

A Quasi Experimental Study to Assess the Effectiveness of Structured Teaching Program Regarding Prevention from Substance Abuse Among High School Students in Selected Schools of Punjab

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Abstract

Aim: The purpose of the study is to evaluate the effectiveness of a structured teaching program regarding prevention of substance abuse among high school students.

Objectives: 1. To assess the pretest knowledge level regarding prevention from substance abuse among high school students. 2. To develop and administer a structured teaching program regarding prevention of substance abuse among high school students. 3. To determine the effectiveness of STP by comparing pretest and post-test knowledge scores regarding prevention from substance abuse among high school students. 4. To find out the association between knowledge level regarding prevention from substance abuse and selected demographic variables of high school students.

Method: An evaluative approach with a pre-experimental one-group pretest-posttest research design was adopted for this study. A total of 50 school students were selected by the convenient sampling method. Data were collected by using a structured questionnaire. Impacted knowledge of students by using a structured teaching program on the prevention of substance abuse.

Results: The present study evaluates the knowledge regarding the prevention of substance abuse and found that demographic variables, the majority of these (24 [48%]) belong to the age group of 15 years, 1 (2%) belongs to the age group of >17 years, 24 (48%) are females, and 26 (52%) are males. In residence, 30 (60%) are rural and 20 (40%) are urban and semiurban. Regarding class, 26 (52%) are in 9th standard and 24 (48%) are in 10th standard. In study 50 had inadequate knowledge in the pre-test., The overall mean percentage of knowledge in the pre-test was 24.9% with a standard deviation of 0.94. In the posttest, the overall mean percentage of knowledge was 91.8% with a standard deviation of 1.14, with a positive difference of 66.9. In the study, knowledge and association of demographic variables with the age, residence, and class they are studying are significant.

Interpretation and conclusion: Analysis data shows that the post-test knowledge score is significantly higher than the pretest knowledge score at a $p < 0.05$ level of significance, i.e., the mean difference is 13.18. There is a significant improvement in knowledge of students regarding prevention of substance abuse. Thus, the investigator concluded that a structured teaching program is a good method of conveying information to adults, and it is very effective in order to gain knowledge.

Keywords: Effectiveness: The study, it refers to the extent to which the structured teaching programme develop desired results as measured by a knowledge questionnaire regarding the prevention of vaginitis and expressed in terms of gain in knowledge score.

Structured teaching programme: The study, it refers to a systematically organized teaching plan to provide information to the higher secondary school students regarding the prevention from substance abuse.

Knowledge regarding prevention from substance abuse: it refers to the information possessed by the students before and after STP as measured through questionnaire.

High School Students: Adolescents enrolled in grades 9 to 12 (or ages 13–17 years, depending on the school system), attending the selected schools for the study.

Assessment: The process of measuring the students' knowledge about substance abuse through a pre-test (before the STP) and a post-test (after the STP) using a structured tool or questionnaire.

INTRODUCTION

Substance abuse among students is a growing global concern that poses significant threats to academic performance, mental health, and societal well-being. The use of illicit drugs, alcohol, and tobacco at an early age has been linked to poor academic outcomes, increased dropout rates, and long-term health complications. According to the World Health Organization (WHO), adolescents and young adults are particularly vulnerable to substance abuse due to peer pressure, stress, and lack of awareness about its consequences. Educational institutions play a crucial role in preventing substance abuse by implementing awareness programs, counselling services, and policies that discourage drug use. However, despite these efforts, many students continue to engage in risky behaviours due to socio-economic factors, family influences, and media exposure. This study aims to explore effective strategies for preventing substance abuse among students, focusing on school-based interventions, community involvement, and policy enforcement. STP is a structured approach that integrates knowledge dissemination, behavioural interventions, and skill-building exercises to deter students from engaging in substance use. These programs are designed to be interactive and student-centered, fostering critical thinking, self-efficacy, and resilience against substance-related temptations. By targeting young individuals within the school setting, STP aims to instill a culture of prevention and promote a healthier lifestyle. Substance abuse among school students in India is a significant concern, with various studies highlighting its prevalence and associated factors. Research indicates that approximately 14.3% of students have experimented with substances like alcohol or tobacco, with boys showing a slightly higher tendency than girls. Notably, nearly 29.5% of these students-initiated substance uses before the age of 11, underscoring the early onset of this issue.

