

# The Influence of Learning Motivation, Nutritional Status and Physical Fitness on the Learning Outcomes of Pjok Siswa Smp N 1 Sungai Beremas



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**ABSTRACT:** The purpose of the study was to determine the effect of learning motivation, nutritional status and physical fitness on the learning outcomes of junior high school students. This type of research is included in correlation research using a path analysis model. The population in this study is all students of SMPN 1 Sungai Beremas District. Sampling is purposive sampling, the sample in this study is only male students in class VIII with a total of 50 people. The results of the study are: The first hypothesis proposed in this study is that there is an effect of learning motivation (X1) on physical fitness (Y) students. The second hypothesis proposed in this study is that there is an effect of nutritional status (X2) on physical fitness (Y) students. The third hypothesis proposed in this study is that there is an influence of learning motivation (X1) on student learning outcomes (Z). The fourth hypothesis proposed in this study is that there is an effect of nutritional status (X2) on student learning outcomes (Z). The fifth hypothesis proposed in this study is that there is an effect of physical fitness (Y) on student learning outcomes (Z). The sixth hypothesis proposed in this study is that there is an indirect influence of learning motivation (X1) on learning outcomes (Z) through physical fitness (Y) students. The seventh hypothesis proposed in this study is that there is an indirect influence of nutritional status (X2) on learning outcomes (Z) through physical fitness (Y) students. It was concluded that there was an influence of learning motivation, nutritional status and physical fitness on the learning outcomes of female students.

**KEYWORDS:** Learning Motivation, Nutritional Status, Physical Fitness, Learning Outcomes Pjok

## I. INTRODUCTION

Achmad et al., (2018); Bangun & Zaluku, (2019) Physical education, sports and health (PJOK) subjects are one of the compulsory subjects at every level of education in Indonesia, starting from primary education to upper secondary education. In the implementation of learning in schools, PJOK subjects can be said to be one of the unique subjects because it is very different from other subjects in schools, where these subjects not only focus on cognitive, but also focus on psychomotor and affective students (Idham et al., 2022; Subarjah, 2016).

Putra et al., (2022); Vera, (2021) In the implementation of PJOK learning in schools, most of the material is given in the form of practice in the field, so it is very necessary for the readiness of students, especially physically so that the implementation of PJOK learning can run well. Apart from physical factors, many other factors can affect the success of the learning process including: level of physical fitness, nutritional status, learning motivation, facilities and infrastructure, parental attention, school environment, and learning models used by teachers (Hamdi, 2021; Nanda, 2020; Warda et al., 2021).

Suharjana dalam Zamzmi, (2022) Physical fitness is a person's ability to be able to carry out daily activities according to work without excessive fatigue so that they can still enjoy time. This certainly plays an important role in determining student success in carrying out all daily routines including PJOK learning. Students who have good physical fitness will be able to follow all the material provided by the teacher, both theory and practice, while students who have low physical fitness will certainly find it difficult to carry out all activities, especially related to physical activities such as PJOK subjects (Aryadi, 2020; Chan, 2021; Ziad, 2015).

Andika, (2020) In nutritional status is the expression of a state of balance in the form of certain variables or it can be said that nutritional status is an indicator of good and bad daily food supply. Good nutritional status indicates that students have consumed nutritious foods that can support student activities at school (Beauty et al., 2020; Osrita et al., 2020; Syampurma,

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2016). Furthermore, the factor that can affect students' PJOK learning is motivation. Okki, (2021) is a drive that comes from within man himself. This certainly can affect the results in learning PJOK at school, if students have high learning motivation, it will make students learn seriously even though they are not supervised by the teacher (Ilahi, 2023; Misbahuddin, 2019; Sallianto, 2018).

Furthermore, the factor that can affect success in learning PJOK is the availability of facilities and infrastructure in schools. Facilities and infrastructure are certainly the needs of teachers and students so that all material can be delivered optimally. The lack of facilities and infrastructure will cause hampering of learning materials provided by teachers, so it is expected that these facilities and infrastructure have been fulfilled by the school before learning begins (Aulia et al., 2022; Kapti & Winarno, 2022; Rahmawati, 2021). Furthermore, the factor that can affect PJOK learning is the school environment. The success of learning in schools is greatly influenced by a conducive school environment. Schools must be able to provide a supportive atmosphere so that students can study calmly and comfortably so that student learning outcomes are also good (Apriyano, 2017; Jamal et al., 2022).

