ORIGINAL ARTICLE

Self-reported smoking cessation interventions among dental practitioners: A cross-sectional study

Raghad Hashim, Shamim Ismail

Department of Growth and Development, College of Dentistry, Ajman University of Science and Technology, Ajman, United Arab Emirates

Address for correspondence:
Dr. Raghad Hashim, Department of Growth and Development, College of Dentistry, Ajman University of Science and Technology, P.O. Box 346, Ajman, United Arab Emirates.
E-mail: raghad69@yahoo.co.nz

ABSTRACT

Objective: The aim of this study is to determine the attitudes and practices of dentists toward smoking cessation intervention (SCI); to identify the barriers that prevent them from advising their patients to quit smoking and to determine the level of interest in future training in smoking cessation. **Methods:** Self-administered questionnaires were distributed to all (122) dentists practicing in private sectors in the Emirate of Ajman, United Arab Emirates. The questionnaire was personally administered, and the dental practitioners were given explanations regarding how to complete it. Only descriptive statistics was calculated. **Results:** More than half of the respondents (55%) inquired about their patients smoking status, whereas 40% of the dentists documented it. The most common barrier cited by the respondents was the lack of training and preparation in the smoking cessation techniques, followed by lack of availability of educational material. Almost three-quarters of the respondent were interested in further training in SCI; being provided to them through full-day training course. **Conclusions:** Dentists require more access to appropriate forms of training in the SCI and more support needed to enable the dentist to help their patient to quit the habit. Providing training program to the dental practitioners in the United Arab Emirates to equip them with the required skill to deliver SCI would be highly beneficial.

Key words
Arab, dentists, health education, smoking cessation

INTRODUCTION

Tobacco smoking is a major public health problem worldwide, and it is the single greatest cause of premature death and preventable illness.[1] The harmful effects of tobacco use have been very well documented, and endless facts and figures could be used to illustrate the impact of smoking. Tobacco use is a global epidemic that kills 5.4 million people annually, sadly, more than 80% of those deaths occurs in the developing world.[2] Tobacco use is also associated with oral disease; it contributes to halitosis, periodontal disease, dental implant failure, delayed wound healing, and oral mucosal disease.[3] Furthermore, it accounts for 75% of cancers of the mouth, tongue, lips, throat and parts of the nose and pharynx.[4] It has been estimated that if adult consumption were to decrease by 50% by the year 2020, approximately 180 million tobaccos-related death could be avoided.[5]

Research indicates that most smokers would like to stop, but they need encouragement and motivation to quit.[6,7] Despite compelling evidence to support smoking cessation intervention (SCI), methods such as brief advice, behavior therapy, and nicotine replacement therapy are under-utilized.[8] SCI provided in the dental surgery has been shown to be as effective as in other care settings.[9] As dental treatment often requires multiple visits, hence

Access this article online	
Quick Response Code:	Website: www.ejgd.org
	DOI: 10.4103/2278-9626.179535

How to cite this article: Hashim R, Ismail S. Self-reported smoking cessation interventions among dental practitioners: A cross-sectional study. Eur J Gen Dent 2016;5:53-7.

it provides a system for initiation; reinforcement and support of tobacco cessation activities.[3,10]

Scientific reviews based on the findings of randomized, controlled clinical trials clearly demonstrate the value of smoking cessation delivered in primary care. These reviews summarize the evidence base for guidelines introduced to encourage health professionals, including dentists, to become more actively involved in smoking prevention.[10] Fortunately, reviews examining the outcome from smoking cessation trials conducted in the dental setting are generally favorable and report cessation rates comparable to those achieved in other primary care settings.[5] In the UAE, there have been no reports on the attitudes and practices of dentists toward SCIs. The primary aim of this study is, therefore, to provide insight into that aspect and identify the barriers to intervention.

METHODS

The current study was approved by the Ethics Committee of Ajman University of Science and Technology. The clinics included in this study were selected from the membership register of Ministry of Health for the Emirates of Ajman. This includes dental clinics, medical centers, polyclinics, and hospitals. The sampling consisted of registered dental practitioners practicing in private sectors of Ajman. It comprised of 122 dental practitioners out of which 95 responded to the questionnaire. At least, 1 year of work experience in the current position was a criterion for eligibility to be included in the study. Participation was voluntary, and participants remained anonymous. The purpose of the questionnaire and how they should be answered was explained, and whenever necessary further information was provided to the participant. The time period of 2 weeks was provided to the dentists to fill up the questionnaires. Those who did not respond were contacted by telephone and encouraged to participate.