Need of the Study:

Administered a questionnaire to 444 Indian high school and college students to determine patterns of drug use, age at onset of such use, the kinds of drugs used, and the relationship between drug use and socio-demographic variables. Results show that tobacco (15.5%) and alcohol (13.9%) were the most frequently used drugs. While amphetamines, marihuana, sedatives, and tranquillizers had been used by a significant proportion of Ss, they were not currently being used. Ss generally began using the drugs in their mid-teens. Males reported having used more types of drugs than females, although use of tranquilizers and sedatives was more common among females. Ss living outside the home used drugs more fre-

quently than those living at home. According to the National Survey on Extent and Pattern of Substance Use in India (2019), nearly 21% of adolescents (10–17 years) reported using substances, with alcohol and tobacco being the most commonly used. Punjab has one of the highest rates of opioid abuse among youth, with various studies highlighting the increasing use of heroin, synthetic drugs, and pharmaceutical opioids. Understanding the prevalence and patterns of substance abuse can help to identify the risk factors, scope of substance abuse can help schools to create a safer, more supportive learning environment. There is a need for effective screening and intervention strategies to identify and support students struggling with substance abuse.

Adolescence is a critical stage of human development, with rapid physical, emotional, and social changes. Substance abuse, particularly among high school students, is a significant public health issue worldwide. Early initiation of substance use increases the likelihood of long-term dependence and adverse outcomes in adulthood. Many adolescents lack adequate knowledge about the harmful effects of substance abuse and prevention strategies. A structured teaching program (STP) can address misconceptions, enhance knowledge, and equip adolescents with skills to resist peer pressure and make informed decisions. Implementing an STP in schools can reach a large population of at-risk students within a controlled environment, fostering a supportive setting for learning and behavioural change. This study aims to contribute to the evidence base for educational strategies to mitigate the growing problem of substance abuse among high school students and aligns with broader public health goals of reducing substance abuse and its associated societal costs.

Hypothesis:

H₁: The mean post-test knowledge regarding prevention from substance abuse will be significantly more than the mean pre-test knowledge among school students.

H₂: There will be significant association between post- test knowledge regarding prevention from substance abuse and selected demographic variables.

Limitations:

1. The study is limited to subjects from selective High.
2. Schools students at the age group between 14-18 years.

Research approach: An evaluative approach was used for this study

Research design: Quantitative, pre-experimental design “Pre-test, posttest with one group”

Variables:

Independent Variables: In the present study independent variable is structured teaching program on prevention from substance abuse.

Dependent Variables: In the present study dependent variable is knowledge of school students regarding prevention from substance abuse.

Extraneous Variables: Age, Gender, residence, class.

Setting: The study conducted in Govt sec. secondary school, Bhaggo Marja, Punjab

Target Population: The target population for the study includes school students of 9 to 12

Accessible population: The population for this study includes school students of Govt sec. secondary school, Bhaggo Marja, Punjab.

Sample and sampling technique Sample: In this present study samples are school students (who fulfill the selection criteria) of selected schools at Punjab.

Sample size: In this present study the sample size is 50 school students.

Sampling Technique: In this study “Non-Probability Convenient” sampling technique was used for the selection of the samples.

Inclusive criteria:

1. School students who are between the age of 14-18, years
2. School students who can Comprehend English.
3. School students who are willing to participate in this study.
4. School student are availabal during the period of data collection.

Exclu

1. School students who are not available during the time of data collection.
2. School students who are not willing to participate in the study.

Development of data collection instrument: To assess the knowledge of school students, a self-administered structured knowledge Questionnaire was prepared.

Data collection instrument: Demographic data. Structured Questionnaire to assess the knowledge of school students regarding prevention of substance abuse.

TESTING THE INSTRUMENT

Validation of the tool: To ensure content validity of the tool, it was submitted to 5 experts. They comprised of 4 nursing experts and 1 non-nursing experts. Previously total 40 items were prepared and after expert's opinion it is cut short in 20 items.

