



**THE RELATIONSHIP OF DENTAL BRUSHING KNOWLEDGE WITH  
THE STATUS OF DENTAL AND MOUTH HYGIENE IN THE VIII  
CLASS ADOLESCENT OF SMPN 1 DARUL IMARAH ACEH BESAR,  
2022**

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**Received:** Filled Out by the Editor

**Accepted:** Filled Out by the Editor

**Published:** Filled Out by the Editor

**Abstract**

*The maintenance of dental and oral health is often neglected by teenagers. Many bad habits of teenagers that can cause damage to the teeth and mouth, these bad habits include the habit of consuming sweet foods, drinking habits - sweet drinks and lazy habits of brushing your teeth at night. The results of the examination that the author conducted on 15 grade VIII students at SMPN 1 Darul Imarah, the average dental and oral hygiene was 3.3 with a poor category level. The results of interviews with 11 out of 15 students still did not know how to brush their teeth properly and correctly. The purpose of this study was to determine the relationship between knowledge of brushing teeth and the status of dental and oral hygiene in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022. This research is analytical with a cross sectional design, conducted at SMPN 1 Darul Imarah Aceh Besar District on 19-22 February 2022. The population in this study was 210 people. The sample in this study used a random sampling technique with a sample of 70 adolescents aged 13-14 years. Bivariate analysis looked at the relationship between knowledge of brushing teeth and oral hygiene status using the statistical test of 0.05. The results showed that the knowledge of brushing teeth with the most dental and oral hygiene status was in the moderate category as many as 20 people (28.6%), the knowledge of brushing teeth was not good with the most dental and oral hygiene status in the poor category as many as 23 people (32, 8%). It can be concluded that there is a relationship between knowledge of brushing teeth with dental and oral hygiene status in adolescents with a P Value: 0.01, it is recommended for adolescents to be more active in seeking information on social media about knowledge or maintenance of dental health such as brushing teeth properly and correctly so that avoid poor dental and oral hygiene status.*

**Keywords:** *Keywords are a minimum of 3 (three) and a maximum of 5 (five) words.*

**A. Introduction**

RI Law no. 36 of 2009 concerning health states that health is a human right and one of the elements of welfare that must be realized in accordance with the ideals of the Indonesian nation as referred to in Pancasila and the 1945 Constitution of the Republic of Indonesia. health efforts, namely every activity and/or a series of activities carried out in an integrated, integrated and sustainable manner to maintain and improve the health status of the community in the form of disease prevention, health improvement, disease treatment and health restoration by the government and/or the community. (Astuti, 2010).

Dental and oral health is also part of physical health that cannot be separated from one another. If dental and oral health is disturbed it can be a sign or even a factor in the emergence of other health problems (Marimbun, 2016).

One of the reasons why someone ignores dental and oral health problems is the lack of knowledge about dental and oral hygiene. Knowledge is the result of 'knowing', and occurs after people have sensed a certain object. Sensing occurs through the human five senses, namely: the senses of sight, hearing, smell, taste and touch. Knowledge is an impression in the human mind as a result of the use of the five senses which is very different from belief (beliefs), superstition (superstition), and misinformation (Mubarak, et al., 2007).

The maintenance of oral health here is one of the efforts to improve health, one of which is by brushing teeth. Brushing teeth is an action to clean dirt and debris attached to the tooth surface which is mainly done after eating and before going to bed will reduce the risk of health problems. teeth (Munadirah & Abubakar, 2018)

The maintenance of dental and oral health is often neglected by teenagers, while during puberty, adolescents are also vulnerable to dental and oral health problems. Many bad habits of teenagers that can cause damage to the teeth and mouth, these bad habits include the habit of consuming sweet foods, drinking habits - sweet drinks and lazy habits of brushing your teeth at night. (Senjaya & Yasa, 2019).

The value of dental and oral hygiene is important for every individual to know. It plays a role in the prevention of caries, and one-fifth of the world's population are teenagers. In their growth and

development, adolescents often experience health problems, one of which is dental and oral hygiene problems. The World Health Organization (WHO) recommends that school students are the right group for health promotion efforts to maintain the health of the oral cavity and surrounding tissues and adolescents are also an important target group for the development of oral health. (Anwar, et al., 2017) .

