

ANALYSIS OF KNOWLEDGE AND BEHAVIOR OF DENTAL AND ORAL HEALTH MAINTENANCE IN STUDENTS OF SDN 050/XI KUMUN HILIR KOTA SUNGAI PENUH IN 2024

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ABSTRACT

Background: Oral health is important for general health and quality of life. Oral health means being free from throat cancer, oral infections and sores, gum disease, tooth loss and other diseases, resulting in disorders that limit biting, chewing, smiling and speaking. This study aims to analyze the relationship between the level of knowledge and the behavior of maintaining oral health of students at SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024.

Method: This cross-sectional study, conducted on March 18, 2024, at SDN 050/XI Kumun Hilir, analyzed 30 second-grade students. Total sampling was used. Data on oral health knowledge and behavior were collected via valid and reliable questionnaires. Analysis involved univariate and bivariate methods, utilizing the Chi-Square test.

Result: Most second-grade students at SDN 050/XI Kumun Hilir demonstrated high oral health knowledge (63.3%) and good oral hygiene practices (66.7%). Notably, 50.0% of students with high knowledge also showed good oral health behavior, significantly more than those with moderate (13.3%) or low (3.3%) knowledge. Statistical analysis confirmed a relationship between knowledge level and oral health maintenance behavior in these students.

Conclusion: Students are advised to improve their tooth brushing habits in the morning after breakfast and at night before going to bed and maintain a diet that includes watery and high-fiber foods such as fruits and vegetables and reduce sweet and sticky foods.

Keywords: knowledge, behavior, dental health, students

INTRODUCTION

Oral health is important for overall health and quality of life. Oral health means being free from throat cancer, mouth infections and sores, gum disease, tooth loss and other diseases. So that there are disorders that limit the form of biting, chewing, smiling and speaking (World Health Organization, 2023).

One of the causes of dental and oral health problems in society is ignoring dental and oral hygiene. This is based on a lack of knowledge about the importance of maintaining dental and oral health. Children are still very dependent on adults in terms of maintaining dental hygiene because of the lack of knowledge of children about dental health compared to adults (Budiharto, 2013).

The causes of dental and oral diseases are influenced by various factors, namely the environment, behavior and dental and oral health services. Dental and oral health has experienced various improvements in recent years, but the prevalence of dental caries or the emergence of cavities in children's teeth remains a significant clinical problem. Dental and oral diseases that are widely suffered by people in Indonesia are generally related to dental and oral hygiene (Herijulianti et al., 2001).

Common problems that occur in the teeth and mouth are dental caries. Caries is the most common disease and most experienced by people in the world. Caries is caused by excessive sugar consumption, lack of dental health care, and difficulty in accessing standard

dental health services. Dental and oral health problems, especially dental caries, are diseases experienced by almost half of the world's population (5.58 billion people) (CDC, 2024).

Dental and oral health problems of 93% were found in the 6-12-year age group, because at the age of 6-12 years most of them still have the wrong habit of brushing their teeth, namely when taking a morning shower and an evening shower. This is proven by the fact that the habit of brushing teeth properly in school-age children is only 2%. In addition, it was found that 91.1% of Indonesians brush their teeth every day. However, only 7.3% brush their teeth properly. The fact is that 72.1% of the Indonesian population has problems with cavities and 46.5% of them do not treat cavities (Kemenkes RI, 2018).

At the age of 6-12 years, children are expected to receive more intensive care because at that age, teeth change and new teeth grow. At the age of 12, all primary teeth have fallen out and the majority of permanent teeth have grown. One of the causes of caries in children is food residue that sticks to the surface of the teeth and the habit of consuming sweet and sticky snacks. The extent of the influence of risk factors on the occurrence of caries in school children is influenced by knowledge, awareness, and habits in caring for dental health, habits that children need to have include cleaning their teeth and choosing the type of food (Rusmiati et al., 2023).

School age is one of the stages of life that is still experiencing growth. Bad eating habits in elementary school children (SD) often occur, such as the habit of consuming excessive snack foods. Snack foods that are often consumed by elementary school children are mostly cariogenic, such as sweet, sticky foods, and foods that are attractively shaped. One of the negative effects of frequently consuming sweet or cariogenic foods is on dental health. Cariogenic foods tend to stick to the surface of the teeth. If this happens often, it can cause tooth decay. Cariogenic foods are foods that

contain fermentable carbohydrates, such as sugar and starch, which can be converted by bacteria in the mouth into acid. This acid then lowers the pH of dental plaque, causes enamel demineralization, and ultimately triggers tooth decay. A study by Asmara found that high consumption of cariogenic foods was significantly associated with an increase in the incidence of tooth decay in children (Asmara, 2018).

Based on the initial survey, it was found that SDN 050/XI Kumun Hilir Kota Sungai Penuh has implemented the School Dental Health Effort (UKGS) program and has also received dental and oral health counseling, dental and oral health examinations, and mass toothbrushing by dental health workers from the Kumun Health Center Kota Sungai Penuh. For UKGS activities, it consists of dental and oral health checks every 6 months, dental health counseling and mass toothbrushing are carried out once a year at the beginning of each odd semester. Based on this, it is necessary to conduct research on the relationship between the level of knowledge and the behavior of maintaining dental and oral health in students of SDN 050/XI Kumun Hilir Kota Sungai Penuh.

