

## Role of dental students towards tobacco-use cessation: KAB Survey

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### Abstract

It is a misfortune of the past that tobacco became a legal invention. It would be a myth to presume that a product which destroys semi its customers was given a legal status by way of judgment. Addictive nature of nicotine leads to tobacco dependence, which can be cured through Tobacco-use Cessation (TUC). Dentists can play a significant role in TUC as dental treatment often necessitates multiple visits, providing a platform for initiation, reinforcement, and support of tobacco cessation activities. Despite this proven potential, not many dental students routinely offer tobacco-use cessation counseling to their patients although the majority of them have positive attitude towards the idea. Hence, this study was carried out to evaluate the knowledge, attitude, behavior, constraints & practices of clinical dental students of four dental colleges of Gujarat, towards tobacco-use deterrence & termination encouragement in oral healthcare settings.

**Keywords:** Tobacco, Tobacco-use cessation (TUC), KAB survey

### Introduction

Tobacco was introduced in India by the Portuguese 400 years before. In 2004, in a predictable populace of 1065 million, 800,000–900,000 Indians die yearly from diseases related with tobacco utilize—around 2500 a day.<sup>(1)</sup> By 2020, it is expected that tobacco will be responsible for 13% of all mortality in India.<sup>(2)</sup> For the era of the 2010s there will be about 1 million tobacco mortalities a year in India and about 70% of those will be adults and children. Presently, tobacco is accountable for 1 in 5 of all male mortalities in core age. The International Agency for Research on Cancer of the World Health Organization has classified tobacco as a category I carcinogen. Tobacco smoke has 10 extra category I carcinogens and numerous category II and III carcinogens.<sup>(3)</sup> Tobacco is the major preventable cause of morbidity and premature death. Tobacco exercise is not just inclination disorder: the International Classification of Diseases (ICD-10) has now informed ‘tobacco dependence’ as an illness. We are building great step in winning many diseases by vaccination, early diagnosis, and effectual management. Tobacco has severe deleterious effects on the overall health, primarily affecting the oral cavity. Research continues to establish and expand the oral conditions associated with tobacco-use including, Periodontal disease & failure of periodontal therapy, tobacco use and tooth loss.<sup>(4)</sup> Second-hand smoke and caries in preschool children,<sup>(5)</sup> Smoking as a major risk factor for oral cancer,<sup>(5,6)</sup> Increased risk of implant failure<sup>(7)</sup> and Compromised outcome of root-coverage procedures.<sup>(8)</sup>

Dental health care workers can have an essential task in the battle against this outbreak. Dental treatment often necessitates multiple visits, providing a platform for initiation, reinforcement, and support of tobacco cessation activities. Despite this proven potential, not many dental students routinely offer tobacco-use

cessation counseling to their patients although the majority of them have positive attitude towards the idea.

Therefore in order to assess the knowledge, attitude and behavior of dental students, a KAB survey was performed on dental students from four dental colleges of Gujarat, towards tobacco-use prevention & termination endorsement in dental care settings.

### Materials and Method

A descriptive cross sectional study was carried out in 180 dental students from four dental colleges of Gujarat utilizing a pretested self-administered questionnaire. Enrollment was deliberate. Character of the study was elucidating to the participant before administered the questioner. Informed consent was taken from all the participants. The 30 itemed questionnaire had closed ended questions and evaluate the students demographic variables, tobacco use, contact to second hand smoke, approach to tobacco termination services, current practice in the region of patients counseling on tobacco cessation and the apparent restriction against counseling, students’ precise guidance on tobacco cessation and their acquaintance of the effects of tobacco on oral health.

**Statistical analysis:** The data was coded and entered into Microsoft Excel spreadsheet. Analysis was done using SPSS version 15 (SPSS Inc. Chicago, IL, USA) Windows software program. The variables were assessed for normality using the Kolmogorov-Smirnov test. Descriptive statistics were calculated.

