Effectiveness of an Awareness Programme on Knowledge and Attitude Regarding Substance Use Disorder among Adolescents



Allan Singh 1*, Dr. Maya Sahu², Nafees Ahmed³, Jyoti4, Anas Khalid⁵, Oscar Donald Obediah⁶, & Arti Choudhary⁵

- 1* , PG Tutor, Department of Mental health Nursing, Teerthanker Mahaveer College of Nursing, TMU, Moradabad -244001
- ^{2,} Assistant professor, College of Nursing, All India Institute of Medical Sciences Deoghar, Jharkhand 814152, mayamonsahu@gmail.com
- ^{3,} Assistant Professor, Department of Medical Surgical Nursing, Teerthanker Mahaveer College of Nursing, TMU, Moradabad 244001, nafeesahmednajir786@gmail.com
- ^{4,} PG Tutor, Department of Community health Nursing, Teerthanker Mahaveer College of Nursing, TMU, Moradabad 244001
- ^{5,} PG Tutor, Department of Medical Surgical Nursing, Teerthanker Mahaveer College of Nursing, TMU, Moradabad 244001
- ⁶ PG Tutor, Department of Mental health Nursing, Teerthanker Parsvnath College of Nursing, TMU, Moradabad 244001
- ^{7,} PG Tutor, Department of Mental health Nursing, Teerthanker Mahaveer College of Nursing, TMU, Moradabad 244001

*Corresponding Author - Allan Singh

*Mail address - allansingh007@gmail.com

Abstract

Background: Dependence to drugs and alcohol among adolescents is becoming more prevalent across the country. Adolescents are frequently the first one to experience substance abuse. It may affect their relationships, reputations, prospects, finances, self-images. Their lives are jeopardised and most importantly it may lead to deterioration of grades.

Aim and Objective: The aim of the study was to evaluate the effectiveness of awareness programs on knowledge and attitude regarding substance use disorder among adolescents.

Materials and Methods: Quantitative research approach with convenience sampling technique was followed to include 63 participants from St. Paul College, Moradabad. Demographic information, knowledge assessment questionnaire and attitude assessment scale on substance use disorder were used to gather data. Descriptive and inferential statistics was used for data analysis.

Results: It was found that the pre-test knowledge score of the student was 18.68 ± 5.26 and the post-test knowledge score increased to 26.54 ± 3.2 , (t-value =10.567 and p=0.001) which was highly statistically significant indicating that the awareness programme was effective on knowledge regarding substance use disorder. The pre-test attitude score was found to be 21.75 ± 4.87 which was reduced to 20.21 ± 3.16 following intervention (t - value 2.345, p=0.022) and the mean difference was statistically significant suggesting that the awareness programme is effective on attitude regarding substance use disorder.

Conclusion: Substance use disorder poses a significant risk to health. In our country, adolescent specific substance use programmes are few, and research evidence regarding the effect of awareness programme on knowledge, attitude and practice is less. The Awareness Programme developed in the present study was found to be beneficial as it enhanced the adolescents' knowledge and attitudes toward substance use disorder. Hence the Awareness Programme is feasible, practical, and has significant implications for the field.

Key words: Effectiveness, Knowledge & Attitude, Awareness Programme, Substance Use Disorder, Adolescents

INTRODUCTION

Dependence to drugs and alcohol, a serious problem is becoming more prevalent across the country. Frequent use of psychoactive drugs like alcohol, pain relievers, and illicit narcotics can cause physical, mental, and social problems, spiritual health and lifestyle issues that affect individuals, families, and communities.

Originally, the term alcohol referred to the main alcohol present in alcoholic beverages, i.e, ethanol, which is also used as a drug.

In India, the misuse of alcohol and cigarettes is a big societal problem. Dependent users make up about a quarter of the existing user base. Alcohol has a dependency rate of 17%, cannabis has a rate of 26%, and opiates have a rate of 22%.

Nicotine can be defined as a drug which increases impulse transference from the brain to the rest of the body. Nicotine is the main psychoactive component in products of tobacco, which causes may negative consequences to health. Tar and carbon monoxide (a dangerous gas) are produced when tobacco is burnt.

Adolescents are defined as those aged 10 to 19 years old by the Reproductive and Child Health Program. (UN system in India, 2003). Nearly 20% of Indian population is adolescent (UNICEF's report, 2011) with 1.2 billion adolescent population in the world. Adolescence is a phase of physical and mental evolution in human body. Adolescents and young children are more prone to substance misuse, which can have catastrophic implications.

