ROLE OF THE DENTIST IN TOBACCO CESSION:
A CROSS-SECTIONAL SURVEY

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ABSTRACT
Tobacco use is considered to be one of the five greatest risk factors for mortality worldwide. Visit to a dentist provides an opportunity during which the patient may be willing to accept tobacco cessation advice. The aim of this study was to determine whether patients visiting dental hospitals are provided with tobacco cessation counseling by the dentists. A cross-sectional survey was conducted and the participants were interviewed according to a self-developed closed questionnaire. The study population comprised of tobacco users reporting to the dental hospitals of Peshawar. 152 tobacco users were interviewed. Data analyses were performed using SPSS version 16. Most of the study participants (64.5%) were never advised by their dentist to quit tobacco use. Only 19.1% of the subjects considered it a duty of the dentist to play a role in tobacco cessation. Twenty four percent of the participants believed that tobacco cessation counseling from a dentist may be more successful than general physicians. Only 23% believed that advice or assistance by dentist may be helpful in tobacco cessation. Among the subjects who were advised to quit tobacco, 93% made an attempt to quit but only 20% were able to successfully quit. It was concluded that dentists can play an influential role in tobacco cessation provided they are properly educated and trained in tobacco cessation counseling and interventions.

Key Words: Tobacco cessation, role of dentist.

INTRODUCTION
Tobacco use is one of the leading cause of premature mortality and morbidity globally. Six million deaths occur annually because of tobacco use in the world. There were 5.4 million tobacco attributable deaths in 2005 and the figure may rise up to 6.4 million in 2016. It is expected that by year 2030, tobacco will be the single biggest cause of death globally and will be accounted for about 10 million deaths annually.

In low income countries aggressive marketing strategies of tobacco industry has led to considerable rise in tobacco use. The growth rate of tobacco industry in Pakistan was calculated to be 5% per year in early 1990s. According to available data, tobacco is consumed by 34% men and 12.6% women in Pakistan. This include use of all forms and types of tobacco. Common forms of tobacco used in Pakistan are cigarettes, moist snuff used as an oral dip (niswar), hookah (hubble bubble), chewed with betel nut (pan), and smoking of rolled dry leaves containing tobacco (beedi). In Khyber Pakhtunkhwa (KPK), Pakistan, tobacco is used in various forms e.g. smoking tobacco in hookah, chilam (hubble bubble), as cigarettes or more commonly in the form of oral snuff, naswar particularly in rural areas.

The harmful effects of tobacco use are exerted on all the human biological systems including oral cavity. Various countries are showing increasing interest in utilizing dental settings for tobacco cessation. Because of regular recall system of patients and the consequent opportunity of assisting people to lifestyle change, dentistry may be a potential setting for several aspects of clinical public health interventions. Tobacco cessation rates can be increased significantly by interventions in dental settings. Research indicates that mentioning the link of oral lesions with patients’ tobacco use is a very strong motivating factor to induce a cessation attempt. The dental visit provides an opportunity during which the patient may be willing to accept cessation advice and assistance, particularly if their dental health concerns are correlated with the
tobacco use. It is a professional and ethical responsibility of the dentists to be trained in and provide tobacco cessation interventions. Research suggests that dentists’ counseling might be more effective than physicians and other health care providers in helping patients quit tobacco use. Healthy People 2010 considered dental professionals to be key practitioners in the effort to achieve public health goals for treatment of tobacco use and dependence.

The primary aim of this study was to determine whether patients visiting dental hospitals of Peshawar are provided with tobacco cessation counseling by the dentists. The secondary aims were to explore the opinions of patients about the role of dentists in tobacco cessation and to examine the effects of counseling by dentists.

METHODOLOGY

It was a cross-sectional descriptive survey and the participants were interviewed according to a self-developed closed questionnaire. Sampling technique was purposive non probability sampling. The study population comprised of patients reporting to the dental hospitals of Peshawar (Khyber College of Dentistry, Sardar Begum Dental College, Peshawar Dental College) for dental treatment. Tobacco users included in this study comprised of both current and ex-users (N=152). A pilot test was conducted using the questionnaire on 10 tobacco users to assess the operational feasibility of the study. The Cronbach’s alpha reliability was 0.72. Sample size was calculated using the standard formula seeking results at 95% confidence interval for which the value of z = 1.96 was fixed and the allowable error as 0.05 (ε). Sample of 358 was estimated. Out of the participants interviewed (n=358), 152 tobacco user (current and ex-users) were included in the study. “Quit attempt” and “quitting tobacco use” were the dependent variables of the study. The independent variable was the “advice by the dentist to quit tobacco use”. Other variables included in the study were age, gender, years of tobacco use, previous visit to dentist and perceptions regarding the role of dentists in tobacco cessation.

The interviewers were trained by the researcher to interview the subjects and fill the questionnaire. Data analysis was performed with SPSS version 16.

