

Level of Oral and Dental Health Knowledge In Adolescents Age 16-22 Years

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Abstract: Dental and oral health are important because dental and oral health describes the overall health condition of the body. Poor dental health can cause a variety of dangerous disease complications. East Java Province is one of the provinces with a high prevalence of dental and oral health problems, which is 54.2%. The importance of knowledge of maintaining oral health should be applied by parents to children from an early age, thus after adolescence and adulthood later, children can take care of oral health properly. **Objectives:** To determine the level of dental and oral health knowledge in adolescents aged 16-22 years old in East Java. **Methods:** This study was a descriptive survey study using an online questionnaire form with a sample of adolescents aged 16-22 years old in East Java. **Results:** From this study found 175 respondents, the study results were presented in the form of a frequency table. There were 18 respondents with medium grades and 157 respondents get high scores. There were no respondents who get low marks. **Conclusion:** Adolescents aged 16-22 years old in East Java mostly have a high level of knowledge about oral health. **Keywords:** level of knowledge, oral health, adolescents aged 16-22 years old.

I. INTRODUCTION

Dental and oral health is important because dental and oral health describes the overall health condition of the body. Dental and oral health is a person's ability to perform a variety of activities that include teeth and mouth such as talking, smiling, feeling, touching, chewing, swallowing, and expressing feelings with comfort and without feeling pain and suffering from craniofacial disorders. Dental and oral health assessment standards according to Annex 2 include survey identification information, general information, tooth status, gingival status, enamel fluorosis, dental trauma, oral mucosal lesions, and urgency of intervention. Poor dental health can cause a variety of dangerous disease complications. The oral cavity is one of the entrances of disease-causing bacteria to other parts of the body. There has been an increase in the prevalence of dental and mouth problems in Indonesia, where sufferers of dental and mouth problems increased from 25.9% in 2013 to 57.6% in 2018[1–3].

East Java Province is one of the provinces with a high prevalence of dental and oral health problems which is 28.6% according to Riskesdas 2013. Meanwhile, based on Riskesdas 2018 data, dental and oral health problems in East Java Province are 54.2%. This shows there is an increase in teeth and mouth problems by 25.6%. One of the most common oral diseases is periodontal disease, such as gum inflammation or gingivitis. This disease is the main cause is plaque or tartar which is caused due to neglect of dental and oral hygiene. Thus, leftover food that is not cleaned will accumulate into plaques that contain lots of microorganisms. This will cause damage to the periodontal tissue of an individual who neglects the cleanliness of his teeth and mouth and will continue to become periodontitis [4–6].

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One way to overcome the above problems is by brushing your teeth with the aim to reduce the accumulation of food scraps that will potentially become tartar. A proper brushing technique can reduce the degree of BOP (Bleeding on Probing) by 35%. However, there are still many people who do not understand the proper technique of brushing their teeth. They still need to get educated about proper tooth brushing techniques, especially for children and adolescents. This is reinforced by the results of previous research explained the results of tooth brushing behavior on 285 elementary school students with the correct category of 54% and the remaining 46% are not good at brushing their teeth [5,7].

Diet is one of the factors that affect human oral health. Poor diet and cause or trigger the occurrence of dental and oral health problems, such as dental caries and periodontal disease. Conversely, a good diet can maintain oral health [8]. Dietary foods and drinks that contain high levels of carbohydrates and sugar can trigger an increase in acid production by the normal flora of the oral cavity. The acid is produced by fermentation of carbohydrates and sugars by cariogenic plaque bacteria. If the plaque pH reaches 5.5, the demineralization of tooth enamel will occur. If this condition occurs in a long time, it can cause dental caries. In periodontal disease, diet does not directly affect the onset of the disease. Diet affects the microorganisms in plaque that cause periodontal disease and the inflammatory response in the host which has a role in susceptibility to periodontal disease [9–11].

The problem in high oral health is absolutely the need for further efforts and actions from the government, health workers, and the community [12]. The oral cavity provides an important function for the body in terms of speaking, mastication, etc. Hence, maintaining oral health is important for health and well-being. Dental health efforts need to be reviewed from the aspects of environment, knowledge, education, public awareness, and treatment of dental health including prevention and care. The behavior of people who are less concerned about oral health, as well as a lack of knowledge in maintaining oral hygiene are factors that can cause a high prevalence of dental and oral diseases in Indonesia. But, most people ignore overall dental health conditions. Dental care is considered not very important, but the benefits are very vital in supporting health and appearance [13]. The cause of dental and oral health problems in the community one of which is a behavioral factor or attitude ignoring dental and oral hygiene. This is based on the lack of knowledge of the importance of dental and oral care [14,15].

