

# Assess the Prevalence and Pattern of Substance Abuse and to Evaluate the Effectiveness of an Informational Booklet on Substance Abuse in Terms of Knowledge and Attitude of Higher Secondary School Students

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**Abstract:** Adolescence are periods of experimentation, exploration, identity formation, risk taking, and assertion for independence in every person's life. Naturally, the incidence of drug abuse in children and adolescents is higher than the general population. [1] A wide variety of substances are produced for medicinal purposes. These include central nervous system (CNS) stimulants (e.g., amphetamines), CNS depressants (e.g., sedatives, tranquilizers), as well as numerous over-the-counter preparations designed to relieve nearly every kind of human ailment, real or imagined.[2] Substance use among adolescents is one such risky behaviour that had emerged as a global concern. [3] In India, consumption of tobacco and alcohol has become common among adolescents, and in the case of tobacco consumption, the age of initiation was observed to be as low as 12 years.[4] The supreme Court (14 December,2022) told the government that 1.58 crore children aged between 10 and 17 years are addicted to substance in the country.[5]

**Materials and Methods:** A quantitative quasi experimental one group pre-test, post-test design was use to evaluate the effectiveness of an informational booklet on substance abuse in terms of knowledge and attitude of higher secondary school students. The study conducted on 200 samples. Data was collected using following tools – 1. Structured Questionnaire on substance abuse 2. Structured Knowledge questionnaire to evaluate the knowledge on prevention of substance abuse 3. Structured attitude scale to assess the attitude regarding prevention of substance abuse.

**Results:** The mean post-test knowledge score 20.97 was higher than the mean pre-test 13.25 with mean difference of 7.72 which was found statistically significant with "t" value  $t(199) = 35.97$  at 0.05 level of significance. Majority (86.5%) of higher secondary school students in post-test had positive attitude towards the prevention of substance abuse. The mean post-test attitude score 69.66 was higher than the mean pre-test 58.20 with a mean difference of 11.46 which was found statistically significant "t" value  $t(99) = 21.31$  at 0.05 level of significance. Above findings reveals that the informational booklet was effective in enhancing both the knowledge and attitude of higher secondary school students. There was a positive correlation ( $r = 0.550$ ) between the post-test knowledge and post-test attitude score on prevention of substance abuse.

**Conclusion:** After the detailed analysis of the study findings showed that pre-test finding showed that, most of the higher secondary school students had average knowledge and neutral attitude regarding substance abuse. but after the administration of information booklet, it enhancing knowledge and positive attitude of the higher secondary school students regarding substance abuse. There was no significant association found between the post-test knowledge score of higher secondary school students with selected variables. There was a significant association between the post attitude score of higher secondary school students with type of family.

**Keywords:** Substance abuse, higher secondary school student, knowledge, attitude and Information booklet.

## I. INTRODUCTION

According to WHO, substance abuse is persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice.<sup>[6]</sup> Drug abuse is a serious menace affecting society. Drug addiction poses a high risk of unintentional injuries, accidents, domestic violence incidents, medical problems, and death. Drug abusers' economic potential gets severely impacted. They fail to become part of the workforce or even if they do then absenteeism and other issues surround the organisation. On a personal level relationship with family, friends and society are affected. Drug dependence also leads to low self-esteem, hopelessness can lead to criminal activities and even suicidal tendencies.<sup>[7]</sup> Substance abuse has led to a detrimental impact not only on individual but also on families, society, and nation. With most drug users in 18-35 years there is loss of human potential and damage to physical, psychological, moral, and intellectual capabilities of children & adolescents. Substance abuse is one of the major areas of concerns in adolescent's health and their behaviour. Substance use is pervasive and endemic among adolescents. It is associated with high-risk sexual behaviour, road traffic accidents, violence, crime, homicide, and suicide in adolescents. Polysubstance abuse further increases the risk of infections like HIV, Hepatitis B, C, sexual transmitted diseases, and infective endocarditis.<sup>[8]</sup> School-based prevention programme have been recognised as one of the most effective strategies for reducing substance use among youth people. <sup>[9]</sup> Adolescence is an in-between stage of physical and psychological human development that usually occurs during the period from puberty to adulthood. It is a crucial phase since these are formative years in the life of an individual when major physical, psychological, and behavioural changes take place. It offers avenues for growth in aptitude, self-sufficiency, self-esteem, and inter-personal relationships. However, it also brings countless perils. <sup>[10]</sup>

## II. OBJECTIVES OF STUDY

1. To determine the prevalence and pattern of substance abuse among higher secondary school students.
2. To assess and evaluate the knowledge and attitude of higher secondary school students regarding substance abuse before and after the administration of the informational booklet.
3. To find the relationship between knowledge and attitude of higher secondary school students regarding substance abuse after the administration of the informational booklet.
4. To seek association between knowledge, attitude, and substance abuse status with selected factors
  - Sex
  - Educational status of father
  - Educational status of mother
  - Occupation of father
  - Occupation of mother
  - Family income
  - Family history of substance abuse.
  - Type of family
  - Stream of study

## III. MATERIALS AND METHODS

A quantitative quasi experimental one group pre-test, post-test design was used to evaluate the effectiveness of an informational booklet on substance abuse in terms of knowledge and attitude of higher secondary school students. The study conducted on 200 samples. Data was collected through following tools –

### Tool – 1 Structured Questionnaire on substance abuse

A Structured questionnaire was developed to assess the demographic data and find out the Prevalence and Pattern of Substance abuse among school students. This Structured questionnaire is divided into two part-

**Part-A**

It contains 11 items which determine information regarding age, sex, stream of study, type of family, educational status of mother and father, occupational status of mother and father, monthly family income, number of family members, involvement of family members in substance use.

