

Evaluation of oral self-care behavior among lay persons and dental students

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Abstract

Objectives. The goals¹ of this study were to identify oral self-care behavior and knowledge among dental students at Basrah Dentistry College and laypersons, as well as to assess the effectiveness of knowledge in improving oral hygiene performance in our culture.

Materials and methods. Students and laypersons completed a self-administered questionnaires in their dormitories that included information on age, gender, tooth cleaning material, and frequency of tooth cleaning¹². The questionnaire was based on Google form questions found on the internet. The data were analyzed using SPSS statistics for Windows version 22. The association was considered statistically significant when $P < 0.05$.

Result. The total of 281 persons from both dental students & laypersons² participated in the study. All the questionnaires were returned after the completion and were analyzed. The study shows that there is low deference between dental students and laypersons due to the availability of many sources of information nowadays such as dental clinics, internet and TV. Dental students perform better in oral hygiene than laypersons, which is undoubtedly owing to the lectures they receive in their studies and the setting of practical work in the college clinic, which makes them more interested and motivated.

Conclusion. The outcome of the study is that there is a little high level of knowledge about oral self-care procedures in dental students than in lay persons. So there is a need to educate the laypersons to increase their concern about oral hygiene and a need to improve dental student to support them with high knowledge to instruct the laypersons that will visit their clinic in the future.

²⁰**Key words:** Dental Students, Laypersons, Oral self-care, tooth brushing, interdental aids

Introduction

Oral self-care behavior is below suggested levels, and additional educational efforts are required to develop such behavior in order to improve oral health status [1].

Oral self-care should be practiced on a daily basis to help avoid dental disease and bad breath. Mainly prevalent types of dental disease are tooth decay (cavities, dental caries) and gum diseases, such as gingivitis and periodontitis [2]. Maintaining good oral hygiene requires consistent brushing and interdental cleaning. Adults should adhere to general standards that include brushing their teeth at least twice a day using toothpaste that contains fluoride. This includes brushing before going to bed and at least one additional time during the day [3]. Interdental cleaning is as crucial as tooth brushing [4]. Fluoride treatments, sealant application, and scaling are examples of preventative services provided by dentists. (Scraping off the hardened plaque known as tartar). The dentist can also provide diagnostic services like x-ray imaging as well as treatments like cavity filling [5].

The primary reason for poor oral health is a lack of frequent dental appointments, untreated dental disorders, and harmful habits such as tobacco use [6]. The World Health Organization (WHO) advises oral self-care (ROSC) for the year 2020, which involves limiting sugar-containing snack consumption to once daily or rarely, adopting a practice of tooth brushing more than once, and using fluoride-containing toothpastes on a regular basis [7].

Individual oral care, which focuses on personal oral health responsibility, is a strategy of avoiding tooth decay and gingival disease. In this sense, mechanical approaches such as brushing and flossing are the most simple and effective preventative behaviors for reducing dental plaque and preventing tooth decay [8].

To effectively promote oral self-care habits in society, it is imperative to comprehend the fundamental factors that impact individuals' decision-making behaviors [9,10].

Socio-psychological researchers have employed a variety of ideas to reach this goal. The Theory of Planned Behavior (TPB) is a useful approach for health education that applies to oral health activities. This theory offers a useful foundation for interpreting behaviors that impact oral health [11,12].

Exploring the understanding, perspectives, and attitude of students in dental school regarding dental health have a significant effect on the level of oral health care provided to future patients. While dental education has an effect on students' oral health behaviors, there has been little research on how and when they adjust their self-care behaviors [13,14]. Public education and promotion of oral health is a crucial responsibility of dental students, who will one day head the field [15-17].

Overall, dental students possess a positive disposition towards oral health. However, they must enhance their own oral-health practices in order to effectively serve as positive examples for their patients, families, and acquaintances [18-22].

Materials and methods

The study has received ethical approval from the College of Dentistry at the University of Basrah. This study depends on goggle form questions on the internet to dental students of Basrah dentistry college and layperson that most of them are students of medicine, law, administration, economics, and others at Basra University, for evaluation of oral self-care behavior to them from January to March 2022. In total, 86 men and 195 women participated in the study. The questionnaires designed for the purpose of this study consisted of ten questions. Questions related to the state of oral self-care behavior, the frequency of visits to the dentist, and if they had toothache.

Some of the questions were open questions and in the rest of them patients were asked to mark 'yes' or 'no'. A different study [23] used some of the questions, and the writers also came up with their own [24]. SPSS statistics for window version 22 was used to look at the data and find frequency distributions and percentages.

