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Knowledge, Attitude, And Practice of Pre-Clinic Dental Medicine Students on Oral Health Care

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ABSTRACT

Background: Knowledge, attitude, and practice affect how a person maintains the health of the oral cavity. As dental medicine student, it is important to have a good knowledge of oral and dental hygiene and are expected to be able to give knowledge about oral health and could produce a change in attitude that being manifested in oral hygiene maintenance measures. **Objective:** To describe the knowledge, attitudes, and practice of Universitas Airlangga pre-clinic dental medicine students towards oral health care. **Methods:** This research was a descriptive quantitative study of Faculty of Dental Medicine Universitas Airlangga preclinical students. The sampling was cluster random sampling with a total of 96 people with observed variables, such as knowledge, attitudes, and behavior. **Result:** The level of attitude varies with the same high percentage of results in the batch 2016 and 2017 (45.8%), while in the batch 2018 it was 58.3% and in the batch 2019 79.2%. The level of behavior varies with high yield dominated, in the batch 2016 and 2019 of 95.8% while in the batch 2017 and 2018 amounted to 91.7%. The level of attitude of female respondents had a higher yield of 58.1% compared to male respondents of 50%. **Conclusion:** The level of knowledge, attitudes, and behavior towards the oral health of Faculty of Dental Medicine Universitas Airlangga preclinical students was quite good and did not have a significant difference.

Keywords: knowledge, attitude, practice, dental medicine pre-clinic student, oral health.

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INTRODUCTION

According to WHO, oral health or oral health is a condition where a person is free from mouth disease and pain in the face, mouth and throat cancer, oral infections, periodontal disease, tooth decay, tooth loss, and other disorders and diseases that limit a person's capacity in chewing, biting, smiling, talking, and other psychosocial well-being[1]. Oral health becomes very important because the mouth is a port of entry for microorganisms to enter the body. Besides, the mouth also reflects what is happening in the body. Oral health problems can harm a person's quality of life[2].

Knowledge, behavior, and attitude of a person affect how he keeps and maintains the health of his oral cavity[3,4]. Dental medicine students who had sufficient knowledge about dental and oral hygiene can implement the acquired knowledge so that it can result in a change in attitude and can be manifested in the maintenance of their oral hygiene[5–7]. For dental health professionals, knowledge and attitude about oral health not only influence their habits in maintaining oral health themselves but also potentially influence their ability to motivate patients in oral health care[8]. As future professionals who will contribute to improving oral health in the community, it is important for preclinical students of the faculty of dental medicine to know how their level of knowledge, attitudes, and behavior towards oral health.

MATERIALS AND METHODS

This research was a quantitative descriptive study with a sampling technique using cluster random sampling. The sample of this study was pre-clinical students of Dental Medicine of Universitas Airlangga (2016-2019 academic year) with a large sample of 96 students. The research location was conducted at the Faculty of Dental Medicine, Universitas Airlangga and it was conducted on 15-23 October 2019.

The variables in this study were knowledge[9–11], attitudes[12], and behavior of pre-clinical students of Dental Medicine of Universitas Airlangga towards oral health care. Data was collected by using a questionnaire in digital form. The questionnaire consisted of 30 questions in which each variable contained 10 questions. Questions on knowledge variables were answered on a scale of 1-3 (do not know, wrong, and correct), while Questions on attitude and behavior variables were answered on a scale of 1-4 (disagree-strongly agree). This research had been approved through ethical clearance assessment by the authorities in the Faculty of Dental Medicine, Universitas Airlangga, and obtained approval from respondents through informed consent that had been given.

The research data were analyzed using the Cross-Tabulation method to determine the level of knowledge, attitudes, and behavior of Faculty of Dental Medicine Universitas Airlangga preclinical students on oral health. The level of knowledge, attitudes, and behavior of respondents would be categorized into low, medium and high with a total score of 0-10 (low), 10-20 (medium) and 20-30 (high).

