

Dental knowledge and behavior among technical medical institute students in Baghdad governorate

Jinan Mohammed Rashad B.D.S., M.Sc. ⁽¹⁾

ABSTRACT

Background: Oral health knowledge is important for promotion and maintenance of oral health. This study aims to find out the difference in oral health knowledge and behavior of medical and dental students in technical medical institute in Baghdad governorate.

Materials and Methods: A questionnaire survey was carried on 202 Iraqi students in technical medical institute of Bab Al-Muadam quadrant in Baghdad governorate (92 dental students and 110 medical students). Students were invited to complete a set of questionnaires on dental knowledge and behaviors that are related to oral hygiene and dental visits.

Results: Highly significant differences were shown between medical and dental students related to dental knowledge, dental students were found to have more dental knowledge than medical students. Concerning the typical method for caries prevention, 90.2% of dental students compared to 35.5% of medical one were aware that brushing regularly, minimizing sweets, visiting the dentist and the use of fluoride are all effective means of avoiding caries. For oral hygiene behavior, dental students were practicing twice daily tooth brushing, flossing and rinsing in a proportion greater than medical students. Irregular visits to the dentist were found to be common among both medical and dental students and toothache was the major factor for dental visits in both groups. The lecturers were found to be the most effective source of dental information for dental students, while the most effective source of information for medical students was the family.

Conclusion: The results of this study indicate that knowledge and behavior toward oral health and dental care especially for the medical students need to be improved and there is a need for inclusion of oral health education in the medical curriculum.

Key words: Knowledge, behavior, dental visits. (J Bagh Coll Dentistry 2012; 24(sp. Issue 1):115-119).

INTRODUCTION

Oral diseases constitute a major public problem ⁽¹⁾, among common oral diseases; caries is the foremost oral pathology that remains widely prevalent and affects all populations throughout the life span. This disease not only causes damage to the tooth, but is also responsible for several morbid conditions of the oral cavity and other systems of the body ⁽²⁾. The prevalence of caries is declining in developed countries, increasing in less developed countries and is an epidemic in countries with emerging economies ⁽³⁾. Decline in prevalence in developed countries has been associated with improved oral hygiene practices and several preventive programs unlike developing countries where the focus is mostly on curative care ⁽⁴⁾. Dental caries has been considered as a behavioral disease because adoption of healthy oral habits is crucial in controlling it. Traditionally, good oral health practice consists of continuous implementation of 2 broadly defined sets of behavior: self-care habits (dental hygiene, restriction of sugar products, use of fluoride products) and utilization of dental services (regular dental examinations, oral health education, and professionally applied preventive measures) ⁽⁵⁾. Many methods are available for maintaining optimal oral hygiene, among which tooth brushing is the most widely accepted method for the prevention and control of periodontal diseases ^(6,7).

Most researchers recommend tooth brushing twice a day and agree that when performed with fluoride toothpaste, it could also reduce dental caries ⁽⁸⁻¹⁰⁾. However, a recent systematic review of the available evidence has shown that tooth brushing plays a limited role in caries prevention ⁽¹¹⁾, because brushing alone is not sufficient in cleaning the proximal surfaces of teeth. As such, using dental floss is therefore also recommended to further help in preventing both dental caries and periodontal disease ^(12, 13). Limiting the consumption of sugar-containing foods is also important in preventing periodontal disease and tooth decay. Added sugar (two thirds of which comes from confectionery, table sugar, and soft drinks) poses the greatest threat to dental health ⁽¹⁴⁾. Oral health knowledge is considered to be an essential prerequisite for health-related behavior, although only a weak association seems to exist between knowledge and behavior in cross-sectional studies ^(15, 16). Studies have shown that there is an association between increased knowledge and better oral health ^(17, 18). To date, information is limited regarding the public's knowledge and attitude about dental caries and its prevention especially among college and institutes students. Therefore, this study aimed to investigate the level of dental knowledge among students of technical medical institute, and to determine their practices of oral care.

