Original Article

Prevalence of smoking among dental students and gauging their knowledge about tobacco cessation methods: An original study

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Abstract

Aims: The aims of this study are to determine the prevalence and type of tobacco use among dental students and to identify the factors that influence them to initiate tobacco use. **Subjects and Methods:** Dental students at two dental colleges affiliated to State Health University of Kerala answered a 20-item questionnaire during Jan–Feb 2015 that investigated their smoking habits and knowledge about the risk factors of smoking habits. The questions were based on the modified Global Health Professional Students Survey (GHPSS) by WHO. Some additional questions were also added from Global Youth Tobacco Survey (GYTS) by WHO to meet the objective of this study. **Result:** Current smoking was reported by 17% of the participants. None of the participants smoked more than half a packet of cigarette. More students from families with at least one tobacco user were using tobacco than those from families with no members using tobacco (51.2 versus 37.0%, respectively). The majority of dental students (92%) considered education on tobacco use cessation to be the responsibility of dentists/doctors. **Conclusion:** One of the main aims of this study was to shed light on the knowledge and attitudes of dental students on tobacco use cessation. Fairly high number of participants reported receiving inadequate information on tobacco cessation during their studies. Dental students should be taught and encouraged early on to routinely discuss with smokers the impacts of smoking on health.

Keywords: Prevalence, attitudes, smoking, tobacco cessation, dental students, Kerala

Introduction

The youth of this current modern era face many challenges and setbacks brought about by a combination of biological, psychological, and socioeconomic factors, such as living circumstances, family, community, peer relationship, education, and access to health information and its services. These factors influence the positive and healthy development of the adolescents and youth.

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Dentists play a vital role in tobacco cessation by educating patients about the hazardous effects of smoking, especially on oral health. Considering the dental students as part of the present youth and future generation, instilling thorough knowledge and positive attitude toward tobacco cessation can bring about effective reduction of smoking in India.

According to WHO, there are several reasons why oral healthcare professionals should put an effort into anti-tobacco counseling. First, they spend on average more time with patients than do many other clinicians. Secondly, they can show the changes tobacco use causes in the mouth, thus encouraging patients to quit smoking. Thirdly, they usually meet with patients on a

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regular basis, which enable them to monitor the progress of tobacco cessation.[1]

The general objective of the study was to evaluate the prevalence of smoking among dental students, the circumstances that lead to initiate smoking, and their attitude toward smoking. This was the first study conducted in Kerala which assessed the knowledge of the dental students to conduct a tobacco control program as a healthcare professional. Inclusion of multidisciplinary tobacco cessation training program in the curriculum can improve the familiarity with practice guidelines of primary healthcare providers, including the family physicians, which may facilitate the care activities.[2]

Subjects and Methods

Dental students from two dental colleges affiliated to the State University of Kerala answered a 20-item questionnaire. The proportion of filled questionnaires was around 80% for study year 1, 92% for study year 2, 86% for study year 3, 79% for study year 4, and 86% for study year 5. The total numbers of filled questionnaires for all study years were 370 (85%).

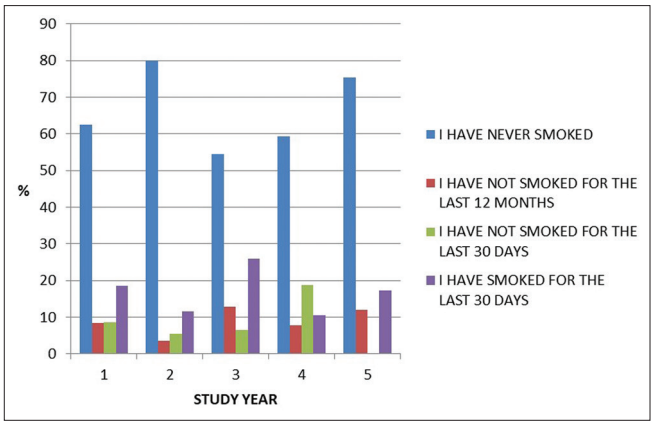
The questionnaire was given to the dental students who were enrolled in the 2014–2015 academic year and the confidentiality was respected. Institutional Ethical Committee clearance was obtained for the study (IEC/06/OPATH-A/MDC-2015). The survey was held during teaching sessions to maximize the number of people answering the survey. Age, study year, and gender were used as background variables. The questions were based on the Global Health Professional Students Survey (GHPSS) by WHO which was modified by adding some questions from Global Youth Tobacco Survey (GYTS) by WHO to meet the objective of this study. The percentage of each option chosen by the participants was calculated using Microsoft Excel software.

