

## Original Research Article

# A comparative study to assess knowledge regarding tobacco use and its ill effects among school children of district Sirmour Himachal Pradesh

Kavita Verma<sup>1\*</sup>, Anjali Sharma<sup>2</sup>, Anupama K.<sup>3</sup>

<sup>1</sup>Department of Child Health Nursing, <sup>2</sup>Department of Community Health Nursing, <sup>3</sup>Department of Mental Health Nursing, Eternal University, Akal College of Nursing, Baru Sahib, District-Sirmour, Himachal Pradesh, India

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### \*Correspondence:

Kavita Verma,

E-mail: [kavita.sch.verma@gmail.com](mailto:kavita.sch.verma@gmail.com)

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## ABSTRACT

**Background:** Drug addiction is one of the major problems across the globe. It is seen in various forms like marijuana, tobacco, hashish, cannabis and heroine etc. especially tobacco being the most common. The objective of the study was to assess the knowledge regarding tobacco use and its ill effects among school children of district Sirmour Himachal Pradesh. The objective of this study was to assess the knowledge regarding use of tobacco and ill effects among school children.

**Methods:** The school going (9<sup>th</sup>-12<sup>th</sup> standard) boys and girls were taken as study sample. The convenient sampling technique was used.

**Results:** The study findings showed that the pre-test score of girls and boys are different i.e. 49% of girls had excellent pretest score while 56% boys are had excellent pretest knowledge and 51% of girls and 39% of boys had good knowledge where as 5% of boys had average knowledge score. The post-test score findings shows that 43.1% of girls had excellent knowledge, 27.5% of girls had good knowledge and 4.6% of girls had average knowledge while the post-test score of 53.2% of boys had excellent, 16.5% of boys had good and 5.5% of boys had average level of knowledge. The t value 4.264 was found to be highly significant among adolescent boys.

**Conclusions:** This study provides insight into the factors to consider while planning adolescent anti-smoking programs in this and similar settings.

**Keywords:** Addiction, Knowledge, Tobacco

## INTRODUCTION

Tobacco consumption is the one of serious public health problem in India. The impact is especially destructive among the poor population. Prevention is our top priority so that we can reduce health issues and poverty. In some culture use of tobacco ingrained deeply as a practice including socio-economic status, marriage, and other religious celebrations. In India, consumption of tobacco use is increasing day by day in spite of control policies. The use of burnable tobacco products are cigarettes, cigar, pipe, kretek and hooks.<sup>1</sup>

A study reveals the lifetime prevalence was 15% for smoking and 2% for tobacco use other than for smoking. Eighteen (9%) students were current smokers and four (2%) were tobacco users other than for smoking. Male students were significantly ( $p < 0.001$ ) more likely than female students to be current cigarette smokers. Approximately 14 (47%) of sometime smokers had smoked on school property and two (50%) of the sometime users of other tobacco products had used those products on school property. As for attitudes, 169 (85%) felt that health professionals serve as role models for their patients and the public.<sup>2</sup>

The sample consisted of 9319 students out of the total eligible population of 30488 from 100 schools. The prevalence of ever-use of tobacco varied between 2.9 to 8.5% in boys and 1.5 to 9.8% in girls. The prevalence was highest in Chandigarh and lowest in Punjab. Between 16 to 46% of students were exposed to the habit of tobacco among parents or friends. There were 10 to 34% students who were passively exposed to environmental tobacco smoke.<sup>3</sup>

In addition to these noncombustible products are chews, dip, suns, gutka. These products have different effects on health.<sup>4,5</sup> The cigarette smoking harms nearly every organ of the body, causes many diseases and reduces the health of smokers in general. More than 480,000 deaths each year in the united states.<sup>5,6</sup>

Ill effects of cigarette smoking on the health are 90% of all lung cancer deaths, 80% of all deaths from COPD, increased risk of coronary heart disease, stroke and increased absenteeism from work, increased health care utilization and cost.<sup>7</sup>

Tobacco smokers are at higher risk for health issues that affects the heart and it damages blood vessels. And then it can make them thicker and grow narrower. This makes heart beat fast and BP go up, clots can form in later stages a clot blocks the blood flow to part of the brain and around the BV burst in the brain and blockage of the BV can also reduce blood flow to legs and skin.<sup>8,9</sup>