**Part-B**

It contains 19 items with multiple responses to determine the prevalence and pattern of substance abuse among the higher secondary school students that includes the type of substances used in past and using currently, age of initiation, duration, frequency, place, reasons, route, source of availability, risky practices, intensive and compulsives use, side effects, future practices related to substance abuse.

**Tool -2 Structured Knowledge questionnaire**

A Structured knowledge questionnaire was developed to assess the knowledge of higher secondary school students regarding prevention of substance use.

The structured knowledge questionnaire consists of 25 multiple choice items in five areas to determine school students' knowledge regarding substance abuse and its harmful effects. Each item has a single correct answer. Every correct answer is awarded a score of one point and every wrong answer is assigned a zero score.

Levels of knowledge	Score
Poor knowledge	0-9
Average knowledge	10-17
Good knowledge	18-25

**Tool - 3 Structured attitude scale**

A structured attitude scale was develop to assess the attitude regarding prevention of substance abuse.

A 5-point Likert type of attitude scale was constructed. It comprises 20 statements. All the items had 5 possible responses i.e., strongly agree (SA), Agree (A), Undecided (UD), Disagree (DA), strongly disagree (SD). Each item was scored on a scale of 1 to 5. 1 mark is the minimum score which shows negative attitude and 5 marks are the maximum score which shows positive attitude toward prevention of substance abuse. The positive aspect of each item was assigned maximum marks and negative aspect of each item was assigned minimum marks. Total score range between 20-100.

S. no	Categories	Scoring criteria
1	NEGATIVE	20-33
2	NEUTRAL	34-66
3	POSITIVE	67-100

Content validity of the tools and information booklet was ensured by a team of 11 experts. The expert included Psychiatric Department, Community Medicine Department, Adolescent health, Psychology Department, Community Nursing Department and Psychiatric Nursing Department. However certain suggestions were given and the same were incorporated in the final tools and informational booklet were also validated based on adequacy, appropriateness, and easiness to follow. Changes were made according to the suggestions given by the experts.

The Reliability of the Tools were established and is as follows –

S.NO.	TOOL	METHODS OF RELIABILITY	RELIABILITY
1.	Structured survey questionnaire	Cronbachalpha	0.84
2.	Structured Knowledge questionnaire	KR-20	0.80
3.	Attitude scale	Cronbachalpha	0.701

Final study was conducted on 200 samples. The sample for the study comprised of higher secondary school students, who met the designated criteria were selected through simple random sampling technique. Objectives of study was discussed and obtained consent for participation in study. Base line data was assessed by structured knowledge questionnaire. Based on the objective and the hypothesis the data was analysed by using various statistical tests i.e. percentage, mean, paired t test and chi square test.

### Statistical methods

The data collected from the participants was planned to be analysed on the basis of the objectives of the study using descriptive and inferential statistics. Data was organized data in a master data sheet. Data analysis is the systematic organization of research data and the testing of research hypothesis using that data. The plan of data analysis was as follows:

- The data obtained will be analysed using both descriptive and inferential statistics on the basis of objective and hypothesis of the study.
- Description of sample characteristics would be analysed using frequencies and percentage.
- Distribution of type of Substance abuse among the Higher Secondary School Students would be analysed by frequency and percentage distribution.
- The knowledge score before and after the administration of Information booklet will be calculated by using mean, standard deviation and paired 't' test.
- The level of significance will be at  $\leq 0.05$  level.
- The significant difference between the mean pre-test and post-test score would be analysed by paired 't' test at  $p \leq 0.05$  level of significance.
- Association of socio demographic variables with pre-test knowledge score would be analysed using chi square test ( $\chi^2$ ).

## IV. RESULTS

### SECTION -1 - DESCRIPTION OF SAMPLE CHARACTERISTICS

#### Frequency and Percentage Distribution of Higher Secondary School Students as Per Demographic Characteristics N = 200

S.NO.	Sample characteristics	Frequency	(%)
<b>1</b>	<b>Age (in years)</b>		
1.1	15years	9	4.5
1.2	16years	33	16.5
1.3	17years	91	45.5
1.4	18years	67	33.5
<b>2</b>	<b>Sex</b>		
2.1	Male	147	73.5
2.2	Female	53	26.5
<b>3</b>	<b>Stream of study</b>		
3.1	Science	25	12.5
3.2	Arts	125	62.5
3.3	Commerce	50	25.0
<b>4</b>	<b>Type of family</b>		
4.1	Nuclear	122	61
4.2	Joint	67	33.5
4.3	Single parents	1	0.5
4.4	Extended family	10	5.0

