



Effectiveness of audio visual display on knowledge regarding ill effects of tobacco products among adolescent boys

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Abstract

Background of the study: Tobacco users have become more common and it is a leading cause of incurable disease. More than 5 million people are dying. The annual death will rise to 8 million by 2030. The fourth round of Global Youth Tobacco Survey revealed prevalence of tobacco use among boys was 9.6%. Many of the studies suggested education through media will help the adolescents to be aware of using tobacco products and its ill effects.

Objectives: The objective of the study was to evaluate the effectiveness of audio visual display on knowledge regarding ill effects of tobacco products among adolescent boys and to find out an association between pretest knowledge scores with their selected socio demographic variables.

Methodology: An evaluative study was conducted among 30 Adolescent boys (16 to 19 years) studying in P.C Jabin's PU College of Science, Hubballi. The research design used for the study was Pre-experimental; one group pre-test, post-test design. Samples were selected by using Simple random sampling technique. Structured knowledge questionnaire was used for obtaining the level of knowledge.

Results: The study results revealed that, majority of the subjects in pre-test 16 (53.3%) had average knowledge, 10 (33.4%) had good knowledge and 4 (13.3%) had poor knowledge. Whereas, in post-test after Audio-Visual Display, 24 (80%) had good knowledge and 6 (20%) had average knowledge regarding ill effects of tobacco products. There was a significant gain in their knowledge i.e 47.37% of after administration of Audio Visual Display. With regard to statistical association, there was an association between subject's family history of any habits of tobacco products and pretest knowledge scores.

Conclusion: The study concludes that intervention using Audio Visual Display regarding ill effects of tobacco products was effective in enhancing the knowledge of adolescent boys.

Keywords: Audio visual display, knowledge, ill effects, tobacco, adolescents

Introduction

Adolescence is a transitional phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19 years [1]. During adolescence, the child continues to grow physically, cognitively, and emotionally, changing from a child into an adult [2].

Adolescents are the most vulnerable population to initiate tobacco use. It is now well established that most of the adult users of tobacco start tobacco use in childhood or adolescence. Adolescents often get attracted to tobacco products because of such propaganda. It is important to understand various factors that influence and encourage young teenagers to start smoking or to use other tobacco products. Tobacco is used in a wide variety of ways in India including smoking and smokeless use [3].

Tobacco is a risk factor for six out of eight leading causes of death in the world. More than 80% of deaths due to tobacco use occur in the developing countries, including India. Each year, 0.8–0.9 million Indians die due to tobacco-related diseases. India has the highest number of oral cancer cases in the world, and 90% of all oral cancers are related to

tobacco use. 36.9% school-going youths (aged 13–15 years) is in India had already initiated smoking before the age of 10 [4].

The fourth round of Global Youth Tobacco Survey (GYTS-4) was conducted in 2019 by the International Institute for Population Sciences (IIPS) under the Ministry of Health and Family Welfare (MoHFW). The key findings of the Survey were nearly 1/5th of the students aged 13-15 used different forms of the tobacco product in their life. Prevalence of tobacco use among boys was 9.6% and among girls was 7.4%. The prevalence of smoking tobacco was 7.3%. In case of smokeless tobacco product, the prevalence was 4.1% [5].

Antismoking programs as part of school curriculum have been shown to be effective in preventing initiation of smoking among children and adolescents. Evidences suggests that antismoking media campaigns may play a potentially effective role in reducing smoking among those exposed to the message (13–18) [6].

Audio visual aids can make the teaching effective and accurate. Things seen are mightier than things heard. Visual aids - pictures, charts, maps, graphs, photographs, cartoon etc. are served through the sense of vision. It enhances the adult thinking capacity and helps them to reason things with

proper understanding ^[7].

Objectives

To assess the level of knowledge of adolescent boys regarding ill effects of tobacco products.

To evaluate the effectiveness of audio visual display on knowledge regarding ill effects of tobacco products among adolescent boys.

To find out an association between pretest knowledge scores of adolescent boys with their selected socio demographic variables.

