

Awareness Of Oral Health In Students Of Medicine And Dental Medicine

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ABSTRACT

Purpose: To examine the different levels of awareness about oral health in the third semester students of Faculty of Medicine and Faculty of Dental Medicine Universitas Airlangga. **Method:** The research design used was descriptive research with survey data collection methods in the online form using google form. Data analysis was performed using the chi square method to get results. **Results:** Based on research that has been done, Faculty of Medicine students have a percentage level of awareness (understanding) about oral health with a category of understanding as much as 76% while Faculty of Dental Medicine students have a percentage of level of awareness (understanding) about oral health as much as 100%. **Conclusion:** There is no significant difference in the level of awareness (understanding) about oral health in Faculty Of Medicine and faculty of dental medicine students at Universitas Airlangga.

Keywords: Oral health, awareness, Faculty of Medicine students, Faculty of Dental Medicine students.

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INTRODUCTION

Oral health is an important component of general health and overall individual hygiene. Healthy oral cavity reflects the individual is able to take care of himself properly (Hidayatullah, Agustiani, & Setiawan, 2018; Susilawati et al., 2018). A good oral cavity not only makes a person appear to care for himself but also makes the oral function properly in the oral cavity (Setijanto, Bramantoro, Palupi, & Hanani, 2019).

Third semester students in both the Faculty of Medicine and the Faculty of Dental Medicine should prioritize and know well about oral health information. Students of the Faculty of Medicine and the Faculty of Dental Medicine are important to be knowledgeable, behave, and practice the health of their own oral cavity. What is more, medical students are far more likely to face underserved and vulnerable populations than dentistry students (Bramma, Trelia, Menik, & Hanna, 2017). They must have optimal knowledge about oral health so they can provide the necessary oral health education (Harahap, Amelia, Wahyuni, & Andayani, 2018; Khair, Putri, Dalimunthe, & Matsumoto, 2018) and guide their patients to take care of the oral health to the dentist (Pratiwi, Akbar, Abdullah, & Maretta, 2018).

Thus, oral health care can be handled by a combination of doctors and dentists. Doctors and dentists are obliged to inform their patients about oral health (Palutturi, Rutherford, Davey, & Chu, 2014). Thus, this proposal will submit data on what percentage of the third semester students of the Faculty of Medicine and the Faculty of Dental Medicine have done and implemented oral health. Due to the third semester students of the Faculty of Medicine and the Faculty of Dental Medicine will provide health services in the future and will be responsible for oral health education. It is important to learn the knowledge, attitudes, and health practices of their oral cavity. The importance of this study aims to determine the level of awareness about oral health in third semester students of the Faculty of Medicine and the Faculty of Dental Medicine, Universitas Airlangga.

METHODS

The research design used was descriptive research with survey data collection methods in the online form using google form. Descriptive research was a form of research aimed at describing several phenomena that exist, both phenomena that occur naturally and man-made phenomena. The phenomenon can be in the form of activities, characteristics, changes, relationships, similarities, and differences between one phenomenon and another phenomenon.

This research has been through the ethical submission process and obtained an ethical clearance certificate. This research was conducted at the Faculty of Medicine and the Faculty of Dental Medicine of Universitas Airlangga, because this study used a sample of third semester pre-clinical students at the Faculty of Medicine and Dental Medicine of Universitas Airlangga. The study was conducted for one month from September to October 2019.

The study was conducted by using a population of all semester III pre-clinical students in the Faculty of Medicine and the Faculty of Dental Medicine, Universitas Airlangga. The sample used in this study was the students of the Faculty of Dental Medicine and the Faculty of Medicine of Universitas Airlangga in the third semester with consideration of the subjects being taught by the students of the Faculty of Dental Medicine and the Faculty of Medicine of Universitas Airlangga. The research sample used was 50 students of the Faculty of Medicine of Universitas Airlangga and 50 students of the Faculty of Dental Medicine of Universitas Airlangga in the third semester. The research instrument used in this study was a questionnaire aimed at third semester students of the Faculty of Medicine and the Faculty of Dental Medicine of Universitas Airlangga regarding their awareness of oral health.

Data Collection Procedure

- a. Online questionnaire distributed to respondents by random sampling
- b. Respondents can fill out the questionnaire
- c. Respondents were students in the third semester of the Faculty of Medicine and the Faculty of Dental Medicine, Universitas Airlangga.
- d. Online data was collected and structured records are made.

