

KNOWLEDGE OF TEETH BRUSHING WITH DENTAL AND ORAL HYGIENE IN STUDENTS OF DURIAN GADANG STATE ELEMENTARY SCHOOL, SIJUNJUNG DISTRICT IN IMPROVING NUTRITIONAL STATUS

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Abstract

Dental and oral health problems are problems that are often found in elementary school children. Brushing teeth is one of the efforts to maintain dental and oral hygiene. The purpose of this study was the knowledge of brushing teeth with dental and oral hygiene in students of SD Negeri Durian Gadang, Sijunjung Regency in Improving Nutritional Status. This type of quantitative research with a Cross Sectional approach. The population of the study was 78 students of SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency. The sampling technique used saturated sampling, namely the entire population was used as a sample. Data collection was carried out using a questionnaire sheet and an OHI-S examination sheet. The analysis used was univariate and bivariate analysis with the Chi Square statistical test. The results showed that the knowledge of brushing teeth of grade IV and V students at SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency was in good criteria 70.5% (55 people), sufficient criteria 24.4% (19 people), low criteria 5.1% (4 people). Oral and dental hygiene in grade IV and V students at SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency, OHIS criteria are good 42.3% (33), moderate 53.8% (42 people), poor criteria 3.8% (3 people). Based on the results of statistical tests, there is a relationship between knowledge of brushing teeth and oral and dental hygiene with a p value = 0.000, which is <0.005. The conclusion of the study shows that there is a relationship between knowledge of brushing teeth and oral and dental hygiene. It is recommended that respondents brush their teeth properly and correctly, and maintain oral and dental hygiene to obtain optimal nutrition.

Keyword : *Tooth Brushing, Knowledge, and Dental Hygiene*

1. INTRODUCTION

Dental and oral health is an integral part of body health and can have an impact on overall body health.³² Many factors influence a person's dental and oral health, such as behavior, environment, heredity, access and utilization of health services (Hanum, A.N, 2022). Health efforts are a series of activities carried out in the form of activities through promotive, preventive, curative, and rehabilitative approaches that are carried out in an integrated, integrated, and sustainable manner. [16].

The most common dental and oral health problem in elementary school children is tooth decay. Causes of tooth decay include lack of maintaining dental and oral hygiene, such as brushing teeth.[13] Preventive efforts in maintaining dental and oral hygiene, which can be done by brushing teeth.[7]

Dental and oral care carried out by children can affect how good their dental and oral conditions are in old age. The right time to train a child's motor skills in brushing teeth is at elementary school age.

One of the most important factors in maintaining dental and oral health is the child's ability to brush their teeth properly and effectively. Parents who do not get their children used to brushing their teeth from an early age can cause children to be unaware and unenthusiastic about maintaining their dental and oral health. As a result, children's teeth and mouths are susceptible to dental and oral diseases (Jumriani, 2018).

Based on Basic Health Research Data (Riskesdas), it shows that dental and oral health problems in Indonesia in 2013 were 25.9% [15] and increased by 45.3% in 2018.[16] For the age group 10-14 years, it was 25.2% in 2013, and increased by 41.4% in 2018.[36] Meanwhile, only 2.1% brush their teeth properly. In West Sumatra, 0.92% brush their teeth properly.[17]

Knowledge is the formation of associative thoughts that connect or link a thought with reality or with other thoughts based on repeated experiences without an understanding of the true and universal cause and effect.[1]

Measuring dental and oral hygiene is an effort to determine the state of a person's dental and oral hygiene, which is usually used to measure dental and oral hygiene and mouth index. Index is one of the numbers that indicates the clinical condition obtained at the time of examination by measuring the area of the tooth surface covered by plaque or calculus. Measurement of dental and oral hygiene according to Green and Vermillion can use an index, one of which is the Simplified Oral Hygiene Index.[23]

Oral hygiene is an important part of general health and affects a person's ability to obtain optimal nutrition (WHO). Children with severe dental caries are more likely to be malnourished. Pain and oral infection can reduce appetite and intake of calories and protein which are essential for growth.[33] Oral health problems such as cavities, gingivitis can reduce the ability to chew. This causes a person to avoid hard or fibrous foods (eg fruit, vegetables, meat) which results in decreased quality and variety of nutrient intake.[28]

2. METHODS

The type of research used is quantitative research with a Cross Sectional approach which aims to determine the relationship between brushing teeth and dental and oral hygiene. The test used is the Chi-Square test to determine whether there is a significant relationship between variables. The location of this research was conducted at students of elementary school 07 and 28 Durian Gadang, Sijunjung Regency. The sampling technique was saturated sample.

