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Knowledge, Attitudes and Reported Practices of Dental Students in Omer-Almokhtar University Regarding Tobacco Effects on Oral Cavity Health

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ABSTRACT

Background: Tobacco use is risk factor causes of preventable death in the world. Oral health professions provide multiple opportunities for interventions throughout their careers that could lessen tobacco correlated diseases. Three factors knowledge, attitudes and behaviour are thought to play a starring role in determining the extent of tobacco use between patients and help dental clinicians to implement smoking cessation policy. Present study aimed to determine dental student's level of knowledge, awareness and practice regarding tobacco use and students/ dentists' role in tobacco cessation.

Subjects and methods; A total of 160 students were recruited from Faculty of Dentistry, Omer- Almokhter university, and surveyed using an anonymous self administered questionnaire. This questionnaire was based on intensive literature review. Cross-section study design was applied using a structured questionnaire which included data related to personal characteristics and assessment of KAP of participants.

Results: one hundred eight students responded with (82.4%) were females and 17.6 % were males. That majority of responding students had high level of knowledge attainment on tobacco with the exception of knowledge about smokeless tobacco which was inadequate. Although, most students (92.6%) agreed that dentist has an important role in tobacco control and training regarding tobacco effects is sufficient to allow them to help their patients to quit smoking, only 56.6% give advices to their patients. The prevalence of smokers among students was low (4%).

Recommendation Education about tobacco effects necessity involved in the curriculum from first year. Students should be given training about smoking cessation and counselling techniques and must be motivated to play their role in patients' education regarding smoking.

Key words:
Tobacco, Oral health care, Periodontal diseases, Knowledge, attitudes.

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INTRODUCTION

Tobacco use may be explained as any products form of the tobacco plant leaf. Cigarettes, pipesand shisha are the predominant tobacco form use. Smokeless tobacco means chewed or sniffed products of tobacco. Some studies refer to indirect effect of tobacco on people surrounding the smokers as negative or second hand smoking[1, 2]. Tobacco use is one of risk factor causes of preventable mortality in the world. Oral health professions can provide interventions throughout their careers to decrease tobacco related diseases. However, in developing countries, providers are generally not aware with such brief clinical interventions. Many developing countries do not have an integrated system of care that can implement the necessary system changes or provide[3]. Cigarettes the most common form of tobacco use. Typically, the cigarette delivers about one milligram of nicotine to the circulation of the smoker[4]. According to the World Health Organization (WHO) in 2017, the male adult global population smokes cigarettes[5]. Also, the waterpipe or shisha has been used for smoking tobacco for centuries in the Eastern Mediterranean Region. The uptake of tobacco nicotine is similar to two to twelve cigarettes per portion of tobacco used hagar in shisha[6].

Tobacco is oral health enemy number one and it is the root of many oral health problems includes halitosis, staining of teeth and restoration and decreased ability to taste and smell[7]. Sanfaz[8] made a comparison between population of Alexandria governorate in Egypt and Benghazi city in Libya regarding risk indicators for periodontal diseases. Results showed that in both Alexandria and Benghazi, non-smoker had more healthy periodontal tissues (increased percentage of healthy sextants).Also, the possible association of Early Childhood Caries (ECC) with parental smoking[9].

An increasing tobacco use trend is expected to occur among university students. Tobacco may be used to alleviate stress and is related to years of study and peer pressure[10]. Despite the tragic health consequences of using tobacco, health professionals' students (including medical, dental, and others) often fall victim to tobacco use[11]. A study conducted among 400 dental students to assess consumption patterns of smoking and risk factors. They found that higher prevalence of smoking among malethan female students (27.6% and 2.4% respectively) and most smokers used shisha (51.5%) [12].

Three factors knowledge, attitudes and behavior are thought to play a role in determining the extent of tobacco use among patients and help dental clinicians to implement smoking cessation policy. Chowdhury et al[13] showed that 97.3 percent fourth year Bangladeshi dental students supported dentist should give advice on tobacco cessation, and 78 percent felt they should serve as role models.

Guidelines advocate the "5 as" model: Ask, Advise, Assess, Assist and Arrange. Ask and Advise are practitioner-driven procedures. This means that a question regarding tobacco use should be part of the health questionnaire used in the dental office[14]. There are various methods for teaching tobacco interventions to health professions students. Moreover, studies[15, 16] reported that tobacco intervention training lectures, conferences and workshops in private practices to learn more about smoking effects and cessation services to underserved and high-risk smokers.

Many developing countries among which Libya do not have planned curriculum about the effects of tobacco use on oral health and role of dentist in tobacco control accordingly this create barriers for provision of tobacco cessation services in dental setting. Assessing the existing knowledge, attitudes and current practices of tobacco use by the dental students will be useful for designing and development of curriculum that addresses the effects of tobacco use on oral health and the role of dentist in tobacco control. This would favorably impact future dental care in implementing the necessary system change.