Data Analysis

Data analysis in this study used the Chi Square method. Chi Square was one type of non-parametric comparative

test conducted on two variables, where the scale of the data for both variables was nominal. The basic principle of the chi square test compared the frequency that occurs (observation) with the frequency of expectations. If the observed frequency values with the expected frequency values were the same, so there was no meaningful (significant) difference. Conversely, if the value of the observation frequency and the expectation frequency value were different, so there was a meaningful (significant) difference.

RESULTS

Table 1. Evaluation of the students of the Faculty of Medicine and the Faculty of Dental Medicine of Universitas Airlangga on oral health awareness of the understanding of oral health awareness based on the faculties being taught.

Questions	Jumlah		Total (%)	
	Faculty of Medicine	Faculty of Dental Medicine	Faculty of Medicine	Faculty of Dental Medicine
1. Do you ever go to dentist?				
Yes (Score : 2)	38	50	76	100
No (Score : 1)	12	0	24	0
2. What time in a year we should go to dentist?				
1 time (Score : 1)	17	1	34	2
2 times (Score : 2)	33	49	66	98
3. Do you ever feel nervous while go to dentist?				
Yes (Score : 1)	35	32	70	64
No (Score : 2)	15	18	30	36
4. Is it necessary to go to dentist?				
Yes (Score : 2)	37	48	74	96
No (Score : 1)	13	2	26	4
5. What time in a day we should brush our teeth?				
1 time (Score : 1)	6	1	12	2
2 times (Score : 2)	44	49	88	98
6. Is it possible to increase decay by brushing teeth?				
Yes (Score : 2)	47	49	94	98
No (Score : 1)	3	1	6	2
7. Do you use toothpick?				
Yes (Score : 1)	36	35	72	70
No (Score : 2)	14	15	28	30
8. What type of your tooth brush?				
Soft Toothbrush (Score : 2)	38	45	76	90
Hard Toothbrush (Score : 1)	12	5	24	10
9. What time you change your tooth brush?				
3 months at once (Score : 2)	29	34	58	68
6 months at once (Score : 1)	21	16	42	32
10. How many tooth paste do you use?				
Covering tooth brush (Score : 1)	32	13	64	26
Like a seed corn in the tip of tooth brush (Score : 2)	18	37	36	74
11. Do you know scaling tooth?				
Yes (Score : 2)	26	50	52	100
No (Score : 1)	24	0	48	0
12. Do you ever do scaling?				
Yes (Score : 2)	13	29	26	58

No (Score : 1)	37	21	74	42
13. Do you think smoke can influence your oral health?				
Yes (Score : 2)	44	50	88	100
No (Score : 1)	6	0	12	0
14. Do you think bloody gum is a normal?				
Yes (Score : 1)	12	8	24	16
No (Score : 2)	38	42	76	84
15. Do you think carbonated beverage has an effect for your teeth?				
Yes (Score : 2)	92	48	48,9	96
No (Score : 1)	8	2	66,7	4

Table 2. Distribution of respondents' understanding of oral health

No	Faculty	Predicate				Total
		Lack of Understanding	%	Understanding	%	
1	Medicine	12	24	38	76	50
2	Dental Medicine	0	0	50	100	50

To determine whether the respondents have a good or bad understanding of their oral health, the score of each respondent was summed. If the respondent scores 15-22, then the respondent has a poor understanding of the health of his oral cavity. Conversely, if the respondent scores 23-30, then the respondent understands the health of his oral cavity.

DISCUSSION

Medical and dental practitioners have an important role in educating dental and oral health in the community because dental and oral health plays an important role as an initial entry point for all kinds of systemic diseases that might occur in the body, so good knowledge is needed for dentistry and medical practitioners(Linarwati & Al., 2016). If tooth decay in the form of dental caries or tooth erosion can be detected early, then appropriate treatment can be immediately conducted, thus it will not develop more severely(Caufield & Griffen, 2000). The methodology of this study is assessing oral health knowledge based on knowledge of theories, attitudes, and health practices dental and oral in daily life at the medical and dental medicine students of Universitas Airlangga. The results of this study obtained a comparison of knowledge about maintaining dental and oral health of dental students is higher than the knowledge possessed by general medical students. Comparison of 100% of dental students understand and practice everyday and as much as 76% of medical students who understand and practice everyday with samples taken by an average of 50 dental medicine students and general medical students, this study is similar to studies that have been it has been conveyed before by Rong WS et al., Al Batayneh et al., suggestion et al., al-kawas et al and Kumar et al, that dentistry students have higher knowledge than general medical students(Rong, WJ, & Yip, 2006).^{3,19} It is necessary to instill awareness of medical students and dental students of the importance of maintaining oral health, both before and after experiencing oral and dental health problems(Fejerskov, 2004).