RESULTS

The study population consisted of 86.2% males and 13.8% females. Out of 152 study participants, 64.5% (n=98) were never advised by their dentist to quit tobacco use (Table 1). Only 19.1% (n=29) of the subjects considered it the duty of dentist to a play role in tobacco cessation (Table 1). Twenty four percent (n=37) of the participants believed that dentist may be more successful in tobacco cessation compared to general physicians (Table 2). Furthermore only 23% (n=35) believed that advice or assistance by dentist may be helpful in tobacco cessation (Table 1). Among the subjects who were advised to quit tobacco 92.6% (n=50) made an attempt to quit but only 20.4% (n=11) were able to successfully quit (Table 1).

<table>
<thead>
<tr>
<th>TABLE 1: PARTICIPANTS’ RESPONSES TO THE QUESTIONNAIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes (n)</strong></td>
</tr>
<tr>
<td>** (%)**</td>
</tr>
<tr>
<td>Have you ever been advised by the dentist to quit tobacco use</td>
</tr>
<tr>
<td>Did you make an attempt to quit tobacco</td>
</tr>
<tr>
<td>Did you successfully quit tobacco</td>
</tr>
<tr>
<td>Do you consider it the duty of dentist to play role in tobacco cessation</td>
</tr>
<tr>
<td>Do you think that advice or assistance by dentist can be helpful in tobacco cessation</td>
</tr>
</tbody>
</table>

**TABLE 2: COMPARISON BETWEEN DENTISTS AND GENERAL PHYSICIANS IN TOBACCO CESSION SUCCESS**

<table>
<thead>
<tr>
<th>In your opinion who may be more successful in tobacco cessation counseling</th>
<th><strong>Frequency (No.)</strong></th>
<th><strong>%</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>General physicians</td>
<td>115</td>
<td>75.7%</td>
</tr>
<tr>
<td>Dentists</td>
<td>37</td>
<td>24.3%</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

DISCUSSION

Dental settings have become increasingly attractive as an avenue for promoting tobacco cessation. Most studies have focused on dental professionals’ attitudes towards tobacco cessation counseling and not the patients’ perspective. Few studies reporting patients attitude about receiving cessation advice from dental college, hospitals and clinics did not include the effects of the counseling by the dentists on the patients. In the present study it has been tried to explore both the attitude and practice of the tobacco users visiting the dentists.

In this present study it was found that a small proportion of the subjects were advised by the dentist to quit tobacco use. These findings suggest that most of
the dentists generally do not advise their patients to quit tobacco use. It is in coincidence with the results reported by Shah et al\textsuperscript{26} and Mumtaz et al\textsuperscript{27} but in contrast to that reported by Svecar et al.\textsuperscript{28} The possible reason for this difference in findings may be because of the fact that public health dentistry is very developed in most of the developed countries and also in some developing countries but not so in Pakistan. The dentists do not consider it their duty to be involved in cessation counseling and fail to appreciate the magnitude of benefit which they can provide to the society by utilizing their influence in this regard. Further research is recommended to probe the perceptions and attitudes of the local dentists regarding their role in tobacco cessation.

Most of the participants advised by the dentist made an attempt to quit tobacco (92.8%). This finding highlights the important role of a dentist in tobacco cessation and is supported by previous research.\textsuperscript{14,28-30} However, the success rate of quitting tobacco was very low. The possible reason may be the absence of cessation strategies or any kind of follow-up by the dentists. The famous 5 A model, as defined by the US 2000 Public Health Services Clinical Practice Guidelines\textsuperscript{24} is a user friendly method that can be used to achieve better results. The 5 As Approach includes: Asking patients about tobacco use; Advising users to quit; Assessing their readiness to quit; Assisting them with the quitting process; and Arranging follow-up to check on their progress. Most of these cessation interventions can easily be carried out in dental settings.

In the present study most of the participants did not consider it the duty of dentists to play a role in tobacco cessation and also did not believe that advice or assistance by dentists may be helpful in tobacco cessation. A survey by Rikard Bell et al\textsuperscript{31} also suggested the same perception. Most of the participants of present study (n=115) considered it to be the role of general physicians to perform tobacco cessation counseling and interventions. This perception of the public regarding role of dentists in tobacco cessation needs to be changed in order to utilize dentistry in achieving cessations goals.

It is noteworthy to mention that 13.8% of present sample was female. In most of the surveys related to tobacco use, people in general and female in particular are reluctant to disclose their smoking habits. Therefore all forms of tobacco (smokeless and smoked) were included in this study. Use of smokeless tobacco is not considered a social taboo in the villages of Pakistan. Almost all of the female participants of the sample hailed from villages located in the periphery of Peshawar (KPK).

One of the limitations of the present study lies in the generalizability of these results to tobacco users who visit private dental clinics as data were collected from teaching dental hospitals.

Different barriers to the effectiveness of tobacco cessation by dentists which are mentioned by Needleman\textsuperscript{18} need to be researched in local settings. It is the opinion of the authors that most of the dentists do not have sufficient skill, time and desire for participation in tobacco cessation activities.

CONCLUSIONS

Dentists can play an important role in tobacco cessation provided they are properly educated and trained in tobacco cessation counseling and interventions. In a developing country like Pakistan, this role by dentist will help to reduce the increasing burden of oral and systemic diseases associated with tobacco.

REFERENCES


CONTRIBUTION BY AUTHORS

1 Amjad Khattak: Main article writer.
3 Sami S Khan: Supervisor.
4 Muhammad Irshad: Helped in results compilation & discussion.