Original Article :

A Concept Analysis of Oral Health Behavior Among Health Sciences Students at Majmaah University.

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Abstract

Background and Aims:

Oral health care is often overlooked as part of a healthy lifestyle. The state of one's dental or oral health is determined by a variety of factors, including personal knowledge, traits, actions, and perceptions. It is crucial to be aware of health practices for maintaining standard oral health based on patients' perceptions of oral health care. The goal of this study was to determine how well health sciences students at Majmaah University in Saudi Arabia knew about oral hygiene.

Methods:

This is a cross sectional study and the samples were obtained from health sciences students at Majmaah university in the period of October 2019 to April 2020. To know oral health knowledge, attitude, habits, and self-opinion of one's own dental appearance, a self-structured questionnaire was employed. SPSS software was used to examine the data.

Results:

36.1% of students are of the opinion that a regular visit to dentist is necessary. 91.6% of students think that as with any part of the body, teeth require care. 50% of female students were having a good knowledge about the oral health while were 12.9% of male were having a good knowledge. Most of dental students were having good knowledge (61.1%) while medical students was having moderate knowledge (43%) and the applied science students (75%) were having poor knowledge. (50.7%) of the students are not afraid from dental in-

strument and procedures. Also (30.8%) of the students prefer taking sedative while they go to dentist. 54.2% are happy with their tooth shape, and 52.4% are happy with their tooth color and 60.8% like their smile.

Conclusion:

Dental students have a greater level of oral health awareness than medical and applied science students, according to the findings of this study. This could be because they include a similar theme on oral health in their curriculum, whereas these specialist themes may not be there in other programs.

Key-words:

Oral health, oral hygiene, knowledge, students, perception.

Introduction

Across the globe, oral diseases occur most frequently than any other non-communicable diseases impact people of all ages, races, and socioeconomic levels; further elucidating the global burden of oral diseases, it is important to know that one in two adults is effected from untreated dental disease[1]. It is important to be aware of health practices for maintaining standard oral health in view of patients' impression of oral medical care. Raising oral hygiene awareness helps to succeed in a successful attitude and behavioral adaptation approach to long-term dental health [2]. There are several factors that contribute to dental health status, including personal knowledge, attributes, behaviors, and perceptions[3]. Dental health is a prerequisite for healthy life style and awareness of dental health tends to increase with age[4]. Oral health is as important as general health, so knowledge of oral health is a significant component in determining a person's overall health[5].

Those in lower socio-economic groups are more likely to have unsound habits, low awareness and perspective about oral health and dental care is underutilized, and so they are more vulnerable to the load of oral disease[6]. This study was undertaken to measure the awareness of the oral hygiene among health sciences students at Majmaah University. Such study will regularly point not exclusively to bestow information, yet additionally to further develop perspectives in regards to oral wellbeing, and to work with the change of these attitudes into practice.

Methodology

This is a cross-sectional study conducted at Majmaah University in Saudi Arabia to examine oral hygiene awareness among health sciences students. Except for students in their preparatory year and interns, all male and female students from

Majmaah University's Medical College, Applied Science College, and Dental College were taken. Data were collected from October 2019 to April 2020. A pre-tested and self-administered questionnaire was used to collect the information. The demographic characteristics of the students were included in the questionnaire. It also includes questions about oral health knowledge, attitude, and practice. It was voluntary participation, and everyone who took part in the study gave their informed consent. The nature and objective of the study were conveyed to all of the students. Ethical approval was obtained from Majmaah University, Institutional Review Board (IRB) under ref. number MUREC-Dec.29 / COM-2O19 / 17 -2. The data was analyzed using version 20.0 of the Statistical Package for the Social Sciences (SPSS) software for Windows (IBM SPSS Chicago, IL:SPSS Inc.). The Mann–Whitney U test was used to compare all of the groups' oral health knowledge, attitude, and practice. Between dentistry, medical, and applied science students, the t test was employed to compare the mean percentage scores for knowledge, attitude, and practices. Karl Pearson's correlation coefficient approach was used to investigate the relationship between knowledge, attitude, and practice. For statistical significance, a P value of 0.05 was selected as the cutoff level.

Result

A total of 227 health sciences students participated in the study. The study showed 137 Medical students (60.4%),72 Applied science students (31.7%) and 18 Dentistry students (7.9%). It also showed 185 (81.5%) were male students, and 42 (18.5%) were female students.