Adolescence is an important period because during this period intellectual, social, emotional and cognitive development occurs. Middle school students (SMP) are on average 12-15 years old, which is the stage of early adolescence. WHO also sets the age of 12-15 years as one of the ages that are indicators in the "Global Goals for Oral Health 2020", this is because this age is a critical age which is an indicator in monitoring dental and oral diseases and almost all permanent teeth are indexed. research has fully grown. (Fitri, et al., 2017).

Dental and oral hygiene is also an important factor for dental and oral health to be free from disease, therefore dental and oral hygiene must be maintained and maintained in order to create optimal health. Oral hygiene can be determined by measuring the status of oral hygiene. According to Green and Vermillion to measure dental and oral hygiene is to use an index called the Oral Hygiene Index Simplified (OHI-S). OHI-S is a number that states the clinical condition or hygiene of a person's teeth and mouth obtained at the time of examination. The value of OHI-S is the value obtained from the sum of the index debris and index calculus (Anwar, et al., 2017).

According to Rahmidian Safitri (2015) in his research entitled The Relationship of Knowledge Level of Toothbrushing Frequency to Dental and Oral Hygiene in Class IV Students of Sdn 28 Mataram, the results of the study were that there was a relationship between the level of knowledge of class IV students at SDN 28 Mataram about the frequency of brushing teeth on health. teeth and mouth, where the correlation is low with the R2 value. = 10.02%, This means that knowledge about the frequency of brushing teeth on oral hygiene contributes 10.02% and the remaining 89.98% % is determined by other factors.

In another study conducted by Yurdiana and Tuti Restuastuti in a study entitled The Relationship between Knowledge Level and Dental

Health Status in Class VIII Students of Mts Muhammadiyah Pengasawan Kampar, the results showed that there was a significant relationship ( $p = 0.000$ ) of the level of knowledge on dental health status with the level of closeness of the relationship  $R^2 = 0.542$ . This means that 54.2% level of knowledge has a positive linear relationship with the dental health status of students.

The majority of the Indonesian population (94.7%) already have good brushing behavior, namely brushing their teeth every day. However, from this percentage, only 2.8% brushed their teeth at the right time, namely at least twice, after breakfast and before going to bed. If based on age group, the highest percentage of age group with good tooth brushing behavior is 15-24 years old at 98.5% with the percentage of correct brushing time is 3.3%. while the lowest percentage of the age group with good tooth brushing behavior is age 65 years and over at 71% with the percentage of correct brushing time of 2.9%. (Ministry of Health, 2019.infodatin).

Province of Nanggroe Aceh Darussalam, 10.0% of people brush their teeth after breakfast, while 90.0% do not brush their teeth after breakfast, and only 20.8% of those who brush their teeth before going to bed at night. Meanwhile, in Aceh Besar district, 5.9% of people brush their teeth after breakfast and 29.3% before going to bed. The province of NAD who brushed their teeth correctly was 4.9%, while the percentage of the population who brushed their teeth incorrectly was 95.1%. The percentage of Aceh Besar residents who brush their teeth correctly is 3.4% and the other 96.6% behaves improperly brushing their teeth. NAD Province is included in the 5 provinces with the highest prevalence of dental and oral problems (30.5%) and 13.2% that require dental and oral care/hygiene counseling. Aceh Besar has dental and oral problems as much as 36.1% and requires dental and oral care/hygiene counseling as much as 16.3%. (Imran & Niakurniawati, 2018).

## **B. Method**

Based on the initial examination that the author conducted on 15 eighth grade students at SMPN 1 Darul Imarah, the average dental and oral hygiene was 3.3 with a poor category level. The results of the dental

and oral hygiene examination showed 2 children with good criteria, 4 children with moderate criteria and 9 children with poor criteria. And after the author conducted interviews, 11 of the 15 students still did not know how to brush their teeth properly and correctly, and the 15 students only brushed their teeth after showering in the morning and evening. In addition, the author also conducted an interview with one of the UKS teachers at the school and he said that during the pandemic until now there was no counseling about dental and oral health at the school.

**1. General purpose**

This study aims to determine the relationship between knowledge of brushing teeth and the status of dental and oral hygiene in class VIII adolescents at SMPN 1 Darul Imarah Aceh Besar in 2022.