### Results

Total response rate in the present study was 94%. Among all there were 53% male and 47% female participants with mean age 21.6±1.97. The qualification of the respondents included 32.7% were in third year,

34.2% were in fourth year, 19.10% were interns and 13.9% were post graduate dental students(Fig. 1-A, 1-B). Out of the 100% respondents, smoking tobacco utilization was in 3.9% participants and smokeless tobacco consumption was among 2.1% respondents (Fig. 1-C). Forty eight percentage of respondents were exposed to passive smoking.(Fig. 1-D)

Tobacco use ban to be strictly implemented at outdoor public places was agreed by 92% respondents and at enclosed areas was agreed by 85% respondents. 92.7% of respondents agreed to tobacco sales banning

amongst adolescents and 86.4% decided to firm ban on tobacco promotion and backing.(Fig. 1-E, 2-D)

According to respondents, Tobacco has a 99.1% association to oral cancer, 97.3% association with periodontal disease and 63.9% association with congenital abnormalities (Fig 1-F). 80.30% respondents considered nicotine replacement therapy and 55.8% respondents considered anti- depressants and other drugs as an therapy for tobacco use cessation (Fig. 2-A).

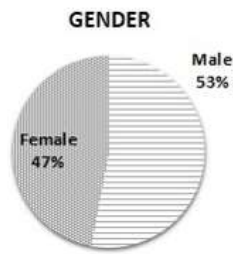


FIG 1-A



FIG 1-B

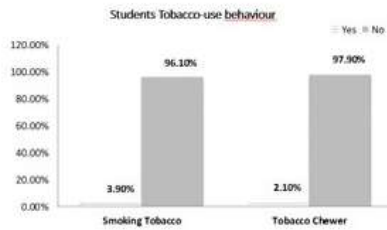


FIG 1-C

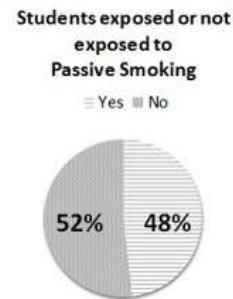


FIG 1-D

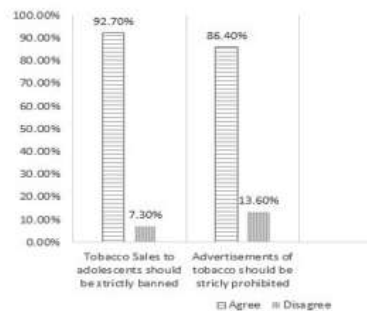


FIG 1-E

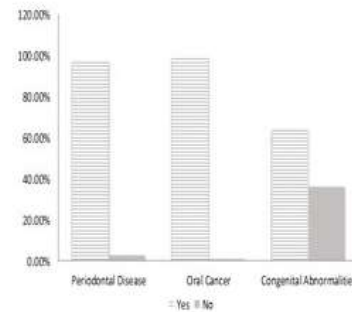


FIG 1-F

Fig. 1-A: Demographic Status, B: Qualification, C: Forms of tobacco in use, D: Exposure to Passive Smoking, E: Ban on tobacco use and advertisements, F: Deleterious effects of Tobacco

97% respondents consider dentist’s job in therapy for tobacco use cessation and 87.6% consider dentist as a role model for tobacco users (Fig. 2-B). 96.4% respondents take tobacco history routinely and 85.2% routinely counsel patients for tobacco use cessation (Fig. 2-C)

Around 80% respondents believe that a smoker dentist are not as much of expected to recommended and encourage a tobacco user to quit smoking in comparison to dentist who do not smoke or chew tobacco. In contrast, 70% respondents believe that probabilities of giving up smoking are bright when a dentist advises them. (Fig. 2-E)

Only 16% dental students have obtained particular guidance in tobacco cessation programme (Fig. 2-F), among them only 18% of students would believe to follow unique training in tobacco use cessation techniques. Chief restraints in the tobacco cessation in the survey were inadequate counseling techniques(35%), lack of time and interest(34%), lack of knowledge(20%) and patients compliance (11%).(Fig. 2-H)