In the practice of daily life in general, dental and oral health everyday medical and dental students are equally

good, such as the habit of brushing teeth twice a day, there is no significant difference between medical and dental medicine students, as much as 88% compared 98%. Based on a journal stating that brushing teeth twice a day using toothpaste containing fluorine is proven to reduce caries(De Josselin, Higham, Smith, van Daelen, & van der Veen, 2009). This is consistent with the theory that environmental factors that affect both dental and oral health include using toothpaste containing fluoride to help strengthen tooth enamel(Ding et al., 2011). Commonly, sample students understand that brushing can prevent cavities by a ratio of 94% of general medical students to understand and 98% of dental students to understand. However, on theoretical knowledge about the urgency of dental and oral health, there is a lot of knowledge gaps in medical and dental medicine students. In a survey conducted on the importance of routine health checks on dental and oral health, medical students have quite a large index compared to dental students. A total of 12 medical students did not go to the dentist, while all dental students had visited the dentist. There are 96% of dental medicine students consider it important to visit a dentist, and 74% of medical students feel important, there is a gap of 22% about the importance of attitudes and knowledge to the dentist, the nervous attitude to visit the dentist, medical and dental medicine students alike the same has a high index. Although dental medicine students know the importance of going to the dentist but most are still nervous about going to the dentist. For the knowledge of going to the dentist it should be every 6 months, medical students are quite different from dental students, 34% of medical students feel they only need once a year to go to the dentist while dental medicine students only 2%.

Dental medicine students know about the importance of scaling but not all students who know and practice scaling therapy to the dentist, while medical students are quite low index of knowledge about the importance of scaling, due to poor knowledge in practice, many of them do not do scaling therapy. Whereas scaling itself has a correlation with systemic health and periodontal disease which has quite complex links to the manifestations of

systemic disease. As many as 100% of dental students know and understand enough about scaling but only 58% practice scaling therapy to dentists, only 52% of general medical students know about scaling and 74% of medical students do not do scaling. From the results of this study, it is still questionable that the relationship of knowledge about scaling affects the attitude and practice of scaling to dentists because of the low number of dental medicine students who know about scaling to do scaling therapy.

On unconventional theoretical knowledge, medical and dental students have average knowledge, such as knowledge about the use of toothpicks which should not be recommended for use. the habit of using a toothpick in a way that strikes / pierces and can disrupt the supporting tissues of the tooth and can cause inflammation of the gums(Erwana, 2013). However, often users misuse it by picking out of between teeth or holes where the food remains without regard to the anatomy of teeth and gum tissue surrounding. This causes the tucked food will be difficult to remove, even getting into the gum tissue(Emailijati, Hamsar, Marthias, & Aini, 2016). When digging food between the teeth, gum automatically come under pressure if it is often done within a certain period of time the position of the gum can go down. This is because the gums cannot withstand the pressure of a larger toothpick. Cases like this usually occur frequently on the back molars. Declining gum position causes discomfort. Teeth feel like cavities because the gums that normally fill between teeth shift a few millimeters(Nursidika, Patricia, & Linda, 2018). Students can actually replace them by using dental floss that can help clean between teeth(Anusavice, 2005). Knowledge of the standard toothbrush replacement in a year. The results of the 2013 National Basic Health Research (Riskesmas) stated that the percentage of people who behave to replace toothbrushes every three months is still very low at 7.2%. Because the average person in Indonesia replaces the toothbrush he uses only once in ten months. This also has an impact on the high disease of the teeth and mouth in Indonesia(BPPK Kemenkes RI, 2013). If for three months the use of a toothbrush is not replaced it will cause a lot of bacteria then the toothbrush bristles have not been able to work properly and can injure the gums(Saran & Kumar, 2016). Brush the teeth that have been used more than three months is a place that has great potential for the development of bacteria.9 The results show 72% of medical students use toothpicks and 70% of dental students use toothpicks and at the change of a toothbrush 42% of medical students replace toothbrushes more than 3 months and 32% of dental students replace toothbrushes for more than 3 months. Various kinds of drinks are known to have a low pH and high carbohydrates. These drinks generally contain artificial sweeteners, acids, and added flavorings(Burt & Pai, 2001). Several studies have shown that isotonic drinks and sodas have a strong sour and sweet taste. Isotonic drinks contain several types of high acids, namely phosphoric acid, citric acid, maleic acid and tartaric acid. Isotonic drinks also contain high sucrose, 6-8%(Anthony & Dkk., 2004). While soft drinks contain carbohydrates with a proportion of high-calorie sweeteners, sucrose 7.8-10.3%. Soft drinks also contain phosphoric acid and citric acid(Borjian & Dkk., 2010). The contents of these drinks will easily settle in the oral cavity which is then attached to the surface of the teeth and form a layer of plaque. Supported by an acidic atmosphere, making it easier to demineralize the activity of bacteria(Fathilaah & Dkk., 2014). This is in accordance