<b>5</b>	<b>Monthly income of family(in rupees)</b>		
5.1	Below10000	9	4.5
5.2	10001-20000	50	25.0
5.3	20001-30000	76	38.0
5.4	30001-50000	53	26.5
5.5	above50000	12	6.0
<b>6</b>	<b>Number of family members.</b>		
6.1	3	10	5.0
6.2	4	80	40
6.3	5	45	22.5
6.4	Morethan 5	65	32.5
<b>7</b>	<b>Does anyone in your family/friend stake any substances(drug and alcohol)</b>		
7.1	<b>Yes</b>	68	34.0
7.2	<b>No</b>	132	66.0
	If yes, Who-		
	Father	35	51.47
	Mother	0	0
	Brother/sister	13	19.11
	Friends	20	29.41

Data presented in Table no.1 shows the distribution of higher secondary school students according to age, sex, stream of study, types of family, monthly family income, number of family member and their substance abuse in family. The Data reveals that Most (45.5%) of student were at the age of 17 years where (4.5%) in age of 15 years. Among the participants 73.5% student were male and 26.5% were female. With regard of stream of study, 62.5% students were from Arts, 25.0% students were from commerce and, 12.5% students were from science. 61% students belong to nuclear family whereas 33.5% belongs to joint family Maximum of students 38% come from families of monthly income between 20001-30,000 per month, 4.5 % were belong to families having income below rupees 10000 per month. Maximum 40% of students were having 4 members in family and 5% had 3 members in family. The 34% of students have family members abusing different substance. Out of which,51.47 % students fathers using the substance,29.41% friends and 19.11% students sibling were using the substance.

**Frequency and Percentage Distribution of Higher Secondary School Students According to Educational and Occupational Status of Father and Mother. N = 200**

S.NO.	SAMPLE CHARACTERISTICS	FREQUENCY	PERCENTAGE%
<b>1</b>	<b>Educational status of father</b>		
1.1	Illiterate	11	5.5
1.2	Primary	18	9.0
1.3	Secondary	29	14.5
1.4	Higher secondary	40	20.0
1.5	Graduation	73	36.5
1.6	post-graduation and above	29	14.5
<b>2</b>	<b>Educational status of mother</b>		
2.1	Illiterate	22	11
2.2	Primary	27	13.5
2.3	Secondary	38	19.0
2.4	Higher secondary	59	29.5

2.5	Graduation	52	26.0
2.6	post-graduation and above	2	1
<b>3</b>	<b>Occupation of father</b>		
3.1	Government job	32	16.0
3.2	Private job	83	41.5
3.3	Agriculture	7	3.5
3.4	Business	43	21.5
3.5	Contractual job	26	13.0
3.6	Any other...	9	4.5
<b>4</b>	<b>Occupation of mother</b>		
4.1	Government job	5	2.5
4.2	Private job	31	15.5
4.3	Agriculture	2	1.0
4.4	Homemaker	148	74.0
4.5	Business	9	4.5
4.6	Contractual job	5	2.5

Data presented in Table no.2 shows the distribution of higher secondary school students, according to educational and occupational status of their father and mother. Maximum 36.5% of father were having education up to graduation level, whereas 5.5% of students father were illiterate.29.5% students' mother were educated till higher secondary only. As regard to occupation, maximum 41.5% of students' father were in private job, whereas 3.5% were in agriculture. Majority 74% of student's mothers were home maker, whereas 2.5 were in contractual job.

## SECTION -2 - FINDINGS RELATED TO FREQUENCY AND PERCENTAGE DISTRIBUTION OF HIGHER SECONDARY SCHOOL STUDENTS AS PER SUBSTANCE ABUSE AND THEIR PATTERN

### Frequency and Percentage Distribution of Higher Secondary School Students According to Abuse of Substance.

N = 200

S.NO	ABUSE OF SUBSTANCE	FREQUENCY	PERCENTAGE(%)
1	Yes	48	24%
2	No	152	76%

Data given in table no. 3 Shows that 24% of higher secondary school students have abused and currently using the different substances whereas majority of students (76%) have not taken the substance.

### Frequency and Percentage Distribution of Type of Substance Abuse Among the Higher Secondary School Students. N = 48

S.N.	Substances	Abused in past		Currently using	
		F	(%)	F	(%)
1	Alcohol	4	8.33%	0	0
2	Beer	8	16.66 %	1	2.08%
3	Wine	3	6.25 %	0	0
4	Cigarettes	16	33.33 %	14	29.16%
5	Hukka	28	58.33 %	24	50%
6	Gutkha	4	8.33 %	2	4.16%
7	Jarda	2	4.16 %	1	2.08%
8	Bidi	10	20.83 %	5	10.41%
9	Bhang	4	8.33 %	0	0
10	Ganja	1	2.08 %	1	2.08%

11	Painkiller	2	4.16 %	0	0
12	Whitener OR ink remover	1	2.08 %	1	2.08%

Data given in table no. 4 shows the frequency percentage distribution of type of substance abused among the higher secondary school students, Data reveals that tobacco was most commonly abused substance (Cigarettes 33.33 %, Hukka 58.33%, Gutkha 8.33 %, Jarda 4.16 %, Bidi 20.83 %), followed by (alcohol 8.33%, Beer 16.66%, Wine 6.25 %) and in present user also tobacco products were most common (Cigarettes 29.16 %, Hukka 50%, Gutkha 4.16 %, Jarda 2.08 % , 10.41 %) , followed by (Beer 2.08 %), Cannabis ( Ganja 2.08 %),volatile solvents ( 2.08 %).

