International Journal of Pharmaceutics and Drug Analysis

Content Available at www.ijpda.org ISSN: 2348:8948

A STUDY TO EVALUATE THE EFFECTIVENESS OF SELECTED AUDIO-VISUAL MODALITIES ON LEVEL OF KNOWLEDGE RERGARDING VARIOUS IMPACTS OF SUBSTANCE ABUSE AMONG ADOLESCENTS AT HIGHER SECONDARY SCHOOLS, KANPUR, UP.

Richa Shakya[1], SAVITRI GUPTA[1], SHAILJA ROY[1], URMILA[1], Syed. Sumiya[2]

[1]B.Sc Nursing students, Faculty of Nursing, Rama University, Kanpur, Uttar Pradesh, India.
[2]HOD of MHN, Faculty of Nursing, Rama University, Mandhana, Kanpur, UP.

Received: 14.08.2026 Revised: 02.10.2026 Accepted: 17.10.2026

ABSTRACT

Substance abuse is a major public health concern affecting individuals, families, and communities worldwide. It refers to the harmful or hazardous use of psychoactive substances, including alcohol, tobacco, and illicit drugs. Substance abuse can lead to physical, psychological, and social problems, such as addiction, organ damage, mental health disorders, and impaired social functioning. The present study was conducted to assess the effectiveness of selected audio-visual modalities on the level of knowledge regarding the various impacts of substance abuse among adolescents in higher secondary schools in Kanpur, Uttar Pradesh. The study was conducted at Ushadeep Senior Secondary School, Mandhana. A total of 60 samples were selected using a non-probability convenience sampling technique, and data were collected using a structured questionnaire regarding the various impacts of substance abuse. After the pre-test, health education regarding the various impacts of substance abuse was provided to the participants with the help of audio-visual modalities. After seven days, a post-test was conducted to assess their level of knowledge. The data were collected and analysed using descriptive and inferential statistics. The results of the study showed that, among the 60 participants, the pre-test assessment of knowledge regarding the various impacts of substance abuse revealed that 18 (30%) had an inadequate level of knowledge, 35 (58.33%) had a moderate level of knowledge, and 7 (11.67%) had an adequate level of knowledge. In the post-test assessment, none of the participants (0%) had an inadequate level of knowledge, 15 (25%) had a moderate level of knowledge, and 45 (75%) had an adequate level of knowledge regarding the various impacts of substance abuse.

Keywords: *Selected audio-visual modalities, Effectiveness, substance abuse, adolescents, higher secondary schools.*

This article is licensed under a Creative Commons Attribution-Non-commercial 4.0 International License. Copyright © 2026 Author(s) retains the copyright of this article.

***CORRESPONDING AUTHOR**

Prof. Syed. Sumiya

DOI: https://doi.org/10.47957/ijpda.v14i3.756

PRODUCED AND PUBLISHED BY

South Asian Academic Publications

INTRODUCTION

Adolescence is one of the most beautiful and transformative periods in human life. It is a bridge between childhood and adulthood, generally spanning from 10 to 19 years of age, as defined by the World Health Organization (WHO). This stage is not merely a period of physical growth but also a remarkable phase of emotional awakening, intellectual development, and identity formation [1,2].

During adolescence, life blossoms with new experiences, dreams, and discoveries. Alongside physical development, emotional sensitivity deepens. Feelings are experienced intensely: joy becomes more radiant, friendships grow stronger, and disappointments contribute to emotional resilience and personal growth.

Adolescence is also a period of curiosity, exploration, and increasing independence. Young people begin to develop abstract thinking, reasoning, decision-making skills, and personal values. Their friendships become more meaningful, ideas are explored, and future goals begin to take shape. The habits and behaviours established during this period can have a lasting

influence on physical health, psychological well-being, and adult life [3,4].

One of the major public health concerns affecting adolescents is substance abuse. The use of substances such as alcohol, tobacco, cannabis, and other psychoactive drugs can adversely affect physical health, mental well-being, academic performance, relationships, and overall development. Early initiation of substance use may increase the risk of long-term health and social consequences [5–7].

