

Knowledge, Attitude, and Practice for Tobacco Control among Dental Professionals in the City of Delhi

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ABSTRACT

To assess the knowledge, attitude, and practices of dental practitioners in Delhi concerning use of tobacco in their patients, a self-administered questionnaire was administered to conveniently selected 100 subjects consisted of students, interns, institutional, and private dental practitioners. Although knowledge about harmful effects of tobacco was high but only some advocate tobacco cessation practices actively, maintain records on tobacco use and follow-up on advice to patients to quit. However, all felt that there is a need to include tobacco cessation in their daily practice. Lack of formal training in tobacco prevention and cessation, lack of time, lack of resources and skills, not optimistic about the effectiveness of their counseling, and thought that it was not their role are most often cited to explain the reluctance of dentists and hygienists to provide tobacco cessation interventions. This is considered a lost opportunity for them which can be better utilized if they are trained for this important task.

Keywords: Dental, tobacco control, knowledge, attitude, practices

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INTRODUCTION

Tobacco use is a major cause of preventable mortality and morbidity globally with total global smoking prevalence to be 29% according to World Health Organization (WHO) in 2006 [1], and World Bank predicting over 450 million tobacco deaths in the next 50 years, if present scenario does not change [2]. Tobacco related illnesses place tremendous burden on the health care system. Its use is growing fastest in low-income countries, due to steady population growth coupled with tobacco industry targeting, ensuring that millions of people become fatally addicted each year. Lack of awareness of harm, ingrained cultural attitudes, and lack of support for cessation maintains tobacco use in the community.

In India, the National Family Household Survey 3 (NFHS 3) figures for 2005–2006 reveal that 57% of males and 10.8% of females use some form of tobacco [3]. Tobacco related mortality in India is among the highest in the world, with about 700 000 annual deaths attributable to smoking in the last decade [4], expected to increase to 1 million in the current decade. Tobacco use has numerous detrimental effects upon systemic and oral health [5, 6]. Smoking is strongly associated with periodontal disease, and both smoking and smokeless tobacco use have been significantly linked to the occurrence of oral cancer [6, 7]. The oral effects of tobacco use are visible earlier than the systemic effects, so the dental hygiene appointment offers a unique opportunity to intervene and encourage tobacco users to quit [8–10]. Evidence has

shown that brief clinical interventions significantly increase the rate of quitting among tobacco users [9, 11, 12].

Available evidence suggests that simple advice for tobacco cessation from a physician in primary care settings increases abstinence rate by 30% compared to no advice [6].

The Clinical Practice Guidelines for Treating Tobacco Use and Dependence (2008 Update) [13] state that the clinician is responsible for providing a brief tobacco cessation intervention to all using patients. An estimated 33% of current tobacco users visited the dentist in 2000 [14] and hence dentists must take advantage of this opportunity to help tobacco users to quit.

Dental treatment often necessitates frequent contact with patients over an extended period of time, providing a mechanism for long-term contact and reinforcement, coupled with visible changes in the oral cavity in response to counseling. Therefore, they can and should offer tobacco cessation interventions actively in their routine clinical practice, as they are well regarded and their advice well-accepted, they also form the most likely persons from whom advice on quitting would be taken seriously and accepted by users.

To increase tobacco-use prevention counseling within dental practices, the profession should emphasize addressing dentists' attitudes and

barriers regarding counseling to prevent tobacco use. We therefore attempted to carry out a survey on the knowledge, attitude and practices of dental practitioners regarding tobacco use.

MATERIALS AND METHODS

A semi-structured self-administered questionnaire was modified version of WHO questionnaire [15], consisting of 46 close ended and responses on likert scale covering the following topics: (i) personal details, (ii) knowledge of harmful effects, tobacco use, and treatment modalities, (iii) attitudes, and (iv) practices of the dentists including the obstacles/barriers faced by them in doing so. On an average of 15 min were required to complete a questionnaire. A sample of 96 subjects was calculated considering the prevalence of tobacco cessation practice by dentist as 52% from the previous study [16] and taking 42% as worst acceptable prevalence at 95% confidence level. However, 132 dental practitioners including dental students, interns, those working in dental college (institutional practice), and private practitioners from Delhi were approached using convenient sampling method and given the questionnaires, only 100 dental practitioners (response rate 86.2%) returned with complete information. The data collected was analyzed using the Statistical Package for Social Sciences (SPSS) V.11 for Windows software.

RESULTS

The mean age of the dental practitioners surveyed was around 26.76 (SD \pm 5.876) years (data not shown in table) and majority of them

were practicing for less than 2 years (54.0%). About 59.0% of the respondents were male and about 29.0% were using tobacco themselves. Among the total respondents, only 21.0% were post-graduates (Table I).

Table I Base Line Characteristics of Dental Professionals ($N = 100$).