AIM OF THE WORK

1. To assess the knowledge, attitudes and practices of dental students in Omer- Almokhter University. regarding the effects of tobacco use on oral health
2. To assess the attitude of dental students regarding the role of dentist in tobacco control.

SUBJECTS AND METHODS

A non experimental, analytical, cross sectional study design was used to collect data from dental students Omer-Almokhter University, regarding the effects of tobacco use on oral health, using a close ended self –administered questionnaire. In 2019, the Faculty of Dentistry had total of162 undergraduate students enrolled in the first to fourth years. Data collection extended over a period of four months from Jun2019 to October 2019. Out of 160 questionnaires distributed, 108questionnaires were returned with most questions answered so that they were considered suitable for analysis.

The first section asked about personal information regarding gender, parent's education and year of study .The Second section explored the level of knowledge and awareness of tobacco effects on oral health. The third section addressed participant attitude using three point Lickert type scale (agree, neutral and disagree) on items concerning the relation between oral disease and tobacco use, the effectiveness of tobacco counselling in the dental office, and role of dentist in tobacco control. The fourth section asked students to report practices of dental students related to tobacco use including type of tobacco they use. In the fifth section students were asked about their sources of information regarding effects of tobacco use on oral health.

ETHICAL CONSIDERATION

The verbal consents of participants were taken after explaining the purpose of the study and assuring them that anonymous to gain participants' trust and confidence as well as to encourage them to share information.

STATISTICAL ANALYSIS

Analysis of data was done by using SPSS, (Statistical Package for Social Science) for windows; version 22.0[17]. Descriptive statistics were calculated as percent for the qualitative variables.

RESULTS

According to demographic data collected questionnaire (Table 1), a significantly higher proportion of female's dental students comparing to males82.4% and17.6%respectively. Most students had fathers who were university graduates (93.5%). Concerning the grade distribution, 34.3% were in first grade and 16.7% in second grade, while 26.9% were in third grade, 22.2% in fourth grade. Only 3.7% students reported that they were tobacco users(Figure 1).When students were asked about their knowledge about tobacco types, out of all students, 91.7% knew that tobacco is present in cigarette, 5.9% in cigar and 2.8% present in cigarette, pipe, and shisha. 74.1% did know what smokeless tobacco is (Table 2). Most of students knew that tobacco causes dental stain (100%), malodour (93.5%), and periodontal disease (98.1%). In addition, 97.2% knew tobacco causes oropharyngeal cancer and delayed wound healing 97.2%, while, 61% did not know that tobacco causes Implant failure (Table 3).

The main source wasfrom high school (67.6%) followed by formal education at faculty (28.7%), and 24.1% from the media. Health care professional had a relatively minor role (13.9% from physician and 5.6% from dentists).The majority of students needed more knowledge (95.4%).The methods preferred by students to gain more knowledge were the media (26.9%), workshops in the faculty (13.9.4%), conferences (13.0%) and 15.7% from formal courses respectively (Table 4).

Most dental students agreed that tobacco is a risk factor causes oral diseases (97.2%), that quitting is very important (100 %) and 95.4% agreed that tobacco must banned in public places, while 94.4% agreed that negative smoking could cause chronic disease to non smokers. Few students (9.3%) agreed that chewing tobacco is more harmful than smoking, while only 9.3% agreed that shisha is less harmful and addictive than smoking (Table 5).91.7% agreed that dentist has to ask his patient if he/she smokes and 92.6 % agreed that dentist has an important role in tobacco control.

Most students agreed that routine dental visit is important for tobacco users (90.7%) and 91.7% agreed that dental office is a suitable place to receive advice about the dangerous effects of tobacco(Table 6).69.8% Students from third grade and fourth grade always asked their patients if they smoke, while only 5.5% sometimes did so, and 24.5% never asked. Fifth percent always gave patients advice to quit smoking, and 20.8% sometimes gave this advice.

Table (1): Percentage of study sample according To gender, grade and nationality

Variables		N	%
Gender	Males	19	17.6
	Female	89	82.4
Father education	High school	7	6.5
	University degree	101	93.5
Grade	1st grade	37	34.3
	2nd grade	18	16.7
	3rd grade	29	26.9
	4th grade	24	22.2

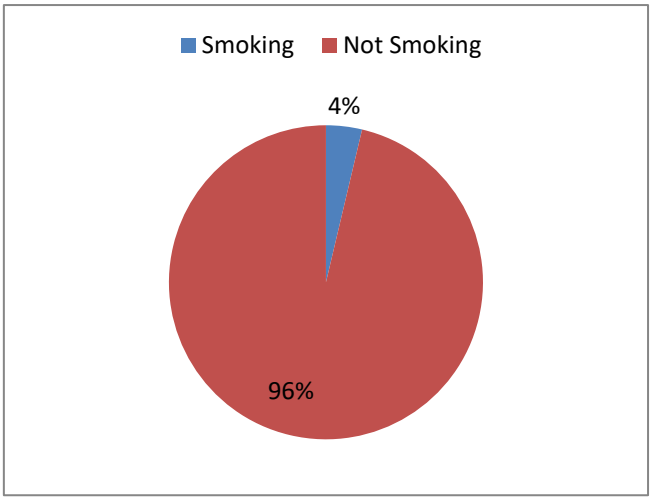

Figure (1) Percentage of Cigarettes smoking among dental students.