Reliability: In order to establish reliability of the tool, structured questionnaires was established through split half method. Reliability of the tool was 0.7

Data analysis plan: (1) Organization of data in a master sheet. (2) Tabulation of data in terms of percentage, mean, standard deviation was done. (3) Descriptive statistics were used to draw the following conclusions: (a) Frequency and percentage distribution to analyze demographic data of school students and their level of knowledge. (b) Central tendency in mean, median and standard deviation to assess the knowledge. (4) Inferential statistics were used to draw the following conclusions: (a) ‘t’ test will be used to find out the effectiveness of structured teaching programe on knowledge level of school students regarding prevention of substance abuse. (b) Chi-square test will be used to find the association between the perceived knowledge level of school students and selected demographic variables.

Results

Section I: Demographic Profile of School Student

Table 1: Frequency and percentage distribution of demographic variables of school students N = 50

DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1. Age		
A. 14 years	9	40%
B. 15 years	24	48%

C. 16 years	16	10%
D. 17 years	1	2%
2. Gender		
A. Male	26	52%
B. Female	24	48%
3. Residence		
A. Rural	30	60%
B. Urban	10	20%
C. Semi urban	10	20%
4. Class		
A. 9th	5	10%
B. 10th	45	90%

The table 1 – Above indicates that majority of the subjects 24(48%) belongs to the age group of 15 years and there were 1(2%) belongs to the age group of >17years and 24(48%) are females and 26(52%) are males. In residence among them 30(60%) are rural and 20(40%) urban and semiurban regarding class 26(52%) are in 9th standard and 24(48%) are in 10th standard.

Section -II: Knowledge of The School Students Regarding Prevention Of Substance Abuse

Table-2 : Mean and standard deviation of the knowledge of the school students regarding Prevention of substance abuse in Pretest. N=50

Sr No.	Knowledge Variables	No of Item	Mean	Mean Percent-age	Standard Deviation
1	General knowledge questions	5	1	33.03%	0.87
2	Substance abuse and its risk factor	6	1.86	20.31%	0.85
3	Management	5	0.79	27.21%	0.77
4	Prevention from substance abuse	6	1.02	19.45%	1.11
5	Over all Knowledge	22	4.80	24.9%	0.94

Note : A Score of (1) for correct answer and a score of (0) for incorrect answer was awarded.

From the above table it is evident that the maximum mean percentage obtained by the subjects is with 33.03% standard deviation of 0.87 in general knowledge questions and the minimum percentage 20.31% obtained by subject with the standard deviation of 0.85 in “substance abuse and its risk factors”, 27.21% with standard deviation 0.77 in ‘substance abuse and management’. 24.5% with standard deviation of 1.11 in ‘prevention from substance abuse’. The mean percentage of overall knowledge obtained by the subjects in pretest is 24.9% with standard deviation of 0.94.

Table: 3 Frequency and Percentage distribution of level of knowledge of the school students regarding prevention of substance abuse in pretest. N=50

Sr No.	Knowledge Variables	< 50		50 – 75		> 75	
		F	%	F	%	F	%
1	General knowledge questions	37	74%	10	20%	3	6%
2	Substance abuse and its risk factors	29	58%	21	42%	0	0%

3	Substance abuse and its management	38	76%	12	24%	0	0%
4	Prevention of substance abuse	46	92%	4	8%	0	0%
5	Overall knowledge	50	100%	0	0%	0	0%

Note: A score of (1) for correct answer and a score of (0) for incorrect answer was awarded.

The above table shows that maximum subjects 3 (6%) are having adequate knowledge about substance abuse. Over all knowledge in the pretest shows that majority of the subjects 50 (100%) had inadequate knowledge and no one is having average and adequate knowledge regarding prevention of substance

Section- III Knowledge Of The School Students Regarding Prevention Of Substance Abuse In Post Test

Table 4: Mean and Standard deviation of the knowledge of the school students regarding prevention of substance abuse in posttest. N=50

Sr No.	Knowledge Variables	No of Item	Mean	Mean Percentage	Standard deviation
1	General knowledge questions	5	3.6	96%	0.3
2	Substance abuse and its risk factors	6	5.24	87.33%	0.81
3	Substance abuse and management	5	4.1	90%	0.5
4	Prevention of substance abuse	6	6.1	89%	0.89
5	Overall knowledge	22	19.04	91.8%	1.14

Note : A Score of (1) for correct answer and a score of (0) for incorrect answer was awarded.