Materials and Methods

An evaluative approach was considered appropriate for the present study. The research design for the study was pre-experimental; one group pre-test post-test design. The study comprised a total of 30 samples. Samples were selected through probability; simple random sampling technique. The tool used for data collection was structured knowledge questionnaire. Audio Visual Display was designed to educate adolescent boys. The study was conducted at selected Pre University College. The pre-test was conducted by using the structured knowledge questionnaire followed by administration of audio visual display on knowledge regarding ill effects of tobacco products. Then audio visual materials were displayed for 6 days. Post-test was conducted after 8 days by using the same tool to evaluate the effectiveness of audio visual display on knowledge regarding ill effects of tobacco products.

Results and Discussion

Findings related to socio-demographic variables of subjects

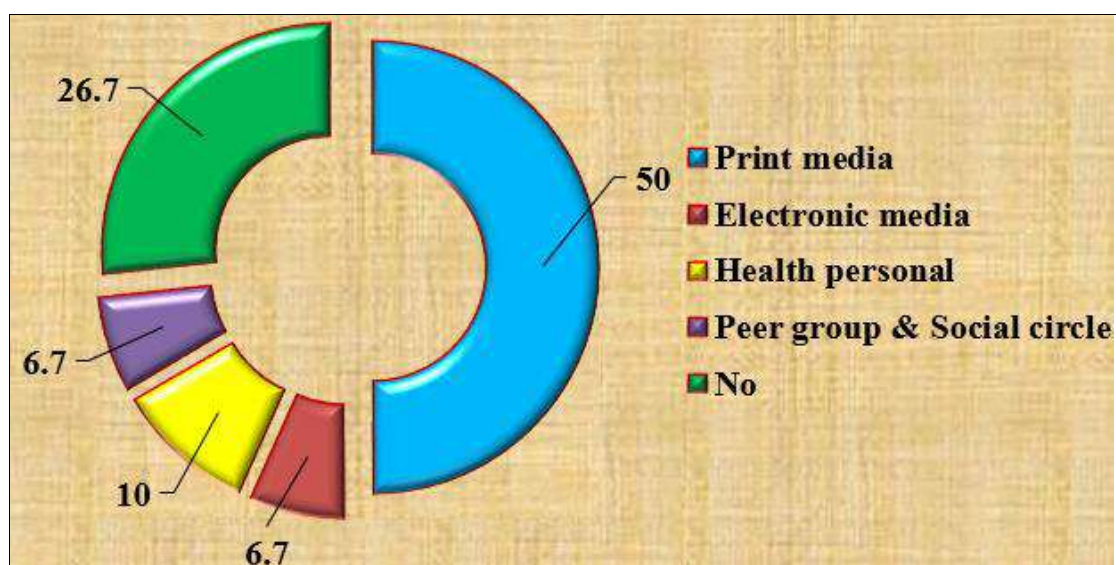
Out of 30 subjects, in regard to the age, majority of the subjects 11 (36.7%) were in the age group of 17-18 years whereas. Regarding religion, majority of the subjects 21 (70%) were belongs to Hindu religion. Regarding course of study, 16 (53.3%) subjects were studying I year PUC and 14

(46.7%) subjects were studying II-year PUC. With regards to the type of family, majority of the subjects 16 (53.3%) were belongs to nuclear family, 12 (40%) belongs to Joint family and 2 (6.7%) were belongs to extended family. Regarding income of parents per month, majority of the subjects 15 (50%) parents' income was <10,000 rupees. With regard to area of residency, majority of the subjects 18 (60%) of the samples resides in rural area. Regarding family history of any habits, majority of the subjects family 19 (63.3%) had a history of using tobacco products. Regarding the source of information regarding ill effects of tobacco products, majority of the subjects 15 (50%) were received information through print media, 3 (10%) from health personal, 2(6.7%) from electronic media, 02 (6.7%) from peer group and social media & 8 (26.7%) of the subjects not received any information regarding ill effects of tobacco products.

These findings were supported through a study conducted by Saima Manzoor, where the researcher found majority of the subjects, 45 (56.3%) were less than 15 years and 35 (43.8) subjects were more than 15 years. Regarding type of family, 50 (50%) were belongs to nuclear family and 50 (50%) belongs to Joint family. With regards to subjects parents income 37 (46.25%) income was between 10,000 to 30,000 rupees, 25 (31.25%) monthly income was <10,000 rupees, 18 (22.5%) subjects parents had income of rupees greater than 30,000 rupees. Regarding residency, majority of the subjects 47 (58.8%) of the samples resides in urban area & 33 (41.3%) of the samples resides in rural area ^[8].