**Frequency and Percentage Distribution of Higher Secondary School Students as per their Pattern of Substance Abuse in Terms of Age of Initiation, Duration, Frequency, Route, And Place N = 48**

S.NO.	PATTERN	FREQUENCY	PERCENTAGE%
<b>1</b>	<b>Age of initiation</b>		
1.1	Below15yearsofage	22	45.83 %
1.2	16-17yearsofage	23	47.91 %
1.3	17-18 years of age	3	6.25 %
<b>2</b>	<b>Duration of substance abuse</b>		
2.1	3to 6 months	16	33.33 %
2.2	6months	10	20.83 %
2.3	1to2yrs	8	16.66 %
2.4	More than 2yrs	4	8.33 %
<b>3</b>	<b>Frequency of substance abuse</b>		
3.1	Abuse done time only	10	20.83 %
3.2	Once a day	2	4.16 %
3.3	Once a week	16	33.33 %
3.4	Only once in a month	9	18.75 %
3.5	On special occasions	11	22.91 %
<b>4</b>	<b>Place for substance abuse</b>		
4.1	Old building	1	2.08 %
4.2	Vacant place	2	4.16 %
4.3	Home Toilet	3	6.25 %
4.4	School toilet	11	22.91 %
4.5	Personal room	4	8.33 %
4.6	Balcony	1	2.08 %
4.7	Park or play ground	5	10.41 %
4.8	In friend's house	11	22.91 %
4.9	Café	21	43.75 %
<b>5</b>	<b>Route for substance abuse</b>		
5.1	Sniff	1	2.08 %

5.2	Smoking	41	85.41 %
5.3	Orally	9	18.75 %

Data given in table no. 5 shows the frequency percentage distribution of higher secondary school students as per their pattern of Substance abuse. Maximum of students (47.91%) were in the age group of 16-17 years when they abused the substance for 1st time whereas (6.25%) in the age group of 17-18 years. Maximum of students (33.33%) have been using from 3 to 6 months whereas (8.33%) were using from more than 2 year. Most of students (33.33%) were using the substance once a week, (22.91%) abuse the substance on special occasion and 20.83% have taken once only. With regard to place, Maximum student (43.7%) use the cafe, (22.91%) use the school toilet and friends house for taking the substance, and (10.4%) use the park or playground, (8.33%) takes in their personal room, (6.25%) use the home toilet, (2.08%) use the old building and balcony for taking the substance. Among user (85.41%) abuse the substance by smoking, (18.75%) by orally, and (2.08%) take the substance by sniffing.

**Frequency Percentage Distribution of Higher Secondary School Students as Per their Reason and Factors Associated with Substance Abuse N = 48**

S.N	REASON	Frequency	Percentage%
1	Due to curiosity/ experimentation	19	39.58 %
2	Due to group pressure or peer pressure	15	31.25 %
3	Joy-seeking or recreation	17	35.41 %
4	Influenced by famous person/ role model	4	8.33 %
5	Imitation of father/other relative	2	4.16 %
6	Lack of knowledge about consequences of Drug	1	2.08 %
7	To increase self confidence	3	6.25 %
8	To increase physical performance	1	2.08 %
9	Parent's divorce	1	2.08 %
10	Family disputes	8	16.66 %
11	Relationship disputes	2	4.16 %
12	Friends' disputes	3	6.23 %
13	Easy availability	3	6.23 %
14	Social gathering/marriage party/birthday Party	20	41.66 %
15	Due to traditional view	1	2.08 %
18	To release tension and worries	2	4.16 %

Data given in table No. 6 shows the frequency percentage distribution of reasons for substance abuse among the higher secondary school students. Maximum of students (41.66%) abused the substance on occasion of social gathering/birthday party/ marriage party, 39.58% started due to curiosity/ experimentation, 35.41% due to joy seeking or recreation , 31.25% influenced by famous person/role model, 6.23% consumed due to friends disputes, easy availability and to increase the self- confidence,4.16% consumed due to relationship disputes, imitation of father, to release the tension and worries,2.08% due to lack of knowledge about consequences of substance abuse, to increase physical performance, due to parents' divorce and due to traditional view.

**Frequency and Percentage Distribution of Higher Secondary School Students as per Source of Availability of Substance. N = 48**

I	With whom	Frequency	Percentage%
1.1	Alone	7	14.58 %
1.2	Friends	36	75 %
1.3	Family members	2	4.16 %
1.4	Relatives	3	6.25 %



<b>2 Expenses</b>			
2.1	Self (Spend from pocket money)	30	62.5%
2.2	Borrow from friends	12	25%
2.3	Family members	2	4.16%
2.4	Relatives	4	8.33%
<b>3 Source</b>			
3.1	Friends	27	56.25 %
3.2	Family	1	2.08 %
3.3	Shop	20	41.66 %

Data given in table no.7, shows the frequency and percentage distribution of higher secondary school students as per their source of availability of substance. Majority (75%) of students used the substance with their friends, 6.25% with their relatives. Maximum (62.5%) times payment for substance was done by self from their pocket money, (8.33%) times by relatives and 4.16% by family members. Most of the students were getting substances from their friends (56.25%) and 41.66% from shop.