From the above table it is evident that the maximum mean percentage obtained by the subjects is with 96% standard deviation of 0.3 in ‘General knowledge questions’ and the minimum percentage 87.33% obtained by subject with the standard deviation of 0.81 in “substance abuse and its risk factors”, 90% with standard deviation 0.5 in substance abuse and its management’. 89% with standard deviation of 0.89 in ‘prevention from substance abuse’. The mean percentage of overall knowledge obtained by the subjects in posttest is 91.8% with standard deviation of 1.14

Table 5: Frequency and Percentage distribution of level of knowledge of the school students regarding prevention of substance abuse in posttest. N=50

Sr No.	Knowledge Variables	< 50		50 – 75		> 75	
		F	%	F	%	F	%
1	General knowledge questions	00	00%	5	10%	45	90%
2	Substance abuse and its risk factors	2	4%	6	12%	42	84%
3	Substance abuse and its management	1	2%	13	26%	36	72%
4	Prevention of Substance abuse	00	92%	3	6%	47	94%
5	Overall knowledge	00	00%	00	00%	50	100%

Note: A score of (1) for correct answer and a score of (0) for incorrect answer was awarded.

The above table shows that maximum subjects 47 (94%) are having adequate knowledge in prevention of substance abuse. Over all knowledge in the pretest shows that majority of the subjects 50 (100%) had adequate knowledge and no one is having average and inadequate knowledge regarding prevention of stroke.

Section-IV: Comparison of Pre And Post-Test Of Knowledge Of The School Students Regarding Prevention Of Substance Abuse

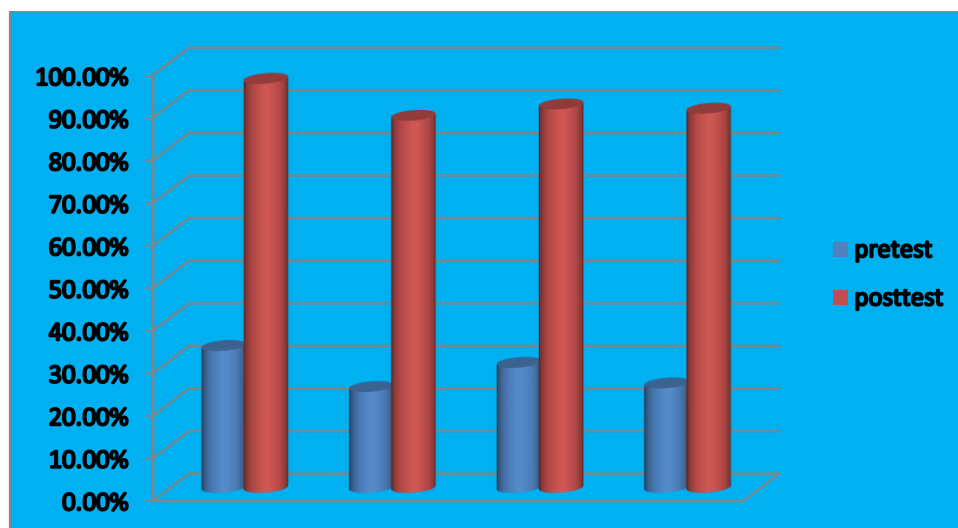
Table 6: Comparison of pre and post-test of knowledge of the school students regarding prevention of substance abuse N=50

Sr No	Knowledge variables	Pre test		Post test		't' Test	Inference
		MEAN	SD	MEAN	SD		
1.	General knowledge questions	1	0.87	3.6	0.3	0.35	NS
2.	Substance abuse and its risk factors	1.86	0.85	5.24	0.81	0.44	NS
3	Substance abuse and management	0.79	0.77	4.1	0.5	0.29	NS
4.	Prevention of Substance abuse	1.02	1.11	6.1	0.89	0.6	NS
4	OVER ALL KNOWLEDGE	4.80	0.94	19.04	1.14	1.82	Significant

Note: statistically significant $t > 1.6604$, p value- .05 , $df = 49$

Minus sign has been ignored.