Results

The majority of students who answered the survey in each study year were females. Only about 24–35% of participants in all the study years were male students.

Tobacco use: Prevalence, knowledge, and attitude

Around 15% of preclinical and 18% of clinical students reported that they had smoked during the last 30 days. Of all dental students who participated in this study, about 17% reported smoking during the last 30 days. Students of study year 3 reported the highest number of smokers during the last 30 days. Of male students, about 50% in the study year 3 were smokers while only 30% in the study year 1 and 20% in study years 2, 4, and 5 reported being smokers. This meant that the majority of dental students in all study years were 321 nonsmokers [Graph 1]. None of the students in study year 4 reported smoking more than one cigarette on average per day, while around 10% of students in study years 3 and 5 reported smoking less than half a packet per day [Graph 2].



Graph 1: Smoking reported by dental students according to study year

The majority of smokers in each study year, except year 5, reported that they started smoking between the ages of 16 and 17 years. Most of the study year 5 smokers reported they started smoking at the age of 15, or at the age of 19 years, or over. About 15% of smokers in the preclinical and 20% of smokers in the clinical phase of studies reported having tried five times or more to quit smoking during the last 12 months, whereas 55% of preclinical and 65% of clinical smokers reported not having tried to quit smoking during the last 12 months.

A substantial proportion (71.0%) of dental students reported that at least one family member (parents, siblings, and other members residing permanently) used tobacco. Use of tobacco by family members was almost the same among boys (72.4%) and girls (70.0%).

When asked about the tobacco use habit of their friends, nearly half of the students (43.9%) reported that at least one of their four best friends used tobacco. More boys (63.7%) than girls (23.0%) reported the use of tobacco by friends [Table 1].

Students were also asked about their level of exposure to second hand smoke at home and public places as their exposure to second hand smoke could influence them to initiate tobacco use and also adversely affects their health.

Less than 10% (5.7–8.6%) of students were exposed regularly to environmental tobacco smoke in their home, while more than half (49.0–55.7%) were exposed occasionally [Table 2]. Nearly one-third (32.3%) of total respondents replied that they had seen tobacco promotional advertisement in media (e.g. radio, TV, newspaper, magazine, etc) or at events (e.g. sporting events, musical shows, religious festivals, etc.) during the last 30 days. More boys (36.5%) than girls (27.5%) were exposed to tobacco promotional advertisement [Table 3].

Nearly half (47.1%) of dental students agreed that tobacco users have more friends. More boys (50.6%) than girls (43.5%) thought that tobacco users have more friends. Only less than one-fifth (16.8%) of students disagreed with the statement that

Table 1: Proportion of the students by the tobacco use habit of family members and friends

Category	Tobacco use habit of family members		Tobacco use habit of friends	
	At least one family member uses tobacco (%)	No family member uses tobacco (%)	At least one of four best friends uses tobacco (%)	No best friend uses tobacco (%)
Sex				
Boys	72.4	27.6	63.7	36.3
Girls	70.0	30.0	23.0	76.7
Total	71.0	29.0	43.9	56.1

Table 2: Proportion of students by their exposure to environmental tobacco smoke at home

Category	Exposed to environmental tobacco smoke at their home		
	Regular (%)	Occasional (%)	Never (%)
Sex			
Boys	8.3	49.7	42.0
Girls	6.7	52.3	41.1
Total	7.4	50.9	41.7

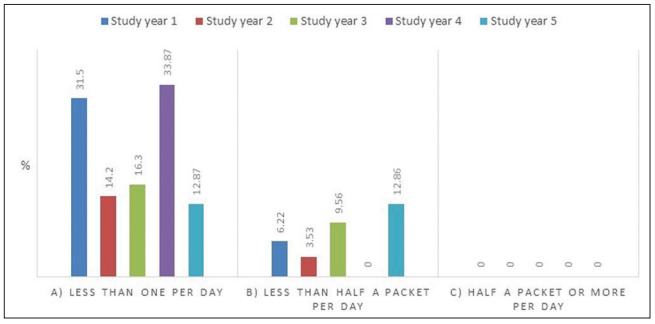
Table 3: Proportion of students by their exposure to pro-tobacco advertisements

Category	Seen any tobacco promotional advertisement in media or events during last 30 days	
	Yes (%)	No (%)
Sex		
Boys	36.5	63.5
Girls	27.5	72.5
Total	32.3	67.7

