

Does the Dental School Environment Help Increasing Student Smoking?

Fawaz Alhoudy^{1*}, Mohammed Khawaji¹, Abdulmajeed Alqahtani¹, Abdullah Almane¹ and Ahmed Alomar²

¹College of Dentistry, King Saud University, Saudi Arabia

²Associate Consultant Oral and Maxillofacial Surgery, King Saud University, Saudi Arabia

***Corresponding Author:** Fawaz Alhoudy, College of Dentistry, King Saud University, Saudi Arabia.

Received: May 29, 2020; **Published:** June 16, 2020

Abstract

This study was conducted to identify the prevalence of smoking, types of smoking, consequences of stress and stress relievers among undergraduate dental students and interns at dental schools in Riyadh during the different years of study. A cross-sectional study was conducted using a self-administered questionnaire. A 235 responses were obtained. The results of the questionnaire reveal the prevalence of smoking among dental students and interns was 43.8%. The most common type of smoking among students was the Cigarettes. No significant physical problems were reported as consequences of smoking.

Keywords: Dental Students; Stress; Smoking; Dentistry

Introduction

Stress is defined as “pressure or worry caused by problems in somebody’s life” (Hornby, 2010). Dental practice has long been associated with high levels of occupational stress; it seems to appear during dental school and manifest differently during different years of study.

Despite knowing the harmful effects of active smoking and secondhand smoke exposure, dental students nevertheless smoke in high numbers [1,2].

Smoking is currently considered a silent pandemic, one dies in every 10 adults worldwide. If the current pattern persists, smoking will be responsible for the death of 10 million people per year by the year 2020 [3]. Several diseases such as lung cancer, heart, respiratory diseases and cancer cases are identified to be caused by a major risk factor, which is smoking [4,5]. Psychiatric disorders such as depression and schizophrenia are related to smoking [6,7]. College is considered a critical time of vulnerability for the onset of smoking [8,9]. Several studies showed a prevalence of smokers ranging from 8.5% 52.5% among undergraduate students, with lack of physical activates alcohol consumption and stress, among others, being considered as associated factors [10-13].

Smoking rates among third year medical students vary across countries, from 5% to more than 40%. In over half of the countries surveyed, more than 20% of students in the healthcare professions currently smoked cigarettes [14]. In addition, about 70% of students reported exposure to secondhand smoke in public spaces [7]. Similar results also were reported among third-year dental students around the world [15].

Many studies report the prevalence of smoking but research on predictors of smoking among students in the healthcare professions is deficient [7-16].

We assessed age of smoking initiation, duration of tobacco use (in years), types of tobacco used (such as Electronic cigarette, Shisha and cigarettes), frequency of tobacco use (Less than a bucket per day, A bucket per day, More than a bucket per day) [17].

Methodology

Study design

This is a cross-sectional questionnaire-based online survey targeting undergraduate dental students and interns in Riyadh dental schools.

The questionnaire will be distributed in English format throughout the social media platforms in order to gain as many respondents as possible. The questions will be formulated to state wrong and correct facts to adequately analyze the prevalence, and the consent of the respondents will be based on their approval to initiate and complete the online questionnaire.

The questionnaire will be distributed manually and online through Google forms.

Inclusion criteria:

1. Male dental students inside Riyadh.
2. Undergraduate dental students, interns.

Exclusion criteria:

1. Female dental students outside Riyadh.
2. Post-graduate dental students and specialists.

The study questionnaire

Does the dental school environment help increasing student smoking?

Are you a smoker?

No

Yes

Which year you are?

1st year

2nd year

3rd year

4th year

5th year

Intern

Current GP:

3>

4.5>

4.5<

4>

The first smoke was:

1st year

2nd year

3rd year

4th year

5th year

Intern

Before joining the dental college

Type of smoke?

Cigarettes

Shisha

Electric cigarette

More than one type

Does it increase with time?

Yes

No

If your answer was (Yes) in the previous question. What is the frequency?