MATERIALS AND METHODS

This survey was carried out on 202 students of technical medical institute in Bab Al- Muadam quadrant (92 dental students including 21 male (22.8%) and 71 female (77.2%) selected from preventive and prosthodontic departments with a mean age of 19.9, and 110 medical students including 55 male (50%), and 55 female (50%) selected from different medical departments in the institute with a mean age of 20.8. The survey was based on collection of 16 item questionnaire. Students from second class were invited to complete the questionnaire forms in their classrooms after lectures. The questionnaire included the following aspects (first) general questions related to the name, age, sex, (second) information about knowledge and (third) information regarding their oral health behavior. Knowledge was measured by asking questions related to role of sugar, bacteria and soft drinks in dental caries, causes, prevention, and treatment of dental caries and whether extraction of teeth is the best treatment for painful teeth or not. Oral health behaviors were measured by asking questions about frequency of tooth brushing, and use of cleaning aids other than toothbrush (flossing, use of mouthwash), use of fluoride toothpaste (yes, no, don't know), consumption of sugar-containing and sugar free products and behavior related to visits to the dental clinics (last dental visit and reason for last dental visit). The data were analyzed using the SPSS. Differences were assessed by the chi-squared test. The significance level (P-value) was set at 0.05.

RESULTS

Table (1) shows dental knowledge among dental and medical students in the institute, out of 92 dental students 77.2% knew that the main causes of tooth decay were bacteria, sugar consumption and weak enamel, the majority of dental students (79.3%) believed that sugar free or diet drinks were harmful to teeth, and 89.2% of them thought that extraction is not the only treatment for a painful tooth. Although, half of medical students thought that sugar free or diet drinks were harmful to teeth, only a small proportion of them (5.5%) knew that the main causes of tooth decay were bacteria, sugar consumption and weak enamel, and more than half of them (69.1%) believed that extraction is the only treatment for a painful tooth. Only few dental students (15.2%) didn't know whether mouth wash benefit the mouth or not, while (42.7%) of medical students didn't know whether mouth wash benefit the mouth or not. It is clear

that dental students had a higher proportion of correct answers than medical students, the differences were highly significant $P < 0.001$.

The opinion of dental students on how to prevent dental caries was very promising compared to medical students as seen on Table (2), 90.2% of dental students compared to 35.5% of medical one were aware that brushing regularly, minimizing sweets, visiting the dentist and the use of fluoride are all effective means of avoiding caries, a highly significant level was found concerning the typical method for caries prevention.

Table (3) illustrates dental behavior among dental and medical students, significantly more dental students than medical one brush their teeth at least twice a day (65.2% versus 50% respectively). 35.5% of medical students didn't know whether they used fluoridated or not fluoridated tooth paste compared to 7.6% of dental students, the difference was highly significant $P < 0.001$. greater proportion of dental students used tooth picks and mouth wash (60.9%, 59.8% respectively), while only 25.5% of medical students used dental floss and 35.5% of them reported to use mouth wash, difference was highly significant for dental floss use, while a significant different was found for mouth wash use. Both dental and medical students have visited the dentist and treatment of dental caries being the most common cause for the visit (67.4% and 78.2% respectively) $P < 0.05$.

Table (4) shows different sources of oral health information, statistically highly significant difference was found between medical and dental students regarding different sources of information $P < 0.001$, for dental students it seems that the most effective source of information was the lecturers as recommended by 60.9%, while 15.2% recorded that the family was the second educating source. Teacher or newspapers were indicated as sources of information by 2.2%. For medical students the most effective source of information was the family as mentioned by 28.2%, the dentist coming as the second source of information (19.1%), while the lecturers were indicated as a source of information by only 8.2%.

DISCUSSION

This is the first study to determine the knowledge and behavior of dental health among students at the technical medical institute in Bab Al-Muadam, so it forms a baseline description of oral health behavior of medical and dental students in the institute, in future these information might be benefit in the planning of preventive programs among institute students. In

this study, oral health knowledge and behavior was significantly higher in dental students compared to medical students, medical students showed poor oral health knowledge comparatively. This may be related to that oral health hardly receives any exposure in the medical curriculum, and hence oral health education must be included in pre-clinical curriculum of medical courses. Attempts to implement oral health modules within the medical curriculum have been received well and some have been shown to be successful in improving the level of dental knowledge among medical students^(19, 20). For dental students, knowledge is important content in their professional education, and they need this knowledge to educate patients and the community when they start working in health care system. With proper knowledge and oral health behavior, they can play an important role in the health education of individuals and groups, and act as role models for lay people and the community at large^(21, 22). However, behavior of both medical and dental students concerning the use of mouth wash, flossing need to be improved.

