

Smoking cessation programs in Middle Eastern dental schools

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هدفت الدراسة إلى معرفة السياسات المتبعة لإيقاف التدخين في كليات طب الأسنان في الشرق الأوسط بالإضافة إلى تحديد أي مدى يتم تطبيق ذلك في المنهاج التدريسية. أجريت الدراسة من خلال إرسال استبيان إلى ٢٥ من عمداء كليات طب الأسنان جرى تحديدهم من الموقع الإلكتروني للاتحاد العربي لكليات طب الأسنان. بلغت نسبة الاستجابة ٨٠٪، وكانت النتائج على النحو التالي؛ ٥٥٪ اتبعوا سياسة التحذيرات المكتوبة و ٨٥٪ حظر التدخين خارج العيادات أيضاً و ٩٠٪ حظر التدخين في مناطق العيادات و ٥٥٪ حظر التدخين في القاعات العامة. ٥٥٪ تقوم بتدريس الطلاب موضوع التدخين بشكل مناسب. كافة الكليات تطبق سياسة تدريس دور التدخين في السرطانات الفموية وأمراض اللثة والأنسجة الداعمة. و ٧٥٪ حول دورها في فشل الغرسات السنوية. أما فيما يتعلق بعوائق تدريس إيقاف التدخين؛ ٣٥٪ لم تواجه أية صعوبات بينما ٢٠٪ واجهت صعوبات في استيعاب الخطة التدريسية لذلك إضافة إلى فقدان الاهتمام والتدريب. يمكن الاستنتاج بأن لكليات طب الأسنان في الشرق الأوسط دور جيداً في الحملات التثقيفية لإيقاف التدخين لذلك هناك حاجة لتحديد كيفية تطبيق هذه السياسة؟

OBJECTIVES: This study aimed to explore current policies and practices concerning smoking cessation programs adopted by dental schools across the Middle East and to determine the extent of smoking cessation teaching in dental schools. **MATERIALS and METHODS:** A survey questionnaire was e-mailed to the deans of twenty-five dental schools that were identified from the Arab Association of Dental Faculties website. **RESULTS:** The response rate was 80%. Fifty-five percent had written tobacco policies, 85% banned smoking in non-clinical teaching facilities, 90% banned smoking in clinical areas and 55% in public access areas. Fifty-five percent taught students appropriate patient smoking cessation techniques. All schools taught the role of tobacco in oral cancer and periodontal disease aetiology and 75% in osseointegrated implant failure. With respect to barriers limiting the teaching of smoking cessation, 35% had not encountered any obstacles. However, 20% cited social, peer pressure, overloaded curriculum and lack of training and interest. Forty-five percent of respondents stated that there were no planned initiatives to develop smoking cessation techniques within their curricula. **CONCLUSIONS:** It is concluded that Middle Eastern dental schools have identified the role of education in the anti-smoking campaign. However, much still needs to be done on improved approach to policy implementation.

INTRODUCTION

Tobacco is the single most important cause of avoidable and remediable public health problem affecting both morbidity and early mortality worldwide.¹ Every year over 4.9 million deaths are caused by tobacco worldwide. The world Health Organization estimates that by the year 2030, 10 million people will die each year from tobacco use.² Both smokers and non-smokers exposed to environmental tobacco smoke are at risk.³

Apart from the contribution of smoking to the development of lung cancer and cardiovascular disease,⁴ there is weighty evidence that it has a considerable influence on oral health.⁵ Smoking has

many negative effects on the mouth, including staining of teeth,⁶ tongue and dental restorations,⁷ reduction of the ability to smell and taste,⁸ and the development of oral diseases such as smoker's palate,⁹ smoker's melanosis,¹⁰ coated tongue,¹¹ oral candidosis,¹² dental caries,¹³ periodontal disease,¹⁴ implant failure,¹⁵ oral precancer and cancer.¹⁶

Dentists have an important role to play in the anti-smoking campaign and should be well trained in tobacco cessation skills. The onus falls upon dental schools to include in the dental curriculum information about tobacco use, its clinical effects, and ways to help patients quit smoking. In Middle Eastern countries, data concerning the role played by dental

Received 25 June 2006; Revised 3 December 2006
Accepted 6 December 2006
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schools in the implementation of tobacco cessation counseling techniques in their curricula are sparse. This study was conducted to explore current policies and determine the nature of practices concerning smoking cessation teaching adopted by dental schools across the Middle East.