Less than a bucket per day

A bucket per day

More than a bucket per day

Which one is the major reason behind your smoking?

Exams

Patient management

Clinical performance

None

Does it increase during exams periods?

Yes

No

Do you think the dental school environment is a major predisposing factor for smoking?

Yes

No

Have you noticed any side effects after smoking (extra/intra orally)?

Yes

No

Data collection

Due to Poor response on online survey, which was, about 50 responses, Paper survey was disrupted in addition to gain the largest number; each college was given 70 papers for standardization to minimize bias.

Data analysis

Data were analyzed using SPSS 24.0 version statistical software. Descriptive statistics (frequencies and percentages) were used to describe the categorical study variables. Pearson's Chi-square test was used to compare the distribution of responses across the categorical study variables. A p-value ≤ 0.05 was used to report statistically significant of results.

Results

Out of 450 targeted study subjects from dental schools for this study, 235 (52.2%) had responded positively to participate in this study. The prevalence of smoking was 43.8% (103 out of 235).

The comparison of academic characteristics among smoking subjects shows statistically significant difference in the prevalence of smoking in relation to the year of study, in which the prevalence of smoking habit is significantly higher among the dental students of 3rd year and 5th year followed by interns ($p < 0.0001$). Also the 23.3% of dental students with higher GPA (4.5 to 5) were having smoking habit

when compared with higher proportion of dental students (36.9% and 30.1%) with GPA of 3.5 to 4 and 4 to 4.5 were having smoking habit which is statistically significant ($p < 0.0001$) (Table 1). The prevalence of smoking is 43.8%. (103 out of 235).

| Characteristics | No. (%) | X ² -value | p-value |
|----------------------|-----------|-----------------------|----------|
| Year of study | | | |
| 2 nd year | 2 (1.9) | 38.99 | < 0.0001 |
| 3 rd year | 34 (33) | | |
| 4 th year | 10 (9.7) | | |
| 5 th year | 33 (32) | | |
| Intern | 24 (23.3) | | |
| Current GP | | | |
| < 3.5 | 10 (9.7) | 44.52 | < 0.0001 |
| 3.5 to 4 | 38 (36.9) | | |
| 4 to 4.5 | 31 (30.1) | | |
| 4.5 to 5 | 24 (23.3) | | |

Table 1: Comparison of distribution of academic characteristics of among dental students who smoke (n = 103).

The comparison of characteristics of smoking (time to first smoke, type of smoke, frequency of smoking, does increase with time and does it increase during exam period) indicates statistically significant difference its distribution. That is higher proportion of dental students (45.6%) started smoking before joining the dental and 21.4% of them during 1st year. About 40.8% of them use cigarettes in their smoking followed by shisha, electric cigarettes and 27.2% of them use all types in their smoking. The data shows statistically significant difference in the frequency of smoking, where 45.6% of them had frequency of ‘a pocket, 38.2% of them use less than a pocket and only 16.2% of them use more than a pocket. A significant proportion of dental students (66%) had responded positively to the statement that smoking habit increases with time and also 76.7% had agreed that smoking habit increases during the exam period (Table 2).

| Characteristics | No. (%) | X ² -value | p-value |
|--|-----------|-----------------------|----------|
| Time of First smoke | | | |
| Before joining the dental school | 47 (45.6) | 75.43 | < 0.0001 |
| 1 st year | 22 (21.4) | | |
| 2 nd year | 14 (13.6) | | |
| 3 rd year | 11 (10.7) | | |
| 4 th year | 7 (6.8) | | |
| 5 th year | 2 (0.9) | | |
| Type of smoke | | | |
| All | 29 (27.2) | 18.05 | < 0.0001 |
| Cigarettes | 42 (40.8) | | |
| Electric cigarettes | 13 (12.6) | | |
| Shisha | 20 (19.4) | | |
| Frequency of smoking | | | |
| A pocket | 31 (45.6) | 9.56 | 0.008 |
| Less than a pocket | 26 (38.2) | | |
| More than a pocket | 11 (16.2) | | |
| Does is increase with time | | | |
| Yes | 68 (66) | 10.57 | 0.001 |
| No | 35 (34) | | |
| Does it increase during exam period | | | |
| Yes | 79 (76.7) | 29.37 | < 0.0001 |
| No | 24 (23.3) | | |

Table 2: Comparison of distribution of characteristics of smoking among dental students (n = 103).