Addiction to drugs and alcohol among teenagers is highly frequent. A teen's substance misuse experience may be divided into three stages: regular usage, experimentation, and dependency. On a regular basis, adolescents use cigarettes or alcohol to cope with worry, depression, or a focus on positive social skills.

According to the European Charter on Alcohol of the World Health Organization, "All children and adolescents have the right to grow up in an environment protected from the consequences of alcohol dependence, to the extent feasible, from the promotion of alcoholic beverages." Adolescents experience identity vs role confusion, according to Erikson's theory. They are still teenagers with little thought and experience maturity. She/he is oblivious to what is proper and improper, and hence their risks going down the wrong path. Young people enjoy taking chances without considering the long-term health threats and risks.3 the scholastic performance of a young drug/alcohol user, as well as the level of responsibility he or she bears is severely impacted such as missing class, not completing tasks, and so on. It may affect their relationships, reputations, prospects, finances, self-images. Their lives are jeopardised and most importantly it may lead to deterioration of grades.4

NEED

Recent studies conducted in 2023 demonstrate that awareness programs targeting adolescents are effective in significantly improving their knowledge about Substance Use Disorder (SUD) and fostering more positive attitudes toward individuals affected by substance use. These interventions contribute to reducing stigma and increasing preventive behaviours among youth. The success of these programs is enhanced when they incorporate interactive elements, culturally relevant content, and sustained engagement, which collectively lead to better retention of information and attitude

change (Kumar & Sharma, 2023; Lee et al., 2023).

PROBLEM STATEMENT

A study to evaluate the effectiveness of an awareness programme on knowledge and attitude regarding substance use disorder among adolescents in selected school at Moradabad UP.

AIM

To evaluate the effectiveness of an awareness programme on knowledge and attitude regarding substance use disorder among adolescents in selected school at Moradabad, UP.

OBJECTIVES

- 1. To assess the knowledge and attitude regarding substance use disorder among adolescents.
- 2. To evaluate the effectiveness of awareness programme on knowledge & attitude regarding substance use disorder among adolescents.
- 3. To identify the correlation between pre-test scores of knowledge & attitude regarding substance use disorder among adolescents.
- **4.** To find out association between the pre-test scores of knowledge and attitude regarding substance use disorder among adolescents with their selected socio demographic variables.

HYPOTHESES

H₁- There is a statistically significant difference between the pre-test & post-test scores of knowledge regarding substance use disorder among adolescents.

H₂- There is a statistically significant difference between the pre-test & post-test scores of attitude regarding substance use disorder among adolescents.

 H_{3} - There is a statistically significant relation between knowledge and attitude regarding substance use disorder among adolescents.

H₄-There is a statistically significant association between the pre-test scores of knowledge substance use disorder among adolescents with their selected demographic variables.

H₅ - There is a statistically significant association between the pre-test scores of attitude substance use disorder among adolescents with their selected demographic variables.

PURPOSE

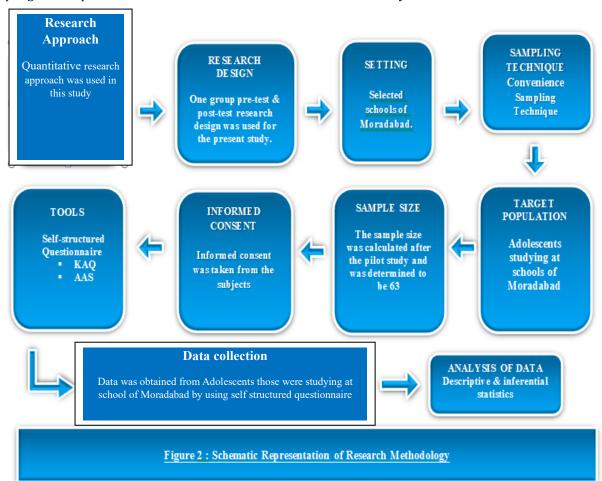
The purpose of this study is to evaluate the effectiveness of an awareness program in improving adolescents' knowledge of Substance Use Disorder (SUD) and shaping more positive attitudes toward individuals affected by substance use. This research aims to determine whether such interventions can

enhance awareness, reduce stigma, and promote preventive behaviours among adolescents, thereby contributing to early intervention and health promotion efforts.