Knowledge of maintaining oral health should be applied by parents to children from an early age, thus after adolescence and adulthood later, children can take care of oral health properly [16]. The school-age children are at a concrete operational development stage, where their way of thinking has begun to be logical and reasonable, thus if children are given education about something then the child will develop the knowledge and skills to do something [17,18].

Lack of knowledge in maintaining oral health can lead to poor oral hygiene and cause various kinds of dental and mouth problems that often occur such as caries, canker sores, and bleeding in the gingiva. Caries is the process of destroying a calcified tissue that begins on the surface of the tooth through the process of decalcification of the enamel layer and followed by the enzymatic organic structure lysis which results in the formation of cavities (holes)[19,20]. Sprue or stomatitis is generally caused by a fungus, bacteria, food allergies, stomach acids, lack of vitamins, stress, and biting oral mucosa. Most of the thrush sufferers generally do not feel comfortable when eating because the mouth hurts when touched by food being chewed [21].

Knowledge about oral health is no less important, namely knowledge about the prevention of dental and oral diseases through routine dental examinations. Based on a study of the differences in dental and oral health between groups of people who regularly check their teeth and those who do not routinely check their teeth, it is evident that the oral health of the group of people who do routine checks is better than people who do not do routine checks. As a long-term effect, regular dental examinations can reduce the number of teeth and caries loss [22].

In an effort to maintain oral health, preventive measures are needed, the government has arranged these efforts in a law. Based on Law 36 of 2009 concerning Health, in article 93, it is stated that dental and oral health services are carried out to maintain and improve the degree of public health in the form of improving dental health, preventing dental diseases, treating dental diseases, and restoring dental health by the Government, Regional Government, and / or community which is performed in an integrated, integrated and sustainable manner. Paragraph (2) stated that the service is conducted in an integrated, integrated, and sustainable manner and is performed through individual dental health services, community dental health services, school dental health efforts [23]. Based on the description of the problems above, the authors are interested in researching the level of dental and oral health knowledge in adolescents aged 16-22 years old in East Java.

II. METHODS

This type of study was a descriptive research method. This study aimed to analyze and describe the level of knowledge of adolescents aged 16 to 21 years old in East Java about oral health. This study was intended for adolescents in the East Java area. This study was conducted throughout October.

In this study, the research instrument used was a list of questions (questionnaire). The questionnaire was given consisted of 15 questions regarding oral health. Data collection procedures used in the form of questionnaires that are filled in by the respondents themselves (self-administered questionnaire). In this study, respondents received questionnaires distributed via Google form media and answered questions that had been given based on the knowledge possessed by respondents.

The results of the study were categorized into low, medium, and high. The low category was a value of 15-25, the medium category was a value of 26 – 35, and the high category was a value of 36 - 45. Data processing included editing, coding, scoring, data entry, and cleaning. The data analysis technique used in this study was descriptive statistics, the statistics used to manage data by describing existing data without the aim of making general conclusions.

III. RESULT

The study respondents obtained were 175 people. Respondents came from various regions in East Java, from 13 cities / districts including Malang, Jember, Surabaya, Mojokerto, Nganjuk, Sidoarjo, Bangkalan Madura, Bojonegoro, Gresik, Lamongan, Pamekasan, Banyuwangi, Madiun. The dominance of respondents domiciled from Surabaya, Malang, and Jember.

Table 1 Respondents by Age

Sex	Mean	N	Standard Deviation
Male	19,03	62	1,736
Female	19,42	113	1,425
Total	19,28	175	1,549

Based on the age characteristics of the respondents shown in table 5.1, it shows that the average age of male respondents is 19.03 years with a standard deviation of 1.736, so the average age range is around 17-21 years. Whereas in women, the average age is 19.42 years with a standard deviation of 1.425.

Table 2 Respondents by Sex

Sex	N	Percentage
Male	62	35,43%
Female	113	64,57%
Total	175	100%

Based on the sex characteristics of the respondents shown in table 5.2, it can be seen that 62 male respondents with a percentage of 35.43% and 113 female respondents with a percentage of 64.57%.