RESULTS

Table 1. Frequency Distribution of Characteristics of Pre-Clinical Student of Dental Medicine Faculty of Universitas Airlangga Respondents

Characteristics	Frequency	Percentage	Total
Sex			96
Male	10	10,4 %	
Female	86	89, 6 %	
Academic Year			96
2016	24	25 %	
2017	24	25 %	
2018	24	25 %	
2019	24	25 %	

Based on Table 1. The number of female respondents was 89.6%. Table 1. also shows that the respondents from the 2016 – 2019 academic year were 24 respondents on each academic year.

Table 2. Knowledge Levels on Oral Health, Levels of Attitude toward Oral Health, and Behavior Levels on Oral Health

Academic Year	Level on Health		
	Low (%)	Moderate (%)	High (%)
Knowledge Levels			
2016	0	0	24 (100)
2017	0	0	24 (100)
2018	0	0	24 (100)
2019	0	0	24 (100)
Attitude Levels			
2016	0	0	24 (100)
2017	0	0	24 (100)
2018	0	0	24 (100)
2019	0	0	24 (100)
Behavior Levels			
2016	0	1 (4,2)	23 (95,8)
2017	0	2 (8,3)	22 (91,7)
2018	0	2 (8,3)	22 (91,7)
2019	0	1 (4,2)	23 (95,8)

Based on table 2, it is known that the level of knowledge of Faculty of Dental Medicine Universitas Airlangga students in 2016, 2017, 2018 and 2019 on oral health was entirely high. Based on table 2, it is known that the level of attitude of Faculty of Dental Medicine Universitas Airlangga students in the academic year of 2016 and 2017 for oral health was classified as moderate. While the level of attitude of the students of Faculty of Dental Medicine Universitas Airlangga academic year of 2018 and 2019 towards oral health was classified as high. Based on table 2, it is known that the behavior level of Faculty of Dental Medicine Universitas Airlangga students in 2016, 2017, 2018 and 2019 for oral health was relatively high.

Table 3. Gender Analysis of Knowledge Levels, Attitude Levels, and Behavior Levels

Gender	Level on Health		
	Low (%)	Moderate (%)	High (%)
Knowledge Levels			
Male	0 %	0 %	100 %
Female	0 %	0 %	100%
Attitude Levels			
Male	0 %	50 %	50 %
Female	0 %	41,9 %	58,1 %
Behavior Levels			
Male	0 %	0 %	100 %
Female	0 %	7 %	93 %

Based on Table 3 it is known that both male and female respondents all had a high level of knowledge of oral health. Based on Table 3 it is known that female respondents had a higher level of attitude ie 58% (n = 50) towards oral health compared to male respondents. Based on Table 3 it is known that all male respondents had a higher level of attitude towards oral health compared to female respondents where there were 7% (n = 6) female respondents who had moderate levels of behavior.

DISCUSSION

Knowledge is very important to shape one's behavior. Knowledge of dental and oral health will underlie

attitudes that can affect a person's behavior in caring for oral health[13]. Knowledge can be obtained naturally or planned through the educational process. Knowledge is also gained by several factors, such as education, mass media, social culture, economy, environment, experience, and age. Someone said to lack knowledge if unable to recognize, explain and analyze a situation[14].

Based on the research results obtained, the knowledge possessed by the students of Faculty of Dental Medicine, Universitas Airlangga preclinical students were averagely showing good results, but some students were still in the low level of the year, often false when answering some questions. This was because the information provided at the university varied according to each grade of the academic year. This was consistent with the theory explaining that if the level of knowledge was higher, then dental health attention would also be high, and vice versa[15].

