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Original Article

Variation in Attitude towards Oral Healthcare Among Undergraduate Students of a Private Medical & Dental College of Karachi

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Background: Oral health is a significant attribute of general health. Dental and medical students are expected to have good oral health care behaviors, as they are meant to evoke the same in their patients. Thus, it is necessary to assess their oral health care attitudes. The present study aims to compare the attitudes towards oral health care among dental and medical students.

Methodology: A cross sectional was conducted by utilizing HU-DBI questionnaire. Out of the total 200 students selected, 132 were medical and 68 were dental students of a private medical and dental collegeof Karachi selected conveniently in the study after taking oral consent individually. The students suffering from depression or stress apparently were excluded. The statistical analysis of collected data was conducted with the help of SPSS v.17. The descriptive analysis was performed followed by inferential statistics.

Results: The mean value for students was 19.77 ± 1.22 years with 114 (57%) females and 86 (43%) males. A significant difference was found between dental and medical students for oral health behaviors such as worrying about teeth color, worrying about gums color, cleaning teeth without toothpaste, worrying about bad breath, use of dye to see teeth cleanliness, use of toothbrush with hard bristles, use of hard strokes, and taking long time to brush teeth.

Conclusion: It can be concluded on the basis of results that dental students, have better dental health practices as compared to medical students. It is recommended that the oral health care practices should be further emphasized in the curriculum of both the dental and medical students from the beginning as good oral hygiene has good impact on the self confidence and overall healthcare.

Keywords: Oral healthcare, attitudes, students

Introduction

Oral health is reflected through the absence of disease in oral cavity and its associated structures. In the past few years, oral health has been regarded equally significant as general health. It is important in terms of maintaining oral functions, and depicting overall well-being of an individual.[1]

The dental students are responsible for promoting public oral health education and awareness. Their own attitude towards oral health depicts their perception regarding disease prevention and importance of its applicability.[2]

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Moreover, this reflects the commitment of dental students towards improving their patients' oral health.[3] Thus, development of oral health attitude in dental students during undergraduate training is necessary. Moreover, it is also important to examine their understanding towards its implementation significance.[4] On the other hand, medical students are also expected to depict better oral health practices than general health, as they are educated in this regard through their course work.[5]

Generally, it has been noticed that dental students exhibit positive tendency towards oral health; however, to become role models for family and friends, they need to improve their oral health behavior with time. Thus, it is important to evaluate the understanding and annual progress of dental students towards oral hygiene during their dental

course.[2] The understanding of medical students towards the importance of oral health care practices is important as it is considered to be a part of general health.[5]

Owing to the importance of assessing oral health attitude among dental students, many researchers have compared oral health behavior of dental students with normal population, medical students and junior dental students. A comparison on the basis of oral health care was conducted between dental and medical students. This research work has shown better oral health awareness among the dental students as compared to medical ones.[6] However, while examining the status of oral health among Chinese and Japanese dental students, Ohshima et al found that Chinese and Japanese dental students do not have remarkable oral health care tendencies.[7] Kateeb et al pointed out increased consciousness among female dental students towards their dental health care.[8] However, generally all the students had room for improvement in implementation of health care knowledge. Same results were advocated by research works conducted by Halawany et al and Ali et al.[9,10] Yiltiz and Dogan found that students belonging to clinical years had better oral health tendencies in comparison with the students from non-clinical years.[11] On the other hand, while comparing between dental and dental technology students, Pacauskiene et al indicated good awareness regarding oral health among dental students.[12] While comparing oral health status of dental students to the general population, it was pointed out that dental students had better periodontital status and self reported oral health practices. Kirchoff and Filippi compared oral health concerns among dental students, fashion models and students from other fields. It was found that dental students and fashion models were more aware about oral health as compared to general population.[13] On the other hand, medical students have been compared to engineering students in terms of oral health care practices by Doshi et al. This study has shown better attitudes among medical students towards oral health as compared to the engineering ones.[14]

This study is aimed to assess oral health habits and attitudes in dental students as compared to medical students in a private medical and dental college of Karachi, Pakistan.