Substance use disorders cannot be diagnosed through a single test. Healthcare professionals generally assess an individual's substance-use patterns, medical history, symptoms, and related behaviours to establish a diagnosis [6].

Need for the Study

Substance abuse among children and adolescents is a significant public health concern because it can adversely affect physical health, mental well-being, academic performance, and overall development. According to the WHO, adolescence encompasses the ages of 10–19 years. Globally, the initiation of substance use during adolescence remains an important concern requiring preventive interventions [7].

A study conducted by Bala et al. reported substance-use patterns among young people and highlighted the relevance of familial and social factors in substance use. The reported findings included the use of alcohol, tobacco, and cannabis, as well as a family history of substance use among some participants [8].

These concerns highlight the importance of school-based and community-based prevention programmes involving adolescents, parents, teachers, and other family members. Educational interventions can help adolescents develop appropriate knowledge, make informed decisions, recognise the harmful effects of substance use, and adopt healthy behaviours. Audio-visual teaching modalities may provide an effective means of communicating health information and improving students' knowledge.

Therefore, the present study was undertaken to evaluate the effectiveness of selected audio-visual modalities on the level of knowledge regarding the various impacts of substance abuse among adolescents studying in higher secondary schools in Kanpur, Uttar Pradesh.

Statement of the Problem

"A study to evaluate the effectiveness of selected audio-visual modalities on the level of knowledge regarding the various impacts of substance abuse among adolescents in higher secondary schools, Kanpur, Uttar Pradesh."

Objectives of the Study

1. To assess the pre-test level of knowledge regarding the various impacts of substance abuse among adolescents in selected higher secondary schools.
2. To evaluate the effectiveness of selected audio-visual modalities in improving the level of knowledge regarding the various impacts of substance abuse among adolescents in selected higher secondary schools.
3. To determine the association between pre-test knowledge scores regarding the various impacts of substance abuse and selected socio-demographic variables among adolescents.

Hypotheses

A hypothesis is a tentative statement predicting a relationship or difference between variables in a research study.

- **H01:** There is no statistically significant difference between the pre-test and post-test knowledge scores regarding the various impacts of substance abuse among adolescents in selected higher secondary schools.
- **H02:** There is no statistically significant association between pre-test knowledge levels regarding the various impacts of substance abuse and selected socio-demographic variables among adolescents.
- **H1:** There is a statistically significant difference between the pre-test and post-test knowledge scores regarding the various impacts of substance abuse among adolescents in selected higher secondary schools.
- **H2:** There is a statistically significant association between pre-test knowledge levels regarding the various impacts of substance abuse and selected socio-demographic variables among adolescents.
- Method and Materials

Research Approach

A quantitative research approach was adopted for the present study.

Research Design

A quasi-experimental, one-group pre-test and post-test research design was used to evaluate the effectiveness of selected audio-visual modalities.

Variables

- **Independent variable:** Selected audio-visual modalities regarding the various impacts of substance abuse.
- **Dependent variable:** Level of knowledge regarding the various impacts of substance abuse.
- Socio-demographic variables: Age, gender, religion, class of study, type of family, area of residence, family history of substance abuse, and the family member with a history of substance abuse, if applicable.
- Population: The population comprised adolescents.
- Target Population: The target population consisted of adolescents in Kanpur, Uttar Pradesh.
- Accessible Population: The accessible population consisted of adolescents studying at Ushadeep

Senior Secondary School, Kanpur, Uttar Pradesh, who were available during data collection.

Sample: The sample comprised adolescents who fulfilled the inclusion criteria for the study.

Sample Size

The sample size consisted of 60 adolescents.

Sampling Technique

A non-probability convenience sampling technique was used to select the participants.

Inclusion Criteria

The study included adolescents who:

- Were studying in the selected higher secondary school.
- Were able to understand English.
- Were willing to participate in the study.

Exclusion Criteria

The study excluded students who:

- Were absent at the time of data collection.
- Were unwilling to participate in the study.

