

## Routine practices of general dentists toward patients' smoking

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أجريت هذه الدراسة لأول مرة في الأردن من أجل تقييم الإجراءات الروتينية المتبعة من قبل أطباء الأسنان العاميين بالنسبة للتدخين في عياداتهم والأسباب التي تُعد من تقديمهم الاستشارة للمرضى المدخنين. لقد تم إرسال نموذج أسئلة خاص بالدراسة بواسطة البريد إلى عينة عشوائية مكونة من 849 طبيب أسنان، حيث كانت نسبة النجاوب 72.2% (613 / 849). شكل الذكور ما نسبته 71.1%، كما أن الأطباء الذين نقل أعمارهم عن أربعين عاماً كانوا 71.5%، بينما 35% هم من المدخنين. دلت النتائج على أن 63% من الأطباء يسمحون بالتدخين في عياداتهم. وعلى الرغم من أن 57.7% يسألون مرضاهم عن عادات التدخين لديهم، فإن 22.3% فقط يقومون بتوثيق تلك المعلومات في الملفات الخاصة بالمرضى. إن العديد من الأطباء (69.5%) ينصحون مرضاهم بالتوقف عن التدخين، كما أن نصفهم تقريباً (48.6%) يقدمون اقتراحات عن كيفية التوقف عن التدخين. أما بالنسبة للذين يشعرون بالتردد في التحدث عن موضوع التدخين فهم قلة (25.4%). معظم الأطباء (74.9%) يناقشون مضار التدخين مع مرضاهم، بينما يقوم 4.2% بتوعية المرضى من غير المدخنين. أهم الأسباب التي يعتقد الأطباء بأنها تُعد من قيامهم بتقديم المشورة هو عدم اهتمام المرضى بالتوقف عن التدخين. إن نتائج هذه الدراسة تدل على أن الممارسات الروتينية المتبعة من قبل أطباء الأسنان العاميين في الأردن نحو التدخين هي غير كافية.

The purpose of this study was to assess routine practices of general dentists in Jordan regarding patients' use of tobacco and perceived barriers to providing cessation counseling. A survey questionnaire was mailed to a random sample of 849 out of 1693 dentists. Of the 613 (72.2%) respondents, 71.1% were males, 71.5% were younger than 40 years, 35% were current smokers and 70.8% were in the private sector. Sixty-three percent permitted smoking in their practices. Although 57.7% inquired whether or not their patients smoked, only 22.3% recorded it. As many as 69.5% advised smokers to quit and almost half provided strategies on quitting. Only 25.4% felt reluctant to discuss the tobacco issue with their patients. Among those who educated their patients of the adverse effects of smoking, 74.9% did this with smokers, whereas 54.2% educated the non-smokers. Dentists perceived lack of interest by patients, lack of effectiveness, inadequate training and lack of time as major barriers to offering advice. It was concluded that tobacco cessation intervention was not a routine practice among general dentists in Jordan.

### Introduction

Tobacco dependence is a chronic disease that requires repeated assessment and intervention.<sup>1</sup> Quitting smoking substantially reduces the risk for disease and greatly improves the health of the public.<sup>2</sup> The majority of smokers would like to quit<sup>3</sup> and as most of them visit their dentists each year; oral health care professionals are in a unique position to promote smoking cessation among their patients.<sup>4</sup>

Several studies have been conducted recently on dentists' role as tobacco usage counselors.<sup>1,4-10</sup> Practice guidelines updated recently by Fiore and others<sup>1</sup> addressed tobacco use in the clinical setting. Brief strategies in helping patients quit smoking e.g. 5 A's (Ask, Advice, Assess, Assist and Arrange) could markedly reduce patients' tobacco use.<sup>1</sup> Quit rates of up to 10-15 percent annually could be achieved in the dental practices after an effective cessation advice.<sup>6</sup> Despite the important role of dentists in reducing patients' tobacco dependence, counseling activity is underperformed in dental offices.<sup>3</sup> While some dentists believed in their responsibility in discussing smoking with their patients, others perceived a number of barriers to such intervention.<sup>5,8-10</sup>