Another study conducted by Sarmaida S, Kintoko R, Linda TM, supports the findings, where they observed majority of subject's father 22 (52.4%) and 7 (16.6%) brothers smoking in the house ^[9].

Findings were also supported through a study conducted by Abidh Ibrahim., *et al.*, according to the study 78.23% said that they were aware of effects of smoking on health. 39.83% and 14.78% thought it would lead to lung disease and heart disease respectively ^[10].



Source of information regarding ill effects of tobacco products

Fig 1: Percentage distribution of subjects according to Source of information regarding ill effects of tobacco products

Analysis and interpretation of knowledge scores of adolescent boys regarding ill effects of tobacco products.**Table 1:** Mean, Median, Mode, Standard Deviation and Range of knowledge scores of subjects regarding ill effects of tobacco products.

n=30					
Area of analysis	Mean	Median	Mode	Standard deviation	Range
Pre-test	15.12	15	16	2.82	11
Post-test	27.66	29	30	1.37	05
Difference	12.54	14	14	1.45	06

Table No. 1 reveals that, the pre-test mean knowledge score was 15.12, median 15, mode 16, standard deviation 2.82, and range 11. Whereas the post-test, mean knowledge score was 27.66, median 29, mode 30, standard deviation 1.37 and range 05. The overall difference in mean knowledge score was 12.54, median 14, mode 14, standard deviation 1.45 and range 06.

Table 2: Frequency and percentage distribution of knowledge scores of subjects regarding ill effects of tobacco products.

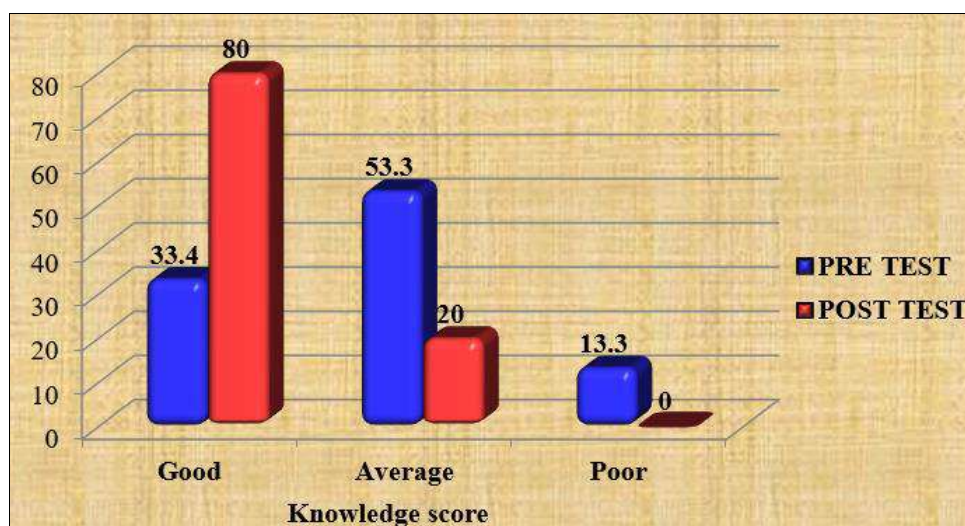
n=30				
Level of knowledge	Pre-test		Post-test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Good	10	33.4	24	80
Average	16	53.3	6	20
Poor	4	13.3	00	00

Table 2 reveals that, distribution of level of knowledge of adolescent boys regarding ill effects of tobacco products during pre-test and post-test. Most of the subjects in the pre-test 16 (53.3%) had average knowledge, 10 (33.4%) had

good knowledge and 4 (13.3%) had poor knowledge. Whereas, in post-test after Audio Visual Display, 24 (80%) had good knowledge and 6 (20%) had average knowledge. These findings were supported by a study conducted by Sarmaida S, Kintoko R, Linda TM, who observed that the mean pretest knowledge score of subjects towards smoking dangers was 33.83 and mean pretest knowledge score was 37.64. The results showed that there are positive effects on knowledge ($p<0.05$) of students after receiving the intervention [9].

