

Research Article

Health Professionals' Role in Helping Patients Quit Tobacco Use: Attitudes among Iranian Dental Students

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Background. Health professionals play an essential role in tobacco control. Our objective was to assess Iranian dental students' attitudes towards tobacco control. **Methods.** Eight dental schools were randomly selected, and a survey using Global Health Professions Student Survey (GHPSS) instrument was conducted among dental students in 2010 in Iran. The chi-square test served for statistical analyses. **Results.** Of the participants (325 students, 66% female), about one-fifth (21%) were current tobacco (including cigarettes and waterpipe) users. A clear majority (over 80%) of the students agreed as to the responsibility of health professionals on serving as role models for patients and the public, routinely advising patients using tobacco to quit, and giving patients advice about smoking cessation. Over 75% believed that cigarette-smoking health professionals are less likely to advise their patients to stop smoking. Current tobacco users were significantly less likely to agree with these beliefs ($P < 0.05$). **Conclusion.** Future oral health professionals have generally positive attitudes towards tobacco control. However, their own current tobacco use has a significant negative impact on these attitudes, an impact which ought to be taken into account in tobacco control.

1. Introduction

Globally, one of the greatest health challenges of today is the tobacco epidemic. Worldwide, the number who dies from tobacco-related diseases each year is higher than the number of victims of tuberculosis, malaria, and HIV/AIDS added together [1]. In developing countries, the situation is even worse than in today's developed countries [2]. In Iran, with its population of about 75 million, tobacco-related diseases kill more than 75,000 people per year [3]. Economically, the expenses associated with tobacco, that is, treatment of tobacco-related diseases together with tobacco production and import, constitute a considerable cost for society. Furthermore, individuals and families have high expenditures from smoking [4, 5].

Health professionals' involvement in the tobacco epidemic is an essential and effective way of dealing with it [6]. Even a brief advice from health professionals to smoking

patients can significantly increase the quit rate [7–9]. One way to make health professionals' involvement even more effective in tackling tobacco use is a multiprofessional approach which has been advocated by the World Health Organization (WHO) [10, 11]. Physicians usually undertake more cessation counseling than do the other health professionals [12], but other groups of health professionals can be effective, as well [13, 14]. Research has shown that a clear majority of dental, medical, and nursing students consider health professionals to play a role in giving patients advice about smoking cessation [15–17].

To be able to effectively participate in the antitobacco effort, health professionals' attitudes towards tobacco use cessation are important. Attitudes are a mixture of beliefs, thoughts, and feelings that predetermine health professionals' behaviour and clinical practice [18, 19]. In addition, a bilateral relation exists between attitudes and behaviour. Health professionals' negative beliefs and their own unhealthy

behaviour, for example, smoking, may have both direct and indirect consequences for their successful preventive work [20, 21].

The objective of our study was to explore attitudes towards health professionals' role in tobacco control among Iranian dental students.

2. Subjects and Methods

2.1. Study Subjects and Data Collection. A national survey was implemented among students selected from all dental schools in December 2010 in Iran. All fourth-year students ($n = 385$) of eight randomly selected schools (six state and two private) were invited to participate in the study. One of the authors (Hooman Keshavarz) distributed a self-administered anonymous questionnaire among the participants in one of their ordinary classroom settings. A detailed description of the survey has been presented [22].

2.2. Questionnaire. The data collection instrument was the Global Health Professions Student Survey (GHPSS) questionnaire [23], modified for Iranian conditions; after translation into Persian, the modified questionnaire was tested in a pilot study [22].

In addition to age and gender, the questionnaire queried students on the following items.

2.2.1. Tobacco Use in the Previous 30 Days. The number of days on which use of tobacco products (cigarette, waterpipe, and other tobacco products) had occurred during the previous 30 days involved three questions with seven alternatives (0 days, 1 or 2 days, 3 to 5 days, 6 to 9 days, 10 to 19 days, 20 to 29 days, and all 30 days). For each tobacco product, those students who had used the product at least once during the previous 30 days were considered as current users.

2.2.2. Attitudes towards Health Professionals' Role in Tobacco Control. The students were asked seven attitudinal questions on health professionals' role in tobacco control (Table 1). To make the answers clearer, in contrast to the yes/no form of the original GHPSS questionnaire [23], we used a five-point Likert scale from "Completely agree" to "Completely disagree" as alternative.

2.3. Statistical Methods. The data were analyzed with SPSS for Windows, version 16 (SPSS Inc., Chicago, IL, USA). The chi-square test served for comparing subgroups. For exploring the association between gender and the students' attitudes, we split our dataset into two categories according to current tobacco use status and tested the association in each of the two categories separately. The statistical significance was set at $P < 0.05$.

