ISSN: 0976-3031

Available Online at http://www.recentscientific.com

International Journal of Recent Scientific Research
Vol. 7, Issue, 7, pp. 12701-12705, July, 2016

International Journal of Recent Scientific Research

Research Article

KNOWLEDGE, ATTITUDE, PRACTICES AND PERCEIVED BARRIERS TOWARDS TOBACCO CESSATION COUNSELLING AMONGST DENTAL PRACTITIONERS IN PIMPRI – CHINCHWAD- A QUESTIONNAIRE BASED CROSS-SECTIONAL SURVEY

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ARTICLE INFO

Article History:

Received 17th April, 2016
Received in revised form 21st May, 2016
Accepted 05th June, 2016
Published online 28th July, 2016

Key Words:

Tobacco cessation counselling, Dentists, Knowledge-Attitude-Practices-Perceived barriers.

ABSTRACT

The use of tobacco products, represents the leading cause of preventable illness and death in the developed world. Office-based interventions involve the use of some or all of a combination of cessation advice by a clinician, setting of a quit date, use of nicotine replacement therapy, and one or more recall visits for reinforcement and support. To evaluate the knowledge, attitude, practices and perceived barriers towards tobacco cessation counselling by dentists'. A cross sectional questionnaire based study was conducted using a pre-tested and validated self-administered questionnaire containing 35 items to be answered. The questionnaire was given to 200 dentists working in private practice in Pimpri-Chinchwad city. The data obtained was analysed using SPSS statistical software version 21.Out of 200 dentists who were given the questionnaire 194 dentists returned the questionnaire duly answered. Around 88% knew that nicotine was most addictive substance in tobacco and tobacco chewing was the most common habit. Almost over half of the dentists knew about the pharmacologic as well as non-pharmacologic treatment methods of nicotine dependence. Almost 72% asked their patients about tobacco use, 26% offered assistance to quit and referred patients to appropriate services. Only 63% of dentists agreed that their advice would be effective to help patients quit tobacco habits. The results of this study call for sensitizing dental professionals on the issue of tobacco cessation counselling.

INTRODUCTION

"No dentist practicing in the 21st century can ignore the tobacco use of their patients"

- Jones RB (2000)

Tobacco use is the world's leading cause of death, accounting for 4 million deaths per year. On the basis of current use patterns by the year 2030, it may kill more than 10 million people annually (Gupta PC 2001). The rising epidemics of deaths due to tobacco continue despite of the vast amount of knowledge available. A discussion on the public health consequences of tobacco use is timely and important for the following reasons i.e. most tobacco habits start at the adolescence, no amount of tobacco is safe, tobacco contains nicotine which has an addictive power, quitting has immediate and long term effects. (Gupta PC 2001)

Tobacco use in the developed world remains stable or rises, but in the low- and middle-income countries it continues to bear an increasing share of tobacco-related mortality. The total number of premature deaths caused by tobacco during the twentieth century has been estimated at about 100 million and, if current trends of tobacco use continue during the 21st century, the death toll is projected to go up to one billion. The World Health Organization (WHO), which provides these estimates, also predicts that India will have the fastest rate of rise in deaths attributable to tobacco in the first two decades of the 21st century. (Reddy KS, Gupta PC 2004)

Many of these deaths will occur in the productive years of adult life, as a consequence of an addiction acquired in youth. There is a compelling need to save many of these lives from falling prey to tobacco use addiction and the urgent imperatives of avoiding the huge health, economic, social and environmental burdens that would be imposed by tobacco on a nation that aspires for accelerated development. Public health researchers have been substantiating these findings and discovering more and more damaging evidence about the disease consequences of tobacco use for over half a century. (Reddy KS, Gupta PC 2004)

For decades, public health advocates have been sending a clear message that tobacco use in any form is harmful. A complex web of motivations and addictions drives each individual who refuses to heed the warnings, but the question for the health

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professions is this: What concrete steps can we take to help smokers and other tobacco users quit and to discourage nonusers from ever starting? (Sandhu HS 2001). The 5 A's, ask, advise, assess, assist and arrange as defined by the US 2000 Public Health Services Clinical Practice Guidelines have been proposed as a user friendly, brief intervention approach to an in office cessation programme. (Sandhu HS 2001, NIH publication 1994).