The comparison of distribution of reasons towards smoking among students shows statistically significant difference, where 35% had mentioned “exams” was the reason and 41.7% of them stated as “no reason” for smoking. A statistically significant higher proportion (77.7%) of dental students had responded positively to the statement “Do you think dental school environment is a major predisposing factor for smoking? whereas no statistically significant difference was observed in the binary response (Yes/No) among the dental students to the statement “ have you notices any physical or dental side effects after smoking” (Table 3).

| Items of Reasons | No. (%) | X ² -value | p-value |
|---|-----------|-----------------------|----------|
| Which is the Major reason behind smoking? | | | |
| Clinical performance | 10 (9.7) | 30.63 | < 0.0001 |
| Exams | 36 (35) | | |
| Patient management | 14 (13.6) | | |
| None | 43 (41.7) | | |
| Do you think dental school environment is a major predisposing factor for smoking? | | | |
| Yes | 80 (77.7) | 31.54 | < 0.0001 |
| No | 23 (22.3) | | |
| Have you notices any physical or dental side effects after smoking | | | |
| Yes | 44 (42.7) | 2.18 | 0.139 |
| No | 59 (57.3) | | |

Table 3: Comparison of distribution responses towards responses of reasons behind smoking among dental students.

Discussion

This study aimed to see the relationship between smoking and dentistry in 5 dental schools in Riyadh, the overall smoking prevalence among undergraduate dental students and interns was estimated at 43.8%, but the prevalence was much higher among 3rd and 5th year undergraduate dental students compared to the other years, A recent literature review of smoking done by Ahmed Mandil., *et al.* [18] confirmed that smoking cigarettes is the most common smoking type to be used and also confirmed that the year of study plays a major role for either initiating or increasing the smoking among undergraduate dental students [18]. And in this study we found that 45.6% to smoke a single pocket per day which opposites another study done by Granville-Garcia., *et al.* that stated most of them were using less than a pocket 56.3% [19] and in this study it was seen that 45% started smoking after joining dental programs which is matched with another study done by Ameerah Y Mansour in Saudi Arabia [20] and the same study confirmed that students with higher GPs smoke less compared to those with lower GPs [20] another study done by Wakgari Deressa and Aklilu Azazh agreed that smoking is increased with time [21]. And stress was found to be the main reason behind either initiating or increasing smoking which corresponds to a study done by done by Granville-Garcia., *et al* [19]. In this study it was seen that 77% believe that dentistry is a major predisposing factor for smoking and that is confirmed by another study done by Abdullah S AlSwuailem., *et al* [22].

Conclusion

Despite possessing knowledge about health risks of smoking, large numbers of dental students continue to smoke and believe that the dental school environment does play a major role for either starting or increasing smoking. A further expansion for this study to include all the dental schools in Saudi Arabia is needed.

Acknowledgement

Special thanks for the respondents, who kindly gave their response and guidance for completing our survey.

