Original Article

Tobacco hazards: Creating awareness in rural schoolchildren

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ABSTRACT

Objective: Realizing that programs to control tobacco addiction will be more effective awareness is created in the formative years of life, the present study was undertaken to evaluate effectiveness of school based tobacco awareness initiatives in rural Maharashtra. **Methods:** It was a longitudinal study design in which a power point presentation regarding hazards of tobacco was shown to the school children in the age group 13-15yr. Retention of knowledge was assessed using a structured questionnaire immediately and one month after the presentation. **Results:** In all 112 students in the age group of 12-14 years participated in the study. Teachers were the main source of information regarding health effects of tobacco projects. Awareness about hazards of smokeless tobacco products increased after the program. 90 % of the students shared their knowledge after the program with family members, friends and neighbours. **Conclusions:** The finding that 90% of the students shared their knowledge with family and friends underlines the importance of such initiatives to educate the community at large.

Key words: Awareness, educational intervention, schoolchildren, Tobacco hazards

INTRODUCTION

Tobacco is a major cause of morbidity and mortality in India.[1] It is reported that 14.6% of students are addicted to some or the other forms of tobacco,[2] it is a growing threat to the health of adolescents in India.[3-7] In spite of such severity of problem, it was reported that awareness about the ill effects of tobacco was significantly low in Maharashtra.[8]

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According to the Global Adult Tobacco Survey 2, India, 2016–2017, current tobacco use in any form is by 28.6% adults, current tobacco smokers are 10.7% while current users of smokeless tobacco are 21.4% of adults.[9] In India, some forms of smokeless tobacco use such as chewing betel quid and use of "masheri" for dental cleaning are sometimes accepted societal norms. This makes the children feel that it is acceptable, especially if the women in the house are also using tobacco in some form in their daily chores. The only way to combat with the addiction of tobacco is creating awareness about its ill effects.

Prevention of tobacco can have long-term benefits for individuals as well as public health in general.

According to a review especially focused on tobacco problem in India, there are various NGOs in addition to the National Tobacco Control Programme working toward bringing more awareness about ill

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effects of tobacco among the people. Most of these programs are based on 5 "A"s - namely - Ask (about tobacco use), Advise (to quit), Assess (commitment and barriers to change), Assist (users committed to change), and Arrange (follow-up to monitor progress).[10]

Realizing that programs to control tobacco addiction will be more effective awareness is created in the formative years of life, a group of doctors, and other professionals launched Prevent Addictions through Children's Education (PACE) group in Pune, in 2011. It is targeted to create awareness among schoolchildren about various addictive substances.[11] Dr. Neeta Ghate started the program in Mumbai, in 2014, with a sole focus on tobacco addiction. The program is carried out in two steps. In the first step, a PowerPoint presentation about ill effects of tobacco is shown to the students. It is followed by a pledge of "no tobacco" by students. The program was appreciated by students, teachers, and principals with 3 lakh students in Pune and >10,000 students in Mumbai participating in the program till date.

To the best of our knowledge, there are very few studies conducted to assess the effectiveness of school-based tobacco awareness initiatives in rural Maharashtra. Hence, the present study was undertaken to evaluate the effectiveness of Prevent Addictions through Children's Education (PACE) program in a rural school. This will help to determine whether PACE program can be considered for uniform implementation all over our country.

Aims and Objectives

The aims and objectives of this study were as follows:

1. To compare knowledge about tobacco addiction and ill effects on health before and after intervention.
2. To determine the extent sharing knowledge about tobacco health hazards with family, friends, or other members of society.
3. To determine the impact of intervention on students to remain tobacco free.

MATERIALS AND METHODS

Study Design

It was a longitudinal observational study. As the early adolescent phase is more vulnerable to any type of addiction, the present study focused on children in the age group of 13–15 years. Sampling method was cluster sampling. One of the Marathi medium schools out of four from a rural area of Maharashtra was selected using lottery method. All the students from standard 8 and 9 were included in the study after obtaining permission of ethical committee and written consent of the principal of selected school. Importance of the study was explained to the parents in the Parent–Teachers' Association meeting. Written consent of the parents was obtained after informing that the present study carried no risks as no intervention was required. Option of voluntary participation of their ward was given. Students, who were absent on the day of the study were excluded from the study. The students were explained about the importance of this study and that participation was voluntary. Assent form from the students for participation in this study was also taken. Data were collected using a structured self-administered questionnaire in Marathi after explaining all the questions.

The intervention included a PowerPoint presentation about ill effects of tobacco shown to the students. After showing the presentation, students were asked to take "no tobacco pledge," which emphasized that students will never use tobacco in any form. Queries of students were answered on the spot. A post-program questionnaire was used to see the immediate impact of the program. Retention of knowledge and attitude toward tobacco was assessed using another structured questionnaire after a month of intervention.

The questionnaire consisted of knowledge about hazards of smokeless and smoked tobacco products, source of knowledge about tobacco ill effects, their attitude toward tobacco addiction, and their perception of the PACE tobacco awareness program and whether this knowledge has been spread in society. The data were compiled in Excel Sheet and statistical analysis was done.

RESULTS

In all 112 students in the age group of 13–15 years participated in the study, out of which 67 were male students and 45 were female students.