Recent national surveys of the population in Jordan showed that 27 percent of adults were current smokers and the percentage rises to 48 among males.<sup>11</sup> Most (82%) began tobacco use as early as 15 years of age, and 19 percent of students

smoked, rising to 29 percent among university population.<sup>12,13</sup> Due to increased national interest in tobacco intervention role for dental professionals, a baseline survey of Jordanian dental practices and tobacco use was conducted. The aim was to determine routine counseling practices of dentists toward their patients who smoke and whether this activity was associated with their age, smoking behavior or practice type as well as perceived barriers to offering cessation advice.

### Subjects and Methods

Jordan is a South-Western Asian country and all practicing dentists are members of the Jordan Dental Association (JDA). The updated lists of names provided by the register at the JDA in May 1999 showed that the total number of dentists aged 65 years and under was 1,856. Dentists over the age of 65 years were not included as they are retired and their particulars were not available at the JDA. Of 1,856 dentists, 91.2 percent (1,693) were general practitioners and only 8.8 percent (163) were specialists who were not included as they constituted a different category.

The distribution of 1,693 general dentists among the three regions of Jordan (JDA, 1999) is presented in Table 1. This was taken into

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consideration in the design of the sample size. The first name on the list for each region was selected by simple random procedure, which then continued with a systematic random sample. A representative sample of 849 general dentists was selected which compromised 50 percent of the basic population in Jordan.

**Table 1.** Regional distribution of practising general dentists in Jordan.

	All	Sample	Respon dents
Northern region (15.8%)	309 (18.2%)	155 (18.2%)	97
Central region (80.9%)	1297 (76.6%)	651 (76.7%)	496
Southern region	87 (5.1%)	43 (5.1%)	20 (3.3%)

The self-reported questionnaire was piloted on 50 dentists who were excluded from the study. To ensure reliability, ambiguous questions were omitted and minor amendments were made prior to it being posted to the random sample. The main mailing was conducted in July 1999 and each questionnaire, which was anonymous and coded to identify the non-respondents, was accompanied with a cover letter and prepaid reply envelope. Only 40 percent of dentists responded after the first mailing. Non-respondents were sent a reminder in August enclosing the same questionnaire. A response rate of 50 percent was obtained by September. Dentists failing to respond to the second mailing were telephoned and those who did not receive the questionnaire by office mail were handed another one by a messenger. By December 1999, a response rate of 72.2 percent (613 out of 849) was achieved. The questionnaire survey asked for information about dentists' basic profile; their routine office practices regarding smoking; the nature of the advice provided on tobacco cessation, as well as barriers perceived by dentists to offering advice. Dentists' responses regarding routine practices on smoking were measured using a binary scale of either yes or no. The data from the responses were coded and entered into a database prior to analysis using the SPSS 9.0 system. Descriptive statistics were generated to characterize the sample. Percentages were based on the number of respondents for each variable. A P-value of less than 0.05 was considered as statistically significant

using the Chi-square test.

### Results

Of responding dentists (613), 71.1% were males, their age ranged from 23 to 65 years, with a mean of 35 years. The year of basic graduation ranged from 1956 to 1998 and covered a 42-year period. Of the two age groups selected to assess the difference in response between younger dentists (23 to 39 years old) and older ones (40 to 65), many (71.5%) were younger than 40 years. Approximately half of respondents (51.1%) had never smoked, 13.9% were former smokers, and 35% were current smokers. Of the 215 dentists who smoked, 87% were males and 13% females and 83.3% of whom were daily smokers. Most of current smokers (95.3%) use cigarettes, and the remainder (4.7%) used cigars, pipes or Nargella (water pipes). None of the respondents had used or tried smokeless tobacco. With respect to practice type, 70.8% were from the private sector, 17.5% from the ministry of health, 5.5% from the military services, and 6.2% respondents were from other forms of practice which constituted UNRWA (United Nations Relief and Works Agency), Voluntary Dental Associations and Labor Dental Clinics.