The questionnaire explored the dentist's demographic information (gender, age, ethnicity, years of work experience, practice type, and smoking status). Dentists were asked about their current practice regarding smoking including questions on screening, documentation, advice to quit smoking as well as to what extent they are prepared to help their patients to quit smoking. Dentists were also inquired about the use of specific strategies to help patient quit smoking (discussion of health hazards of smoking, benefits of quitting, recommendation for the use of the nicotine substitute products and referrals of patients to the cessation clinics). In addition, dentists were asked to determine the barriers to incorporating smoking cessation activities in their dental practice such as patient resistance, lack of time, staff resistance, concern about effectiveness, availability of educational material, lack of training, and wither they consider smoking cessation activities a part of dental practice. A three-point Likert scale of "not at all;" "a little bit;" and "to considerable extent" was used. The questionnaire was based on a similar study conducted by Brady *et al.*[11] and also by Wyne *et al.*[12] Initially, a pilot study was carried out among 10 dental professionals to check the feasibility of the study, and 4 of the questions from the initial questionnaire were removed.

Moreover, dentists were asked to determine their level of interest in the utilization of posters and leaflets, self-quitting booklets, or receiving information through the professional journal, mail, computer-based updates, and full-day training course; if they were made available to them. Furthermore, dentists were inquired about receiving any formal training in cessation intervention techniques for smokers. The questionnaires were distributed by the researchers between February and April 2014. All the data entered into the Microsoft Excel and then transferred into SPSS program. Data analyses were conducted by using SPSS windows version 16.0 (SPSS Inc., Chicago, IL, USA). Only descriptive statistics such as frequencies were calculated.

RESULTS

Of the 122 dentists who were invited to participate in the study, 95 returned a completed questionnaire, giving a response rate of 77.9%. More than half of the respondents were female (62%). The majority of the respondents were <36 years of age and 63% were non-Arab. Around 62% of the respondents had <10 years of work experience. About 69% of the respondents were involved in the group practice. More than three-quarter of the participants were "never-smoker" [Table 1].

More than half of the respondents (55%) routinely inquired about their patients smoking status whereas only 40% of the dentists documented it. Only 38% of the respondents regularly asked their patient if they are interested to quit smoking whereas the majority of them (60%) reported that they advised their patient to quit smoking. A high percentage (60%) of the respondent explained to their patients the health hazards of smoking. About 54% of the respondents discussed with their patients the benefits of quitting smoking. Only 7% of the respondents provided take-home leaflets or written material to their patients related to smoking cessation. Minority (14%) recommended the use of nicotine substitute products whereas only 10% referred their patients to cessation clinics [Table 2].

Dentists were asked about which factors they considered to be barriers to incorporating smoking cessation activities into their dental practice [Table 3]. The most common barrier cited by the respondents (75%) was the lack of training and preparation in the smoking cessation techniques followed by lack of availability of educational material (60%) and patient's resistance (38%). Lack of time was found to be a strong barrier in incorporating the

Table 1: Sociodemographic characteristics of the dentists

Characteristic	Frequency (%)
Gender	
Male	36 (38)
Female	59 (62)
Age group	
<36	59 (62)
36-44	24 (26)
45-54	8 (8)
>54	4 (4)
Ethnicity	
Arabs	35 (37)
Non-Arabs	60 (63)
Years of experience (years)	
<10	59 (62)
≥10	36 (38)
Practice type	
Solo	24 (26)
Group	66 (69)
Others	5 (5)
Smoking status	
Current smoker	6 (6)
Ex-smoker	7 (7)
Never smoked	82 (87)

Table 2: Percentage of dentist reporting smoking intervention activities

	Routinely	Sometimes	Never
Ask patient if they smoke	55	40	5
Record the patient smoking status	40	47	13
Ask patient if they want to stop smoking	38	51	11
Advice patient who smoke to quit	60	25	14
Discuss the health hazards of smoking	60	35	5
Discuss the benefits of quitting	54	42	4
Provide take home leaflets	7	31	62
Recommend the use of nicotine substitute products	14	34	52
Referral of patients to cessation clinics	10	29	61

smoking cessation activities by 25% of the respondents, 22% of the respondents does not even consider smoking cessation activities to be a part of the dental practice.

