

Smoking Among Dental Students

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Abstract. Tobacco use remains one of the leading causes of preventable morbidity and mortality worldwide, contributing to millions of deaths annually. Dental students, as future healthcare providers, play a crucial role in tobacco prevention and cessation; however, high smoking prevalence among them raises concern about their readiness to serve as health advocates. Despite global research, little is known about the prevalence, patterns, and determinants of smoking among dental students in Iraq, particularly regarding their knowledge and attitudes toward cessation. This study aimed to investigate the prevalence of tobacco use, identify associated risk factors, and evaluate dental students' knowledge and attitudes toward smoking and cessation. A cross-sectional survey of 250 students revealed a smoking prevalence of 37%, with a significant gender disparity (36% among males vs. 1% among females). Cigarettes (66%) and shisha (62%) were the most commonly used tobacco products. Stress (55%) and enjoyment (55%) were the leading reasons for smoking initiation, followed by addiction (28%) and peer pressure (14%). No significant reduction in smoking rates was observed with increasing age or academic level. Two-thirds of students reported that the dental curriculum inadequately addressed smoking cessation. This is among the first studies to systematically assess smoking behavior and cessation knowledge among Iraqi dental students, highlighting gaps in education. The findings emphasize the urgent need to integrate comprehensive tobacco education and cessation training into dental curricula to empower students as effective public health advocates.

Highlights:

1. Smoking prevalence among dental students reached 37%, with a stark gender difference (36% males vs. 1% females).
2. Cigarettes (66%) and shisha (62%) were the most commonly used tobacco products.
3. Stress and enjoyment were the main reasons for smoking initiation (55% each), while two-thirds of students felt their curriculum lacked adequate smoking cessation education.

Keywords: Tobacco use; Dental students; Smoking prevalence; Cigarettes; Shisha; Stress; Smoking cessation; Iraq

Introduction

In 2003, Palmer demonstrated that tobacco use is linked to a wide range of diseases, including stroke, coronary and peripheral artery disease, gastric ulcers, and cancers of the oral cavity, pancreas, lungs, and bladder. It has also been acknowledged that tobacco use contributes to periodontitis, influencing the prevalence, extent, and severity of the condition.

Tobacco use is also a contributing factor to increased pocket depth, alveolar bone loss, loss of periodontal attachment, and a higher rate of tooth loss caused by periodontal disease. Over 8 million deaths are attributed to tobacco use each year, according to the World Health Organization. Of these, 7 million are directly caused by tobacco use, and 1.2

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million are caused by secondhand smoke exposure [1].

Furthermore, the tobacco industry views students and teenagers as a key target because of the psychological, physical, interpersonal, and emotional ties that influence tobacco use among students.

Numerous studies have indicated that nearly all tobacco use begins during childhood and adolescence. About 88% of daily adult cigarette smokers report starting by the age of 18. This period of life is heavily influenced by social factors, including tobacco product advertising in glossy magazine ads, youth-driven posts on social media, and portrayals of smoking in films, all of which make tobacco use seem more appealing to teenagers and young adults [2].

Tobacco use is often considered to be a personal choice, because of addictiveness of nicotine which present in tobacco many of tobacco users when they want to quit they find it difficult to stop [3].

Health professionals should provide pharmacotherapy connected with tobacco users to provide counseling for patients which help them quit smoking because encourage of health professionals .

Compared to other healthcare practitioners, dentists are frequently able to identify intraoral symptoms including foul breath, tooth stains, and problems with oral hygiene early. They can therefore play a vital role in providing preventative treatment and are uniquely positioned to identify smokers [4].

As a result, dental practitioners are now more involved in anti-smoking efforts that try to lessen the negative effects of smoking due to their increased awareness of tobacco usage and the different stopping techniques available [5].

Regular dental clinic patients frequently don't talk much about tobacco usage and the risks it entails with medical staff. Oral healthcare providers' lack of awareness and confidence in providing preventative treatment, together with patients' lack of time and knowledge, are the causes of this [6].

A plan that improves tobacco cessation education and counseling and incorporates dental practitioners in anti-smoking prevention programs should be implemented in order to close this communication gap [7].

