ORIGINAL ARTICLE

Youth Tobacco Survey among the School Going Adolescents in a Block of Vadodara District, Gujarat.

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Abstract

Background: Tobacco use is the leading cause of Preventable death, Tobacco use during adolescence increases the risk of persistent addiction, leading to regular and sustained tobacco use in adulthood. Objective: To assess the prevalence and practice of tobacco use among the school going adolescents in a block of Vadodara district, Gujarat. **Material & Methods**: Multiphase sampling was done to select the sample students (13 to 17 years) from private and government schools in a selected block of Vadodara. A cross-sectional study including 1045 students was carried out using a pre-designed and pre-tested proforma. **Results:** Out of 1045 students, 3% (n=32) tried cigarette smoking ever, one or two puffs and 1.8% (19 students) of students were current cigarette or beedi smokers. Around 27.9% students and 23% students admitted that at least one of their parents and friends smoked cigarettes, respectively. About 24% and 44% of the students were exposed to passive smoking at home and outside home, respectively. **Conclusions:** Present study provides the baseline information of prevalence of smoking and attitude of school going adolescents towards smoking in Gujarat. The result gives an alarm to work upon tobacco control among adolescents and make them aware about the hazards.

Keywords

Smoking; Adolescents; Tobacco

Introduction

Tobacco kills more than 7 million people every year. (1) Tobacco use related diseases results in nearly 8 to 9 lakh deaths every year in India. (2) Majority of the chronic lung diseases, cancers and cardiovascular diseases are directly attributable to tobacco consumption. (3)

Adolescents (10–19 years) constitute about one-fifth of India's population. (4) The prevalence of tobacco use among the youth population (age 15-24 years) reduced from 18.4 % in GATS-1 (2009-10) to 12.4 %

in GATS-2 (2016-17). (5, 6) But absolute number of adolescents exposed to tobacco use is still higher. Adolescence and early adulthood, (ages 15-24 years) is the most susceptible time for initiating tobacco use in India and it has long lasting health impact on future life. (7). In India, approximately 5500 children and adolescents start using tobacco products daily, majority of users have first tried tobacco prior to age 18. (8)

In order to facilitate the implementation of the tobacco control laws, bring about greater awareness regarding harmful effects of tobacco and fulfil obligation(s) under the WHO Framework Convention on Tobacco Control (WHO FCTC), (9) the Government of India launched the National Tobacco Control Programme (NTCP) in the country in 2007-08.

The GYTS is a school-based survey designed to enhance the capacity of countries to monitor tobacco use among youth and to guide the implementation and evaluation of tobacco prevention and control programmes. (10) So, present study used GYTS tool for assessment of tobacco prevalence and factors associated among the school going adolescents.

Aims & Objectives

To assess the prevalence and practice of tobacco use among the school going adolescents (13-17 years) in a block of Vadodara district, Gujarat.

Material & Methods

The study was conducted during January to August 2016. A cross-sectional study was carried out using a pre-designed and pre-tested proforma of National Youth Tobacco Survey. (11) Prior written permission was taken from the Education Officer of the Vadodara district and also from the respective Principals and Head Teachers of the selected schools. The questionnaire was explained prior to handing them out to the students. Only those who voluntarily agreed and gave the verbal consent was included in the study. The data collected from the subjects using the questionnaire contained questions on use of tobacco, knowledge & attitude towards tobacco, exposure to other people smoking, attitude towards stopping smoking, knowledge about media messages about smoking, discussion of smoking in school, etc. The questionnaire contained multiple response questions with only one option to be selected. The response sheet did not have any name on it and it was confidentially collected in a box kept in the classroom from each relevant classes of the schools, next day, to safeguard the anonymity of the subjects.

The national prevalence rate for the use of tobacco among the youth is 9.6% (2009). The sample size formula n=(Z2*P(1-P))/d2 was used; where Prevalence P=9.6%, Standard Normal Variate Z=1.96, and Precision d=2%. Accordingly, sample size was calculated to be 834 which was rounded off to 1050 students for the study after taking into account the 25% of nonresponse rate of the school students. Out of all the secondary and higher secondary schools located in Waghodia Taluka multi-phased sampling was done at school level and student level. The schools were divided into two groups i.e. Govt. schools and Private schools. Further, there were groups within these schools of male and female. The selection of the schools and the number of male and female students was done using proportionate sampling.

Inclusion criteria: All the students (both male and female) in the age group of 13 to 17 years who gave the consent for the study were included as study subjects.

Exclusion criteria: Those not consenting for the study and those who are out of the age group were not included as subjects in the study.

Before starting data collection necessary permissions were sought from Institutional Ethics Committee for Human ***Research and District Education Office***.