**2. Special purpose**

- a. To find out the Knowledge of Brushing Teeth in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022.
- b. To find out the Status of Dental and Oral Hygiene in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022.

**3. Scope**

The scope of this research is limited to dental and oral health to determine the relationship between knowledge of brushing teeth and the status of dental and oral hygiene in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022.

**C. Result and Discussion**

**A. Research result**

The study was conducted on 19-22 February 2022 at SMPN 1 Darul Imarah Aceh Besar, where the sample in this study amounted to 70 respondents aged 13-14 years. The data obtained from the results of respondent interviews and direct examination in the field presented in the form of tables and narratives obtained the following results:

1. General data
  - a. Gender

The frequency distribution of respondents by gender can be seen in the table below:

Frequency Distribution of Respondents by Gender in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022

No	Gender	Frequency	Percentage
1	Woman	33	47.1%
2	Man	37	52.9%
Total		70	100%

Based on table 4.1, it can be seen that of the 70 types of respondents, the majority were male, as many as 37 people (52.9%).

b. Age

The frequency distribution of respondents based on age can be seen in the table below:

Frequency Distribution of Respondents by Age in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022

No	Age	Frequency	Percentage
1	13 years old	37	52.9%
2	14 years	33	47.1%
Total		70	100%

Based on table 4.2, it is known that of the 70 respondents, the most are respondents aged 13 years, namely 37 people (52.9%)

2. Special Data

a. Univariate Analysis Data

1. Knowledge of brushing teeth in adolescents

The frequency distribution of respondents based on knowledge of brushing teeth in adolescents can be seen in the table below

Frequency Distribution of Respondents Based on Knowledge of Brushing Teeth in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022

No	Toothbrushing Knowledge	Frequency	Percentage
1	Well	23	32.9%
2	Not good	47	67.1%

Total	70	100%
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Based on table 4.3 above, it is known that of the 70 respondents who have the most knowledge of brushing their teeth in the poor category, 47 people (67.1%).

2. Dental and oral hygiene status (OHI-S)

The frequency distribution of respondents based on dental and oral hygiene status (OHI-S) in adolescents can be seen in the table below:

Frequency Distribution of Respondents Based on Dental and Oral Hygiene Status in Class VIII Adolescents of SMPN 1 Darul Imarah Aceh Besar in 2022

No	OHI-S	Frequency	Percentage
1	Well	4	5.7%
2	Currently	42	60.0%
3	Bad	24	34.3%
Total		70	100%

Based on table 4.4 above, it is known that of the 70 respondents who had the most dental and oral hygiene status in the moderate category, 42 people (60.0%).

b. Bivariate Analysis Data

1. The Relationship between Knowledge of Brushing Teeth and Dental and Oral Hygiene Status in Class VIII Adolescents of SMPN 1 Darul Imrah Aceh Besar

Frequency Distribution of the Relationship of Knowledge of Brushing Tooth with Dental and Oral Hygiene Status in Class VIII Adolescents of SMPN 1 Darul Imrah Aceh Besar

Toothbrushing Knowledge	OHIS						Total		P-Value
	Well		Currently		Bad				
	N	%	N	%	N	%	N	%	
Well	2	2.9%	20	28.6%	1	1.4%	23	32.9%	=0.05
Not good	2	2.9%	22	31.4%	23	32.8%	47	67.1%	p=0.01
Total	4	5.7%	42	60%	24	34.3%	70	100%	

Based on table 4.5 above, it can be seen that from 70 respondents, knowledge of brushing teeth was good with the most dental and oral hygiene status in the moderate category as many as 20 people (28.6%), and knowledge of brushing teeth was not good with dental and oral hygiene status the most. in the bad category as many as 23 people (32.8%).

Based on the chi-square statistical test, there is a relationship between knowledge of brushing teeth with dental and oral hygiene status in class VIII teenagers of SMPN 1 Darul Imarah Aceh Besar, with P Value: 0.001 ( $P < 0.05$ ).

#### **D. Conclusion**

Based on the results of the research and discussion, it can be concluded that there is a relationship between knowledge of brushing teeth and the status of oral hygiene in class VIII teenagers of SMPN 1 Darul Imarah Aceh Besar, the value of P Value = 0.001 < 0.05.

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