Next is the learning model used by teachers. Currently, there are so many learning models and approaches used by teachers in learning so that learning can run well and students can understand the material well. Among these learning models are problem-based learning, project-based learning, discovery learning and various other learning models that can be used by teachers to improve student learning outcomes in schools (Arief, 2022; Hartono & Akhiruyanto, 2019). The next factor is parental support. This is the initial capital of all student success in every activity including PJOK learning at school. Students who get support from parents will make students feel more cared for so that it will be an encouragement from outside the student (Hidayat et al., 2022; Merchán-Sanmartín et al., 2022).

Of the many schools in West Pasaman Regency, Sekolah Menengah Junior Negeri 1 Sungai Beremas is one of the schools that has met almost all of the above learning support factors, but based on observations made and interviews with PJOK teachers at SMPN 1 Sungai Beremas, information was obtained that PJOK learning is still not running optimally so that there are still many students who get scores below KKM, this is likely caused by low physical fitness, this can be seen when students carry out learning activities, many students quickly experience fatigue, another factor that is thought to affect the lack of optimal PJOK learning at SMP N 1 Sungai Beremas is the low nutritional status and also the excess nutritional status possessed by students of SMP N 1 Sungai Beremas, it can be seen that many students are thin and also have excess weight, The last factor that is suspected to be the cause of not maximizing PJOK learning at SMP N 1 Sungai Beremas is the low motivation to learn owned by students, it can be seen that many students are not enthusiastic in learning PJOK and students are only excited about certain subjects such as football, volleyball and badminton.

Not yet maximized PJOK learning at SMP N 1 Sungai Beremas must be overcome immediately, so that students can carry out learning well in all subjects, therefore, researchers are interested in conducting research to see the influence given by physical fitness, nutritional status and learning motivation on the learning outcomes of PJOK students of SMP N 1 Sungai Beremas, From this research, it is expected to provide solutions to the problems faced by SMP N 1 Sungai Beremas.

## **II. MATERIAL AND METHODS**

This type of research is included in correlation research using a path analysis model because between independent variables and dependent variables there is an influencing mediation. The path analysis method is a method that examines the direct or indirect influence or effect of hypothesized variables as a result of the influence of treatment on these variables.

The time and place of the study will be conducted in February 2023 at SMP Negeri 1 Sungai Beremas, West Pasaman Regency. According to Sugiyono, (2008) Population is a generalized area consisting of objects / subjects that have certain qualities and characteristics that are determined by researchers to be studied and then drawn conclusions ". Almost similar things are said Arikunto, (2008) says "population is the whole subject of study. The population in this study was all students of SMPN 1 Sungai Beremas District.

The sample is the part of the population that is the center of research attention, within a predetermined scope and time, (Winarno, 2011). In this study, sampling was carried out by purposive sampling, namely sampling due to certain considerations, while the sample in this study was only male students in class VIII with a total of 50 people, while the thing to consider was that this group of students was the one who received the lowest learning outcomes in the even semester of the 2021/2022 academic year.

Operational Definition of variables and research instruments, so that various interpretations do not occur, for more details the variables to be examined in this study are as follows: 1) Learning motivation referred to in this study is motivation originating from within students (intrinsic) and motivation from outside students (extrinsic) which is measured using questionnaires. 2) The

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nutritional status referred to in this study is nutritional status measured using the body mass index formula. 3) Physical fitness referred to in this study is the ability of students to carry out all daily activities optimally without experiencing significant fatigue as measured by using the Nusantara Student Physical Fitness test. 4) The learning outcomes that become the benchmark in this study are the results of the UTS / UAS exam that has been taken by students.

The data analysis technique used in this study is to use Path Analysis (Path Analysis) developed by Sewall Wright (1960) with the aim of explaining the direct and indirect effects of a set of causal variables (exogenous variables) to a set of consequent variables (endogenous). When going to perform path analysis, a causal relationship structure must first be drawn diagrammatically between the cause variable and the effect variable hereinafter referred to as the Path diagram (Path diagram). The path analysis was carried out using the SPSS version 25 program.