Table (2): Percentage of dental students regarding their knowledge of some tobacco facts

Knowledge question	Answers	N	%
Where is tobacco present?	Cigarette	99	91.7
	Cigar	6	5.9
	All	3	2.8
What is Smokeless tobacco?	Chewing tobacco	80	74.1
	Hold tobacco	12	11.1
	Both	6	14.8

Table (3): Percentage of dental students regarding their knowledge about tobacco effects on health of oral cavity.

Tobacco effect	Yes		No		Do not know	
	N	%	N	%	N	%
Malodour	101	93.5	6	5.6	1	0.9
Dental stain	108	100	0	0	0	0
Periodontal disease	106	98.1	0	0	2	1.9
Oropharyngeal cancer	105	97.2	0	0	3	2.8
Fungal infection	94	87	1	0.9	13	12
Delay wound healing	105	97.2	1	0.9	2	1.9
Tooth loss	99	91.7	2	1.9	7	6.5
Implant failure	41	38	1	0.9	66	61.1
Caries experience in primary and permanent teeth	96	88.9	10	9.3	3	1.9

Table (4): Sources of knowledge about effects of tobacco and the Methods by which students preferred to gain more knowledge

Statement		N	%
Sources of knowledge about tobacco effects	Media	26	24.1
	Self learning	25	23.1
	Faculty	31	28.7
	High school	73	67.6
	Physician	15	13.9
	Dentist	6	5.6
Need more knowledge	Yes	103	95.4
	No	3	2.8
Methods by which students prefer to gain more knowledge	Media	29	26.9
	Workshops in the Faculty	15	13.9
	Conferences	14	13.0
	Formal courses	17	15.7

Table (5): Distribution of dental students regarding their attitude towards tobacco effects.

Statement	Agree		Disagree		Neutral	
	N	%	N	%	N	%
Tobacco is a risk factor for oral disease	105	97.2	0	0	3	2.8
Tobacco quitting is very important	108	100	0	0	0	0
Tobacco should be restricted in public areas	103	95.4	5	4.6	0	0
Negative smoking can cause chronic disease to non smoker	102	94.4	2	1.9	4	3.7
Sharing Shisha	50	46.3	58	53.7	0	0
Chewing tobacco is more harmful than smoking	10	9.3	82	75.9	16	14.8
Waterpipe (Shisha) is less harmful than some other tobacco products	10	9.3	93	86.1	5	4.6

Table (6): Attitude of dental students regarding role of dentist in tobacco control

Statement	Agree		Disagree		Neutral	
	N	%	N	%	N	%
Dentist has to ask his patient if he/she smokes	99	91.7	9	8.3	0	0
Dentist has important role in tobacco control	100	92.6	4	3.7	4	3.7
Routine dental visit important for tobacco users	98	90.7	1	0.9	9	8.3
Dental office is a suitable place to receive advice about the harmful effects of tobacco	99	91.7	5	4.6	4	3.7

Table (7): Practice of dental students regarding tobacco control (third and fourth grade dental students only).

Questions and responses		N	%
Do you ask patients if they smoke? (N=53)	Yes, always	37	69.8
	Yes, Sometimes	3	5.5
	No, never	13	24.5
Do you give patients advice to quit smoking? (N=53)	Sometimes	11	20.8
	Always	30	56.6
	Not my work	4	7.5
	Advise and not responded	5	9.4
	Cannot do	3	5.7

DISCUSSION

Tobacco usage is a global concern and it is essential to limit its usage and increase effectsawareness among patients. Involvement dental professionals' in tobacco cessation will help their patient quitting. The present study assessed knowledge, attitude and practices of dental students of Omer-Almokhter University regarding the effects of tobacco use on oral health, as well as their attitude towards the role of dentist in tobacco control using ended self –administered questionnaire. Among the limitations encountered by the investigator was receiving in completed data sheets, which was mainly due to insufficiency time. This was expressed by number of students who were frustrated as they felt that filling in questions would interfere with their class activities. Also the result of this study may not reflect the actual practices of the students because of measurement errors due to reliance on self-reporting of practices. In the present study, regarding knowledge about tobacco effects. The majority (91.7%) were well informed that tobacco is present in cigarettes, which is consistent with findings from a study in India where the knowledge was much higher about smoking tobacco than about smokeless tobacco products[19]. This might be explained by the assumption that smoking is a more common form of tobacco use than smokeless tobacco.