3. Results

About 84% of the students (325 students, 66% female) participated in the survey. Most of them (92%) were from 19 to 24 years old. The dental students had generally positive

TABLE 1: Attitudinal questions (in their order in the questionnaire).

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- (1) Do health professionals serve as "role models" for their patients and the public?
 - (2) Should health professionals routinely advise their patients who smoke to quit smoking?
 - (3) Should health professionals routinely advise their patients who use other tobacco products to quit using these products?
 - (4) Do health professionals have a role in giving advice or information about smoking cessation to patients?
 - (5) Are patient's chances of quitting smoking increased if a health professional advises him or her to quit?
 - (6) Are health professionals who smoke cigarettes less likely to advise patients to stop smoking?
 - (7) Are health professionals who use other tobacco products (waterpipes, pipes, chewing tobacco, snuff, bidis, or cigars) less likely to advise patients to stop smoking?
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attitudes towards health professionals' role in tobacco control (Figure 1). A clear majority of them (88%), completely or partially, agreed as to their responsibility to serve as role models for patients and the public. Similarly, most of the students (>80%) recognized the responsibility of health professionals to routinely advise tobacco-using patients to quit and to give patients advice about smoking cessation. A clear majority of the students (78%) believed that health professionals' advice can promote patients' chances to quit smoking. More than three-fourth of the students expressed their agreement on the lower likelihood of advising patients to stop smoking if the health professionals are cigarette smokers themselves and believed that advising patients to stop smoking is less likely to be done by health professionals who use other tobacco products.

Current tobacco users, however, reported significantly ($P = 0.001$) less agreement with health professionals' serving as role models for patients (Table 2). Current tobacco users also reported significantly less agreement with the following health professionals' responsibilities: routinely advising smoking patients to quit ($P < 0.001$), routinely advising patients who use other tobacco products to quit ($P = 0.008$), and playing a role in giving patients advice about smoking cessation ($P < 0.001$). Regarding the lower likelihood of advising patients to quit smoking if the professional is a cigarette smoker, current tobacco users expressed significantly ($P = 0.022$) less agreement as well (Table 2).

Among the students who did not use tobacco currently, female students reported their agreement on the responsibility of health professionals to serve as role models significantly more often than did male students ($P = 0.04$). Except for this association, no significant association emerged between gender and students' attitudes.

4. Discussion

Our study investigating Iranian dental students' attitudes towards health professionals' role in tobacco control showed generally positive attitudes towards tobacco control by health

TABLE 2: Iranian dental students' attitudes towards health professionals' role in helping patients quit tobacco use, by the students' current tobacco use status.

| | Current tobacco use status [‡] | Agree <i>n</i> (%) | No opinion or disagree <i>n</i> (%) | <i>P</i> [†] |
|---|---|-----------------------|--|-----------------------|
| Serving as role models for patients (<i>n</i> = 324) | Nonuser | 233 (90.7) | 24 (9.3) | 0.001* |
| | User | 51 (76.1) | 16 (23.9) | |
| Routinely advising smoking patients to quit (<i>n</i> = 324) | Nonuser | 221 (86.0) | 36 (14.0) | <0.001* |
| | User | 40 (59.7) | 27 (40.3) | |
| Routinely advising patients who use other tobacco products to quit (<i>n</i> = 323) | Nonuser | 219 (85.2) | 38 (14.8) | 0.008* |
| | User | 47 (71.2) | 19 (28.8) | |
| Having role in giving advice about smoking cessation to patients (<i>n</i> = 321) | Nonuser | 231 (90.6) | 24 (9.4) | <0.001* |
| | User | 48 (72.7) | 18 (27.3) | |
| Health professionals' advice can increase a patient's chances to quit smoking (<i>n</i> = 323) | Nonuser | 201 (78.5) | 55 (21.5) | 0.673 |
| | User | 51 (76.1) | 16 (23.9) | |
| Less likelihood of advising patients to stop smoking by cigarette smoking health professionals (<i>n</i> = 305) | Nonuser | 191 (78.9) | 51 (21.1) | 0.022* |
| | User | 41 (65.1) | 22 (34.9) | |
| Less likelihood of advising patients to stop smoking by health professionals who use other tobacco products (<i>n</i> = 312) | Nonuser | 195 (78.9) | 52 (21.1) | 0.057 |
| | User | 44 (67.7) | 21 (32.3) | |

[†] *P* values derived from χ^2 test (*statistically significant).

[‡] Using any kind of tobacco products at least once during the previous month was considered as current tobacco use.

