

# A Study to Evaluate the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding the Ill Effects of Tobacco Use Among Adolescents in a Selected School, Kanniyakumari District

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**Abstract**—This study examined the effectiveness of a video assisted teaching program in improving adolescents' knowledge about the ill effects of tobacco use in a selected school in Kanyakumari district. Tobacco use remains a major public health concern in India, with many adolescents initiating the habit at an early age facing serious health risks that extend into adulthood. A quantitative approach with a quasi-experimental one group pretest and post-test design was adopted among 60 adolescent students selected through convenience sampling. Base line findings showed that most students possessed only average or inadequate knowledge regarding the harmful effects of tobacco. Following a structured video based educational intervention, knowledge scores improved markedly with all participants achieving an adequate level of understanding in the post level assessment.

**Index Terms**—Tobacco use: Tobacco use is the habitual consumption of the tobacco plant leaf. Video assisted teaching: Video assisted teaching is a structured instructional method that uses curated educational videos as a primary learning aid. Health education: Health education is any combination of learning experience designed to help individuals and communities improve their health by increasing knowledge.

## I. BACKGROUND OF THE STUDY

The use of tobacco has always been a hindering factor in a developing nation like India. Tobacco use among children is ever increasing, especially in rural parts of the country. Knowledge about its prevalence and usage patterns among adolescents may aid in adopting measures for awareness and prevention of its use

among children.

A high prevalence of tobacco use among adolescents was observed. For this reason, the researcher decided to conduct a study to evaluate the effectiveness of a video assisted teaching programme on knowledge regarding the ill effects of tobacco use among adolescents in selected school Kanniyakumari district.

## II. ILL-EFFECTS OF TOBACCO: OVERVIEW

Tobacco is a breaker of the heart and body because it is a major cause of heart disease and cancer. Nicotine addiction ensures lifelong customers, not long-term customers. Among adolescent boys, there is a lack of awareness about the causes, risk factors of tobacco consumption and its impact on health. Nature has given us only good things and it is useful for the requirement in all aspects because tobacco also has some medicinal value but most people abuse it for negative reasons.

Nicotine is a highly addictive substance, and adult experimentation can easily lead to a lifelong addiction to tobacco. India is the second largest producer and third largest consumer of tobacco in the world. Almost all tobacco use begins in childhood and adolescent.

## III. PREVALENCE OF ILL-EFFECTS OF TOBACCO

In India, the prevalence of tobacco use among school-going children (ages 13–15) is a significant public health concern, with nearly 8.5% of students currently

using some form of tobacco, according to the Global Youth Tobacco Survey (GYTS-4). While this reflects a substantial 42% decline over the previous decade, the data reveals a troubling trend in early initiation: roughly 38% of cigarette smokers and 47% of bidi smokers in this age group started before their 10th birthday. The prevalence is notably higher among boys (9.6%) than girls (7.4%), and regional disparities are stark, with states like Arunachal Pradesh and Mizoram reporting prevalence rates as high as 58%, compared to just over 1% in states like Himachal Pradesh and Karnataka.

#### IV. NEED FOR PREVENTION AND MANAGEMENT

The need for the prevention and management of tobacco's ill effects in India is a critical public health priority, driven by the fact that tobacco remains the single largest cause of preventable death and disability. Prevention is primarily centered on protecting the youth from nicotine initiation through the strict enforcement of the Cigarettes and Other Tobacco Products Act (COTPA), which mandates smoke-free public spaces and prohibits the sale of tobacco near educational institutions. From an economic perspective, the necessity of prevention is underscored by the massive disparity between tobacco tax revenue and the astronomical healthcare costs required to treat related diseases like oral cancer and COPD. Effective management involves a dual approach of high-level policy, such as the MPOWER framework, and ground-level clinical interventions like the National Tobacco Quit line and m-Cessation mobile programs.

