yogya also sent delegations to join the Blangguan student movement. The corn planting action, begun by students and activists, proceeded well for a time, but the authorities were aware of it and were hunting for the mastermind behind it.

*Blangguan Student Action. Bram, Kinan, Julius, Alex, and the East Java Winatra team have been studying and recording the disputes between farmers and military in this area for several years. The people of Blangguan Village were forcibly evicted from their agricultural land because their residential area and land will be used for joint military training using mortars and long rifles* (Chudori, 2017).

The student action for Blangguan is based on facts gathered from the region's disputes between farmers and troops. Farmers are the ones who suffer as a result of land eviction. The people of Blangguan Village were forcibly evicted from their agricultural land because their residential area and land will be used for joint military training using mortars and long rifles. The usage of mortars and long rifles indicated whether or not the territory was taken violently. Bulldozers evicted their corn crops. Despite this, the farmers did not remain silent, and with the support of the students, they returned to growing corn on the field.

The student movement in Blangunan was inspired by "Sajak Seongkok Jagung" by Rendra. Laut took action against the army by planting corn because of its literature. The student movement in Blangunan did not have guns with bayonets like the troops or their muscles. Students also do not use state funds like politicians (Azida & Fitri, 2021). The students only had their passion, their own money, and donations from a few people who secretly believed they didn't fit the New Order government style. In reality, as described in Kompas "20 Years of the Trisakti Tragedy," students were arrested and shot not only by security agents stationed in front of demonstration participants but also by gunfire fired from the Grogol overpass and pedestrian bridges. The tragedy left four students dead in the shooting of demonstrators who were carrying out peaceful demonstrations, namely Elang Mulia Lesmana, Hafidin Royan, Heri Hartanto, and Hendriawan Sie. Meanwhile, Kontras' documentation writes that the injured victims reached 681 people from various universities in Indonesia.

*I thought that the Blangguan tragedy would kill me as a student who believes in positive change; I believed that my first encounter with such terrible suffering would silence me and turn me into an apathetic person. But Kinan and Anjani are two women who restored my faith in the power of ideals; in humanity's ability to survive persecution, betrayal, and insults. In the dark, goodness is still sprouting and living.*" (Chudori, 2017).

The Blangguan tragedy turned Laut into a student figure who believes in positive change. Even the anguish he endured did not silence him or make him apathetic. Through the tragedies that happened at Blangunan, Laut witnessed sacrifice and struggle directly. Despite the fact that certain government officials regard Laut and his pals as traitors to the country and opponents. Laut and his friends who took action became heroes in the eyes of the public, at least in the eyes of the people of Blangunan. Acts of rejection or radical action are referred to as "acts of selflessness" since the self is a type of hegemonic and social-cultural constraint and construction. When the boundaries and structures are crossed, the subject truly occurs. Subjectivity is formed

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when conditions are emptied by murdering the 'self,' which is a symbolic interpellation. When humans can be separated from their bodies, then the subject has been freed from the symbolic form of the body

### d) Kamisan Action

The premise of Leila S. Chudori's novel *Laut Bercerita* is students fighting for justice for human rights violations that took place in it. As a result, resistance is necessary to fight for justice, as seen by the existence of organizations and regular kamisan acts. The embodiment of the Kamisan takes the form of a silent demonstration accompanied by a black umbrella containing demands for case resolution (Adiwilaga, 2018). The Kamisan Action began on January 18, 2007, and it is held every Thursday from 16.00 to 17.00 (Atmojo, 2021). The participants dressed fully in black, stood silently, and carried black umbrellas with numerous incidents of human rights violations printed on them. Participants from many cities attend the action, which generally takes place in front of the State Palace in Jakarta, because victims of human rights violations come from many regions, particularly on the island of Java. The Kamisan action embodied more collective resistance ideals than weekly routines, which merely served to strengthen solidarity among victims/families of victims of grave human rights crimes whose investigations (from a political standpoint) have yet to be finished. Furthermore, they urge a thorough investigation into cases of major human rights violations in the past, which is also a method to preserve the public's memory of the military apparatus's repressive attitude, which violated civil and political rights (Putra, 2016).

*It's been quite a long time, every Thursday, parents, friends, relatives, sympathizers, and journalists have gathered in front of the State Palace, holding a black umbrella as a symbol and questioning where the missing activists are* (Chudori, 2017).

For 32 years, the New Order was in power, giving rise to the main political characteristics of the time, such as the president's dominance, a political recruitment system that was not transparent, public policies that were not accountable, very low human rights implementation, and a judicial system that was not independent. This scenario gave rise to numerous interest groups as well as social movements aimed at obtaining citizens' rights (Irfani & Sunarso, 2020).

### CONCLUSION

The following conclusions can be inferred from the theoretically provided data above. To begin, the historical events portrayed in Leila S. Chudori's novel *Laut Bercerita* are as follows: (1) Discussion on the Book "Left Margin", (2) Rejection of the Dual Functions of ABRI, (3) Student Action for Blangguan, and (4) Kamisan Action.

Second, the occurrence is represented as an integral part of the events that the novel's characters go through. That is, historical events based on true occurrences are contextualized in the author's fiction. Third, from the perspective of new historicism, a lot of sociopolitical historical events in Ayu Utami's novels exist primarily to call into doubt previously recorded historical truths. The New Order regime was accused of engaging in extreme repression and violating human rights. The motions carried out by students in Leila S. Chudori's novel *Laut Bercerita* are not only negative kinds of action that have a detrimental impact on individuals or groups, but they are also acts that highlight self-rejection and awareness of other things. Students opposed the ABRI's dual function policy, the Five Political Laws, the banning of three media sources in Indonesia, the repeal of campus normalization, and the eviction of agricultural land by the locals of Blangguan Village. Furthermore, throughout the New Order era, the students prosecuted corruption cases, riots caused by political parties, legal monopolies, or an unstable economy that did not receive a resolution and firmness from the government. The students who were reading Marxist publications had no intention of promoting leftist ideas or forming ties with communist countries to overthrow the Suharto regime. Students continue to read literature that includes socialist beliefs, obscuring the reality of the consequences of their actions. This attitude of challenging historical truth is consistent with the new historicist notion that every feature of reality is included in texts and social structures defined by dominating "discursive practices," therefore the truth must be questioned again.

### RECOMMENDATIONS

Leila S. Chudori's novel *Laut Bercerita* shows learning through the student movement's battle against oppression during the New Order era. Aside from that, the characters in this novel educate about solidarity, togetherness, compassion, and a sense of responsibility. *Laut Bercerita*, a novel by Leila S. Chudori, has various behavioral characteristics and an instinct felt or carried out by the main character while engaging in a social activity in his environment. Students as activists play an important part in the novel, such as supporting, loving, and defending one another.

- a. For other researchers, it is suggested to read further material that expands on the idea used in this work, notably new historicism. Furthermore, there are numerous historical studies that have the ability to generate new and more interesting concepts.

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- b. Literature connoisseurs are advised to study other works of literature in order to compare and demonstrate that there are movements made by students in various literature works and that these movements do not just have a negative impact.

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## Evaluation and Enhancement of Existing Intervention Programs for Juvenile Delinquency



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**ABSTRACT:** This study mainly aimed to identify and evaluate the existing intervention programs to provide insightful information about the current state of children in conflict with the law and to propose measures for enhancement of the intervention programs in the selected barangays to better cater the needs of the CICL in the City of Cabuyao, Laguna. The researchers utilized a phenomenological research design under qualitative method and purposive sampling to select the seven (7) qualified Violence Against Women and Children Officers appointed to implement the existing intervention programs and had been facilitating for at least more than a year. A validated semi-structured interview with open-ended questions was used to gather data and thematic analysis was employed for the evaluation. From the findings, the study revealed that there were different intervention programs implemented, and despite the efforts of the authorities to extend aid and assistance among CICL, it was found that there is still a need for enhancement and enhancement in some areas of program implementation to further address and help the CICL. This study also provided recommendations for the enhancement of intervention programs for children in conflict with the law.

**KEYWORDS:** Evaluation, Enhancement, Existing Intervention Programs, Children in Conflict with the Law, CICL, and VAWC officers.

### INTRODUCTION

The constitution requires the local government levels to provide intervention programs for children involved in juvenile delinquency. Delinquency is essentially a legal concept that is defined as a state of being delinquent or behavior that is not in accordance with social standards or nation's constitution that were accepted by the people in the society. Consequently, there is a legislation for the children who are in conflict with the law that gives consideration to their welfare, rehabilitation, reformation, and protection. The Republic Act No 9344, otherwise known as the Juvenile Justice Law of 2006 established the minimum age of criminal liability at the young age of fifteen years. This denotes that children from the age of fifteen up to eighteen years may be detained to youth facilities and take part in rehabilitation programs. Likewise, individuals who are fourteen years old and younger are not susceptible to federal prosecution and therefore must participate in intervention programs (Official Gazette, 2006). Seeing as physical injury was the most common crime committed by children according to Ng & Lachica, 2019 (as cited by Serger, 2021), it is abundantly evident that there is a call for enhanced measures to deal with juvenile delinquency. Juvenile delinquency has become a crucial phenomenon in most affluent countries as a result of rapid industrialization and urbanization (Bhagat & Sadaf, 2019), and the emergence of children in conflict with the law and the constant increase in the number has become one of the widespread awareness that society must address.

The majority of legal systems specify particular protocols for handling children who were conflicted with the law, such as juvenile detention facilities and tribunals (Khuda, 2019). A facet of this are the intervention programs which refers to activities or sets of actions that intend to improve one or several aspects of a procedure or a course of the children's action to alter some of their characteristics, such a performance or expected outcome (Pallipedia, 2021).

Different intervention programs are being introduced at the local government levels for children who are in legal jeopardy. In order to properly meet the needs of the children, it is imperative to provide a sufficient and adequate intervention. Various governmental entities coordinate to ensure just rulings that safeguard the rights of children who are in legal trouble (Austria, 2021).

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Oplan Sagip Bata and Project Sagip Batang Solvent, which aims to provide them with reformative reintegrated intervention programs so they may reach adulthood to be responsible members of society, are couple of the programs offered for the safety of the children specifically in conflict with the law against illicit substances (Caliwan, 2019).

It is evident from the outcomes that more often or mostly more often notable to the children who participated in a recovery process that the rehabilitation programs implemented were described as effective and beneficial (Manuel, 2019). The evidence indicates that children who participate in rehabilitation programs are much more emotionally healthy because they can find their own interests, manage their emotions, and make wise judgments in the face of stressful experiences.

Those who participated in community activities, generally obeyed their parents, and sought to their parents for direction and guidance rather than their peers, their psychosocial well-being increased (Gunawan, 2018; Mwangangi, 2017; and Petiprin, 2020). Other intervention activities such as casework services and educational activities, religiously oriented activities (Kermen, 2018), recreational, sports and other sociocultural activities (Impact Laws, 2022; Khuda, 2019; and Wolffs & Hums, 2019) were also noted as efficient. These notable interventions also include functional literacy, medical and livelihood services (Manuel, 2019). The rehabilitation program is therefore effective. It is based on the way that the consequences have positively brought change to the children.

However, despite having already established policies, structures, and programs absolutely essential for the development of a child-centered juvenile system and welfare, it was noted in a comprehensive national narrative report of a juvenile intervention programs for the years of 2018 to 2022 that notable discrepancies and impediments remain in the implementation phase of the intention programs as a result of a lack of appreciation or acknowledgement and awareness, more particularly within the local government level where the core of the juvenile justice law of 2006 is supposedly followed. Moreover, the execution of the law for the protection of the children is generally acknowledged and implemented, however, authorities who oversaw CICL have committed shortcomings in their responsibilities during the previous confrontation with the child (Patalinghug, 2019) as well as during the implementation of the intervention programs often as a result of inadequate resources within the local municipality.

Children who are in legal jeopardy are given the guidance and assistance they require to deal with the circumstances they found themselves in. With the assistance of social workers and other professionals, productive activities are provided. At research by Patalinghug (2021), social workers in rehabilitation centers encountered variety of events throughout their typical case management for juveniles. These experiences have a mixed impact on the lives of the children involved in legal issues as well as those who handle their cases and growth. The study also shown how social workers' attitudes and mindsets affect their ability to successfully navigate the difficulties of dealing with juvenile cases.

Another important contribution of this study is how, despite widespread acceptance of the law's enforcement by various organizations and municipalities, however, officers who first handled these children have committed lapses in their initial encounter. Working with young people can be challenging for a number of reasons, thus according Noviello (2022), and it necessitates a great deal of effort, perseverance, and attention. Both the employee and the young victim may experience stressful and trying moments. In order to gain from altering and having an impact on a child's life, it is crucial for the personnel to maintain the sufficient training.

The Philippines, like any other country, faces a variety of social issues that are made worse by poverty and the inability to reduce the disparity between social classes. Although advocates and scholars contend that the issue is largely caused by the state's incapacity to adequately deal with its children in dispute with the law, the number of juvenile delinquents recorded each year has been connected to poverty. Juvenile recidivism, according to the article Criminal (2021), is the proportion of young people who commit a crime, are sentenced, and then are found guilty of another crime. The study suggests that the system might contribute to the issue. The lack of continuity in the program as juveniles go from residential confinement to aftercare and the lack of support mechanisms as young people enter adulthood were shown to be the main causes of the highest recidivism rates.

The researchers were prompted to conduct the study as it aims to identify the existing intervention programs for juvenile delinquency and provide an evaluation and additional insightful data regarding the current state of the children in conflict with the law in the City of Cabuyao, given its rapid development and numerous cases over the years. This intends to help the community understand and determine the impediments in the implementation of exiting intervention programs. Lastly, the study serves to propose measures to enhance the implementation of the existing intervention programs to better meet and cater the actual needs of the children in conflict with the law and truly help them progress as better members of society.



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### **METHODOLOGY**

#### **Research Design**

The study employed a qualitative research design since the data needed was gathered solely from the VAWC officers' experiences facilitating intervention programs for juvenile delinquency. Furthermore, the phenomenological approach was used to help the researchers understand the context and goals of the intervention programs based on the VAWC officers' experiences. It also aided in determining the challenges that the participants confronted and making recommendations for how to enhance the intervention programs.

Additionally, in order to discuss and support the study and its claims, the researchers used an existing theory relevant to the study as an academic foundation. Stufflebeam's Context, Input, Process, and Product Model was utilized to evaluate the program's effectiveness based on its goals, the planning and strategies for program implementation, the continuous development of the programs, and their outcomes. Significantly, the outcome evaluation approach that generally served as a summative evaluation of the program in which engross if the outcome of the programs were attained was also employed in the study to generate recommendations for program enhancements.

#### **Research Participants**

The participants in this study were the seven (7) Violence Against Women and Children Officers that were qualified based on the criteria that the researchers established and they were chosen using the purposive sampling method. The qualified participants for the study shall be employed in the Women's Desk office of a local barangay within the City of Cabuyao and have the knowledge and experience in handling CICAL cases and implementing intervention programs for at least more than a year. The VAWC officers were chosen as the participants of the study in order to evaluate the existing intervention programs for juvenile delinquency considering that the officers know the context and input of the programs respectively as well as the process of implementation better in comparison to those who have undergone it intermittently.

#### **Research Locale**

The research study was conducted among the selected barangays in the City of Cabuyao, Laguna. Familiarity with the places and dialect served as an advantage for the researchers in gathering the needed data. There are eighteen (18) barangays, however, only the top five (5) barangays that had the highest number of recorded cases of juvenile delinquency from years 2019 to 2021 were chosen to be the research locale of the study.

#### **Data Gathering Procedure**

The participants were interviewed in a face-to-face setting in which the researchers utilized a validated semi-structured interview with open-ended questions that served as an interview guide for the researchers in conducting an in-depth interview. Moreover, the interview was conducted in a less formal, conversational style using the guide questions as the basis in order to make the participants feel more at ease and comfortable in speaking with the researchers, and to encourage them to freely express their thoughts about their experiences as VAWC officers in implementing the intervention programs. The researchers strictly followed the health protocols and research ethics in respect to the participants. Letters of authorizations were presented as well as informed consent forms.

#### **Data Analysis**

Thematic analysis was utilized to evaluate the data gathered from the participants in which several themes were generated. The researchers employed this type of data analysis since it is one of the good approaches in research if the researchers seek to find out something about people's views, opinions, knowledge, experiences, or values from a set of qualitative data. It also allowed the researchers to approach large data sets more easily by sorting them into broad themes (Caulfield, 2019).

#### **Ethical Consideration**

The researchers also considered ethical considerations while conducting the research study. In order to determine which Barangays had the most juvenile delinquency cases, the researchers implored the City Social Welfare and Development Office of Cabuyao for a copy of the cases that had been recorded from 2019 to 2021. The data gleaned was considered confidential and used only for the study. The researchers formally asked the permission of the Barangay Chairmen to where the study took place. Authorization letters and informed consent forms were also provided to the Violence Against Women and Children Officers' desk.



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Moreover, this study also deliberated the Psychological Association of the Philippines Code of Ethics as it follows some of its ethical considerations as the researchers respect the rights of the participants involved and the confidentiality of the gathered data the study needed.

### RESULTS

The data gathered from the responses of the participants were analyzed by the researchers using thematic analysis, which involved coding, categorizing, and creating themes. The researchers discovered a number of themes as they investigated the existing intervention programs for juvenile delinquency, including (1) *Intervention Programs for Juvenile Delinquency*; (2) *Objectives of the Intervention Programs*; (3) *Process of Program Implementation*; (4) *Program Approaches to the Needs of CICL*; (5) *Experiences as VAWC officers*; (6) *Challenges in Program Implementation*; (7) *Dealing with Challenges in Program Implementation*; (8) *Monitoring of CICL cases*; (9) *Impacts of Intervention Programs*; (10) *Trends of CICL cases*; and (11) *Input for Enhancement*.

**Table 1. Presentation of Themes**

MAJOR THEMES	SUBTHEMES
<b>Intervention Programs for Juvenile Delinquency</b>	Livelihood and Recreational Moral Advice and Lecture Sports Religiously Oriented Alternative Intervention
<b>Objectives of the Intervention Programs</b>	Serve as Diversion Provide Financial Opportunity Impart Knowledge Instill Moral Values Nurture CICL
<b>Process of Program Implementation</b>	Handling of CICL Cases and Interventions
<b>Program Approaches to the Needs of CICL</b>	Establishment of Empathy Providing Comfort and Care Promoting Inclusivity of CICL
<b>Experiences of VAWC Officers</b>	Laborious Demands Compassion towards CICL Traveling to Distant Facilities Filling Multiple Job Roles Sense of Accomplishment
<b>Challenges in Program Implementation</b>	Sacrifices in Duty Conflict in Decision Making Jeopardy Management of CICL Management of Parents

## Evaluation and Enhancement of Existing Intervention Programs for Juvenile Delinquency

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<b>Dealing with Challenges in Program Implementation</b>	Reaching Out to Other Authorities Endorsement to DSWD Accustomed to Adversity Commitment to Occupation
<b>Monitoring of CICL Cases</b>	Means of Communication Home Visitation Frequency of Monitoring
<b>Impacts of Intervention Programs</b>	Apprehension of Consequences Progress in CICL Cases Serve as Disciplinary Action
<b>Trends of CICL cases</b>	Case of Repeating Offenses
<b>Input for Enhancement</b>	Need for Resources Parental Involvement Additional Psychosocial Programs Consistency of Implementation Extension of Intervention

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### Intervention Programs for Juvenile Delinquency

Dealing with cases of juvenile delinquency in their respective barangays, the VAWC officers facilitate different intervention programs in order to address and extend their hand to these children in conflict with the law.

#### Livelihood and Recreational

This theme is associated with the type of intervention program for children in conflict with the law that VAWC officers implement in their barangays. The children make amends for their wrongdoings by cleaning up while being watched over by the other barangay officers. In addition to this, Rafferty (2018) stated that such activity that involves helping in the community is an important component of restorative justice as it serves as a form of retaliation that benefits the community itself. Some participants also mentioned that this intervention program is only for those who have committed minor offenses. Aside from cleaning, children are also taught how to make products that they can sell and profit from.

*“Yung mga CICL ang ginagawa namin ‘pag nagkakaroon ng kaso dito **pinagliliinis namin, pinagwawalis** pagka nahuhuling may kasalanan. ‘Yung pangkaraniwang kasalanan lang hindi naman napatawan [nang mabigat na parusa].” (Ms. Dedicated)*

*“When we have a CICL case here, we only give the children **cleaning and sweeping** tasks if they have been found guilty, [We do not imply severe penalties] to minor offenses.” (Ms. Dedicated)*

On the other hand, one participant did point out that their barangay also equips the children in conflict with the law to in learning how to create and sell items for the purpose of earning money.

*“[...] meron silang ang ano yung **tuturuan ang mga bata** na halimbawa yung, **yung mga binebentang basahan.**” (Ms. Gentle)*

*“[...] They had a training where **the CICL were taught**, for instance, **on how to sell rags.**” (Ms. Gentle)*

#### Moral Advice and Lecture

When a case is received, VAWC officers sit down with and talk to the children involved and inform them of their wrongdoing. Jack and Maria (2017) mentioned that such discussions help people navigate difficult life situations, recognize what was good in the past, and decide what they want to achieve in the future. These participants also stated that they are aware that they are not credible or knowledgeable enough to provide counseling.

*“Pag dito lang sa amin mga **panga-pangaral, pangaral lang**, ganon lang kasi wala kaming karapatan mag ano dyan mag sa **pagdating sa counselling dahil naghahanap yan ng doctor e.**” (Ms. Devoted)*

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*"If it's within the office, we simply offer them **preaching, or sermons**, just that as **we do not have the authority to perform counseling**, since it requires a qualified doctor". (Ms. Devoted)*

Moreover, some of the participants have also invited parents to speak with them because they believe that they are responsible for their children and have a significant role to play in this.

*"Edi ano, iyan e **kinakausap namin**, pinapatawag ang magulang, lalo diba minor 'yung mga CICL na 'yan pinapatawag ang magulang [para kausapin]."* (Ms. Analytical)

*"Initially, **we speak with them**, we invite their parents, especially considering that they're minors. The parents of the CICL were summoned [to discuss the situation with]."* (Ms. Analytical)

### Sports

Aware of the potential prejudice and discrimination that children in conflict with the law may face, the officers involved make every effort to involve and include these children in all sports activities and leagues held in their barangays.

*"[...] may ano po tayo, **ang SK po natin minsan nag papa-basketball.**"* (Ms. Congenial)

*"[...] we have our **SK here who often organize our basketball tournaments.**"* (Ms. Congenial)

This allows them to promote social inclusivity while also allowing the children to enjoy and have fun without fear of being treated differently than other children simply because they have committed offenses.

*"Edi palaro, mga palaro. Ah one day league [para sa mga bata]."* (Ms. Dedicated)

*"Sport, different kinds of sports, like a one-day league [for the children]."* (Ms. Dedicated)

### Religiously Oriented

The participants strongly believe that religion and spiritual beliefs can help children in conflict with the law reflect on all of their crimes, which is why they encourage them to participate in religious-oriented activities. Moreover, Pearce (2020) mentioned worship, moral conduct, and involvement in religious organizations as core elements of religious life.

*"Mostly sa mga pastor kasi **syempre spiritual baka mas kailangan nila ng moral ano advice ganyan, spiritual advice kasi nga medyo mga nagiging pasaway na nga or naliligaw nga ng landas so ganon.**"* (Ms. Gracious)

*"Mostly to the pastor **since it is spiritual, they primarily need moral advice or spiritual advice as they are becoming more stubborn or they've somehow lost their way in life.**"* (Ms. Gracious)

Additionally, one participant even mentioned that they seek assistance from a church priest to help them talk to and advise the children. Conforming to the Council of Europe (2022), the religious practice may also include sermons, the commemoration of gods' activities, festivals, feasts, meditation, public service, or other aspects of human culture

*"May benefits ka naman doon, [may] pakain naman 'yun at tsaka isa pa huwag kang mag-alala, **may mga mag-aano rin [magba bahagi] ng mga salita ng Diyos.**"* (Ms. Dedicated)

*"You will benefit from it, [there is also] food and you do not need to be worried given that **[there is someone who will share] the words of God.**"* (Ms. Dedicated)

### Alternative Intervention

When cases are deemed to be a major one, VAWC officers resort to referring the cases to other rehabilitation centers and other institutional facilities where the children can get better intervention and help.

