

The Relationship Between Parents' Knowledge Of Dental And Oral Health And The Incidence Of Dental Caries In Nurul Hayat Islamic Kindergarten School Children In Kapuk Village, Cengkareng District North Jakarta.

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Abstract.

Background Parents, especially mothers, have an important role in developing children's positive behavior towards dental and oral health. Parents' participation in maintaining children's dental and oral health can be implemented by paying attention to children's behavior regarding dental and oral health and children's eating patterns. *Writing Objective:* to determine the relationship of knowledge about oral and dental health with the incidence of dental caries in Islamic Kindergarten students at Nurul Hayat, Kapuk Village, Cengkareng District, North Jakarta. *Research Methods:* The sample size in this study used a total side of 50 students of Nurul Hayat Islamic Kindergarten in Kapuk Village, Cengkareng District, North Jakarta. This study was to determine parents' knowledge about dental and oral health using a questionnaire conducted by interviewing parents and children of Nurul Hayat Islamic Kindergarten in Kapuk Village, Cengkareng District, North Jakarta. The data analysis used was univariate and bivariate analysis using the chi square test. *Research Results* The results showed that parents' knowledge of dental and oral health on the incidence of caries on the Chi-square test resulted in a P value of $0.00 < 0.05$, so the analysis was that there was a relationship between the history of parental knowledge about dental and oral health and the incidence of caries. The results of the OR calculation were 0.583, which means that the incidence of caries was 0.583 times lower with good parental knowledge about dental and oral health compared to parents with less knowledge (95% CI 0.362-0.941). *Conclusions and Suggestions:* It is hoped that the results of this study can be used as a reference for students about providing education to parents and children about oral and dental health.

Keywords: Knowledge, children and Dental Caries Incidence.

I. INTRODUCTION

The results of the 2018 Basic Health Research (Riskesdas) stated that the largest proportion of dental problems in Indonesia were broken/cavities/caries teeth (45.3%). Dental caries is tooth decay due to multifactors that occurs through the interaction between teeth and saliva as the host, bacteria in the oral cavity, and easily fermented foods. Preschool age is one of the groups at high risk of developing caries. The high incidence of caries requires optimal management, especially the incidence of caries in children (Winahyu, 2019). According to Ulfah (2020) The family as a cultural unit influences the attitudes and beliefs of its members. The laxity of parents when regulating sugar consumption is a very significant factor influencing their caries status. Habits children acquire early in life continue to shape the attitudes and lifestyle choices they will use into adulthood. Good oral hygiene and eating habits are adopted at an early age and will have an impact on good oral health in adulthood. This habit is mostly obtained through learning and observation, especially parents and close relatives. Parents' knowledge about health behavior can improve their ability to supervise their children in maintaining oral hygiene.

The lack of parental knowledge regarding the effect of diet on the development of dental caries increases the provision of sweet foods to their children, so that children are more often exposed to risk factors for dental caries. According to Edie, I. S et al (2021). Parents have a very important role in maintaining healthy teeth and mouth for their children, especially in preventing dental caries. Parents need to have sufficient knowledge in preventing dental caries in their children. First, they must understand good dental hygiene habits, namely correct tooth brushing techniques. In addition, parents need to have knowledge

about a healthy diet, which types of food and drink can increase the risk of dental caries. In addition, parents also need knowledge of the early signs of dental caries such as symptoms of sensitive teeth, stains and white spots on the teeth, pain when chewing or bad breath so that by recognizing the signs of dental caries parents can immediately take action and take their child to the doctor for proper treatment. The prevalence of rampant caries teeth will be low if people know about how to maintain healthy teeth and mouth and avoid habits that can lead to rampant caries. By diligently maintaining oral hygiene, the chance of rampant caries can be minimized.

However, in reality health service facilities such as puskesmas are not much in demand by the public due to a lack of information and health promotion from health service facilities that are directly involved in it (Sadimin et al, 2017). Based on the results of observations and interviews with the school principal and 10 parents of students, data was obtained that the school had not yet organized a School Dental Health Enterprise, and had never been given dental and oral health education to parents of students. Of the 10 parents who answered correctly the correct tooth brushing movement was 4 people, 4 parents who knew routine dental checks every 6 months. While the results of observations made on some 25 kindergarten children found dental caries in 12 children out of 25 children who were examined with Penlight used to provide clearer lighting so that the area of the oral cavity can be seen clearly, sonde serves to ascertain the teeth affected by caries and teeth that are filled in. Therefore, the title of this study is the Relationship between Parental Knowledge About Dental and Oral Health with the Incidence of Dental Caries in Nurul Hayat Islamic Kindergarten School Children in Kapuk Village, Cengkareng District, North Jakarta.