Dentists' approach to their patients' smoking and its documentation varied according to their own age and tobacco use as shown in Tables 2, 3 and 4. Younger dentists and those who never smoked were more likely to restrict smoking in their offices and to inquire and record their patients' use of tobacco. With respect to discussing quitting with patients, many advised their patients to quit; non-smokers and respondents from military services were most likely to counsel their patients. Almost half of respondents provided strategies to aid quitting and non-smokers were most likely to do so. Thirty percent asked their patients to set a quit date in comparison to 70% who advised a reduction on tobacco use. Very few dentists suggested additional measures for tobacco dependence such as nicotine gum, nicotine patches and sugarless gum.

Of the dentists who felt reluctant to discuss the issue of smoking with their patients; those who smoked reported this more frequently than non-smokers. Many educated tobacco users reported of the adverse health effects of smoking. Non-smokers did this mostly. Fewer dentists discussed this issue with non-smokers; mainly those from private practices or ministry of health. Interestingly, more than half of respondents who smoked discussed the health effects of smoking

**Table 2.** Routine practices of the young and old general dentists toward patients' smoking response in percentages.

Yes n =	Total(613)	Young(438)	Old(175)	P Value
Allows smoking in the waiting room	(63.1)	60.7	69.1	.05
Asks patients about their tobacco use	(57.7)	62.6	45.7	.01
Records patients' smoking status	(22.3)	25.8	13.7	.01
Advices patients who smoke to quit	(69.5)	68.3	72.6	NS
Gives suggestions on quitting	(48.6)	47.0	52.6	NS
Feels reluctant to discuss tobacco issues with patients	(25.4)	24.4	28.0	NS
Educates smokers about health risks of smoking	(74.9)	76.7	70.3	NS
Discusses health risks of smoking with nonsmokers	(54.2)	54.8	52.6	NS

NS = not significant

**Table 3.** Smoking profile of 613 dentists toward patients' smoking. Response in percentages.

Yes n =	Never smoked (313)	Ex-smoker (85)	Current smoker (215)	P Value
Allows smoking in the waiting room	53.7	61.2	77.7	.01
Asks patients about their tobacco use	66.1	52.9	47.4	.01
Records patients' smoking status	26.2	22.4	16.7	.01
Advices patients who smoke to quit	76.6	69.4	59.1	.01
Gives suggestions on quitting	54.3	55.3	37.7	.01
Feels reluctant to discuss tobacco issues with patients	20.4	25.9	32.6	.01
Educates smokers about health risks of smoking	81.2	78.8	64.2	.01
Discusses health risks of smoking with nonsmokers	55.0	56.5	52.1	NS

NS = not significant

**Table 4.** Practice locations of 613 dentists and patients' smoking.

Yes n =	Private (434)	Ministry (107)	Military (34)	Others (38)	P Value
Allows smoking in the waiting room	68.7	57.0	35.3	42.1	.01
Asks patients about their tobacco use	59.2	56.1	47.1	55.3	NS
Records patients' smoking status	24.0	14.0	8.8	39.5	.01
Advices patients who smoke to quit	67.1	74.8	88.2	65.8	.01
Gives suggestions on quitting	47.0	55.1	58.8	39.5	NS
Feels reluctant to discuss tobacco issues with patients	26.0	24.3	17.6	28.9	NS
Educates smokers about health risks of smoking	73.3	84.1	76.5	65.8	NS
Discusses health risks of smoking with nonsmokers	57.1	53.3	38.2	36.8	.01

NS = not significant

with their patients. Of the barriers perceived to tobacco use intervention; patients' lack of interest was seen as the primary obstacle followed by lack of effectiveness, inadequate training and lack of time (Fig. 1).