Dental caries constitute a major public problem in the world today. One of the most risk behaviors for dental caries is irregular dental attendance⁽²³⁾. The importance of regular dental check up is needed all over the world. Majority of the students in this study consult the dentist only when they were in pain. This is may be attributed to the lack of awareness of the role of the regular dental visits in the prevention of dental disease.

In this study the main source of information regarding oral health for dental students was found to be the lecturers, while the most effective source of information among medical students was from the family, teachers had less effect in this study among dental and medical students. Paik et al (1994) had shown that mass media, dental professionals, and dental literature were the main sources of oral health information⁽²⁴⁾.

The results indicate that the oral health knowledge was not enough to influence the oral health status especially among medical students, behavior related to dental visits among all students whether medical or dental need to be improved. There is a need for the inclusion of oral health education in the medical curriculum so oral health awareness among these students should be increased.

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Table 1: Knowledge of Dental Health among Dental and Medical Students.

Item description		Dental	Medical	χ^2 -value	Statistical significant level
		No (%)	No (%)		
Causes of caries	Sugar consumption only	8(8.7)	59(53.6)	110.6	HS P<0.001 d.f=3
	Sugars consumption and weak enamel	9(9.8)	22(20)		
	Bacteria and sugar consumption	4(4.3)	23(20.9)		
	Bacteria, sugar consumption and weak enamel	71(77.2)	6(5.5)		
Does sugar free or diet drinks are harmful to teeth	Yes	73(79.3)	54(49.1)	17.55	HS P<0.001 d.f=1
	No	19(20.7)	56(50.9)		
Does extraction the only treatment for painful teeth	Yes	10(10.8)	76(69.1)	11.81	HS P<0.001 d.f=1
	No	82(89.2)	34(30.9)		
Does mouth wash benefit the mouth	Yes	78(84.8)	57(51.8)	25.71	HS P<0.001 d.f=1
	No	0(0)	6(5.5)		
	Don't know	14(15.2)	47(42.7)		

HS: Highly significant

Table 2: The Number and Percentage of Dental and Medical Students Opinions in the Way to Prevent Caries.

		Dental	Medical
		No (%)	No (%)
Typical method for caries prevention	Brushing regularly	6 (6.5)	27 (24.5)
	Visit dentist	1(1.1)	9 (8.2)
	Use of fluoride	0(0)	7 (6.4)
	Minimize sweets	1(1.1)	9 (8.1)
	All of the above	83 (90.2)	39 (35.5)
	I don't know	1 (1.1)	19 (17.3)

$\chi^2 = 108.7, P<0.001, d. f = 5$

Table 3: Oral hygiene behaviors among dental and medical students

Item description		Dental	Medical	χ^2 -value	Statistical significant level
		No (%)	No (%)		
Tooth brushing frequency	Less than once a day	0 (0)	0 (0)	4.73	S P<0.05 d.f=1
	Once a day	32(34.8)	55(50)		
	More than once a day	60(65.2)	55(50)		
Uses of fluoride tooth paste	Yes	75(81.5)	45 (40.9)	35.50	HS P<0.001 d.f=2
	No	10 (10.9)	26 (23.6)		
	Don't know	7 (7.6)	39(35.5)		
Use of dental floss and tooth picks	Yes	56 (60.9)	28 (25.5)	25.80	HS P<0.001 d.f=1
	No	36 (39.1)	82 (74.5)		
Use of mouth wash	Yes	55 (59.8)	39 (35.5)	11.92	S P<0.05 d.f=1
	No	37(40.2)	71 (64.5)		
Last dental visit	Less than one year	54 (58.7)	34 (30.9)	24.97	HS P<0.001 d.f=2
	More than one year	11 (12)	19(17.3)		
	Tow years and more	27 (29.3)	57 (51.8)		
Purpose of visit	Examination/ prevention	30 (32.6)	24 (21.8)	8.02	S P<0.05 d.f=1
	Treatment	62 (67.4)	86(78.2)		

Table 4: Number and Percentage of sources of oral health information

	All the previous information known from															
	Family		Dentist		Doctor		Teacher		Lecturers		T.v. And radio		Newspapers		Others	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Dental	14	15.2	7	7.6	0	0	2	2.2	56	60.9	5	5.4	2	2.2	6	6.5
Medical	31	28.2	21	19.1	7	6.3	12	10.9	9	8.2	17	15.5	7	6.3	6	5.5

$\chi^2 = 69.82$, HS $P < 0.001$, d. f = 7