### III. RESULTS AND DISCUSSION

#### Result

The description of data in this study was carried out to see a descriptive picture of research data consisting of data: learning motivation (X1), nutritional status (X2), physical fitness (Y) and learning outcomes (Z). The data description of each variable is as follows:

#### 1. Learning Motivation

To obtain learning motivation data, it was carried out using a questionnaire with a total of 40 points of statements given to 46 respondents. The results of learning motivation data obtained an average of 84.74, median 85, mode 85.5, standard deviation 2.77, highest score 90.50 and lowest score 79.

#### 2. Nutritional Status

To obtain nutritional status data was carried out using the body mass index by measuring body weight and height to 46 sampled people. The results of nutritional status data obtained an average of 18.33, median 18.6, mode 18.6, standard deviation 2.19, highest score 24.89 and lowest score 12.82.

#### 3. Physical Fitness

To obtain physical fitness data, it was carried out using the Indonesian Student Fitness Test (TKPN) which was given to 46 samples. The results of physical fitness data obtained an average of 4.87, median 4.7, mode 4.0, standard deviation 1.20, highest score 8.51 and lowest score 2.03.

#### 4. Learning Outcomes

To obtain data on learning outcomes, it was carried out by taking UTS scores for the even semester of the 2022/2023 academic year from 46 samples. The learning outcome data obtained an average of 80.67, median 80, mode 80, standard deviation 5.53, highest score 95 and lowest score 70.

#### Test Analysis Requirements

Before data analysis is carried out, analysis requirements tests are first carried out consisting of normality tests and multicollinearity tests:

##### a. Normality Test

The normality test was conducted using the Shapiro-Wilk normality test against all research data consisting of data on learning motivation, nutritional status, physical fitness and learning outcomes. The results of the Shapiro-Wilk normality test are as follows:

**Table 1. Normality Test Shapiro-Wilk**

Tests of Normality			
	Shapiro-Wilk		
	Statistic	df	Sig.
Learning Motivation	.981	46	.663
Nutritional Status	.968	46	.228
Physical Fitness	.981	46	.639
Learning Outcomes	.972	46	.320

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## b. Multicollinearity Test

The next requirement test is to use the multicollinearity test, while the results of the multicollinearity test are as follows:

**Table 2. Multicollinearity Test**

Coefficients <sup>a</sup>			
Type		Collinearity Statistics	
		Tolerance	VIF
1	Learning Motivation	.988	1.012
	Nutritional Status	.973	1.027
	Physical Fitness	.971	1.030
a. Dependent Variable: Hasil_Belajar			

\*. This is a lower bound of the true significance

a. Lilliefors Significance Correction

Based on table 1, it can be known the results of the shapiro-wilk test, each data including learning motivation obtained Sig value 0.663, nutritional status Sig value 0.228, physical fitness Sig value 0.639 and learning outcomes Sig value 0.320 all Sig values > 0.05. Test criteria:

If the Sig value > 0.005, H0 is accepted and Ha is rejected, meaning that the data is normally distributed. If the Sig value < 0.05, H0 is rejected and Ha is accepted, meaning that the data is abnormally distributed. Based on the table above and the criteria, it is concluded that all data in this study are normally distributed.

Based on table 2 above, it can be known the VIF value of each variable as follows: learning motivation VIF = 1,012, nutritional status VIF = 1,027, physical fitness VIF = 1,030. Test criteria Multicollinearity occurs if the value VIF > 2; Multicollinearity does not occur if the value VIF ≤ 2). Based on the table above and the criteria, it was concluded that all data in this study did not occur multicollinearity.

## Hypothesis Testing

To test the hypothesis in this study was carried out by path analysis (path analysis) after testing the requirements of data analysis. The criteria for hypothesis testing are as follows:

H0: accepted if the observation Sig value > 0.05

Ha: accepted if the observation Sig value < 0.05

The results of hypothesis testing in this study are as follows:

### 1. There is an influence of learning motivation (X1) on the physical fitness (Y) of SMP N 1 Sungai Beremas students.

The first hypothesis in this study is that there is an influence of learning motivation (X1) on physical fitness (Y) of students of SMP N 1 Sungai Beremas. It is known that the Sig value is 0.595 > 0.05 and the Beta value is 0.081 so that H0 is accepted and Ha is rejected thus it can be said that there is no significant influence by learning motivation (X1) on physical fitness (Y) of SMP N1 Sungai Beremas students, then to find out the magnitude of the influence given by learning motivation (X1) on physical fitness (Y) of SMP N1 Sungai Beremas students can be determined in the following way:

$$K = \rho_{y1}^2 \times 100\%$$

$$K = 0.081^2 \times 100\%$$

$$K = 0.66\%$$

Based on the calculation of the contribution above, it can be seen that the influence given by learning motivation (X1) on the physical fitness (Y) of N1 Junior High School students is very small, which is 0.66%.