MATERIALS AND METHODS

A Quantitative research approach with convenience sampling technique was followed to include 63

participants from St. Paul College, Moradabad. Demographic information, knowledge assessment questionnaire and attitude assessment scale on substance use disorder were used to gather data. Ethical consideration was done from the University ethical committee. Paired t-test, Karl Pearson correlation coefficient and Chi-square test was used for data analysis.



INCLUSION CRITERIA

- Adolescents who all were in 9 &10th standard
- Adolescents who were able to read write and understand English or Hindi.

EXCLUSION CRITERIA

- Adolescents who were absent during data collection.
- Adolescents who under want similar programme earlier.

RESULTS

Table 1: Distribution of sample characteristics in terms of frequency and percentage with their Age.

N=63

Illustrates the distribution of socio demographic of the study. As per age, of the study subjects was 15.05 (SD= 0.91). According to gender majority

were male i.e., 32 (50.8%). Most of the belonged to Hindu 34 (50%), lived in nuclear families 33 (52.4%). It was also noted that more than one third of the student's father occupation was private service 25 (39.7%) whereas majority of the student's mother occupation was home maker 49 (77.8%). The majority of the students arose from 9 standard 39 (61.9%) and more than half of the students' monthly family income was between Rs.10, 001- Rs.20, 000 19 (30.2%), 15 (23.8%) of the students came across substance use from movie but majority of the students 46 (73.0%) did not have anyone who use substance in their family. Most of the students were playing game as leisure (free time) activities 23 (36.5%).

Table 2: Level of knowledge score regarding substance use disorder among adolescents.

N=63

Illustrates the level of knowledge score regarding substance use disorder among adolescents, before intervention, majority of the students were in average knowledge category 45 (71.4%) and after intervention majority of the them were in good knowledge category 61 (96.8%).

Table 2.1: Level of attitude score regarding substance use disorder among adolescents. N=63

Illustrates the level of attitude score regarding substance use disorder among adolescents, before intervention, majority of the students 32 (50.8%) had Positive / favourable attitude and after intervention and after intervention majority of the them 41 (65.1%) had Negative/ unfavourable attitude towards substance use disorder.

Table 3: Effectiveness of awareness programme on knowledge regarding substance use disorder among adolescents.

N=63

Illustrates that, pre-test knowledge score of the student was 18.68 ± 5.26 and post-test knowledge score increased to 26.54 ± 3.2 , (t-value =10.567 and p=0.001) which was highly statistically significant indicating that the awareness programme was effective on knowledge regarding substance use disorder.

Table 3.1: Effectiveness of awareness programme on attitude regarding substance use disorder among adolescents.

N = 63

Illustrates that, effectiveness of awareness programme on attitude regarding substance use disorder. Pre-test attitude score was found to be 21.75 ± 4.87 which reduced to 20.21 ± 3.16 following intervention (t - value 2.345, p=0.022) and the mean difference was statistically significant suggesting that the awareness programme is effective on attitude regarding substance use disorder.

DISCUSSION

Description of demographic variables.

The findings of the present study regarding mean age of the study subjects were 15.05, gender

majority were male i.e., 32 (50.8%). Most of the belonged to Hindu 34 (50%), lived in nuclear families 33 (52.4%). More than one third of the student's father occupation was private service 25 (39.7%) whereas majority of the student's mother occupation was home maker 49 (77.8%). Most of the students arose from 9 standard 39 (61.9%) and more than half of the student's monthly family income was between Rs.10,001- Rs.20,000 19 (30.2%), 15 (23.8%) of the students came across substance use from movie but majority of the students 46 (73.0%) did not have anyone who use substance in their family. Most of the students were playing game as leisure (free time) activities 23 (36.5%).

Similar study was done in Nepal by Deepa G,et al.(2020) Among 155 adolescents, majority were 15 years old (46.45%). There were 8.3% more male than female. Most ofthe samples were from nuclear family (76.77%). Samples with Hindu religion comprised 79.35%. In Ethnicity, Brahmin/Chettri (49.68%) and Janajati (43.23%) were greater in number. Most of the adolescents lived in urban area (91.61%). 58.6% of students had mother with secondary level education, and 65.1% had father with secondary level education.¹

Level of knowledge score regarding substance use disorder among adolescents

The findings of the present study Illustrates the level of knowledge score regarding substance use disorder among adolescents, before intervention, majority of the students were in average knowledge category 45 (71.4%) and after intervention majority of the them were in good knowledge category 61 (96.8%).