II. METHODS

This research was conducted to determine the relationship between parental knowledge about oral and dental health and the incidence of dental caries in children. This research was conducted at Nurul Hayat Islamic Kindergarten, Kapuk Village, Cengkareng District, North Jakarta during April-May 2023. The independent variable in this study was parental knowledge about dental and oral health and the dependent variable was the incidence of caries in children. The sample size in this study used the total side, namely 50 students of Nurul Hayat Islamic Kindergarten, Kapuk Village, Cengkareng District, North Jakarta. This study was to determine parents' knowledge about dental and oral health using a questionnaire conducted by interviewing parents and children of Nurul Hayat Islamic Kindergarten in Kapuk Village, Cengkareng District, North Jakarta. The data analysis used was univariate and bivariate analysis using the chi square test.

III. RESULT AND DISCUSSION

A. Results of Univariate Data Analysis

1. Frequency Distribution Based on Parental Knowledge About Dental and Oral Health and Caries Incidence at Nurul Hayat Islamic Kindergarten School, Kapuk Village, Cengkareng District, North Jakarta.

Table 1. Frequency Distribution Based on Parental Knowledge About Dental and Oral Health and Caries Incidence in Nurul Hayat Islamic Kindergarten School, Kapuk Village, Cengkareng District, North Jakarta N=50

Respondent Data	Amount (n)	Precentage(%)
Parental Knowledge		
Good	12	24
Not enough	38	76
Caries incident		
No Caries	5	10
Experiencing Caries	45	90

Source: *Primary Data Processed (2023)*

Based on table 1 above, it shows that out of 50 respondents from Nurul Hayat Kindergarten school children, the majority of parents lacked knowledge of 38 respondents (76%), and the majority experienced caries incidents of 45 respondents (90%).

B. Results of Bivariate Analysis

1. The Relationship between Parents' Knowledge of Dental and Oral Health Against Caries Incidence in Nurul Hayat Islamic Kindergarten School, Kapuk Village, Cengkareng District, North Jakarta.

Table 2. The Relationship between Parents' Knowledge of Dental and Oral Health Against Caries Incidence in Nurul Hayat Islamic Kindergarten School, Kapuk Village, Cengkareng District, North Jakarta

Knowledge	Caries incident				Total	OR 95% CI	P value
	No Caries		Caries				
	f	%	f	%	f		
Good	5	10,0	7	14,0	12	(0,362 – 0,941)	0,000
Not Enough	0	0,0	38	76,0	38		
Total	67	10,0	11	90,0	50		

Source: Primary Data Processed (2023)

The results of the study showed that parents' knowledge of dental and oral health on the incidence of caries in the Chy-square test resulted in a P value of 0.00 <0.05, so the analysis was that there was a relationship between the history of parental knowledge of dental and oral health and the incidence of caries. The results of the OR calculation were 0.583, which means that the incidence of caries was 0.583 times lower with good knowledge of parents about dental and oral health compared to parents with less knowledge (95% CI 0.362-0.941)

Discussion**A. Discussion of Univariate Analysis**

1. An overview of the results of the frequency distribution of parents' knowledge about dental and oral health at Nurul Hayat Islamic Kindergarten School, Kapuk Village, Cengkareng District, North Jakarta.

The results of this study indicate that of the 50 respondents of Nurul Hayat Kindergarten schoolchildren, the majority of parents have less knowledge, as many as 38 respondents (76%) According to Rompis, Pangemanan, & Gunawan (2016). Knowledge is the result of the realm of knowing and this happens because someone senses a certain object, through the five human senses. Knowledge about children's dental health is a must for a mother for the development and growth of good children's teeth. The knowledge of parents, especially a mother, on how to maintain healthy teeth and mouth is very important in underlying the formation of behaviors that support children's dental and oral hygiene, so that children's dental and oral health is good. Mother's knowledge about dental health will greatly determine the dental health status of her child in the future. A mother plays an important role in her family, both as a wife and as a mother of her children. The first figure a child recognizes as soon as he is born is the mother, therefore the behavior and habits of the mother can be emulated by the child. Knowledge alone is not enough, it needs to be followed by the right attitudes and actions. Keumala, (2018).

The knowledge possessed by the individual will determine his behavior in terms of health so that someone who has good knowledge will know the right attitude and behavior when exposed to disease. Knowledge is an impression in the human mind as a result of using the five senses. Knowledge is very different from belief, superstition, and misinformation. Knowledge is everything that is known based on the experience gained by every human being. (Notoatmodjo, 2018) Based on the theory of knowledge, in this study it was found that the majority of knowledge was lacking about dental health where parental knowledge is very important to know the incidence of caries. However, sometimes some parents do not realize that their child's teeth have cavities after seeing their child's mouth. When the presence of caries is recognized, it may be too late to protect the teeth. To prevent caries, the role and attention of parents towards their children is very much needed, namely, among other things, don't give sweet drinks or milk to children when they are going to sleep, get used to cleaning/brushing their children's teeth, and preventing the accumulation of bacteria in children, because the accumulation of bacteria in the child's oral cavity occurs after baby teeth start to grow. in this case it is very important for a mother to have good knowledge so that she can prevent diseases that can attack children, one of which is Dental Caries. (Sari, 2021).