*"Before nagkaron kami ng program together with the DSWD uh buong... buong Cabuyao 18 barangays, namili kami ng mga CICL na **nagkaron ng retreat somewhere in, hindi ko alam kung San Pablo ba? Basta somewhere banda dyan sa pataas ng Laguna.**"* (Ms. Gracious)

*"We previously had a program with the DSWD all throughout the 18 barangays of Cabuyao. We selected CICL who **have undergone a retreat somewhere... I'm not sure if it's in San Pablo? someplace at the top area of Laguna.**"* (Ms. Gracious)

Moreover, they have also mentioned *Bahay Pag-asa* and DSWD which assist and take over the custody of the children wherein they are given proper counseling and other intervention.

*"**Meron po tayong Bahay Pag-asa na ito po ay nasa Calauan**, so doon po dinadala yung mga bata na kailangan na pagbayaran naman yung kanilang mga ah kasalanan."* (Ms. Congenial)

*"**We have a Bahay Pag Asa in Calauan**, it is where the young offenders are taken to make amends for their offenses."* (Ms. Congenial)

## Evaluation and Enhancement of Existing Intervention Programs for Juvenile Delinquency

### Objectives of the Intervention Programs

It outlines the barangay authorities' goals for how these intervention programs could enhance the lives of children who are in conflict with the law.

#### Serve as Diversion

Participants answered that one of their aims was to redirect the attention of the children and have them focus on other things that can be beneficial for them rather than spending their time committing offenses. Through the various intervention programs that they implement in their barangay, children get to manage their time productively and get entertainment from it.

*"Para ma-busy [ang mga] CICL, eh sports lang naman 'yan eh para may pagkalibangan sila." (Ms. Analytical)*

*"To keep [the] CICLs busy, it is a simple sports event yet it will keep them entertained." (Ms. Analytical)*

*"Bigyan namin [ang mga CICL] ng, halimbawa sports, para hindi sila ma-ano [masangkot] sa mga masasamang gawain." (Ms. Gentle)*

*"To provide [CICL], for instance sports, for them to [divert them away] from delinquent acts." (Ms. Gentle)*

#### Provide Financial Opportunity

With theft being one of the most commonly reported violations and offenses of the children, the officers also seek to offer opportunities for the children to learn how to earn and make profit just from doing simple products.

*"[...] yung matuto sila mag negosyo, kumita ng pera." (Ms. Gentle)*

*"[...] for them to learn how to run a simple business, earn money." (Ms. Gentle)*

#### Impart Knowledge

Children in conflict with the law are often seen as misguided individuals that needed to amend their values. With this, the VAWC officers also try their best to guide and teach the children to drive them away from the possibility of reoffending.

*"Iga-guide namin para maano sila... hindi malulong sa gan'yan, di ba? [sa] mga bisyo." (Ms. Cheerful)*

*"We will guide them... to refrain from becoming addicted to that, right? [on] addiction." (Ms. Cheerful)*

In addition, Das (2021) mentioned that imparting knowledge shapes the minds as well as the hearts. However, people typically associate the idea of imparting knowledge with a wide range of viewpoints. Some may consider imparting values or facts to constitute a rant, while others may regard it as an act of nobility for giving a bit of their knowledge.

#### Instill Moral Values

Participants wish to impart discipline and principles through the intervention programs offered in their respective barangays in order to help them develop a better sense of themselves. Furthermore, moral values are socially produced attitudes, beliefs, and behaviors. It comes into play when a person interacts with the outside world or makes a decision that will have an impact on others stated by Harappa (2020).

*"Matutunan mo yung kung ano ang dapat mong gawin. Hindi ang pinaka purpose na community service is hindi para linisin ang barangay namin. Ang pinaka-ano ko doon, ang pinaka intensyon ko doon matuto sila." (Ms. Congenial)*

*"For them to figure out what they should do. The purpose of the community service is not to just clean the barangay. My main objective or intention is to educate them and help them learn from it." (Ms. Congenial)*

#### Nurture CICL

Above all, the main point of these intervention programs is to help and develop these children in conflict with the law. The participants mentioned that what they truly desire is for them to become a better version of themselves and recognize that what they did was wrong, and thus should not be repeated.

*"Makapagpabago and then to make them realize na yung tinatahak nilang landas is hindi [...] tama ganon." (Ms. Gracious)*

*"To make a change and then to make them realize that the path they are taking in life is not right for them." (Ms. Gracious)*

The participants mentioned that what they truly desire is for them to become a better version of themselves and recognize that what they did was wrong, and thus should not be repeated.

*"[...] ang target namin e yung improvement ng mga bata." (Ms. Gentle)*

*"[...] our target is the improvement of children." (Ms. Gentle)*

## Evaluation and Enhancement of Existing Intervention Programs for Juvenile Delinquency

### Process of Program Implementation

This theme explained how participants handle cases involving children who have in conflict with the law by detailing the process necessary for the implementation of existing intervention programs.

### Handling of CICL Cases and Intervention

The handling of CICL cases and interventions frequently begins with the filing of complaints. The officers then collect data or perform profiling on the child's information. The VAWC officers must immediately file the blotter in order to keep a record of the case. They would then send an invitation to the guardians of the children involved to continue the discussion.

*“Sa lahat ng inaano namin, nililiwat, nakarecord at may blotter. May in-take form, merong referral form kaming ginagawa kapag ini-refer namin, referral form. At kung dito naman nangyari, may in-take form kaming para sa status ng kan’yang ano... kan’yang pagkakakilanlan.” (Ms. Analytical)*

*“For every one that we reincarcerate, there is a record [of their information] and blotter procedure. There is also an in-take form and referral form that we do whenever we refer them [to other authorities]. And if the case will happen here, there is an in-take form for the status of the children’s identity.” (Ms. Analytical)*

One of the participants stated that they will first gather all the necessary client data before proceeding to hear their perspectives.

*“[Ang unang ginagawa ay] ini-interview siya. Inaa-nuhan, bina-blotter. Lahat ng impormasyon kukuhain mo sakanya tapos kung kaya naming ano, pinupuntahan namin yung magulang. Tinatanong namin bakit nagkakaganyan yung anak mo ganon ganon.” (Ms. Cheerful)*

*“[The first thing to do is] to interview them. They undergo a blotter procedure. All of the information about them is needed to be attained, then if we can, we will visit their parents. We will ask them why their children are acting that way.” (Ms. Cheerful)*

### Program Approaches to the Needs of CICL

This theme highlighted how each of the selected barangays' intervention programs recognizes the needs of children in conflict with the law in order to achieve beneficial changes in their lives.

### Establishment of Empathy

The officers are certain that understanding is what the children in conflict with the law need most. Participants said they always try to comprehend the CICL's underlying motives and how they were able to commit violations and misdemeanors. Moreover, Molenberghs (2017), mentioned the importance of empathy as it enables people to understand how others are experiencing therefore they can respond appropriately to the situation. It is commonly associated with social behavior, and several studies suggest that greater empathy leads to more helpful behavior. One participant claimed that developing rapport with the children helped them understand their needs and feelings better.

*“Hindi komo may ginawang hindi maganda ang CICL ay hindi mo dapat paratangan sa lahat ng pagkakamali niya bagkus ay yakapin mo at bigyan mo ng pagkakataon na hindi lang ikaw ang batang ganyan. Sabihin mo lahat ang problema sa amin at ika’y naiintindihan at kami ay kakampi mo.” (Ms. Dedicated)*

*“Despite the unlawful things that the CICL did, they should not only be seen by their mistakes, rather we must embrace and give them another chance and make them feel that they are not the only children who did the same mistake. Assure them that they can share all of their problems with you and that you will understand them and can be their companion.” (Ms. Dedicated)*

### Providing Comfort and Care

As per the findings of Petiprin (2020), human comfort can occur in four contexts: physical, psychospiritual, environmental, and social. Moreover, the participants also mentioned that they can give the CICL a safe space where they don't have to worry about their security and safety thanks to the intervention programs they run in their barangay.

*“[...] sa work namin kasi ina-assess talaga lahat from family kung ano ang nangyari ganito ganyan so hahanapin o yung root cause so after non sasabihin namin sa partner namin na magka counselling, excuse me, na ganon ang case nya kaya ayon nga uh na kumbaga natutumbok naman ng aming mga, aming magka-counsel sa bata yung mga needs talaga kung ano yung, anong tawag dito, yung kailangang puntohin para at least mapa bago yung bata.” (Ms. Gracious)*

*“[...] in our work, we are assessing all [the information] from the family, to what happened, and we will find the root cause [of the problem or the case] then after that, we will tell our partner who will be done the counseling that, that is their case, in which*

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*it seems to be helpful for them to determine the child's needs that needed to be addressed so that at least the children can change."* (Ms. Gracious)

Additionally, Kolcaba in 1990s classified comfort into three categories: relief, ease, and transcendence. When a person's comfort needs are satisfied, he or she feels relief, which is a sort of comfort. The participant mentioned that there have been times when they have provided for the children's basic needs, including food and other necessities.

*"[...] hindi pa rin sila kumakain binibigyan namin ng pagkain ng pera para may mabili sila."* (Ms. Cheerful)

*"[...] if they have not eaten yet, we will give them food or money for them to buy something."* (Ms. Cheerful)

### Promoting Inclusivity of CICL

If there was one thing that the officers do not want to happen, that is to have these children feel alienated from society just because they have committed few infractions. According to Hart (2020), when somebody is welcomed in a group setting, they are said to be inclusive. (e.g., company, office, meeting). Not only do these team members feel included but they are also trusted and counted on to contribute to the team.

*"[...] kunwari may mga project ang mga Women's Desk isa sila sa kinukuha namin na para mailahok sa mga palaro na mga kapwa CICL nila"* (Ms. Dedicated)

*"[...] for instance, whenever the Women's Desk has projects, we include them to participate in the games with their fellow CICL."* (Ms. Dedicated)

Through the intervention programs that they provide in their local municipality, the participants mentioned that they get to make sure that they are still treated the same way other children are.

*"[...] hindi po sila pwedeng hindi isama. Kasi CICL yan. Mga magulo yan baka magwalang hiya dito yan. Hindi po natin pinapahintulutan yan... so, ibig sabihin kahit po sila ay CICL karapatan nila na maenjoy pa rin dahil bata pa rin naman sila."* (Ms. Congenial)

*"[...] they cannot be excluded. Because that's CICL. They are prone to get into trouble. We will not allow that... so, that means even if they are CICL they still have the right to enjoy it because they are still young."* (Ms. Congenial)

### Experiences of VAWC Officers

The experiences of the participants in handling the cases of CICL were emphasized in this theme. They also delineate how they feel when they receive complaints about children in conflict with the law.

### Laborious Demands

Participants disclosed that they experienced demanding work conditions. Additionally, they talked about how they feel about their work when handling cases involving juvenile offenders and others. Noviello (2022) mentioned that working with young people can be challenging for a variety of reasons; it requires a lot of effort and stamina and commitment. Both the employee and the child victim may have difficult and traumatic experiences. This is why it is crucial for young workers to maintain the necessary strength for the reward for making a difference in and having an impact on a child's life.

They have also mentioned some instances wherein they get to experience being verbal abused, stress, and exhaustion. Apart from this, they have also learned that they do not get paid enough.

*"Yung trabaho kong mahirap, minsan nasstress kami, napupuyat kami sa ganong halaga ng sweldo, kulang naman talaga ang sweldo eh, maliit lang ang sweldo."* (Ms. Dedicated)

*"My job is difficult, sometimes we get stressed, we stay up late with that amount of salary, the salary is really not enough, the salary is low."* (Ms. Dedicated)

Additionally, the participants have also expressed the tough parts in their jobs where one specially finds it difficult if the child that they need to be rescued gets involved in the fight between their parents. The participants struggle to keep things civilized between the couple and still have to think of the child's situation at the same time.

*"Sa totoo lang, mahirap talaga trabaho ko ano lalo na yung yung ang pinaka mahirap saken mag [asikaso] ng bata yung sa mag asawa nga na mag rerescue ng bata kasi minsan nagkaka anuhan, sigawan."* (Ms. Devoted)

*"To be honest, my job is really difficult, especially if... what makes it more difficult is when I am assigned to [take care of] the child that need to be rescued [due to the fight of the parents]. The parents will sometimes start an argument and scream so loudly."* (Ms. Devoted)



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According to Inegbedion et al. (2020), employees in every organization experience various levels of workload on a daily basis. Employee workload means the number of work assignments (Nwinyokpugi, 2018). If the workload changes for any reason, it affects employees' stress levels as well as their perception of fairness in labor balance. They claim that a workload that is below the standard workload will stimulate laziness and give employees the chance to be unproductive. On the other hand, if the workload exceeds the average, there is a likelihood that the employee will feel overwhelmed, which could lead to risks like burnout and breakdowns as well as negative emotions and dissatisfaction that could lead to the worker quitting the job. Workload for workers is a key factor in determining their productivity and turnover (Rajan, 2018).

### Compassion towards CICL

Participants expressed their concerns about the CICL and how it enabled them to feel better about themselves and others and encouraged these children to grow. They believe that children, in conflict with the law or not, deserve to be treated with respect, kindness, and consideration.

*"[...] nakakaawa yung mga bata, nakakaawa kasi, meron nga dito na pag inano yung mga bata hindi mo na talaga halos matignan."* (Ms. Gentle)

*"[...] the children look pitiful because there are times that when they were brought here you can hardly look at them."* (Ms. Gentle)

Some of the participants expressed their views regarding the apprehension of the children in conflict with the law.

*"[...] kasi sa harap ko, ayokong masaktan ang mga bata kahit may mga kasalanan 'yan dahil parang iniisip ko kapatid ko 'yung mga 'yan. 'Yung sasabihin [...] diba merong halimbawa may tanod na "Ikaw, magnanakaw ka [...]" may ganon, oops, wag niyong saktan, nasa akin nang harapan e. Kasi nakakaawa din 'yan, tao din 'yan, ang iniisip ko na lang itinuturing ko silang kapatid na pinapangaralan ko."* (Ms. Analytical)

*"[...] in my part, I do not want the children to get hurt even though they made a mistake because I think of them as my siblings. For instance, some of the barangay police officers would say appalling things, and I will prevent them to hurt the children in front of me. Because they are pitiful, they are also human, I am just thinking that I consider them as my brothers and sisters that I preach to."* (Ms. Analytical)

### Traveling to Distant Facilities

The participants were forced to travel to distant institutions to help children who had broken the law due to a lack of resources, particularly in their municipality.

*"[...] ang pinagdadalhan namin doon sa Silang, Silang, Cavite."* (Ms. Gentle)

*"[...] we will bring them to Silang, Silang, Cavite."* (Ms. Gentle)

Facilities like mental hospitals and rehabilitation centers are necessary in cases involving children. They also talked about the difficulties they encountered when going to far-off facilities.

*"Meron don sa Mandaluyong. Sa Mandaluyong mismo. Biruin mo, hindi sa pag-aano, ang mahal na ng gasoline, ano 'yan ng barangay. Oo, tapos, minsan hihingi lang kami ng pang-allowance namin kasi siyempre kakain kami."* (Ms. Cheerful)

*"There is one in Mandaluyong. It is not a joke to bring the children there because the cost of gasoline is expensive, but the barangay provided the expenses. Then, sometimes we will just ask for our food allowance."* (Ms. Cheerful)

### Filling Multiple Job Roles

The participants shared how their line of work has accustomed them to handling a variety of duties and responsibilities. Cecile (2017) argues that jobs these days are not just getting longer in hours, but also getting more tasks, making them multi-roles. Moreover, some of the participants also had to handle other cases in addition to the CICL cases.

*"Parepareho kami ng trabaho, dinagdagan pa nga eh. Dapat Women's Desk, women's desk lang kaso...eh minsan 'pag walang DSWD kami na rin."* (Ms. Dedicated)

*"We do have the same job roles, but sometimes the workload increases. Even though we are at the Women's Desk and must only do our assigned tasks there, sometimes when the DSWD is not present, we will be assigned to do their job."* (Ms. Dedicated)

Apart from their roles as VAWC officers, one participant claimed that they have further job commitments in order to process the cases of the CICL.

*"[...] kami naman magdadala ng referral kahit minsan galing sa munisipyo dadaan kami dapat diyan sila dapat ang magdadala doon kami na lang ang nagdadala kaya bukod don sa VAWC, meron pa kami sa imbestigasyon kami rin ang napapaupo."* (Ms. Analytical)

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*"[...] we, on the other hand, will bring a referral, even if it comes from the municipality, we will go through there. **They should be the ones who bring it to the [municipality] but there are instances that we would just do the task. So, apart from being the VAWC, we still have to do the investigation.**" (Ms. Analytical)*

### **Sense of Accomplishment**

The participants discussed how they feel a sense of accomplishment after improving the children's circumstances. Participants also feel delighted upon seeing progress in how these children treat and socialize with others.

*"Kahit papaano **meron kang nagawang maganda sa barangay, sa pamilya ng bata na naano mo 'to. Napaganda mo ang buhay nila. [...] pag na-accomplish mo siyempre proud ka sa sarili mo na bago ko naano may nagawa ka may naitulong ka diba ganon na ano ganon lang naman.**" (Ms. Gentle)*

*"Somehow, **it feels like you have done something in the barangay, to the family of the children you helped. You made their lives better, [...] when you accomplish it, of course, you will be proud of yourself that you have done something, that you were able to provide help.**" (Ms. Gentle)*

One particular participant also shared that she could not help but feel the joy that some children become more participative and cooperative with the intervention programs being held out for them.

*"**Minsan nakakatuwa** kasi pagdating nila, papasok ako, "Ma'am, tapos na po kami nilinis ko na ang, nalinis ko na po yung kwarto mo nalinis na po namin yung ano"" (Ms. Congenial)*

*"**Sometimes it is gladdening** because when I come in, they will said things like, "Ma'am, we're done, We have cleaned the, We have cleaned your room." (Ms. Congenial)*

The participants consider such achievements as rewards for their efforts in helping the children. This elicits a positive emotional reaction and works to motivate them to continue to improve as well as make lasting behavioral changes when needed (Ryan and Deci, 2020; Manzoor et al, 2021).

### **Challenges in Program Implementation**

The participants acknowledged a few obstacles that make managing the intervention programs challenging for them.

#### **Sacrifices in Duty**

According to the participants, making sacrifices is just as important as doing their jobs. Their sense of exhaustion is correlated with managing the CICL and facilitating the programs.

*"[...] **minsang oras kami nakaka-uwi, alas tres, alas dos ng madaling araw.**" (Ms. Cheerful)*

*"[...] **sometimes we arrive home late, around three or two in the morning.**" (Ms. Cheerful)*

One participant said that they frequently have to put their personal matters aside for the benefit of the CICL. Moreover, according to Patalinghug (2021), caseworkers who work with children who are in conflict with the law imply that anything can happen that goes beyond their scope of responsibility. Handling children necessitates that the officers must be flexible and that there is no fixed time in their work because they are obligated to do their job when they are needed

*"[...] mahirap talaga kaya yung ginagawa namin sa sacrifice talaga, **nag sasakripisyo kami para lang sa kanila [sa mga CICL].**" (Ms. Gentle)*

*"[...] **it's really tough that's why we really have to sacrifice for them [for the CICL].**" (Ms. Gentle)*

#### **Conflict in Decision Making**

In order to mitigate impartiality and unfair treatment in the field of the participants, they must exercise critical judgement when handling the cases of children in conflict with the law. Juneja (2018) stated that such involves identifying a decision, gathering information, and evaluating possible solutions.

A participant also shared that it gets even more challenging when a family member of hers get involved with the issues wherein she must remain just and fair in drawing decisions and actions.

*"[...] Kaya nga may ah **sa pag-iimbestiga kailangan medyo matalas. Ayon yung medyo mahirap na talagang train muna din namin na hindi ka pwede na basta nag report ka, nag report ka na ito si ganito, ginanto ako, ginanto ako.**" (Ms. Congenial)*

*[...] **That is why you have to be sharp during the investigation. That is really crucial, hence why we have to really train because we cannot just submit reports that "they did this to me, this person did this to me."**" (Ms. Congenial)*

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### Jeopardy

Participants reported that their safety was adversely affected while carrying out their responsibilities. The officers raised their concerns and worries about getting complained if they make a judgement that they do not seem to find favorable to their end.

*"[...] 'yung sumuntok, dinala ko muna sa lupon. Doon ko, hinayaan kong ma-endorse sila ng lupon kung kakasuhan sila. **'Yun lang ang naexperience kong halos binalikan ako ng magulang na kesyo raw mali daw sabi ko,** "hindi, kasi nagbase lang din ako doon sa nalaman ko kaya ini-report ko." (Ms. Analytical)*

*"[...] the one who punched, I brought them to the barangay committee. There, I let them decide to endorse them if they will be charged. **That is the only time that I experienced that a parent came back to me and accused me of making wrong calls and judgement,** I said, "no, I only base from the information I have gathered and reported it." (Ms. Analytical)*

Another participant also expounded the need of being analytical and fair as they are aware of the possible consequences if they happen to make a mistake upon finalizing the judgement.

*"So, kaya... kasi nga once na nagkamali kami pwede kaming mag desisyon sa aming kaharap **kami ang pwedeng balikan. Kami ang puwedeng ireklamo nang inireklamo.**" (Ms. Congenial)*

*"So, if... once we make a mistake in making decisions then **the respondent can file charges and complaints against us instead.**" (Ms. Congenial)*

### Management of CICL

The officers noted that there were times when the CICL themselves did not seem to want to cooperate or show any interest. Additionally, they admitted that despite their best efforts to question children, there are times when they will lie or refuse to acknowledge their errors.

*"For the past 8 years, **yung mapasunod [laughs] saka mag yung ma-prevent or ma-lesser yung mga kaguluhan** sobrang challenging yon." (Ms. Gracious)*

*"For the past 8 years, **making them comply, as well preventing and lessening the occurrence of troubles,** have been really challenging." (Ms. Gracious)*

They also said that dealing with CICL management was very difficult because nobody there ever seemed to pay attention to what they had to say.

*"[...] parang hindi sila nag nakikinig". (Ms. Gentle.)*

*"[...] they do not seem to listen." (Ms. Gentle)*

### Management of Parents

Apart from the children, participants also shared their dismay with how uncooperative some parents tend to be. One participant voiced her displeasure by asserting that parents who neglect to watch over and take responsibility for their children must also be punished and held accountable.

*"Ma'am kailangan ho yung anak niyo ay minsan nagba-bonding ho kayo sa labas, kumain sa Jollibee o kahit turo-turo, ah gawin niyong kaibigan ang inyong anak ng hindi naman maano sa kaniyang barkada na masasama, mga panget' Ganon, ganon ang sinasabi namin sa kanila. **Ah bigyan ng oras, hindi trabaho lahat.**" (Ms. Dedicated)*

*"Ma'am, sometimes you have to bond with your children, eat at Jollibee or street foods, befriend with your children so that they do not get included in the wrong circle of friends.' that's what we tell them. **Allocate time, and do not solely focus on work.**" (Ms. Dedicated)*

Additionally, Forrester et al. (n.d.) probed parental resistance to the involvement of child and family social workers in their study. It defines parental resistance as any form of noncooperation, including perceptible collaborative efforts that mask uncertainty, non-engagement, violent or threatening social behavior, and other manifestations of non-engagement. They have also shared a few instances in which they have contacted or visited parents but neither of the parents showed up or communicated with them.

*"Kapag pinuntahan mo naman, ayaw makipagharap sayo." (Ms. Cheerful)*

*"If you pay them a visit, they do not want to face or entertain you." (Ms. Cheerful)*

### Dealing with Challenges in Program Implementation

This theme covers the approaches used by the intervention programs' facilitators to deal with the difficulties and troubles they encountered while putting the programs in place.

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### Reaching Out to Other Authorities

The officers talked about their practice of turning to other authorities in their barangay or municipality for assistance when they believe a particular case requires it. In order to get more help for the cases of the children, they also speak with their barangay chief.

*“Kaya ang ginagawa naming ine-endorse din namin kung sinong VAWC sa kabilang barangay o saang barangay para alam din nila, namo-monitor din nila ‘yung kabataan.” (Ms. Analytical)*

*“So what we do is that we also endorse it to the VAWC from other barangay or any barangay so that they are also aware, they also get to monitor the children.” (Ms. Analytical)*

Participants also disclosed that in order to address the issue of a child who happens to commit a crime in their community, they regularly communicate with an officer in another barangay.