In our study 36.1% of the students in table-1 think that dental visits are necessary on a regular basis and (35.2%) thinks the opposite. While (41.4%) of the students reported that they visit the dentist during dental pain, other reported that they visit once every 3 months, once every two years, and Never visited (30.8%, 12.8% & 15% respectively). In response to the question “Do the dental diseases impact the general body health?” (64.8%) answered yes and (18.5%) answered no. (91.6 %) of the students reported yes to the question “Care about teeth is important as any part of body?”. In response to the question “What is the adequate amount of toothpaste?” (33.9%) said full-length toothbrush and a half-length toothbrush, as the size of a basil seed, as the size of a rice seed (32.6%, 26.4%,7% respectively). Two thirds (60.8%) know that their toothbrushes should be changed every three months. And (24.7%) thought that they should re-

place it when it destroys. Almost half of the students (44.9%) know that SEWAK can't replace the toothbrush. (45.8%) know that eating too much sweets leads to bad mouth odor and affect the gum and tooth health. Most of the students (79.7%) know that soft drinks affect the dental health.

Table 1: Knowledge and awareness about oral health among the students

Knowledge and awareness questions	Frequency	Percentage
1-Are regular visits to dentist necessary?		
Yes	82	36.1%
No	80	35.2%
Sometimes	65	28.6%
2-How often you must visit the dentist?		
Once every 3 months	70	30.8%
Once every two year	29	12.8%
During dental pain	94	41.4%
Never visited	34	15.0%
3-Do the dental diseases impact the general body health?		
Yes	147	64.8%
No	42	18.5%
Don't know	38	16.7%
4-Care about teeth is important as any part of body?		
Yes	208	91.6%
No	6	2.6%
Don't know	13	5.7%
5-What is the adequate amount of toothpaste?		
All length of toothbrush	77	33.9%
Half-length of toothbrush	74	32.6%
As the size of basilla seed	60	26.4%
As the size of rice seed	16	7.0%
6-When you must replace your toothbrush?		
After cold and flu	33	14.5%
When it is destroyed	56	24.7%
After 3 months of use	138	60.8%
7-Can Sewak replace toothbrush?		
Yes	77	33.9%
No	102	44.9%
Don't know	48	21.1%
8-Eating too much sweets lead to?		
Affect the gum and tooth health	81	35.7%
Cause bad mouth odor	13	5.7%
All of the above	104	45.8%
Not affect oral health	4	1.8%
I don't know	25	11.0%
9-Do soft drinks affect the dental health?		
Yes	181	79.7%
No	13	5.7%
Don't know	33	14.5%

Table 2 showed that (50.7%) of the students are not afraid from dental instrument and procedures. "Also showed that (30.8%) of the students prefer taking sedative upon going to dentist. The students reported yes regarding the following questions "I am satisfied with my tooth shape?", "I am satisfied with the size of my teeth?." "I am happy with my teeth color?", " I am satisfied with my smile?," "I have some problems in mouth closure?" are in the following percentages 54.2%, 68.3%, 52.2%, 60.8%, 33% respectively.

Table 2: Distribution of attitude and self-perception of oral health among students

Attitude and self-perception questions	Frequency	Percentage
1-Are you afraid from the dental instrument and procedures?		
Yes	65	28.6%
No	115	50.7%
Sometimes	47	20.7%
2-If you have toothache you prefer taking sedative upon going to a dentist?		
Yes	70	30.8%
No	111	48.9%
Sometimes	46	20.3%

Attitude and self-perception questions	Frequency	Percentage
3-I am satisfied with my tooth shape?		
Yes	123	54.2%
No	104	45.8%
4-I am satisfied with my tooth size?		
Yes	155	68.3%
No	72	31.7%
5-I am satisfied with my tooth color?		
Yes	119	52.4%
No	108	47.6%
6-I am satisfied with my smile?		
Yes	138	60.8%
No	89	39.2%
7-I have some problems in mouth closure?		
Yes	75	33.0%
No	152	67.0%

Table-3 of our study showed 21(50%) of female students were having a good knowledge about the oral health while most of male students was having poor knowledge (51.3%). The students whose age ranged from 18-22 years were having poor knowledge (49.4%) while the students whose age ranged from 23-27 years was having moderate knowledge (41.9%). Most of dental students were having good knowledge (61.1%). The medical students were having moderate knowledge (43%) and most of applied science students were having poor knowledge (75%) with P value<0.001. Our study showed that half of female students was having positive attitude about the oral health while the other half was having negative attitude. Most of male students were having good attitude (60%). The students whose age ranged from 18-22 years, 23-27 years, and above 28 years were having positive attitude 59.8%, 57.1%, 60% respectively.