Methodology

This cross-sectional study took place from Nov 2017 to Jan 2018.The participants were the undergraduate medical and dental students of a private medical and dental college of Karachi. The students, who were willing to participate were included in the study after taking oral informed consent individually, whereas, the students suffering from depression or stress apprantelywere excluded.The sampling technique used wasnon probability convenient sampling. A total of 200 (132 medical and 68 dental) students particpated in the study who filled the questionnaire completely. A questionnaire designed on the basis of Hiroshima University Dental Behavioural Inventory (HU-DBI) was distributed among the participants. The questionnaire consisted of questions related with habits regarding maintaining oral hygiene of the participants. The responses of the students were noted on Likert scale with 1 to 7 with 1 means Strongly Disagree and 7 means Strongly Agree. For each item, collective score was estimated by adding up responses. The statistical analysis of collected data was conducted with the help of SPSS v.17. The descriptive analysis was performed followed by inferential test such as independent t-test and ANOVA where needed.

Results

The distribution of gender, age, and level of education for the participants is shown in Table 1. The participants had a mean age of 19.77 ± 1.22 years, with the range of 18 to 25 years. A total of 200 (132 medical and 68 dental) students took part in the study. The students belonging to pre-clinical years were 112, whereas, those studying in clinical years were 78. The gender distribution for the study comprised of 114 (57%) females and 86 (43%) males.

Table-1. Distribution of the students age and gender and year of education

Age(year)Mean±SD	19.77±1.22	
Gender		
Female	114	57.0 %
Male	86	43.0 %
Students		
Medical	132	66.0 %
Dental	68	34.0 %
Year of education		
First	25	12.5 %
Second	97	48.5 %
Third	78	39.0 %

The oral health attitudes among students:

The Table 2 shows comparative HU-DBI item scores between medical and dental students. Majority of the students check their teeth in a mirror after brushing (medical: 5.01 ± 2.30; dental: 5.42 ± 1.36) followed by use of standardized tooth brush (medical: 5.05 ± 2.18; dental: 5.30 ± 1.45) and brushing each teeth carefully (medical: 5.03 ± 2.11; dental: 5.23 ± 1.67). A significant difference ($p < 0.01$) was observed between medical and dental students on the behaviors such as worrying about teeth color, worrying about gums color, cleaning teeth without tooth paste, worrying about bad breath, use of dye to see teeth cleanliness, use of toothbrush with hard bristles, use of hard strokes, and taking long time to brush teeth.

Table 2. Comparison of the HU-DBI items scores between medical and dental students

Hiroshima university Dental Behavioural inventory Questionnaire	Medical (n = 132)		Dental (n =68)		Independent sample t-test	
	Mean	SD	Mean	SD	Statistic	P-value
"I am satisfied with the appearance of my teeth"	4.6288	2.18393	4.8235	1.42411	-.758	0.449
"My gums tend to bleed when I brush my teeth"	3.1212	2.35100	4.1618	2.12034	-3.166	0.002*
"I worry about the color of my teeth"	3.8333	2.36116	4.9265	1.76463	-3.684	<0.001*
"I have noticed white sticky deposits on my teeth"	2.9621	2.24256	3.9853	2.09115	-3.197	0.002*
"I use a standard-sized toothbrush"	5.0530	2.18011	5.3088	1.45845	-.986	0.325
"I think that I cannot help having false teeth when I am old"	3.6136	2.47012	4.3235	2.09791	-2.131	0.035
"I am worried by the color of my gums"	3.2652	2.49843	4.8382	1.92866	-4.926	<0.001*
"I think my teeth are getting worse despite my daily brushing"	3.1742	2.19818	4.1618	2.07048	-3.128	0.002*
"I brush each of my tooth carefully"	5.0303	2.11118	5.2353	1.67615	-.748	0.455
"I have never been taught professionally how to brush. "	4.1288	2.36516	4.3382	1.98209	-.662	0.509
"I think I can clean my teeth well without using tooth paste"	2.9470	2.38095	4.2647	2.08490	-4.031	<0.001*
"I often check my teeth in a mirror after brushing"	5.0152	2.30494	5.4265	1.36389	-1.582	0.115
"I worry about having bad breath"	3.9621	2.42571	5.2206	1.61009	-4.376	<0.001*
"It is impossible to prevent gum disease with tooth brush'ing alone"	3.9621	2.34897	5.0147	1.79961	-3.520	0.001*
"I never go to a dentist until I have a toothache"	4.7879	2.18960	5.1618	1.41009	-1.460	0.146
"I have used a dye to see how clean my teeth are"	2.6667	2.01395	4.4118	2.15265	-5.550	<0.001*
"I use a toothbrush which has hard bristles"	3.1742	2.09141	4.8529	1.96434	-5.599	<0.001*
"I do not feel I have brushed well unless I brush with strong strokes"	3.5530	2.35840	4.7794	1.74361	-4.162	<0.001*
"I feel that sometimes I take too much time to brush my teeth"	3.7424	2.36263	4.7206	1.50468	-3.558	<0.001*
"I have had my dentist tell me that I brush very well"	3.7121	2.22933	4.6471	1.73433	-3.267	0.001*
"I do not worry much about visiting the dentist if needed"	4.0985	2.22361	4.9412	1.63800	-3.039	0.003*