Table 3 Knowledge Levels of Dental and Oral Respondents

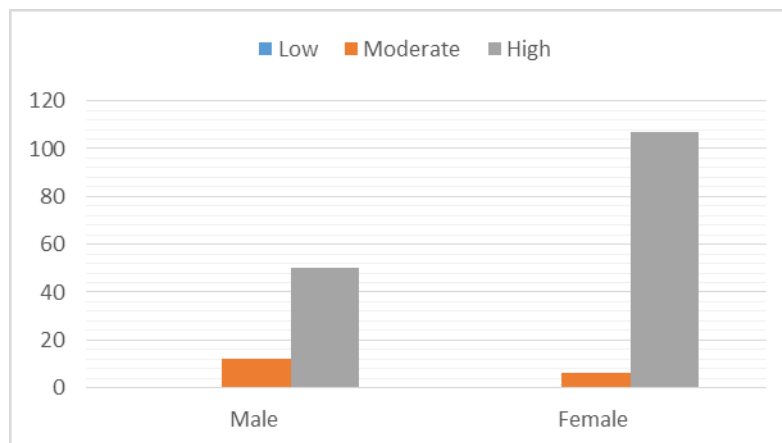
No	Knowledge	Total
1	Low	0
2	Moderate	18
3	High	157
Total		175

There are 157 respondents with a high level of knowledge, 18 respondents with a moderate level of knowledge, and no respondents who have a low level of knowledge.

Table 4 Crosstab Level of Knowledge based on Sex

NO	SEX	KNOWLEDGE LEVEL			TOTAL
		LOW	MODERATE	HIGH	
1	MALE	-	12	50	62
2	FEMALE	-	6	107	113
TOTAL		-	18	157	175

There are 12 people in the medium knowledge category and 50 in the high knowledge category. For the sample of females in the moderate category, there are 6 people while the high category was 107 people. In the sample of male and female, no one received the low knowledge category in this study.



Graph 1. Comparison of Knowledge Level in Male and Female

IV. DISCUSSION

A study on the level of dental and oral health knowledge was conducted in adolescents aged 16 to 22 years old in East Java. This study was conducted by distributing online questionnaires through social media platforms. From this study, there were 175 respondents from various regions in East Java which were dominated by teenagers in Surabaya, Malang,

and Jember. Respondents in this study were dominated by women, with 113 respondents. The average age of respondents both female and male was 19 years old.

The results of this study indicate that the level of dental and oral health knowledge in adolescents aged 16 to 22 years old in East Java is included in the high category. The results obtained 89.7% of 175 respondents have a high level of knowledge, while the other 10.3% have a moderate level of knowledge. There are no respondents with a low level of knowledge. This can be caused by the level of education in East Java that can be categorized as advanced. In addition, in East Java, the distribution of dentists has also been spread evenly.

It was found that the level of knowledge of females tends to be slightly higher than that of men but the difference is not significant enough. The average value of the knowledge level of female respondents was 40.56 while the value of the knowledge level of male respondents was 39.71. Female's knowledge level tends to be higher because women tend to care more about health problems compared to men.

There were several questions that were wrongly answered incorrectly by many respondents in the questionnaire. The first statement is a statement no. 3 about brushing teeth twice a day when bathing in the morning and evening, whereas many as 44.6% of respondents answered incorrectly. Another statement is a statement no. 11 about the suggestion to rinse with mouthwash every day, where 45.1% of respondents incorrectly answered. It can be concluded that there are still many teenagers aged 16 to 22 years in East Java who lack understanding about efforts to maintain daily oral health.

The high level of knowledge of adolescents aged 16 to 22 years old in East Java is not in accordance with the increasing level of caries in East Java. It is possible that people in East Java who are highly knowledgeable still do not apply their knowledge to everyday life.

V. CONCLUSION

Based on a study that has been conducted, it can be concluded that of the 175 respondents aged between 16-22 years old and domiciled in East Java, as many as 90% have a high level of knowledge about dental and oral health and 10% have a moderate level of knowledge. The results also showed that the level of knowledge in the female is higher compared to males. But the results of the study are not in line with the fact that East Java experienced dental and mouth problems with a percentage of 54.2% [24]. This shows that a high level of knowledge is not always balanced with the right attitude and treatment. Based on the results obtained from this study, various programs can be held to educate especially teenagers, not only about knowledge about how to care for teeth and mouth properly, but also education to build awareness of the importance of maintaining oral health and dental hygiene. If the further study was conducted, it should further develop variations of questions in the questionnaire thus new results are obtained compared to previous studies.

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