Tobacco use among street children age group 6-18 years in India is the common. Street children's account for one of the most unsafe and at risk groups in India.<sup>10</sup>

WHO estimates currently 5 million people die prematurely every year in the world due to the use of tobacco and by 2030 it would be doubled to 10 million deaths every year with about 7 million of the death taking place in developing countries. The World Bank has reported that between 82,000-99,000 children and adolescent all over the world begin smoking every day. These results kill nearly 250 million of today's children.<sup>11</sup>

Shimla the capital city of the Himachal Pradesh was the fourth city in the country to be declared smoke free in 2010.<sup>12</sup> And the state itself was to be declared so in 2013.<sup>13</sup> However the considerable smoke free status remains a matter of challenge compliance tends to reduce with time.<sup>14</sup> With this background students in our campus came from Himachal, others states and countries to bring awareness among children this study was conducted.

### ***Need of the studies***

Our young generation out of curiosity, to subside its feelings, fears and limitations practice all type of addictions to fade themselves away from harsh reality of today's competitive world. Keeping this in view time to time education of the school going children is very

necessary which will lead to change the knowledge regarding types of abuses and its ill effects on their health. Our study is totally focused on tobacco use only because its prevalence is found to be very in today's young generation especially North India. These addictions not only affect the life of the abusers but it also disturbs decorum of their families. So an insight and change in thought process is very much necessary to eliminate tobacco addiction. Research on this particular domain can contribute enormously to our understanding of tobacco use, addiction, and related diseases; which help to identify interventions which are needed to reduce tobacco use; and help to determine the resources and infrastructure needed to implement new interventions.

### **METHODS**

A quantitative research design was used to assess the knowledge regarding use of tobacco and its ill effects among school going children studying in selected private schools of district Sirmour Himachal Pradesh. The study population included school going (9<sup>th</sup>-12<sup>th</sup> standard) boys and girls. A total of 164 samples were taken through convenient sampling technique.

### ***Inclusion criteria***

All the boys and girls of 9<sup>th</sup> to 12<sup>th</sup> standard who were present at the time of data collection and were willing to participate in the study. The data was collected in the month of June, 2020 by using a self-structured multiple choice questioners which was used for pretest followed by health education session and accordingly post-test was taken. The 15 multiple choice questions based on knowledge regarding tobacco abuse, its physiological impact and its adverse impacts were added in the tool. The overall content validity of the tool was assessed before administering the tool, by sending the tool for experts and found valid. The reliability of the tool was checked by Cronbach's alpha (i.e. 0.81). The ethical approval was taken from the institutional ethical committee followed by principal of the schools. An informed consent was taken from each student too. Anonymity and confidentiality of the subjects was maintained. The data was analyzed by using inferential statistics with statistical package for social science (version 23).

$$n = \frac{NZ^2p(1-p)}{d^2(N-1)} + Z^2p(1-p)$$

n = Sample size

N= Total Population 300

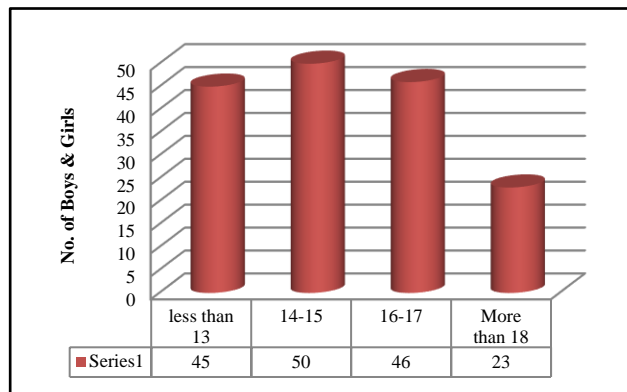
Z = Standards normal variable with 95% confidence interval i.e. 1.96 d= (allowable error) = 5% = 0.05

p= population proportion = 0.5

The obtained sample size is 169 but as per availability of samples only 164 samples were taken.