It is recommended that the dental education curriculum be adequately modified to enhance dentists' involvement in smoking cessation. Dentists need education to improve their knowledge and skills, and to develop positive attitudes toward tobacco cessation counseling (TCC) [8].

While most dental students recognize that TCC is part of a dentist's responsibilities, the lack of patient motivation remains a significant barrier to its effectiveness. The educational period is considered the ideal time to train students in providing TCC before they enter the workforce.

The World Dental Federation (WDF) has provided guidelines for graduating dentists on how to identify and address smoking habits [9].

The knowledge, attitudes, and behaviors of dental students toward smoking play a crucial

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role in tobacco control performance [10] . This study aims to assess the type and prevalence of tobacco use among dental students, evaluate their current knowledge and attitudes toward smoking and cessation, and identify the causes or risk factors that contribute to smoking initiation.

Materials and Methods

A study was conducted by 5th class dental students for the first batch of Ibn Sina University as a research project by submitting a questionnaire to the students as a sample to obtain the goal of the study. The questionnaire was presented at the times of their lectures and at times of rest. The questionnaire was submitted regardless of gender and the academic stage. The questionnaire was collected from four different universities, Ibn Sina, Al-Farabi, Al-Farahidi, and Al- Mustansiriya, where the questionnaire included several questions written in the Arabic language as the questions included at the beginning of the person first knowing whether or not he was a smoker, as well as the reason for smoking, the purpose of it, the period of repetition, the reasons that led to it, and why they are unable to quit although he is known to be completely damaging, smoking habits were classified in the questionnaire as a smoker, current smoker, or ex-smoker, and the case was assessed.

The survey asked students to indicate whether they began smoking before or during their university studies, the duration of their smoking habit in years, and the types of tobacco they used (cigarettes, hookahs, pipes), along with the frequency (daily or weekly). Students also asked to specify their preferred smoking reasons and the locations behind their initiation of smoking, such as peer influence, parental smoking, stress, amusement, experimentation, boredom, or a desire to enhance their appearance. Information was gathered on the smoking habits of parents and friends, their views on passive smoking in public spaces, and the role of dentists in helping patients quit smoking. The survey also assessed the adequacy of current dental approaches to addressing tobacco use. The data was organized in tables to calculate the required proportions.

Result

Out of 250 dental students, 78 students responded to the purpose of conducting studies, of whom 59 were male and 19 females, the results showed that the smoking rate among males (36%) exceeded the smoking rate among females (1%). Two age groups were taken for the study, and the results show that the age group Between 18- 21, which included most of the first, second, and third stage includes more smokers (19%) than those who are over the age of 21, (18%)and that included the last stages of the dental student (the fourth and fifth stages), table-1.

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Table-1: Distribution of the sample according to smoking status

Parameter	Smoker		Non-smoker		Total
	No.	%	No.	%	
Age					
(18-21)	14	18%	32	44%	46
>21	15	19%	17	22%	32
Gender					
male	28	36%	31	40%	59
Female	1	1%	18	23%	19
Stage					
(1-3)	15	19%	32	41%	47
(4-5)	14	18%	17	22%	31
Former smoker	1	1%	77	99%	78

The results show most smokers used cigarettes 66% and shisha 62% followed by cigars 21% and pipe 10%, table-2.

Table-2: Frequency and percentage of smoking sources

Smoking source	No.	%
Cigarette	19	66%
Shisha	18	62%
Pipe	3	10%
Cigar	6	21%
Others	0	0

The result also shows the stress and enjoyment have a high percentage in main causes of smoking (stress and enjoyment 55%) and show the addiction 28 %, peer pressure 14%, show off 7% (Table-3).

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Table-3: Frequency and percentage of factors that prevent quitting smoking

Factors	No.	%
Stress	16	55%
Addiction	8	28%
Peer pressure	4	14%
Show off	2	7%
enjoyment	16	55%
Others	0	0

Discussion

The purpose of this cross-sectional study was to determine the prevalence of smoking among Ibn Sina University dental students and to find any risk variables associated with tobacco use. The general population's smoking behaviors are reflected in the dentistry community sample, indicating that personal behavior is not significantly influenced by medical and dental schooling. Overall, 37% of the students who responded to the poll said they now smoke, which is a comparatively high rate considering that they work in healthcare. Similar smoking rates have been noted among medical students; research by Al-Kaabba and Al-Haqwi [11] [12] revealed that among medical students in Riyadh, smoking rates were 18% and 19%, respectively.