### 2. There is an effect of nutritional status (X2) on physical fitness (Y) of students of SMP N 1 Sungai Beremas

The second hypothesis in this study is that there is an influence of nutritional status (X2) on physical fitness (Y) of students of SMP N1 Sungai Beremas, it is known that the Sig value is 0.338 > 0.05 and the Beta value is 0.146 so that H0 is accepted and Ha is rejected thus it can be said that there is no significant influence by nutritional status (X2) on physical fitness (Y) of SMP N1 Sungai Beremas students, Furthermore, to determine the magnitude of the influence given by nutritional status (X2) on physical fitness (Y) of students of SMP N1 Sungai Beremas can be determined in the following way:

$$K = \rho_{y2}^2 \times 100\%$$

$$K = 0.146^2 \times 100\%$$

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$$K = 2.13\%$$

Based on the calculation of the contribution above, it can be seen that the influence given by physical fitness (X2) on the physical fitness (Y) of N1 Junior High School students is very small, which is 2.13%.

### 3. There is an Influence of Learning Motivation (X1) on Learning Outcomes (Z) of SMP N 1 Sungai Beremas students

The third hypothesis in this study is that there is an influence of learning motivation (X1) on the learning outcomes (Z) of N1 Sungai Beremas Junior High School students, it is known that the Sig value is  $0.897 > 0.05$  and the Beta value is 0.019 so that  $H_0$  is accepted and  $H_a$  is rejected thus it can be said that there is no significant influence by learning motivation (X1) on the learning outcomes (Z) of N1 Sungai Beremas Junior High School students, Furthermore, to determine the magnitude of the influence given by learning motivation (X1) on the learning outcomes (Z) of SMP N1 Sungai Beremas students can be determined in the following way:

$$K = \rho_{v1z}^2 \times 100\%$$

$$K = 0.019^2 \times 100\%$$

$$K = 0.04\%$$

Based on the calculation of the contribution above, it can be seen that the influence given by learning motivation (X1) on the learning outcomes (Z) of N1 Junior High School students is very small, which is 0.04%.

### 4. There is an Effect of Nutritional Status (X2) on Learning Outcomes (Z) of SMP N 1 Sungai Beremas students

The fourth hypothesis in this study is that there is an influence of nutritional status (X2) on the learning outcomes (Z) of N1 Sungai Beremas Junior High School students, it is known that the Sig value is  $0.545 > 0.05$  and the Beta value is -0.090 so that  $H_0$  is accepted and  $H_a$  is rejected thus it can be said that there is no significant influence by nutritional status (X2) on the learning outcomes (Z) of N1 Sungai Beremas Junior High School students, Furthermore, to determine the magnitude of the influence given by nutritional status (X2) on the learning outcomes (Z) of SMP N1 Sungai Beremas students can be determined in the following way:

$$K = \rho_{v2z}^2 \times 100\%$$

$$K = 0.090^2 \times 100\%$$

$$K = 5.24\%$$

Based on the calculation of the contribution above, it can be seen that the influence given by nutritional status (X2) on the learning outcomes (Z) of N1 Junior High School students is very small, which is 0.81%.

### 5. There is an influence of physical fitness (Y) on the learning outcomes (Z) of SMP N 1 Sungai Beremas students.

The fifth hypothesis in this study is that there is an influence of physical fitness (Y) on the learning outcomes (Z) of students of SMP N1 Sungai Beremas, it is known that the Sig value is  $0.0545 > 0.05$  and the Beta value is -0.295 so that  $H_0$  is accepted and  $H_a$  is rejected thus it can be said that there is no significant influence by physical fitness (Y) on the learning outcomes (Z) of SMP N1 Sungai Beremas students, Furthermore, to determine the magnitude of the influence exerted by physical fitness (Y) on the learning outcomes (Z) of SMP N1 Sungai Beremas students can be determined in the following way:

$$K = \rho_{yz}^2 \times 100\%$$

$$K = 0.295^2 \times 100\%$$

$$K = 8.70\%$$

Based on the calculation of the contribution above, it can be seen that the influence given by physical fitness (Y) on the learning outcomes (Z) of N1 Junior High School students is very small, which is 8.70%.

