



Dental Health Status of Student Dormitory Residents in Yogyakarta, Indonesia

Wiworo Haryani¹, Fitri Mindriasi², Ety Yuniarly³

^{1,2,3} *Department of Dental Health, Poltekkes Kemenkes Yogyakarta, Indonesia*

Abstract

Background: Bad oral and dental hygiene in a person can cause dental caries. One indicator of dental health status is using the status of oral hygiene and dental caries status. Objective: This study aims to determine the dental health status of students living in dormitories in Yogyakarta. Methods: This research is descriptive with a cross sectional research design. The sample of this study were students living in a dormitory in Yogyakarta using purposive sampling technique with inclusion criteria of respondents being in good health and willing to be respondents. The research data was obtained from the format for checking the status of oral hygiene and dental caries status using oral diagnostic tools, namely mouth mirror and sonde. Data analysis is presented in the form of cross tabulation. Results: the dental and oral hygiene status of dormitory students with good criteria was 47.5%, and dental caries status was 80% high. Conclusion: The dental health status of students dormitory residents in Yogyakarta is categorized as moderate

Keywords – *Dental health status, student, dormitory resident*

I. INTRODUCTION

Dental and oral health is often the umpteenth priority for some people. In fact, as we know, teeth and mouth are the gateway for germs and bacteria to enter so that they can interfere with the health of other body organs. Dental and oral problems are still a lot of complaints by both children and adults and cannot be allowed to become severe because it will affect the quality of life where they will experience pain, discomfort, disability, acute and chronic infections, eating and sleeping disorders and have a high risk for hospitalized, which causes high medical costs and reduced learning time at school [1–3].

Dental and oral health is part of body health that cannot be separated from one another, because dental and oral health will affect the health of other bodies. Maintenance of dental and oral hygiene is one way to improve dental and oral health. A person is said to be unhealthy, not only his body but also healthy teeth and oral cavity, so that dental and oral health is very supportive of one's body health [4,5].

Good oral hygiene describes a good general health condition, whereas poor oral hygiene describes a poor health condition. Dental and oral hygiene will be maintained by brushing teeth. Teeth should be brushed in the morning after breakfast and at night before going to bed [6].

Dental caries is a common disease that can be suffered by all age groups, although it is a daily disease, the pain in the teeth is excruciating, if this disease is left for a long period of time and is not treated immediately, it is not only feeling dizzy, and not sleeping well. prolonged but can also have an impact on more severe disease [7,8]. Dental caries is the result of the interaction of bacteria on the tooth surface, plaque or biofilm, and diet

(specifically carbohydrate components that can be fermented by plaque bacteria into acids, especially lactic and acetic acids) resulting in demineralization of dental hard tissue and requires sufficient time for its occurrence [9].

Based on a preliminary study conducted through interviews and examinations of 10 dormitory students, it was found that 60% had dental caries, namely 6 people had caries and 4 people did not have caries and students did not pay attention to dental and oral health. Information from the student dormitory management has never received information about dental and oral health regarding the status of dental and oral hygiene and dental caries.

II. METHODOLOGY

The type of research used is descriptive with a cross sectional design. The sample taken in this study by purposive sampling was 40 people, with inclusion criteria including: registered as student residents of a dormitory in Yogyakarta, students from Lampung city, in good health and willing to be respondents. Data collection was carried out from March to April 2018. The data collection instrument used the OHI-S Index examination format to measure dental and oral hygiene status and DMF-T index for dental caries status. Data analysis is presented in the form of cross tabulation.

III. RESULT

Table 1: Frequency distribution of respondent characteristics and dental health status

Variables		n	%
Gender	Male	22	55%
	Female	18	45%
Age	17-20 years	26	65%
	21-24 years	11	27.5%
	25-28 years	3	7.5%
Dental and oral hygiene status	Good	19	47.5%
	Moderate	17	42.5%
	Bad	4	10%
Dental caries status	Low	3	7.5%
	Moderate	5	12.5%
	High	32	80%

Table 1 shows that the characteristics of the majority of respondents are women, amounting to 18 respondents aged 17-20 years. The most dental and oral hygiene status is good criteria with 19 respondents (47.5%) and the most caries status, 32 respondents (80%) are in the high caries rate category.