METHODS

This study is a cross-sectional study. This study was conducted at SDN 050/XI Kumun Hilir, Sungai Penuh City on March 18, 2024. The population was 30 students of grade II of SDN 050/XI Kumun Hilir, Sungai Penuh City, with a sample size of 30 students taken using total sampling. Data were collected by distributing questionnaires about knowledge and behavior of maintaining dental and oral health. This questionnaire has been tested for validity and reliability. Data were analyzed univariately and bivariately using the Chi Square test.

RESULTS AND DISCUSSION

Research on the relationship between the level of knowledge and behavior in maintaining dental and oral health in students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024, which was conducted on March 18, 2022, with a sample of 30 students.

1. Level of Knowledge of Students of SDN 050/XI Kumun Hilir, Sungai Penuh City

Table 1 Frequency Distribution of Respondents Based on Knowledge of Class II Students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024

Level of Knowledge	n	%
High	19	63,3
Medium	6	20
Low	5	16,7
Total	30	100

In table 1, the results of the study found that most (63.3%) of the samples had a high level of knowledge about maintaining dental and oral health. The majority of respondents had a good understanding of the concept of healthy teeth, namely teeth that are clean, free from cavities, and free from other dental diseases. Data from questions 9 and 11 showed that more respondents knew how to properly care for their teeth, including the importance of brushing their teeth gently and thoroughly on all parts of the teeth, including the front, back, and between the teeth. The basic principle of brushing your teeth properly is being able to clean all food debris, especially in the interdental space, without damaging the tooth and gum tissue.

Too much pressure when brushing can damage the inner dentin and cementum layer of the teeth, and cause trauma to sensitive gums that can potentially irritate them. Incorrect brushing movements can also damage gum tissue and abrade the tooth enamel. Therefore, education about proper brushing techniques is essential to prevent tooth and gum damage, as well as maintain overall dental health. (Fitriana, 2006).

Based on the tabulation data from question number 7, the majority of respondents have

understood that the requirements for a good toothbrush are with soft bristles and a flat surface. However, the tabulation of question number 20 shows that only 9 respondents answered correctly, while 21 respondents answered incorrectly regarding the importance of brushing the tongue when brushing their teeth. This shows a lack of knowledge among respondents about tongue hygiene which is also crucial for oral health. In addition, the majority of respondents know that the right time to have a dental check-up is every 6 months, the importance of education about this cannot be ignored. This routine check-up is highly recommended especially for school-age children who are changing from baby teeth to permanent teeth. Regular dental check-ups, even without any complaints, are very important to prevent tooth decay and other oral health problems. Thus, increasing education and awareness about the importance of complete dental and oral hygiene, including the tongue, as well as routine dental check-ups should be encouraged to maintain dental and oral health from an early age.

Family environmental factors play an important role in developing children's knowledge, because the family is the main educational vehicle. Knowledge instilled in the family influences children's behavior, including in terms of dental health and disease prevention efforts. Therefore, it is important to support dental health programs in schools that are carried out routinely at least four times a year. This program not only strengthens the education provided at home, but also ensures that children receive consistent and comprehensive information about proper dental care. Through this activity, children can learn and practice dental health habits from an early age, which will have a positive impact on their dental health in the future. Routine implementation of dental health programs in schools also allows for early detection of dental problems, so that intervention can be carried out before conditions worsen, reducing the

prevalence of dental disease among children (Kurniastuti, 2015).

2. Dental and Oral Health Maintenance Behavior of Students of SDN 050/XI Kumun Hilir, Sungai Penuh City

Table 2 Frequency Distribution of Respondents Based on Dental and Oral Health Maintenance Behavior of Class II Students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024

Dental and Oral Health Maintenance Behavior	n	%
Good	20	66,7
Enough	8	26,7
Bad	2	6,7
Total	30	100

Based on table 1, it shows that the majority (67.7%) of samples have good dental and oral health maintenance behavior. This study is in line with the study by Silfia, A (2019) which found that samples with good dental and oral health maintenance behavior were 67.8% (Silfia et al., 2019).