Dentists trained in tobacco cessation counselling advised patients more frequently to quit tobacco habits and were more confident about their counselling skills than the dentists who had no training in tobacco cessation counselling. (Albert D, *et al* 2002) concluded that dentists were not adequately communicating to their patients the importance of quitting. (Warnakulasuriya S 2002). Dentists who implemented an effective smoking cessation program could expect to achieve quit rates up to 10-15 % each year among their patients who smoke or use smokeless tobacco. A relatively low number 30% dentists indicated that they had active involvement in assisting smokers to stop or referring them for more detailed support (24%) (Watt RG, *et.al*. 2004).

Though much data exists world-wide, there is limited data pertaining to Maharashtra on tobacco cessation counselling provided by dentists. Hence this study was taken up with the aim to assess the knowledge attitude, practices and perceived barriers of dentists towards tobacco cessation counselling in Pimpri – Chinchwad city.

MATERIALS AND METHODS

The study area was dentists practicing in Pimpri-Chinchwad city located in Pune district of Maharashtra. The dental community is small in the city and all the dentists were included in this survey. The study design used was a Cross-sectional questionnaire based survey. The total number of dentists in Pimpri-Chinchwad city was 227. Considering this, it was decided to include all the dentists practicing in Pimpri-Chinchwad in the survey. The questionnaire was distributed by a door to door method by visiting every dentist in Pimpri-Chinchwad city. The dentists who refused (n=15) to participate in the study were excluded and those who did not return (n=12) the questionnaire on 3 consecutive visits were also excluded from the study. The total number of dentists who participated in the study was 200 out of which 6 incompletely filled questionnaires were not included. Thus a total of 194 questionnaires were analyzed.

Data Collection Procedure

A pretested and pre-validated questionnaire was hand-delivered to dental practitioners in the Pimpri-Chinchwad City. The self-administered questionnaire was collected back from them immediately on completion. The questionnaire was pilot tested and validated prior to the start of the study. Pilot testing was done by distributing the questionnaire to 20 randomly selected dentists working in Pune. These dentists were not included in the main study. Validation of the questionnaire was done with the help of subject experts from the department of Public Health Dentistry. Relevant and necessary changes were made to the questionnaire and the final questionnaire was approved by the subject experts. The questionnaire was developed keeping in mind the aim and objectives of the study. The questionnaire consisted of four sections.

Section A- Assessed the demography of the respondents i.e. gender, age, type of work, years of experience, etc.
Section B- Comprised of questions to assess the Knowledge and Attitude of the respondents.
Section C- Comprised of questions to assess the Practice.
Section D- Comprised of questions to assess the Perceived barriers towards tobacco cessation counselling.

Ethical Considerations

The ethical approval was obtained from the Institutional Ethical committee of SinhgadDental College and Hospital, Pune.

Statistical Analysis

The data obtained from the completed questionnaires was entered in Microsoft excel (version: Microsoft Office 2013). Out of 200 practitioners who were given the questionnaires 194 completely answered the questionnaire. Descriptive analysis was done in order to determine the frequency and number of responses. The statistical analysis was done using the Statistical Package for Social Sciences software (SPSS version 21 for windows 8).

RESULTS

The cross sectional survey was conducted amongst the dental practitioners in Pimpri-Chinchwad to evaluate the knowledge, attitude, practices and perceived barriers towards tobacco cessation counselling by dentists. Equal number of respondents from both the genders, (98 males and 96 females). Amongst the dentists who answered the questionnaire, 150(77.3%) are practicing since lesser than 5 years, 25(12.9%) are practicing since 6-15 years, 12(6.2%) are practicing since 16-25 years and 7(3.6%) are practicing since more than 25 years.

It was also noted that 69(35.6%) saw less than 10 patients a week, 48(24.7%) saw around 10-20 patients per week, 26(13.4%) saw around 21-30 patients, 32(16.5%) dentists saw around 31-40 patients per week and 19(9.8%) dentist attend to more than 40 patients per week suggestive that majority of the dental community have ample amount of time for counseling the patient. The study was conducted on 152 (78.4%) General Practitioners (B.D.S.) and 42(21.6%) specialists (M.D.S). It was found that major bulk of dentists, 162(83.5%) had a general practice whereas; 28(14.4%) had only speciality practice. Amongst the dental practitioners 155(79.9%) have never smoked, 10(5.2%) regularly smoke, 22(11.3%) are occasional smokers while 3(1.5%) have quit smoking and 4(2.1%) have not answered this question.

