

Mother's Dental Health Behavior with Dental and Oral Hygiene Status in Early Childhood: A Cross-sectional Study



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ABSTRACT: Background: Early childhood is a group that is susceptible to dental disease, especially dental caries, so it needs special attention to prevent it. Dental caries in milk teeth that are not treated will result in disruption of masticatory function and premature tooth loss which causes abnormal eruption of permanent teeth. One of the reasons for this is poor oral and dental hygiene due to the fact that at that age they do not have independence in maintaining dental health. Therefore, the mother's role is very important in early childhood dental health.

Objective: This study aims to analyze the relationship between maternal dental health behavior with dental and oral hygiene status of early childhood.

Methods: This study is an observational analytic study with a cross-sectional approach. The sampling technique used was purposive sampling, with 222 respondents consisting of 111 mothers and 111 early childhood children. Data analysis using Chi-square test.

Results: Knowledge of dental health, attitudes and practices of mothers on the dental and oral hygiene status of early childhood showed a p-value of 0.001 ($p < 0.05$).

Conclusion: there is a significant relationship between mother dental health behavior on dental and oral hygiene status of early childhood

KEYWORDS: Dental health behavior, mother, dental hygiene status, early childhood.

I. INTRODUCTION

Dental health is an integral part of general health, besides that the teeth are one of the digestive organs that play an important role in the process of chewing food, so it is important to maintain dental health. Maintenance of dental and oral hygiene is one of the efforts to improve health because it can prevent the occurrence of various oral diseases [1].

The main problem of dental health in Indonesia, apart from the condition of inadequate oral and dental hygiene, also concerns the high prevalence of hard tissue disease and the supporting tissues of the teeth or periodontal tissues. The prevalence of dental periodontal disease is close to 100% due to poor oral hygiene conditions [2,3].

Winda et al research on PAUD children in Pineleng II Indah Village shows that students who have rampant caries are more than 49 people (76.56%) and those who do not have rampant caries are 15 people (23.44%) with a def index. -t is 4.3. This is included in the high category when compared to the 2018 WHO target, which is 50% of children 5-6 are free from caries [4].

The high incidence of dental caries in early childhood can be influenced by several factors, namely the frequency of brushing children's teeth, the supply of water that lacks fluoride, the long distance to access dental health services, diet and most importantly the dental health behavior of parents and awareness to guide them children. Yuniati's statement is also strengthened by stating that maternal behavioral factors affect the incidence of dental caries in children [5,6].

II. METHOD AND MATERIAL

This study is an observational analytic study, with a cross-sectional design. The sampling technique used was purposive sampling, with 222 respondents consisting of 111 mothers and 111 early childhood children. This research was conducted at Bumi Sawangan Indah Estate, Sawangan Depok. The research variable consisted of the dependent variable on the dental and oral hygiene status of early childhood while the independent variable was the mother's dental health behavior. The data collection instrument for dental health behavior was a questionnaire and the dental hygiene status of early childhood was

Mother's Dental Health Behavior with Dental and Oral Hygiene Status in Early Childhood: A Cross-sectional Study

measured by the PHP-M index. Analysis of the data used is the Chi-square to know r relationship between mother dental health behavior with dental and oral hygiene status of early childhood

III. RESULT

Table 1. Frequency distribution of mother dental health behavior with dental and oral hygiene status of early childhood

| Variable | n | % |
|---------------------------------------|----|------|
| Mother knowledge | | |
| Good | 63 | 56.8 |
| Low | 48 | 43.2 |
| Mother attitude | | |
| Positive | 65 | 58.6 |
| Negative | 46 | 41.4 |
| Mother practice | | |
| Good | 63 | 56.8 |
| Bad | 48 | 43.2 |
| Dental and oral hygiene status | | |
| Good | 72 | 64.9 |
| Enough | 39 | 35.1 |

Table 1 shows that most of the mothers have knowledge of dental health in the good category as many as 63 people (56.8%), positive attitude as much as 65 (58.6%) and practice in the good category as many as 63 people (56.8%) as well as for the dental and oral hygiene status of early childhood mostly with good category as much as 72 (64.9%).