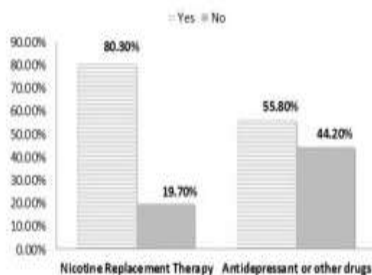


FIG 2-A

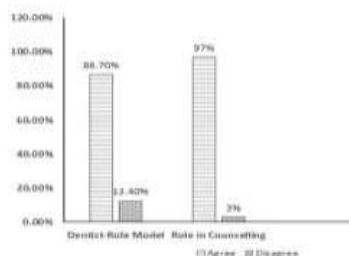


FIG 2-B

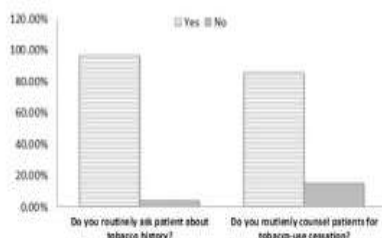


FIG 2-C

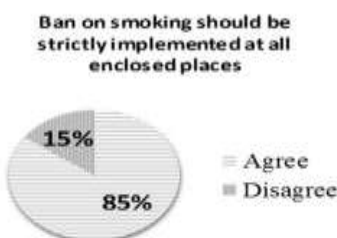


FIG 2-D

Chances of patients quitting smoking if dentist advises them

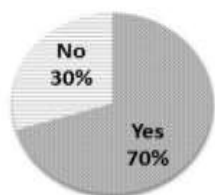


FIG 2-E

Students who have got any special training in tobacco-use cessation techniques



FIG 2-F

DENTISTS SHOULD GET SPECIFIC TRAINING IN CESSATION TECHNIQUES



FIG 2-G

Major constraints against tobacco-use cessation counseling



FIG 2-H

Fig. 2-A: Knowledge about alternatives to tobacco amongst dental students, B: Tobacco cessation counseling, C: Proportion of dental students’ role in TUC, D: Ban on smoking should be strictly implemented, E: Chances of patients quitting smoking if dentist advises them, F: Training for TUC among students, G: Need for special training in TUC for dentists, 2-H: Major constraints in TUC counseling

## Discussion

The Dental office provides an excellent setting for providing tobacco cessation intervention services. Dental patients are particularly more aware, little quick to understand health messages during every dental visit, & oral effects of tobacco use which ultimately provide strong motivation for tobacco users to quit. Hence every dentist should always be ready and prepared to intervene patients who visit their dental office.<sup>(9)</sup>

There are 5 major steps (the "5 As") to intervention in the primary care setting. It is important for the Dental care provider to "Ask" the patient if he or she uses tobacco, "Advice" him or her to quit, "Assess" willingness to make a quit attempt, "Assist" the patient in making a quit attempt, and "Arrange" for follow-up contacts to prevent relapse.<sup>(10)</sup>

Present research discovered that unsatisfactory therapy skill, lack of time and interest, lack of knowledge and patients compliance are the major constraints against tobacco cessation counseling. Regardless of the truth that greater part (61.4%) of the students have awareness of tobacco cessation techniques and information of consequence of tobacco on oral health, the study discovered that the majority participants did not experience predominantly ready to help out patients in quitting tobacco and 84.1% are keen to experience guidance since they support the addition of tobacco cessation in to the dental course. Numerous dental students are involved in getting particular preparation on tobacco cessation, which was in agreement to the study that exposed that only 23% of incoming dental students were only vaguely or not concerned in getting tobacco cessation training.

Present research discloses where students are trained correctly how to assist their patients to quit tobacco use, they will be extremely valuable since greater part of them (96.4%) presently regularly take history of tobacco use from patients who came in the dental clinic. Similar findings were obtained from a study performed in South Essex. Greater part accounted inquiring their patients about smoking (90%) and collecting this information in their clinical notes (75%). In present study, active contribution in backing up smokers to quit smoking was 47.4%, which was higher in number when comparing to study carried out in England, where active contribution in backing up smokers to quit was 30% and referring them for more detailed support was 24%.<sup>(8)</sup>

Regardless of the truth that mass (>90%) of the students have knowledge of poisonous effects of tobacco on health; the survey discovered that the majority respondents did not feel predominantly ready to help patients quitting tobacco as there were major restrictions like inadequate counseling techniques, lack of time and interest, lack of knowledge and patients compliance in the students for helping patients to quit tobacco. The professional skills requisite by the dentists to give smoking cessation therapy to their patients

preferably should be learnt through the dental syllabus and toughened within ongoing education.<sup>(11,12,13)</sup>

If the goal of tobacco cessation curricula is to influence students' future clinical practice behaviors, to produce practitioners who incorporate tobacco cessation promotion as a routine component of Dental practice, then instructors must understand where students are beginning from and what is the knowledge of student regarding tobacco cessation. Attitudes, concerns, and reservations must be acknowledged and addressed. Students need to understand the principles of tobacco cessation.