Respondents' answers to statements regarding oral health care attitudes in this research questionnaire were divided into 3 types of answer choices, the first was the answer choices "agree and very agree" where the questionnaire contained 5 statements, the second choice of answers "not really agree, agree, and very agree "on the questionnaire there were 2 statements, and the third option answers" disagree, not really agree, agree, and very agree "on the questionnaire there were 3 statements. The most answers chosen by preclinical students of Universitas Airlangga class of 2016-2019 were “very agree” with the statement "Sharing / alternating toothbrushes with friends/family". Of the 96 respondents, 95 people chose answers very agree with this statement. Toothbrushes could be contaminated with bacteria from the oral cavity, the environment, hands, aerosol contamination, as well as contamination from the storage of the toothbrush itself. These bacteria could stick, accumulate and affect the individuals and eventually causing disease[16]. Bacteria found in toothbrushes with prolonged use include Streptococcus, Staphylococcus, Lactobacilli, Pseudomonas, Klebsiella, Escherichia coli, and Candida. These bacteria could cause diseases such as caries, gingivitis, stomatitis, etc[17,18]. Therefore, it was not recommended to alternate toothbrushes to prevent bacterial spread. From the answers of respondents in this statement, it could be concluded that the respondents did a good attitude towards maintaining the health of the respondent's oral cavity respectively.

In the questionnaire there was a statement "Brushing teeth twice in the morning and evening shower" there were 55 respondents answered with “very agree” and disagree while 41 others answered less agree and disagree. Respondents 'answers could represent respondents' attitudes toward their habits in maintaining the health of their oral cavity. The frequency of tooth brushing in a day had been shown to have a relationship with the prevalence of periodontal disease as indicated by the CPITN score. The group that brushed teeth twice a day had a high portion in the score 0, 1, and 2 of the CPITN index indicating that the group did not have a periodontal pocket yet[19]. Referring to the study, the frequency of tooth brushing became an important part of an effort to maintain oral health.

In the acquisition of a score statement of attitudes towards oral health, it can be seen that the attitude of Faculty of Dental Medicine Universitas Airlangga Preclinical students as respondents was already good. This result was in line with the journal of Akhionbare O [19], explaining that the frequency of oral hygiene attitudes influenced the education level of the study population. In this study, the population was dental students who were in the learning practice, Therefore, the expected attitude of dentistry students was good towards maintaining oral health.

Based on Table 6 it can be seen that there were no significant differences between the students in the academic year of 2016, 2017, 2018, and 2019 regarding their behavior towards oral health. Regarding the study population consisted of preclinical dental medicine students, it was assumed that they would have adequate theoretical knowledge about the nature and formation of dental biofilms in addition to steps to ensure plaque control. However, knowledge of theoretical concepts and principles was not necessarily applied to positive self-care practices[20].

Several inconsistencies were noted in the self-care behavioral practices reported by respondents, such as how to clean teeth, practice diets, and check-up with the dentist. The same inconsistency was also reported by Gopinath[21], showing that less than two-thirds of dentists in their study (55.9%) showed that they brushed their teeth twice a day with fluoridated toothpaste (55.1%), even though they were aware of plaque control measures. The majority of respondents in this study used toothpaste and toothbrushes to clean their teeth by 86% (n = 85), but there were variations in the behavior of cleaning teeth by rinsing after eating snacks besides toothbrushes after breakfast and before going to bed, only 22 % (n = 21) respondents agreed.

Several studies had shown high oral health knowledge and attitudes among dental students because it was an important part of their curriculum, and therefore, positively influenced their attitudes and behavior[22]. This study result showed that female respondents were better than male respondents in terms of attitudes, while male and female respondents had a high level of behavior, although there were 7% of female respondents who had a moderate level of behavior. This was following several studies including Al Omari et al., Porat et al., Nanakorn et al., Kassak et al., Halboub et al. and Rashid et al., and contrary to studies reported by Ahamed et al., Sharda and Shetty, and Khami et al., showing female dental medicine students had better oral health attitudes than men[22]. This had been linked to positive self-care attitudes due to internal psychological reasons to improve their appearance and self-esteem[23].

CONCLUSION

Based on observations made through filling out questionnaires by Faculty of Dental Medicine Universitas Airlangga pre-clinic students in 2016, 2017, 2018 and 2019, it was found that knowledge, attitudes, and behaviors towards oral health of Faculty of Dental Medicine Universitas Airlangga preclinical students were classified as good and there were no significant differences, and this result was supported by lecture practices equipping them about oral health.

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