*“Kunwari ‘yung taga rito yung gumawa ng kasalanan at sa [redacted] ginawa, susuportahan mo ‘yun sasamahan mo ‘yun ano bang nagawa nito isasamahan namin ng magulang ‘yun, kasama na ‘yung magulang.” (Ms. Dedicated)*

*“For example, someone committed an offense here in [redacted], you have to support and guide them, ‘what did this person do?’ We also bring the parents with us.” (Ms. Dedicated)*

### Endorsement to DSWD

One strategy used by the officers to address this problem was to ask the government agency for help. Participants mentioned that government authorities assisted them in helping young offenders.

*“[...] pero pag hindi na talaga yon nire-refer na namin sila sa DSWD and then si DSWD na ang bahala kung ang mag aassess kung kung ano ang dapat gawin don sa bata specially kapag paulit-uulit ang ginagawa.” (Ms. Gracious)*

*“[...] but if the case is beyond our control anymore, we refer it to DSWD already and let them assess what is better for the child, especially if it has been repeated many times.” (Ms. Gracious)*

Additionally, they mentioned that the cases were brought to them based on the severity of the offense committed by the children.

*“So ayon pag mga ganong case turn over to DSWD na yon. DSWD na ang nag c-counseling sa kanila.” (Ms. Congenial)*

*“So if there are cases like that, we turn it over to DSWD. DSWD will be the one to counsel them.” (Ms. Congenial)*

There are referral networks at various levels, according to the Philippines Commission on Women and the Inter-Agency Council on Violence Against Women and Their Children (n.d.). The obligation to provide temporary shelters, counseling, psychosocial services, and/or recovery, rehabilitation, and livelihood assistance falls on the Local Government Units (LGUs) and the Department of Social Welfare and Development (DSWD). Moreover, they are entrusted with providing rehabilitative counseling and treatment to violent delinquents. As a result, the VAWC officers refer children who are in conflict with the law to them.

### Accustomed to Adversity

Participants described their line of work to be difficult and challenging at first time but they were able to get used to it and have a better grasp of how to handle cases and reports.

*“Nung una, nung unang bago ako nahihirapan ako humihingi ako ng payo sa mga dalawa kong kasama, ngayon okay na, gamay ko na.” (Ms. Analytical)*

*“At first, when I was just starting, I was really struggling so I ask tips from my other workmates. Now, I already got the hang of it.” (Ms. Analytical)*

*“Hindi na, nasanay na ko siguro. Siguro nong mga first 2 years ganyan 2 years medyo hirap pa pero ngayon di naman na.” (Ms. Gracious)*

*“Not anymore, maybe I already got used to it. I guess I was struggling during the first 2 years, but now, not anymore.” (Ms. Gracious)*

### Commitment to Occupation

Participants talked about one way they overcame difficulties was by loving what they did for a living. They also mentioned that they have a vowel obligation to assist, regardless of how doing so might impact their quality of life hence why they cannot just simply leave and abandon cases and reports that they receive.

*“Kasi syempre pag mahal mo ang, di ko naman na kasi hindi ako tumagal dito dahil ano e, anong tawag dito, dahil sa sweldo kasi kung sweldo ang titingnan ko dito di sweldo yung kinikita namin dito, honorarium lamang kumbaga so napamahal na lang din*

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***ako sa trabaho ko kaya ayon parang okay na saken ganon na kumbaga pag mga ganyan, okay na yan masstress ka lang nang slight after nyan tapos na ulit ganon.*** (Ms. Gracious)

*"If you love, I did not last here because of the compensation because if you will base it on the salary, we do not gain salary from here, but only honorarium. So I just fell in love with my job, so for me, it is okay to be slightly stressed, after that it won't happen again."* (Ms. Gracious)

One participant also shared how they value their field of work, understanding the background of the their job, hence why they must not fail to look after those cases.

*"Hindi mo naman kasi mapapabayaang, hindi mo pwedeng tanggihan. Ano ng trabaho namin yan e"* (Ms. Cheerful)

*"You cannot neglect it, you cannot refuse. That's part of our job."* (Ms. Cheerful)

### Monitoring of CICL Cases

The participants talked about how they track the development of the children conflict with the law both before and after the intervention programs are implemented.

### Means of Communication

The officers responded that they would occasionally get in touch with the parents of CICL to inquire whether the children had undergone any noticeable changes. Additionally, some participants mentioned using their personal mobile phone and contact number to keep in touch with the parents and track the children involved.

*"Kapag sasabihin ko na hindi ako makakapunta, merong ganon. Personal. Minsan ibinibigay ko. Minsan naman 'yung sa barangay. Kasi 'pag sa barangay ang binibigay ko tatawag sila, wala ako kaya personal kong ano. Minsan din messenger na."* (Ms. Analytical)

*"There are instances where I inform them that I will not be able to pay them a visit, [so I give them my] personal [contact], sometimes I do. Sometimes, I give them the barangay's. However, if I give them the barangay's contact number, I do not receive a copy of their message [on my personal phone], so sometimes, I also do [give them my Facebook] messenger."* (Ms. Analytical)

One participant did, however, mention that their barangay had given them a work phone to use for the monitoring to contact the parents or any of the guardians present.

*"Tumatawag ako sa mismong nanay, 'oh kumusta yung anak mo? Andyan na ba?'"* (Ms. Congenial)

*"I call directly to the mother, 'So how is your child? Is your child there?'"* (Ms. Congenial)

### Home Visitation

In order to find out where the children in conflict with the law were and how things were going for them, the participants frequently visited them. In addition to that, Kelly (2022) mentioned that home visits are designed to ensure that there is consistency applied among the participants, facilitators and other providers, and as well as to the visitors in order to establish a positive connection between the program activities and other desired outcomes. Home visitation is also done if the children repeatedly commit such dubious actions despite undergoing the existing intervention programs.

*"Ano pag paulit ulit talaga, binibisita ko talaga yung mga matitigas ang ulo."* (Ms. Devoted)

*"If it is really repetitive, I really [allot a time to] to visit the stubborn [children]."* (Ms. Devoted)

The officers also used it as a means of assisting the parents in the child's development. Some participants mentioned that they sometimes hold unannounced visitation for them to truly see whether they are adhering to what they were advised of and further ask the people that the CICL live with in their household as well as their neighbors and everyone around them to take note if the children truly made any progress.

*"[...] meron po akong ah secret home visit. [...] para ma-sure ko kung ah [nasa bahay ang bata], bukod din kasi sa bahay nila sa mga kapitbahay nga tatanong din ako."* (Ms. Congenial)

*"[...] I have ah secret home visit. [...] so that I can make sure if ah [the child stays at home], well, aside from their household, I also ask questions to their neighbours [to ensure if the child is really showing progress]."* (Ms. Congenial)

### Frequency of Monitoring

The VAWC officers do not always visit the children who were in violation of the law or speak to their parents on a daily basis. Additionally, the CICL were given a period of time to enjoy themselves without worrying about being watched or regularly checked by



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the officers. The participants had different answers from one another. Some said they do the monitoring monthly, or twice or even three times a week.

*“Mga minsan dalawang, sa isang buwan dalawa ganon, hindi naman palagi, nong isang buwan wala mga ganon.” (Ms. Devoted)*

*“Sometimes two, twice a month like that, but not always. Last month there was none.” (Ms. Devoted)*

The VAWC officers have had different lengths or duration as well in monitoring the children, moreover, most of them conduct monitoring either weekly or on a monthly basis.

*“Anim na buwan. Dadalawin ko siya ng ano, nang yun nga sinasabi ko sa inyo na monthly. Umabot ng anim na buwan ‘yun [...] depende doon sa imo-monitor, iho-home visit mo, merong lingguhan, meron din naman na buwanan. Kasi nakapagho-home visit ako buwanan kasi sabi ng nanay.” (Ms. Analytical)*

*“Six months. I will visit the child monthly, like I told you. It took six months [...] well, it depends on the case that you will monitor, or pay a home visit to, there are weekly and there are monthly because sometimes, I do monthly home visit as per request of the mother [due to their work schedule because no one will accompany the minor]” (Ms. Analytical)*

### Impacts of Intervention Programs

In this theme, the participants discussed how the existing intervention programs helped to lower the number of children in conflict with the law.

### Apprehension of Consequences

Participants discussed how the programs changed the children in conflict with the law to deal with the repercussions of their actions. It was also mentioned how the programs made parents more aware of important aspects of raising children.

*“[...] yon nga uh nape-prevent or halimbawa uh napapa-realize kasi natin don sa mga bata kung kung ano yung mga wrongdoing na ginagawa nila, kung ano yung mga consequences non ganon uh yon nakakapagpa-realize and then yon nga nakakapagpa-bago kahit papano yung mga intervention program na ginagawa namin.” (Ms. Gracious)*

*“[...] like I said uh it prevents or, for example, we are able to make the children realize the wrongdoing that they commit, the consequences of those actions uh that, we are able to make them realize and then we bring change howsoever through the intervention program that we implement.” (Ms. Gracious)*

Additionally, the existing intervention programs also allowed the parents of the CICL to establish a more strict discipline to prevent the children from getting involved in worse cases repeatedly.

*“[...] syempre ang mga magulang aanohin niya na yung mga kanilang mga anak kasi sila yung na peperwisyo e kaya medyo hinihigpitan nila, nakakatulong din.” (Ms. Gentle)*

*“[...] of course the parents will feel the need to deal with their children more strictly because they are the ones getting bothered [by having to attend the barangay] which helps somehow.” (Ms. Gentle)*

### Progress in CICL Cases

The officers mentioned that there were significant changes in the rate of CICL cases they receive. nseling.

*“[...] pag kasi yung mga batang yuon ay, diba nakagawa na siya ng kasalanan at ano pag kina-counselling namin dito nag babago naman sila.” (Ms. Gentle)*

*“[...] well, if the children ever commit dubious actions, when we do counselling sessions with them, they do show progress in some way.” (Ms. Gentle)*

They have also observed that some children in conflict with the law were able to finish their education as they consistently monitor them.

*“Siyempre less kaso kami, naa-ano namin, namo-monitor namin. Yung iba, pagka kunyari nakikita mo, nakakapagtapos naman ng pag-aaral.” (Ms. Cheerful)*

*“Of course, there is less case, [we are able to] monitor them. Some [children], let's say if you see them around, they do finish their studies and graduate.” (Ms. Cheerful)*



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### Serves as Disciplinary Action

Officers clarified that intervention programs also serve as disciplinary measures to compel the children to take responsibility for their own mistakes and to reassure the complainants that they hold them accountable even if a signed contract between two parties already exists.

*“Pananakot lang namin yon kasi nahihiya sila na sila yung mag wawalis, “sige ulitin nyo mag wawalis kayo, mag wawalis.” She added “kunyari lang tataktutin, walisan mo na yan, ganon which is alam naman ng magulang.” (Ms. Devoted)*

*“We only use that to scare them because they feel embarrassed if they get to sweep around and clean, we’ll be like “do it one more time and you will have to sweep and clean again.” She added “we pretend to punish them and ask them to sweep [this area] something like that, which is something that the parents are aware of.” (Ms. Devoted)*

Moreover, some cases only serve as an agreement between the officer, the CICL and their guardians, and the complainant, if there is any. This agreement is the reminder that the children in conflict with the law are held accountable for their actions and have agreed to do the specified tasks.

*“[...] So ibig sabihin ayon ay naging kasunduan lang namin na meron kang ganito dito.” (Ms. Congenial)*

*“[...] so meaning, it serves as an agreement that they have had a case here [in the barangay].” (Ms. Congenial)*

### Trends of CICL Cases

The observed changes in the trends and rates of CICL cases over the course of the year are highlighted in this theme. The participants also offered some explanations for the reasons why there were differences each year.

### Cases of Repeating Offenses

Participants have noted that there are still instances of juvenile recidivism even after the implementation of various intervention programs. Even after repeated reprimands, some officers claimed that some children never truly learn anything. One participant also mentioned how some children have a tendency to exploit their youth because they do not seem fazed about the possible consequences of their actions.

*“Wala naman kasi silang ano, parang ugali na talaga nila e, kahit may intervention na ibibigay naulit pa din.” (Ms. Devoted)*

*“It is like they have already developed a habit out of it, even if you give them intervention it will only happen again.” (Ms. Devoted)*

A participant also expressed their frustration and helplessness over repeating cases of the same CICL.

*“Pero meron pa ring paulit-ulit, walang takot talaga. Wala kaming magagawa na.” (Ms. Cheerful)*

*“There are still some who repeatedly commit offenses, they are not really afraid at all. We cannot do anything anymore.” (Ms. Cheerful)*

### Input for Enhancement

The participants shared their ideas and perceptions on how the current intervention programs could be made more effective and efficient for the children in conflict with the law.

### Need for Resources

Participants have stated that they require facilities, professional staff, and financial resources. Christensen, et al. (2021) described resources as something which assists individuals in accomplishing their objectives. Moreover, the participants have stated that they are only able to talk about basic issues with the children because they are not allowed to offer counseling because they lack the credibility to do so and because there aren't any licensed professionals in their area who can. Another participant added that in order to reduce the amount of time that they must spend traveling, there is a real need for nearby facilities like rehabilitation centers or organizations like Bahay Pag-asa.

*“Pag-igihin? Kahit gustuhin man namin kagaya nung wala nga kaming center na pwedeng paglagyan sa kanila, sana magkaron kami kahit feeding program, diba sa mga... kaso wala. Kulang na kulang.” (Ms. Cheerful)*

*“To enhance? Because even if we want to, as you can see, we do not even have a center [or a place] to accommodate them in, we are hoping to have the opportunity to organize even a simple feeding program for the... [children] but unfortunately, we can not. It is really not enough.” (Ms. Cheerful)*

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Furthermore, it was mentioned that there is not enough facility within the city that can cater the needs of the children in conflict with law. The local offices of the VAWC officers in their respective barangay were not enough to closely accommodate the children which is something that they hope to be addressed.

*“Walang pasilidad.” (Ms. Devoted)*

*“There is no facility.” (Ms. Devoted)*

### Parental Involvement

The officers expressed their concern regarding the involvement of the parents in cases involving their children. They stated that there have been instances where children have resorted to breaking the law in order to get their parents' attention. Moreover, Mwangangi (2017) argues that the quality of a child's relationship with his or her parents influences whether or not he or she becomes a delinquent.

*“Kaya yung bata diba naghahanap ng atensyon ng magulang. Iyon ang kulang.” (Ms. Cheerful)*

*“The child, as you know, seeks attention from their parents. That is something they lack.” (Ms. Cheerful)*

A lack of parental attention and support, on the other hand, leads children to feel emotionally insecure and leads to poor personality development, fostering antisocial or delinquent behavior. Another participant shared her thoughts on the potential efficacy of intervention programs and how important it is for parents to get involved and work with the programs.

*“Magiging mabisa sya kung nakikipag cooperate yung, anong tawag dito, yung magulang at yung bata.” (Ms. Gracious)*

*“It will be effective if the parents and the children cooperate.” (Ms. Gracious)*

### Additional Psychosocial Programs

In addition to the intervention programs already in place in their barangay, they proposed other initiatives they believed would benefit the CICL more. One participant expressed her desire to hold events where they could foster and inspire children to display their artistic abilities and talents because she thinks that these CICL are talented and creative. Others mentioned initiatives that would target both children and their families as participants.

*“[...] pero ito nga, ito ngang gusto ko sanang ah maging project ng mga CICL mismo para nga sa mga CICL ah mabigyan ng pansin na, na magkaroon sila ng culture? Culture ba yung tawag doon? Yung, yung maging talented kasi makikita mo yung mga talent ng bata e ang kulang, ang kakulangan siyempre.” (Ms. Congenial)*

*“[...] but anyway, the project that I have in mind, that I'm hoping to do for the CICL themselves in order to raise concern, to give them culture? Is that what you call it? A way to help them become more talented and all because you will really notice that the children here have talent [and so much potential] but unfortunately, we do not have enough [to push through with that].” (Ms. Congenial)*

In accordance with the article Child Hope Philippines (2021) such concerns may be addressed with activities that can be accomplished by assisting children in creating healthy habits, introducing them to others, and organizing activities that support rehabilitation. There are several ways to offer psychosocial support, including: arts and crafts; drama and puppet performances; storytelling; sports; playing games; singing, musical instruments, and dance classes; awareness campaigns and seminars; skill training; counseling; psychological first aid; support and self-help groups.

### Consistency of Implementation

A participant also spoke about how crucial it is for these programs to continue and be carried out consistently for children who are in conflict with the law. She went on to say that strict regulation of policies and implementation was necessary if they were to expect the desirable changes.

*“Hindi mo naman pwedeng basta umpisahan lang yan e, kailangan once na inumpisahan kasi yan tuloy tuloy.” (Ms. Congenial)*

*“Well, you cannot just start with it. Once you begin with it, you really need to be consistent.” (Ms. Congenial)*

### Extension of Intervention

VAWC officers also wanted to extend the scope of their intervention so that they could provide assistance in addition to themselves. They have stated that it would be extremely helpful if they could also receive assistance from other organizations and sectors within their barangay.

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*“[...] yon nga **yung pagpapalawig pa nga namin nong mga intervention na hindi lang ako ang ta-trabaho** kasi part din dito ang BCPC tinatawagan nilang Barangay Council for the Protection of Children so buong community pero kami ang parang pinaka, anong tawag dito, uh magi-implement non. Mga programs sa BCPC kasama don ang kapitan, mga sangguniang barangay, and then mga school representative, mga ganon, sa community talaga.” (Ms. Gracious)*

*“[...] Like I said, **our extension of the intervention where I will not be the only one working** because BCPC or what we also call Barangay Council for the Protection of Children is also a part of this, so this also includes the entire community but we will be the ones who will lead and mainly implement it. There are also programs that include the BCPC, the barangay captain, the barangay Council, and then the school representatives, so it really calls for the cooperation of the community.” (Ms. Gracious)*

### DISCUSSION

The local authorities offer programs to nurture and encourage the growth of the children in conflict with the law to redirect their attention from committing illicit activities repeatedly. These intervention programs include community service where the CICL were encouraged to participate in activities such as clean-up drives, landscaping activities that include planting and catering crops in a small garden, needlework and other livelihood and recreational activities like sewing rags and selling them to make profit. There is also one-on-one discussion with the CICL where they have a conversation with the officer where rapport was being established. Sports like basketball and other physical activities were also offered that promotes inclusivity and camaraderie. Moreover, there were also religiously oriented activities where the CICL receive sermon and participate in small cell group. The VAWC officers also often resort to alternative interventions that include turning over of cases to DSWD or to distant facilities and institutions.

The study also revealed that there were cases of repeating offenses even if they have undergone the intervention programs. The light consequences encouraged them to continuously commit illicit activities after laying low for a few days. However, the research and study findings intensely noted that the existing interventions for juvenile delinquency called for enhancement. Additionally, the participants have expressed their needs and desire for more resources. The authorized officers also mentioned that they needed to travel to distant facilities when there is a need for a CICL to be assigned in a shelter. Hence, there was a need for the establishment of nearby custodial facilities such as institutions, shelters, and rehabilitation centers that will be able to cater these children within the city. An increase in funds would also greatly aid in hosting and organizing much more activities and programs intended for these children.

Moreover, it is a well-known fact that the role of the family plays a big part in why some children resort to the commitment of immoral behavior and actions. Consequently, there is a need to amplify the relationship between the parent and the child. The involvement of the parents would be a great help to ameliorate the situation and lives of the children. The participants also laid out their suggestions for implementing a variety of programs such as educational ones, as well as religious-oriented activities, as they believe that these will greatly help the children in conflict with the law in developing themselves. They also added that having skill training and workshops for the children will not only provide diversion but also allow them to develop and enhance their talents and skills. They also proposed that intervention programs should not only be limited and directed to the CICL itself. Instead, there should be seminars and dissemination of information across the community, and more importantly with the parents.

Apart from the substantial strategies of the barangays in implementing the various programs, it is a requisite to have consistency in administering the following measures to provide the appropriate and sustainable intervention programs for children in conflict with the law. There is also a need to execute the programs with a stern approach that would compel the children to follow the programs solemnly and to apprehend the consequences of their behavior.

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Table 2 Proposed Enhancement of Intervention Programs for Juvenile Delinquency

Intervention Programs	Description	Objectives	Time Frame
<b>Community Service Additional Qualified Manpower</b>	<p>The need for additional qualified manpower in the intervention program for community service calls for another qualified VAWC Officer that have the following qualities as per the Barangay VAW Desk Handbook (2012):</p> <p>Have experience in handling gender-sensitive cases; Committed; Responsive in a non-judgemental manner; Willing to learn new things and be trained for the job; Transparent and efficient in using the allotted budget; and Resourceful in terms of providing the necessities of the victim-survivors.</p>	<p>This enhancement seeks to provide further support in order to facilitate and attentively monitor the children in conflict with the law as well as to lessen the shouldered responsibility of the VAWC officers who work in the Women's Desk alone without shifting hours.</p> <p>Shift scheduling can help the barangay maximize each employee's productivity. Employees working diverse schedules may easily cause confusion over shift hours and responsibilities. They cannot operate at their best while they are uncertain.</p>	
<b>Parental Involvement</b>	<p>There is an evident need for activities that promote a stronger parental involvement such as seminars and family programs, to encourage the guardians to get more associated with the child's upbringing and whereabouts as well as to properly guide the children as they learn to grow as an individual and associate more in the society.</p>	<p>The strong involvement of the guardians with the children in conflict with the law aims to provide support and guidance to the children. In this way, the children will be guided and feel secure and supported by the people around them.</p>	
<b>Consistency of Implementation</b>	<p>The implementation of the existing intervention program for community service calls for consistency in a stern manner in order to show the children in conflict with the law that the intervention programs shall be taken seriously and with utmost accountability.</p>	<p>The stern consistency aims to truly instill discipline to the children in conflict with the law all throughout the intervention programs. This also seeks to teach the children to take accountability of their actions.</p>	At least a month

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### Moral Advice and Lecturing

<b>Additional Qualified Manpower</b>	There is a need for more qualified personnel, such as trained staff, doctors, counsellors, and other mental health professionals, who are required for the best interests of the child.	These additional qualified personnel must have the knowledge to carry out the appropriate procedure in counselling the children in conflict with the law that will provide help for the betterment of these children.	At least three (3) sessions with a professional counselor
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### Sports

<b>Consistency of Implementation</b>	The implementation of the existing intervention programs for sports shows the need for consistency as such activities promote inclusivity and camaraderie which encourages the children in conflict to interact more with their peers through sportsmanship rather than illicit activities.	The consistency in implementing the sports activities aim to give the children an event to look forward to which shall serve as a diversion that prevents them from engaging in delinquency and enjoyment at the same time.	At least a month
<b>Additional Activities</b>	Sports activities such as basketball and volleyball leagues are good ways to promote inclusivity and camaraderie to the children in conflict with the law and are recommended to be implemented more often.	These activities aim to serve as a diversion to the children in conflict with the law and allow them to feel involved and belong with their peers.	

### Religiously Oriented

<b>Additional Qualified Manpower</b>	Including the right people to help with this intervention program will have a greater impact on the children who are in conflict with the law. These individuals may be church priests or ministers with extensive experience in providing spiritual lectures and activities.	Employing the right people for the program are most likely to draw a more effective and efficient outcome from the children in conflict involved.	
<b>Consistency of Implementation</b>	There is a need for a strict consistency and implementation of the program to produce a substantial result.	To draw long-term changes in the development of the CICL.	At least two (2) months

### Alternative Intervention

<b>Parental Involvement</b>	The absence of parental involvement in the children's lives promotes delinquency in a variety of ways. Children raised by loving, consistent parents are less likely to commit serious crimes as juveniles or adults. On the other hand, children raised by parents who ignore or reject them are likely to become delinquent.	There is a need to strengthen the bond between the parents and the CICL in order to promote the children's life. The extent of commitment and active participation a parent has in their	
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children's life contributes to healthy personality development in children; households that are affectionate, supporting, and understanding are more likely to foster conformist and constructive social behavior.