Bibliography

1. Siddiqui Saima and Danny O Ogebeide. "Profile of smoking amongst health staff in a primary care unit at a general hospital in Riyadh, Saudi Arabia". *Saudi Medical Journal* 22.12 (2001): 1101-1104.]
2. Smith Derek R., et al. "Tobacco smoking among doctors in mainland China: a study from Shandong province and review of the literature". *Tobacco Induced Diseases* 10.1 (2012): 14.]
3. Zanini Roselaine Ruviano., et al. "Prevalência e fatores associados ao consumo de cigarros entre estudantes de escolas estaduais do ensino médio de Santa Maria, Rio Grande do Sul, Brasil, 2002". *Cadernos de Saúde Pública* 22 (2006): 1619-1627.]
4. Deheinzelin Daniel., et al. "The level of nicotine dependence is an independent risk factor for cancer: a case control study". *Clinic* 60.3 (2005): 221-226.]
5. Oliveira AF, et al. "Aspectos da mortalidade atribuível ao tabaco: revisão sistemática". *Revista de Saúde Pública* 42.2 (2008): 335-345.]
6. Malbergier André and Hercílio Pereira da Oliveira Jr. "Dependência de tabaco e comorbidade psiquiátrica". *Archives of Clinical Psychiatry (São Paulo)* 32.5 (2005): 276-282.]
7. Silva Leonardo VE., et al. "Fatores associados ao consumo de álcool e drogas entre estudantes universitários". *Revista de Saúde Pública* 40.2 (2006): 280-288.]
8. Andrade Ana Paula Alves de., et al. "Prevalência e características do tabagismo em jovens da Universidade de Brasília". *Jornal Brasileiro de Pneumologia* 32.1 (2006): 23-28.]
9. Wagner Gabriela Arantes., et al. "Alcohol and drug use among university students: gender differences". *Brazilian Journal of Psychiatry* 29.2 (2007): 123-129.]
10. Silva Antonia Oliveira., et al. "Tabaco e saúde no olhar de estudantes universitários". *Revista Brasileira de Enfermagem* 61.4 (2008): 423-427.]
11. Rodrigues., et al. "Nível de atividade física e tabagismo em universitários". *Revista de Saúde Pública* 42 (2008): 672-678.]
12. Tavares Beatriz Franck., et al. "Fatores associados ao uso de drogas entre adolescentes escolares". *Revista de Saúde Pública* 38 (2004): 787-796.]
13. Franca Carolina da and Viviane Colares. "Comparative study of health behavior among college students at the start and end of their courses". *Revista de Saude Publica* 42 (2008): 420-427.]
14. Warren Charles W., et al. "Tobacco use, exposure to secondhand smoke, and cessation counseling among medical students: cross-country data from the Global Health Professions Student Survey (GHPSS), 2005-2008". *BMC Public Health* 11 (2011): 72.
15. Warren Charles W., et al. "Tobacco use, exposure to secondhand smoke, and cessation counseling among medical students: cross-country data from the Global Health Professions Student Survey (GHPSS), 2005-2008". *BMC Public Health* 11.1 (2011): 72.]
16. Wali Siraj O. "Smoking habits among medical students in Western Saudi Arabia". *Saudi Medical Journal* 32.8 (2011): 843-848.]

17. Gharaibeh Huda., *et al.* "Knowledge, attitudes, and behavior in avoiding secondhand smoke exposure among non-smoking employed women with higher education in Jordan". *International Journal of Environmental Research and Public Health* 8.11 (2011): 4207-4219]
18. Mandil Ahmed., *et al.* "Smoking among university students: a gender analysis". *Journal of Infection and Public Health* 3.4 (2010): 179-187]
19. Granville-Garcia and Ana Flávia. "Smoking among undergraduate students in the area of health". *Ciencia and Saude Coletiva* 17.2 (2012): 389-396]
20. Mansour Ameerah Y. "Predictors of smoking among Saudi dental students in Jeddah". *American Journal of Health Behavior* 41.3 (2017): 329-337]
21. Deressa Wakgari and Aklilu Azazh. "Substance use and its predictors among undergraduate medical students of Addis Ababa University in Ethiopia". *BMC Public Health* 11.1 (2011): 660]
22. AlSwuailem., *et al.* "Smoking among dental students at King Saud University: Consumption patterns and risk factors". *The Saudi Dental Journal* 26.3 (2014): 88-95]

Volume 19 Issue 7 July 2020

©All rights reserved by Fawaz Alhoudy., *et al.*