The data was entered in Microsoft Excel 2016 and analysed in SPSS 24.0. Frequency and percentage was calculated

Results

After the cleaning and validation of data, 1045 entries were recorded into the final database. Out of 1045 students, 19%, 77.9% and 3.1% were in the age-group 11-13 years, 14-16 years and 17 years or more, respectively. Around 58.5% were males and 41.5% were females.

History of smoking – Out of 1045 students, 3% (n=32) tried cigarette smoking, one or two puffs ever. Out of 32 students, 10 students had tried smoking even before 10 years of age; 12 students had tried smoking at the age of 10 to 13 years; and 10 students after 14 years of age.

Current smoking status – About 1.8% (n=19) of students were current users of tobacco. Out of these 19 students, 12 were also using other forms of

tobacco products e.g. chewing tobacco, gutka, sniff, pan masala, etc. (current smoking/chewing was defined as having smoked/chewed for one or more days in last 30 days preceding the survey).

Frequency of smoking – Out of the 32 students who had used tobacco ever – during the past one month – 13 students did not smoke, 14 students smoked less than 10 days as compared to 5 students who smoked 10 to 20 days in last month.

Source and expenditure on smoking cigarettes – Out of 19 students who were current tobacco users (current smoking/chewing was defined as having smoked/chewed for one or more days in last 30 days preceding the survey) – 9 students bought the cigarettes from a store or a shop, 5 students gave someone else money to buy them and 5 students got them by other ways. Out of 19 students, 14 spend less than Rs.20 for cigarettes or they were not spending from their pockets for the cigarettes; 3 students spend around Rs.30 to 100 while 2 students spend more than Rs.100 for cigarettes. Out of 19 students, 8 admitted that the shopkeeper refused to sell them cigarettes because of younger age while 4 students got the cigarettes from shopkeeper even if they were young (Table-1).

Family and friends smoking history – Out of 1045 students, 3.7% students admitted that both their parents smoked cigarettes while 24.2% students had their single parent smoking. Around 23% students admitted that at least one of their friends smoke cigarettes. Out of 1045 students, 4.3 % admitted that his/her boyfriend or girlfriend is currently smoking.

Attitude towards smoking – Out of 1045 students, almost 97% of students disagreed to accept the offer to smoke cigarettes even if it was from their best friend/ friends; also similar percentage of students disagreed to the chances of smoking in the next 1 year or 5 years.

About 28% and 19% of students felt that smoking helps boys and girls look attractive, respectively. Around 60% students think that smoking helps in losing weight while 34% thinks it has no effect on weight. About 3 out of 4 students agreed that smoking is harmful. Half of the students felt that a person who smokes is stupid while around 5% of students felt smokers are successful or intelligent (Table-2). About 35% of students thought that to quit smoking is difficult.

Exposure to Second Hand Smoke (SHS) – Out of 1045 students, about 75% of students believed that smoke from others' cigarettes is harmful. About 24% and 44% of the students were exposed to passive smoking in their house and outside their house, respectively. Almost half of the students were in favour of ban of smoking cigarettes in closed public places.

Exposure to the media messages on smoking – Out of 1045 students, during the past one month, 72% of students were directly exposed to anti-smoking media messages like television, radio, posters, newspapers, movies, etc. When watching videos, movies, or television, almost 71% students noticed the actors smoking. About 65% of students saw billboards with Ads on cigarettes during the last one month.

Awareness by Health Education on smoking and its harmful effects – Out of 1045 students, during the current school year, about 51% of students agreed to have discussed about the dangers of smoking with teachers or classmates in the school premises. About 57% of students never had discussion on smoking and health in their classroom as a part of their lesson. Only 59.2% students had discussion about the harmful effects of smoking cigarettes at home by their family.

Discussion

Tobacco use can risk the lifelong health and may contribute to non-communicable diseases and to early mortality. WHO estimates that India will have the fastest rate of rise in deaths due to tobacco in the first 20 years of the 21st century. Because of acquired addiction in early life, most of these deaths will be in productive years of life (2).

This study provided the baseline data on prevalence and practice of tobacco use among the school going adolescents (13-17yrs) of Waghodia taluka. According to this study, prevalence of smoking is 3% in the area whereas 1.8% are current smokers. Tobacco is also used in other forms by 1.1% of subjects. According to a report on tobacco control in India, current smoking in India was reported by 8.3% of adolescents. It ranged from 2.2% in Himachal Pradesh to 34.5% in Mizoram by different study results (Figure-1) (2).

A study by Pednekar M, reported that use of tobacco among parents and peer has significant influence on current adolescent smokers (12). Prevalence of tobacco use among parents was reported 2 to 3 times higher among smokers and use among peers was reported 5 to 7 times higher among smokers as compared to never users (13). Similarly, in our study

history of smoking among parents is 2 times higher and history of smoking among peers is almost 3 times higher among smokers as compared to never users. There was a significant association between history of smoking among parents and friends with current use of cigarettes among smokers ($p<0.05$) in present study. Many such influencing factors in our study as well as past studies showed a strong association with tobacco use among adolescents for example positive history of parental and peer tobacco use, lack of knowledge on harmful effects of tobacco, positive attitude for the person using tobacco, etc. (7,9,14).