<b>Monitoring</b>	Monitoring is the continuous collection of data on CICL to assess the effectiveness of an intervention, such as a project, program, or policy.	To see achievements and outcomes in relation to the program intervention's goals.	At least six (6) months after undergoing intervention program
<b>Establishment of Facilities</b>	The main reason why the assigned officers resort to alternative intervention is because there is a lack of facilities within the area. Establishing necessary facilities and centers within the area will not only benefit the children in conflict with the law but also the officers managing them.	To centralize the cases within the city and ease the struggles of both the CICL and officers of traveling outside the city.	

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### IMPLICATIONS AND RECOMMENDATIONS

The researchers present information on existing juvenile delinquency intervention programs. They place an emphasis on areas that still require improvement. Based on the findings and conclusions of the study, the researchers recommend the following:

#### Additional Qualified Manpower

The study shows that the participants obtain multiple job roles because there is only one VAWC officer employed in their local office. The researchers recommend Cabuyao's prominent officials to increase the number of skilled workers in each Women's desk by placing at least two officers to address the needs and concerns of the children in conflict with the law. This will also provide work opportunities for the local government.

#### Parental Involvement

Parental resistance, as mentioned by the majority of participants, is one of the common challenges they experience. The parents of juvenile offenders are recommended by the researchers to get more involved and informed about their children's situations. Working with VAWC Officers, maintaining a healthy household, and being accountable for instilling in their children the laws, norms and values may prevent their children from engaging in unsafe, destructive, and irresponsible behavior.

#### Psychosocial Intervention and Recommended Enhanced Flow of Program Implementation

Community service is the most frequently used intervention program in the local municipality for minor and even major crimes like larceny and gang fights. It was figured out that there is a weak implication in these projects where it just fills in as obligatory discipline for the CICL. There is also a subdued implementation and limited resources that restricts the impact of the intervention programs to the progress of the child. These results to repeating cases of juvenile delinquency over the years.

In order to prevent CICL from perpetrating further violations, the study recommends officers to establish and implement programs that address relevant concerns, such as psychosocial intervention programs, as well as community programs, and stricter regulation of these to help improve the status of children in conflict with the law.



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Moreover, it has been determined that there is still a need for enhancement and development in some areas in order to address and assist children in conflict with the law. These suggest that providing the suitable and enhanced programs could help these children to circumvent from developing deviant and behavioral concerns.

Thereby, upon evaluating the existing intervention programs offered by the selected barangay, the researchers provide an enhanced program implementation flow that is shown in *Figure 1*.

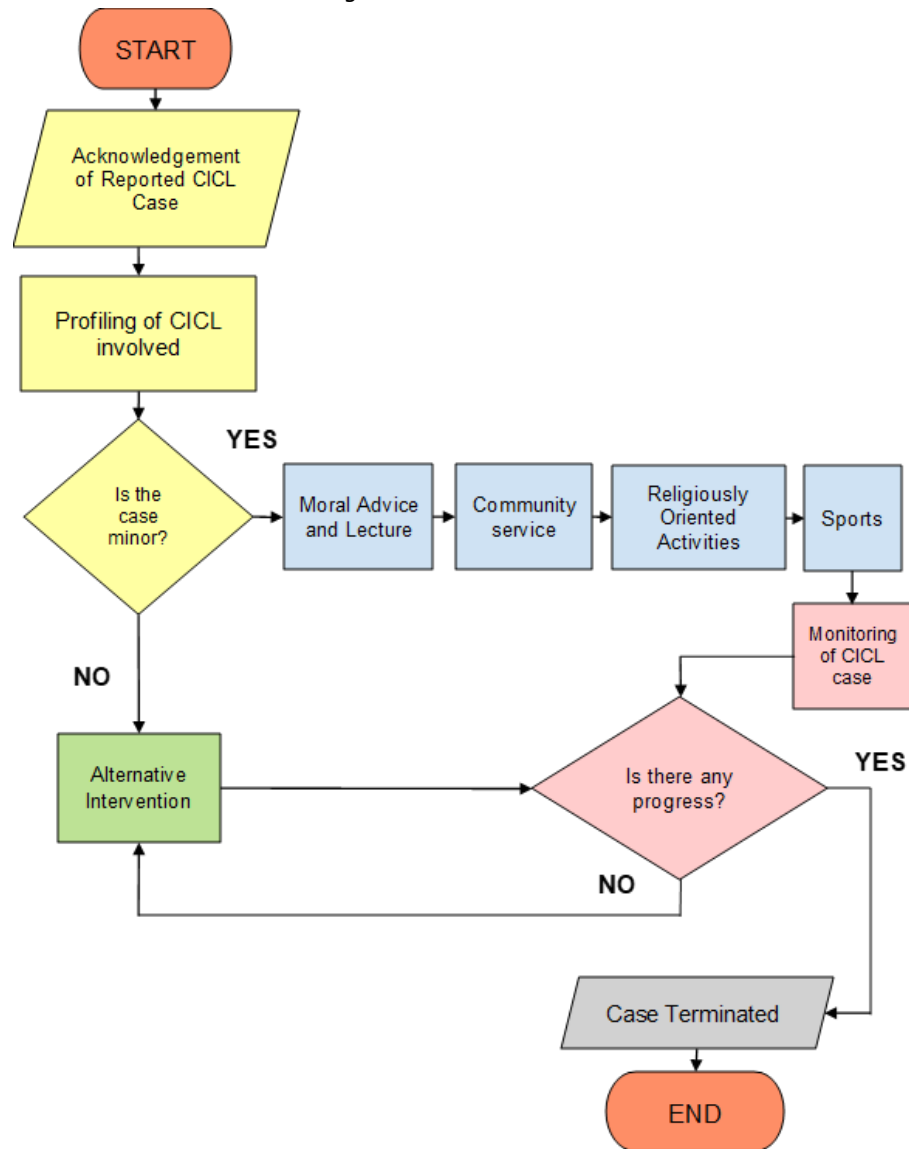


Figure 1 Recommended Enhanced Flow of Program Implementation

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The enhanced flow aims to act as a basis and to initially assist in developing a more systematic approach to case management and implementation of existing intervention programs. The recommendations for the enhanced flow of program implementation include three phases:

### Phase One: Case Management

The researcher recommends the entire process of phase one start upon receiving and acknowledging the cases and complaints at the VAWC office. The involved individuals will receive assistance from officers and barangay tanod to maintain order. The next step is to record the child's personal information so that the officers can get in touch with the children's parents within eight hours, as suggested by the Barangay Protocol (n.d.). The officer must immediately begin assessing the incident's severity. In the event that the case causes any extreme physical, emotional, and mental harm to another party it is deemed to be major, and it will be referred to CSWD for alternative interventions, as outlined in the green section, in order for the children in conflict with the law to receive the assistance they need. Officers are also expected to closely monitor the cases and the children's progress as part of phase three. If the desired changes are observed, the case can already be ended. However, if there are no significant changes, they should stay with the institution for a longer time.

The research study recommends, extension of qualified manpower to reduce the workload of one officer assigned to the barangay in phase one and additional professional assistance should be offered in the implementation of professional counseling, and parental involvement which will help the officers greatly in managing the children. In addition, a comprehensive evaluation of the CICL cases is required to identify those that are being handed over to the CSWD. The CSWD will greatly benefit from this by prioritizing cases that truly require alternative intervention. This will also be beneficial to the local municipality establish initial preventive measures.

### Phase Two: Intervention Programs

Moreover, the case is considered minor if the actions committed by the children in conflict with the law did not cause any extreme physical, emotional, and mental harm to another party. As shown in the blue sections of phase two. The barangay's existing intervention programs will then be used to help the children in conflict with the law. Before being put through community service, such as clean-up drives, livelihood, and other recreational activities, they will receive initial counseling from other professionals who are recommended to participate in the implementation of the existing intervention programs. In addition, it will be expected of them to participate in religious activities in their community. Children in conflict with the law must be given priority when participating in sports leagues or other youth activities to promote social inclusion and avoid discrimination against them. The key components of the most effective intervention programs for preventing juvenile delinquency, according to Impact Laws (2022) Share the following key components: Education, Recreational, Community Involvement, Bullying prevention program, Prevention programs within the juvenile justice system, and Functional Family therapy.

The study recommends Phase two should establish concrete programs that address pertinent concerns and tighter regulation. In addition, the barangay's program implementation must be consistent.

### Phase Three: Case Monitoring

Children will be closely watched during phase three until the desired changes are observed. Consistency in monitoring is also one of the study's recommendations for the third phase. The official will assess whether the child gained any progress and the case can already be closed from there. However, if despite these programs there is still no progress, they are encouraged to refer the case to DSWD and other institutions and facilities to handle the case and offer other intervention programs.

The recommendations of the study shows that alternative interventions call for extension of intervention in terms of facilities. As previously mentioned, there is no BPA in the City of Cabuyao the officials actually travel far. This will significantly assist the VAWC Organization and the children in conflict with the law. This will include additional resources and professional help such as counsellors and other mental health professionals. The researcher recommends for a city-wide information dissemination that involves seminars and programs with and for the family of the CICL and the community.

### Consistency of Program Implementation

The researchers advised the local officers to ensure that the intervention programs are implemented consistently in their barangay. In addition, the researchers recommend the VAWC officers to execute the intervention programs with strict adherence and undertake

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strict close monitoring in order to accurately evaluate the child's progress. Maintaining consistency among the programs' policies and practices will enable them to gain leverage and significantly benefit the community and the children.

### **Extension of Intervention**

There is a need for the local authorities to thrive for the extension of the intervention and establish a shelter or confinement area separate from adults that shall also provide short-term residential care or a home environment for the children in conflict with the law. Moreover, the researchers strongly recommend that local officials provide additional trained staff, doctors, counselors, and other mental health professionals to further address and accommodate the needs of the children in conflict with the law. With this, this study will serve as an appeal to the officials to provide the necessities that the children compelled in order to better cater and alleviate their lives.

### **City-wide Information Dissemination**

This study raises a call to widen the cognition of the significant individuals in the lives of the children in conflict with the law. In order for the community and the family of the CICL to be involved and informed about the situation of their children, the researchers recommend city-wide information dissemination which involves seminars and programs that the community and the family will partake in. This will significantly support VAWC officers as well in accumulating new ideas from other partaking authorities on how to efficiently handle cases while also raising awareness about the importance of the children's environment in their progress.

## **CONCLUSION**

The study was able to identify the existing intervention programs for juvenile delinquency in selected barangays within the city of Cabuyao that offers livelihood and recreational activities for the children in conflict with the law as well as religiously oriented activities and sports related programs. The local municipality also often resort to alternative interventions where they turn over the cases to organizations and distant institutions that have enough resources to cater the needs of the CICL. These intervention programs were explored and further investigated through the experiences of the VAWC officers.

The development and identification of numerous intervention strategies and targeted program approaches that have been proven to contribute in lowering crime and fostering development over the past few years has come from a variety of disciplines. However, despite the implementation of these programs, it was found that there are still records of repeating cases which signifies the weak implications and efficacy of the existing intervention programs due to inadequate resources and inconsistency.

The intervention programs present in the local barangays tend to fail in addressing the root cause of juvenile delinquency and only serves as punishments for the wrongful actions of the children in conflict with the law which results to cases of juvenile recidivism. Furthermore, this research indicates that giving these children better guidance and suitable interventions will help them deal with the root cause of their delinquent activities and avoid such behaviors in the future. Thus, it is concluded that there are gaps in program implementation which call for enhancement and growth in several areas upon evaluating the existing intervention programs provided by the selected barangays across the municipality of Cabuyao.

Substantially, the evaluation of the existing intervention programs for juvenile delinquency presented in the study helped the community, particularly the local authorities, determine and understand the impediments in the program implementation. This study also contributed in discussions of juvenile delinquency and enhancement of the provided programs which are not often deliberated in the field of research for community. There were limitations encountered; nevertheless, the researchers were able to gather enough data to explore the existing intervention programs for the CICL.

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## Athlete Parents' Satisfaction on New Management Service in S Volleyball



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**ABSTRACT:** This study aims to determine the level of satisfaction of athletes' parents in the new management service at SELABORA volleyball FIK UNY, which was revealed by a questionnaire totaling 68 statement items, and was divided into two factors, namely customer satisfaction factors and service quality factors. This research is a quantitative descriptive research using survey methods. The data collection technique uses a questionnaire or questionnaire given to the parents of athletes who take part in training at SELABORA volleyball FIK UNY. The subjects of this study were parents of athletes who participated in training at SELABORA volleyball FIK UNY and the sample in this study was 50 children, which were divided into 25 men and 25 women. Sampling in this study used purposive sampling techniques whose sampling techniques were carried out by taking selected people, according to criteria that had been set by the researchers. The data analysis used in this study is descriptive percentage. The results showed that: (1) The customer satisfaction factor in this case is that the parents of athletes are included in the excellent category by reaching a percentage of 76%. (2) The service quality factor is included in the excellent category with a percentage of 74%. (3) The level of satisfaction of athlete parents in the new management service at SELABORA volleyball FIK UNY is included in the excellent category with a percentage of 76%. From the results described above, it can be concluded that the customer satisfaction factor is superior to the service quality factor owned by the new management service at SELABORA volleyball FIK UNY.

**KEYWORDS:** Satisfaction, athlete parents, management

### I. INTRODUCTION

Customer or consumer satisfaction is a form of evaluation of a service or program carried out. The loyalty of customers or consumers depends on the results provided. Therefore, customer or consumer satisfaction is very important for a company / service provider. Service quality and customer or customer satisfaction are important elements that must be accounted for in order to improve company goals (Budur & Poturak, 2021; Kurdi et al., 2020; Otto et al., 2020). Customer satisfaction is the main key in creating customer or consumer loyalty. This is in line with the research conducted by Shokouhyar et al., (2020) which explains that the quality of service has a positive and significant effect on repurchase or reuse (services). The satisfaction felt by customers or consumers directly will make consumers feel that the company or service provider has given what he expects.

Related to the issue in the first segment of this study, consumers can be interpreted as parents of athletes who entrust and entrust their daughter's son to hone their skills in playing volleyball in the hope of becoming a professional athlete in a volleyball club. Good service management will also affect the interest of athlete parents to entrust their sons and daughters in volleyball training at a club. According to (Afthanorhan et al., 2019; Pradeep et al., 2020) states that the service is an appearance performance, intangible and quickly lost, more perceptible than owned, and customers are more able to actively participate in the process of consuming the service. At the Laboratory School of volleyball or known as SELABORA volleyball FIK UNY, there are changes or improvements in service management over time. This aims to provide the best service for customers or consumers to be comfortable and can attract prospective athletes to join the SELABORA FIK UNY club. With good management, of course, you can create a good volleyball club as well.

This topic is important to study because with this study, parents of athletes can find out how much their level of satisfaction with the new management services in SELABORA volleyball FIK UNY. Many parents have entered or entrusted their children to the training ground at SELABORA volleyball FIK UNY, parents are also willing and willing to drive and wait for their sons and daughters in volleyball training from the beginning until the training ends. In this case, athlete's parents have high hopes

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for their sons and daughters by training and honing their volleyball skills at SELABORA volleyball FIK UNY can become professional athletes. Parents see that many athletes are successful in the world of volleyball from the SELABORA FIK UNY club and have good service, so the parents of athletes have full confidence in the club they are visiting.

This topic has been researched by a number of researchers including research conducted by Dianto, (2014) about Analysis of the level of customer satisfaction with the quality of service at The Body Art Fitness; Aerobic Surabaya, research conducted by Akmal & Tohidin, (2019) namely about the study of the level of athlete satisfaction with health services in the Regional Technical Implementation Unit of the Center for Sports Education and Training (UPTD-PPLP) West Sumatra, research conducted by Veza & Hernuning, (2020) about Analysis of the level of customer satisfaction with GIC online shop services, research conducted by (Martono, 2019) about the effect of service quality on the satisfaction of swimming pool users Yogyakarta State University Wates campus, namely stating that the quality of service affects user satisfaction in the swimming pool Yogyakarta State University Wates campus.

Many researchers have studied this topic, but there are other sides that need to be explored further, namely, from other studies that are widely used in hospitals, in market places, on campuses, in fitness venues and so on. Meanwhile, the research that the researchers researched was in SELABORA volleyball FIK UNY, with variable X in the form of customer satisfaction or parents of athletes and variable Y in the form of service quality in the management of SELABORA volleyball FIK UNY. Some of the changes to the new management are first, the more efficient administrative system that was originally held by the coach, now there is a section that takes care of the administration itself. Second, facilities and infrastructure that were once uncertain, are now clearer, such as the volleyball training ground being in the GOR and the badminton hall of FIK UNY, the rejuvenation of volleyball used for training. Third, a definite training schedule in training, so that coaches are more focused on training athletes. In addition, athletes who have been registered in the VOLLEYBALL SELABORA FIK UNY who one day are eligible to enter the youth category, will automatically enter the Yuso Sleman volleyball club. This is already stated in the letter of agreement to the new management of SELABORA volleyball FIK UNY. With this, athletes have a considerable opportunity in achieving achievements in the field of volleyball through new management at SELABORA volleyball FIK UNY.

This study aims to determine the level of satisfaction of athlete parents in the new management service at SELABORA volleyball FIK UNY. In this case, the hope is that the parents of athletes will be more excited and believe and feel satisfied with the new management changes at the CLUB SELABORA volleyball FIK UNY.

## II. MATERIAL AND METHODS

This research is a descriptive research with a survey method. The place and time of research at the GOR Faculty of Sports Science, Yogyakarta State University. The population used in this study was all parents of athletes who participated in training at SELABORA volleyball FIK UNY. In this study, purposive sampling was used by taking subjects instead of based on class or group. The instrument in this study used a questionnaire or questionnaire to obtain data on the satisfaction of athletes' parents in the new management service at SELABORA men's volleyball FIK UNY.

The components of the questionnaire as a data collection tool are presented in the form of a grid of research instruments in table 1 as follows:

**Table 1. Test Questionnaire Grids**

No	Component	Variable	Indicators	Sub indicators	Question Item
1	Athlete Parents' Satisfaction with New Management Services at SELABORA Volleyball FIK UNY	Customer Satisfaction According to Hawkins and Lonney cited in (Oliver, 2010).	1. Conformity of Expectations	1.1 Products obtained in accordance with or exceeding the expected	1,2,3,4
1.2 Services by the employees obtained in accordance with or exceeding the expected				5,6,7,8	

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				1.3 Supporting facilities obtained in accordance with or exceeding the expected	9,10,11,12
			2. Interest in Revisiting	2.1 Interested in revisiting because the service provided by employees is satisfactory	13,14,15,16
				2.2 Interested in revisiting because of the value and benefits obtained after consuming the product	17,18,19
				2.3 Interested in revisiting because the supporting facilities provided are adequate	20,21,22,23
			3. Willingness to recommend	3.1 Advise friends or relatives to buy the products offered due to satisfactory service	24,25,26,27
				3.2 Advise friends or relatives to buy the products offered because the supporting facilities provided are adequate	28,29,30,31
				3.3 Advise friends or relatives to buy the products offered because of the value or benefits obtained after consuming a service product	32,33,34,35
2		Quality of Service	1. Reliability (Reliablility)	1.1 Accurate service	36,37,38,39

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	According to (Afthanorhan et al., 2019)		1.2 Accuracy of officers in service	40,41,42,43
		2. Responsiveness (Responsivennes)	2.1 Response to feedback	44,45,46,47
			2.2 Complaint handling	48,49
		3. Guarantee (Assurance)	3.2 Hospitality	50,51
			3.3 Safety and comfort	52,53,54,55,56,57
		4. Empati (Emphaty)	4.1 Professional trainers	58,59
			4.2 Providing services regardless of status or position	60,61,62,63
		5. Tangible (Tangibles)	5.1 Availability of facilities	64,65,66
			5.2 Comfort in the service space	67,68
		Sum		

The data collection technique in this study is by providing questionnaires to students who are the subjects of the study. The mechanism is as follows: (1) The researcher takes care of a research permit from the faculty, then the researcher meets with SELABORA to ask for permission. (2) Researchers look for data on the parents of athletes in SELABORA volleyball FIK UNY then the researcher determines the number of respondents who are the subject of the study. (3) After determining the size of the sample to be studied, the researcher distributes the questionnaire to the respondents by giving it directly to the parents of athletes who are around the UNY GOR and providing the questionnaire through the athlete's intermediary (their child) then taken home and returned to the next training. (4) Furthermore, the researcher collects a questionnaire and conducts a transcript of the results of filling out the questionnaire. (5) After obtaining the research data, Then coding is carried out and analyzed from the results of the questionnaire, then the researcher draws conclusions and suggestions. The total validity value of the research instrument is 0.820, so it can be said to be valid, and the reliability value is 0.805, which means reliable.

The data analysis technique in this study uses quantitative descriptive data analysis techniques. How data analysis is calculated to find the magnitude of the relative frequency percentage, with the following formula (Maizar et al., 2022).

$$P = \frac{F}{N} \times 100 \%$$

Information:

P: Percentage Number

F: Frequencies that are being sought for percentages

N: Number of Respondents (Children)

Sumber : (Maizar et al., 2022).

### III. RESULTS AND DISCUSSION

#### Result

#### 1) Research Subjects

##### Subject Validation

The validation subjects in this study were carried out at one of the volleyball clubs in Sleman district located in Jetis, Tirtomartani, Kalasan district which has the name PERVAS. The club often participates in official competitions held in the Special

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Region of Yogyakarta and also often gets achievements in the championship. With many achievements that are often achieved, both achievements from individual athletes and from club achievements, it is the reason for researchers to conduct questionnaire validation tests with validation subjects being parents of 14 athletes who are respondents in the questionnaire validation trial in this study.

### Research Subjects

This research was carried out at the VOLLEYBALL SELABORA FIK UNYYang located at GOR FIK UNY which has a training schedule 3 times a week. The men's training schedule is held every Monday, Wednesday, and Sunday. As for the women's training schedule, it is held every Tuesday, Thursday and Saturday. The sample taken in this study was 50 athletes divided into 2 groups, namely men as many as 30 athletes and women as many as 20 athletes from a population of 300 athletes who participated in training at SELABORA volleyball FIK UNY.

### 2.) Validation and Reliability Results

The results of Aiken validity and Cronbach's Alpha Reliability in this study can be shown in the table below:

**Table 2. Validity and Reliability Results**

NO	COMPONENT	VALIDITY OF AIKEN	RELIABILITY
1	Conformity of Expectations	0.821	0.920
2	Interest in Revisiting	0.836	0.870
3	Availability Recommends	0.817	0.931
4	Reliability	0.848	0.896
5	Responsiveness	0.881	0.918
6	Guarantee	0.815	0.805
7	Empathy	0.933	0.824
8	Tangible	0.813	0.837

And after that, this research must be carried out a reliability test to measure whether or not the questionnaire is consistent in conducting the research. Testing reliability is carried out using Cronbach's Alpha method. A questionnaire is declared reliable if a person's answer to a statement is consistent or stable over time. The variable will be said to be reliable if Cronbach's Alpha value is 0.60 (Sürücü & MASLAKÇI, 2020). Variables are considered reliable if the value of the variables (each Indicator) is greater than 0.60. While the results obtained from the reliability using Cronbach's Alpha there is the smallest result of 0.805 and the largest of 0.931 so that with these results it can be said to be reliable.