Preexisting Knowledge about Tobacco Addiction

Distribution of study population regarding source of information about health effects of tobacco products is shown in Figure 1.

It was observed that teachers were the main source of information regarding health effects of tobacco projects.

Distribution of study population regarding awareness about hazards of tobacco is shown in Figure 2.

It was observed that 95.5% of the students were aware that smoking causes health problems, exposure to the second-hand smoke is harmful and smokeless tobacco such as chewing tobacco, pan with tobacco, and masher (using tobacco in burnt form for cleaning teeth) can cause serious health problems.

Information was collected whether the students have noticed any advertisement about bad effects of tobacco in any mass media such as newspaper, television, or magazine in the past 30 days. It was observed that while 72% of students had seen such advertisement, 28% had not seen any advertisement.

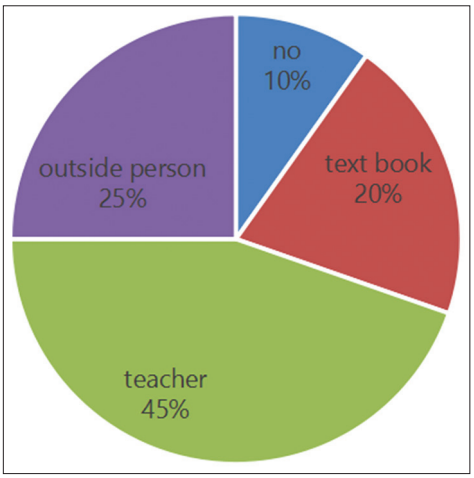

Figure 1: Awareness and source of information about tobacco

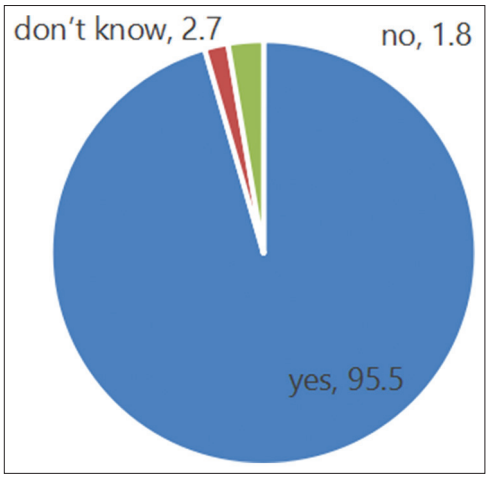

Figure 2: Awareness about hazards of tobacco

Although 73% of the students believed that trying tobacco product even once may lead to tobacco addiction, 27% of students were not sure about it.

Assessment of Immediate Effect of Program

It was noted that all the students agreed that PACE program added to their knowledge about health hazards of tobacco and will help to prevent addictions in children.

All of them were willing to spread awareness of tobacco hazards in society. Most of them of the students (85%, 96 of 112) showed their willingness in spreading the awareness among family members, friends, and neighbors.

All the 110 students said that they will feel proud to remain tobacco free for the rest of their life. This program appears to have been effective in developing a positive attitude in the students, convincing them to refrain from tobacco use for the rest of their lives.

Data Collected after 1 Month

Out of the initial 112, only 103 students participated in the third phase of the study. Awareness about hazards of smokeless tobacco products increased from 95.5% to 100% after the program. 90% of the students shared their knowledge after the program with family members, friends, and neighbors. 86% said that they have asked some person to quit any form of tobacco. More importantly, 42.8% out of them also confirmed that due to their advice some has stopped using tobacco in the past 30 days.

DISCUSSION

In India, there is an urgent need for tobacco health hazards awareness programs in schools to protect the vulnerable adolescent students from falling prey to addictions. A study -"Evaluation of PACE tobacco awareness program for schoolchildren in Pune and Mumbai" was conducted during December 2015–February 2016 to assess change in knowledge and attitude toward tobacco addiction among schoolchildren after PACE awareness program.[11]

Nazir and Almas observed in schoolchildren of Saudi Arabia that odds of smoking were 22%–47% lower among schoolchildren who were aware of the consequences of smoking on oral health than those who were unaware of these complications.[12]

Results of the present study confirm the effectiveness of PACE program in creating awareness about health hazards of smoking and smokeless tobacco products in rural children. It is further found to have a deep impact as the awareness retained 1 month after the program also.

The most important feature of this study has been the dissemination of the knowledge about health hazards of smokeless tobacco products in the society by both boys and girls. Majority of students who participated in the program reported that they were successful in convincing at least one member of their family or friends for leaving tobacco addiction. We feel that this positive change brought about by the students' needs to be supplemented by "tobacco cessation facilities."

CONCLUSIONS

An important observation noted was that teachers were the main source of information about tobacco hazards. As teachers are role models for the students, especially school students, involving teachers in tobacco control program can be effective in increasing awareness in schoolchildren. It also appears that mass media campaigns need to be more aggressive in rural areas about anti-tobacco campaigns.

The PACE program has proved to be effective in creating awareness about tobacco health hazards, smoking, and smokeless tobacco products. Thus, we recommend that this program must be implemented systematically on a nationwide basis.

A limitation of this study is that the exact number of people, who quit tobacco after the program could not be confirmed.

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