The dentists in Pimpri-Chinchwad support strict legislation on tobacco use around (99%). Almost all the dentists (99.5%) support ban on public use of tobacco. Only (93.8%) of them believed that media and celebrities promote tobacco and hence they want a more responsible attitude from the media and celebrities and more participation by media and celebrities in creating awareness amongst the population against the harmful effects of tobacco use. Sizeable number of dentists (78.9%) even believe that increasing the warning size and 60.8% of the

dentists believed that increasing the price of tobacco products will decrease consumption.

Table 1 Demographic Characteristics of the Sample

	Variable	Number	Percentage (%)
Gender	Male	98	50.5
	Female	96	49.5
	Total	194	100
Years in Practice	< 5 years	150	77.3
	6-15 years	25	12.9
	16-25 years	12	6.2
	>25 years	7	3.6
	Total	194	100
Patients seen / week	< 10 patients.	69	35.6
	10-20 patients.	48	24.7
	21-30 patients.	26	13.4
	31-40 patients	32	16.5
	40>patients.	19	9.8
	Total	194	100
Professional Rank	General Practitioner	152	78.4
	Specialist	42	21.6
	Total	194	100
Type of practice	General Practice	162	83.5
	Specialist practice	32	16.5
	Total	194	100
Smoking habits	Non-smoker	155	79.9
	Smoker	10	5.2
	Occasional Smoker	22	11.3
	Ex-Smoker	3	1.5
	Did not answer	4	2.1
	Total	194	100

Table 2 Knowledge and attitude based questions and the responses in percentages.

	Knowledge about harmful effects	
i.	Tobacco use linked to various cancers	90%
ii.	Passive smoking linked to lung diseases and increasing risk for cancer	85%
iii.	Maternal smoking increases risk of sudden infant death syndrome	100%
	Knowledge of tobacco use in India	
i.	The active ingredient in tobacco is nicotine, an active psychoactive substance.	98.5%
ii.	Nicotine is the most addictive drug.	88%
iii.	Tobacco chewing is more common in India than smoking.	69%
	Knowledge of treatment modalities	
i.	Nicotine patches	26.8%
ii.	Nicotine gums	5.7%
iii.	Pharmacotherapy(Bupropion)	0%
iv.	All of the above	67.5%
	Attitudes	
i.	Support strict legislation on tobacco use	99%
ii.	Support ban on public use of tobacco	99.5%
iii.	Believe media and celebrities promote tobacco	93.8%
iv.	Want size of warning labels to be increased.	78.9%

In the current practice a sizeable number (72.7%) of dentist asked their patients about their tobacco habit. All the dentists (100%) advised the patients to quit their tobacco habits. Majority of the dentists (93.8%) explained the detrimental effects of tobacco to their patients. It was also observed in the study that very few dentists (20.6%) referred patients to appropriate services to help them stop their tobacco habits. Dentists (53.1%) assisted their patients to stop their habits. a meagre few dentists (25.3%) provided pamphlets and had posters put up in waiting room to educate people. Although around (50%) of the dentists try and assist patients with tobacco habits to stop the habit and 52.1% discussed the use of nicotine replacement therapy with patients who smoke. Very few dentists (26.8%) of them followed up their patients and only 20.6% of the dentists kept records of patient's tobacco habits status.

Perceived barriers like the attitude of the patient and dentist in helping the patients were evaluated. **(Figure 1 & 1a)** 52% of the participants felt that advice from a dentist in quitting tobacco was effective. 1/3rd of the participants (31.4%) felt that it is not the responsibility of the dentist to convince people to quit tobacco habits. Majority of participants (75.3%) did not have adequate education materials and 84.5% of them said that they do not have referral resources for helping patients quit. Some (32%) of the participants did not know how to help patients quit and a meagre 6.2% said that they did not have time to advice patients to quit.

