ABSTRACT

Aim: The aim was to assess the effectiveness of educational intervention among adolescents pertaining to tobacco consumption in Bangalore city. Materials and Methods: An intervention study was conducted in school, which was selected by convenient sampling method. Necessary permissions and ethical clearance were obtained. 9th and 10th standard students were divided into two groups. Health education intervention was given in the form of lecture using Power Point presentation (PPT) for Group A and lecture without PPT for Group B. Knowledge was assessed using structured validated questionnaire before and after the health education. Data were analyzed using SPSS version 16. Results: A total of 55 students completed the data. Paired t-test was used to assess the difference in knowledge within groups for pre- and post-intervention, which was statistically significant (Group A - 7.5 and 8.95) (Group B - 6.7 and 8.3). Whereas, unpaired t-test was employed to assess the difference in the method of intervention and no statistically significant difference between the two methods education was observed. Conclusion: Health education proved to be an effective method in improving knowledge of adolescents irrespective of the method of intervention.

Key Words: Adolescents, adverse effects, educational intervention, tobacco.

Introduction

Tobacco usage in India has been an upmost concern among health professionals. Adolescents being vulnerable group are more susceptible to tobacco addiction. The usage of tobacco by adolescents has been increased in recent years. The World Bank has reported that nearly 82,000-99,000 children initiate smoking all over the world every day. Tobacco usage among adolescents has increased, and the habit is carried over to their adulthood. It is estimated that, one in every 10 adult deaths in India is smoking-related. The Global Adult Tobacco Survey (GATS) estimated that more than one-third (35% or 274.9 million) of adults in India used tobacco in some form or the other.

Adolescents are more susceptible to the use of tobacco. It is important to elicit the influencing and motivating factors that initiate the use of tobacco products. The reasons for which the teenagers initiate the use of tobacco would be curiosity, peer pressure, social acceptance, and parental influence. Other contributing factors namely stress, psychological factors, promotional advertisements etc. The adolescents who have started consuming tobacco in their early age become victims for various diseases such as oral cancer, lung cancer, pancreatic cancer, heart attacks, and chronic obstructive pulmonary diseases in their life course. This has an impact on the individual’s quality of life, his family, community and more on the productivity and also on Nations health and economic status.
Tobacco is responsible for the severe health complications among adolescent tobacco users. It is necessary to develop preventive strategies to reduce the tobacco use. In order to do so, educating the adolescents by providing awareness about ill-effects of tobacco is important. Hence, there is a need for health education among adolescents. The study was conducted with the objectives, (1) To assess the knowledge of adolescents pertaining to adverse effects of tobacco consumption, and (2) to assess the effectiveness of methods of health education regarding tobacco consumption.

Materials and Methods

The study was conducted in a school selected by convenient sampling method in Bangalore city. The study population was high school students. Sample size was estimated to be 60 students. (95% of confidence interval, 10% error). Ethical clearance was obtained by Institutional Ethics Committee. Necessary permissions were obtained from authorities. Informed consent was obtained from parents 9th and 10th standard students consented to take part in the study. Structured questionnaire consisting of nine binomial questions and one question with multiple choices were formulated and validated by subject experts. It was translated to local language. School children were divided into two groups (30 students in each group). Questionnaire was distributed among students to assess their baseline knowledge regarding adverse effects of tobacco. Following this health education material was prepared, and content was validated by experts. One group (Group A) received lecture with Power Point presentation (PPT), whereas the other group (Group B) received lecture without PPT. Post health education assessment was done with the same questionnaire.

The first part of the questionnaire consisted of demographic details, which included age, gender, class, school, parent’s education, parent’s occupation. The second part of the questionnaire had questions to assess their knowledge regarding ill-effects of tobacco such as staining of teeth, early aging, oral cancer, lung cancer, etc.

Data were analyzed using SPSS version 16 for descriptive statistics and inferential statistics such as paired t-test and unpaired t-test.

Results

A total of 60 students consented and participated in the study. Five students failed to complete few questions in the questionnaire, and hence they were not included in the analysis. Group A had 22 male and 8 female students. Group B had 20 male and 5 female students.

Paired t-test was employed to assess change in knowledge within the group (Table 1). Group A showed a mean score of 7.5 at baseline and 8.93 post health education (Graph 1), which was statistically significant \( P = 0.01 \).

Group B showed a mean score of 6.56 at baseline and 8.64 post intervention (Graph 2) which was statistically significant \( P = 0.01 \).

There was the difference in the two methods used for health education but was not statistically significant when unpaired t-test was used (Table 2). Television, teachers were the major source of information about the tobacco for the students (Graph 3).

Discussion

The present study was carried out to assess the knowledge of adolescents pertaining to adverse effects of tobacco consumption. The prior knowledge of study subject regarding adverse effects of tobacco was satisfactory. About 90.3% of students had knowledge regarding questions based on ill-effects of tobacco usage like bad odor, staining of teeth. This is comparable to previous studies, which was carried to assess and improve children’s knowledge of the ill-effects of smoking. In our study, the reason could be attributed to the information by teachers and television (41.8%). There was a significant increase in knowledge after health education irrespective of the method employed.

In our study, 78% students had knowledge about tobacco being a causative factor for oral cancer, lung cancer, which is comparable to the previous study. This could be due to information from the print and digital media with warnings displayed, which are graphical, larger, and more comprehensive in content. However, they were unaware regarding the role of tobacco in causing
bladder and esophageal cancer which is comparable to study\textsuperscript{5} by Hammond et al. The reason could be the people were not fully informed about all the diseases caused by tobacco. Though the students had good knowledge regarding ill-effects of tobacco on health, they lacked knowledge regarding seeking professional help to quit tobacco, early ageing, shaving of trees and the environment related aspects. However, it increased significantly after the health education. It is comparable to the study conducted by Tsai \textit{et al.}\textsuperscript{4} where tobacco prevention education program improved adolescents’ knowledge and attitudes toward the hazards of cigarette smoking. Health education interventions will help in imparting knowledge and creating awareness regarding tobacco ill-effects. The change in knowledge among adolescents after the awareness program was beneficial as we have observed in our study. There was a significant increase in their knowledge irrespective of the method of education. Importance of awareness program can be seen through the positive results. Schools have long been a priority setting for adolescent health promotion activity. Therefore, such tobacco awareness programs among adolescents need to be conducted through scientifically prepared module.

**Conclusion**

Oral health education proved to be an effective way of improving knowledge of adolescents regarding tobacco and its adverse effects.
effects. The knowledge regarding the less known diseases due to tobacco such as esophageal and gall bladder cancer was also increased.

There is a need for education on tobacco and the initiation of cessation campaigns among the youths. Education on the ill-effects of unhealthy lifestyle such as tobacco use should be incorporated into secondary school curriculum. The module for tobacco awareness can be standardized and utilized to create awareness among adolescents by dental professional to catch them young for their better future.

Acknowledgment

We sincerely acknowledge our Dean, Dr. B V Sreenivasa Murthy, our Registrar Academics Dr. Silju Mathew, Faculty of Dental Sciences, MS Ramaiah University of Applied Sciences. Mr. Naveen, our Medico Social Worker for coordinating with the school authorities in organizing the health education program. School authorities, teachers, parents and students for cooperating to carry out the study.

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