The percentages of dentists reporting interest in resources on smoking cessation are presented in Table 4. Majority of the respondents (82%) were very interested in using posters and leaflets to help their patients to quit smoking followed by utilization of self-quitting booklets (79%) While, 77% of the respondents were interested in update through full-day training course followed by 71% receiving professional journals, 67% were interested in update sent through mails; respondents were least interested 61% in computer-based updates. Unfortunately, 94% of the respondents never received formal training in cessation intervention techniques for smokers (data not presented).

Table 3: Percentage of dentists reporting barriers to incorporate smoking cessation activities into the dental practice

	Not a barrier	Small barrier	Strong barrier
Patient resistance	35	25	38
Time required	42	31	25
Resistance by staff	68	15	15
Concern about effectiveness	48	25	25
Availability of educational material	19	21	60
Lack of training/ preparation	10	13	75
Do not consider it a part of dental practice	68	10	22

Table 4: Percentage of dentists reporting interest in resources and training on smoking cessation

	Very interested	Interested	Not interested
Posters and leaflets	82	4	12
Self-help quitting booklets	79	11	9
Journals updates	71	16	12
Mail update	67	12	21
Computer based updates	61	15	23
Full-day training course	77	13	8

DISCUSSION

Dental professionals have the opportunity to provide SCI to their patients. Therefore, they must expand their knowledge to include SCI strategies in their regular preventive and therapeutic treatment modalities. Lack of training is perceived as a major barrier for delivering SCI. To our knowledge, this is the first published research shed the light on dental practitioners intervention toward smoking cessation.

Based on the most recent published data,[13] the prevalence of current smoking among the general population in the UAE is (24.3%); however, the prevalence among this sample was 6%, this lower prevalence of smoking among dentists might reflect dentists' concern for their own health. Several studies in the West have shown that tobacco cessation advice provided by health professionals enhances the quit rate among their patients.[10,14,15] In spite of the appropriateness of the dental practice as a setting for the delivery of smoking cessation advice and assistance, SCIs are not often incorporated as a routine part of dental care. Research has shown that most oral healthcare professionals believe that helping patients stop smoking is important, but they are reluctant to provide smoking cessation services for their patients.[16]

The current study indicates that the situation among our sample of dentists is similar, with almost half reported that they usually advise patients who smoke to quit, only 55% routinely asking patients whether they smoke, which are comparatively similar to 52% reported by Saddichha *et al.*,[17] the reason which might be associated with this finding is the possible negative impact on their practice. Unfortunately, only 40% recorded their patients' smoking status. Opportunities have been identified for dentists and their teams to become involved in smoking cessation activities.[5,18] Member of the dental team is in an ideal position to help people stop smoking, in part because they are among the few healthcare professionals who routinely see "healthy individuals." Randomized clinical trials have found that even brief dental office-based interventions can be effective in motivating and assisting tobacco users to quit.[19] Clinicians involved in oral healthcare have a natural entry to the discussion of tobacco-related disease with their patients because of the impact of smoking on oral health. The early effects of tobacco use on the mouth, such as stained teeth and halitosis, are visible and reversible and may be useful motivators for the cessation of smoking. Furthermore, most people are aware of the effects of smoking on general health but relatively few know about the links between smoking and oral diseases, including oral cancer. Moreover, dentists have an ethical responsibility to caution patients about the risks associated with tobacco use.[20] Therefore, raising awareness about the potential oral health effects of smoking, along with providing reassurance that cessation significantly reduces the increased risk, could be helpful in motivating patients to quit smoking in the UAE.

Studies have identified a number of barriers to providing support for smokers, including Time and cost pressures, lack of resources for use in dental settings, doubts about the effectiveness of interventions, concerns over the impact of SCI on the dentist-patient relationship and inadequate training.[21-23] However, effective treatments exist that can produce long-term or even permanent abstinence.[24,25] Once these barriers are identified, they can be eliminated, or their effect can be minimized for effective tobacco cessation activities.[9] Three-quarter of the dentists in this study did not feel adequately trained and prepared to help their patients give up smoking. These findings were in accordance with studies which identified insufficient knowledge as a major barrier that discouraged dentists from helping their patients to quit.[22,26] Healthcare givers at all levels of the healthcare delivery system must be trained in tobacco dependence treatment including behavior counseling and pharmacotherapy. The use of innovative technologies like mobile phones and setting up quitlines can give a major impact to the ongoing efforts of the government in the UAE for providing cessation facilities to a larger population.