#### V. SIGNIFICANCE AND NEED FOR THE STUDY:

Tobacco is a major contributor to these diseases, which now account for more than half of the diseases in these countries. It is estimated that India will have a rapid increase in tobacco-related deaths every year compared to other developing countries. Tobacco users are almost 2-3 times more likely to develop heart disease and various other health complications than non-smokers. Smoking tends to be the causative factor for almost more than 90% of lung cancer and other lung diseases like chronic bronchitis, emphysema etc.

Tobacco is responsible for cancer in many places i.e. lungs, mouth, pharynx, larynx, stomach, bladder, gall bladder and penis.

According to the WHO, the total number of tobacco-related deaths in India is likely to be between 800,000 and 900,000 annually. It kills about half of teenagers who are addicted to tobacco. In addition to the traditional burden of communicable diseases, developing countries today also face a huge increase in non-communicable diseases such as mental illness, violence and injuries.

Tobacco use is increasing among the adolescents and is usually continues into adulthood. Another trend noticed these days among adolescents is that tobacco purchase and usage have shifted to alternative products like electronic nicotine delivery systems (vaping), raising concerns due to increased public interest. E-cigarette marketing is of particular concern, because it creates an illusion that they are safer and healthier option to conventional tobacco cigarettes, whereas their safety and their potential role in cessation are matters of worry. Hence, it is crucial to include e-cigarettes in tobacco prevention programs targeting vulnerable groups through early intervention efforts.

The National Survey on Drug Use and Health estimates that more than 4,000 people under the age of 18 try their first cigarette every day. This represents more than 730,000 new smokers each year. According to the ICMR, nearly 1.16 million people get cancer, 4.5 million get heart disease and 3.9 million get chronic obstructive pulmonary disease (COPD) every year in India due to tobacco consumption.

Despite the high prevalence and severity of complications, many adolescent girls remain unaware of the condition, its risk factors, and preventive measures. Therefore, this study is highly significant as it aims to bridge this knowledge gap by assessing the effectiveness of a Video-Assisted Teaching (VAT) program. By improving awareness of a healthy lifestyle and promoting positive attitudes toward prevention, this study contributes directly to the efforts of controlling the incidence and progression of tobacco use among adolescent students in the Kanniyakumari district.

#### VI. OBJECTIVES

1. To assess the level of knowledge regarding the ill

effects of tobacco use among adolescents in a selected school.

2. To evaluate the effectiveness of a video assisted teaching programme on knowledge regarding the ill effects of tobacco use among adolescents in a selected school .
3. To find out the association between the pre test level of knowledge regarding the ill effects of tobacco use and the selected demographic variables among adolescents in a selected school.

## VII. HYPOTHESES

H1: There is a significant difference between the pre-test and post-test level of knowledge regarding the ill effects of tobacco use among adolescents in a selected school.

H2: There is a significant association between pre-test level of knowledge regarding the ill effects of tobacco use and the selected demographic variables.

ASSUMPTIONS: The study assumes that:

1. Adolescents may have some knowledge regarding the ill effects of tobacco use.
2. Adolescents' knowledge regarding the tobacco use may vary with selected demographic variables.
3. Video assisted teaching program will improve the knowledge of school students.

## VIII. DELIMITATION

1. Adolescents was delimited to area in selected school
2. Data collection period is delimited to 2 Weeks

## IX. PROJECTED OUTCOMES

1. The study will enable the adolescents to identify the prevention in ill effects of tobacco.

## X. REVIEW OF LITERATURE (ROL)

The Review of Literature (ROL) is a fundamental and critical step in the research process. It involves the systematic identification, location, critique, and synthesis of existing written material that contains information on the research problem. The primary purpose of the ROL is to convey to the reader the current state of knowledge, the ideas and theories that have already been established, and what is still

unknown about the specific topic under investigation. It helps in broadening the investigator's view, justifying the current study, and focusing the research objectives on issues specifically concerning the study's aim.