3. RESULTS

The results of the research conducted at Durian Gadang State Elementary School, Sijunjung Regency obtained the following results:

Table 1. Frequency Distribution of Toothbrushing Knowledge of Grade IV and V Students of SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency in 2025

No	Knowledge Criteria	F	%
1	Good (80-100%)	55	70,5
2	Average (60-79%)	19	24,4
3	Poor (<60%)	4	5,1
Total		78	100

In table 1 above, it can be seen that the frequency distribution of knowledge of grade IV and V students at SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency regarding knowledge of brushing

teeth is highest in the good criteria of 70.5% (55 people), while the lowest knowledge of brushing teeth is in the low criteria of 5.1% (4 people).

Table 2. Frequency Distribution of Dental and Oral Hygiene of Grade IV and V Students of State Elementary Schools 07 and 28 Durian Gadang, Sijunjung Regency in 2025

No	Dental and Oral Hygiene Criteria	f	%
1	Good	33	42,3
2	Average	42	53,8
3	Poor	3	3,8
	Total	78	100

In table 2 above, it can be seen that the frequency distribution of dental and oral hygiene in grades IV and V at SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency, is highest in the moderate OHIS criteria at 53.8% (42 people), while the lowest dental and oral hygiene with the OHI-S criteria is in the poor criteria at 3.8% (3 people)

Table 3. Chi-Square Test Results of the Relationship between Toothbrushing Knowledge and Dental and Oral Hygiene in Grade IV and V Students of SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency in 2025

	Value	Df	Asymptotic Significance (2-sided)	<i>P value</i>
Pearson Chi-Square	27.880. ^a	4	.000	
Likelihood Ratio	33.820	4	.000	0,000
Linear-by-Linear Association	21,982	1	.000	
N of Valid Cases	78			

Based on table 3 above, it shows that the highest cross-tabulation of statistical test results using chi-square shows a p value = 0.000 with a confidence level of 95% or p value = <0.005 where H_0 is rejected, which means there is a significant relationship between knowledge of brushing teeth and dental and oral hygiene in grade IV and V students of SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency.

4. DISCUSSION

The results of the study showed that the results of the statistical test using chi-square showed a p value = 0.000 with a confidence level of 95% or p value = <0.005 so that it can be concluded that there is a significant relationship between knowledge of brushing teeth and dental and oral hygiene in grade IV and V students of SD Negeri 07 and 28 Durian Gadang, Sijunjung Regency, meaning that the higher the knowledge about brushing teeth, the better the dental and oral hygiene figures.

According to researchers, the relationship between knowledge of brushing teeth and oral hygiene is caused by the behavior of respondents who already know about brushing teeth such as the purpose

of brushing teeth, how to brush teeth, time and frequency of brushing teeth, and the use of good and correct toothpaste so that patients know how to maintain the cleanliness of their teeth and mouth. Their habit of brushing teeth 2x a day but not after breakfast and at night before going to bed, and some children have brushed their teeth after breakfast and at night before going to bed, which is proven by those who have good OHI-S as many as 33 people. When researchers asked about their brushing habits, they had brushed their teeth properly.

Brushing your teeth after eating aims to remove food residue that sticks to the surface or between the teeth and gum.[11] Brushing your teeth properly and with good technique can prevent various problems in the oral cavity. Brushing your teeth is done to remove and prevent plaque formation on the surface of the teeth that can be reached by the toothbrush. In brushing your teeth, you must pay attention to the correct and regular brushing technique.[11] The frequency of brushing your teeth is one form of behavior that will affect the good or bad hygiene of your teeth and mouth.[13] If children do not brush their teeth properly, food residue and sugar will stick to the surface of the teeth and become plaque. This plaque contains *Streptococcus Mutans* bacteria which produce acid and can damage tooth enamel, thus causing cavities (caries).[17]

Children's knowledge of brushing teeth is included in the good category, so that on average most respondents know about knowledge of brushing teeth. Children's knowledge of how to maintain dental and oral health is very important in forming behaviors that support dental and oral hygiene in children, so that dental and oral health in children can be good.[9]

The higher the child's level of knowledge, the better the child's attitude in maintaining their dental and oral health.[14] The level of knowledge at the know stage is the lowest level. Knowledge abilities at this level are such as describing, mentioning, defining and stating. A low level of knowledge will cause children to not care about their dental health so that they are susceptible to dental and oral diseases.

This study is in line with previous research conducted on elementary school children in Muaro Jambi Regency which showed that there was no significant relationship between knowledge of brushing teeth and dental and oral hygiene, obtained p value = 3.670, meaning there was no significant relationship.[18]

5. CONCLUSION

Based on the results of the study, it can be concluded that most respondents had good knowledge of tooth brushing, although their oral hygiene was still in the moderate category. The statistical analysis showed a significant relationship between tooth brushing knowledge and oral hygiene, with a p-value of 0.000 ($p < 0,05$) at a 95% confidence level. This indicates that higher the level of knowledge about proper tooth brushing techniques, the better the oral hygiene condition. Therefore, education regarding proper tooth brushing techniques should be enhanced through the School Dental Health Program (UKGS) and health education activities conducted by dental health professionals. Parents expected to play an active role in guiding children to brush their teeth regularly twice a day to maintain good oral hygiene

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