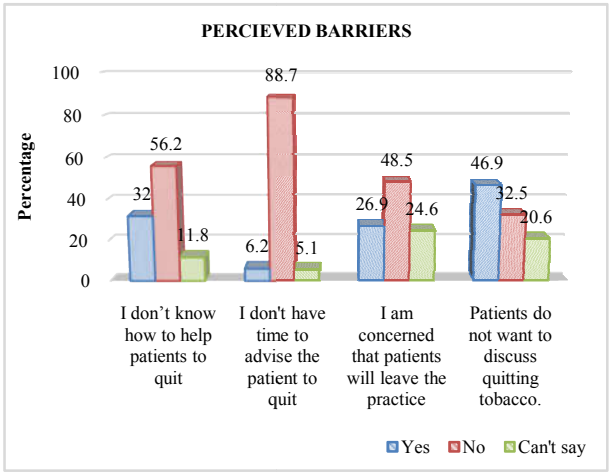

Figure 1 Perceived barriers towards tobacco cessation counselling

Table 3 Current Practice Regarding Tobacco Cessation

Sr. No.	Statement	Yes (%)	No (%)	Can't say(%)
i.	Do you ask all new patients about their tobacco habits?	72.7	11.8	15.5
ii.	Do you advise patients who have tobacco habits to quit?	100.0	0	0
iii.	Do you explain to your patients with tobacco habits the impact of tobacco on their general & dental health?	93.8	5.2	1.0
iv.	Do you refer patients to appropriate services to help them stop tobacco habits?	20.6	52.6	26.8
v.	Do you assist patients with tobacco habits to stop the habit?	53.6	20.6	25.8
vi.	Do you provide tobacco cessation pamphlets & posters in the waiting room so patients can help themselves?	25.3	52.5	22.2
vii.	Do you discuss the use of nicotine replacement therapy with patients who smoke?	52.6	30.9	16.5
viii.	Do you involve the dental team in helping patients with tobacco habit issues?	30.9	51.5	17.6
ix.	Do you Follow-up with the patients' progress in giving up tobacco?	26.8	46.4	26.8
x.	Do you keep records of patients' tobacco habit status?	20.6	58.8	20.6

Over a quarter of the participants (26.3%) were concerned that patients will leave if they start tobacco cessation counselling. Almost (46.9%) of participants felt that patients do not want to discuss quitting tobacco and over (51.5%) felt that most of the users are unable to quit the habit even if they want to actually quit. There is a definite role of the dentist in educating the population, where in patients should be encouraged to discuss their tobacco habits. Lacunae like unavailability of education material, adequate referral centres and lack of training in tobacco cessation counselling should be addressed.

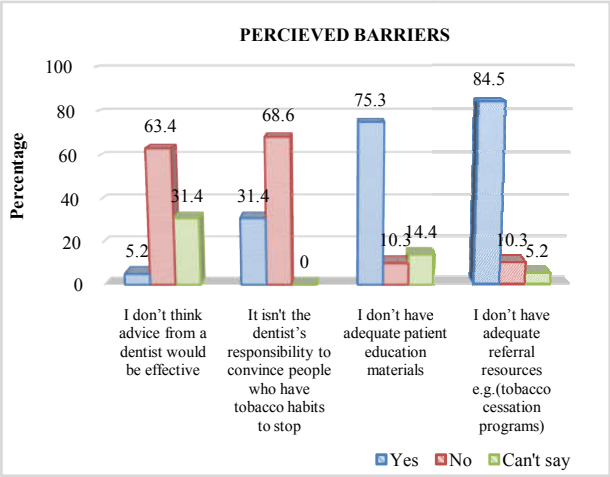

Figure 1a Perceived barriers towards tobacco cessation counselling.

DISCUSSION

The study was conducted on 152 (78.4%) general practitioners (B.D.S) and 42 (21.6%) specialist (M.D.S.) and it was found that major bulk of dentist, 162(83.5%) were general practitioners, whereas 28(14.4%) had speciality practice. General practitioners tend to ask patients less frequently about tobacco use as compared to specialists i.e. oral and maxillofacial surgeons, periodontists, etc. This result is in consensus with an earlier study conducted by (Albert DA, Severson H, *et al* 2005*)*. Wherein they reported that only half (52.5%) of the responding dentists asked about tobacco habits to their patients.

Knowledge regarding treatment modalities for tobacco cessation among the respondents varied as 26.8% suggested nicotine gums, 5.7 suggested nicotine patches and 67 % answered that gums, patches and bupropion were all treatment modalities for tobacco cessation. The knowledge about the treatment modalities varied. The results were similar to those obtained by (Saddicha S, Dorothy PR, *et al* 2010) in their study wherein, they found that (51%) were unaware of nicotine patches and about 42% were unaware of nicotine gums. Only 34% of the clinicians had any knowledge of behavioral methods for tobacco cessation but the majority were unaware of the available pharmaceutical methods for tobacco cessation (74%). Thus there is a need to sensitize dentists with regards to pharmaco-therapeutic interventions for tobacco cessation.