The review for this study is presented under the following headings Section A: Studies related to tobacco use in international context Section B: Studies related to ill effects of tobacco in india

## SECTION A. STUDIES RELATED TO TOBACCO USE IN INTERNATIONAL CONTEXT

The Ministry of Health and Welfare and the Korea Health Promotion Institute seoul (2015) conducted a school-based tobacco control program survey in korea. This web-based self-administered survey is an annual nationwide cross-sectional survey of adolescents aged 10–18 (grades 5 to 12) nested in primary and secondary schools in Korea. The survey uses stratified three-stage cluster sampling methods and equal allocation methods. Through stratification by geographic area and school type, 1100 primary and secondary schools were randomly selected, and then one classroom for each grade was randomly selected. In 2015, 8.0% of boys and 2.6% of girls in secondary school were current smokers, and with higher students' grades, the proportion of current smokers increased. About 65% reported that they participated in more than two programs; the proportion of smokers decreased with a greater number of programs. Of the students, 27.8% witnessed teachers smoking within the school premises, and 11.2% of those students were smokers. The mean of the individual attitudes toward tobacco use was 27.5, while that of individual attitude to tobacco control regulations was 11.9. Smokers had lower scores on both attitudes than non-smokers.

Tesler R et al., (2020) conducted a cross-sectional study in Israel .A survey was conducted with students from schools and data were collected via anonymous self-report questionnaires available in Hebrew and Arabic. The total sample included 56,513 participants who participated in all six samples between 1998 and 2015. The Israeli HBSC research protocol received approval from the research ethics committees of the Israeli Ministry of Education, Bar Ilan University, and Ariel University. The total sample included 56,513 students in grades 6, 8, and 10, with 29,411 girls and 27,102 boys. Smoking was higher among boys across all grades, ethnic groups, and years of study, with the

highest frequencies among Arab-Israelis. The results of this study can significantly enhance the development and implementation of smoking prevention and control programs among students in Israel.

SECTION B: STUDIES REALATED TO ILL EFFECTS OF TOBACCO IN INDIA

Jaisoorya TS et al.,(2016) Prevalence & correlates of tobacco use among adolescents in Kerala, India conducted a cluster random sampling design. Total 7560 students from classes 8, 10 and 12, within the age group of 12-19 years, across 73 schools in Ernakulam district, Kerala, India, completed a self-administered questionnaire incorporating standardized instruments. Of the 7350 valid questionnaires, the overall lifetime prevalence of tobacco use was 6.9 per cent (12.5% males and 1.2% females). The prevalence of tobacco use increased from 3.1 per cent at 12-13 yr to 15.1 per cent at 18-19 years. The mean age of onset of tobacco use was 14.0±2.2 years. The prevalence was higher among students from urban backgrounds, lower socio-economic status and those with part-time jobs. Tobacco users had significantly higher rates of use of alcohol (67.8% vs. 11%) and illicit drugs (33% vs. 6.1%). They had poorer academic performance (24.7% vs. 9.1%), more severe psychological distress (10.8% vs. 4.5%), suicidal attempts (10.2% vs. 3.5%), higher scores of ratings of attention deficit hyperactivity disorder (8.3% vs. 2.5%) and history of sexual abuse (12.5% vs. 3.8%).

D S. Akash et al., (2023) Pattern of Smokeless Tobacco Initiation and Use among School Going Adolescents in Delhi, India. A cross-sectional survey was used in conducted to assess the pattern of smokeless tobacco use among school going adolescents in senior secondary schools with the assessment of the socio demographic factors responsible for initiation of smokeless tobacco use by adolescents. A total sample of 714 students across grades 9-11 standards in 3 schools of Delhi was done using a self-administered questionnaire after obtaining approval from Institutional Ethics Committee and School Health Scheme, Delhi. Consumption of tobacco was found to be 27.9% at a frequency of 6-9 days in a period of one month and a majority of 31 (39.2%) students initiated the use in the age group of 10-11 years. Among the different SLT products, pan masala combined with zarda with 56 (70.8%) users,

was found to be the most commonly consumed SLT product. Grocery shops were preferred POS among the students as (67%) of students obtained the SLT product from this POS. 56 (70.8%) of the students wanted to quit the habit of SLT use whereas 49 (62%) students tried to quit the habit and 43 (54.4%) students sought help in order to quit the habit.