The smoking rates of male (36%) and female (1%) dentistry students were significantly different, which is in line with other research Al-Haqwi and Al-Kaabba[13]

The societal disapproval of female smoking, especially in conservative cultures like Iraq, may be the reason for lower smoking rates among female dental students. The high rate of smoking among male dentistry students may have detrimental effects on future dentists' health as well as patient care because smokers may not be motivated to counsel patients to quit[14].

Interestingly, no significant decline in smoking rates was observed among male students as they got older (18-21 years at 18% vs. >21 years at 19%), nor did smoking rates decrease as students advanced in their studies (19% in the first three years vs. 18% in later years). In contrast, some studies have reported lower smoking rates among junior dental students compared to seniors[15]

This trend may be attributed to personal stress from academic and emotional pressures, as well as societal factors like financial stress, family responsibilities, and the lack of smoking cessation education in the dental curriculum.

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The study found that cigarette smoking (66%) was more common than shisha smoking (62%), likely because cigarettes are quicker and easier to smoke, while hookah requires more time and preparation. Other research has also shown a preference for shisha smoking among both the general public and health students. For example, Memon et al. (2000) found that 57% of men and 69% of women in Kuwait had tried shisha at least once. Shisha smoking has become more popular due to its pleasant taste and aroma, with many users mistakenly believing it is less harmful than cigarette smoking. However, studies suggest that shisha smoking may pose different cancer risks because of the various types of tobacco used [16]

The study found that the percentage of students smoking pipe (10%) and cigars (21%) was lower, likely due to the higher cost of these products compared to cigarettes and the specific tobacco required for pipe smoking. Stress as the main reason they started smoking in half of the current smokers, which is consistent with findings from other studies [17]. Stress-related issues among dental students have been extensively documented, with some studies highlighting stress as a significant barrier preventing medical students from quitting smoking [18].

The study also found that 21% of students viewed smoking as a form of entertainment, though it is likely that these students had become addicted, making it hard for them to see smoking as just a recreational activity.

Having friends who smoke was also identified as a contributing factor to students' smoking habits, with 5% of students reporting this as a reason for smoking. Similar findings have been observed in Saudi Arabia, where the presence of friends who smoke increased the likelihood of smoking among medical students [19]. Additionally, 2% of students indicated that smoking was a way to show off socially.

Studies on dental students' attitudes toward smoking cessation in dental settings generally show positive results [20]

These findings underscore the importance of dental schools in training dentists who are preventive-oriented. Public health policies and legislation to control smoking should also be included in dental education, as active participation in tobacco cessation programs is essential. Many patients who smoke want to quit but struggle due to a lack of guidance on how to do so [21].

The study revealed that two-thirds of dental students felt that their college curriculum did not sufficiently address public tobacco use and that specialized training in tobacco cessation was necessary. This highlights a gap between students' understanding of the health risks of tobacco and their education in smoking cessation counseling [22]

Conclusion

A key objective of this study was to emphasize the prevalence of smoking among dental students. The conclusions drawn from the study's findings are as follows:

1. The rate of tobacco use is relatively high among dental students, despite their knowledge, age, and level of education.
2. Smoking remains socially unacceptable for women.

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3. Shisha and cigarettes are the most commonly used forms of tobacco among dental students.

Recommendations

It is essential to implement extra coping mechanisms to assist students in managing the pressures of their coursework and raise awareness of the addictive nature of tobacco usage. Students will be better equipped to handle demands in and out of their academic lives as a result. Introducing awareness talks and debates in the early years of dental school would be the most efficient method to do this. In addition to training to improve skills and knowledge in smoking cessation counseling, tobacco control programs are required to reduce or prevent tobacco use among aspiring dentists.

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