Table:1

1- Source of your information:	7- Do you believe that the use of fluoride toothpaste is beneficial for dental health?
2-How many times do you brush your teeth?	8-Which brush your teeth are using?
3-How many times do you clean your tongue a day?	9- When was the last time you visited the dentist?
4- Which brush are you using?	10- What is the reason that makes you visit the dentist?
5-Which teeth brushing method are you using?	
6-Which interdental cleaning aids are using?	

Results

The total of 281 persons from both dental student & laypersons participated in the study. All the questionnaires were returned after the completion and were analyzed. The sample description of both student & laypersons is given in Table 2 Where the participant was 143 (51%) dental students, males 41 (29%) and females 102 (71%), as for laypersons it was 138 (49%), males 45 (33%) and females 93 (67%)".

Table 2: Sample description.

Category	Male %	Female %	Total %
dental student	41(29)	102(71)	143(100)
laypersons	45(33)	93(67)	138(100)
Total	86	195	281

Table 3: Percentage and analysis of responses of dental students & laypersons: brushing habits (oral self-care behavior)

Questions	Dental students	Laypersons
Source of your information:		
A. Dental clinics	A. 51(36%)	A. 47 (34%)
B. the family	B. 16 (11%)	B. 19 (26%)
C. Internet	C. 71 (50%)	C. 41 (57%)
D. Television	D. 1 (1%)	D. 2 (3%)
E. Other:	E. 1(1%)	E. 3 (4%)
3		
How many times do you brush your teeth a day?		
A. after every meal	A. 14(10%)	A. 22(16%)
B. Once	B. 54(38%)	B. 50 (36%)
C. Twice	C. 66 (46%)	C. 57 (31%)
D. Other:	D.9 (6%)	D. 10(7%)
How many times do you clean your tongue a day?		
A. every day	A. 77(55%)	A. 72(52%)
B. Not once	B.31(22%)	B. 36(26%)
C. Sometimes when it becomes a smell	C. 33(23%)	C. 30(22%)
Which brush are you using?		
A. soft	A. 67(47%)	A. 65(47%)
B. medium	B. 74(52%)	B. 70(51%)
C. solid	C.1(1%)	C.3(2%)
Which teeth brushing method are you utilizing?		
A. Vertical	A. 21(15%)	A. 17(12%)
B. Horizontal	B.9(6%)	B. 11(8%)
C. In a circular motion	C. 49(34%)	C. 54(39%)
D. All of the above	D. 64 (45%)	D. 59(41%)

Table 3 shows percentage and analysis of responses of dental student & laypersons regarding the questionnaires, asked about the source of your information, it was found that 36% of dental students their information from dental clinics, 11% from parents, and 50% from the Internet. As for laypersons, it was 33% from dental clinics, 19% from parents, and 41% from the Internet.

When it comes to brushing, 38% of dental students say they do it once a day, and 46% say they do it twice. Among laypersons, 36% say they do it once a day, and 41% say they do it twice. Dental students brush their tongues every day 55% of the time and when there is the odor 23% of the time. Laypersons brush their tongues 52% of the time every day and when there is the odor 22% of the time.

A medium brush was chosen by 52% of dental students, and a soft brush by 47%. 50% of laypeople chose a medium brush, and 47% a soft brush. 12% of them brushed their teeth vertically, 39% brushed them circularly, and 41% used all three methods. For students, about 15% brushed their teeth vertically, 34% brushed them circularly, and 45% used all three methods.

Dental students and laypersons use the interdental aids listed in Table 4. Among dental students, 47% reported using dental floss regularly. For laypersons, it was found that 36% use dental floss and 31% use the toothpick, while 22% of dental students use the toothpick. And their use of fluoride-containing toothpaste 55% by dental students, and laypersons by 36%. While 53% answer; it is not good for teeth. Regarding brush teeth use, the regular brush is the most method used for dental students about 87%, and 81% for laypersons.

Figure 5 show the responses about the last time of participants visited the dentist, the dental students visited the dentist less than 6 months about 39% and from 6 months to 12 months about 17%, while laypersons about 22% and 10% respectively.

The responses about the reason that make participants visited the dentist (figure 6). 50% and 53% keep to visit dental clinics of laypersons and dental students when there is pain, 16% of dental students visited the dentist because continuous examinations and 12% for laypersons.