METHODS AND MATERIALS

A self-reported questionnaire was adapted from those designed by McCartan and Shanley,¹⁷ and Bain.¹⁸ The names and e-mail addresses of current deans of dental schools were obtained from the Arab Association of Dental Faculties database. A letter that explained the questionnaire and relevance of the study was e-mailed to all.

RESULTS

Of the 25 dental faculties that were contacted, responses were received from 20, a response rate of 80%.

The first question explored whether the school has a written smoking policy. Of the 20 who responded, 11 reported that there was some form of a smoking policy, and 9 stated that there was no policy. Smoking was prohibited in all designated areas within the premises of 9 dental schools, more specifically, 6 participants responded that smoking was not allowed in any part of the school, while in 3 smoking was prohibited in private offices. One school had posters in relevant places instructing smokers to go outside buildings for smoking, and two schools penalized violators by fining them. One stated that although smoking was banned in all his country's public places and institutions, this was not applicable to his dental school.

Details on policy and whether smoking was prohibited in non-clinical teaching facilities, whether smoking was prohibited

in clinical facilities and public access areas associated with clinical facilities, and whether students took tobacco usage histories from patients are summarized in Table 1.

Table 1. Summary of dental schools smoking policies.

Question	Yes		No	
	N	%	N	%
Does your school have a written smoking policy?	11	55	9	45
Is smoking prohibited in non-clinical teaching facilities?	17	85	3	15
Is smoking prohibited in clinical facilities?	18	90	2	10
Is smoking prohibited in public access areas associated with clinical facilities?	11	55	9	45
Do students take tobacco usage histories from all patients?	15	75	3	15

In a small majority of schools students were taught appropriate patient smoking cessation skills (Table 2). Ten respondents stated that the hazards of smoking on oral mucosa were taught as part of their curriculum in subjects such as oral medicine, oral pathology and dental public health. The economical aspect was the reason by one institution in advising smokers to quit smoking. Another stated that even though giving advice to patients was advocated to students as part of their curriculum, they were not required to provide evidence of furnishing anti-smoking advice, even if indicated by the patients' conditions.

All schools answered affirmatively when asked if students were taught the role of tobacco in the aetiology of oral cancer and periodontal disease. When asked whether students were taught the role of tobacco in the failure of dental implants, the answers were varied (Table 2).

Table 2. Summary of smoking cessation teaching within the curriculum of dental schools

Question	Yes		No		Do not know	
	N	%	N	%	N	%
Are students taught anti-smoking suitable for patients?	11	55	6	30	2	10
Are students taught the role of tobacco in the aetiology of oral cancer?	20	100	0	0	0	0
Are students taught the role of tobacco in the aetiology of periodontal disease?	20	100	0	0	0	0
Are students taught the role of tobacco in the failure of dental implants?	15	75	2	10	2	10

Table 3. Estimated smoking practice of teaching personnel and students of the dental schools

Estimated percentage	Teaching personnel		Students	
	N	%	N	%
<20%	9	45	6	30
21-30%	2	10	5	25
31-40%	4	20	4	20
>41%	5	25	5	25

Table 4. Perceived barriers to teaching smoking cessation

Perceived barrier	N	%
No limitations encountered	7	35
Social pressure	4	20
Overloaded curriculum	4	20
Lack of training and interest	4	20
A breach of human rights	1	5
Difficulty to convince students	1	5

The results of estimated percentages of smokers amongst staff and students of respondents are summarized in Table 3.

With respect to perceived barriers to the teaching of patient smoking cessation, the results are detailed in Table 4. According to one response, the difficulty of teaching

smoking cessation programmes was due to the fact that most senior teaching personnel at that school were smokers.

DISCUSSION

To our knowledge the present study was the first survey of smoking cessation curriculum content in Middle East dental school who responded. The relatively high response rate of 80% is a testimony of the interest of senior teaching staff toward the objectives of this study.

It was encouraging to find that 85% of the schools had outlawed smoking in non-clinical teaching facilities, and in 90% of clinical facilities, and that 75% of the schools expected students to ask patients about smoking. These results are strikingly similar to those of McCartan and Shanley¹⁹ who found that the majority of European dental schools had written tobacco policies, had banned smoking in clinical areas and in non-clinical areas and expected students to take tobacco histories from all patients. Just over half of Middle Eastern schools reported teaching students anti-smoking counseling skills suitable for patients. This finding was lower than that of European dental schools, where a good majority taught their students tobacco cessation skills and expected them to provide such.¹⁹

Little research has been conducted to ascertain policy and practices with regard to tobacco-related curriculum content in dentistry. Rikard-Bell *et al.*²⁰ stated that in 1989, 28% of responding United States dental schools reported having a curriculum addressing relevant counseling techniques and only 19% required students to counsel patients about tobacco use. In 1993, 41% of dental schools surveyed had a course devoted solely to smoking cessation counseling. By 1998, this had reportedly increased to 51%.