During the past 30 days, 72% of students were directly exposed to anti-smoking media messages like television, radio, posters, newspapers, or movies in the study. Madan *et al* reported that almost everyone were exposed to cigarette advertisements on TV, whereas about half reported exposure to advertisements from outdoor hoardings (45.7%), newspapers (65.3%) and social events (67.4%) (13). An advertisement related to tobacco and smoking is banned under The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and regulation of Trade and Commerce, production, Supply and Distribution) Act, 2003. To decrease the prevalence of smoking among adolescents as well as adults the act should be implemented vigorously.

Globally, more than a third of all people are regularly exposed to the harmful effects of smoke. This exposure is responsible for about 600,000 deaths per year, and about 1% of the global burden of disease worldwide (15). In present study around one fourth and half of the students were exposed to passive smoking in their house and outside their house, respectively. Pantip *et al* reported that around 33.8%, 47.9% and 38.6% students were exposed to second hand smoke, respectively at home, school and public places (16). In a study done among school children in Mumbai, 16.5% and 39.9% of students were exposed to second hand smoke at home and outside their homes respectively (17). Government of India adopted legislations for banning smoking in public places in 2008; with this intervention proportion of youth exposed to second hand smoke should decrease. Smoking is banned in many public places and workplaces such as healthcare, educational, and government facilities and on public transport; still high number of adolescents are exposed to SHS and needs to be protected.

Health education and information regarding smoking and its harmful effect can play a major role in delay or decrease prevalence of smoking if taught to the students as a part of curriculum. In present study around half of the student had never discussed the harmful effects with their peer or teachers. Similarly, about half of all students agreed that they had been taught about the dangers of smoking (ranging from 2.7% in Bihar to 75.5% in Punjab) (2). Tobacco-use outcomes could be improved by school-based education interventions, and cessation assistance and it could be facilitated by training for health professionals and school teachers for better implementation (18)

Conclusion

Present study provides the baseline information that number of adolescents started smoking and using other tobacco products from their youth. Higher number of students, around one fourth and half of the students were exposed to passive smoking in their house and outside their house, respectively. Study result also shows that many students still have positive attitude towards smoking and they are at risk of starting smoking in future.

Recommendation

The finding underscores the need to strengthen implementation of existing tobacco control rules and regulations as well as to add some new school-based intervention to develop proper attitude among youth towards tobacco and smoking.

Limitation of the study

In present study, questionnaire was self-administered by school going students. In India, tobacco use by adolescents is culturally not acceptable, so answer may be under reported or over reported about their knowledge, attitude and practice. Still this study provides valuable data regarding tobacco use and its determinants

Relevance of the study

Present study provides the baseline information of prevalence of smoking and attitude of school going adolescents towards smoking in Gujarat.

Authors Contribution

All authors have contributed equally in this study.

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Tables

TABLE 1 DISTRIBUTION OF STUDENTS ACCORDING TO SOME INFLUENCING FACTORS (N=32)

Influencing factors	(n=32)
Access-Not refused to sell because of their age	4 (12.5%)
Using other tobacco products along with cigarettes	12 (37.5%)
Parents smoked	16 (50 %)
Friends smoked	23 (71.9%)
Know harmful effects	19 (59.4%)
Discussed harmful effect with friends	15 (46.9%)
Discussed harmful effect at school	14 (43.8%)
Exposed to anti-smoking media message	23 (71.9%)

TABLE 2 DISTRIBUTION OF STUDENTS ACCORDING TO THEIR ATTITUDE TOWARDS SMOKING

Attitude factors (n=1045)	Yes (%)	No (%)	No difference (%)
Chances of smoking in 5 years from now	3.0	97.0	-
Is it difficult to quit smoking?	35.2	64.8	-
Smoking helps boys to have more friends?	18.1	58.4	23.5
Smoking helps girls to have more friends?	13.5	60.3	26.2
Smoking helps in feeling comfortable in social gatherings	22.7	40.1	37.2
Smoking helps boys look attractive?	27.8	42.7	29.5
Smoking helps girls look attractive?	18.8	52.0	29.2
Does smoking help in gain weight?	6.0	59.9	34.1
Is smoking harmful to your health?	74.6	25.4	-
Having positive thoughts for the man who smokes	4.9	95.1	-
Having positive thoughts for the woman who smokes	4.8	95.2	-
Smoking only for a year or two and then quitting, is it safe?	31.2	68.8	-

Figures

FIGURE 1 PREVALENCE OF CURRENT SMOKERS BY DIFFERENT STUDIES AT DIFFERENT PLACES (%)