### 6. There is an indirect influence of learning motivation (X1) on learning outcomes (Z) through physical fitness (Y) of SMP N 1 Sungai Beremas students.

The sixth hypothesis in this study is that there is an indirect influence of Learning Motivation (X1) on Learning Outcomes (Z) through Physical Fitness (Y) Students of SMP N 1 Sungai Beremas, it is known that  $\rho_{yx1z} = -0.0239$  is smaller than  $r$  table = 0.297 meaning that  $H_0$  is accepted and  $H_a$  is rejected in other words the sixth hypothesis states There is an indirect influence Learning Motivation (X1) on Learning Outcomes (Z) through Physical Fitness (Y) Students of SMP N 1 Sungai Beremas rejected. When viewed from the influence given only by 0.06% is classified as very low.

### 7. There is an indirect influence of nutritional status (X2) on learning outcomes (Z) through physical fitness (Y) of SMP N 1 Sungai Beremas students.

The seventh hypothesis in this study is that there is an indirect influence of nutritional status (X2) on learning outcomes (Z) through physical fitness (Y) of junior high school students N 1 Sungai Beremas, Based on the calculation above, it can be seen

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that  $\rho_{yx2z} = -0.04307$  is smaller than  $r \text{ table} = 0.297$  meaning that  $H_0$  is accepted and  $H_a$  is rejected in other words the hypothesis of aiming which states there is an indirect influence of nutritional status (X2) on learning outcomes (Z) through physical fitness (Y) Students of SMP N 1 Sungai Beremas were rejected. When viewed from the influence given only by 0.19% is classified as very low.

### **DISCUSSION**

This study uses path analysis of learning motivation variables (X1), nutritional status (X2), physical fitness (Y) and learning outcomes (Z) using 6 research hypotheses with the following discussion :

#### **1. There is an influence of learning motivation (X1) on physical fitness (Y) of students of SMP N 1 Sungai Beremas**

The first hypothesis proposed in this study is that there is an effect of learning motivation (X1) on physical fitness (Y) of students of SMP N 1 Sungai Beremas. Based on the analysis of the data that has been done, Sig values of  $0.595 > 0.05$  are obtained so that  $H_0$  is accepted in other words that the first hypothesis proposed in this study is rejected.

Motivation is a psychological symptom in the form of a reciprocal impulse in a person either consciously or unconsciously to perform an action with a specific purpose (Appova & Arbaugh, 2018). Learning motivation is the overall driving force within students that causes learning activities, which guarantees the continuity of learning activities and which provides direction to learning activities, so that the desired goals can be achieved (A. D. A. De Silva et al., 2018). Learning motivation is a non-intellectual psychological factor that plays a role in generating passion for learning as well as feelings of pleasure and enthusiasm for learning (Zeyer, 2018). From some of the opinions above, it can be said that learning motivation is what drives that can cause passion for learning. From this definition, it can be understood that the learning motivation possessed by students will be able to determine the high and low enthusiasm of students in participating in the learning process, including students of SMP N1 Sungai Beremas.

Physical fitness is the quality of life in the form of the ability to do daily work diligently and swiftly, without significant fatigue, and still have the energy to enjoy leisure time and unexpected emergencies (Karhiwikarta, 2012). Physical fitness is needed not only by athletes for better performance but also for non-athletes to maintain physical and spiritual health (Prajapati et. al., 2008).