The results of the study on the level of satisfaction and quality of service in this study were measured by 68 statements with a score range of 1-4. The following is a table of the distribution of research results on the level of satisfaction and service quality as follows:

**Table 3. Description of Research Results on the level of satisfaction and quality of service**

NO	INTERVAL	FREQUENCY	PERCENTAGE	CATEGORY
1	232 - 272	38	76%	Excellent
2	191 - 231	12	24%	Good
3	150 - 190	0	0%	Enough
4	109 - 149	0	0%	Less
5	68 - 108	0	0%	Very Less
<b>Jumlah</b>		<b>50</b>	<b>100%</b>	

The results of the overall research on the level of satisfaction and quality of service when displayed in diagram form can be seen in the figure below:

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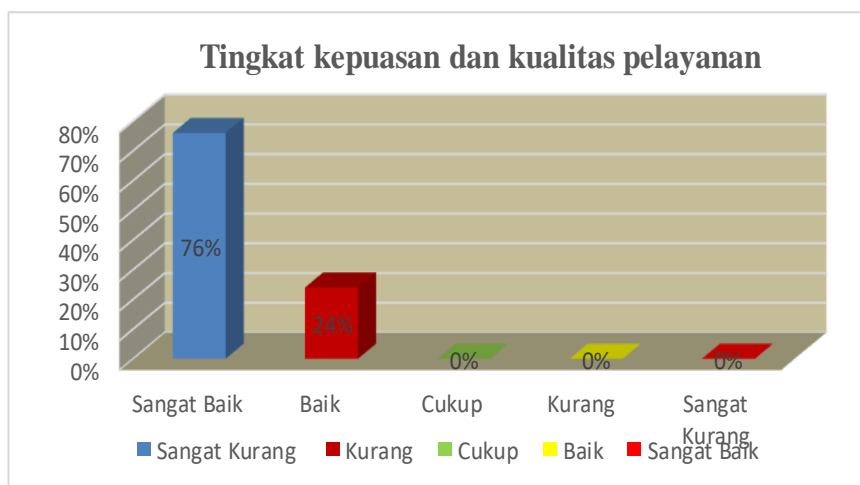


Figure 1. Graph of satisfaction level and quality of service

Based on the table above, it shows that the level of satisfaction and quality of service as many as 38 athlete parents (76%) are categorized as excellent, 12 athlete parents (24%) are categorized as good, while there are no parents who are categorized as sufficient, lacking and very lacking. So it can be concluded that the overall factor is included in the excellent category.

### DISCUSSION

This study aims to find out how much the level of satisfaction of athlete parents in the new management service at SELABORA volleyball FIK UNY, which was revealed with a questionnaire totaling 68 statements, and was divided into two factors, namely customer satisfaction factors and service quality factors. The customer satisfaction factor has 34 items of statements consisting of three indicators, namely the expectation conformity indicator has 12 statement items, the return visit interest indicator has 10 statements and the availability indicator to recommend has 12 statement items. While the service quality factor has 34 statement items consisting of five indicators, namely reliability indicators have 8 statements, responsiveness indicators have 6 statement items, assurance indicators 8 statement items, empathy indicators have 6 points of statement and tangible indicators have 6 statement items.

Based on the results of the study, it shows that the level of satisfaction of athlete parents in the new management service at SELABORA volleyball FIK UNY is in the very good category. In detail, the category is very good at 76% with a frequency of 38 athlete parents, the good category is 24% with a frequency of 12 athlete parents, while in the category it is enough, less and very less by 0% with a frequency of 0 athlete parents.

From the description above, it shows that the satisfaction of athletes' parents in the new management service at SELABORA volleyball FIK UNY is very good when viewed from the results of the study. This is because the quality of services provided by service providers in this case the management of SELABORA volleyball FIK UNY is in accordance with what is expected by consumers or customers in this case the parents of athletes.

The good and bad quality of service provided by the service provider in this case is the management of SELABORA volleyball FIK UNY can be known through the satisfaction of athlete parents with the quality of new management services at SELABORA volleyball FIK UNY. The service quality factor is based on 5 indicators, namely (1) reliability, (2) responsiveness, (3) assurance, (4) empathy, (5) tangible. Based on research, it can be seen that the quality of service factor as many as 37 athlete parents (74%) are categorized as very good, 13 athlete parents (26%) are categorized as good, while there are no parents who are categorized as enough, less and very lacking, so it can be concluded that the new management services at SELABORA volleyball FIK UNY only need to increase 26% so that in the factor of service quality in management services at SELABORA volleyball FIK UNY becomes very good.

Customer satisfaction is the main issue in sales and satisfied customers want to stay loyal longer, are less sensitive to price and give a good opinion about the industry (Hill et al., 2017). Customer satisfaction is the meaning of comparing what consumers expect with what consumers experience when using products or services (El-Adly, 2019; Hill et al., 2017; Leninkumar, 2017) Reporting that satisfaction is an emotional reaction to a comparison between what a customer expects and what a customer receives. Achieving the highest level of customer satisfaction is the main marketing goal that can increase the turnover of a service industry. The satisfaction experienced by the parents of athletes with the new management services at SELABORA VOLLEYBALL FIK UNY obtained during the service process was provided. Satisfaction is the feeling of happiness or



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disappointment of a person after equating between his assumptions or impressions of the performance or results of a product and his expectations (Yussoff & Nayan, 2020). Customer satisfaction is the level of a person's feelings after equating the performance or results he feels with his expectations (Ismail & Yunan, 2016; Khairawati, 2020). Universally it can be concluded that the quality of service is a meaningful aspect in order to obtain a large level of customer satisfaction.

Service quality is a level of good not good that is intangible but can meet the needs of customers or residents related to the products or services produced. Not only that, the quality of service services should be perceived well if the services received reach let alone exceed customer expectations. In line with the comments Hassan et al., (2015) who reports that if you want to achieve customer satisfaction, until the quality of service must meet or exceed expectations or wills customer. Pan & Nguyen, (2015) report that the quality of service can increase customer satisfaction. Good service quality is indicated by the good condition of the facilities. The image of good service quality is not seen from the assumptions of the provider, but is sourced from customer assumptions. This matter is also suitable for research Afthanorhan et al., (2019) which creates if the quality of service affects customer satisfaction. The customer's assumption of service quality is an even evaluation of the advantages of a product. One of the markers of service quality is also supported by reliable employees by distributing good service to consumers. One of the meaningful aspects of getting customer satisfaction is through a good bond between employees and customers (Al-Tit, 2015).

### IV. CONCLUSION

Based on the results of research conducted at SELABORA volleyball FIK UNY so that researchers are able to explain the discussion as described above, the following conclusions can be drawn: (a) The customer satisfaction factor consists of 3 indicators, namely indicators of conformity of expectations, indicators of interest in visiting again, and indicators of availability to recommend. With the acquisition of an overall score on the satisfaction factor of 76% of the excellent category and 24% of the good category, (b) The service quality factor consists of 5 indicators, namely reliability indicators, responsiveness indicators, assurance indicators, empathy indicators, and tangible indicators. With the acquisition of an overall score on the service quality factor of 74% of the excellent category and 26% of the good category, (c) The level of customer satisfaction in this case, namely the parents of athletes and the quality of service in the new management at SELABORA volleyball FIK UNY is in the excellent category with a score of 76%, and a good category of 24.

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## The Effect of Pomegranate Peel Extract on Collagen Total, Interleukin-6 and Vascular Endothelial Growth Factor Receptor (VEGF) Levels



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**ABSTRACT:** Treatment and rehabilitation of burns requires perseverance, high costs, trained and skilled personnel, therefore a breakthrough is needed to address this problem in an effective, safe and affordable way. One of the breakthrough alternatives is to use natural ingredients such as pomegranate peels. The purpose of this study was to determine the effect of giving pomegranate peel extract orally on levels of IL-6, VEGF and the amount of collagen of male Sprague Dawley rats that were given second degree burns. The design of this study was experimental with a post-test only control group design approach. The subjects of the study were 24 male Sprague Dawley rats which were randomly divided into 4 groups. Group K, P1, P2, and P3. Groups P1, P2, and P3 were given second degree burns and given pomegranate peel extract at doses of 54, 108, 162 mg/200 g BW. On the 3rd day an IL-6 examination was carried out at PSPG UGM and on the 7th day a termination was carried out and an examination was carried out for VEGF and the amount of collagen at the SSCR FK UNISSULA in January 2022. The One Way Anova test showed levels of IL-6, VEGF and the amount of collagen in between groups, there is a significant difference with each value of  $p=0.000$ ,  $p=0.029$  and  $p=0.000$  ( $p<0.05$ ). Administration of pomegranate peel extract at doses of 54, 108, 162 mg/200 g BW can reduce IL-6 levels, increase VEGF, and increase the amount of collagen of male Sprague Dawley rats that were given second degree burns.

**KEYWORDS:** Pomegranate skin extract, interleukin-6, VEGF, collagen total

### I. INTRODUCTION

Burns are tissue damage caused by exposure to or contact with heat sources such as fire, hot water, hot oil, electricity, chemicals and radiation (Scapin et al., 2018). Burns cause skin tissue damage which triggers an inflammatory reaction by releasing proinflammatory mediators, especially *Interleukin-6* (IL-6). The proliferative phase of wound healing is characterized by angiogenesis starting from the response of the *Vascular Endothelial Growth Factor* (VEGF) to the formation of collagen (Revilla, 2018). The use of antibiotics as a medicine for burns can cause drug resistance, so an alternative is needed to use medicinal plants such as Pomegranate peel. Pomegranate peel contains polyphenols, anti-inflammatory properties, and high antibacterial activity, but the effect on IL-6, VEGF, and collagen levels is unknown (Buhaudin, 2021).

Treatment and rehabilitation of burns requires persistence, high costs, and trained and skilled personnel. World Health Organization (WHO) reports that burns are ranked 9th in terms of deaths in the world, for people aged 5–14 years with an estimated 41,575 deaths, 15th for people aged 15–29 years with an estimated 49,067 deaths, and 15th for people aged 0–4 years with an estimated 62,655 deaths. The death rate from burns is estimated to be 5% of all the 7th most common injuries in the world (Wardhana et al., 2017). The use of antibiotics as a medicine for burns can cause drug resistance, so other alternatives are needed for the use of medicinal plants such as Pomegranate peel (Afriansyah et al., 2021).

Pomegranate is widely known by the people of Indonesia as a traditional medicine because it is believed to contain certain substances. Several studies have revealed the high polyphenol content, antioxidant activity, anti-inflammatory content, and high anti-bacterial activity in pomegranate (Putri, 2013). Research conducted by Krisna states that the active substances punicalagin, ellagic acid, gallic acid, urolithin A/B, granatin A/B and delphinidin from flowers, seeds, peels, mesocarp (inner skin) and whole pomegranate are proven to be able to reduce levels of IL-6 in diseases with inflammatory pathophysiology (Krisna et al., 2021). Research conducted by Puspitasari also showed that there was an effect of the ethanol extract of red pomegranate seeds at a concentration of 40% on wound healing time in Wistar strain rats (Puspitasari, 2019).

## The Effect of Pomegranate Peel Extract on Collagen Total, Interleukin-6 and Vascular Endothelial Growth Factor Receptor (VEGF) Levels

Skin tissue damage caused by burns produces large numbers of apoptotic and necrotic cells. Necrotic tissue and surrounding tissue that are also damaged become a trigger for the body to release various Damage Associated Molecular Patterns (DAMPs), such as exposed DNA, Reactive Oxygen Species (ROS), ATP, and N-formyl peptides which induce the production of pro-inflammatory cytokines. such as IL-6 in maintaining the inflammatory response (Krisna et al., 2021).

Pomegranate peel contains polyphenols which play a role in helping the process of wound healing (angiogenesis) by repairing epidermal and dermal cells and tissues through *vascular endothelial growth factor* (VEGF). However, specifically there has been no research that reveals how effective pomegranate is in treating burns, especially in terms of affecting IL-6, VEGF, and collagen levels, so the results of this study are expected to become a new alternative that supports the treatment of burns orally. where pomegranate has a function as a standardized, tested, affordable traditional medicinal ingredient, and has minimum side effects. This study will look at the effect of giving pomegranate peel extract orally on levels of *interleukin-6* (IL-6), VEGF and collagen in male *Sprague Dawley* rats who received second degree burns.

### II. MATERIALS AND METHODS

This type of research is experimental with a posttest only control group design. The sample of this study were 24 male *Sprague Dawley* rats which were acclimatized at the PSPG laboratory as experimental animals at Gadjah Mada University, Yogyakarta and allocated to 4 groups, 1 negative control group and 3 treatment groups randomly sampling allocation. Data on the average levels of IL-6, VEGF and the amount of collagen are presented descriptively in tabular (graphic) form. Then the data was tested for normality with *Shapiro Wilk* and the data homogeneity was tested with the *Levene test*. The distribution of data on levels of IL-6, VEGF and the amount of collagen was normal and homogeneous, so it was continued with the parametric test *One Way Anova* which was obtained with a p value <0.05 followed by *Tukey test*.

#### Research Instruments

Rat cages with feed containers sizes L: 40 cm, W: 30 cm, H: 30 cm, rat scales "Nigushi Scale", gloves, pipettes, Eppendorf, spectrophotometers, micropipette, ELISA reader, shaver, alcohol swab 70%, ketamine 10%, syringe, circle plate stainless steel 2 cm, Erlenmeyer, heater, notch heater (COD reactor HACH®), and thermometer.

#### Sample Preparation

The research sample must be included in the inclusion criteria and taken by simple random as many as 24 of male *Sprague Dawley* rats categorized into four group with the number of samples for each group are six, consisting of one control group and three treatment groups, then adapted first for seven days. Experimental animals were given standard feed consisting of 20-25% protein, 45-55% starch, 10-12% fat, and 4% crude fiber and plain water for every day.

#### Pomegranate Peel Extract

Pomegranate Peel Extract in powder form is obtained from the standardized Herbilogy Pomegranate Peel Extract Powder brand. Pomegranate peel extract powder mixed with distilled water and stirred with the help of a magnetic stirrer until dissolved. Preparation of pomegranate peel extract doses of 54 mg/200 g BW, 108 mg/200 g BW, and 162 mg/200 g BW obtained from the conversion of doses from humans to rats given orally for 6 days.

#### 2<sup>nd</sup> Degree Burns

Rats were anesthetized first on the area to be burned with a dose of 0.2 cc of lidocaine in 2 cc of distilled water. Prepare a round stainless steel with 2 cm of diameter that heated up to 85°C. The plate is then attached to the previously shaved skin for five seconds (Lukiswanto et al., 2019).

#### Interleukin-6 (IL-6) levels

The measurement of IL-6 levels using ELISA kit Rat IL-6 with units of ng/L. The sample was obtained by blood centrifugation of male *Sprague Dawley* rats taken from the orbital vein on day three.

#### Vascular Endothelial Growth Factor Receptor (VEGF)

The observation of VEGF was used the back skin of male *Sprague Dawley rats* tissue preparation which were given the second degree burns for seven day by using immunohistochemistry staining.

#### Collagen Total

The observation and measurement of collagen total was used the back skin of male rats *Sprague Dawley* tissue preparation which were given the second degree burns for seven day by using Sirius Red staining.

# The Effect of Pomegranate Peel Extract on Collagen Total, Interleukin-6 and Vascular Endothelial Growth Factor Receptor (VEGF) Levels

## Result Observation and Calculation

VEGF and the amount of collagen was calculated using the fast-digital analysis method, each preparation was photographed using an LC evolution camera and an Olympus Bx51 photomicroscope with an objective magnification of 400 times, each preparation was photographed 3 times and saved in JPEG format. ImageJ 1.52a software (*National Institute of Health, USA*).

## III. RESULT

The study of the effect of giving pomegranate peel extract orally on levels of interleukin-6 (IL-6), VEGF and the amount of collagen in male Sprague Dawley rats that were given second degree burns was carried out for 7 days. The results of the study are listed in Table 1.

**Table 1. The results analysis of mean of IL-6, VEGF, and collagen total**

Variable	Group				Sig.(p)
	K	P1	P2	P3	
	N=6 Mean	N=6 Mean	N=6 Mean	N=6 Mean	
<b>IL-6 Levels</b>	79.03	54.99	42.48	40.49	
Std.devasi	0.96	0.81	0.51	0.59	
Shapiro Wilk	0.772*	0.869*	0.804*	0.988*	
Levene Test					0.352*
One Way Anova					0.000*
					**
<b>VEGF Levels</b>	13.69	17.47	19.00	18.27	
Std.devasi	2.13	3.25	3.48	2.34	
Shapiro Wilk	0.741*	0.799*	0.675*	0.935*	
Levene Test					0.486*
One Way Anova					0.020*
					**
<b>Collagen Total</b>	38.80	50.32	55.21	58.41	
Std.devasi	3.20	7.21	4.88	2.67	
Shapiro Wilk	0.270*	0.115*	0.767*	0.622*	
Levene Test					0.109*
One Way Anova					*
					0.000*
					**
<b>Description:</b> *Normal p>0,05 **Homogeneous p>0,05 ***Significant p<0,05					

Table 1 showed that the lowest average of IL-6 level were the third treatment group (P3) by administering pomegranate peel extract at a dose of 162 mg/200 g BW, followed by the second treatment group (P2) with a dose of 108 mg/200 g BW and then the first treatment group (P1) with a dose of 54 mg/200 g BW. The control group (K) with distilled water obtained the highest average IL-6 level. One-Way Anova test result showed the significant differences between each group (p=0.000).

The highest average of VEGF levels (Table 1) were the second treatment group (P2) with a dose of 108 mg/200 g BW of pomegranate peel extract, followed by the third treatment group (P3) with a dose of 162 mg/200 g BW, and the first treatment group (P1) with a dose of 54 mg/200 g BW. The control group (K) with distilled water resulted in the lowest average of VEGF levels. One-Way Anova test showed the significant differences of VEGF levels between each group (p=0.020).

The highest average of collagen total (Table 1) were the third treatment group (P3) with a dose of 162 mg/200 g BW of pomegranate peel extract, followed by the second treatment group (P2) with a dose of 108 mg/200 g of pomegranate peel extract. and the first treatment group (P1) with a dose of 54 mg/200 g BW. The control group (K) with distilled water obtained the lowest

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average of total collagen. One-Way Anova test showed the significant differences in the total of collagen between each group ( $p=0.000$ ).

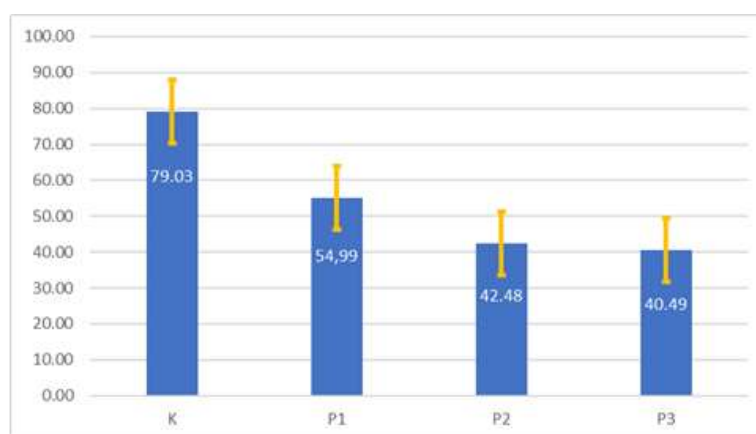
### IL-6 Levels

The difference levels of IL-6 levels between two group was determined by *post hoc* test using the Tukey test as presented in Table 2. Tukey test result showed that there is a significant difference of IL-6 levels between control group (K) with first, second, and third treatment group (P1, P2, P3). The results in the first treatment group (P1) were significant difference with second and third treatment group (P2, P3). The second treatment group (P2) had a significant difference with the third treatment group (P3). Based on the data in Table 2, it can be concluded that administration of pomegranate peel extract at a dose of 54 mg/200 g BW, 108 mg/200 g BW, 162 mg/200 g BW had a significant effect on decreasing IL-6 levels in male rats *Sprague Dawley* that received the second degree burns.

**Table 2. The differences of IL-6 levels between two group**

Group	<i>p-value</i>
K vs P1	0.000*
K vs P2	0.000*
K vs P3	0.000*
P1 vs P2	0.000*
P1 vs P3	0.000*
P2 vs P3	0.001*

\*Tukey test with significant value  $p < 0.05$



**Figure 1. The average levels of IL-6 between groups**

Based on Figure 1 showed that the average of IL-6 levels in the control group (K) is 79.03 mg/200 g BW, the first treatment group (P1) is 54.99 mg/200 g BW, the second treatment group (P2) is 42.48 mg/200 g 200 g BW, and the third treatment group (P3) is 40.49 mg/200 g BW.

### VEGF Levels

The difference of VEGF levels between two group was determined by using the Tukey test as shown in Table 3.

**Table 3. the differences in VEGF levels between two groups**

Group	<i>p-value</i>
K vs P1	0.134
K vs P2	0.021*
K vs P3	0.052
P1 vs P2	0.789
P1 vs P3	0.961
P2 vs P3	0.970

\*Tukey test with significant value  $p < 0.05$



## The Effect of Pomegranate Peel Extract on Collagen Total, Interleukin-6 and Vascular Endothelial Growth Factor Receptor (VEGF) Levels

*Tukey test* result in Table 3 showed that there were no significant differences of VEGF levels between control group (K) with first and third treatment group (P1, P3) but there is a significant difference with the second treatment group (P2). The results in the first treatment group (P1) showed no significant difference with the second treatment group (P2) and the third treatment group (P3). There was no significant difference between the second treatment group (P2) with the third treatment group (P3). It can be concluded that the administration of pomegranate peel extract at a dose of 54 mg/200 g BW, 108 mg/200 g BW, 162 mg/200 g BW had a significant effect on increasing the VEGF levels in male *Sprague Dawley* rats which were given the second degree burn.

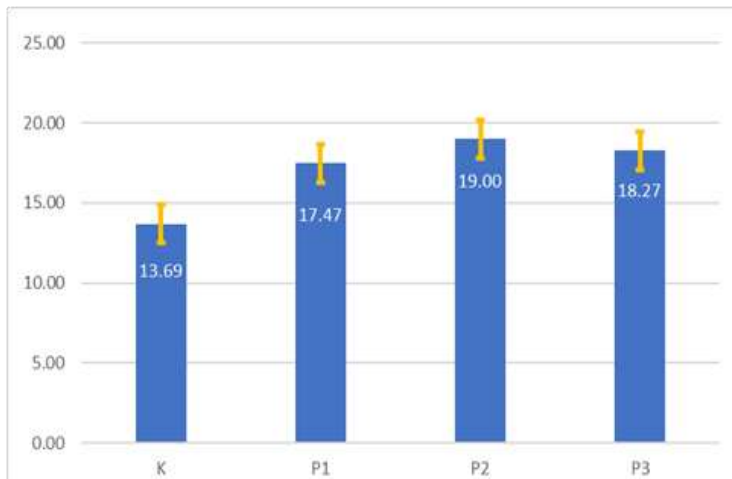


Figure 2. the average of VEGF levels between groups

Based on Figure 2 showed that the average of VEGF levels. The average of VEGF in the control group (K) is 13.69 mg/200 g BW, the first treatment group (P1) is 17.47 mg/200 g BW, the second treatment group (P2) is 19.00 mg/200 g BW, and the third treatment group (P3) is 18.27 mg/200 g BW.

### Collagen Total

The difference in the total of collagen between two group was determined by using *Tukey test* as presented in Table 4.

Table 4. The difference of collagen total between groups

Group	<i>p</i> -value
K vs P1	0.003*
K vs P2	0.000*
K vs P3	0.000 *
P1 vs P2	0.322
P1 vs P3	0.040*
P2 vs P3	0.665

\**Tukey test* with significant value  $p < 0.05$

*Tukey test* result (Table 4) showed the difference of collagen total between groups. There is a significant difference between the control group (K) with the first, second, and third treatment group (P1, P2, P3). The results in the first treatment group (P1) showed there is no significant difference with the second treatment group (P2) but showed a significant difference with the third treatment group (P3). The second treatment group (P2) showed no significant difference with the third treatment group (P3). It can be concluded that administration of pomegranate peel extract at doses of 54 mg/200 g BW, 108 mg/200 g BW, and 162 mg/200 g BW significantly affected to increase the amount of collagen in male *Sprague Dawley* rats which were given the second degree burns.

## The Effect of Pomegranate Peel Extract on Collagen Total, Interleukin-6 and Vascular Endothelial Growth Factor Receptor (VEGF) Levels

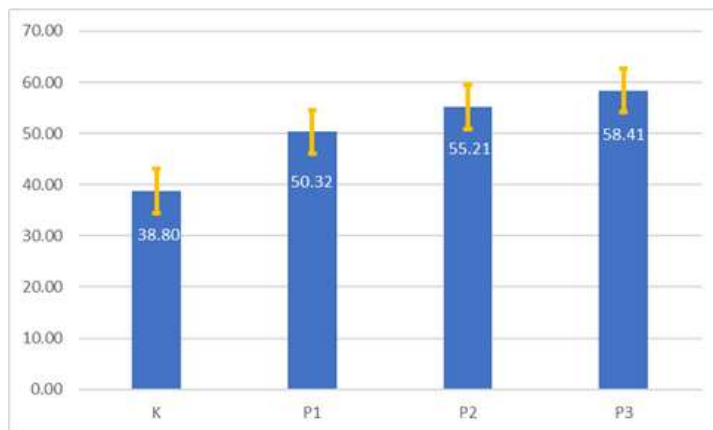


Figure 3. The average total of collagen between groups

Based on Figure 2, the average levels of VEGF in the control group (K) is 38.80 mg/200 g BW, the first treatment group (P1) 50.32 mg/200 g BW, the second treatment group (P2) 55.21 mg/200 g BW and the third treatment group (P3) 58.41 mg/200 g BW. Histopathological picture of VEGF skin tissue of the male *Sprague Dawley* rats stained with IHC is presented in Figure 4.