Table 2. Chi-square test of mother's knowledge with dental and oral hygiene status of early childhood

| Knowledge | Dental and oral hygiene status | | | | Total | | OR 95 %CI | p value |
|-----------|--------------------------------|------|--------|------|-------|-----|-----------------------|------------|
| | Good | | Enough | | | | | |
| | n | % | n | % | n | % | | |
| Good | 50 | 79.4 | 13 | 20.6 | 63 | 100 | 4.545 1.975-10.460 | 0.001 |
| Low | 22 | 45.8 | 26 | 41.2 | 48 | 100 | | |
| Total | 72 | 64.9 | 39 | 35.1 | 111 | 100 | | |

Table 2 shows the results of the analysis of the relationship between the mother's level of knowledge and the dental and oral hygiene status of early childhood, obtained by statistical tests obtained p value = 0.001, it can be concluded that there is a significant relationship between mothers who have high knowledge and the status of dental and oral hygiene of children. From the results of the analysis, the OR value of 4.545 means that mothers who have knowledge of good dental health have 4,545 times the chance of having children with good dental and oral hygiene status, compared to mothers who have low knowledge.

Table 3. Chi-square test of mother's attitude with dental and oral hygiene status of early childhood

| Attitude | Dental and oral hygiene status | | | | Total | | OR 95 %CI | p value |
|----------|--------------------------------|------|--------|------|-------|-----|----------------------|------------|
| | Good | | Enough | | | | | |
| | n | % | n | % | n | % | | |
| Positive | 51 | 78.5 | 14 | 21.5 | 65 | 100 | 4.337 1.894-9.930 | 0.001 |
| Negative | 21 | 45.7 | 25 | 54.3 | 46 | 100 | | |
| Total | 72 | 64.9 | 39 | 35.1 | 111 | 100 | | |

Table 3 shows the results of the analysis of the relationship between mother's attitude and dental and oral hygiene status of early childhood, obtained by statistical tests obtained p value = 0.001, it can be concluded that there is a significant relationship between mother's attitude and child's dental and oral hygiene status. From the results of the analysis, the OR value of 4.337

Mother's Dental Health Behavior with Dental and Oral Hygiene Status in Early Childhood: A Cross-sectional Study

means that mothers who have good attitudes have 4,337 times the chance of having children with good dental and oral hygiene status, compared to mothers with low attitudes.

Table 4. Chi-square test of mother's practice with dental and oral hygiene status of early childhood

| Practice | Dental and oral hygiene status | | | | Total | | OR 95 %CI | p value |
|----------|--------------------------------|------|--------|------|-------|-----|----------------------|------------|
| | Good | | Enough | | | | | |
| | n | % | n | % | n | % | | |
| Good | 50 | 79.4 | 13 | 20.6 | 63 | 100 | 4.545 1.975-10.46 | 0.001 |
| Bad | 22 | 45.8 | 26 | 54.2 | 48 | 100 | | |
| Total | 72 | 64.9 | 39 | 35.1 | 111 | 100 | | |

Table 4 shows the results of the analysis of the relationship between mother's practice and dental and oral hygiene status of early childhood, obtained by statistical tests obtained p value = 0.001, it can be concluded that there is a significant relationship between mother's practice and children's dental and oral hygiene status. From the results of the analysis, the OR value of 4,545 means that mothers who have good practices have 4,545 times the opportunity to have children with good dental and oral hygiene status, compared to mothers who have bad practices.

V. DISCUSSION

Mother's knowledge, attitudes and actions will determine the dental and oral health status of the child in the future. Parents should know how to take care of their children's teeth and should teach their children how to take good care of their teeth. There are still many parents who assume that deciduous teeth are only temporary and will be replaced by permanent teeth, so parents often assume that damage to deciduous teeth caused by poor oral hygiene is not a problem. A mother should have good knowledge, attitudes and behavior towards dental and oral health in order to provide oral health education to children [7–9].