Similar study was done in India by T.H ansadahand S. Sonalika (2018) In pre-test, majority of adolescents 36 (72%) had inadequate knowledge and 14 (28%) had moderate knowledge. During post-test, most of the adolescents 33 (66%) had adequate knowledge where 17 (34%) had moderate knowledge regarding on substance abuse and its consequences.²

Table 1: Distribution of sample characteristics in terms of frequency and percentage with their Age.

Variables		Frequencyf	Percentage%
Age	15.05 ± 0. 91 (Mean ± SD)		
Gender	a) Male b) Female	32 31	50.8 49.2
Religion	a) Hindu b) Christian c) Muslim	34 8 21	50.0 12.7 33.3

Type of family b) Extended family c) Nuclear c) Nuclear 33 52.4 a) Self-employed/Business b) Private service c) Government service 14 22.2 a) Self-employed 2 3.2 b) Private service 5 7,9 c) Government service 7 11.1 d) Home maker 49 77.8 Academic class a) 9th class b) 10th class b) 10th class b) 10th class c) Ramily c) Rs.10,000 14 22.2 Monthly income of the family c) Rs.20,001-Rs.20,000 19 30.2 family c) Rs.20,001-Rs.30,000 12 19.0 a) From family member b) From friends c) From movie c) From movie c) From movie c) From movie c) From book c) From book c) From book c) Others specify 11 17.5 Does anyone in your family or around you use substance d) Neighbours c) No one 46 73.0		a) Inius family	27	42.0
C) Nuclear 33 52.4 38.1	m cc 11	a) Joint family	27	42.9
Academic class	Type of family	,	_	
Self-employed Comparison		,		
C) Government service				
Mother's occupation a) Self-employed b) Private service c) Government service d) Home maker 5 7.9 11.1 11.1 11.1 11.1 11.1 11.1 11.1	Father's occupation	b) Private service	25	39.7
Mother's occupation b) Private service c) Government service d) Home maker 5 7.9 Academic class a) 9th class b) 10th class 39 61.9 By 10th class 39 61.9 By 10th class 24 38.1 By 10th class 24 38.2 By 10th class 24 38.2 By 10th class 24 30.2 By 10th class 25 32.2 By 10th class 39 61.9 By 10th class 48 48		c) Government service		
C Government service 7 11.1		a) Self-employed		
Academic class Acad	Mother's accumation	b) Private service		7.9
Academic class a) 9th class b) 10th class 39 (24) 38.1 a) <8s.10,000	Mother Soccupation	c) Government service	7	11.1
Academic class b) 10th class 24 38.1		d) Home maker	49	77.8
B) 10th class 24 38.1 a) <rs.10, -="" 000="" 001="" 001-rs.30,="" 14="" 18="" 19="" 22.2="" 28.6="" 30.2="" b)="" c)="" d)="" family="" rs.10,="" rs.20,="" ="">Rs.30, 000 12 19.0 a) From family member 11 17.5 b) From friends 9 14.3 c) From movie 15 23.8 d) From book 12 19.0 e) Others specify 16 25.4 Does anyone in your family or around you use c) Friends 2 3.2 substance d) Neighbours 1 1.6 </rs.10,>	Academic class	,	39	61.9
Monthly income of the family b) Rs.10,001 - Rs.20,000 19 30.2 c) Rs.20,001-Rs.30,000 18 28.6 d) >Rs.30,000 12 19.0 Where did you come across substance use a) From family member 11 17.5 b) From friends 9 14.3 c) From movie 15 23.8 d) From book 12 19.0 e) Others specify 16 25.4 Does anyone in your family or around you use substance c) Friends 2 3.2 substance d) Neighbours 1 1.6	Academic class	b) 10th class	24	38.1
family c) Rs.20, 001-Rs.30, 000 18 28.6 d) >Rs.30, 000 12 19.0 Where did you come across substance use a) From family member 11 17.5 b) From friends 9 14.3 c) From movie 15 23.8 d) From book 12 19.0 e) Others specify 16 25.4 Does anyone in your family or around you use substance c) Friends 3 4.8 substance d) Neighbours 1 1.6		a) <rs.10, 000<="" th=""><th>14</th><th>22.2</th></rs.10,>	14	22.2
d) >Rs.30, 000 12 19.0 where did you come across substance use 15 23.8 d) From friends 9 14.3 c) From movie 15 23.8 d) From book 12 19.0 e) Others specify 16 25.4 Does anyone in your family or around you use substance c) Friends 2 3.2 substance d) Neighbours 1 1.6 17.5 1.6 18. 19.0 19.0	Monthly income of the	b) Rs.10, 001 - Rs.20, 000	19	30.2
A) From family member 11 17.5	family	c) Rs.20, 001-Rs.30, 000	18	28.6
Where did you come across substance use b) From friends 9 14.3 c) From movie 15 23.8 d) From book 12 19.0 e) Others specify 16 25.4 Does anyone in your family or around you use substance b) Family members 3 4.8 o' Friends 2 3.2 substance d) Neighbours 1 1.6		d) >Rs.30, 000	12	19.0
Where did you come across substance use c) From movie d) From book 23.8 15 23.8 d) From book e) Others specify 12 19.0 e) Others specify 16 25.4 Does anyone in your family or around you use substance b) Family members 3 4.8 o' Friends 2 3.2 3.2 substance d) Neighbours 1 1.6		a) From family member	11	17.5
substance use C) From movie d) From book d) From book e) Others specify 15 d) From book de) Others specify 12 d) From book d)	Whore did you some agrees	b) From friends	9	14.3
d) From book 12 19.0		c) From movie	15	23.8
a) Self 11 17.5 Does anyone in your family b) Family members 3 4.8 or around you use c) Friends 2 3.2 substance d) Neighbours 1 1.6	substance use	d) From book	12	19.0
Does anyone in your family or around you use substanceb) Family members34.8c) Friends23.2d) Neighbours11.6		e) Others specify	16	25.4
Does anyone in your family or around you use substanceb) Family members34.8c) Friends23.2d) Neighbours11.6		a) Self	11	17.5
or around you use substancec) Friends d) Neighbours2 13.2 1.6	Does anyone in your family			
substanced) Neighbours11.6				
	_			
			46	73.0
a) Watching movie 8 12.7		a) Watching movie	8	12.7
h) Playing game 23 36.5		, ,		
What do you do as your c) Studying 21 33 3				
leisure (free time) activities d) Spent with peers 5 33.3 7.9	leisure (free time) activities	, ,		
e) Others, specify 6 9.5				