Characteristics		$N = 100$
Sex	Male	59
	Female	41
Qualification	BDS final year students	35
	BDS completed	44
	MDS	21
No. of Years of Practice	Less than 2 years	54
	2–5 years	21
	More than 5 years	25
Type of Practice	Students	35
	Interns	15
	Institutional practitioners	25
	Private practitioners	25

Knowledge of Dental Professionals Regarding Harmful Effects of Tobacco

The study showed that 100% of the respondents agreed that the tobacco use is linked to various cancers and passive smoking

is linked to lung diseases and increases the risk of cancer. About 99.0% believed that maternal smoking increases risk of sudden infant death syndrome (Table II).

Table II Knowledge, Attitude, and Practices about Tobacco Use among Dental Professionals (N = 100).

Variable	Sub-groups	Affirmative answers N = 100
Knowledge of harmful effects	Tobacco use linked to various cancers	100
	Passive smoking linked to lung diseases and increasing risk for cancer	100
	Maternal smoking increases risk of sudden infant death syndrome	99
Knowledge of tobacco use	The active ingredient in tobacco is nicotine, an active psychoactive substance	56
	Nicotine is the most addictive drug	75
	Smoking is more common in India than chewing	45
Knowledge of treatment modalities	Nicotine patches	69
	Nicotine gums	85
	Behavioral methods	85
	Pharmacotherapy	77
Attitudes	Use tobacco themselves	29
	Support strict legislation on tobacco use	100
	Support ban on public use of tobacco	90
	Believe media and celebrities promote tobacco	66
	Want size of warning labels to be increased	93
	Want increase price of tobacco products	50

Knowledge of Dental Professionals Regarding Tobacco Use

In the assessment of the dental practitioners' knowledge of the tobacco use in India, we found out that 44% of respondents did not know that the active ingredient in tobacco is nicotine, an active psychoactive substance and 75.0% of them knew that nicotine is the most addictive drug. The study also revealed that

only 45% knew that smoking is more common in India than chewing (Table II).

Knowledge of Treatment Modalities

Awareness of nicotine patches as treatment modalities was found to be less (31%), while 85.0% were aware of nicotine gums used in tobacco cessation. 15.0 and 23% of dental professionals were unaware of the available

pharmaceutical methods and behavioral methods, respectively, for tobacco cessation (Table II).

Attitudes of Dental Professionals Regarding Tobacco Use

About 29.0% of them used tobacco themselves. All had a belief that there should be strict legislation on tobacco use, and nearly all believe that public use of tobacco should be banned and the warning labels on tobacco products should be increased. About 66.0% believed that media and celebrities promote tobacco and about 50.0% wanted to increase price of tobacco products.

Practice of Dental Professionals Regarding Tobacco Users among Their Patients

Only 59.0% asked their patients about tobacco use and only 45.0% advocate tobacco cessation practices actively. Less than half of them (36%) follow up their patients for tobacco cessation and 40% maintain records on tobacco use. Although, almost all felt that there is a need to include this in their daily practice. As per providing antismoking educational material, only 10.0% do that and 34% of them suggest nicotine replacements and arrange follow-ups (Table III).

Table III Anti-tobacco Prescriptions of Dental Professionals to Their Patients ($N = 100$).

Variable	Sub-groups	Affirmative answers $N = 100$
Practice	Ask about tobacco use	59
	Maintain records on tobacco use	40
	Advocate tobacco cessation practices actively	45
	Followed up on advice to patients to quit	36
	Is it important to be included in daily practice	94
	Providing antismoking educational material	10
	Suggesting nicotine replacements and arranging follow-ups	34

Potential Barriers in Tobacco Cessation Practices

When asked to identify a list of potential barrier in tobacco cessation practice (Table IV), 29% respondents considered lack of formal training in tobacco prevention and

cessation as the most potential barrier. Lack of time (24.0%), lack of resources and skills (17.0%), not optimistic about the effectiveness of their counseling (16.0%), and not their role (14.0%) were the other barriers indicated in tobacco cessation practices.

Table IV List of Potential Barriers in Tobacco Cessation Practices, According to Dental Professionals Surveyed ($N = 100$).

S. no.	Variable	$N = 100$
1	Lack of formal training in tobacco prevention and cessation	29
2	Lack of time	24
3	Lack of resources and skills	17
4	Not optimistic about the effectiveness of their counseling	16
5	Not their role	14

DISCUSSION

Tobacco-related illnesses place a tremendous burden on the health care system. In addition to being associated with a number of cancers and cardiovascular conditions, tobacco plays a role in the etiology of a number of oral conditions; it is a primary risk factor for oral cancer [17], as well as leukoplakia [18], periodontitis [19], and delayed wound healing [20].