Table 4: Interdental aids used by dental student & laypersons

	dental student	laypersons
Which interdental cleaning aids are using?		
A. Dental floss	A. 67(47%)	A. 50(36%)
B. The small toothbrush between the teeth	B. 19(13%)	B. 21(15%)
C. toothpick	C. 31(22%)	C. 43(31%)
D. nothing	D. 27(19%)	D. 23 (17%)
Do you believe the use of fluoride toothpaste is beneficial for dental health?		
A. yes	A. 79(55%)	A. 50(36%)
B. no	B. 16(11%)	B. 73(53%)
C. non- Know	C. 49(34%)	C. 14(10%)
Which brush your teeth using?		
A. interdental cleaning brush	A. 17(12%)	A. 26(19%)
B. miswak	B. 0	B. 1(1%)
C. regular brush	C. 124(87%)	C. 59(81%)

Figure 5 showing the responses about the last time of participants visited the dentist

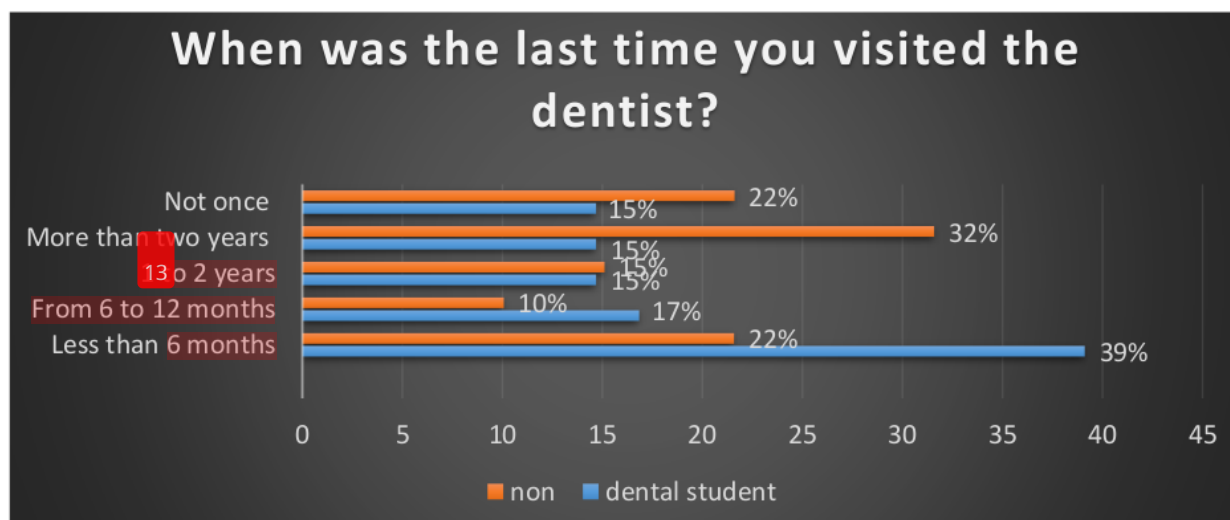
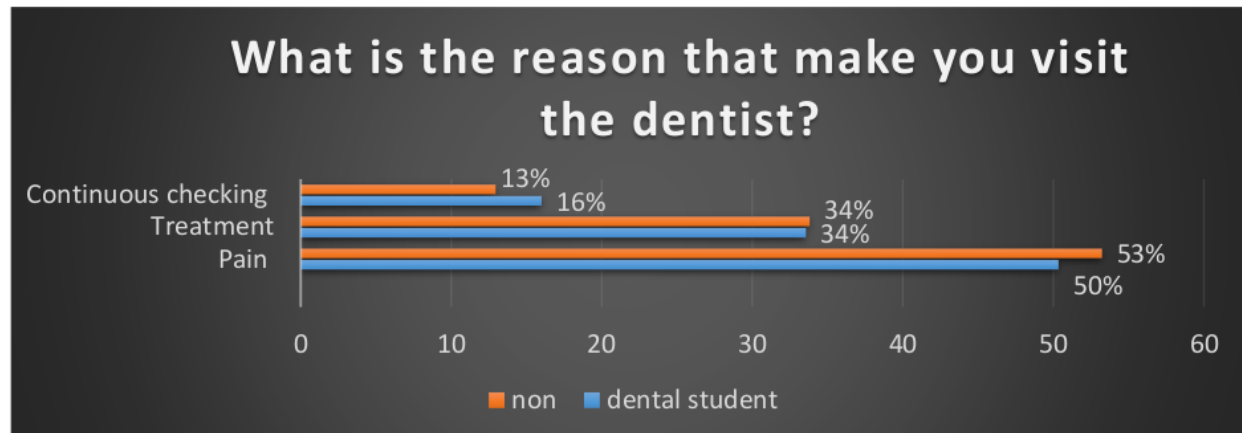


Figure 6 shows the answers to the question about the reason that make participants visited the dentist



Discussion

This study examined data on ¹⁶ oral self-care and behavior, as well as the level of awareness among dental students and laypersons. Furthermore, strengthening dental curriculum, such as boosting dental courses throughout the last three years and increasing clinical practice within a year, can be useful in improving oral health.