B. Description of the Results of the Frequency Distribution of Caries Events in Nurul Hayat Islamic Kindergarten, Kapuk Village, Cengkareng District, North Jakarta

The results of this study indicate that out of 50 respondents from Nurul Hayat Kindergarten school children, the majority experienced caries incidents as many as 45 respondents (90%). Caries is a disease of the hard tissues of the teeth, namely enamel, dentin and cementum, which is caused by the activity of a microorganism in a fermentable carbohydrate. The sign is the demineralization of the hard tooth tissue which is then followed by the breakdown of the organic matter. As a result, bacterial invasion occurs and the ability of the pulp and the spread of infection to the periapex tissue which can cause pain. However, given the possibility of remineralization occurring, at very early stages the disease can be stopped. According to Ramadhan, Cholil, & Sukmana (2016). Dental caries is a disease of the tooth tissue and begins with the occurrence of damage to the tooth surface, namely from the enamel to the dentin which then extends towards the pulp. The occurrence of caries is caused by a series of processes and factors that influence each other over several periods of time. There are four main factors that cause caries, these four factors are the host, microorganisms, substrate and time.

As processes and factors that influence each other, the balance of the main factors in the oral cavity is also influenced by external risk factors. External risk factors consist of age, social and economic status, education level, knowledge and attitude and behavior. According to Larasati, R., et al (2021). The main factors that cause caries are: Teeth and saliva Irregular shape of teeth and saliva which makes caries easier Presence of caries-causing bacteria Bacteria that cause caries are of the Streptococcus and Lactobacillus types. The impact of tooth decay can also make it difficult for children to eat and sleep, parents think that their child's teeth will be replaced after they are damaged. The presence of caries can cause cavities in children's teeth which can interfere with the growth of new adult teeth, interfere with speech functions so that children who experience caries lack self-confidence. Hardika, B. D. (2018). According to Sholekhah, N. K. (2021) As for the assessment of the incidence of caries, it is divided into mild caries, where there is damage to the teeth that is still limited to the outer layer of the tooth enamel (enamel), usually mild caries has not penetrated the dentin, the layer that lies beneath the enamel. Moderate caries occurs when the damage to the tooth has penetrated the enamel and reached the dentin. Caries at this level can cause symptoms such as tooth sensitivity to food or drink. Severe caries, where damage to the tooth has reached the soft tissue inside the tooth which is called the pulp. Caries at this level can cause severe pain, swelling or abscess

C. Discussion of Bivariate Analysis

1. The Relationship between Parents' Knowledge of Dental and Oral Health Against Caries Incidence in Nurul Hayat Islamic Kindergarten, Kapuk Village, Cengkareng District, North Jakarta

The results of the study showed that parents' knowledge of dental and oral health on the incidence of caries on the Chi-square test resulted in a P value of $0.00 < 0.05$, so the analysis showed that there was a relationship between the history of parental knowledge about dental and oral health and the incidence of caries. The results of the OR calculation were 0.583, which means that the incidence of caries was 0.583 times lower with good parental knowledge about dental and oral health compared to parents with less knowledge (95% CI 0.362-0.941).

The results of the research are in line with Khulwani, 2020 which states that in the results of his research there is a relationship between knowledge and the incidence of caries. In addition, according to Sari's research, 2021 which states that the results of statistical tests using the chi square test obtained a p value = $0.029 \leq \text{value } \alpha = 0.05$, so H_a is accepted. So it can be concluded that there is a significant relationship between mother's knowledge about dental health and the incidence of dental caries in elementary school children in Banjar Negeri Village, Way Lima District, Pesawaran Regency. Based on the results of previous research which stated that in reducing the incidence of caries, there is a relationship with parental knowledge in dental and oral health so that it can be practiced in children in oral and dental hygiene actions.

IV. CONCLUSION

Based on the results and discussion of the research results, it can be concluded that:

1. The majority of 50 respondents from Nurul Hayat Kindergarten school children had less knowledge of their parents, 38 respondents (76%), and the majority experienced caries incidents, 45 respondents (90%).
2. The results of the study showed that parents' knowledge of dental and oral health on the incidence of caries in the Chi-square test resulted in a P value of $0.00 < 0.05$, so the analysis was that there was a relationship between the history of parental knowledge about dental and oral health and the incidence of caries. The results of the OR calculation were 0.583, which means that the incidence of caries was 0.583 times lower with good parental knowledge about dental and oral health compared to parents with less knowledge (95% CI 0.362-0.941).

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