The rejection of the first hypothesis in this study indicates that there is no significant influence by learning motivation on physical fitness owned by SMPN 1 Sungai Beremas students. This can occur possibly because motivation does not directly affect physical fitness, as revealed by the Ministry of Health of the Republic of Indonesia (2005) There are many factors that affect a person's physical fitness level, including physical activity, nutritional status, and smoking behavior, this opinion is reinforced from the results of a survey conducted by the Center for Physical Freshness of the Ministry of National Education (Depdiknas) previously, Information was obtained that the learning outcomes of Penjasorkes in schools were only able to provide physical freshness effects on approximately 15 percent of the entire student population (Prianto, 2022). Another factor that causes the absence of the influence of learning motivation on physical fitness is the time available in the Penjasorkes lessons. It was found that 25 minutes/week of moderate to vigours of physical activity in schools was very inadequate based on national recommendations (National Institute of Child Health and Human Development Study of Early Child Care and Youth Development Network, 2003) in (Prianto, 2022).

#### **2. There is an effect of Nutritional Status (X2) on the physical fitness (Y) of SMP N 1 Sungai Beremas students**

The second hypothesis proposed in this study is that there is an effect of nutritional status (X2) on physical fitness (Y) of students of SMP N 1 Sungai Beremas. Based on the data analysis that has been done, Sig values of  $0.338 > 0.05$  are obtained so that  $H_0$  is accepted in other words that the second hypothesis proposed in this study is rejected.

According to Soekirman (2000) nutritional status is a state of health due to the interaction between food, the human body and the human environment. Direct nutritional status assessment can be divided into four assessments, namely; anthropometric, clinical, biochemical, and biophysical. Anthropometry as an indicator of nutritional status, can be done by measuring several parameters. One such parameter is Body Mass Index (BMI). BMI is a simple method to monitor a person's nutritional status, especially those related to underweight or overweight (Apriyano et al., 2020; Sukendro et al., 2021).

The rejection of the hypothesis in this study means that there is no significant influence by nutritional status on physical fitness owned by SMPN 1 Sungai Beremas students. Based on research data, it can be seen that some students still have nutritional status in the less classification and also some students have nutritional status in the excess classification and most students of SMPN 1 Sungai Beremas have nutritional status in the normal classification. There are several factors that may cause the rejection of the hypothesis in this study, including: the influence of gadgets, Internet access, online games and all the

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conveniences produced by smartphones that cause all work to be done practically. Fully automated equipment such as electronic ladders and remote controls make people relatively non-physical activity (Mutohir & Maksum, 2007). Due to advances that make the work of the younger generation more practical so that lack of movement and low desire to exercise, according to (Holt et al, 2002) fitness will decrease by 50% after stopping exercise or exercise for 4-12 weeks and will continue to decrease to 100% for 10-30 weeks.

### **3. There is an Influence of Learning Motivation (X1) on Learning Outcomes (Z) of SMP N 1 Sungai Beremas students**

The third hypothesis proposed in this study is that there is an influence of learning motivation (X1) on the learning outcomes (Z) of SMP N 1 Sungai Beremas students. Based on the data analysis that has been done, Sig values of 0.897 > 0.05 were obtained so that H0 was accepted in other words that the third hypothesis proposed in this study was rejected.

With the diversity that exists, each of these students certainly has different abilities or interests. This should require intensive attention from Physical Education, Sports and Health teachers. However, the facts in the field have not been in accordance with what was expected because teachers have not optimized play opportunities for students, resulting in difficulties in mastering the competencies taught (ASTUTI & ERIANTI, 2022; Sunandar et al., 2022).

### **4. There is an Effect of Nutritional Status (X2) on Learning Outcomes (Z) of SMP N 1 Sungai Beremas students**

The fourth hypothesis proposed in this study is that there is an effect of nutritional status (X2) on the learning outcomes (Z) of SMP N 1 Sungai Beremas students. Based on the analysis of the data that has been done, Sig values of 0.545 > 0.05 are obtained so that H0 is accepted in other words that the fourth hypothesis proposed in this study is rejected.

Status gizi adalah suatu ukuran mengenai kondisi tubuh seseorang yang diakibatkan oleh makanan yang consumption and use of nutrients needed by the body to form tissues and organs with their respective functions in a system, so as to produce growth (physical) and development (mental), intelligence, and productivity as a condition for achieving a healthy, fit and prosperous level of life (Astuti & Kumar, 2019; Candra et al., 2023). External factors, in this external factor, researchers analyzed two sub-factors, namely the social environment and the non-social environment which is one of the factors that affect the learning outcomes of Physical Education, Sports and Health.