Methods of Data Collection

Data were collected using a socio-demographic pro forma and a structured knowledge questionnaire regarding the various impacts of substance abuse. Selected audio-visual modalities were used as the educational intervention.

Development and Description of the Tools

The data collection tool consisted of two sections:

- **Section A:** Socio-demographic variables.
- **Section B:** Structured knowledge questionnaire regarding the various impacts of substance abuse.

RESULTS AND FINDINGS

Section A: Distribution of Adolescents According to Pre-Test and Post-Test Knowledge Levels

Table 01: Distribution of Adolescents According to Pre-Test and Post-Test Levels of Knowledge Regarding the Various Impacts of Substance Abuse (N = 60)

S. No.	Level of knowledge	Pre-test frequency (f)	Pre-test percentage (%)	Post-test frequency (f)	Post-test percentage (%)
1	Inadequate	18	30.00	0	0.00
2	Mild	35	58.33	15	25.00
3	Moderate	7	11.67	45	75.00
Total		60	100.00	60	100.00

Table legend: N*N* = total number of adolescents; *ff* = frequency; % = percentage.

Table 01 shows that, in the pre-test, 18 (30%) adolescents had inadequate knowledge, 35 (58.33%) had mild knowledge, and 7 (11.67%) had moderate knowledge regarding the various impacts of substance abuse. In the post-test, no adolescents were classified as having inadequate knowledge, 15 (25%) had mild knowledge, and 45 (75%) had moderate knowledge. These findings indicate an improvement in knowledge following the selected audio-visual intervention.

Section B: Effectiveness of Selected Audio-Visual Modalities

Table 02: Comparison of Pre-Test and Post-Test Knowledge Scores Regarding the Various Impacts of Substance Abuse Among Adolescents Using a Paired *t*-Test (N = 60)

S. No.	Test	Mean score	Mean difference	Standard deviation	Paired t-value	Level of significance
1	Pre-test	13.63		4.15		
2	Post-test	23.48	9.85	4.28	12.79	Significant at 0.05 level

Table legend: N*N* = total number of adolescents; *t* = paired *t*-test statistic; SD = standard deviation. The reported mean difference is based on the difference between the post-test and pre-test means.

Table 02 shows that the mean pre-test knowledge score was 13.63, with a standard deviation of 4.15, whereas the mean post-test knowledge score was 23.48, with a standard deviation of 4.28. The mean difference was 9.85, and the calculated paired *t*-value was 12.79. The result was reported as statistically significant at the 0.05 level, indicating that knowledge scores improved following the selected audio-visual intervention. Therefore, the null hypothesis H01 was rejected and the research hypothesis H1 was supported, subject to verification of the statistical analysis.

Section C: Association between Pre-Test Knowledge Levels and Selected Socio-Demographic Variables

Table 03: Association between Pre-Test Knowledge Levels Regarding the Various Impacts of Substance Abuse and Selected Socio-Demographic Variables Among Adolescents (N = 60)

S. No.	Socio-demographic variables	Statistical test	Reported finding
1	Age	Chi-square test	Significant
2	Gender	Chi-square test	Significant
3	Religion	Chi-square test	Significant
4	Class of study	Chi-square test	Significant
5	Type of family	Chi-square test	Significant
6	Area of residence	Chi-square test	Significant

CODEN (USA): IJPDBY

7	Family history of substance abuse	Chi-square test	Significant
8	Family member with a history of substance abuse	Chi-square test	Significant

Table legend: N*N* = total number of adolescents; $\chi 2\chi 2$ = chi-square statistic. Statistical significance was assessed at the 0.05 level.

Table 03 presents the reported association between pre-test knowledge levels and selected socio-demographic variables. According to the study findings, significant associations were reported for age, gender, religion, class of study, type of family, area of residence, family history of substance abuse, and the family member with a history of substance abuse. The null hypothesis H02 was reported as rejected, and the research hypothesis H2 was supported.

Note: The chi-square values, degrees of freedom, and exact p-values were not provided in the supplied results. These should be added to the final table after verification of the statistical output.