**Fig. 1.** Perceived barriers to providing tobacco cessation advice by 613 dentists.



### Discussion

Primary dental health care professionals can be potentially effective tobacco counselors. The approach to tobacco users by dentists in Jordan had not been examined before. The high smoking rate among Jordanian dentists (35%) is of serious concern with regard to their involvement in promoting smoking cessation among their patients. In contrary to recent findings in which the majority of dental practices were smoke-free across the U.S., Australia, or Europe,<sup>1,5,8,10</sup> many surveyed dentists in Jordan permitted smoking in their practices. This discrepancy may be due to cultural differences as smoking restriction in dental offices is perceived by patients as interfering with their personal freedom and, surprisingly enough, most Jordanians do not seem to recognise the rights of non-smokers of not being passive participants in this behavior. Despite this finding, more dentists in the present study asked their patients if they smoked than that reported by Fiore and others<sup>1</sup> and Block and others<sup>7</sup> on American dentists and by Telivuo and others<sup>14</sup> on Finnish dentists, but similar to that of the British dentists.<sup>9</sup>

Few respondents recorded tobacco use information in their patients' charts which accords with recent research conducted in Britain by John and others<sup>5</sup> and Chestnutt and Binnie,<sup>15</sup> but lower than that reported by American dentists.<sup>1</sup> It is important to note that this study presents data on self-reported behaviour and not on the level of knowledge or training among Jordanian dentists. Future research is, therefore, needed to validate these findings.

The Jordanian dentists' positive behaviour with respect to prevention counseling is noted as the majority routinely advised their patients who smoke to quit. Similar findings were reported by the American<sup>1,7</sup> and European dentists,<sup>16</sup> and to a lesser extent by the British<sup>5,15</sup> and Finish dentists.<sup>14</sup> It is worth noting that dentist's smoking status was related to this activity, as non-smokers were more likely in assisting their patients to quit. This accords with the British findings,<sup>5,15</sup> and with a study in the U.S. by Fiore and others.<sup>1</sup> Attention should, therefore, be paid to discourage dentists from smoking and to provide them with the support needed to allow them become more efficient in this area.

Recently, there have been a number of evidence-based guidelines on effective strategies for clinical tobacco intervention.<sup>1,16</sup> A number of treatments for nicotine addiction have been produced with emphasis on total abstinence from smoking.<sup>16</sup> In this study, strategies on quitting were only provided by 49 percent of dentists and most of them advised their patients to reduce tobacco use as opposed to set a quit date. Effective clinical treatments for tobacco dependence need to be adopted by Jordanian dentists in the light of available resources. The Ministry of Health in Jordan is in the process of establishing the first center that will help Jordanians with their tobacco addiction. Future research is required to identify the best strategies that could be employed in dental settings to assist Jordanian dentists become more effective tobacco counselors.

Dentists' responsibility towards informing their patients of the adverse effects of smoking was recognized as early as 1964.<sup>17</sup> It appears that dentists in Jordan were aware of their role as health educators, but on the other hand, smokers should believe in the harmful effect of smoking in order to be able to quit.<sup>15</sup> Further studies are needed to assess dentists' knowledge on the health risks associated with smoking and the consequence of education intervention on patients' use of tobacco.

Barriers perceived by dentists in approaching their patients to discuss the tobacco issue were reported in several recent studies.<sup>5,8-10,15</sup> Cabana and others<sup>18</sup> reviewed these barriers and offered suggestions toward improving clinicians' adherence to clinical practice guidelines. However, Campbell and others<sup>19</sup> found a wide discrepancy between patients and dental professionals' views regarding tobacco cessation services. A total of 59 percent of patients surveyed believed that dental offices should offer such

services, whereas 62 percent of dentists thought patients did not expect such services.<sup>19</sup> Additional studies to assess perceived barriers from patients' perspective are needed to identify factors that would improve performance in reducing tobacco dependence. In summary, this study indicates that tobacco use intervention is not a routine practice in the Jordan dental health care system. Special program is needed to provide general dentists with the awareness and skill required in promoting effective smoking cessation counseling among their patients.

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