Shilpi Singh *et al.* conducted study on knowledge regarding ill effects of smoking among college students, they found that only 4% of the study subjects had an awareness about the effects of smoking on oral health while 40% had moderate awareness and 56% of the students had poor awareness [11].

A study conducted by Saima Manzoor showed that in pre-test 35% having inadequate, 62.5% having moderate and 2.5% having adequate knowledge and in post- test 64.% having adequate, 36% having moderate and no one was having inadequate knowledge regarding hazards of smoking [8].

**Fig 2:** The column graph represents percentage distribution of subjects according to their level of knowledge scores in pre-test and post-test.**Table 3:** Pre-test, post-test percentage of knowledge scores of subjects regarding ill effects of tobacco products.

n=30			
Items	Mean% of knowledge scores of subjects		
	Pre-test	Post-test	Gain in knowledge
Structured knowledge questionnaire	43.20	90.57	47.37

Table No. 3 reveals that, there was 47.37% of gain in knowledge after administration of Audio Visual Display.

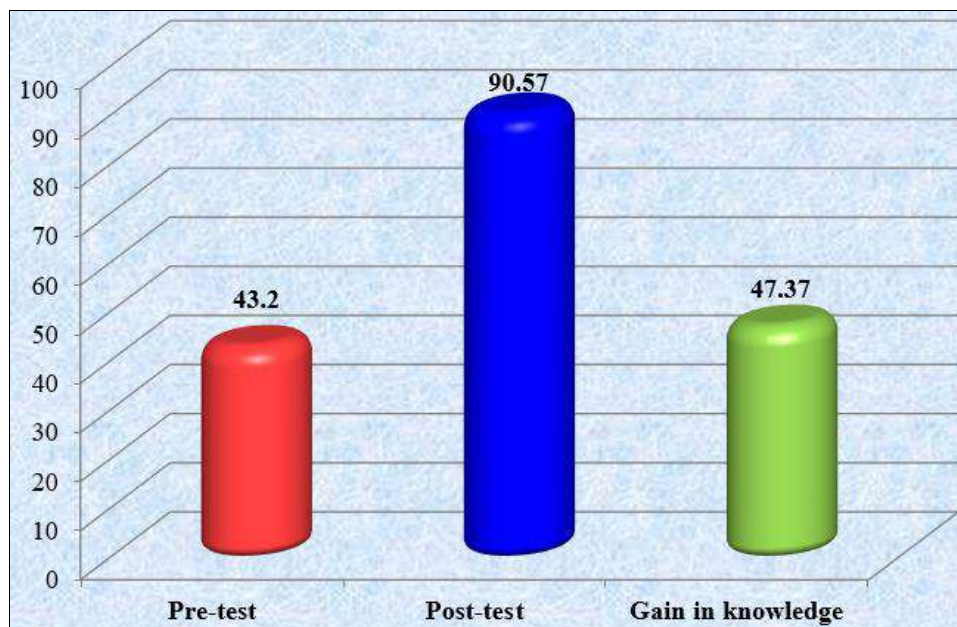


Fig 3: The Cylindrical graph diagram represents the mean percentage of gain in knowledge scores of subjects according to their knowledge scores.

Testing of hypothesis

The calculated paired 't' value ($t_{cal}=29.16^*$) was greater than the tabulated value ($t_{tab}= 2.009$). This indicates that the gain in knowledge scores was statistically significant at 0.05 level of significance. Therefore, the Audio Visual Display was effective in improving the knowledge of adolescent boys regarding ill effects of tobacco products.

These findings were also supported by a study conducted by Sarmaida S, Kintoko R, Linda TM, who assumed health education by using audio-visual media can increase the level of adolescent knowledge about the dangers of smoking.⁹

A study conducted by Saima Manzoor showed that over all pre-test score mean 20.18 as against post-test score mean of 28.61 with mean difference of 8.42. The difference between the two scores (56% v/s 79.40%) showed a significant association ($p \text{ value} \leq 0.001$)^[8].

Analysis and interpretation of data to find out an association between pre-test knowledge scores of subjects with their selected socio-demographic variables

The calculated chi-square value for subject's family history of any tobacco habits 10.3 was greater than tabulated value 9.49. Hence, there was a statistical association between pre-test knowledge scores and subjects family history of any habits of tobacco products. And there is no association between the pretest knowledge scores and other socio-demographic variables such as age, religion, course of study, type of family, income of parents, and area of residency and sources of information regarding ill effects of tobacco products.