Health care providers can play a vital role in helping their patients attempt and realize tobacco cessation. The 2000 Public Health Service clinical practice guideline [6] indicates that “brief physician advice significantly increases long-term smoking abstinence rates.” Currently, most tobacco cessation interventions are provided by physicians, although it has been demonstrated that all health care providers can be effective [21]. In a study that attempted to compare the quality and quantity of tobacco cessation services provided by different health care providers,

including physicians, dentists, mental health counselors, and social workers, it is concluded that cessation interventions by dental providers ranked lowest in terms of both quantity and quality [22]. Similar to findings of the present study, dentists’ concern about their ability to effectively help patients to quit, lack of training, lack of resources, and skills, they feel that it is not their role, etc. are most often cited to explain the reluctance of dentists to provide tobacco cessation interventions [23, 24].

Dental professionals are role models for their patients regarding oral health and general health behaviors. Since they are primary health care providers, the majority of the respondents in various studies were non-tobacco users, which is typical of the dental health care profession [25–27]. Interestingly, the respondent percentage of current tobacco use (29%) corresponds with a similar survey done by Saddichha et al., 2010 [16] and much lower than in a survey done among dental students (81%) in Bihar [28]. However, the Global Health Professional Students’ (GHPS) survey

revealed that 13.5% of male medical and 11.4% of dental students used tobacco. According to the GHPS survey done among 3rd year dental students in India in 2005, 9.6% currently smoke cigarette and 3.7% currently use other tobacco products [29]. Importantly respondent use or non-use of tobacco had an influence on their interaction with tobacco-using patients, with users being less engaged in Tobacco Control Cessation with their patients. Brief advice from a dentist for tobacco control is cost-effective because it is provided during a visit scheduled for another purpose and has a potentially large reach.

While comparing our results with the study done by Saddichha et al., 2010 [27], we found out that mean age of the dental professionals was significantly on a lower side (26.87 ± 5.48), and also, majority of them were practicing for less than 2 years (52.5%). This might be due to the fact that majority of the respondents in our study were dental students and interns (50%) as compared to later study where majority were private practitioners (50%).

Almost all dentists (97.5%) in our survey had adequate knowledge on adverse effects of second hand and maternal smoking, similar to the findings in the WHO-GHPS (99.1%) [29]. On similar lines of common belief with the NFHS 3 [3], most dental professionals (62%) were not aware that smoking tobacco was more common than chewing in India. This is

in contrary to the fact revealed by a survey done in Bangalore, India [27].

Roughly one third of respondents were unaware of various treatment modalities reflecting the urgent need to sensitize health professionals on the different modalities of tobacco cessation. Such sensitization on the treatment modalities would certainly benefit patients by improving cessation rates among them [30]. Awareness regarding different forms of Nicotine Replacement therapy is similar in our study as compared to that in Global Health Professional Survey (2005) [29]. However, our study reveals better results regarding the knowledge of the treatment modalities when compared to a similar study done by Saddichha et al., 2010 [27] as the dentists surveyed in our study were mostly students and interns, and seemed to be more sensitized due to increasing awareness for tobacco cessation education now-a-days than before.

Almost all favored banning smoking in all enclosed public places; and almost all supported the increase in price and size of warning labels on tobacco products. Two-third of the health professionals also felt that the media and celebrities promoted tobacco, either directly or indirectly, calling for measures to control such surrogate promotion of tobacco use. This is similar to the earlier study on dental students who had also favored a ban on public use and on sale of tobacco products to

adolescents [29].

National surveys in USA suggest that between 30 and 50% [22] of US dentists, along with 25% of hygienists, ask their patients about smoking. However, the cessation advice provided by dentists has been described as “rather ad hoc and somewhat superficial” [31, 32]. In Bihar, most of the doctors surveyed (60–80%) did not take tobacco history. In our survey, only about half of respondents actually enquire about the tobacco use of their clients, corresponds with the study done in Bangalore [27]. Though 59% of the dental practitioners asked about tobacco use but less than half of them rarely advocate tobacco cessation practices actively, maintain records on tobacco use and follow-up on advice to patients to quit. Data from around the world suggests that up to half of all dental professionals advise their patients and suggest methods to quit tobacco [8, 22], although most of the dental practitioners agreed that the tobacco cessation practices should be included in daily practice. Studies from India suggest that most doctors did not ask for or suggest methods to quit tobacco [30]. As reported in a number of studies earlier on dental students globally, a large proportion of dental students including the present study consider lack of formal training in tobacco prevention and cessation (29.0%), lack of time (24.0%), lack of resources and skills (17.0%), not optimistic about the effectiveness of their counseling (16.0%), and not their role (14.0%) were the potential barriers indicated in tobacco

cessation practices. This is not restricted to dentists; integration of clinical guidelines into practice is a problem for all clinicians. For example, Cabana et al (1999) provided a thorough assessment of physicians’ difficulties in following clinical practice guidelines [33]. The lack of training and sensitization of dental health professionals limits the assessment and intervention of tobacco use. This is one of the lost opportunities for dental practitioners to implement effective intervention. This highlights the need of training of all level of dental practitioners in tobacco cessation program.

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