with the theory of Artaria (2009) which says that culture such as drinking soda, opening a bottle cap with teeth, and the culture of eating sweet foods can cause dental caries and wear. on teeth(Artaria, 2009). As the data we have attached, it is known that Faculty of Medicine students showed 48.9% of people stated yes and 66.7% no, for Faculty of Dental Medicine students showed 96% stated yes and 4% stated no. This data shows a significant difference that medical students pay less attention to dental health than Faculty of Dental Medicine students. Thus, the habits of Indonesian people in brushing their teeth are still not good(Al Kawas, Fakhruddin, & Ur Rehman, 2009).

CONCLUSION

Medical and dental students in the third semester of Universitas Airlangga generally understand general daily knowledge about dental and oral health care, but in their attitude and practice they are still reluctant to take care of themselves. More dental medicine students understand more than general medical students on general dental and oral health knowledge in society, but in general theoretical medical and dental medicine students have average knowledge that is neither too good nor too bad.

REFERENCES

1. Al Kawas, S., Fakhruddin, K., & Ur Rehman, B. A. (2009). Comparative study of oral health attitudes and behaviour between dental and medical students; the impact of dental education in United Arab Emirates. *J Int Dent Med Res*, 2, 6–10.
2. Anthony, V., & Dkk. (2004). *Dissolution of dental enamel in soft n drinks*.
3. Anusavice, J. K. (2005). Present and Future Approaches for The Control of Caries. *Journal of Dental Education*, 69(5), 538–554.
4. Artaria, D. M. (2009). *Antropologi Dental*. Yogyakarta: Graha Ilmu.
5. Borjian, A., & Dkk. (2010). *Pop cola acids and tooth erosion: an in vitro, in vivo, electron microscopic and clinical report*.
6. BPPK Kemenkes RI. (2013). *Riset Kesehatan Dasar (Riskesmas) Tahun 2013*. Jakarta.
7. Bramma, K., Trelia, B., Menik, P., & Hanna, B. (2017). The relationship between oral health condition and systemic disease in healthy indonesian population. *Journal of International Dental and Medical Research*, 10, 465–469.
8. Burt, B., & Pai, S. (2001). Sugar Consumption and Caries Risk: A Systemic Review. *Journal of Dental Education*, 65(10).
9. Caufield, P., & Griffen, A. (2000). Dental caries: An infectious and Transmissible Disease. *Pediatr Clin North Am*, 47, 1001–1019.
10. De Josselin, D., Higham, S. M., Smith, P. W., van Daelen, C. J., & van der Veen, M. H. (2009). Quantified lightinduced fluorescence, review of a diagnostic tool in prevention of oral disease. *Journal of Applied Physics*, 105(10), 102031–102038. <https://doi.org/10.1063/1.3116138>
11. Ding, Y., YanhuiGao, S. H., Han, H., Wang, W., Ji, X., & Sun, D. (2011). The relationships between low levels of urine fluoride on children's intelligence, dental fluorosis in endemic fluorosis areas in Hulunbuir, Inner Mongolia, China. *Journal of Hazardous Materials*, 186(2/3), 1942–1946. <https://doi.org/10.1016/j.jhazmat.2010.12.097>