Table 3: Association of participant's knowledge and attitude with demographic characteristic

Demographic character		Poor Knowledge	Moderate Knowledge	Good Knowledge	Total	P- Value
Gender	Male	95(51.3%)	66(35.6%)	24(12.9%)	185	<0.001
	Female	5(11.9%)	16(38.1%)	21(50%)	42	
Age	18-22	48(49.4%)	31(31.9%)	18(18.5%)	97	0.112
	23-27	36(34.2%)	44(41.9%)	25(23.8%)	105	
	>28	16(64%)	7(28%)	2(8%)	25	
Stream of students	Medical	46(33.6%)	59(43%)	32(23.3%)	137	<0.001
	Applied science	54(75%)	16(22.2%)	2(2.7%)	72	
	Dental	0(0%)	7(38.9%)	11(61.1%)	18	
Demographic character		Positive Attitude	Negative Attitude	Total		P- Value
Gender	Male	111(60%)	74(40%)	185		0.156
	Female	21(50%)	21(50%)	42		
Age	18-22	58(59.8%)	39(40.2%)	97		0.673
	18-22	58(59.8%)	39(40.2%)	97		
	Above 28	15(60%)	10(40%)	25		

Demographic character		Positive Attitude	Negative Attitude	Total	P- Value
Stream of students	Medical	81(59.1%)	56(40.9%)	137	0.305
	Applied science	38(52.7%)	34(47.3%)	72	
	Dental	13(72.2%)	5(27.8%)	18	

Table-4 of our study showed the following results: In response to the question " what do use for cleaning of teeth?" Approximately 146 (64%) of the student's use brush +toothpaste alone while 62 (27.3%) of them used both toothbrush & dental floss P value <0.001. In response to the question " How often do you brush your tooth?" Approximately 103 (45.3%) of the students brush their teeth Twice a day while 58 (25.5%) of them brush their teeth Once a day P value=0.001. In response to the question " For how long do you brush your teeth?" Approximately 87 (38.3%) of the students brush their teeth in 1 min while 73 (32.1%) of them brush their teeth in 2 min P value=0.053. In response to the question " Morning brushing?" Approximately 152 (66.9%) of the students said "Yes" while 40 (17.6%) of them said "No" P value <0.001. In response to the question " When do you brush teeth?" Approximately 103 (45.3%) of the students brush their teeth morning and evening while 63 (27.7%) of them brush their teeth only in the morning P value <0.001. In response to the question " How often you use dental floss/day" Approximately 113 (49.7%) of the students Don't use it while 81 (35.6%) of them use it once a day P value <0.001. In response to the question " Do you visit dentist regularly? "Approximately 123 (54.1%) of the students said "No" while the rest of them said "Yes" and "rarely" (27.3% and 18.5% respectively). In response to the question " When was your last visit to dentist?" The highest answer is with who had visited in "3 months ago" (37.8%) then with who had visited in "last month" and ">a year ago" and " Did not visit him" (28.1% and 21.1% and 12.7% respectively) P value=0.001.

Table 4: Association of practice towards oral health among study participants

Characteristics		Gender		
		Male	Female	P
What do you use for cleaning of teeth	Brush +toothpaste alone	127(86.7%)	19(13.3%)	<0.001
	Finger	14(100%)	0(0%)	
	Dental floss	7(87.5%)	1(12.5%)	
	Both toothbrush & dental floss	40(64.5%)	22(35.5%)	

Characteristics		Gender		
		Male	Female	P
How often do you brush your tooth	Once a day	52(89.7%)	6(10.3%)	<0.001
	Twice a day	74(71.8%)	29(28.2%)	
	>twice a day	16(69.6%)	7(30.4%)	
	sometimes	32(100.0%)	00.0%	
	Never	11100.0%	0(0.0%)	
For how long do you brush your teeth	< 1min	39(86.7%)	6(13.3%)	0.270
	1 min	73983.9%)	14(16.1%)	
	2min	58(79.5%)	15(20.5%)	
	I don't know	15(68.2%)	7(31.8%)	
Morning brushing	Yes	114(75.0%)	38(25.0%)	0.002
	No	38(95.0%)	2(5.0%)	
	Sometimes	33(94.3%)	2(5.7%)	
When do you brush teeth	Morning	6095.2%	34.8%	<0.001
	Noon	19(95.0%)	1(5.0%)	
	Before bedtime	39(95.1%)	2(4.9%)	
	Morning evening	67(65.0%)	36(35.0%)	
How often you use dental floss/day	Don't use it	94(83.2%)	19(16.8%)	0.389
	Once a day	62(76.5%)	19(23.5%)	
	Twice a day	21(91.3%)	2(8.7%)	
	More than twice a day	8(80.0%)	2(20.0%)	
Do you visit dentist regularly	Yes	50(80.6%)	12(19.4%)	0.130
	No	105(85.4%)	18(14.6%)	
	Rarely	30(71.4%)	12(28.6%)	
When was your last visit to dentist	Last month	55(85.9%)	9(14.1%)	0.217
	3 months ago,	73(84.9%)	13(15.1%)	
	>a year ago,	35(72.9%)	13(27.1%)	
	Did not visit him	22(75.9%)	7(24.1%)	