It has increasingly been recognized globally that all oral health professionals should integrate tobacco use prevention and cessation into their daily practice. In the current study, 60% of the dentists considered that lack of the availability of the educational material as a strong barrier to SCI. Studies have already shown that the use of an educational pamphlet about the effects of smoking on oral cancer significantly improved smoking patient knowledge to levels similar to nonsmokers.[27,28] Therefore, making this kind of educational material available might have a positive impact on smoking cessation activities.

Although the surveyed dentists were interested in further training in SCI, they were much more in favor of being provided with full-day training course. Similar finding has been reported by other investigator.[29] Providing such a course as part of continuing education where points are obtainable would be beneficial.[30] In addition, it is highly advisable to incorporate training of the dental students in the smoking cessation techniques within the dental school's curriculum. Studies conducted worldwide have shown that dental students can bridge this gap by actively participating in tobacco cessation activities.[31-34] All oral health institutions and all continuing education providers in the UAE should integrate tobacco-related subjects into their programs. It has been argued that the professional skills required by the dentists to provide smoking cessation counseling to their patients ideally should be learned during the dental curriculum and reinforced within continuing education.[31] The training content should focus on training the future dentists to help their patients to quit smoking rather on knowledge of the impact of smoking on dental and general health.

A certain limitation exists in the current study; although a minimum response rate of 75% is optimal for a survey of health professionals,[35] the response rate of 63.3% is considered to be typical for this type of study.[36] In addition, it is not known to what extent those who chose to participate differed from the dentists who refused to contribute in this study. Therefore, we cannot generalize the finding to all dentists practicing in UAE. Other factors may have introduced bias into this study is the use of a self-administered questionnaire that could overestimate the level of activity of dentists in SCI due to social desirability bias.[37]

Based on our finding, it is highly recommended that training program should be provided to the dental practitioners to equip them with the required skill to deliver SCI. In addition, to providing the educational material required for this purpose. Furthermore, the dental institutions should include SCI into the curriculum, but it should not be just theoretical knowledge rather it must have a practical component so that the upcoming dental professionals have the essential competency to fight one of the preventable cause of death. Further research is needed to determine the optimum strategies and type of support required to increase the participation of dentists in SCI in the UAE.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