There was a favorable attitude amongst dentists towards strict tobacco legislation and its implementation. Sizeable number of dentists (78.9%) and (60.8%) believed that increasing the warning size and increasing the price of tobacco products will decrease consumption. These results were in consensus with an earlier study conducted by (Shah 2005) among dental students almost (87.8%) who also favored a ban on tobacco products. Such kind of ban of use of tobacco products has been recently implemented under the Cigarettes and other Tobacco Products Act (COTPA) in 2003 and more recently the gutkha ban in the state of Maharashtra in 2012. The implementation of such bans has not been effective as it should have been.

In the current practice a sizeable number (72.7%) of dentist asked their patients about their tobacco habit. All the dentists (100%) advised the patients to quit their tobacco habits. Majority of the dentists (93.8%) explained the detrimental effects of tobacco to their patients. It was also observed in the study that very few dentists (20.6%) referred patients to appropriate services to help them stop their tobacco habits. Dentists (53.1%) assisted their patients to stop their habits. A meagre few dentists (25.3%) provided pamphlets and had posters put up in waiting room to educate people. Dentists believed that they are role models for patients to quit tobacco habits and that their advice to quit tobacco habits. Lack of training and lack of printed education materials can be attributed to less number of dentists providing pamphlets and posters.

The results of our survey are in consensus with results of a study conducted by (Ajwani *et al* 2002) where in they found that 2/3rd of the dentists felt that giving advice or information about tobacco cessation was the responsibility of the dentist in order to persuade patients to quit tobacco. These results of our survey are in line with results of other surveys like (Dolan *et al* 1997); (Warnakulasuriya *et al* 2002) and (Campbell *et al)* suggests that almost (50%) of all the dentists ask, advise and suggest different methods to quit tobacco. (Severson *et al*), (Hastreiter *et al* 1994)and (Tomar *et al* 2001) in their studies found that almost 43.5%, 38.8% and 30% of the dentists maintained records or advocated tobacco cessation counselling to their patients respectively.

Perceived barriers were evaluated like the attitude of the patient and dentist in helping the patients were evaluated. Advice from a dentist in quitting tobacco was effective was felt by 52% of the participants. Some of the participants (31.4%) felt that it is not the responsibility of the dentist to convince people to quit tobacco habits. Majority of participants (75.3%) did not have adequate education materials and 84.5% of them said that they do not have referral resources for helping patients quit. Some (32%) of the participants did not know how to help patients quit and only 6.2% said that they did not have time to advice patients to quit. Lack of training in tobacco cessation counselling and lack of educating materials can be attributed as the major reasons for perceived barriers towards tobacco cessation counselling.

These results were in consensus with other surveys (Saito A, *et al* 2010); (Amemori M, *et al* 2013) almost half of the respondents (49.8%) cited reasons as lack of educational materials and adequate referral sources were the most highly perceived barriers amongst the dentists to providing tobacco cessation counselling to patients. This can be explained by the unavailability of proper communication between the tobacco cessation programs and dentists, which could provide dentists

with information and educational materials to help dentists assist their patients to quit and lack of tobacco cessation training. This was first if its kind survey conducted among the dentists in Pimpri-Chinchwad city to assess the Knowledge, Attitude, Practices and Perceived barriers towards tobacco cessation counselling faced by the dentists were assessed through our survey, were the strength of our survey.

Responses to the questionnaire might have been influenced by the social desirability bias. There is possibility of intentional or un-intentional miss-reporting by the participants. These are some of the limitations of our study.

CONCLUSION

From our study it was noted that, patients do look up at the dentist for advice for cessation of tobacco. This indicates that dentists have a definite role in educating the population and helping the patients quit tobacco habits. Lack of training and knowledge in tobacco cessation counselling may be attributed to the inadequacy towards providing tobacco cessation counselling to patients by general practitioners. Dental practice in the 21st century will increasingly move from a restorative orientation to one of broader promotion of health and well-being. It is unconscionable to not include aggressive tobacco intervention in that new paradigm.

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How to cite this article:

Chaudhari LJ *et al*.2016, Knowledge, Attitude, Practices And Perceived Barriers Towards Tobacco Cessation Counselling Amongst Dental Practitioners in Pimpri –Chinchwad- A Questionnaire Based Cross-Sectional Survey. *Int J Recent Sci Res.* 7(7), pp. 12701-12705.