**Frequency Percentage Distribution of Higher Secondary School Students Responses According to Their Involvement in Risky Practices and Continuation of Substance Abuse in Future N = 48**

<b>1</b>	<b>Risky practices.</b>	<b>Frequency</b>	<b>Percentage %</b>
1.1	Arrested because of unusual behavior	2	4.16 %
1.2	Driving under the influence of substances	-	-
1.3	Arrested for possession of illegal drug	-	-
1.4	Stealing money to purchase drugs	6	12.5 %
1.5	Sharing needles	-	-
1.6	Reuse of syringe and Needle	-	-
1.7	Stealing of house hold items to purchase drugs	0	0
1.8	Bunked the school	29	60.41 %
1.9	Using high dose of substances alone	-	-
1.10	Unsafe sex	-	-
1.11	No	11	22.91%
<b>2 like to continue substances abuse in future</b>			
2.1	No	18	37.5 %
2.2	I can take it rarely	18	37.5 %
2.3	Only when I am stressed, I can take	5	10.41 %
2.4	There is no harm in taking it occasionally	7	14.58 %

Data given in table no.8 shows the frequency percentage distribution of higher secondary school students according to their in risky practices. As regard to involved in any risky practice, Majority of students 60.41% involved in bunking the school, 12.5% students were stealing money to purchase drugs and 4.16% arrested because of unusual behaviors. As regard to continue in future, 37.5% students do not want to continue the substance abuse in future, whereas 37.5% students said that they can take it rarely, 14.58% think that there is no harm in taking it occasionally, 10.41% said that, only when I am stressed, I can take.

**Frequency and Percentage Distribution of Higher Secondary School Students According to Compulsive use of Substance and Side Effects of Drugs. N = 48**

<b>1</b>	<b>Strong desire or urge to abuse the substances</b>		
	Yes	3	6.25 %
	No	45	93.75 %
<b>2</b>	<b>Felt need of increasing the dose</b>		
	Yes	1	2.08 %
	No	47	97.91 %
<b>3</b>	<b>Abuse multiple substances</b>		
	Yes	5	10.41 %
	No	43	89.58 %
<b>4</b>	<b>Unable to do the work without taking the substances</b>		
	Yes	2	4.16%
	No	46	95.83 %
<b>5</b>	<b>Side effect /withdrawal symptoms</b>		
	Irritability	2	4.16 %
	Restlessness	0	0
	Tremor	0	0
	Stomach cramps	0	0
	Nausea and vomiting	0	0
	Diarrhoea	0	0
	Sleepiness	0	0
	Severe Anxiety	0	0
	Other (please specify)	0	0
	No	46	95.83 %

Data given in table no. 9, shows the frequency and percentage distribution of higher secondary school students according to compulsive use of substance and side effects of Drugs.

More than half of the students 93.75% had no urge or desire to abuse the substance, but 6.25% had the desire or urge to abuse the substance. (2.08%) students felt the need of increasing the dose of substances. (10.41 %) students abused multiple substances, 4.16% are not able to work without taking the substances, 4.16% felt irritable when they stopped taking substances.

**SECTION -3 - FINDINGS RELATED TO EFFECTIVENESS OF INFORMATIONAL BOOKLET IN TERMS OF KNOWLEDGE ON PREVENTION OF SUBSTANCE ABUSE AMONG HIGHER SECONDARY SCHOOL STUDENTS**

**Frequency and Percentage Distribution of Higher Secondary School Students According to Their Categories of Knowledge Scores N = 200**

S. No.	Knowledge Scores Categories	PRE-TEST		POST-TEST	
		Frequency	Percentage	Frequency	Percentage
1	Poor knowledge (0-9)	12	6 %	0	0%
2	Average knowledge (10-17)	172	86 %	4	2%
3	Good knowledge (18-25)	16	8 %	196	98%

**Maximum possible score is 25**

Data given in the Table No 10 shows the pre-test and post-test knowledge score of higher secondary school students on prevention of substance abuse. It shows that in pre-test Majority (86%) of higher secondary school students had average

knowledge, and (6%) were in poor category whereas in the post test score, majority (98%) had good and only (2%) had average knowledge. Hence it indicates that the informational booklet was effective in increasing the knowledge of higher secondary school students on prevention of substance abuse.

**Mean, Median and Standard Deviation of Pre-Test and Post-Test Knowledge Scores of Higher Secondary School Students. N = 200**

TEST	MEAN	MEDIAN	STANDARD DEVIATION.
PRE-TEST	13.25	13	2.79
POST-TEST	20.97	21	1.53

Maximum possible score is 25

Data presented in table no.11 describe the Mean, median standard deviation of comparison between of pre-test and post-test knowledge score of higher secondary school students. It shows that the mean post-test knowledge score 20.97 of higher secondary school students was higher than their mean pre-test knowledge score 13.25 after administration of informational booklet on prevention substance abuse, It was also evident that mean and median are close to each other in pre-test and post-test, hence the distribution is close to the normal. There was a decrease in standard deviation from pre-test knowledge score 2.79 to post-test knowledge score 1.53 suggesting that the group became more homogenous in terms of knowledge. Hence it reveals that informational booklet was effective to enhance the knowledge of higher secondary school students on prevention of substance abuse.