### **5. There is an influence of physical fitness (Y) on the learning outcomes (Z) of SMP N 1 Sungai Beremas students.**

The fifth hypothesis proposed in this study is that there is an effect of physical fitness (Y) on the learning outcomes (Z) of SMP N 1 Sungai Beremas students. Based on the analysis of the data that has been done, Sig values of 0.0545 > 0.05 are obtained so that H0 is accepted in other words that the fifth hypothesis proposed in this study is rejected. Physical fitness is one component in human life that is indispensable, so that all daily activities can run well. Physical fitness can be obtained by doing physical activity regularly, measurably, and programmatically. Good physical fitness is the main basic capital for a person to do physical activity repeatedly for a relatively long time without causing significant fatigue (Biddle et al., 2004; Shull et al., 2020).

The rejection of the hypothesis in this study proves that not always students who have good physical fitness are followed by good learning outcomes, on the contrary students who have low physical fitness also do not always have low learning outcomes, this can happen because good physical fitness must be followed by other factors in order to achieve good learning results, among them are: intelligence skills, parental support and also the school environment.

### **6. There is an indirect influence of learning motivation (X1) on learning outcomes (Z) through physical fitness (Y) of SMP N 1 Sungai Beremas students.**

Hipotesis keenam yang diajukan dalam penelitian ini adalah Terdapat pengaruh tidak langsung motivasi belajar ( $X_1$ ) terhadap hasil belajar (Z) melalui kebugaran jasmani (Y) siswa SMP N 1 Sungai Beremas. Berdasarkan analisis data yang telah dilakukan diperoleh  $\rho_{yx1z} = -0,0239$  lebih kecil dibandingkan dengan  $r$  tabel = 0.297 sehingga H0 diterima dengan kata lain bahwa hipotesis keenam yang diajukan dalam penelitian ini ditolak.

(Riyoko et al., 2019) Motivation is the driving force, direction and reinforcing behavior. Learning motivation can be seen from the character of student behavior which involves interest, sharpness of attention, concentration and diligent in achieving goals. Physical fitness is a physical condition related to the ability and ability to function at work optimally and efficiently. Physical fitness better describes the quality of the ability of body organs to carry out their functions and the continuity of those functions occurs in a system (Batista et al., 2019; Trudeau & Shephard, 2008).

The absence of an indirect influence of learning motivation on learning outcomes through physical fitness is due to the low correlation between the variables obtained namely motivation with physical fitness and learning outcomes. Directly, the relationship between motivation and fitness is not significant so that it does not have a significant impact on the learning outcomes of SMPN 1 Sungai Beremas students.

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### 7. There is an indirect influence of nutritional status (X2) on learning outcomes (Z) through physical fitness (Y) of SMP N 1 Sungai Beremas students.

The seventh hypothesis proposed in this study is that there is an indirect influence of nutritional status (X2) on learning outcomes (Z) through physical fitness (Y) of students of SMP N 1 Sungai Beremas. Based on the analysis of the data that has been done,  $\rho_{yx2z} = -0.04307$  is smaller than  $r_{table} = 0.297$  so that  $H_0$  is accepted in other words that the seventh hypothesis proposed in this study is rejected.

Dwijayanthi (2011: 105) said that the characteristics of children who have good nutritional status, namely weight growth in accordance with height and not easily tired. Next Kastrena et al., (2020) said that children with good nutritional status have high endurance and have good work power so that children are excited and active in the learning process. However, if the nutritional condition is not good, it will make interest and enthusiasm for learning decrease which certainly affects the learning process. If the learning process is disrupted, then the learning outcomes will also be disrupted so that students get low learning outcomes. The rejection of the seventh hypothesis in this study can be caused by the low direct relationship between nutritional status and physical fitness, resulting in no indirect influence by nutritional status on student learning outcomes through physical fitness.

#### IV. CONCLUSION

Based on data analysis and discussion in the previous chapter, the conclusions in this study are as follows: 1) There is no significant influence by learning motivation on students' physical fitness. 2) There is no significant effect by nutritional status on students' physical fitness. 3) There is no significant influence by learning motivation on student learning outcomes. 4) There is no significant effect by nutritional status on student learning outcomes. 5) There is no significant effect by physical fitness on student learning outcomes. 6) There is no indirect influence of learning motivation on learning outcomes through students' physical fitness. 7) There is no indirect influence of nutritional status on learning outcomes through students' physical fitness.

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