This study and the data done between dental students and laypersons revealed that the sources of knowledge for both groups, whether from dental clinics or the Internet, are quite similar, with a 1-2 ratio in favor of dental students. Positively, they have, as well as the amount to which the two groups keep up with development, the role of the Internet, and the processes of promoting the

transmission of information, all of which play an effective role in educating both group.

According to the findings of this study, the percentage of people who ¹⁹brush their teeth twice a day is higher in both groups than those who clean their teeth only once a day. Thus, we can conclude that both groups are interested in maintaining their teeth and their health, because they understand the importance of brushing their teeth and prefer twice over once, and a reversal of the teeth shown by laypersons is a slightly different situation for dental students [26].

Another study found a substantial difference in the number of times dental students brushed their teeth per day, which is far from common practice in many other nations [27]. This is also evident in Kumar's research in Chennai, India [25,28]. This could be because they cannot afford to buy toothpaste on a regular basis; therefore, in order ¹to make their toothpaste last longer, they saved by brushing once a day. A poor attitude towards oral health may also play a role.

Tongue care also helps to preserve oral health and eliminate bacteria that live on the tongue. As a result, tongue hygiene in particular, and oral hygiene in general, serve as an effective entrance to preventing many diseases and eliminating microorganisms that enter the body through the mouth. The ratio of brushing to not brushing the tongue among dental students is really big, and these differences are completely comparable to laypersons. The ratio of dental students to laypersons differed. The reason for the importance of awareness and the spread of culture among dental students and the role of scientific lectures in spells in addition to campaigns ²²and their global implementation for dental colleges during the allocation of "Dental Day" and "Oral Health Day" by dental students and routinely through community education of oral health and teeth.

Brushing methods such as vertical, horizontal, and circular movements have been taught for decades. The use of the circular motion method and using a medium brush among two groups were more popular; also, the use of a soft brush among

laypersons and dental students was high, indicating the possibility of their plaque increasing and their use of a hard brush exposed them to a percentage of probability of gum disease and bleeding gum [29]. However, the optimum method is one that is adjusted to the patient's specific needs and abilities, and it is the dentist's obligation to thoroughly train the patient on how to do the procedure.

The frequency with which teeth are brushed is another crucial factor in plaque removal efficiency [30]. Investigations into optimal times for cleaning one's teeth have proved unclear. While it is believed that cleaning teeth for longer periods of time removes more plaque, the brushing technique may affect study comparisons [31].

Removing interstitial plaque is essential for keeping healthy gums, preventing gum disease, and treating gum disease, reducing dental decay. Unfortunately, toothbrushes are inefficient at eliminating interstitial plaque, therefore patients must resort to alternative methods. Floss, wood sticks, rubber tips, and interdental brushes are currently the most used ways for cleaning between teeth.

Flossing is the most generally used approach for interdental cleaning; yet, this study discovered that laypersons use less dental floss than students. These percentages are similar to another study [32] that revealed that dental students use more dental floss than the other group, and that laypersons wash their teeth without brushing, such as with a toothpick. They have a higher percentage than dentistry students, so do not follow these behaviors; this is related to the lack of promotion and marketing to this point, as well as its value as a margin for laypersons.

Dental students, in particular, should highlight the necessity of utilizing dental floss and fluoride-containing toothpaste, as well as promoting and marketing these aspects to promote oral health. Reducing difficulties emerging from poor knowledge and the degeneration of general culture through social media, which is a large and effective means of communication by dental students and doctors.

In addition, the study found that people are generally good about taking care of their teeth and gums. However, when it comes to dental clinics, it was observed that dental students see a dentist less than six times a year to monitor their oral health, whereas laypeople see a dentist more than twice a year, this means when there is a pain or problem in the mouth. Another study conducted in Iran, similar to the one conducted on laypersons, discovered that the most common cause for a visit is tooth pain. The findings of this study are consistent with those of other studies [33].

Emphasize the significance of dental studies in motivation and attitude toward treatment [34]. As a result, comparable studies should be done with a bigger sample size to provide a more comprehensive picture of the current situation.

Most people fail to prioritize their oral and dental health, which is concerning because the mouth is the body's entry point and poor oral hygiene can cause problems throughout the body. People don't pay attention to their oral health until they have tooth decay or sensitive gums. They also don't care about how their teeth look and how clean they are when they smile. However, taking care of their physical health is just as important, since the mouth is the window to the body and can sometimes show how healthy someone is overall.

Conclusion

The study's findings show that dentistry students have a little higher degree of awareness about oral self-care techniques than laypersons. So, there is a need to educate the laypersons to enhance their concern about oral hygiene, and a need to develop dentistry students to assist them with high knowledge to train the laypersons who would visit their clinic in the future. Dental hygienists are the first line of defense in dealing with the oral health care crisis. As the saying goes, "Prevention is better than cure".

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