Table 2: Results of cross tabulation of respondents' characteristics with dental and oral hygiene status

Variables		Dental and oral hygiene status							
		Good		Moderate		Bad		Total	
		n	%	n	%	n	%	n	%
Gender	Male	8	20	11	27.5	3	7.5	22	55
	Female	11	27.5	6	15	1	2.5	18	45
Age	17-20 years	14	35	10	25	2	5	26	65
	21-24 years	5	12.5	5	22.5	1	2.5	11	27.5
	25-28 years	0	0	2	5	1	2.5	3	7.5

Table 2 shows that the highest results were criteria for good oral and dental hygiene status at the age of 17-20 years with a total of 14 respondents (35%), and moderate dental and oral hygiene status criteria for male, namely 11 respondents (27.5%) and criteria for hygiene status. good teeth and mouth in women with a total of 11 respondents (27.5%).

Table 3: Results of cross tabulation of respondents' characteristics with dental caries

Variables		Dental caries							
		Low		Moderate		High		Total	
		n	%	n	%	n	%	n	%
Gender	Male	2	5	4	10	16	40	22	55
	Female	1	2.5	1	2.5	16	40	18	45
Age	17-20 years	2	5	3	7.5	21	52.5	26	65
	21-24 years	1	2.5	2	5	8	20	11	27.5
	25-28 years	0	0	0	0	3	7.5	3	7.5

Table 3 shows that the highest results were at the age of 17-20 years with high caries status totaling 21 respondents (52%), male and female with high caries status totaling 16 respondents (50%).

Table 4: Results of cross tabulation of dental and oral hygiene status with dental caries

Dental and oral hygiene status	Dental caries							
	Low		Moderate		High		Total	
	n	%	n	%	n	%	n	%
Good	3	7.5	2	5	14	35	19	47.5
Moderate	0	0	2	5	15	37.5	17	42.5
Bad	0	0	1	2.5	3	7.5	4	10
Total	3	7.5	5	12.5	32	80	40	100

Table 4 shows that the criteria for moderate dental and oral health status with high caries status were 15 respondents (37.5%).

IV. DISCUSSION

Based on the cross tabulation of age with dental and oral hygiene status table 5, the most results were criteria for good oral and dental hygiene status at the age of 17-20 years with a total of 14 respondents (35%). This study shows that most of the respondents in the research subjects have good dental and oral hygiene, from

oral interviews this situation is caused because respondents have known information about maintaining oral hygiene properly through counseling and advertising media.

This is supported by research on the status of oral hygiene and tooth brushing behavior of children at SD Negeri 1 Malalayang conducted by Gopdianto et al. the teeth cleaning behavior of 55 respondents in the good category occupied the percentage of 35 (64%). This data shows that 64% of respondents know the duration and frequency of brushing their teeth every day well, namely the duration of brushing their teeth for 2 minutes and the frequency of brushing teeth 2 times a day in the morning after breakfast and at night before going to bed [10].

Based on the cross tabulation of sex with dental and oral hygiene status, it was found that 11 (27.5%) women had good dental and oral hygiene status criteria. This agrees with Anggraini et al. that women have better oral hygiene than men and the number of men who smoke affects oral hygiene. The tar contained in cigarette smoke will settle on the surface of the teeth to become rough, making it easy for plaque to form [11].

Based on the cross tabulation of age with caries status in table 6, caries status is obtained at the age of 17-20 years with the highest number of high criteria, namely 21 respondents (52.5%). Based on oral interviews, high caries status at the age of 17-20 years is caused by consuming sweet and sticky foods more often, so that sweet and sticky food residue sticks to the tooth surface making it easier for dental caries to occur.

This shows that the period of puberty (adolescence) between the ages of 14-20 years, during puberty hormonal changes occur which can cause swelling of the gums, so that oral hygiene is less maintained and causes higher caries [12]. This research is also supported by the opinion of Kiswaluyo which states that with increasing age a person's awareness of maintaining dental and oral health is in accordance with increasing age [13].

Based on the cross tabulation of sex with caries status, 16 respondents (40%) women and men had the same high caries status. This high caries status in women and men is possible because the male and female research subjects in this study were less diligent and less thorough in maintaining dental and oral health, causing the risk of dental caries.