Major Findings

The major findings of the study were as follows:

1. The majority of adolescents, 42 (70%), belonged to the 16–18 years age group.
2. The majority of adolescents, 41 (68.33%), belonged to the Hindu religion.
3. The largest group, 25 (41.67%), were studying in Class XI.
4. The majority of adolescents, 51 (85%), belonged to nuclear families.
5. All adolescents, 60 (100%), belonged to rural areas.
6. A total of 9 (15%) adolescents reported a family history of substance abuse.
7. In the pre-test, 18 (30%) adolescents had inadequate knowledge, 35 (58.33%) had mild knowledge, and 7 (11.67%) had moderate knowledge.
8. In the post-test, no adolescents had inadequate knowledge, 15 (25%) had mild knowledge, and 45 (75%) had moderate knowledge.
9. The mean knowledge score increased from 13.63 in the pre-test to 23.48 in the post-test, with a mean difference of 9.85.
10. The calculated paired *t*-value was 12.79, which was reported as statistically significant at the 0.05 level.
11. Significant associations were reported between pre-test knowledge levels and the selected socio-demographic variables.

CONCLUSION

The findings of the present study indicate an improvement in adolescents' knowledge regarding the various impacts of substance abuse following the administration of selected audio-visual modalities.

In the pre-test, 18 (30%) adolescents had inadequate knowledge, 35 (58.33%) had mild knowledge, and 7 (11.67%) had moderate knowledge. In the post-test, no adolescents had inadequate knowledge, 15 (25%) had mild knowledge, and 45 (75%) had moderate knowledge.

The mean knowledge score increased from 13.63 in the pre-test to 23.48 in the post-test, with a mean difference of 9.85 and a reported paired *t*-value of 12.79. These findings suggest that the selected audio-visual modalities were effective in improving knowledge regarding the various impacts of substance abuse among the adolescents who participated in the study.

The study also reported significant associations between pre-test knowledge levels and selected socio-demographic variables. School-based educational programmes using audio-visual teaching methods may therefore be useful in promoting awareness about substance abuse and its harmful consequences among adolescents.

However, the findings should be interpreted in consideration of the one-group quasi-experimental design, convenience sampling technique, and sample size of 60 adolescents.

FUNDING

Nil

ACKNOWLEDGEMENT

Not Decree red.

AUTHOR CONTRIBUTION

All are contributed equally.

REFERENCES

1. Varvogli L, Darviri C. Stress management techniques: Evidence-based procedures that reduce stress and promote health. *Health Science Journal*. 2011.
2. Kliegman RM, St Geme JW, editors. *Nelson Textbook of Pediatrics*. 21st ed. Philadelphia: Elsevier; 2020.
3. Hurlock EB. *Developmental Psychology: A Life-Span Approach*. 5th ed. New Delhi: Tata McGraw-Hill; 2001.
4. Marlow DR, Redding BA. *Textbook of Pediatric Nursing*. 6th ed. Elsevier; 2006. p. 1122.
5. Reference details require verification. The supplied Google Share link should be replaced with the original publication or a reliable, accessible source.
6. Mayo Clinic. Drug addiction (substance use disorder): Symptoms and causes. Available at: https://www.mayoclinic.org/diseases-conditions/drug-addiction/symptoms-causes/syc-20365112 .
7. Kumar S, Singh R. Early initiation of substance use and its impact on youth behavior. *Indian Journal of Community Medicine*. 2020;45(2):150–154.

Bibliographic details should be verified before submission.

8. Bala N, Kaur G, Attri JP, Singh M, Thakur M, Jain P. Psychiatric and anesthetic implications of substance abuse: Present scenario. *Anesthesia: Essays and Researches*. 2015;9(3):304–309. doi:10.4103/0259-1162.161810.
9. Fletcher A, Bonell C, Hargreaves J. School effects on young people's drug use: A systematic review of intervention and observational studies. *Journal of Adolescent Health*. 2008;42(3):209–220. doi:10.1016/j.jadohealth.2007.09.020.