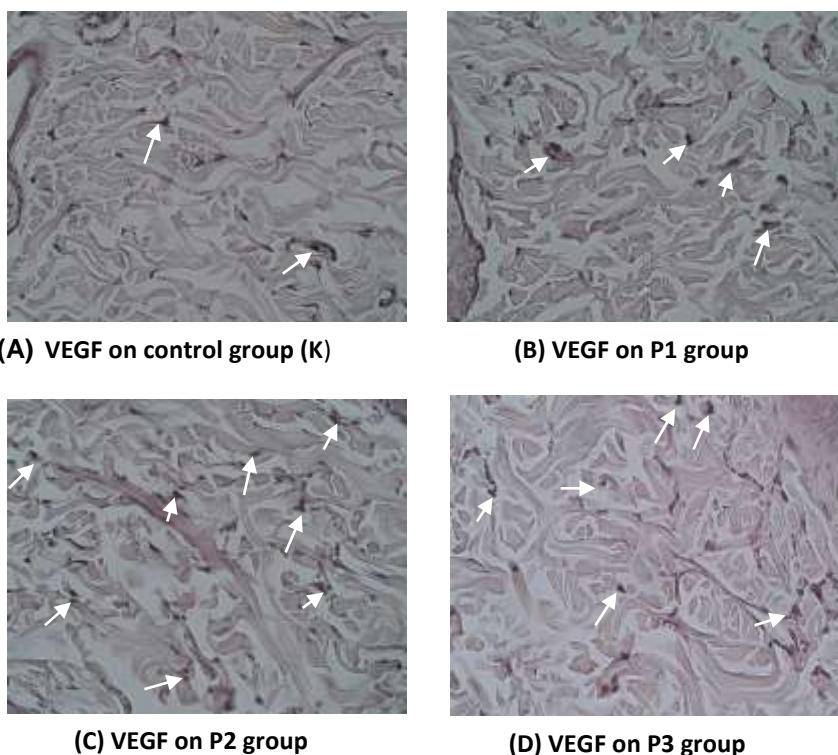


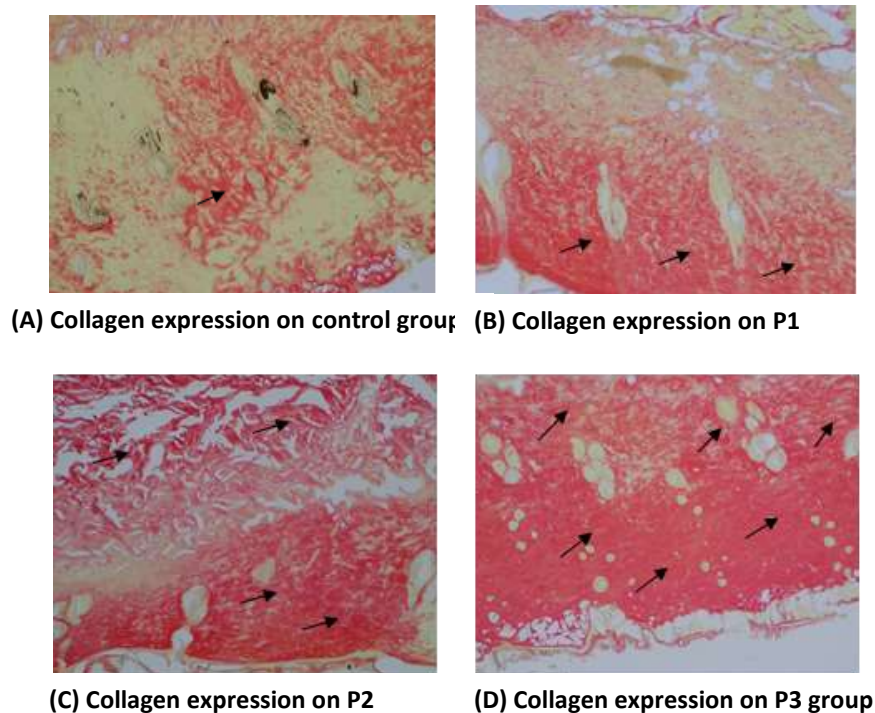
Figure 4. Differences in VEGF control group and treatment group in male *Sprague Dawley* rats with IHC staining, using a 400x magnification light microscope. The sign (arrow) is positive for brown VEGF.

The expression of VEGF by immunohistochemical staining is indicated by the brown color that accumulates in the cytoplasm that diffuses out of the cell (Figure 4). VEGF expression was calculated by the amount of cytoplasm in cells that were positively stained at three fields of view at 400x magnification on an Olympus Bx51 photo microscope and area expression analysis was averaged with ImageJ 1.52a software (*National Institute of Health, USA*). In the control group (K) there were fewer, while in the first group (P1) they were given pomegranate peel extract at a dose of 54 mg/200 g BW, the second treatment group (P2) was given pomegranate peel extract at a dose of 108 mg/200 g BW and the third treatment group (P3) by giving pomegranate peel extract at a dose of 162 mg/200 g BW immediately after being exposed to second degree burns, appeared to be more.

The observation result of collagen total using Sirius red staining of dermis skin tissue of male *Sprague Dawley* rats presented in Figure 5. The amount of dermal collagen is the percentage of collagen tissue pixels in the form of bright red tissue with Sirius

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red staining compared to the pixels of the entire tissue seen in histological preparation photos. The assessment was carried out on photographs and calculations by digital analysis using ImageJ 1.52a software (*National Institute of Health, USA*), then calculated on three fields of view at 400x magnification, the average was taken. It can be seen in the Figure 4 that the control group (K) is smaller than the first treatment group (P1), given pomegranate peel extract at a dose of 54 mg/200 g BW, the second treatment group (P2) is given pomegranate peel extract at a dose of 108 mg/200 g BW and the third treatment group (P3) were given pomegranate peel extract at a dose of 162 mg/200 g BW.



**Figure 5. The differences in collagen expression of the control group and the treatment group of male Sprague Dawley rats staining Sirius Red, using a 400x magnification light microscope. The arrows show positive collagen expression in bright red.**

### IV. DISCUSSION

Burns are damage to the integrity of the skin or other organic tissues caused by acute trauma (Anggowarsito, 2014). Second degree burns are burns that involve destruction of the epidermis and the upper layers of the dermis and injury to the deeper dermis. The wound feels painful, looks erythema or reddish and has fluid exudation (Hendra et al., 2014). The results of examining IL-6 levels in the control group (K) who were given second degree burns by administering distilled water experienced a significant increase compared to the group given pomegranate peel extract at a dose of 54 mg/200 g BW (P1), 108 mg/200 g BW (P2), and 162 mg/200 g BW (P3) (Table 1). Interleukin 6 (IL-6) is a cytokine that plays a role in the early inflammatory phase. The main source of IL-6 comes from various types of cells such as macrophages, fibroblasts, keratinocytes and endothelial cells. Excessive production of the cytokine IL-6 indicates inflammation. IL-6 cytokines have a function in regulating the immune system such as in the differentiation of neutrophils and monocytes and affect the work of other cytokines and chemokines that work in the inflammatory phase to proliferation (Rahman, 2019).

The decrease in IL-6 levels in the P3 group which was given second degree burns and given pomegranate peel extract at a dose of 162 mg/200 g BW experienced a significant difference from the treatment group at a dose of 54 mg/200 g BW (P1) and the treatment group at a dose 108 mg/200 g BW (P2) (Table 1). This is because the inflammatory process is working optimally so that the inflammatory response does not last longer. In a prolonged inflammatory response, macrophages will continue to release IL-6 which influences inflammation by attracting inflammatory cells so that inflammatory cells will continue to accumulate in eliminating pathogens. So low levels of IL-6 can indicate that the wound has entered the final inflammatory phase and is soon moving into the initial proliferative phase (Rahman, 2019). This happens because the benefits of pomegranate peel extract include antioxidants, anti-inflammatories, and can function to boost the immune system. Research conducted by Almahita (2013) proved that an aqueous extract of pomegranate peel orally can inhibit the increase in the number of macrophages from the inflammatory phase to the proliferative phase so that the inflammatory process does not continue in the healing process of burns (Putri, 2013).

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In addition, in the same study it was proven that the anti-inflammatory activity possessed by *Ellagic Acid* was not as strong as pomegranate extract in inhibiting increased expression of interleukin-6 (IL-6) and transforming *growth factor-beta 1* (TGF- $\alpha$ 1) due to biliary obstruction (Yuniarti et al., 2013).

The results of the VEGF examination in the control group (K) who were given second degree burns by administering distilled water experienced a significant decrease compared to the group given pomegranate peel extract at a dose of 54 mg/200 g BW (P1), 108 mg/200 g BW (P2), and 162 mg/200 g BW (P3) (Table 1). Vascular Endothelial Growth Factor (VEGF) plays a role in increasing endothelial cell migration, proliferation, and blood vessel permeability. VEGF binds specifically and soluble to fibrinogen with high affinity, retaining its capacity to support endothelial cell proliferation when both bound and soluble with surface immobilized fibrinogen. This interaction facilitates the localization and mitogenic activity of VEGF in injured tissue (Aisyah, 2014).

The treatment groups P1, P2, and P3 were given pomegranate peel extract which was given second degree burns and experienced an increase in VEGF (Table 1). This proves that pomegranate peel extract is good for increasing VEGF expression in wound healing, because apart from flavonoids and polyphenols, pomegranate peel extract also has *Ellagic Acid* which can stimulate proliferation in the wound healing process. (Putri, 2013) According to Pusparatri (2018) Gel Pomegranate skin (*Punica granatum L.*) contains flavonoids and tannins in which there is *ellagic acid* which can stimulate fibroblast proliferation in the wound healing process (Pusparatri, 2018). VEGF expression in the P2 group seemed to be higher than in the P3 group but in the *Post Hoc* the difference was not significant.

The results of examining the amount of collagen in the control group (K) who were given second degree burns by administering distilled water experienced a significant decrease compared to the group given pomegranate peel extract at a dose of 54 mg/ 200 g BW (P1), 108 mg/ 200 g BW ( P2), and 162 mg/200 g BW (P3) (Table 1). This indicates damage to the dermis layer of the skin where there are scabs or eschar, the epidermis of the skin is hypertrophied caused by the proliferation of epithelial cells, and in the dermis layer it can be seen that collagen has formed but not as thick as seen in the negative control. According to Han et al (2005), scabs or eschar that form on the skin area of a burn wound are formed of fibrin and platelets from a hemostatic response and infiltration of mononuclear cells and necrotic tissue (Fatmawati, 2018).

The increase in the amount of collagen in the P2 group that was given second degree burns and given pomegranate peel extract at a dose of 108 mg/200 g BW experienced no significant difference with the treatment group at a dose of 54 mg/200 g BW (P1) and was significant different from the treatment group with a dose 162 mg/ 200 g BW (P3) (Table 1). This study shows that pomegranate peel extract orally plays a role in increasing collagen synthesis. Collagen that is in the skin is useful in the wound healing process so that when the skin is injured it can heal by itself. This is also supported by the research of Shinde, et al (2020) which states that pomegranate peel contains antioxidant activity due to its phenolic content. Examples such as flavonoids are associated with antioxidant abilities, polyphenols are found in pomegranate peels e.g. ellagic, ellagic acid and gallic acid. The use of polyphenols and flavonoids is useful for antioxidants in wound healing and antimicrobials (Supia&Yuniartika, 2020). A similar study by Almahita (2013) reported that aqueous extract of pomegranate peel plays a role in the proliferation of fibroblasts and the process of collagen synthesis by stimulating the synthesis of pro-collagen type I and inhibits MMP-1, a collagen degrading enzyme (Putri, 2013).

The limitation of this study is that the wound healing process is generally divided into several phases, which is interrelated, namely the inflammatory, proliferation, and maturation phases. Wound healing time takes up to 25 days, but this study was only conducted for 7 days, as a result, only partial tissue healing effects were observed. The research using time series design is needed to determine the duration of the effect of pomegranate peel extract in healing burns.

## IV. CONCLUSION

Oral administration of pomegranate peel extract at doses of 54 mg/200 g BW, 108 mg/200 g BW, and 162 mg/200 g BW can reduce levels of *Interleukin-6* (IL-6) and can increase VEGF and the amount of collagen in male *Sprague Dawley* rats who received second degree burns.

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## Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam



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**SUMMARY:** The article provides the concepts of motivation, work motivation, insurance agent. Work motivation is not a new topic, which has been studied by many authors. However, the research team found a gap through studying the impact of sample characteristics on work motivation. The test results on qualitative survey data have shown that the importance of control variables such as gender, education level or working seniority has an influence on the independent variable that is the work motivation of university employees. Life insurance manager at Bao Viet Life Vietnam Corporation. Through the results of the analysis of survey data, the research team also proposes some recommendations to increase labor motivation such as: Create a reciprocal and supportive working environment or The remuneration regime needs to be closely associated with the employees. working seniority to increase labor motivation for insurance agent employees.

**KEYWORDS:** Accreditation, Working motivation, Insurance agent, Vietnam

### 1. PROBLEM

Motivation is a term that refers to a process from the origin, direction, and maintenance of purposeful behaviors that help us achieve goals. Working motivation is the voluntariness, desire, and oriented effort to achieve each individual's goals. Work motivation is affected by three groups of variables. The first group is a group of independent variables including many factors such as image, reputation of the company in the market, promotion in the organization, the relationship between employees and immediate superiors [1]. Group two are indirect variables such as satisfaction variables. The third group is the moderator variable, mainly qualitative variables such as gender, age. Currently, there are many studies on the work motivation of domestic and foreign employees. However, the assessment of the influence of sample characteristics such as gender, education level, seniority, and age has received little attention from the authors. Although according to the research team, the moderator variable plays an important role and directly affects the work motivation of employees. This is the reason why the research team carried out the research content Test the difference of the research sample characteristics on the work motivation of insurance agent employees of Baoviet Life Corporation, Vietnam. The results of the study will show which modifiers affect the work motivation of agent staff and some solutions to increase employee work motivation through sample characteristics.

### 2. CONCEPTS

#### Motivation

According to Vroom (1964), motivation is the state formed when employees expect that they will receive the desired results and rewards if they make efforts to perform the job [2].

#### Motivation to work

Anu Singh Lather, Archana Singh (2015) argue that the nature of work has an impact on employee motivation. Specifically, the more interesting, interesting and challenging the job is, the more motivated employees will be to explore, learn, and improve their knowledge skills to complete the job in the best way [3].



# Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam

## Insurance agent

Under the Insurance Business Act, an Insurance Agent is a person who is paid to work for a business that sells the company's products to buyers [4].

## 3. RESEARCH METHODS

The study used a combination of general methods such as information collection, analysis, synthesis, statistics, comparison and comparison for analysis.

Document research method: Collect and research relevant research works that have been done in the country and abroad. The theoretical content is selectively inherited from the research results of published scientific works on the contents related to work motivation from which the research team draws unique theoretical problems. scientific arguments on assessing the work motivation of insurance agent employees of Baoviet Life Corporation.

Descriptive statistical method: Using primary and secondary information to make an assessment and an agent data system such as gender, education level, etc. at Baoviet Life Corporation.

Methods of analysis and synthesis: Analyze and synthesize data collected from primary and secondary data sources. Processing data to calculate relative numerical indicators to indicate the impact of the study sample's characteristics on the working motivation of insurance agent employees of Baoviet Life Corporation.

## 4. RESEARCH RESULTS

### 4.1. Characteristics of employees' gender and working seniority

To help evaluate the factors affecting the work motivation of insurance agent employees of Baoviet Nhan Corporation, in this section the contents, research results and methods of use are presented. in turn follow the process to help clarify the research objectives of the topic and identify the influence of each factor on the working motivation of insurance agent employees. The study sample was selected by convenience sampling method. Data collection method by questionnaire. Therefore, with 250 questionnaires issued, the research team collected 215 votes, of which 24 were invalid, the remaining 191 votes were entered and analyzed to ensure sufficient data for the methods. analysis in this study.

#### Gender of survey participants

Based on the survey results of gender content agents, we get the results as shown in Table 1. Accordingly, the number of insurance agents participating in the survey is mostly Female with 117 turns, accounting for 61.3%, The number of male turns was 74, accounting for 38.7% of the total sample. The above gender data is similar to the current situation and number of agents of Baoviet Life Corporation, suitable for research when performing other related analyses.

**Table 1. Results on gender of respondents**

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	117	61,3	61,3	61,3
	Male	74	38,7	38,7	100,0
	Total	191	100,0	100,0	

**Source:** Processing of the research team's investigation results

#### Age of survey participants

From the survey results, the age of agents participating in the survey is unevenly distributed in different age groups. With the largest number of people over 56 years old, there were 71 survey participants, accounting for 37.2%, the second was the age group from 36 to 45 with 48 people accounting for 25.1%, the ages have fewer numbers of 26 to 35, 46 to 55, and finally 18 to 25 years old with 9.9%. Although there is a difference in the age of agents participating in the survey above, this is completely accurate and consistent with the age of the current insurance agent staff of Baoviet Life Corporation.

**Table 2. Results on age of respondents**

AGE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to 25 years old	41	21,5	21,5	21,5

## Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam

	26 to 35 years old	102	53,4	53,4	74,9
	36 to 45 years old	24	12,6	12,6	87,4
	46 to 55 years old	8	4,2	4,2	91,6
	56 and up	16	8,4	8,4	100,0
	Total	191	100,0	100,0	

Source: Processing of the research team's investigation results

### Education level of the respondents

From the table of results of the education survey, we see that the distribution values are in all groups. The group with high school level has 19 people, corresponding to 9.9%, the middle and college group has 124 people, accounting for the highest rate of 64.9%. The second largest proportion in the survey results of agent education belongs to the university group with 36 people accounting for 18.8% and the last is the other group with the smallest number with 12 people accounting for 6.3%. The survey results on the agent's education level are quite close to the situation at Bao Viet Life Corporation today because a large number of agents are qualified people who are currently employed and want to find a source of income.

**Table 3. Results on the education level of the survey participants**

Literacy					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Common	19	9,9	9,9	9,9
	Intermediate college	124	64,9	64,9	74,9
	University or higher	36	18,8	18,8	93,7
	Other	12	6,3	6,3	100,0
	Total	191	100,0	100,0	

Source: Processing of the research team's investigation results

### The survey participant's current seniority as an agent

Seniority as an agent is also affected by the insurance agent's motivation to work for the business. According to the results from the survey data, the largest number of agents under 2 to 5 years accounted for 102 people with a rate of 53.4%. The number of agents under 1 year is 41 people ranked second with the rate of 21.5%. Agents with long-term experience of 6 years or more accounted for a small percentage of the total with 12.6% and 4.2% respectively.

**Table 4. Results describing the number of years as current agent**

Seniority					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	20	10,5	10,5	10,5
	From 2 to 5 years	30	15,7	15,7	26,2
	From 6 to 10 years	47	24,6	24,6	50,8
	From 11 to 15 years	23	12,0	12,0	62,8
	Over 15 years	71	37,2	37,2	100,0
	Total	191	100,0	100,0	

Source: Processing of the research team's investigation results

## 4.2. Testing the difference of the characteristics of the research sample on the working motivation of insurance agent employees of Baoviet Life Corporation

### Testing for gender differences

The independent T-Test is used to compare the mean value of a research indicator between two subjects of interest. The significance of testing mean differences in studies is to help us determine if there is a statistically significant mean difference between a quantitative variable for different values of a qualitative variable or not. For example, is there a difference in the working motivation of insurance agent employees of Baoviet Life Corporation between different genders.

## Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam

**Table 5. Results of testing for gender differences**

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	,407	,524	2,427	189	,016
Equal variances not assumed			2,420	153,904	,017

**Source:** Processing of the research team's investigation results

The analysis results show that in the Equal variances assumed section with the Sig value in the Levene's Test for Equality of Variances column equal to  $0.407 > 0.05$ , the variance between the two sexes is not different. However, continuing to check the T-Test in the Sig column. (2-detail) also in the Equal variances assumed section, we see that  $\text{Sig} = 0.016 < 0.05$ , so it is concluded that there is a difference between men and women that affects work motivation. Insurance agent staff of Baoviet Life Corporation.

### Test for age difference

Because the surveyed people's age also has 5 groups of attributes, the research team also uses one-way anova test. The results in the Test of Homogeneity of Variances table have  $\text{sig} = 0.2 > 0.05$ . We continue to see the results in the anova table and see  $\text{sig} = 0.927 > 0.05$ . Thus, there is no statistically significant difference in the working motivation of agents of different age groups.

**Table 6. Results of testing for age differences**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
18 to 25 years old	41	3,8049	,93088	,14538	3,5111	4,0987
26 to 35 years old	102	3,8431	,98247	,09728	3,6502	4,0361
36 to 45 years old	24	4,0139	,73214	,14945	3,7047	4,3230
46 to 55 years old	8	3,8333	,71270	,25198	3,2375	4,4292
56 and up	16	3,8333	,68853	,17213	3,4664	4,2002
Total	191	3,8551	,90577	,06554	3,7259	3,9844

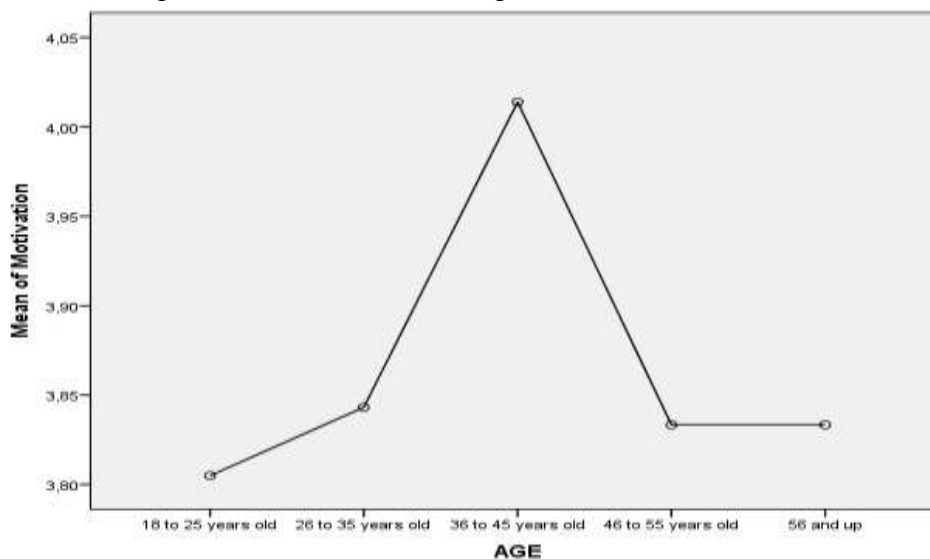
  

Test of Homogeneity of Variances			
Levene Statistic	df1	df2	Sig.
1,513	4	186	,200

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,735	4	,184	,220	,927
Within Groups	155,147	186	,834		
Total	155,881	190			

**Source:** Processing of the research team's investigation results



**Char 1. Chart depicting working motivation by agent age**

**Source:** Processing of the research team's investigation results

## Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam

### Testing for differences in educational attainment

Similar to the assessment of age differences, with the test of differences in educational attainment, we also use one-way anova analysis. The results of data processing are as follows:

**Table 7. Results of testing the difference in educational attainment**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Common	19	3,9474	,83343	,19120	3,5457	4,3491
Intermediate college	124	3,8118	,97042	,08715	3,6393	3,9843
University or higher	36	3,8796	,75236	,12539	3,6251	4,1342
Other	12	4,0833	,78012	,22520	3,5877	4,5790
Total	191	3,8551	,90577	,06554	3,7259	3,9844
Test of Homogeneity of Variances						
Levene Statistic		df1	df2	Sig.		
,762		3	187	,517		
ANOVA						
	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	1,041	3	,347	,419	,740	
Within Groups	154,841	187	,828			
Total	155,881	190				

**Source:** Processing of the research team's investigation results

At the Test of Homogeneity of Variances table, we will look at the Levene Statistic's sig. The sig result in this test is  $0.517 > 0.05$ , then the variance between the choices of the above qualitative variables is not different. We continue to see the results in the ANOVA table. Sig in table ANOVA is  $0.74 > 0.05$ , we conclude: There is no statistically significant difference in working motivation of insurance agent employees of Baoviet Life Corporation between groups presenting different levels of education.