According to Notoatmodjo (2012), the level of knowledge is an important domain for shaping a person's behavior. Behavior that is

3. The Relationship between Knowledge Level and Dental and Oral Health Maintenance Behavior of Students at SDN 050/XI Kumun Hilir, Sungai Penuh City

Table 3 Frequency Distribution of Respondents Based on the Relationship between Knowledge Level and Dental and Oral Health Maintenance Behavior in Students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024

Pettiti City in 2024									
Level of Knowledge	Dental and Oral Health Maintenance				Behavior		Total		P value
	Good		Enough		Bad				
	n	%	n	%	n	%	n	%	
High	15	50,0	4	13,3	0	0	19	63,3	0,013
Medium	4	13,3	2	6,7	0	0	6	20,0	
Low	1	3,3	2	6,7	2	6,7	5	16,7	
Amount	20	66,7	8	26,7	2	6,7	30	100	

Table 3 shows that the behavior of maintaining dental and oral health with a good category is more often found in samples with high knowledge (50.0%) compared to moderate knowledge (13.3%) and low knowledge (3.3%). The results of the statistical analysis test show that H_a is accepted, thus it can be concluded that in this study there is a relationship between the level of knowledge and the behavior of maintaining dental and oral

health in students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024. adopted through a process that is conscious of knowledge, awareness, and positive attitudes tends to be lasting, while behavior that is not conscious of knowledge and awareness will not last long. The four main factors that influence health are heredity, environment (physical and socio-cultural), behavior, and health services. Among these factors, behavior plays an important role in influencing the status of dental and oral health directly and influencing environmental factors and health services (Notoatmodjo, 2012).

Oral and dental health maintenance behavior includes individual, group, and community efforts to improve oral and dental health. The role of parents is very crucial in guiding, providing understanding, and providing facilities that support children in maintaining their oral and dental health. With high knowledge and awareness, good hygienic behavior can be instilled early on, so that children can develop habits that will have a positive impact on their oral and dental health in the future.

health in students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024.

This study is in line with Gree's theory (2000) in Arianto (2018), which states that a person's behavior can be influenced by the knowledge they have. Knowledge is an important domain in forming a person's actions, behavior based on knowledge tends to be more lasting than behavior that is not based on knowledge. Good knowledge of dental and oral

health allows individuals to understand the importance of proper maintenance practices, such as brushing their teeth with the right technique and regularly. This supports the formation of consistent and sustainable hygienic habits, which ultimately improve the status of dental and oral health. Therefore, effective and sustainable health education programs are very important to improve knowledge and, directly, dental and oral health maintenance behavior in the community.

This study is in line with that conducted by Gopdianto, Rattu and Mariati, (2015) who concluded that there is a relationship between the level of knowledge and the behavior of maintaining dental and oral health of students at SDN 1 Malayang. Artawa showed that good and correct dental and oral health behavior includes the habit of brushing teeth at least twice a day. The right time to brush your teeth is every after breakfast and at night before going to bed. This habit is important to remove food residue and plaque that can cause tooth decay and gum disease. Adequate knowledge about the importance of time and frequency of brushing teeth can increase awareness and implementation of effective dental hygiene practices. Therefore, educational efforts that emphasize this basic knowledge must be intensified among students to form lasting hygienic behavior and have a positive impact on their dental and oral health.

However, the results of this study are not supported by research conducted by Silfia, A (2019) on students of SDN 36/IV Jambi City, which showed that there was no strong relationship between the level of knowledge and oral health maintenance behavior. Silfia, A found that although children had high knowledge and understood good oral health maintenance behavior, this knowledge was not always applied in real actions. This shows that knowledge alone is not enough to encourage behavioral change; other factors such as motivation, environment, and support from parents also play an important role in applying

knowledge to daily practice. Knowledge that is not applied in real behavior indicates a gap between knowing and doing, which may be caused by a lack of awareness, limited facilities, or a lack of support and encouragement from the surrounding environment. Therefore, in addition to increasing knowledge, efforts to strengthen motivation and environmental support also need to be increased to ensure that oral health knowledge can be applied effectively (Silfia et al., 2019). This happens because the child's knowledge is quite high, and the child's good behavior only reaches the level of knowing and understanding, besides that, a person's knowledge can be influenced by several factors so that this knowledge is not applied in a behavioral action.

Knowledge, awareness and behavior regarding dental and oral health maintenance are influenced by population factors, environment, education level, economy and the presence of health facilities as well as the extent of the risk of developing dental and oral diseases (Suwelo, 1992).

From the UKGS activity data at SDN 050/XI Kumun Hilir Kota Sungai Penuh, the school has implemented the School Dental Health Effort (UKGS) program and has also received dental and oral health counseling, dental and oral health checks, and mass toothbrushing by dental health workers from the Kumun Health Center, Sungai Penuh City. For UKGS activities, it consists of dental and oral health checks every 6 months, dental health counseling and mass toothbrushing are carried out once a year at the beginning of each odd semester. In this regard, it is necessary to conduct research on the relationship between the level of knowledge and the behavior of maintaining dental and oral health in grade II students of SDN 050/XI Kumun Hilir Kota Sungai Penuh.

CONCLUSION

The results of the research that has been conducted regarding the level of knowledge and behavior of maintaining dental and oral health in students of SDN 050/XI Kumun Hilir, Sungai Penuh City, can be concluded that:

1. Most (63.3%) of the samples have a high level of knowledge about maintaining dental and oral health.
2. Based on table 1, it shows that most (67.7%) of the samples have good dental and oral health maintenance behavior.
3. There is a relationship between the level of knowledge and dental and oral health maintenance behavior in students of SDN 050/XI Kumun Hilir, Sungai Penuh City in 2024..

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CONFLICT OF INTEREST

In this research there is no conflict of interest in writing the manuscript.

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