XI. CONCEPTUAL FRAMEWORK SECTION

Conceptual framework

According to Pender’s health promotion model [Pender, 1996], a system is composed of a set of interactive elements and is distinct from the environment in which it exists. In a system, all activities can be resolved into an aggregation of processes, primarily modifying factors, cognitive perceptual factors, health promotion behavior and output, which are maintained by feedback circuit. This systemic approach ensures the maintenance of an intact, functioning whole.

XII. METHODOLOGY

Research methodology involves the systematic and structured procedures employed by the researcher from the initial identification of the problem to its conclusion. This chapter provides a detailed description of the methods used in the study, including the research approach and design, variables, setting, population, sample, sampling technique, development and description of the tool, data collection procedure, validity and reliability, pilot study, data analysis plan, and ethical considerations

Research Approach

The study utilised a Quantitative Research Approach to objectively measure and analyses the knowledge levels of adolescent students.

Research Design

The research design adopted for this study was a Quasi-Experimental, One-Group Pre-test Post-test Design. This design is appropriate for evaluating the effectiveness of an intervention in a non-randomized setting.

The design is schematically represented as follows:

GROUP	PRE-TEST	INTERVENTION	POST – TEST
School children	O1	X	O2

Keys:

- O1=pre-test knowledge scores regarding ill effects of tobacco among adolescent students.
- O2=post-test knowledge regarding ill effects of tobacco among adolescent students.

X=video assisted teaching programme regarding complications of tobacco use. Variables

- Independent variable: Video-assisted teaching program regarding the ill effects of tobacco use among adolescents.
- Dependent variable: Knowledge scores of adolescents regarding the ill effects of tobacco use.
- Selected Demographic Variables: Age, Education, Religion, Residence, Diet Pattern, Age at Menarche, Type of Family, and Source of Information

Setting of the study

The study was conducted at Bethlahem Matriculation Higher secondary school, Karungal, Kanniyakumari district. It is located 2.5 kilo meters away from Bethlahem College of Nursing, Nadutheri , Karungal.

3.5 Population and Sample

3.5.1 Target population

The target population for the study was all the Adolescents students in the kanniyakumari District.

Accessible population

The accessible population under study constituted adolescent students studying in Bethlahem Matriculation higher secondary school, Karungal during the study period.

Sample & Sample Size

The sample consist of 60 adolescent students studying in Bethlahem Matriculation Higher secondary school, Karungal, Kanniyakumari District.

### XIII. SAMPLING TECHNIQUE

The participants were selected using Non probability convenience sampling technique.

3.6 Sampling Criteria

Inclusion criteria

The study will include school students who are:

1. Available during data collection.
2. Able to read and write English.

Exclusion criteria

The study will exclude:

1. School children who are not willing to participate

in the study.

2. Who are not available during data collection.

### XIV. DESCRIPTION OF INTERVENTION

Step 1: The purpose of the study was explained and oral consent was received from the subject before the procedure. The researcher administered demographic variables and questionnaire to assess the level of knowledge of ill effects of tobacco use.

Step 2: The video was played for 15 minutes for the subjects to create awareness on knowledge of ill effects of tobacco use and if any doubt arises were clarified

Step 3: The post test score was assessed by administrating the same questionnaire after the intervention to know the awareness about knowledge of ill effects of tobacco use and the data were kept confidential

### XV. VALIDITY AND RELIABILITY OF CONTENT

VALIDITY

The content was validated by two experts including one Nursing personnel from Child Health Nursing Department. They were requested to give their opinion about the appropriateness of the item. As per their suggestion modification were done.

RELIABILITY

The reliability of the tool was assessed by the test re-test method. The Karl Pearson formula was used to determine the relationship among variables.