These findings were contradictory to a study conducted by Saima Manzoor, who observed that there is significant association of pretest knowledge scores with educational status of mother ($p=0.01$) at $p \leq 0.05$ and no association was found with other variables like age, gender, educational status of father, residence, type of family, family income^[8].

Conclusions

Comparison of pre-test and post-test knowledge cores revealed that the post-test competence score was significantly higher than the pre-test competence scores. There was a significant gain in their knowledge i.e 47.37% of after administration of Audio Visual Display. The calculated paired 't' value was greater than the tabulated value. This indicates that the gain in knowledge score was statistically significant at 0.05 level of significance. Therefore, the Audio Visual Display was effective in improving the knowledge of subjects regarding ill effects of tobacco products.

The study concludes that intervention using Audio Visual Display regarding ill effects of tobacco products was effective in enhancing the knowledge of adolescent boys. The improved knowledge regarding ill effects of tobacco products helps the adolescents to take protective and preventive measures against tobacco, which will, in turn, help the students to improve the quality of life and thus the students can engage in creating awareness among the public.

References

- 1 Csikszentmihalyi M. <https://www.britannica.com/>. [Online]; 2021 [cited 2021-03-23]. Available from: <https://www.britannica.com/science/adolescence>.
- 2 Pickhardt CE. www.psychologytoday.com. [Online]; 2012, [cited 2021-03-26]. Available from: shorturl.at/cjpAU.
- 3 Chadda RK, SN Sengupta. Tobacco use by Indian adolescents, Tobacco Induced Diseases. Jun 15, 2002;1(1):8. doi:10.1186/1617-9625-1-8
- 4 Kaur PG, Jagdish, Kishore, *et al*. Effect of Anti-Tobacco Audiovisual Messages on Knowledge and Attitude towards Tobacco Use in North India. Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine.

- 2012;37:227-31. 10.4103/0970-0218.103470. Available from:
https://www.researchgate.net/publication/234071064_Effect_of_Anti-Tobacco_Audiovisual_Messages_on_Knowledge_and_Attitude_towards_Tobacco_Use_in_North_India
- 5 Ministry of Health and Family Welfare. National Fact Sheet Global Youth Tobacco Survey (GYTS-4), India, 2019 [Internet]. PIB Delhi; 2021 [cited 2022 Jan 10]. Available from:
<https://pib.gov.in/PressReleasePage.aspx?PRID=1744555>
 - 6 Salim Surani, Raghu Reddy, *et al.* Ill Effects of Smoking: Baseline Knowledge among School Children and Implementation of the “AntE Tobacco” Project. International Journal of Pediatrics. 2012;2011:584589, 7p. Available from:
<https://doi.org/10.1155/2011/584589>
 - 7 Viji Arockia. A study to assess the effectiveness of audio visual display regarding ill effects of tobacco products on the awareness and attitudes of adolescent boys towards using tobacco products in selected schools at Coimbatore, Tamil Nadu, [cited 2021-03-26]. Available from:
<http://repository-tnmgrmu.ac.in/4263/>
 - 8 Saima M. Effectiveness of planned Teaching programme on knowledge regarding hazards of Smoking among adolescents of selected high schools. Indian journal of applied research. 2018 June;8(6):72-75.
 - 9 Sarmaida S, Kintoko R, Linda TM. The effect of audio-visual media on adolescents’ Knowledge and attitude toward smoking Dangerous at secondary high school. International journal of nursing and health services. September 2019;2(3):164-171.
Doi: <http://doi.org/10.35654/ijnhs.v2i3.147>
 - 10 Abidh I, Stacy B, Sudipta SA, Swathi, Santhosh, Rashmi K. A study to assess the awareness of ill effects of tobacco among Adolescents and young adults. Nitte university journal of health science. 2016 September;6(3):21-23.
 - 11 Shilpi S, Kapil D, Pratik BK, Seema B, Shreyas S. Knowledge and attitude regarding ill effects of smoking among college students. EJDTR. 2015;4(1):259-265.