Discussion

Healthcare professionals play a crucial part in spreading awareness of oral health and its importance to the overall population. Health science students need to be familiar with oral care so that this attitude can be communicated to patients and the community as a whole[7]. Using this study as a platform, we hope to help advance the knowledge and practice of oral hygiene in the community.

In our study, the percentages of knowledge have been substantially better amongst dental college students than medical and/or applied science students. This finding is similar with the previous study done by Khaled K, [19]. A overall of 45.3% of the students in our study brushed two times a day which is similar to the findings by Al Omari et al.[8] , Peker et al[13] and Elsabagh

HM15. 27% of the students used both toothbrush & dental floss. This finding is lower than the previous study by Elsabagh HM[15], which was 36%. Flossing of teeth is just about as much expected as cleaning for complete tidiness of teeth. A total of 49.8% of students in our study did not know about flossing. This shows that college students are not knowledgeable with respect to the advantages of flossing.

60.8% know that the toothbrush needs to be changed every 3 months this finding is almost an agreement with Omari et al[8] ,Elsabagh HM[15]. Most of the college student realize that sweet and bubbly beverages influence oral wellbeing (87.2% & 79.7% respectively). This finding is in contrast to Elsabagh HM[15], which were (94.9% & 93.9% respectively) and almost same as Priya M[16], which were (81.80%, 77.70% respectively).

54.2% of the students reported that they don't regularly visit a dentist and 66.1% reported that their last visit was in the last 12 months in comparing to Kassak KM[14], Elsabagh HM,[15] which were (49.6%, 48.6% respectively). Omari et al. in their study showed that 92.4% of the dental students were not thinking too much about going to the dentist[8]. 61% of dental students were having good knowledge and in comparing to 23% of medical students and 2.7% of applied science student. This finding illustrates that dental students have taken better oral hygiene measures. The same finding was reported by Khaled K[19].

In this study, 50% females showed better oral hygiene behavior than males in terms of going to the dentist and brushing their teeth regularly. Female students also showed better brushing skills, consistent with the finding of previous studies[8,13,14,15]. A woman's positive oral hygiene behavior and attitude can usually be explained by her greater interest in her appearance and self-esteem. Therefore, the likelihood of going to a dentist and learning about oral health is higher. Regular dental examinations are important to prevent oral disorders, educate patients, and inspire the patients to practice better oral hygiene [16,17]. In the present study, our evaluations of knowledge were steady with the findings of earlier studies that announced that females showed preferred knowledge and perspectives over males.[8,9,10,11,12] In contrast to, Tseveenjav et al. 18 reported that, from a practical point of view, there was no difference of between males and female Mongolian students. Many studies have shown that knowledge and attitudes of oral hygiene are high among dental students as they form an important part of their curriculum and therefore have a positive impact on their attitudes and behaviors.[8,10,17,20]

The only limitation of this study is that,

even though the data is kept confidential, there is a possibility that self-reported data may be over reported or under reported based on social desirability. The questionnaire has been validated and piloted twice, so this impact is considered minimal. Participants were selected using the appropriate sampling strategy, so this study also has some notable advantages. We believe that this sampling technique will minimize selection bias in addition to high response rates.

Conclusion

In this study, we found that knowledge about oral hygiene among dental students is superior to medical students and applied science students because oral hygiene is an integral part of the dental curriculum. Student females were more knowledgeable about oral health and tooth maintenance than student males. As students are future medical and dental professionals, undergraduate education requires more attention to oral health to improve knowledge about, attitudes toward, and practices regarding dental health.

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conflIcts of Interest

Conflict of Interes The authors declare no conflicts of interest.

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