This is not in accordance with the opinion of Sariningsih that girls have more caries than boys, because the prevalence of dental caries in girls is slightly higher and the teeth erupt in girls more quickly than boys, so girls are more at risk. affected by dental caries. This study shows that high caries results in boys and girls have the same percentage because from the results of oral interviews, men and women often consume foods and drinks that damage teeth [14].

Based on the cross tabulation of dental and oral hygiene status with caries, the highest results were found in moderate dental and oral health status with a high caries number, namely 15 respondents (37.5%), this indicates that the high prevalence of dental caries is caused by by poor oral hygiene, due to lack of awareness of dental and oral hygiene. These results agree with Rattu et al that there is no significant relationship between oral hygiene status and caries rate, in a caries prevention report in Canada it was stated that oral hygiene procedures consisting of plaque removal by brushing and flossing did not cause a reduction in caries status. The results shown in the research of Rattu et al. The number of high school students with the number of students with moderate oral and dental hygiene status had high caries of 20.5% [15].

V. CONCLUSION

Based on the results of the study, it can be concluded that there is a the dental health status of students dormitory residents in Yogyakarta is categorized as moderate.

Acknowledgements

The authors thank to all participants and research assistants.

REFERENCES

- [1] Febriyanti ID, Liana ID, Indriyani R, Christiono S. The effect of roselle (*Hibiscus sabdariffa* L.) petals extract as alternative disclosing solution for dental plaque identification. *Dentino J Kedokt Gigi* 2018;3:108–15.
- [2] Gilchrist F, Rodd HD, Deery C, Marshman Z. Development and evaluation of Caries-QC: a caries-specific measure of quality of life for children. *BMC Oral Health* 2018;18:1–16.
- [3] Purnama T, Rasipin, Santoso B, Suwondo A, Fatmasari D. Tedi's Behavior Change Model As An Efforts For Brushing Teeth Behaviour In Preschool Children. *Int J Allied Med Sci Clin Res* 2019;7:715–22.
- [4] Reddy S, Anitha M. Culture and its influence on nutrition and oral health. *Biomed Pharmacol J* 2015;8:613.
- [5] Ahamed S, Moyin S, Punathil S, Patil NA, Kale VT, Pawar G. Evaluation of the oral health knowledge, attitude and behavior of the preclinical and clinical dental students. *J Int Oral Heal JIOH* 2015;7:65.
- [6] Kusumawardani E. *Buruknya Kesehatan Gigi dan Mulut Memicu Penyakit Diabetes, Stroke dan Jantung*. Yogyakarta Siklus Hangar Creator 2011.
- [7] Demirci M, Tuncer S, Yuceokur AA. Prevalence of caries on individual tooth surfaces and its distribution by age and gender in university clinic patients. *Eur J Dent* 2010;4:270–9.
- [8] Kidd E. The implications of the new paradigm of dental caries. *J Dent* 2011;39:S3–8.
- [9] Hiranya MP, Eliza H, Neneng N. *Ilmu pencegahan penyakit jaringan keras dan jaringan pendukung gigi*. Jakarta EGC 2011;104.
- [10] Gopdianto R, Rattu AJM, Mariati NW. Status kebersihan mulut dan perilaku menyikat gigi anak SD Negeri 1 Malalayang. *E-GiGi* 2014;3.
- [11] Anggraini CW, Wahyukundari MA, Pujiastuti P. The Description of Oral Hygiene Status and Gingival Status of Patients in Dental Hospital of Jember University on October-November 2015. *Pustaka Kesehat* 2016;4:365–74.
- [12] Tarigan R. *Karies gigi*. Jakarta EGC 2013.
- [13] Kiswaluyo K. Hubungan Karies Gigi Dengan Umur Dan Jenis Kelamin Siswa Sekolah Dasar Di Wilayah Kerja Puskesmas Kaliwates Dan Puskesmas Wuluhan Kabupaten Jember. *Stomatognatic-Jurnal Kedokt Gigi* 2015;7:26–30.
- [14] Sariningsih E. *Merawat gigi anak sejak usia dini*. Jakarta Elex Media Komputindo 2012.
- [15] Rattu AJM, Wicaksono D, Wowor VE, Kedokteran F, Ratulangi US, Studi P, et al. Hubungan antara Status Kebersihan Mulut dengan Karies Siswa Sekolah Menengah Atas Negeri 1 Manado n.d.;117.