Table 2: Level of knowledge score regarding substance use disorder among adolescents. N=63

Sl.No.	CRITERION	RANGEOF	PRE-TESTKNOWLEDGE		POST TEST KNOWLEDGE	
51.140.	SCORE		Frequency	Percentage	Frequency	Percentage
1	GOOD	21 - 30	16	25.6%	61	96.8%
2	AVERAGE	11 - 20	45	71.4%	2	3.2%
3	POOR	0 - 10	2	3.2%	0	0%

Table 2.1: Level of attitude score regarding substance use disorder among adolescents. N = 62

Sl. No.	CRITERION	RANGEOF SCORE	PRE-TESTATTITUDE		POST TESTATTITUDE	
			Frequency	Percentage	Frequency	Percentage
1	Unfavourable attitude	0-19	31	50.8%	41	65.1%
2	Favourable attitude	20-40	32	49.2%	22	34.9%

Table 3: Effectiveness of awareness programme on knowledge regarding substance use disorder among adolescents.

N = 63

Variables	Mean	Std. deviation	t-value	df	p-value
Pre test	18.68	5.26	10 567	62	<0.001*
Post test	26.54	3.2	-10.567	62	

^{*}Significant at p<0.05

Table 3.1: Effectiveness of awareness programme on attitude regarding substance use disorder among adolescents.

N = 63

Variables	Mean	Std. deviation	t-value	df	p-value
Pre test	21.75	4.87	2 2 4 5	62	.022*
Post test	20.21	2.16	2.345	02	.022

^{*}Significant at p<0.05

LIMITATIONS

- The sample size was small which restricts the study findings from getting generalized to whole population.
- There was a lack of comparison group.

RECOMMENDATIONS

- Another study can be conducted with larger sample size, which will aid in generalizing the findings.
- Mixed method research can be adopted to yield quantitative as well as qualitative data that can yield voluminous information pertaining to substance use disorder.
- Future study can target individuals who seek help from both inpatient and outpatient departments for various illnesses and their relatives.
- Longitudinal study can be done to evaluate the effectiveness of the awareness programme by assessing the changes in the knowledge, attitude and practices using long follow up period.
- Future study can include brief intervention or other motivational intervention strategies for substance use disorder.

CONCLUSION

Substance use disorder poses a significant risk for health. Women suffer health risks, including during pregnancy, in addition to the typical health problems that both genders confront. In our country, men and women specific substance use programmes are few and research evidence regarding effect of awareness programme on knowledge, attitude and practice is less. The Awareness Programme developed in the present study was determined to be beneficial because it enhanced the individuals' knowledge and attitudes towards substance use disorder. Hence the Awareness Programme is feasible, practical and has significant implications for the field.

