SJIF Impact Factor: 6.711

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 9
Issue: 9
Page N. 01-06
Year: 2025

Review Article

ww.wjahr.com

EVALUATING THE IMPACT OF STRUCTURED TEACHING ON HIV/AIDS AWARENESS AMONG ADOLESCENTS IN JODHPUR

Manish Saraswat*

Principal, Vyas College of Nursing, Jodhpur.

Article Received date: 10 July 2025 **Article Revised date**: 30 July 2025 **Article Accepted date:** 20 Aug. 2025

***Corresponding Author: Manish Saraswat**

Principal, Vyas College of Nursing, Jodhpur.

ABSTRACT

Background: Adolescents remain a high-risk group for HIV/AIDS due to insufficient knowledge, prevailing misconceptions, and limited access to structured health education. In India, especially in non-metropolitan regions like Jodhpur, there is a critical need for effective awareness programs targeting school-aged youth. **Objective:** To evaluate the impact of a structured teaching programme on improving knowledge about HIV/AIDS among adolescents in senior secondary schools in Jodhpur, Rajasthan. **Methods:** A pre-experimental, one-group pre-test and post-test design was employed. A total of 100 students from classes XI and XII were selected through convenience sampling. Participants completed a validated, 30-item knowledge questionnaire before and seven days after attending a structured 45-minute educational session on HIV/AIDS. Data were analyzed using paired t-tests to compare pre- and post-test scores, and chi-square tests were used to assess associations between knowledge levels and demographic variables. **Results:** The mean pre-test knowledge score was 7.36 (27.26%), which increased significantly to 22.70 (84.07%) in the post-test (mean difference = 15.34, $t = 32.667$, $p < 0.05$). Statistically significant associations were observed between pre-test scores and demographic variables such as age, gender, religion, and source of HIV/AIDS information ($p < 0.05$). No significant association was found with class level or family type. **Conclusion:** The structured teaching programme was highly effective in enhancing adolescents' knowledge of HIV/AIDS. Given the significant improvement observed, such interventions should be integrated into school curricula to foster awareness, correct misconceptions, and reduce stigma related to HIV/AIDS among youth.

KEYWORDS: HIV/AIDS, Adolescents, Health Education, Structured Teaching Programme, Awareness, Jodhpur.

INTRODUCTION

HIV/AIDS continues to be a major public health issue, particularly affecting adolescents, who often lack accurate knowledge and are highly susceptible to misinformation. In India, adolescents comprise a substantial portion of the population living with or at risk of HIV/AIDS, and yet their level of awareness remains inadequate. This vulnerability stems from several factors including societal stigma, restricted sex education, and reliance on unreliable sources of information such as peers or mass media.[1]

Despite government efforts through programs like the National AIDS Control Programme (NACP), significant gaps persist in the dissemination of HIV-related knowledge, especially in semi-urban and rural areas. For instance, a large-scale study in Bihar and Uttar Pradesh found that HIV awareness among adolescents improved only moderately over time—from 38.6% to 59.9% among boys, and from 30.2% to 39.1% among girls—highlighting a continued need for more intensive, targeted interventions.[2]

Studies consistently show that awareness levels are influenced by educational attainment, gender, urban-rural background, and media exposure. For example, adolescents from urban slums of Delhi were found to have limited awareness, with only 40% having heard of HIV/AIDS, primarily through television and school teachers.[3] In rural Maharashtra, while 87% of adolescents were aware of HIV transmission routes, many still held misconceptions, such as believing HIV could spread through coughing or sneezing.[4]

Importantly, educational interventions have been shown to improve awareness significantly. In Haridwar, classroom-based education was recommended after it was found that rural girls had better HIV knowledge than urban boys, emphasizing the need for structured, in-school programs.[5] Additionally, a longitudinal study of adolescents in India reported that exposure to mass media and internet use were positively associated with HIV awareness, suggesting that multi-platform approaches may be beneficial.[2]

Given these insights, structured teaching programs that are age-appropriate, engaging, and contextually relevant have become essential tools to improve knowledge and dispel myths among youth. This study aims to assess the effectiveness of such a structured teaching programme in enhancing HIV/AIDS awareness among senior secondary school students in Jodhpur, Rajasthan—a region where adolescent health education data is still sparse.

METHODOLOGY

Research Design

A pre-experimental, one-group pre-test and post-test design was adopted to evaluate the effectiveness of a structured teaching programme on HIV/AIDS awareness among adolescents.

Study Setting and Population

The study was conducted in selected senior secondary schools of Jodhpur, Rajasthan. The target population included students from Classes XI and XII, representing late adolescence (ages 16–18).

Sample and Sampling Technique

A total of 100 students were selected using a **non-probability convenience sampling** method. Inclusion criteria were: students currently enrolled in Classes XI or XII, aged between 16 and 18 years, and who gave consent to participate. Students absent during either the pre-test or post-test were excluded.

Tool for Data Collection

Data were collected using a **self-structured knowledge questionnaire** consisting of 30 multiple-choice questions covering basic facts about HIV/AIDS, modes of transmission, prevention strategies, and misconceptions. The tool was validated by a panel of subject matter experts and pre-tested on a small sample to ensure clarity and reliability. The reliability of the tool was established using the **split-half method**, with a reliability coefficient (r) of 0.79, indicating acceptable internal consistency.

Intervention

A **structured teaching programme** was developed based on WHO and NACO guidelines and consisted of a 45-minute interactive lecture supported by visual aids and real-life scenarios. Topics included basic virology, routes of transmission, high-risk behaviors, prevention strategies, available treatments, and myth-busting.

Procedure

- **Pre-test:** Conducted using the questionnaire to assess baseline knowledge.
- **Intervention:** Structured teaching was delivered on the same day to all participants in a classroom setting.
- **Post-test:** Administered seven days after the intervention using the same questionnaire.