## RESULTS

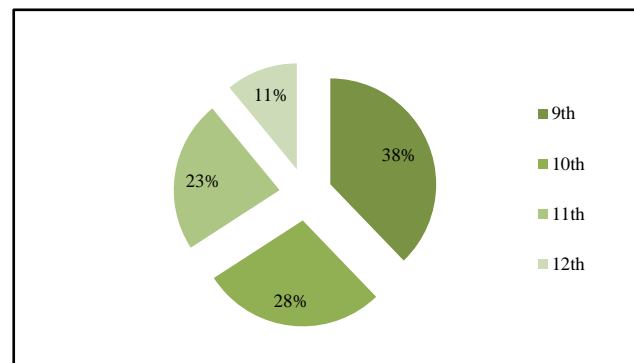
The results of the study are shown in tables and figures given below.



**Figure 1: Percentage distribution of boys and girls on the basis of age group (n=164).**

Figure 1 depicts the percentage distribution of boys and girls on the basis of their age group.

Figure 2 depicts percentage distribution of participants (boys and girls) from each class.



**Figure 2: Percentage distribution of participants from each class (n=164).**

Table 1 shows significant difference in the pre and post-test knowledge of Boys at t (4.264) and p value less than 0.0001.

**Table 1: Difference in the pre and post-test knowledge of girls and boys on awareness regarding tobacco use and its ill effects (n=164).**

Variable		Paired differences				T value	df	Sig. (2-tailed)
		Mean±SD	Std. error mean	95% CI				
				Lower	Upper			
BOYS	Pre-test score	1.317±2.797	0.309	-1.932	-0.702	-4.264	81	0.000***
	Post-test score							
GIRLS	Pre-test score	0.366±0.366	0.424	-1.210	0.478	-0.863	81	0.391
	Post-test score							

## DISCUSSION

The self-structured knowledge based questioner on tobacco and its ill effects reveals that there was a mean difference between the knowledge scores of boys and girls within the group. The findings showed that the pre-test score of girls and boys are different i.e. 49% of girls had excellent pretest score while 56% boys were having excellent pretest knowledge score and 51% of girls and 39% of boys had good knowledge score where as 5% of boys had average knowledge score.

The post-test score findings shows that 43.1% of girls had excellent knowledge, 27.5% of girls had good knowledge and 4.6% of girls had average knowledge while the post-test score of 53.2% of boys had excellent, 16.5% of boys had good and 5.5% of boys had average level of knowledge. The t value 4.264 was found to be highly significant among adolescent boys.

A similar study included 302 (64.7%) females and 165 (35.3%) males. Among the males, 44 (38.5%) were ever smokers. Though 451 (96.6%) of the subjects knew that tobacco use is harmful for health, only 101 (22.5%) of the subjects knew that it causes cardiovascular diseases.<sup>14</sup>

Another study was conducted in Bangalore among (age 13-15 years high school children) to assess the knowledge, attitude, and behavioral determinants of tobacco use among high school students (age 13-15 years) in Bangalore. The study results shows population [94.4% (472/500)] believed that smoking is definitely harmful to our health. Also, 39.0% of the participants of age 13 years believed that smoking does not help in socializing and 92.2% of study subjects had negative attitude toward starting the habit. Most of them (83.9%) had a negative perception about smokers that they lack confidence. However, less than 1% of the study population had a habit of smoking at this young age.<sup>15</sup>

This study is limited to the students of private schools only. The teaching faculty and parents of the students should also be included in the study as they are the major contributors for the development of students in all the spheres of the life.

## CONCLUSION

In conclusion, the pre-test scores showed that the 49% girls had excellent knowledge while 56% of boys had excellent knowledge about tobacco use. It indicates the significance of information, education and communication techniques among adolescent population so that they can share their thoughts with the individuals of their faith instead of using addictions as a means to subside their problems. Talks based on changing the thought process should be delivered so that the adolescents have more mental stability. So that even after having a good knowledge about the ill effects of tobacco addiction the youngsters should use it. This study provides insight into the factors to consider while planning adolescent anti-smoking programs in this and similar settings. The government should raise its funds for awareness programmes which are directed towards the addiction eliminations with adolescents be the target groups. The school teachers & guardians should be made educated about how to check for signs of addiction, factors and coping factors associated with it.

## Recommendations

To assess the awareness of tobacco use and ill effects among the school cross-sectional and cohort study and meta-analysis can be conducted other than the comparative study. Further study can be conducted on the other factors like awareness about the various traditional and culture practices that influences the use of tobacco.

Further study can be conducted on the large study sample because this population is easily available at schools.

Further study can be conducted on the effectiveness of various tobacco prevention programs conducted for enhancing knowledge of school children in the school.

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