## Conclusion

According to Present study around 70% respondents believe that probabilities of giving up smoking are bright when a dentist advises them. Only 16% dental students have obtained particular guidance in tobacco cessation programme (Fig. 2-F), among them only 18% of students would believe to follow unique training in tobacco use cessation techniques. Present study found that a majority of the students and interns in Four different Dental colleges in Gujarat, India planned to provide Tobacco Cessation Counseling in their professional career and saw it as part of their professional role as Dentists. However, it also found that lack of adequate tobacco cessation training and inadequate knowledge and awareness of tobacco cessation counseling are barriers to counseling practices. The results of this study indicate that tobacco cessation counseling may be practiced more widely and in appropriate manner if Dental students will be given additional training during their undergraduate education. So, a Unified effort should be made among health professionals to reduce the morbidity and mortality associated with tobacco use. With a clear vision and administrative support, we can strive to develop practitioners who feel prepared and comfortable helping tobacco-using patients to abstain.

## References

1. World Health Organization. An international treaty for tobacco control. Geneva, Switzerland: World Health Organization: 2003. Available at <http://www.who.int/features/2003/08>.
2. Johnson GK and Guthmiller JM. The impact of cigarette smoking on periodontal disease and treatment. *Periodontol* 2000 2007;44:178-194.
3. Dietrich T, Maserejian NN, Joshipura KJ, Krall EA and Garcia RI. Tobacco use and incidence of tooth loss among US male health professionals. *J Dent Res* 2007;86:373-377.
4. Leroy R, Hoppenbrouwers K, Jara A and Declerck D. Parental smoking behavior and caries experience in preschool children. *Community Dent Oral Epidemiol* 2008;36:249-257.
5. Freedman ND, Abnet CC, Leitzmann MF, Hollenbeck AR and Schatzkin A. Prospective investigation of the cigarette smoking-head and neck cancer association by sex. *Cancer* 2007;110:1593-1601.

6. Warnakulasuriya S. Bidi smokers at increased risk of oral cancer. *Evid Based Dent* 2005;6:19
7. Strietzel FP, Reichart PA, Kale A, Kulkarni M, Wegner B and Kuchler I. Smoking interferes with the prognosis of dental implant treatment: a systematic review and meta-analysis. *J Clin Periodontol* 2007;34:523-544.
8. Chambrone L, Chambrone D, Pustiglioni FE, Chambrone LA and Lima L. The influence of tobacco smoking on the outcomes achieved by root-coverage procedures: a systematic review. *J Am Dent Assoc* 2009;140:294-306.
9. Salman K, Azharuddin M, Ganesh R. Attitude of Dental Students Towards Tobacco Cessation Counseling in Various Dental Colleges in Tamil Nadu, India. *Int J Sci Stud* 2014;2(4):20-24.
10. Warnakulasuriya S. Effectiveness of tobacco counseling in the dental office. *J Dent Educ* 2002;66:1079-1087.
11. Rikard-Bell G, Groenlund C, Ward J. Australian dental students' Health professionals do not have sufficient skills to provide views about smoking cessation counseling and their skills as counselors. *J Pub Health Dentist* 2003;63: 200-6.
12. Davis JM, Ramseier CA, Mattheos N, Schoonheim-Klein M, Compton S, Al-Hazmi N, et al. Education of tobacco use prevention and cessation for dental professionals – a paradigm shift. *International Dental Journal* 2010;60:60-72.
13. Ehizele A, Azodo C, Umoh A and Akinboboye B: Attitude of Dental Students to Tobacco Cessation Services. *The Internet Journal of Dental Science* 2009;7(1):1-7.