12. Emailijati, K., Hamsar, A., Marthias, E., & Aini, N. (2016). Hubungan Penggunaan Tusuk Gigi Terhadap Terjadinya Saku Gusi Pada Masyarakat Dusun II Desa Marindal II Kecamatan Patumbak Kabupaten Deli Serdang Tahun. *Jurnal Kesehatan Gigi*, 3(2), 24–25.
13. Erwana, A. F. (2013). *Seputar Kesehatan Gigi dan Mulut*. Yogyakarta: Rapha Publishing.
14. Fathilaah, A., & Dkk. (2014). *Erosive effect of Sport Drinks on Tooth Enamel*.
15. Fejerskov, O. (2004). Changing Paradigms in Concepts on Dental Caries: Consequences for Oral Health Care. *Caries Research*, 38, 182–191.
16. Harahap, J., Amelia, R., Wahyuni, A. S., & Andayani, L. S. (2018). Community empowerment program for increasing knowledge and awareness of tuberculosis patients, cadres and community in Medan city. *IOP Conference Series: Earth and Environmental Science*, 125(1). <https://doi.org/10.1088/1755-1315/125/1/012102>
17. Hidayatullah, T., Agustiani, H., & Setiawan, A. S. (2018). Behavior management-based applied behaviour analysis within dental examination of children with autism spectrum disorder, 71(32), 71–75. <https://doi.org/10.20473/j.djmg.v51.i2.p71>
18. Khair, H., Putri, C. N., Dalimunthe, R. A., & Matsumoto, T. (2018). Examining of solid waste generation and community awareness between city center and suburban area in Medan City, Indonesia. *IOP Conference Series: Materials Science and Engineering*, 309(1). <https://doi.org/10.1088/1757-899X/309/1/012050>
19. Linarwati, M., & Al., E. (2016). Studi Deskriptif Pelatihan Dan Pengembangan Sumberdaya Manusia Serta Penggunaan Metode Behavioral Event Interview Dalam Merekrut Karyawan Baru Di Bank Mega Cabang Kudus. *Journal of Management*, 2(2).
20. Nursidika, P., Patricia, G. N., & Linda, A. L. (2018). Gambaran Bakteri Kontaminan Pada Sikat Gigi. Surabaya. *The Journal of Muhammadiyah Medical Laboratory Technologist*, 2(1), 33–50.
21. Palutturi, S., Rutherford, S., Davey, P., & Chu, C. (2014). Professional challenges to strengthen partnerships in the implementation of healthy cities in Indonesia: A case study of Makassar. *Research Journal of Medical Sciences*, 8(4), 126–132. <https://doi.org/10.3923/rjmsci.2014.126.132>
22. Pratiwi, R., Akbar, F. H., Abdullah, A., & Maretta, Y. A. (2018). Knowledge and self perception about preventive dentistry among Indonesian dental students. *Pesquisa Brasileira Em Odontopediatria e Clinica Integrada*, 18(1), 1–6. <https://doi.org/10.4034/PBOCI.2018.181.15>
23. Rong, W., WJ, W., & Yip, H. (2006). Attitudes of dental and medical students in their first and final years of undergraduate study to oral health behaviour. *Eur J Dent Educ.*, 10, 178–184.
24. Saran, R., & Kumar, S. (2016). Oral health knowledge, attitude and behaviour of medical and dental students. *Int J Sci Res*, 5, 359–360.
25. Setijanto, R. D., Bramantoro, T., Palupi, R., & Hanani, A. (2019). The role of attitude, subjective norm, and perceived behavioral control (PBC) of mothers on teaching toothbrushing to preschool children - Based on the Theory of Planned Behavior: A cross-sectional study. *Family Medicine and Primary Care Review*, 21(1), 53–57.
26. Susilawati, S., Monica, G., Fadilah, R. P. N., Bramantoro, T., Setijanto, D., Wening, G. R. S., & Palupi, R. (2018). Building team agreement on large population surveys through inter-rater reliability among oral health survey examiners. *Dental Journal (Majalah Kedokteran Gigi)*, 51(1), 42–46. <https://doi.org/10.20473/j.djmg.v51.i1.p42-46>