Dentists are in a key position as far as smoking intervention is concerned. The majority of smokers visit the dentist at least once per year. A particular advantage of promoting smoking cessation advice in the context of dental treatment is that a course of treatment is frequently provided over several visits, providing an opportunity for follow-up. It has been argued that the professional skills required by dentists to provide smoking cessation counseling to their patients ideally should be learned during the dental curriculum and reinforced within continuing education. Academic faculties as well as public health leaders identify the years of dental training as the preferred time to initiate changes in smoking behaviour and control practices within the dental profession.²¹ Earlier, Yip *et al.*²² suggested the need to help dental students develop professional competency in smoking cessation advice by encouraging the development of a prevention mindset, by which smoking cessation counseling is included under oral disease prevention practices, such as brushing, flossing and maintaining consistent dental care. More emphasis should also be placed on conveying information regarding the clinician's potential efficacy in tobacco cessation efforts by focusing on the better long-term quit rates attributable to clinician efforts compared to self-help cessation methods.²² Koerber *et al.*²³, in a pilot study of dental students training recommended that programmes should provide more extensive student practice and at an early stage, such as beginning student training in the first two years of dental education. Future studies are therefore recommended to determine Middle Eastern dental students' views about their role in providing smoking counseling to patients and their confidence in doing so, their beliefs about the potential effectiveness of such counseling, their

skills and their utilization of smoking cessation strategies. Other methods and strategies, such as acupuncture, hypnosis, physiological feedback and restricted environmental stimulation therapy, are also widely used, but there are still insufficient studies to address their predictability on positive abstinence rates.²⁴

Burgan,²⁵ in a study of a randomly selected sample of 849 licensed practicing general dentists in Jordan, found that while the vast majority of dentists considered smoking as the leading cause of staining of teeth, fewer associated tobacco use with oral cancers and potentially malignant oral lesions. Such finding indicated that there was still a considerable need for improvement in knowledge amongst Middle Eastern dentists with respect to serious oral health consequences of smoking. Therefore it is encouraging to discover that 100% of Middle Eastern dental schools taught the role of smoking in the causation of oral cancer and periodontal diseases.

Considerable emphasis should be placed on the importance of health professionals being seen as non-smokers in terms of their roles both as educators and role models. Johnson and his colleagues²⁶ had observed that over 35% of dentists did not provide advice about smoking, apparently quite often ignoring their patient's use of tobacco in clinical treatment planning. It has been documented that those who had never smoked were more optimistic about their impact in helping patients quit smoking, as well as about patients' willingness to receive necessary information.²¹

In a study by Poulsen *et al.*²⁷, after adjustment for exposure to smoking at home and at school, they deduced that teachers' smoking during school hours was associated with an increased incidence of adolescent smoking. This is not consistent with the finding of this study where the increase in the

percentage of staff who smoked was not associated with a concurrent increase in the rate of dental students who were smokers.

In conclusion, Middle Eastern dental schools have verifiable principles regarding the anti-smoking campaign, but there is a need for a more practical implementation of these policies to increase dental students' knowledge and level of engagement in tobacco cessation promotion.

ACKNOWLEDGEMENT

I would like to acknowledge a debt of gratitude to Dr. Samar Burgan, Associate Professor of Oral Medicine at the School of Dentistry, University of Jordan for her comments, and my appreciation for the efforts of those who demonstrated their commitments to addressing the growing menace of smoking habits in the Arab world.