**Area Wise Mean Knowledge Score, Mean Percentage and Mean Gain Percentage of Pre-test and Post-test Knowledge Scores of higher secondary school students. N = 200**

S. NO	AREA	MAX SCORE	PRE-TEST		POST-TEST		GAIN IN SCORES		RANK
			MEAN SCORE	MEAN%	MEAN SCORE	MEAN%	MEAN SCORE	MEAN%	
1	Meaning of substance abuse	3	1.82	60.83%	2.63	87.66%	0.81	27%	IV
2	Common product of substance abuse	5	2.87	57.4%	3.80	76.1%	0.93	18.6%	V
3	Causes and factors for substance abuse.	3	1.45	48.33%	2.66	88.83%	1.21	40.5%	II
4	Health risk and ill effects dueto substance abuse.	9	4.51	50.11%	7.365	81.83%	2.85	31.72%	III
5	Prevention and treatment of substance abuse.	5	2.52	50.4%	4.58	91.6%	2.06	41.2%	I

Data presented in table no. 12 shows that lowest (48.33%) pre-test mean score was in the area of causes of substance abuse representing maximum knowledge deficit followed by (50.11%) in risk of substance abuse. Highest (91.6%) post-test mean score was in the area of Prevention and treatment of substance abuse. The post-test mean percentage score in all areas was higher than the mean pre-test percentage score, it indicates that informational booklet was effective in enhancing the knowledge on prevention and treatment of substance abuse among higher secondary school students.

**Mean, Mean Difference, Standard Deviation of Difference, Standard Error of Mean Difference And "t" Value of Pre-Test and Post-Test Knowledge Scores of Higher Secondary School Students on Prevention of Substance Abuse. N= 200**

KNOWLEDGE TEST	MEAN	MEAN DIFFERENCE	SDD	SEMD	't' value
PRE-TEST	13.25	7.72	3.056	.216	35.97
POST-TEST	20.97				

For df (199), t=1.09, thus calculated t is significant at 0.05 level of significance.

The data presented in above table no.13 shows that the mean post-test knowledge scores (20.97) was higher than the mean pre-test knowledge score (13.25) with a mean difference of (7.72). The obtained mean difference was found to be statistically significant as evident from 't' value 35.97 for degree of freedom 199 at 0.05 level of significance. This shows that the informational booklet was effective in enhancing the knowledge of school students regarding substance abuse.

**SECTION – 4 FINDINGS RELATED TO EFFECTIVENESS OF INFORMATIONAL BOOKLET ON PREVENTION OF SUBSTANCE ABUSE IN TERMS OF ATTITUDE AMONG HIGHER SECONDARY SCHOOL STUDENTS**

**Frequency and Percentage Distribution of Pre-test and Post-Test Attitude Scores of Higher Secondary School Students According to Their Categories of Attitude Score N = 200**

SN	Attitude Score Categories With Class Interval	PRE-TEST		POST-TEST	
		F	%	F	%
1	Negative Attitude (20-33)	0	0.0%	0	0.0%
2	Neutral Attitude(34-66)	170	85%	27	13.5%
3	Positive Attitude(67-100)	30	15%	173	86.5%

**Maximum possible score-100**

The data presented in the above table no 14 shows that the frequency of scores in pre-test under neutral attitude category was 170 (85 %) which were reduced to 27(13.5%) in post-test. On the contrary the frequency of scores in positive attitude category increased from 30(15%) in pre-test to 173 (86.5 %) in post-test. This suggests most of the higher secondary school student's attitude score was under positive category after the intervention. So, it suggests that informational booklet on "prevention of substance abuse" was effective in changing the attitude of the higher secondary school students towards avoid the abuse of substance.

**Mean, Median and Standard Deviation of Pre-Test and Post-Test Attitude Scores of Higher Secondary School Students. N = 200**

TEST	MEAN	MEDIAN	STANDARD DEVIATION
Pre-test	58.20	58	6.63
Post –test	69.66	70	3.1

**Maximum possible score=100**

The data presented in the table no 16 shows that the mean post-test attitude score (69.66) of higher secondary school students was higher than the mean pre-test attitude score (58.20). The Mean and Median were closer to each other in both pre-test and post- test. Mean of pre-test attitude score was (58.20) and median was (58), whereas mean of post-test attitude score was (69.66), and median (70), which suggested a normally distributed samples. There was also a decrease in standard deviation from pre-test (6.63) to post-test (3.1), indicating that after the administration informational booklet, the group had become more homogenous in terms of attitude.

**Mean, Mean Difference, Standard Deviation of Difference, Standard Error of Mean Difference and “t” Value of Pre-Test and Post-Test Attitude Scores of Higher Secondary School Students on Prevention of Substance Abuse. N = 200**

	MEAN	MEAN DIFFERENCE	SDD	SEMD	‘t’ value
Pre-test	58.20	11.46	7.58	.536	21.31
Post-test	69.66				

**For df (199), t=1.09, thus calculated t is significant at 0.05 level of significance.**

The data presented in above table no.17 shows that the mean post-test attitude scores (69.66) was significantly higher than the mean pre-test attitude score (58.20) with a mean difference of (11.46). The obtained mean difference was found to be statistically significant as evident from 't' value 21.31 for degree of freedom 199 at 0.05 level of significance. This shows that the informational booklet was effective in enhancing the positive attitude of higher secondary school students to avoid the abuse of substance.