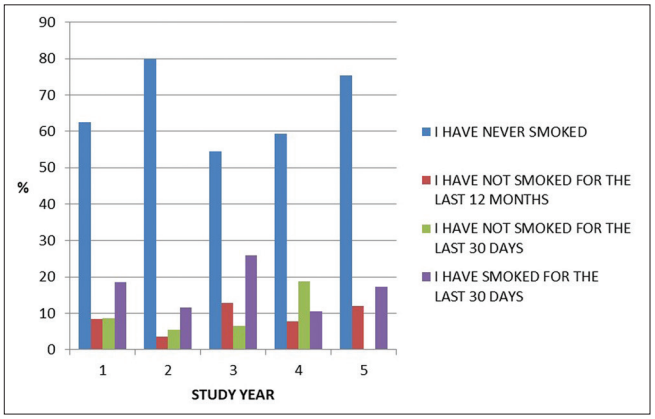
tobacco users have more friends [Graph 3]. The proportion of tobacco users among those who agreed with the statement that tobacco users have more friends was higher (48.6%) than those who disagreed (47.5%) or were undecided (45.7%), but the difference was not significant.

The 45–55% of students in study years 3, 4, and 5 reported having enough information on how to make an active smoker quit smoking. However, <50% of the students in study years 4 and 5 reported having enough information on how to use tobacco cessation methods in practice [Graph 4].

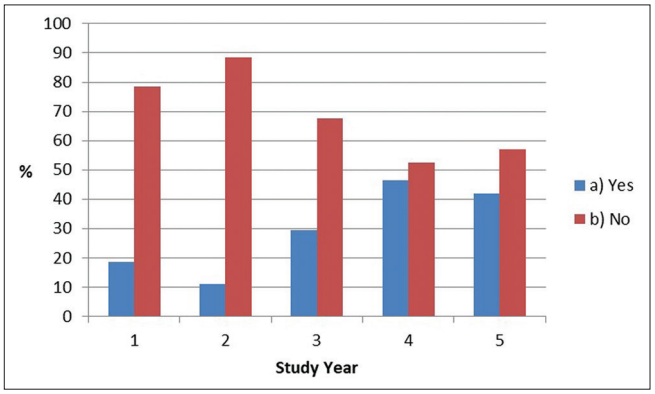
The majority of students (80–100%) reported that it is the duty of doctors and dentists to encourage people to quit smoking. About 30% of study years 1 and 4, 40% of study year 2, 70% of study year 3, and 50% of study year 5 students reported the need of more information on tobacco use cessation methods in their undergraduate curriculum. The majority of participants reported that smokers expect to get information from doctors and dentists on how to quit smoking.



Graph 2: Number of cigarettes consumed by dental students according to study year



Graph 3: Proportion of students who believe tobacco users have more friends



Graph 4: Opinion of dental students on whether they had enough information during their studies how to use tobacco cessation methods in practice

Discussion

The objective of the study was to evaluate the prevalence of smoking among dental students, the circumstances that lead to initiation of smoking, and their attitude toward it. We also assessed the knowledge of dental students to conduct tobacco cessation in practice.

A total of 17% of dental students were currently using tobacco products, which means the majority of dental students in all study years reported being nonsmokers. In contrast to the study conducted by Sinha[3] (9.6%), this data shows a much higher population of smokers in dentistry.

Emphasis was given to collect the information regarding experimental use of tobacco products. High proportions (22.7%) of dental students were experimental users during the time of the survey, and about one in ten (10.6%) students had used tobacco products in the past but was not current users. Boys were 3.15 times more likely to use tobacco compared to girls. The finding is almost similar to the result of GPHSS India survey. The proportion of ever users may be higher among boys as the boys have the liberty to "experiment" their fantasies in total contrast to the over protective environment the girls are mentored in.

A noteworthy issue to remember is that the reported number of cigarettes consumed among all participants was less than half a packet per day. Thus, all of those who reported smoking were occasional smokers, and no heavy smokers were present in these participating dental colleges.

In addition, the percentage of smokers who reported smoking ten or more days during the last 30 days is lower for preclinical phase smokers (15%) than for their clinical phase peers (25%). One could expect the opposite as the students in their clinical phase of studies should generally have much profound knowledge about the hazardous effects of smoking, especially on oral health. One reason for these results could be due to the constant stress and increased workload of clinical phase students. Gorter *et al.* in 2008 found that stress increased among undergraduate dental students while they advanced in their studies.[4]

Influential factors

The average age of initiating tobacco use was 16 years in this study but it was noted that the use of tobacco products increased after 16 years of age. There could be several reasons for this trend. One reason is that once the individual enter adolescence, they enjoy more freedom as they are less managed by their parents. Experimental use was the second reason for initiating smoking along with peer pressure. Though the proportion of girls using tobacco was less than boys, girls initiated tobacco use earlier than boys in this study.