REFERENCES

1. Watt RG, Johnson NW, Warnakulasuriya KA. Action on smoking opportunities for the dental team. *Br Dent J* 2000;189:357-360.
2. WHO. The World Health Report: Reducing risks, promoting healthy life. Geneva: World Health Organization 2002.
3. Jha P, Peto R, Zatonski W, Boreham J, Jarvis MJ, Lopez AD. Social inequalities in male mortality, and in male mortality from smoking: Indirect estimation from national death rates in England and Wales, Poland, and North America. *Lancet* 2006;368:367-370.
4. Schlesselman JJ The emerging case-control study: Lung cancer in relation to tobacco smoking. *Prev Med* 2006;43:251-255.
5. Martin LM, Bouquot JE, Wingo PA, Heath CW Jr. Cancer prevention in the dental practice: Oral cancer screening and tobacco cessation advice. *J Public Health Dent* 1996;56:336-340.
6. Alkhatib MN, Holt RD, Bedi R. Smoking and tooth discolouration: Findings from a national cross-sectional study. *BMC Public Health* 2005;5:27.
7. Proia NK, Paszkiewicz GM, Nasca MA, Franke GE, Pauly JL. Smoking and smokeless tobacco-associated human buccal cell mutations and their association with oral cancer. A review. *Cancer Epidemiol Biomarkers Prev* 2006;15:1061-1077.
8. Hyland A, Goldstein R, Brown A, O'Connor R, Cummings KM. Happy Birthday Marlboro: The cigarette whose taste outlasts its customers. *Tob Control* 2006;15:75-77.
9. Sato K, Endo S, Tomita H. Sensitivity of three loci on the tongue and soft palate to four basic tastes in smokers and non-smokers. *Acta Otolaryngol* 2002;546:74-82.
10. Taybos G. Oral changes associated with tobacco use. *Am J Med Sci* 2003;326:179-182.
11. Reibel J. Tobacco and oral diseases. Update on the evidence with recommendations. *Med Princ Pract* 2003;12:22-32.
12. Winn DM. Tobacco use and oral disease. *J Dent Educ* 2001;65:306-312.
13. Byrappagari D, Mascarenhas AK, Chaffin JG. Association of caries and tobacco risk with dental fitness classification. *Mil Med* 2006;171:415-419.
14. Mantyla P, Stenman M, Kinane D, Salo T, Suomalainen K, Tikanaja S, Sorsa T. Monitoring periodontal disease status in smokers and nonsmokers using a gingival crevicular fluid matrix metalloproteinase-8-specific chair-side test. *J Periodontal Res* 2006;41:503-512.
15. Peleg M, Garg AK, Mazor Z. Healing in smokers versus nonsmokers: Survival rates for sinus floor augmentation with simultaneous implant placement. *Int J Oral Maxillofac Implants* 2006;21:551-559.
16. Macek MD, Reid BC, Yellowitz JA. Oral cancer examinations among adults at high risk: Findings from the 1998 National Health Interview Survey. *J Public Health Dent* 2003;63:119-125.
17. McCartan BE, Shanley DB. Policies and practices of European dental schools in relation to smoking; A ten-year follow-up. *Br Dent J* 2005;198:423-425.

18. Bain C. Smoking cessation advice taught in dental schools. *Br Dent J* 2005;198:415.
19. McCartan BE, Shanley DB. Policies and practices of European dental schools in relation to smoking. The place of tobacco education in the undergraduate curriculum. *Br Dent J* 1995;179:306-308.
20. Rikard-Bell G, Groenlund C, Ward J. Australian dental students' views about smoking cessation and their skills as counselors. *J Public Health Dent* 2003;63:200-206.
21. Polychonopoulou A, Gatou T, Athanassouli T. Greek dental students' attitudes toward tobacco control programmes. *Int Dent J* 2004;54:119-125.
22. Yip JK, Hay JL, Ostroff JS, Stewart RK, Cruz GD. Dental students' attitudes toward smoking cessation guidelines. *J Dent Educ* 2000;64(9):641-650.
23. Koerber A, Crawford J, O'Connell K. The effects of teaching dental students brief motivational interviewing for smoking-cessation: A pilot study. *J Dent Educ* 2003;67:439-447.
24. Ramseier C. Smoking prevention and cessation. *Oral Health Prev Dent* 2003;1:427-439.
25. Burgan SZ. Smoking and health: Opinions and awareness among general dentists in Jordan. *Int Dent J* 2001;51:463-467.
26. Johnson NW, Lowe JC, Warnakulasuriya KA. Tobacco cessation activities of UK dentists in primary care: Signs of improvement. *Br Dent J* 2006;200:85-89.
27. Poulsen LH, Osler M, Roberts C, Due P, Damsgaard MT, Holstein BE. Exposure to teachers smoking and adolescent smoking behaviour: Analysis of cross sectional data from Denmark. *Tob Control* 2002;11:246-251.