A considerable percentage of dental students demonstrated adequate knowledge about the association between oral health disease and smoking. Almost all students knew that tobacco causes dental stain (100 %) and periodontal disease (98.1%), which is consistent with other studies [19, 20, 21] reporting similar findings. In contrast, lower knowledge levels were reported by the study sample regarding tobacco relation to implant failure (38%). The same findings were by the study sample reported by Jordanian dental students[22].

The main source was from high school (67.6%) followed by formal education at faculty (28.7%), and 24.1% from the media. These findings in disagreement with study in India Only (8.5%) of surveyed students had received smoking control instruction during their training[19]. In addition, the majority of students (95.4%) in the present study (Table 4) needed more knowledge and wished to receive information about tobacco cessation counselling through workshops in the faculty. This is similar to the study by Katarina K et al [(20)] who revealed that many dental students were interested in receiving tobacco cessation information. In contrary to our findings a study on students from medical and dental colleges in different regions of Saudi Arabia, reported that high proportion of students (74.7 %) fully confident about having the knowledge regarding harmful effects of smoking[21].

Most dental students agreed that tobacco is a risk factor for oral diseases 97.2 %.A higher prevalence of this attitude was reported in the present study compared to the study of Komu et al[23] who reported lower prevalence (34%) amongst the four student groups (Dental, Medical, Nursing and Pharmacy) regarding their attitudes that tobacco causes severe oral and systemic effects. It is suggested that based on previous findings relevant to knowledge about tobacco facts, attitude of dental students towards risk of tobacco on oral health will be positively affected which explains the high prevalence findings. It was encouraging to see that only 9.3% of students agreed that shisha is less harmful than other tobacco products. This is much better than the findings of Suhair et al [22]who reported one third of students agreed with the statement.It is assumed that the low prevalence level in present study might be attributed to their adequate knowledge about harmful effects of water pipe.

According to reviews of fourteen studies, dental patients who received tobacco cessation in the dental office were more likely to quit tobacco and remain abstinent after six months than patients who received no counseling[24]. One of the objectives of the present study was to detect the attitude regarding the effectiveness of the dentist as tobacco use cessation counsellors. The majority (92.6 %) agreed that dentist has an important role in tobacco control. Similarly, findings from other studies agreed that all members of health profession have a duty to promote oral, general health and healthy lifestyles among their patients[20-22]. These findings in disagreement with study by Uti et al[25]. Reported that low proportion of Nigerian dental students' attitudes and perceptions to smoking cessation activities.

The results from many studies suggested that dental professionals might be effective for helping tobacco users to quit smoking[14, 15, and 24]. Concerning behaviours related to tobacco cessation, 69.8% students in the present study reported favourable practices such as asking their patients

about smoking status. A study conducted in Nigeria[26] reported that higher proportion of dental students routinely take history of tobacco use and give advice patient who smoke to quit compared to the present study. The findings might be explained that it is not worth discussing tobacco use with patients since most people already known they should quit.

The prevalence of tobacco use among health care providers varies widely[15, 26]. In the current study sample, the majority of students were not tobacco users (96%).Compared to other countries; these reported smoking rates of AL-Bayda dental students are substantially low. For example, among 547dental students in Jordan, 54.8 % was smokers [22] and in Croatia dental school, the smoking prevalence was 39, 6%[20]. The explanation for this lower prevalence in this current study might be due to the fact that many students refused to tell the truth about their tobacco practice, especially females because of culture, customs and traditions.

The findings of the present study suggest that it is imperative to encourage dental health professionals to provide their patients with information concerning the negative health consequences of smoking and to motivate them to help their smoking patients quit. There is a responsibility on dental students to act as role models in the promotion of a tobacco free life style which could be achieved through training students in intervention techniques and implementing tobacco cessations strategies. It is also recommended that further studies should include Biophysical measurements such as serum cotinine or expired carbon monoxide levels to justify the validity of the above findings.

CONCLUSIONS

There is a need that all health professional including dentists and dental students should play an important role in educating about smoking cessation and counselling techniques that motivate their patients' quit smoking.

RECOMMENDATIONS

1- The University must enforce the already existing antismoking policy and students should be made aware of this policy.
2- Education about tobacco effects necessity involved in the curriculum from first year.
3- Students should be given training about smoking cessation and counselling techniques and must be motivated to play their role in patients' education regarding smoking.
4- Biophysical measurement such as such as serum cotinine or expired carbon monoxide levels should be included in future studies to justify the validity of the results.

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