The table values revealed that the mean obtained for overall knowledge in the pretest was 4.80 and in posttest was 19.04. The gain in Mean for overall knowledge was 14.24, with "t" value at $df = 49 = 1.6604$ which was highly significant at $p < 0.05$. The findings reveal that the overall mean post test knowledge scores of the subjects are significantly higher than the overall mean pre-test knowledge scores at < 0.05 level of significance. Hence the hypothesis H1 is accepted.



According To Mean Percentage of Each Knowledge Aspects

Table 7: Comparison of pretest and posttest percentage distribution of level of knowledge of the school students regarding, prevention of substance abuse. N = 50

Sr No.	Knowledge Variables	< 50		50 – 75		> 75	
		Pretest %	Posttest %	Pretest %	Posttest %	Pretest %	Posttest %
1.	General knowledge questions	74%	00%	20%	10%	6%	90%
2	Substance abuse and its risk factors	58%	4%	42%	12%	0%	84%
3	Substance abuse & management	76%	2%	24%	26%	0%	72%
4	Prevention of Substance abuse	00%	00%	8%	6%	0%	94%
5	OVER ALL KNOWLEDGE	100%	00%	0%	00%	0%	100%

This table indicates maximum mean percentage 100% obtained in overall knowledge is having inadequate knowledge in pretest and gain mean for overall knowledge is 100% subjects having are having adequate knowledge in posttest.

SECTION V: Association Between Pre Test Knowledge Score Of Demographical Variable Of School Students

Table 8: Association between demographic variables and pretest knowledge scores of the school students regarding prevention of substance abuse Median= N=50

SR NO	VARIABLE	CATEGORY	TOTAL SCORE		CHI SQUARE VALUE	TABLE VALUE	INFERENCE
			< Median	>Median			
1	Age	A. A.14	0	9	10.7975	df = 3	Significant
		B. B.15	2	22			
		C. C.16	0	16			
		D. D.17	0	1			
2	Gender	A. A.Male	1	25	0.02938	df= 2	NS
		B. B.Female	1	23			
3	Residence	A. A. Urban	1	9	1.38888	df= 2	Significant
		B. Semi urban	0	10			
		C. Rural	1	29			
4	Class	A. A. 9th	2	22	2.25694	df= 1	Significant
		B. B. 10th	0	26			

Note: statistically significant $p < 0.05$

From the table it is evident that the obtained chi-square values for age (10.79757), Gender (0.029380), residence (1.3888), class (2.2569) were $p < 0.05$ less than the table values and found that there is no significant association between some of the variables. Hence hypothesis H2 there is significant association between pretest knowledge of adult and selected demographic variables is rejected for age, Gender, class and residence.

Summary

In this present study most of the students, in Age (40%) students are of 14 years ages, 48%) students are of 15 years, (10%) students are of 16 years, (2%) students are of 17 years, in Gender (48%) students are female, (52%) students are male, in Residence (60%) students are from Rural, (20%) are from Urban, (20%) are from Semi urban, in Class (10%) are from 9th standard, and (90%) are from 10th class. In the present study most of the subjects (100%) have inadequate knowledge in the pretest regarding prevention of substance abuse. This study reveals that there is inadequate knowledge among school students regarding Prevention of substance abuse. In the present study most of the subjects (100%) have adequate knowledge in the post-test regarding prevention of substance abuse. This study reveals that there is adequate knowledge among school students regarding Prevention of substance abuse.

The present study shows that the mean difference of pretest post-test knowledge score is 14.24 with t value of 1.82 at df 49, 0.05 and. It reveals the effectiveness of STP. The present study shows the significant association between knowledge level and education and subjects taught by the students with knowledge level of school students in pretest. There is no significant association between and age, Gender, residence and age.

Conclusion

Based on the findings of the study the following conclusion was drawn. The existing knowledge regarding prevention of substance abuse among school students was inadequate. The STP significantly increased the knowledge ('t' value is 1.82) and regarding prevention structured teaching programme (STP) among school students. Based on the statistical findings it is evident that provision of such kind of structured teaching programme will motivate to school students and help them to acquire knowledge.

Recommendations:

- The study can be replicated on a large scale.
- The same study can be conducted by using different teaching methods.
- The study can be conducted on the basis of assessing knowledge, attitude.
- The effectiveness of the test can be assessed by giving health education to the students.
- Comparative study can be done for both urban and rural subjects.
- An STP can be given in the and colleges and community area.
- A similar study can be done with control group.

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