**SECTION – 5 FINDINGS RELATED TO THE RELATIONSHIP BETWEEN POST TEST KNOWLEDGE AND POST TEST ATTITUDE SCORE OF HIGHER SECONDARY SCHOOL STUDENTS ON PREVENTION OF SUBSTANCE ABUSE**

**Karl Pearson co-efficient of correlation between post-test knowledge scores and post-test attitude scores of higher school students. N = 200**

Variable	Mean	SD	r
Post-test knowledge score	20.97	1.53	0.550
Post-test attitude scores	69.66	3.1	

**\*Significant at 0.05 level of significance. ‘r’ value (df-199) = 0.10**

The data presented in table no. 18 shows that there was a moderate positive correlation (0.550) between post-test knowledge scores and post attitude scores of higher school students, which was found to be statistically significant at 0.05 level of significance. The moderate positive correlation shows that as the knowledge scores increases, it enhances the positive attitude of higher secondary school students to avoid the abuse of substance.

**SECTION – 6 FINDINGS RELATED TO ASSOCIATION BETWEEN POST TEST KNOWLEDGE SCORES OF HIGHER SECONDARY SCHOOL STUDENTS AND SELECTED VARIABLES.**

The findings of the study reveals that there is no significant association between the post-test knowledge score and the selected variables sex ( $\chi^2=0.084$ ), educational status of father( $\chi^2=2.527$ ), educational status of mother( $\chi^2=6.90$ ), occupation of father ( $\chi^2=0.519$ ), occupation of mother( $\chi^2=3.574$ ), monthly income of family( $\chi^2=8.130$ ), family history of substance abuse( $\chi^2=0.024$ ), type of family( $\chi^2=3.06$ ), stream of study( $\chi^2=1.48$ ) at 0.05 level of significance.

**SECTION – 7 FINDINGS RELATED TO ASSOCIATION BETWEEN POST TEST ATTITUDE SCORES OF HIGHER SECONDARY SCHOOL STUDENTS AND SELECTED VARIABLES**

The findings of the study reveals that there is no significant association between the post-test attitude score and the selected variables i.e. sex ( $\chi^2=0.925$ ), educational status of father ( $\chi^2=4.014$ ), educational status of mother( $\chi^2=5.391$ ), occupation of father( $\chi^2=2.152$ ), occupation of mother ( $\chi^2=2.12$ ), monthly income of family( $\chi^2=7.702$ ), family history of substance abuse( $\chi^2=0.427$ ), stream of study ( $\chi^2=.615$ ) except type of family ( $\chi^2=7.92$ ) at 0.05 level of significance.

**SECTION – 8 FINDINGS RELATED TO ASSOCIATION BETWEEN SUBSTANCE ABUSE OF HIGHER SECONDARY SCHOOL STUDENTS AND SELECTED VARIABLES.**

The findings of the study reveals that there is no significant association between the substance abuse status and the selected variables i.e. sex ( $\chi^2=0.416$ ), educational status of mother( $\chi^2=6.124$ ), occupation of father( $\chi^2=5.14$ ), occupation of mother ( $\chi^2=2.37$ ), monthly income of family( $\chi^2=0.692$ ), family history of substance abuse( $\chi^2=0.872$ ), type of family( $\chi^2=1.524$ ), stream of study ( $\chi^2=1.053$ ) except the educational status of father( $\chi^2=11.72$ ) at 0.05 level of significance.

**V. DISCUSSION**

**Finding of the study are discussed in terms of objective, theoretical base and hypothesis formulated**

The present study was aimed to assess the prevalence and pattern of substance abuse among higher secondary school students and to evaluate the effectiveness of an informational booklet on substance abuse in terms of knowledge and attitude of higher secondary school students.

**Finding related to prevalence of substance abuse among adolescents**

From the present study it was found that the prevalence of substance abuse among higher secondary school students was 24 %. This finding was seen in consistence with the study findings of Baruah C, Gupta K. et.al. (2019) who found the prevalence of substance abuse among male adolescents (22.8%). Present study was also supported by Shobhit Srivastava, Pradeep Kumar et.al. (2016) in which incidence of substance abuse among adolescent was found (16 %).

**Finding related to pattern of substance abuse among adolescents.**

It was found in the study that maximum no of student-initiated substance use in the age between 16-17 years which is consistent with the study of Craig A Olsson et. al. (2015) in which mean age of starting alcohol use was found 17.4 years and also supported by study on substance abuse done by Clearfork academy, March20,2022 in which the most common age group for substance abuse was 16-18 years (40%).

It was found in the study that tobacco was most abused substance followed by alcohol. This finding was seen in consistence with the study finding of Sanya Raheja (2021) found smoking was prevalent among 54% of adolescents, alcohol was used by 51% and other drugs were used by 24% of the adolescents and also supported by the study of Daniel, Lizathankam. Krishnan, Ganesh. Gupta, Sandhya.(2017) found that the common substances used by the subjects were any kind of tobacco (77.05%), inhalants (26.23%), and alcohol (11.47%) and Pratik K et.al.(2019) found that the Tobacco was most common substance abused by the adolescents.

It was found in the study that most of the students were getting substances from their friends. This finding was seen in consistence with the study finding of Daniel, Lizathankam. Krishnan, Ganesh. Gupta, Sandhya. (2017) found that the most of the subjects were getting substances from their friends (85.25%) .