REFERENCES

- (2002). <u>Mosby's Medical, Nursing & Allied Health</u> <u>Dictionary</u>. Sixth Edition. Drug abuse definition, p. 552. Nursing diagnoses, p. 2109. <u>ISBN 0-323-</u> 01430-5.
- World Health Organization (WHO) Global Status Report on Alcohol and Health. 2014. [Last accessed on 2017 Jan 18. Last accessed on 2018 Jul 01].

- 3. UNICEF's report, 2011.
- 4. "World Drug Report 2012" (PDF). UNITED NATIONS. Retrieved 27 September 2016.
- 5. King'endo M. *Incidence and extent of substance abuse among secondary school students in Nairobi Province, Kenya: implications for specialized intervention* (Doctoral dissertation, Kenyatta University).
- 6. Nakhaee N, Ziaaddini H, Karimzadeh A. Epidemiologic study on drug abuse among first and second grade high school students in Kerman. Addiction & health. 2009;1(1):31.
- 7. Rehm J, Monga N, Adlaf E, Taylor B, Bondy SJ, Fallu JS. School matters: Drinking dimensions and their effects on alcohol-related problems among Ontario secondary school students. Alcohol and Alcoholism. 2005 Nov 1;40(6):569-74
- 8. Abdulkarim AA, Mokuolu OA, Adeniyi A. Drug use among adolescents in Ilorin, Nigeria. Tropical Doctor. 2005 Oct 1;35(4):225-8.
- 9. Baus J, Kupek E, Pires M. Prevalence and risk factors associated with drug use among school students, Brazil. Revista de SaúdePública. 2002;36:40-6.
- 10. Whittaker R, Dorey E, Bramley D, Bullen C, Denny S, Elley CR, Maddison R, McRobbie H, Parag V, Rodgers A, Salmon P. A theory-based video messaging mobile phone intervention for smoking cessation: randomized controlled trial. Journal of medical Internet research. 2011 Jan 21;13(1):e1553.
- 11. Perera B, Torabi M, Kay NS. Alcohol use, related problems and psychological health in college students.
- 12. Park S, Kim Y. Prevalence, correlates, and associated psychological problems of substance use in Korean adolescents. BMC public health. 2015 Dec;16(1):1-9.
- 13. Jayakrishnan R, Geetha S, Mohanan Nair JK, Thomas G, Sebastian P. Tobacco and alcohol use and the impact of school based antitobacco education for knowledge enhancement among adolescent students of rural Kerala, India. Journal of Addiction. 2016 Aug 17;2016.
- 14. Chakravarthy B, Shah S, Lotfipour S. Adolescent drug abuse-Awareness & prevention. The Indian journal of medical research. 2013 Jun;137(6):1021.

- 15. Divya T, Radhakrishnan G, AnuChithra S. The level of awareness and attitude on ill-effects of substance abuse among adolescent students in selected high schools at Belgaum district, India. health. 2018:10:14.
- 16. Singh V, Gupta R. Prevalence of tobacco use and awareness of risks among school children in Jaipur. JAPI. 2006 Aug;54:609-12.
- 17. Ebie JC, Pela OA. Some sociocultural aspects of the problem of drug abuse in Nigeria. Drug and Alcohol Dependence. 1981 Dec 1;8(4):301-6.
- 18. Soyibo K, Lee MG. Use of illicit drugs among high-school students in Jamaica. Bulletin of the World Health Organization. 1999;77(3):258.
- 19. Vinoth Chandran V. A study to evaluate the effectiveness of structured teaching programme on level of knowledge regarding problems of substance abuse among higher secondary school students (15-17 years) at selected schools in Dindigul district (Doctoral dissertation, Sara Nursing College, Dharapuram).
- 20. Saini JK, Suthar H, Shokandha S, Dey M. Effectiveness of Structured Teaching Programme on Knowledge and Attitude Regarding Prevention and Control of Alcohol Lee, S., Patel, R., & Nguyen, T. (2023). Impact of culturally tailored awareness campaigns on adolescent perceptions of substance use: A recent systematic review. International Journal of Adolescent Medicine and Health, 35(1), 45-55. https://doi.org/10.1177/17455057231131234
- 21. Unicef. UNICEF annual report 2010. Unicef; 2011.