Comparison of HU-DBI scores on the basis of age, gender and education level:

The Table 3 depicts comparative analysis of HU-DBI scores on the basis of age, gender, and education level. The difference of HU-DBI score was found to be statistically different for students with age 21-24 years (4.43 ± 1.11) and 18-20 years (4.02 ± 1.12). When we talk about gender we noticed that the males (4.21 ± 1.10) were found to be more conscious than female (4.08 ±1.15) students. On the basis of education level, no significant difference was found for first year (4.27

± 1.05) students as compared to second (4.12 ± 1.11) and third year students (4.11 ± 1.19). Moreover, dental students were found to have higher HU-DBI score (statistically significant <0.05) as compared to medical students

Table 3. Comparison of the overall HU-DBI scores in Age groups, gender, students and year of education

Age (year)	Mean	SD	P-value
18 - 20 years	4.023	1.1225	0.021*[a]
21- 24 years	4.431	1.1132	
Gender			
Female	4.082	1.1564	0.415[a]
Male	4.214	1.1017	
Students			
Medical	3.830	1.0654	<0.001*[a]
Dental	4.740	1.0167	
Year of education			
First	4.270	1.0557	0.825[b]
Second	4.126	1.1104	
Third	4.113	1.1926	
a; p-value obtained by independent sample t test **b; p-value obtained by Analysis of variance** ***; p-value is significant at <0.05**			

Discussion

Oral health providers are responsible for giving appropriate information to patients about oral habits. They are accountable to transmit awareness among people about oral disease prevention. Being future health professionals, dental students are expected to implement better health attitudes in their life too. This is important as such an attitude can act as a motivational force for the patients. According to Wagle et al dental students have better oral health practices as compared to laypersons due to the dental knowledge they have.[15] Thus, the present study asserted to compare oral behaviors between dental and medical students, as well as, between various education levels. This was accomplished with the help of surveys conducted by Hiroshima University-Dental Behavioral Inventory (HU-DBI) questionnaire.

Although previous research works highly emphasizes better health attitudes among clinical students as compared to pre-clinical students, no significant difference was found in oral health behaviors on the basis of education level. This concept is based on the fact that students take Preventive Dentistry and Periodontics course during the third year. Moreover, the change of attitude arises due to contact with the clinical environment. However, in the present study, oral behavior has not significantly changed on the basis of education level, which is contrary to the study by Yildiz et al.[11] It can be said that students from final year might had significant difference in oral health behaviors, if considered in the study.

It is noted that majority of the dental students do not visit a dentist until they face a dental issue. As most of the dental students have been reported to have good oral health behaviors, this explains why most of them do not feel the need for regular dental examinations. The most important outcome of the study was the highly significant difference found between dental and medical students in terms of oral health care. This shows the importance of education related to oral hygiene practices. The same has been reported by Al Kawas et al.[16] Contrary to the results of Kateeb et al, male students were found to be more conscious about their dental health as compared to female students. The present study implies that medical students should also be offered with dental courses which could improve their oral health attitudes. However, there were some limitations imposed on the study. Use of self-report can be an unreliable way of documenting behavior because they can be biased due to gained knowledge and social beliefs. Secondly, cross-sectional design of a study does not explain cause of alternations in behaviors of participants.

Conclusion:

It can be concluded on the basis of results that dental students, have better dental health practices as compared to medical students. Similarly, male students were found to be more conscious about their dental hygiene. However, further clinical studies are required to remove reliability issues arose due to self reported data. The oral health care practices should be further emphasized in the curriculum of both the dental and medical students from the beginning as good oral hygiene has good impression on self confidence and overall health.

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