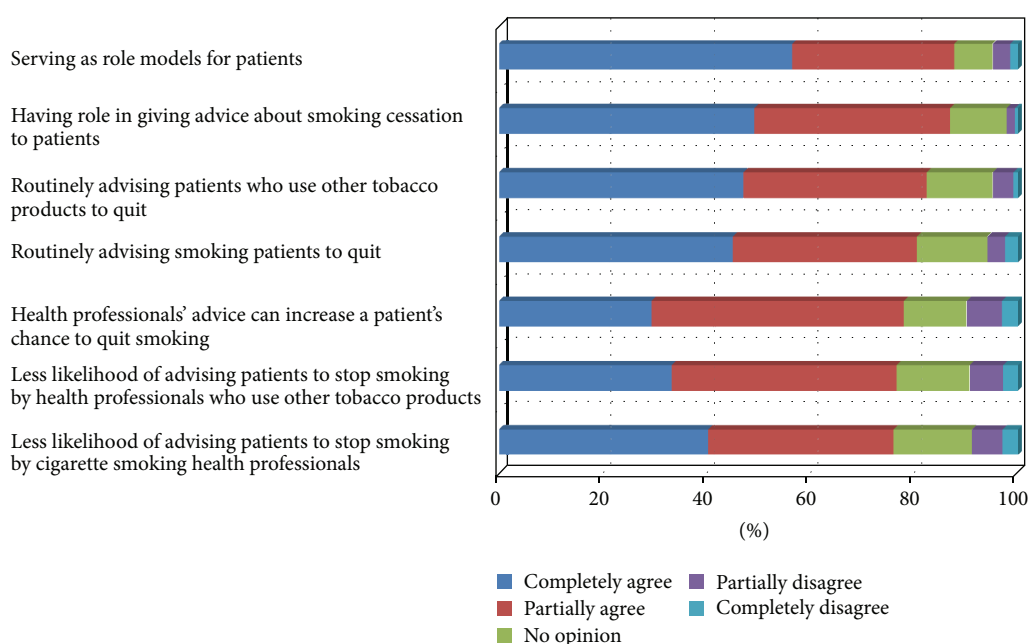


FIGURE 1: Iranian dental students' attitudes towards health professionals' role in helping patients quit tobacco use.

professionals. Current tobacco use, however, had a significant negative impact on attitudes among the respondents.

Health-profession students' attitudes are of high importance, since they will take on important responsibilities in the future. These students often recognize that they play a role in advising patients on smoking cessation and believe they should receive training on counseling patients to quit using tobacco, but few report receiving such formal training [15–17]. Iranian dental students have not been studied well

regarding attitudes towards tobacco control, even though a recent national study showed that more than half of all Iranian dental students had tobacco-use experience with either cigarettes, waterpipes, or other tobacco products and that about one-fifth were current tobacco users [22].

Our findings are in line with earlier research assessing health-profession students' attitudes towards health professionals' role in tobacco control [15–17]. Studies done on health professionals who had graduated also report similar

results regarding attitudes towards health professionals' role in tobacco control [24, 25]. However, physicians' central role and responsibility has been emphasized in some studies [26].

Health professionals' own tobacco use status has an influence on their attitudes towards health professionals' role in tobacco control, with current tobacco users less likely to express positive attitudes [24, 27, 28]. Sreeramareddy et al. [27] showed that never-smokers agreed with the role modeling of medical professionals significantly more than did ever-smokers. Smoking health sciences students in Kuwait were also significantly less likely to agree with their professional responsibility to help smokers quit than were nonsmoking students [28]. Findings from Gulf Arab states, in line with our results, showed significantly different attitudes between never-smokers and current smokers regarding health professionals' role model position, whereas, in contrast to our results, they showed no significant difference as to the responsibility of health professionals to routinely advise smoking patients to quit [24]. In contrast to our results, the difference between never- and current smokers' agreement that patients' chances of quitting smoking are increased if a health professional advises them to quit was significant in Gulf Arab states [24].

While a pronounced gender difference has been reported in earlier tobacco use and in current tobacco use among Iranian dental students [22], overall, we found no significant gender difference in the students' attitudes. However, among the current non-tobacco-users, female students highlighted health professionals' responsibility as role models significantly more than did male students.

Our random sample, as it includes both state and private dental schools as its target population, offers reliable and comprehensive views of students' attitudes. Although our high response rate (84%), random sampling, and anonymous questionnaire increase validity for our findings, as with any other questionnaire surveys collecting data on tobacco use status, its results should be treated with caution. In particular, the social unacceptability of tobacco use among women in Iran [29] and the possibility of social desirability bias are factors to be taken into account.

5. Conclusion

Future oral health professionals' generally positive attitudes towards tobacco control are affected by their current tobacco use. Considering the relationship between attitudes and performance to improve future oral health professionals' performance in tobacco control, the focus of training should be on tobacco users among these students.

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