### Testing the difference in working seniority

One-Way ANOVA is a method of analyzing the influence of a causal (qualitative) factor on an outcome (quantitative) factor with the assumption that the comparison groups must be independent, established and selected at random; The comparison groups must have a normal distribution or the sample size must be large enough to be considered asymptotically normally distributed; The variances of the comparison groups should be the same. The purpose of this analytical method is to test the null hypothesis of equal mean among groups of samples with a probability of error of only 5%. The analysis results show that the Sig of Levene Statistic has a value of  $0.00 < 0.05$ . That is, the variance between the seniority groups is not equal. We cannot use the ANOVA table but will enter the Welch test for the case that violates the uniform variance assumption. At the result of Welch's sig test in the Robust Tests table  $< 0.05$ , we conclude: There is a statistically significant difference in the working motivation of insurance agent employees of Baoviet Life Corporation in different locations, different seniority groups.

**Table 8. Results of testing for differences in seniority**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Less than 1 year	20	3,3860	1,03198	,23675	2,8886	3,8834
From 2 to 5 years	30	2,8556	,65322	,11926	2,6116	3,0995
From 6 to 10 years	47	3,7778	,98050	,14152	3,4931	4,0625
From 11 to 15 years	23	4,1304	,78328	,16333	3,7917	4,4692
Over 15 years	71	4,3662	,39503	,04688	4,2727	4,4597
Total	191	3,8551	,90577	,06554	3,7259	3,9844
Levene Statistic		df1	df2	Sig.		
8,092		4	186	,000		

### Robust Tests of Equality of Means

## Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam

	Statistic <sup>a</sup>	df1	df2	Sig.
Welch	37,541	4	57,539	,000

Source: Processing of the research team's investigation results

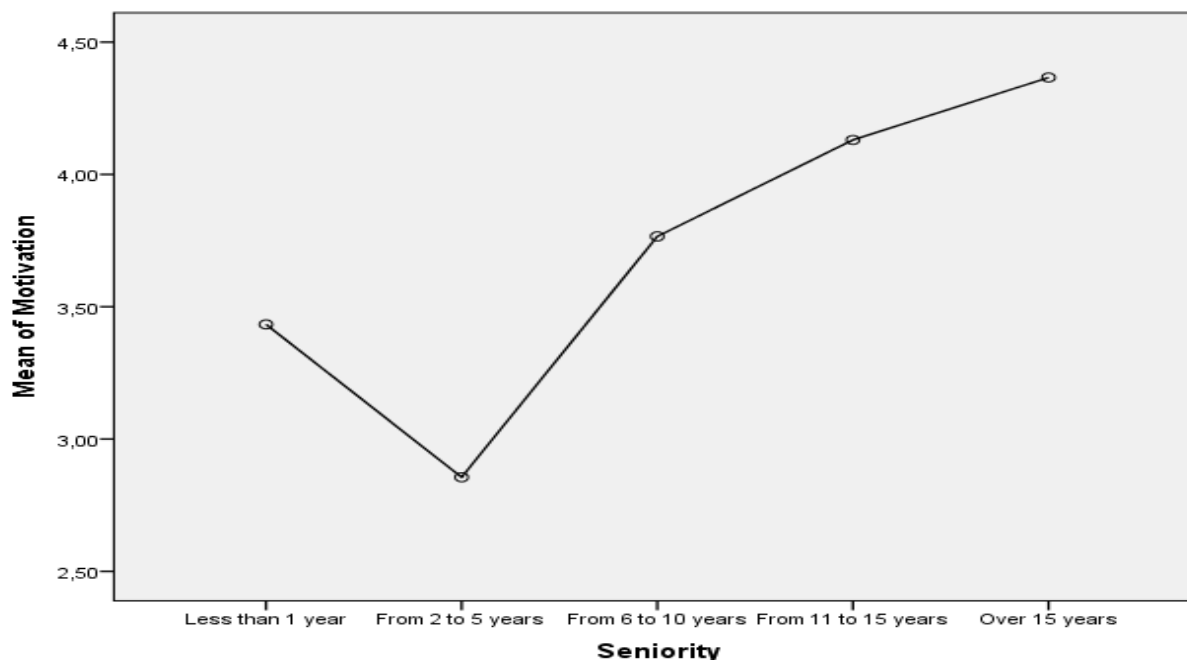


Chart 2. Chart depicting working motivation by seniority in agency work

Source: Processing of the research team's investigation results

### 5. DISCUSS THE RESULTS

The results of the test on sample characteristics show that there are two characteristics of gender and working seniority of the agent that have statistically significant differences in the working motivation of insurance agent employees of the Insurance Corporation. Viet Life. Therefore, the research team also proposes some solutions to solve these two issues in the lower part of the study.

#### 5.1. Create a working environment that is reciprocal and supportive.

The results of the gender difference test showed that there was a statistically significant difference between men and women. This is also an important suggestion in our solution proposal to bring about high feasibility. To reduce this difference, insurance businesses need to have policies to support and motivate female personal agents because women often have to take care of their families, so they often have time and enthusiasm to devote to the company. lower jobs than men. There are many reasons for reduced motivation to work, but one important cause is the growing disparity between the desires of agent employees and those of insurers. General information from Price waterhouse Coopers Saratoga (PwC)'s 2011 Asia-Pacific Human Resource Performance Survey (PwC) shows that salary philosophies and compensation structures to retain talent are increasing. change. A high base salary may attract new employees, but may not retain them and may not provide the best benefits. The high base salary just stops at attracting talent. The decisive factor to increase work motivation and long-term commitment to a business depends quite a lot on the additional welfare regime for employees. According to some surveys on human resources in the Vietnamese market, Vietnamese enterprises are facing similar problems in human resource management. The survey shows that 75% of companies in Vietnam want to develop their workforce by 20% in the coming years, but face frequent changes in personnel, especially the workforce of the company. The young generation accounts for more than 50% of the Vietnamese workforce. Many insurers still lack long-term strategies in agent management, in which appropriate additional compensation policies such as health care, accident insurance for agents and their family members. they have a very important role to play.

#### 5.2. Remuneration should be closely linked to seniority

The test results show that there is a statistically significant difference in the working motivation of agents of different seniority groups. When testing the difference between the number of years working as an agent in the current enterprise and the motivation to work, the results show that agents with a working time of 2 to 5 years, the work motivation is evaluated. quite low

## Testing The Difference of the Characteristics of the Research Sample on the Working Motivation of Insurance Agent Employees of Baoviet Life Corporation, Vietnam

compared to other seniority groups. Those who have worked for 10 years or more and the team for more than 15 years appreciate their self-motivation. The reason is that the easy recruitment policy does not make the agent see the difficulty in working in reality and only focuses on the income that will be achieved. This leads to them not seeing where they are working or frustrated because the job is not as simple as they think. Policy for agents is always considered as an important steering wheel leading agency activities. Life insurance enterprises need to orient to encourage the motivation of agents to work and help them stick with them for a long time through the remuneration regimes closely linked to the number of years the agents have long-term attachment to the Company.

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## Historical Evolution of Dentin Bonding Agents: A Clinician's Perspective



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**ABSTRACT:** The development of dentin bonding agents has revolutionized the field of esthetic and restorative dentistry. Buonocore's discovery on enamel acid-etching followed by description of hybrid layer by Nakabayashi et al are some of the major breakthroughs which are responsible for changing paradigms in adhesive dentistry. On the basis of mode of use, dental adhesives can be divided in generations. Currently, challenges lie in front of the researchers to develop products that not only bind to the tooth but also contain antibacterial, remineralizing and enzymatic-inhibitory properties that can increase the longevity of the adhesive procedures. This paper provides an insight into the historical evolution of dentin bonding agents.

**KEYWORDS:** adhesion, bonding, bonding agents, dentin, generations

### INTRODUCTION

Outlook towards cavity preparation has changed drastically with the advent of adhesive materials since it is no longer necessary to prepare the cavity in order to provide mechanical retention through features such as dovetails, grooves, undercuts to retain the restorative material. Adhesive dentistry has also resulted in the conservation of large quantities of sound tooth structure.

### BONDING AGENTS AND ADHESIVE DENTISTRY

In the early 1950s, research into agents that could attach resins to tooth structure was initiated. The first attempt to develop an adhesive system for bonding acrylic resins to tooth structure was made by Dr. Hagger who was a Swiss chemist and worked for DeTrey/Amalgamated Dental Company [1]. He patented the first dental adhesive product called "Sevriton Cavity Seal" in 1951. This bonding agent contained adhesive glycerolphosphoric acid dimethacrylate (GPDM) [2]. In the year 1952, a study published by Mclean and Kramer suggested that, "Sevriton Cavity Seal" material containing glycerolphosphoric acid dimethacrylate (GPDM) improved adhesion to dentin by "penetrating the surface and forming an intermediate layer" [3]. Later in the year 1955, it was Dr. Michael Buonocore, regarded as the pioneer of 'Adhesive Dentistry', who gave the concept of acid-etched enhanced adhesion after observing that some automobile industries used phosphoric acid to treat metal surfaces in order to obtain better adhesion of the primer to the metal [4]. He subsequently applied this idea to enhance the adhesion of resin to enamel surfaces [5] and in his groundbreaking research used 85% phosphoric acid [6]. A timeline of major breakthroughs in the history of bonding agents has been illustrated in Figure 1.

## Historical Evolution of Dentin Bonding Agents: A Clinician's Perspective

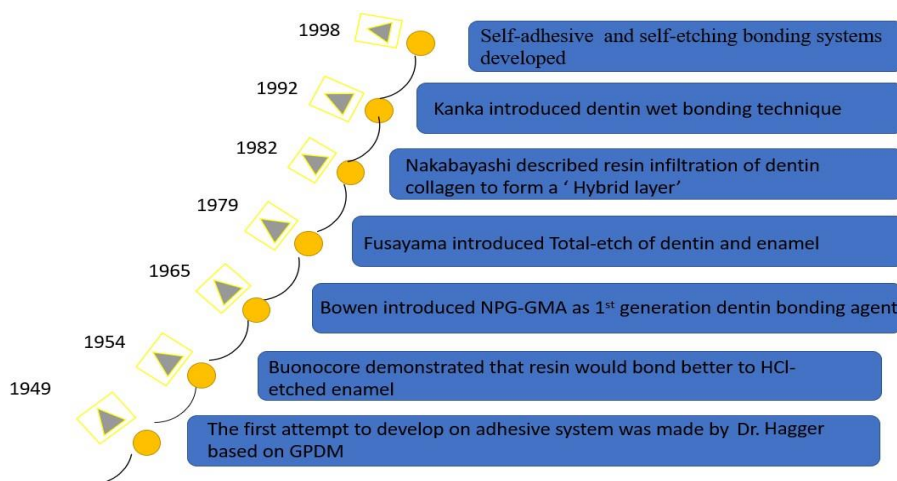


Fig.1. A timeline of major breakthroughs in the history of bonding agents

Bowen in his ground-breaking research developed the BisGMA (bisphenol glycidyl methacrylate), a monomer which is used in most modern composite resin materials [7]. In his efforts to effectively bond this compound to the tooth, in the year 1965, he also developed a surface active comonomer named NPG-GMA (N-phenylglycine-glycidyl methacrylate). He concluded that the mechanism by which the NPG-GMA coupling agent improves bonding between a methacrylate resin and hard tooth tissues may be primarily by interaction with the mineral phase rather than with the organic phase of the tooth structures [8]. This formed the basis of development of NPG-GMA origin dentin bonding agents, also known as the **first generation adhesives**. The first commercially available product was Cervident (SS White).

In the 1970s, identification of smear layer was made possible using the scanning electron microscope (SEM) and was first reported by Eick et al [9]. The **second generation adhesives** evolved around this time. The first and second generation adhesives were applied over the smear layer which resulted in low bond strengths [10]. Commercial products from second generation bonding agents include Clearfil and Prisma Universal Bond.

The researchers soon realized that the smear layer had to be removed or modified/ in order to let the adhesives bond with dentin [11] which led to the advent to the **third-generation adhesives**. Scotchbond 2 (3M Dental) was one of the first bonding agents in this generation.

Developed in the 1980s-1990s, the **fourth generation bonding agents** were the first ones aiming to completely eliminate the smear layer. They make use of the "Total-Etch" technique, which was based on a Japanese research originally conducted by Fusayama et al [12].

During the early 1990s, the complexity of use of the preceding generation led the manufacturers to develop the **fifth generation**. It is 2-step etch and rinse adhesives that combined the primer and bonding agent in "one-bottle". The commercial products of this generation bonding systems include One-Coat Bond (Coltene) and Prime and bond (Dentsply) [13].

In the late 1990s, **sixth generation systems** were developed. They are 2-step self-etch adhesives that provide a self-etch primer, combining the etchant with a primer, followed by the application of an adhesive resin. Commercial systems available are Adper Prompt L – Pop (3M ESPE) and Xeno III (Dentsply) [13].

During the years 1999-2005, **seventh generation adhesives** or 1-step self-etch adhesives or "all-in-one" adhesives were developed. They combined all three etching, priming and bonding functions in just one bottle. Commercial materials available are ibond (HeraeusKulzer), Xeno IV (Dentsply) and One coat 7 universal (Coltene) [13].

## CONCLUSION

In the hindsight, the state and simplification of adhesive bonding technology that has been achieved today, can be attributed to the persistent efforts made by various researchers in the past. After extensive experiments and research, a paradigm shift has been seen in adhesive dentistry. The future perspectives include adhesive systems that not only bond effectively to enamel and/or dentin but also present additional features such as remineralizing properties, antibacterial effects and enzymatic inhibition. Though research has been going on in this arena but further research is needed to develop products that deliver better results in clinical conditions.

The historical perspective of evolution of bonding agents as per their development has been illustrated in Figure 2 –

## Historical Evolution of Dentin Bonding Agents: A Clinician's Perspective

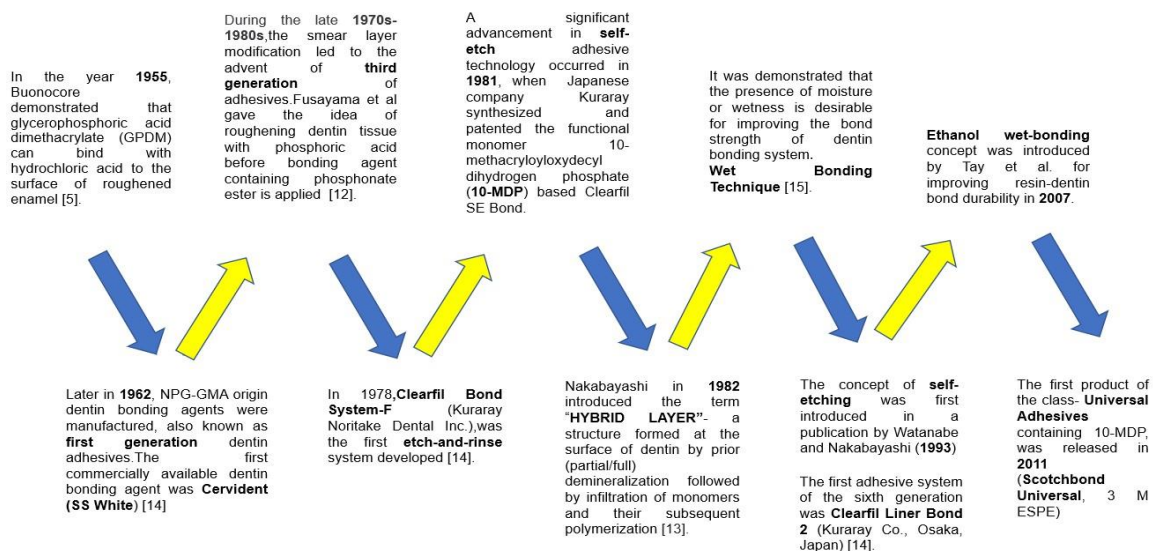


Fig. 2. Historical perspective of evolution of bonding agents

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## The Value of Clinical Anatomy, Imaging, Breast Gland Surgery and Therapeutic Implications in Breast Cancer



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**ABSTRACT:** Breast cancer is a common disease in women over the age of 50. The risk of breast cancer in women between the ages of 30 to 39 is 1 in 250 women, and in women between the ages of 40 to 49 is 1 in 70 women.

**Material and method:** We analysed clinicopathological data of the breast cancer on a series of 32 cases that underwent surgery between 2020–2021 in General Surgery Department of "Providenta" Hospital Iasi, Romania. This includes the mammary gland and the cellular-adipose tissue placed between the glandular lobes and lobules together with blood and lymphatic vessels, and nerves. The study was conducted after the surgery on the parts resected through it, but we also used the explorations performed for diagnosis and stage evaluation such as breast ultrasound, mammography, staging CT. The patients ranged between 58 and 71 years old and came from rural areas. The anatomopathological examination confirmed the preoperative diagnosis, the patients being referred to oncology for evaluation followed by adjuvant treatment.

**Results:** The postoperative evolution was favourable, and no immediate postoperative complications were reported. Aspiration drainage was removed on average after 3 days. The average length of hospital stay was 7 days.

**Discussions:** The surgery was performed using the Madden technique and was a radical mastectomy with axillary lymph node removal. This technique offers a very good loco-regional clearance from the oncological point of view because it resects in block the mammary gland, the adipose tissue next to it, the skin on a wide surface as well as the neighbouring fascial system, also preserving the pectoral muscle. The axillary lymph-adenectomy is complete, with no risk of intraoperative dissemination.

**Conclusion:** Radical mastectomy with axillary lymph node removal using the Madden technique, performed in the beginning stage is a modern, effective surgery, easily supported by patients who were informed from the beginning, with an average duration of two hours and reduced postoperative complications.

**KEYWORDS:** breast adenocarcinoma, Madden mastectomy, estrogen receptor, progesterone receptor, anti Ki67 antibodies.

### INTRODUCTION

Breast cancer (BC) is a common disease in women over the age of 50. The risk of breast cancer increases with age [1]. The risk of BC in women between the ages of 30 to 39 is 1 in 250 women [2], and in women between the ages of 40 to 49 the risk is 1 in 70 women. This disease is rarer in women under 35 years of age. All women over 40 and over are at risk for this condition, but most cases are in women over 50. The risk of BC is increased in women 60 years and over [3], [4], [5]. Breast cancer is the most frequently diagnosed cancer in women and ranks second among causes for cancer related death in women [6], [7]. Although, there are cases of BC in men, 99% of cases occur in women. The natural history of BC begins with the first malignant cell to appear under the action of risk factors and ends with the destruction of the host organism. Breast cancer is the abnormal proliferation of malignant cells in the epithelium of the ducts and lobules of a breast [8].

# The Value of Clinical Anatomy, Imaging, Breast Gland Surgery and Therapeutic Implications in Breast Cancer

## AIM

Our research was aimed at surgical technic of breast tumours based on radical mastectomy by Madden operation and immunohistochemical analyses.

## PATIENTS, MATERIALS AND METHODS

We analyzed clinicopathological data of the breast cancer on a series of 32 cases that underwent surgery between 2010 – 2012 in General Surgery Department of Providenta Hospital Iasi, Romania . This includes dates about the mammary gland and the cellular-adipose tissue placed between the glandular lobes and lobules together with blood and lymphatic vessels, and nerves from medical electronic datas and imagistics used. We analyzed clinicopathological data of the breast cancer on a series of 32 cases that underwent surgery between 2010 – 2012 in General Surgery Department of Providenta Hospital Iasi, Romania . This includes dates about the mammary gland and the cellular- adipose tissue placed between the glandular lobes and lobules together with blood and lymphatic vessels, and nerves from medical electronic datas and imagistics used. We analysed clinical and pathological features of women diagnosed with breast cancer on a series of 32 cases that underwent surgery between 2010–2021 in General Surgery Department of "Providenta" Hospital Iasi, Romania. The patients ranged from 58 to 71 years old, and came from rural areas.

We analysed the anatomy of the breast on our series of 32 breast cancer cases operated on in the last ten years. This includes dates about breast tissue together with tumoral invasion in blood and lymphatic vessels, and nerves from medical electronic data and imagistics used.

The patients were informed that the likelihood of cancer was high, so they accepted radical surgery from the very beginning. The operation performed was Madden radical mastectomy with axillary lymph node removal. This technique based on radical mastectomy offers a very good loco-regional clearance from the oncological point of view because it resects in block the mammary gland, the adipose tissue next to it, the skin on a wide surface as well as the neighbouring fascial system, also preserving the pectoral muscle. The axillary lymphadenectomy is complete, with no risk of intraoperative dissemination.

The study was performed on postoperative resection pieces, but we also used the explorations performed for diagnosis and stage evaluation such as breast ultrasound, mammography, staging CT.

Subsequently, the anatomopathological examination confirmed the preoperative diagnosis, so the patients were referred to oncology for evaluation and continued with adjuvant treatment.

The appearance of orange peel that can occur in breast cancer is explained by the enlargement of hair follicles caused by dermal edema as a consequence of lymphatic stasis secondary to lymphatic blockage caused by tumor or malignant cells. The skin of the breast in the submammary groove loses its mobility and is fixed to the fascia of the pectoralis major muscle by connective fibers. For this reason, when we performed the mastectomy for breast cancer, we cut and lifted it together with the mammary gland and the fascia of the pectoralis major muscle. Most of the lymph of the mammary parenchyma flows centripetally to the areolar and subareolar superficial plexus, and from here it goes centrifugally to the periphery of the mammary gland through the circumareolar lymphatics which anastomoses with the fascial plexus belonging to the pectoralis muscle.

There is a fine lymphatic network located on the pectoral fascia that does not participate in the early spread of breast cancer due to the very small size of these vessels. At the periphery of the gland, the lymph vessels are grouped schematically in a number of afferent pathways leading to the regional lymph nodes. The main axillary pathway is the most important drainage channel from the mammary lymph to the axilla. It consists of two large lymph trunks that form at the periphery of the subareolar plexus, one lateral that collects lymph from the upper half of the breast and another that collects lymph from the lower and inner edge of the subareolar plexus that runs to the axillary ganglia surrounding the mammary areola. The main internal mammary tract consists of the vessels that drain the lymph from the central and medial quadrants of the breast. They accompany the perforating blood vessels crossing the pectoralis major muscle in the inner part of the mammary region by shedding lymph into the chain of the internal mammary ganglia. They are 4 in number, with a diameter between 2 and 5 mm and are usually located in each of the first 3 intercostal spaces, the 4th ganglion being at the level of the 5th or 6th intercostal space. These are also called parasternal ganglia. From the axillary ganglion groups start lymphatic collecting trunks that pass through the axillary tip between the subclavicular and clavicular muscle and flow at the confluence between the internal jugular vein and the subclavicular vein.

Representative sections of breast tissue were used for IHC stainings, to identify the origin of the BM in a previous BC [anti-cytokeratin 5/6 (CK5/6) and anti-mammaglobin antibodies], the immunoexpression of estrogen receptor (anti-ER antibody) and progesterone receptor (anti-PR antibody), but also the tumor proliferation (anti-Ki67 antibody) (Table 1, 2).

IHC reactions were performed using the EnVision™+ Dual Link System–Horseradish Peroxidase (HRP) (Dako, Denmark) for mammaglobin, cytokeratin 5/6 (CK5/6) and ER, and UltraVision Quanto Detection System–HRP (Thermo Scientific, UK) for PR and



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Ki67 labeling index (LI), according to manufacturers' recommendations. Antigen retrieval was realized with sodium citrate buffer, pH 6, using a water bath at 95°C. In the end, 3,3'-Diaminobenzidine (DAB) was used as chromogen and Mayer's Hematoxylin for nuclear counterstaining against nuclear staining. Normal breast tissue was used as positive controls. IHC reactions were considered positive only when a brown staining of the cytoplasm (in case of anti-CK5/6 and anti-mammaglobin antibodies) or of the nucleus (in case of anti-ER, anti-PR, and anti-Ki67 antibodies) were obtained.