The results of the study Knowledge of dental health, attitudes and practices of mothers on the dental and oral hygiene status of early childhood showed a p-value of 0.001 ($p < 0.05$), meaning that there is a significant relationship between mother dental health behavior on dental and oral hygiene status of early childhood. This is in line with several studies proving that there is a significant relationship between mother's behavior and children's tooth brushing habits. Cahyaningrum's research also proves that there is a relationship between knowledge, attitudes, and actions of mothers about oral health on the incidence of dental caries in toddlers. Afiati's research proves between mother's knowledge, education and social status and child's caries index [9–11].

Stage of growth and development of the health of preschool age children is still very dependent on the care and attention that requires adults or parents and the most powerful influence in this phase is the mother. The mother's role is needed to determine the child's growth and development. So that the state of the child's health, one of which is the oral health of toddlers is still very much determined by the behavior of his parents, especially the knowledge, attitudes, and behavior of his mother [10,12,13].

Knowledge is something that is captured by the five senses. Sensing occurs in the five senses, namely the sense of sight, the sense of hearing, the sense of taste, the sense of smell and the sense of touch. And knowledge itself, mostly obtained through something seen and heard. The description of understanding knowledge at the cognitive level which is a very important domain for the formation of one's actions (over behavior). Knowledge also influences someone to do something. Behavior based on knowledge will be more lasting than behavior that is not based on knowledge will not last long [14].

Mother's knowledge in maintaining dental and oral health of toddlers is in the good category, respondents understand the importance of maintaining dental health for toddlers, it is proven that most of the early childhood children have dental and oral hygiene status in good category.

Mother's attitude is something that mothers apply if their child has a toothache and how to prevent dental and oral diseases for their children. Many of the respondents have paid attention to how to maintain the health of their children. Mothers know that dental care is very important to avoid dental disease. Attitude is a form of behavior in life, but attitude is not necessarily a real form. In everyday life, attitude is an emotional form to a social stimulus that can be evidence of a human response. Human behavior can be strengthened by believing in something. Attitude measurement can be direct or indirect. Asking directly or interviewing an object is a type of direct attitude measurement. Example The attitude of a good mother in carrying out an action will be influenced by the level of knowledge that the mother has regarding the maintenance of oral health. For example, mothers who are always looking for information related to dental health maintenance or sharing about dental and oral health

Mother's Dental Health Behavior with Dental and Oral Hygiene Status in Early Childhood: A Cross-sectional Study

with an expert such as a dentist, this is proof that the mother has a positive attitude in responding to problems that occur on the dental health of children [14].

This statement is also supported by the theory of Notoatmodjo, that the response can also be passive, without the act of thinking, arguing, acting or taking an action. Health behavior can be formulated as all forms of life experiences and interactions between individuals and their environment, especially regarding their knowledge, attitudes, and actions related to health. Alport's theory states that attitude has 3 main components, namely the concept of an object, a belief or belief, and an idea, an emotional life or a person's evaluation of the object, and a tendency to take an action. The three main components will form a complete attitude. Attitudes have not automatically manifested in an action (over behavior). To realize the attitude so that it becomes a real action, several supporting factors or a possible situation are needed, including adequate facilities. As an illustration of a good person's attitude towards utilizing his knowledge to gain access and information on dental and oral health, confirmation from other people must be obtained, and there are facilities that are easily accessible, so that someone can easily and properly apply it to his family members and the surrounding environment [14].

Mother's practices are things done by mothers to children in the application of children's dental and oral health. According to Budiharto, attitude can be a tangible action that requires supporting factors or conditions that allow, among others, the existence of suggestions and infrastructure or facilities. Dental hygiene measures have four levels, namely: Perception is the first level of action, namely selecting and recognizing objects in relation to the action to be taken. For example, taking the right toothbrush from a variety of toothbrushes that are presented with various shapes and hardness of bristles (soft, medium, hard bristles) to brush your teeth [15].

VI. CONCLUSIONS

Based on the results of the study, it can be concluded that there is relationship between mother dental health behavior on dental and oral hygiene status of early childhood

ACKNOWLEDGMENT

This study was done by self- funding from the authors. The authors thank to all partisipants and research assistan.

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Mother's Dental Health Behavior with Dental and Oral Hygiene Status in Early Childhood: A Cross-sectional Study

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