It was found in the study that the most common reasons for starting the substance abuse were social gathering/marriage party/birthday party, curiosity/ experimentation, joy-seeking/recreation, peer pressure or group pressure. This finding was seen in consistence with the study finding of Maruf MM et.al. (2013) found that the common reasons for initiating substance were Curiosity, peer pressure and for fun.

**Findings related to the effectiveness of informational booklet on prevention of substance abuse.**

The informational booklet on prevention of substance abuse was found to be effective in improving the knowledge and attitude of higher secondary school students. These findings were consistent with the findings of Yogeshwar Puri Goswami, et.al. (78) (2019) where structured teaching programme on prevention and control of alcohol use was effective in increasing the knowledge and attitude of undergraduate college students. Present study was also supported by Firdousa Jan, et.al. (2018)<sup>54</sup> where structured teaching programme on prevention and control of substance abuse was effective in increasing the knowledge and attitude of adolescents.

**VI. CONCLUSION**

**ON THE BASES OF THE FINDING OF THE STUDY, THE FOLLOWING**

- Most of higher secondary school students with history of substance abuse belonged to the age group of 17yrs and come from the nuclear family
- About one third of the students come from families where at least one of the family members consumed the substances. Most of student's fathers were found using the substances.
- The prevalence of substance abuse among higher school students was found (24%) and majority of them used and using Tobacco products like (Hukka, Cigarettes, Gutkha, Jard) followed by Alcohol products. It reveals that Tobacco and Tobacco product were mostly used substance by adolescence.
- Maximum number of the students started to use substances after 15 years of age, it reveals that incidence of substance abuse in adolescents is higher after the 15 years of age.
- Most of them using the substance once a week.
- The Cafe, School toilet and friend's house were found to be most suitable place for taking the substance, Smoking was the route used by most of students.
- Reasons that influenced majority of the students for the abuse of substance were social gathering/birthday party /marriage party, curiosity/experimentation, joy seeking or recreation and peer pressure. It indicates the need of education and positive social environment to prevent substance abuse.
- Majority of students were found to be taken the substances with their friends and expenses of substances done by self like from pocket money. Most of the subjects were getting substance from their friends followed by shop. It reveals that friends are the key source for initiation and use of substance.

- Majority of students were found to be involved in bunking the school and few of them also stealing money to purchase the substances.
- Most number of students do not want to continue the substance abuse in future whereas also most number of students want to take it rarely.
- Only a small number of students had the desire or urge, felt the need to increasing the dose of substances, abused multiple substances and few of them felt irritable when they stopped taking substances.
- The informational booklet on prevention of substance abuse was effective to increase the knowledge and attitude of the higher secondary school students.
- There was a positive correlation found between the post-test knowledge score and post-test attitude score of higher secondary school students on prevention of substance abuse. It means when the knowledge of the higher secondary school students increases, the positive attitude also increases regarding the prevention of substance abuse.
- There was no significant association between post-test knowledge score of higher secondary students with selected variables. It means the knowledge of higher secondary school students on prevention of substance abuse was independent to the selected variable.
- There was significant association between post-test attitude score of higher secondary school students with type of family. It means attitude of higher secondary school students depends to the type of family.
- There was significant association between substance abuse status of higher secondary school students with educational status of father. It means substance abuse status of higher secondary school students depends to the educational status of father.

## VII. IMPLICATIONS

### Community psychiatric nursing practice.

- Community psychiatric nurses can help the community in organizing and strengthening community support system for preventing substance abuse. Health education programmes can be conducted using charts, posters, leaflets/pamphlets, PowerPoint presentation. Film shows emphasising on the ill effects is a useful method of educating public.

### National Health Care System-

- Incidents of many diseases are preventable through changes in health behaviour. This reveals the importance of adopting health education strategies for educating the public through various mass media regarding the risk factors of substance abuse and adapting safe health practices

### Nursing Education-

- Several implications can be drawn from the present study for nursing education. A curriculum incorporating the recent trends and demands of the changing society is needed for the progress of nursing education.
- In the basic nursing course, the psychiatric nursing syllabus should emphasize on substance abuse. Nursing students should be provided with learning experiences in planning and organizing health education programmes on prevention of substance abuse in various setting.

### Nursing Research-

- Nurse researcher may conduct studies in clinical and community setting to evaluate the effectiveness of the nursing interventions in prevention and control of substance abuse at various levels.
- Nurses' researcher must take up research in clinical areas, schools, colleges, and community as a whole for taking preventive measures to reduce the risk of substance abuse.

**Nursing Practice-**

- Patient education is one of the important nursing activities. The findings of the study imply the need for regular health education programs by hospital nurses, public health nurses and school health nurses in hospitals, communities, schools, and colleges.

**Nursing Administration-**

- Nursing profession should be able to render services according to the changing needs of the society. The increasing incidence of substance abuse in the community demands the profession to render more attention to the care of clients and their family.
- Nurses need to involve more actively in the preventive programs on substance abuse. administrators should encourage the nurses to involve themselves in the prevention programs on substance abuse at primary, secondary and tertiary levels. In the context of technological changes and knowledge explosion, nurse administrator should take responsibility to update the knowledge of the nursing staff.

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