**Table 1. The antibodies used for immunohistochemical staining of the analysed breast adenocarcinoma**

Antibody	Manufacturer	Clone	Antigen retrieval	Class	Dilution	Labeling	Cellular localization
<i>Anti-CK AE1/AE3</i>	Dako	AE1/AE3	Citrate, pH6	Monoclonal mouse anti-human CK AE1/AE3	1:50	Epithelial cells	Cytoplasmic
<i>Anti-CK7</i>	Novocastra	RN7	Citrate, pH6	Monoclonal mouse antibody	1:100	Epithelial cells	Cytoplasmic and membranous
<i>Anti-CK20</i>	Novocastra	KS208	Citrate, pH6	Monoclonal mouse anti-human CK20	1:100	Epithelial cells	Cytoplasmic
<i>Anti-CDX2</i>	Cell Marque	EPR2764Y	Citrate, pH6	Monoclonal rabbit antibody	1:500	Intestinal epithelium	Nuclear
<i>Anti-HER2/neu</i>	Thermo Fisher Scientific	SP3	Citrate, pH6	Monoclonal rabbit antibody	1:700	Epithelial cells	Cell membrane
<i>Anti-S100</i>	Novocastra	-	-	Polyclonal rabbit antibody S100 protein	1:200	Neural crest cell	Nuclear and cytoplasmic
<i>Anti-HMB45</i>	Genemed	HMB45	-	Mouse anti-melanosome	1:50	Melanic cells	Cytoplasmic
<i>Anti-melan A</i>	Dako	A103	pH 9	Mouse monoclonal anti-human melan A	1:50	Melanic cells	Cytoplasmic
<i>Anti-Ki67</i>	Thermo Fisher Scientific	SP6	Citrate, pH6	Monoclonal rabbit antibody Ki67	1:250	Proliferating cells	Nuclear

CK: Cytokeratin; CDX2: Caudal-type homeobox 2; HER2: Human epidermal growth factor receptor 2; HMB45: Human melanoma black 45.

**Table 2. Immunohistochemical profile of breast adenocarcinoma**

Histological type of breast adenocarcinoma	CK7	CK20	CDX2	HER2/neu (aberrant nuclear accumulation)	Ki67 (%)	Li	Melan A	HMB45	S100 protein
ADC									
•Conventional type, moderately differentiated	-	+++	+++	+++/++/-	90-100%	-	-	-	-



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• <i>Serrated</i>	-	+++	+++	+++	95%	-	-	-
• <i>Mucinous</i>	-	+++	+++	+++	90%	-	-	-
• <i>Cribriform comedo-type</i>	-	+++	+++	+++	95%	-	-	-
Melanoma	-	-	-	-	Not done	+++	+++	+++

ADC: Adenocarcinoma; CK: Cytokeratin; CDX2: Caudal-type homeobox 2; HER2: Human epidermal growth factor receptor 2; Li: Labeling index; HMB45: Human melanoma black 45.

### RESULTS

The clinical diagnosis was based on the clinical examination of the breasts, so patients came for a consult with the surgeon either because they discovered a tumor formation in the breast, either were examined by the general practitioner and referred to the surgeon.

The tumor formation was detected following the local clinical examination (Fig. 1).



**Figure 1. Palpable breast tumour (personal casuistry)**

For the suspicion of breast tumor, the patients were examined by ultrasound and mammography (Fig. 2, 3).



**Figure 2. Breast ultrasound detects and measures the breast tumour (personal casuistry)**



**Figure 3. Mammography shows malignant tumours (personal casuistry)**

Patients were informed of the high probability of having BC and agreed to undergo radical mastectomy surgery (Fig. 4) from the beginning.

All detected breast tumours were in the T3 stage N2-3 Mx with dimensions between 2 and 5 cm.

After rigorous preparation, surgery was performed by using a modified Madden radical mastectomy with axillary ganglion removal (Fig. 5, 6).

Aspiration drainage was used in all cases given the extent of dissection, and skin restoration (Fig.7) was facilitated by preoperative marking.



**Figure 4. Preoperative marking**  
*(personal casuistry)*



**Figure 5. Axillary lymph node dissection**



**Figure 6. Large pectoralis muscle without poneurosis and armpit without lymph nodes**



**Figure 7. Axillary vein without lymph nodes**



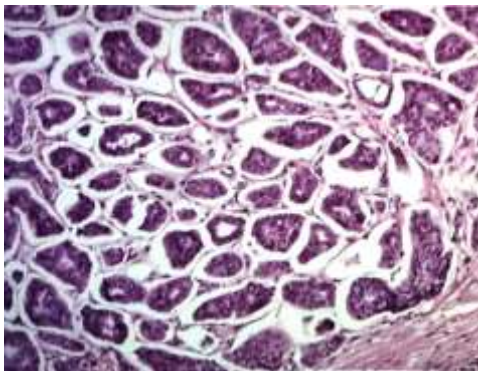
**Figure 8. Skin suture**

The removed body parts were sent for anatomopathological examination (Fig. 9).

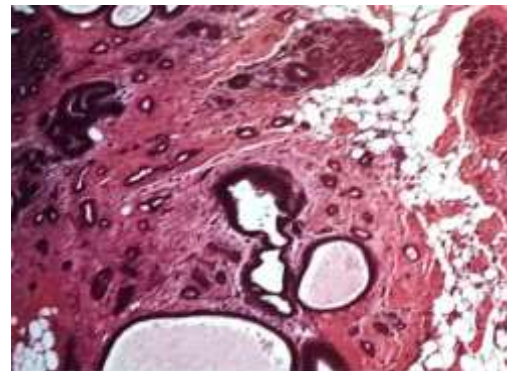


**Figure 9. Excised body part**  
(personal casuistry)

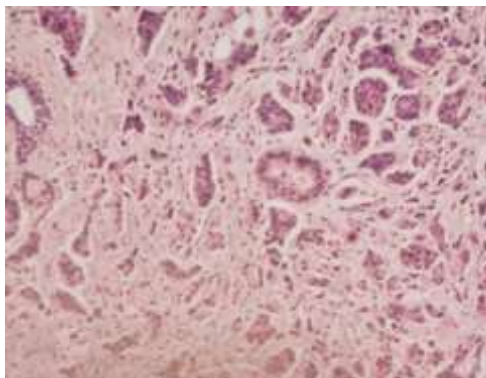
The microscopic pathological examination confirms the type of adenocarcinoma, the immuno-histochemical examination performed helping in this (Fig. 10 a,b,c,d).



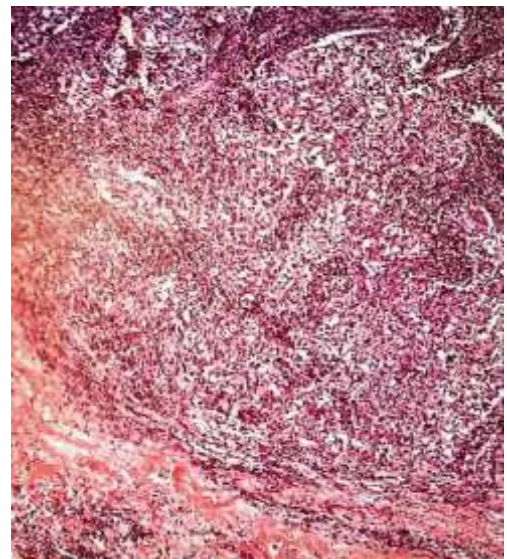
a) Invasive micropapillary carcinoma-pseudopapillae or tubules with inside outgrowth pattern. HE 400X OB 40x, Col HE, EPR 2764 Y. CK 20 +++



b) Tubular carcinoma- tubular structures with malign features invasive in adipose tissue. 400X, HE OB 40x, Col HE, KS 208, CK20 +++



c) Invasive breast carcinoma NOS- multiple tubular structures and desmoplastic stroma. 200X HE. OB 20x, Col HE, EPR 2764 Y, CDX2 +++



d) Tumour-infiltrating lymphocytes (Til) in invasive breast carcinoma. 200X HE OB 20x, Col HE, EPR 2764 Y, CK 20 +++

**Figure 10. Immunohistochemistry.**  
(personal casuistry)



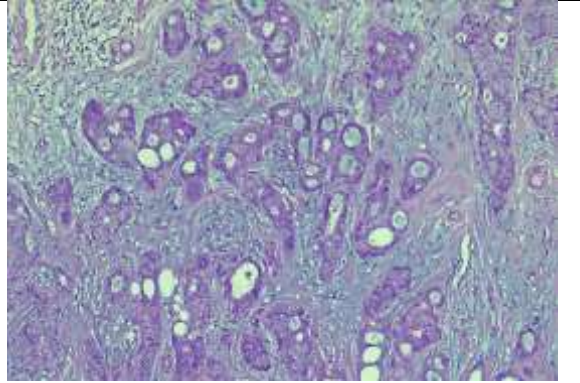
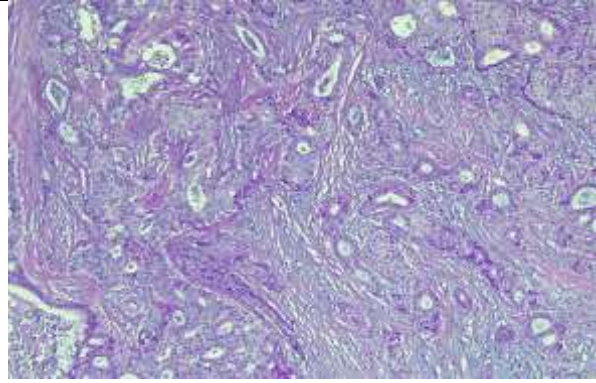
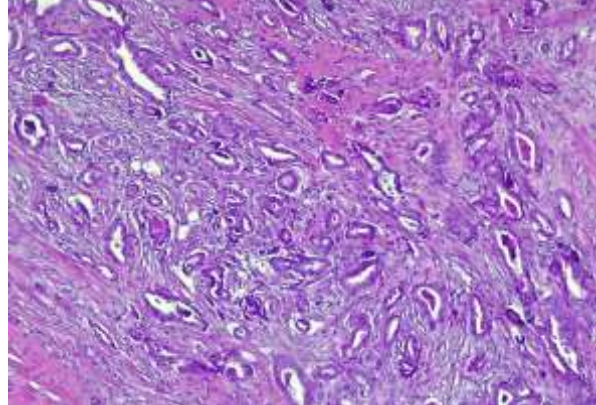
**The Value of Clinical Anatomy, Imaging, Breast Gland Surgery and Therapeutic Implications in Breast Cancer**

**Vascular support of leukocyte trafficking in breast tumors and lymphatic invasion**

Breast infiltrative leukocytes are described as complex pathways (traffic), engaging inputs through activated vascular endothelium (high endothelial venules type), more or less systematized pathways along the stromal connective fibers, either highlighted by short contact episodes of macrophages or other resident defense cells, or interrupted for decades by recirculation in relatively stable inflammatory structures possibly followed by lymphatic output to the drainage ganglia and then systemic dispersal (Fig. 11,a,b,c). Some of these steps can be suggested by the specific highlighting of the lesional blood and lymphatic vessels. Some of the signaling pathways controlling the passage of lymphocytes and dendritic cells from the tissue into the lymphatic efferents can also be found in some of neoplastic cells involved in lymphatic dissemination (inside vessels, placed in the lower part).

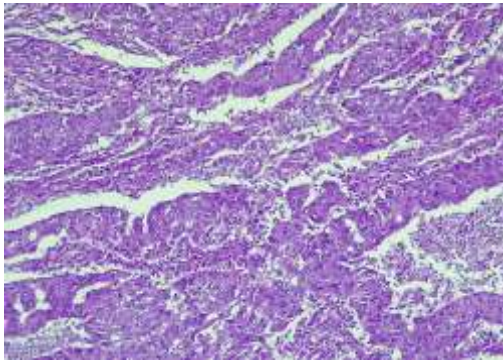
The next stage of approach was represented by the evaluation of the inflammatory infiltrate, from the point of view of the histoarchitectonics and its intensity and by means of the immunohistochemical markers that allow the identification of the cellular phenotype.

The methods used are based on current exploration resources (respectively, morphological examination in optical microscopy), which provides clues about **relations** but **does not validate the function**. These aspects are objective elements that support the hypothesis of the role of inflammatory infiltrate in the natural evolution of breast cancer, including through the intervention of the microenvironment in the development and, implicitly, the aggressiveness of the tumor.

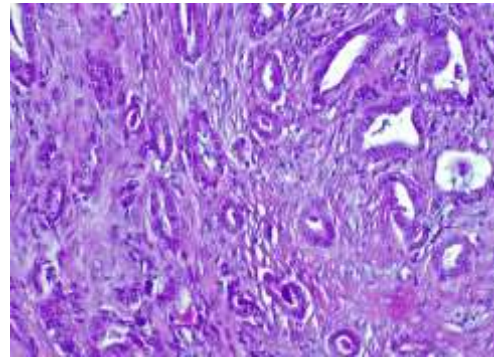
	
<p>a) F, 71 years-old- Moderately differentiated invasive tubular breast carcinoma – tumoral proliferation with &lt; 75% tubular differentiation (HE x10), moderate nuclear pleomorphism, F: female, HE: Hematoxilin-Eosin, G2: moderately differentiated.</p>	<p>b) 67 years-old, F- Moderately differentiated invasive tubular breast carcinoma NOS – tumoral proliferation with &lt;75% tubular differentiation (HEx10), moderate nuclear pleomorphism, F: female, NOS: not otherwise specific, HE: Hematoxilin-Eosin, G2: moderately differentiated.</p>
<p><b>Figure 11.a,b,c Exemples by invasive tubular brest carcinoma from our cases</b></p>	 <p>c) F, 71 years-old, Poorly differentiated invasive tubular breast carcinoma of no special type– tumoral proliferation with &gt;75% tubular differentiation, reduced nuclear pleomorphism, multiple calcifications (HE x10). F: female, HE: Hematoxylin-Eosin, G1: well differentiated.</p>

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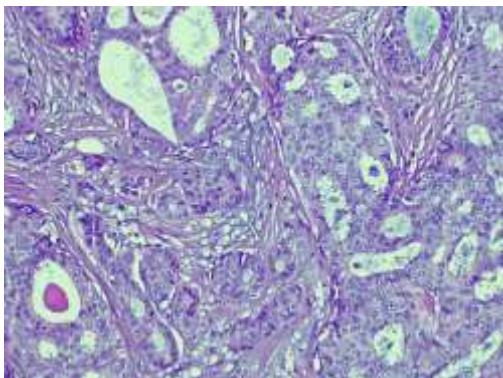
The results of this study (Fig. 12) show once again that the tumor follows a complex path that paradoxically gathers different types of relationships with the immune system and the rest of the body.



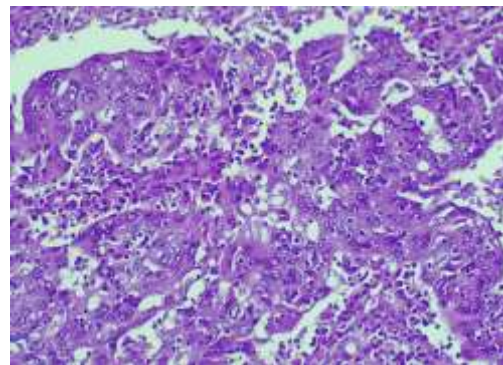
a) 68 years-old F, Poorly differentiated invasive tubular breast carcinoma NOS – tumoral proliferation with <10% tubular differentiation (HE x10) marked nuclear pleomorphism, F: female, NOS: not otherwise specific, HE: Hematoxilin-Eosin, G3: poorly differentiated.



b) 59 years-old F, Well-differentiated invasive tubular breast carcinoma NOS – tumoral proliferation with >75% tubular differentiation (HE x10) reduced nuclear pleomorphism, multiple microcalcifications, F: female, NOS: not otherwise specific, HE: Hematoxilin-Eosin, G1: well-differentiated.



c) Moderately differentiated invasive tubular breast carcinoma NOS – tumoral proliferation with <75% tubular differentiation (HE staining x20), moderate nuclear pleomorphism, NOS: not otherwise specific, HE: Hematoxilin-Eosin, G2: moderately differentiated.

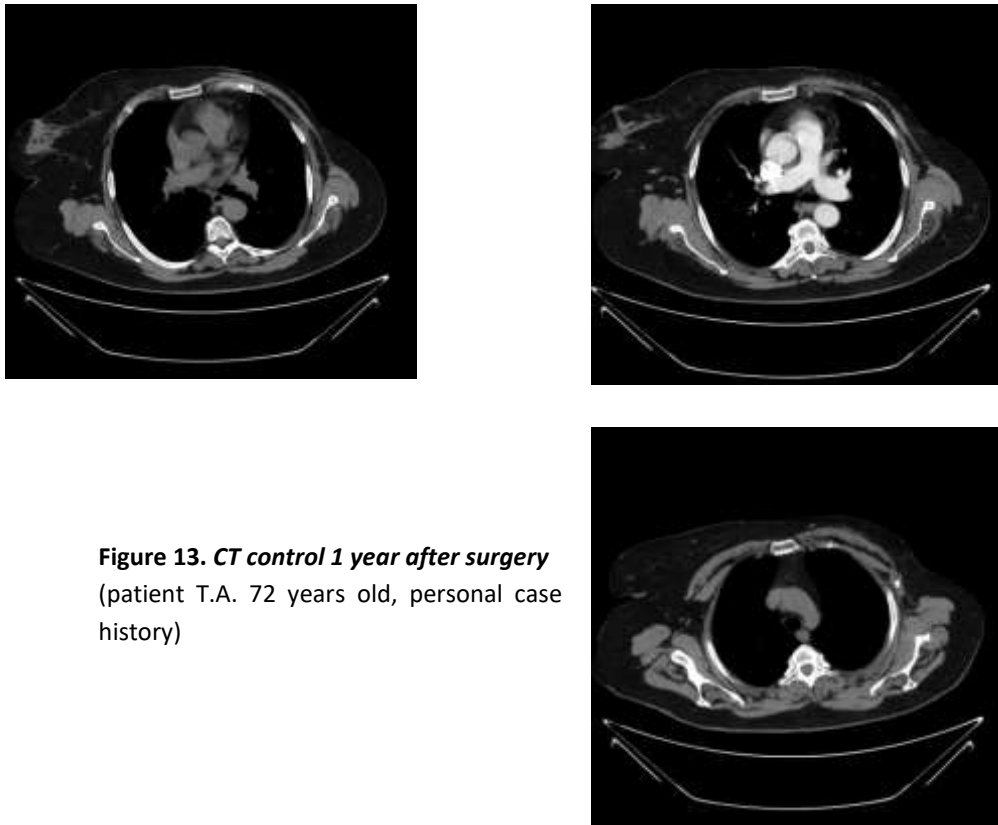


d) Poorly differentiated invasive tubular breast carcinoma not otherwise specific – tumoral proliferation with <10% tubular differentiation (HE staining x20), marked nuclear pleomorphism, HE: Hematoxilin-Eosin, G3: poorly differentiated.

**Figure 12.**

The postoperative evolution was favorable, we did not have immediate postoperative complications.

Aspiration drainage was removed on average at 3 days. The mean length of hospital stay was 7 days. We can say that we had very good results after the elective operation performed. These were demonstrated by follow-up of cases performed by clinical control and CT 1 year after surgery (Fig. 13).



**Figure 13. CT control 1 year after surgery**  
(patient T.A. 72 years old, personal case history)

## DISCUSSIONS

The main technical problem solved by the original technique is the approach of the entire armpit (especially its tip) and the interpectoral ganglia (Rotter), thus allowing a complete cellulo-lymphadenectomy to be performed, "in sight", in block with the breast tumor. The method eliminates the known disadvantages of other surgical techniques, providing optimal conditions for axillary dissection by temporarily removing the pectoral muscles. This ensures a direct, wide, anterior approach, and the restoration of the muscular component of the anterior wall of the armpit, functional and protective against irradiation, directs healing by avoiding the appearance of arm edema.

It offers a satisfactory loco-regional radicalism from an oncological point of view because:

- Surgically removes the mammary gland, the adipose tissue around the breast, the skin over a large area, as well as the nearby fascial system with the preservation of the pectoral muscles; removes the primary tumor as well as any neighboring multiple subclinical foci, most of the lymph collectors, including the interpectoral ganglia, thus providing effective recurrence prophylaxis.
- Complete axillary lymphadenectomy allows microscopic control of all lymph nodes, avoiding false negative results; appreciation of the degree of invasion; positive lymph nodes removal, which exceed their ability -to overcome the defense capacity, become possible metastatic foci; correct staging of the disease; establishing a more accurate prognosis and the necessary complementary therapy.
- Respecting the principle of monobloc resection at a distance from the tumor reduces the risks of intraoperative dissemination. The intervention performed with ligature or harmonic scalpel is simple, fast, non-traumatic, well supported even by sicker patients.

Survival at 5 years is comparable to that in the literature [6], but qualitatively better and with satisfactory aesthetic results (offers favorable conditions for plastic reinterventions, in well-selected cases).

Breast cancer is a tumor with intermediate malignancy that recurs frequently and metastasizes. It mainly affects women over the age of 50.

Clinically the tumor can develop anywhere in the mammary gland but occurs more frequently in the superior-external quadrant. Diagnosis by microscopic anatomopathological examination and immunohistochemistry is mandatory and useful for further conduct. The anatomo-pathological results underlines the idea of the different behavior of the tumor cells [9], in a microenvironment in which they interfere with the components of the inflammatory infiltrate [10].

Based on the premise that in breast carcinomas there is an intense interaction between tumor cells on the one hand and



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inflammatory cells, cytokines, chemokines [11], [12] and elements of the microenvironment on the other hand we tried to make morphological and biological correlations to answer the question: What is the relationship between biological markers of tumor aggression and inflammatory infiltrate?

Thus, the theory that the microenvironment has a crucial role in the development and evolution of breast cancer is increasingly confirmed [10], [13].

Metastases are most commonly located in the lungs or regional lymph nodes [14], [15], [16]. The incidence of recurrences and metastases is much higher in patients who are mistreated or initially treated incorrectly [17].

Mortality varies between 0-6% at 10 years after the first surgery and is relatively low [6], 0-1% in patients treated correctly [18], [19].

After the anatomopathological confirmation of the diagnosis [20], [21], the patients were referred to oncology for evaluation and continuation with adjuvant treatment

### CONCLUSIONS

- The treatment of choice is surgical: excision of the tumor within the limits of oncological safety assessed by extemporaneous microscopic histopathological examination followed by re-excision if necessary.
- In the case of recurrences, a wide re-excision is performed with cell lymphadenectomy.
- Radiation therapy and chemotherapy may be combined postoperatively.
- In the case of late, metastatic tumors, surgical excision improves the prognosis by slowing the evolution of secondary tumors.
- Consensus points useful to clinicians: the potential for malignancy of any formation detected in a breast is a real risk.
- The possibility of a long asymptomatic period requires caution.
- Diagnostic errors negatively influence the evolution.
- **Proper surgical excision is the basic component of the treatment.** We did not opt in any case for enucleation, limited excision with anatomo-pathological examination or waiting for the intraoperative anatomo-pathological result because we had the informed consent of the patients from the preoperative period. Based on the clinical, mammographic and CT examination, the patients opted directly for radical surgery from the beginning.
- Postoperatively, the patient must be registered by the oncologist who will determine the therapeutic conduct adapted to each case.
- Detection of recurrences and long-term metastases after surgery requires long-term follow-up of patients.

### CONFLICT OF INTERESTS

The authors declare that they have no conflict of interests.

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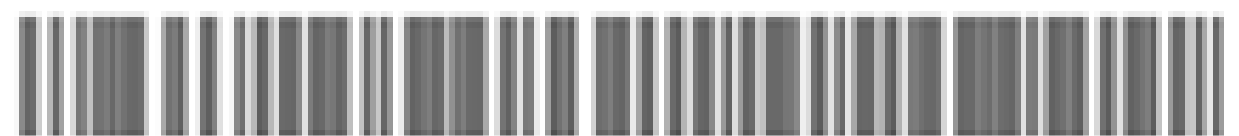
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