REFERENCES

1. World Health Organization. Global Report on 'Tobacco Attributable Mortality, 2012. Geneva: WHO; 2012.
2. World Health Organization. WHO Report on the Global Tobacco Epidemic 2009, Implementing Smoke-free Environments. Geneva: WHO; 2009.
3. Albert DA, Severson H, Gordon J, Ward A, Andrews J, Sadowsky D. Tobacco attitudes, practices, and behaviors: A survey of dentists participating in managed care. Nicotine Tob Res 2005;7 Suppl 1:S9-18.
4. USDHHS. The Health Consequences of Smoking: A Report of the Surgeon General. Centers for Disease Control & Prevention; 2004.
5. Mackay J, Eriksen M. The Tobacco Atlas. Geneva: World Health Organization; 2002.
6. Uppal N, Shahab L, Britton J, Ratschen E. The forgotten smoker: A qualitative study of attitudes towards smoking, quitting, and tobacco control policies among continuing smokers. BMC Public Health 2013;13:432.
7. Vangeli E, Stapleton J, West R. Residual attraction to smoking and smoker identity following smoking cessation. Nicotine Tob Res 2010;12:865-9.
8. de Zwart KM, Sellman JD. Public knowledge and attitudes regarding smoking and smoking cessation treatments. N Z Med J 2002;115:219-22.
9. Binnal A, Rajesh G, Denny C, Ahmed J. Insights into the tobacco cessation scenario among dental graduates: An Indian perspective. Asian Pac J Cancer Prev 2012;13:2611-7.
10. West R, McNeill A, Raw M. Smoking cessation guidelines for health professionals: An update. Health education authority. Thorax 2000;55:987-99.
11. Brady SJ, Ayers KM, Thomson WM, Holborow DW. The involvement of New Zealand dentists in smoking cessation interventions. N Z Dent J 2004;100:16-21.
12. Wyne AH, Chohan AN, Al-Moneef MM, Al-Saad AS. Attitudes of general dentists about smoking cessation and prevention in child and adolescent patients in Riyadh, Saudi Arabia. J Contemp Dent Pract 2006;7:35-43.
13. Al-Houqani M, Ali R, Hajat C. Tobacco smoking using midwakh is an emerging health problem – Evidence from a large cross-sectional survey in the United Arab Emirates. PLoS One 2012;7:e39189.
14. Lancaster T, Stead L, Silagy C, Sowden A. Effectiveness of interventions to help people stop smoking: Findings from the Cochrane Library. BMJ 2000;321:355-8.
15. Gorin SS, Heck JE. Meta-analysis of the efficacy of tobacco counseling by health care providers. Cancer Epidemiol Biomarkers Prev 2004;13:2012-22.
16. Newton JT, Palmer RM. The role of the dental team in the promotion of smoking cessation. Br Dent J 1997;182:353-5.
17. Saddichha S, Rekha DP, Patil BK, Murthy P, Benegal V, Isaac MK. Knowledge, attitude and practices of Indian dental surgeons towards tobacco control: Advances towards prevention. Asian Pac J Cancer Prev 2010;11:939-42.
18. Watt RG, Johnson NW, Warnakulasuriya KA. Action on smoking – Opportunities for the dental team. Br Dent J 2000;189:357-60.
19. Carr AB, Ebbert JO. Interventions for tobacco cessation in the dental setting. Cochrane Database Syst Rev 2006;25(1):CD005084.
20. Uti OG, Sofola OO. Smoking cessation counseling in dentistry: Attitudes of Nigerian dentists and dental students. J Dent Educ 2011;75:406-12.
21. Albert D, Ward A, Ahluwalia K, Sadowsky D. Addressing tobacco in managed care: A survey of dentists' knowledge, attitudes, and behaviors. Am J Public Health 2002;92:997-1001.
22. Ibrahim H, Norkhafizah S. Attitudes and practices in smoking cessation counseling among dentists in Kelantan. Arch Orofac Sci 2008;3:11-6.
23. Mohanty VR, Rajesh GR, Aruna DS. Role of dental institutions in tobacco cessation in India: Current status and future prospects. Asian Pac J Cancer Prev 2013;14:2673-80.
24. Jiloha, RC. Tobacco Use Health and Behavior. 1st ed. New Age International Pvt Ltd Publishers; New Delhi. 2008.
25. World Health Organization. Economics of Tobacco Toolkit: Assessment of the economic costs of smoking. Geneva, WHO. 2011.
26. Parakh A, Megalamanegowdru J, Agrawal R, Hathiwala S, Chandrakar M, Tiwari R, *et al.* Dental practitioners self reported performance of tobacco cessation counseling interventions: A cross sectional study. Asian Pac J Cancer Prev 2013;14:6141-5.
27. Humphris GM, Field EA. An oral cancer information leaflet for smokers in primary care: Results from two randomised controlled trials. Community Dent Oral Epidemiol 2004;32:143-9.
28. Boundouki G, Humphris G, Field A. Knowledge of oral cancer, distress and screening intentions: Longer term effects of a patient information leaflet. Patient Educ Couns 2004;53:71-7.
29. Allard RH. Tobacco and oral health: Attitudes and opinions of European dentists; a report of the EU working group on tobacco and oral health. Int Dent J 2000;50:99-102.
30. Albert DA, Anluwalia KP, Ward A, Sadowsky D. The use of 'academic detailing' to promote tobacco-use cessation counseling in dental offices. J Am Dent Assoc 2004;135:1700-6.
31. Rikard-Bell G, Groenlund C, Ward J. Australian dental students' views about smoking cessation counseling and their skills as counselors. J Public Health Dent 2003;63:200-6.
32. Polychonopoulou A, Gatou T, Athanassouli T. Greek dental students' attitudes toward tobacco control programmes. Int Dent J 2004;54:119-25.
33. Cannick GF, Horowitz AM, Reed SG, Drury TF, Day TA. Opinions of South Carolina dental students toward tobacco use interventions. J Public Health Dent 2006;66:44-8.
34. Rajasundaram P, Sequeira PS, Jain J. Perceptions of dental students in India about smoking cessation counseling. J Dent Educ 2011;75:1603-10.
35. Rikard-Bell G, Ward J. Maximizing response rates to a survey of dentists: A randomized trial. Aust Dent J 2000;45:46-8.
36. Locker D. Response and nonresponse bias in oral health surveys. J Public Health Dent 2000;60:72-81.
37. Clover K, Hazell T, Stanbridge V, Sanson-Fisher R. Dentists' attitudes and practice regarding smoking. Aust Dent J 1999;44:46-50.