Other studies showed that initiation of tobacco use (cigarette or other products) starts around 13–14 years in most of the countries.[5] Alqahtani conducted a study to assess the prevalence of smoking of tobacco among health colleges' students at Najran University, and to investigate the students' knowledge, attitude, and practice toward smoking and its risks. His study revealed that prevalence of cigarettes smokers was 30.1% for males and 0.5% for females ($P < 0.001$). For males, the prevalence of snuff, shisha smoking, and smokeless tobacco usage was 16.8, 28.3, and 14.6%, respectively. Male and female students believed that shisha and smokeless tobacco smoking are less harmful (30 vs. 59.7%; $P = 0.001$ and 7.7 vs. 38.5%; $P = 0.001$, respectively).[6] As the smokeless tobacco products are easily available, the youth may be experimenting with smokeless tobacco products at much younger age than cigarette smoking. During answering the questionnaire, a socially acceptable answering may have occurred due to the fact that all respondents were dental students. In other words, the results on this survey might be too optimistic.

A substantial proportion (71.0%) of the dental students reported that at least one of their family members (parents, siblings, and other members residing permanently) or at least one of their best friends (43.9%) use tobacco. This result is much higher than the GYTS data.

The results of this study revealed that dental students from families with at least one member using tobacco were 1.79 times more likely to use tobacco and 5.93 times more likely to use tobacco whose best friend is a tobacco user. When children are exposed to the tobacco use habit of family members, they are more likely to perceive tobacco use as a positive and acceptable behavior and also because of the strong peer group relations the young people are influenced more by the habits of their friends.

Exposure to second hand smoke could influence them to initiate tobacco use and some of the students (5.7–8.6%) reported that they are occasionally exposed to tobacco smoke at home than the public places which could be due to the restriction on smoking in public places in Kerala.

Nearly one-third (32.3%) of respondents reported that they saw tobacco promotional advertisements in the media or at social or sporting events during the last 30 days. Although the advertisement of tobacco products in national electronic media (i.e. radio and television) is already banned, national newspapers and magazines with high youth readerships are still publishing the attractive advertisements of tobacco products.

The results of this study showed that professional students exposed to tobacco promotional advertisements were 1.32 times more likely to use tobacco than those who were not exposed. Similarly, other research has shown that youth who were regularly exposed to such advertisements were more likely to use tobacco.[7] More students reported exposure to pro-tobacco advertisement in the GYTS fact report.

Perceptions toward tobacco use

Nearly half (47.1%) of the respondents thought that adolescents who use tobacco have more friends. These perceptions may have developed among dental students from the information received from their peers. This suggests that students were not getting valid or complete information about the hazards and benefits of tobacco.

Some of the students (15–20%) have tried to quit the smoking habit at least five times in the past 1 year in contradictory to the GPHSS data (71%). But much higher population of current smokers want to stop the smoking habit.

Dental students and tobacco cessation: A step toward anti-Smoking campaign

The percentage of dental students (92%) who believe that it is the responsibility of dentists/doctors to encourage people, to quit smoking is slightly higher than that found by McCarlan *et al.* (2008),[8] which was 80%. A considerable number of students believe that the information they get from the academic curriculum is not good enough to conduct a tobacco cessation program; rather they want more information regarding tobacco cessation after they graduate. This shows that great majority of dental students realize that they are key players in tobacco cessation. Nevertheless, there is decent evidence to show that even brief interventions from health professionals can enhance tobacco cessation.[9] Effective tobacco cessation training should include approaches and skills that discourse student perceptions in order to cherish the belief that tobacco cessation efforts are a part of worthy clinical practice.[10]

Conclusion

One of the main aims of this study was to shed light on the knowledge and attitudes of dental students on tobacco use cessation. Fairly high number of students, particularly in study years 4 and 5, reported that they received inadequate information during their studies on how to use tobacco cessation methods in practice. On the contrary, the attitude of these future dentists does not seem to be the problem—almost every participant reported that tobacco cessation is the duty of dentists/doctors. This implies that more time should be dedicated to teaching dental students on how to use these tobacco cessation methods for patients who smoke. In addition, dental students should be encouraged earlier on to quit their own smoking and to routinely discuss with smokers the impacts of smoking on health. The results of this present study can be applied to develop the curriculum for dental students to give future dentists better tool for promoting tobacco cessation.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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