PILOT STUDY

The purpose of pilot study was to find out the feasibility and practicability of the study and to finalize the tool. After obtaining initial permission from the school, the pilot study was conducted at Bethlahem Matriculation Higher Secondary School, Karungal, Kanniyakumari district. The pilot study was conducted among 6 adolescent students. Pre-test was conducted .the intervention was given for 30 minutes. Post-test was conducted on the same day with video assisted teaching programme. Analysis of the data was done by using descriptive and inferential statistics. The pre-test mean value was 9.8 and the post-test value was 15.5. The paired 't' value is 17.32 in the group which is significant at  $p < 0.005$  shows that video assisted teaching programme on improve knowledge of ill

effects of tobacco use among adolescents, in selected school. The tool was found feasible and practicable. No changes were made and the investigator proceeded to the main study.

**XVI. DATA COLLECTION PROCEDURE**

Phase1: The purpose of the study was explained and oral consent was received from the subject before the procedure. The researcher administered demographic variables and questionnaire to assess the level of knowledge of ill effects of tobacco use.

Phase 2: The video was played for 15 minutes for the subjects to create awareness on knowledge of ill effects of tobacco use and if any doubt arose were clarified.

**SECTION B: PRE-TEST AND POST-TEST LEVEL OF KNOWLEDGE EFFECTS LEVEL.**

Pre-test frequency and percentage distribution on level of knowledge and ill effects of tobacco use among adolescents in selected school.

N=60

PRE-TEST						
S.NO	Inadequate		Average		Adequate	
	F	%	F	%	F	%
1	11	18.33%	46	76.66%	3	05%

**Interpretation of Pre-Test Knowledge**

Table 2.1 represents that during pre-test in 11 (18.33%) of them had inadequate knowledge, 46 (76.66%) of them had average knowledge and 3 (05%) of them had adequate knowledge. Phase 3: The post-test score was assessed by administering the same questionnaire after the intervention to know the awareness about knowledge of ill effects of tobacco use and the data were kept confidential.

**XVII. PLAN FOR DATA ANALYSIS**

Data collected were analysed using both descriptive and inferential statistics such as mean, standard deviation, chi-square, paired ‘t’ test and unpaired ‘t’ test.

**Descriptive statistics**

- The frequency and percentage and distribution was used to describe the demographic, variables

and level of knowledge among ill effects of tobacco use in the group.

- Mean and standard deviation was used to assess the effectiveness video assisted teaching programme on knowledge of ill effects of tobacco use among adolescents.

**Inferential statistics**

- Paired ‘t’ test was used to compare pre and post-test level of knowledge regarding video assisted teaching programme on knowledge of ill effects of tobacco use among adolescents.
- Unpaired ‘t’ test was used to compare pre-test and post-test level of knowledge regarding video assisted teaching programme on knowledge of ill effects of tobacco use among adolescents.
- Chi-square test was used to find out the association between pre-test levels of knowledge on ill effects of tobacco use with their selected demographic variables among adolescents.

**Post-test Knowledge**

- Following the VAT intervention, there was a substantial shift in knowledge levels. The percentage of subjects with inadequate knowledge dropped sharply to 0 (0%), while 0 subjects (0%) moved into the Average knowledge category, and 60 subjects (100%) achieved an Adequate knowledge level. This clearly indicates that the VAT program successfully bridged the initial knowledge gap.
- This finding aligns with the study conducted by Jha et al. (2015) reported that many adolescents lack sufficient knowledge regarding the harmful effects of tobacco. Despite the growing awareness campaigns, misconceptions about the severity of tobacco-related diseases remain widespread among adolescents.

**XVIII. CONCLUSION**

The discussion confirms that the Video-Assisted Teaching program is a statistically proven and highly effective educational strategy for significantly improving the knowledge of adolescent regarding the ill effects of tobacco use. The study highlights a universal need for such targeted health education programs among adolescents, irrespective of their demographic background.