Data Analysis

Collected data were coded and analyzed using SPSS software. Descriptive statistics (mean, percentage, standard deviation) were used to summarize demographic data and knowledge scores. Inferential statistics, including **paired t-tests**, were used to assess the significance of the difference in pre- and post-test scores. **Chi-square tests** were applied to evaluate associations between demographic variables and knowledge levels. A p-value of <0.05 was considered statistically significant.

Table 1: Demographic Characteristics of Participants (N = 100).

Variable	Category	Frequency (n)	Percentage (%)
Age (in years)	16 years	45	45%
	17 years	40	40%
	18 years	15	15%
Gender	Male	55	55%
	Female	45	45%
Class	Class XI	60	60%
	Class XII	40	40%
Religion	Hindu	70	70%
	Muslim	20	20%
	Others	10	10%
Family Type	Nuclear	65	65%
	Joint	35	35%
Source of HIV/AIDS Info	TV/Radio	30	30%
	Internet	25	25%
	School	35	35%
	Others	10	10%

Table 2: Comparison of Pre-test and Post-test Knowledge Scores on HIV/AIDS (N = 100).

Test	Mean Score	Standard Deviation (SD)	Mean Difference	t-value	p-value
Pre-test	7.36	2.15	–	–	–
Post-test	22.70	3.28	15.34	32.667	<0.05

Interpretation: The post-test scores increased significantly after the structured teaching programme, indicating improved knowledge. The difference was statistically significant at $p < 0.05$.

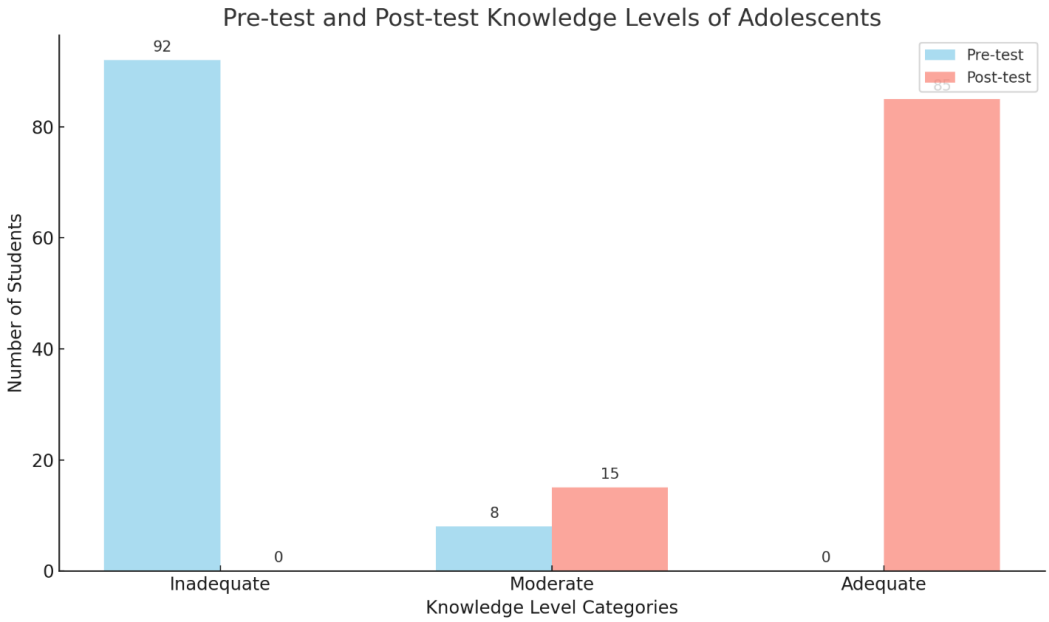

Figure 1: Category-wise Comparison of Pre-test and Post-test HIV/AIDS Knowledge Scores Among Adolescents (N = 100).

Table 3: Association Between Pre-test Knowledge Scores and Selected Demographic Variables (N = 100)/

Demographic Variable	Chi-square (χ^2) Value	Degrees of Freedom (df)	p-value	Significant Association
Age	6.89	2	<0.05	Yes
Gender	4.12	1	<0.05	Yes
Class	2.45	1	>0.05	No
Religion	5.67	2	<0.05	Yes
Family Type	1.89	1	>0.05	No
Source of Information	7.34	3	<0.05	Yes

Interpretation: There was a significant association between knowledge scores and demographic variables such as age, gender, religion, and source of information. No significant association was found with class or family type.

DISCUSSION

The results of the present study demonstrate a significant improvement in adolescents' knowledge about HIV/AIDS following a structured teaching programme, with mean knowledge scores increasing from 7.36 (27.26%) to 22.70 (84.07%). This outcome highlights the effectiveness of structured educational interventions in bridging knowledge gaps among adolescents—a vulnerable group due to limited access to reliable sexual health information and the persistence of stigma in many communities.

These findings are consistent with those reported in similar Indian and international contexts. For instance, Kamble (2017) in Ludhiana found a significant rise in HIV/AIDS knowledge post-intervention, with scores increasing from 15.55 to 35.18, confirming the efficacy of structured health education in school settings.[6] Likewise, in Bhopal, Jan (2020) observed knowledge gains from a mean score of 9.83 to 21.65 after a similar program, supporting the reproducibility of such results across different regions.[7]

Another noteworthy study in Bengaluru, by Stephen et al. (2018), showed a 21% increase in knowledge post-intervention among adolescent girls, highlighting that even short, school-based interventions can produce substantial benefits.[8] These findings mirror the gains observed in the present study, where an interactive 45-minute session led to a marked increase in HIV/AIDS-related knowledge. Similar post-test improvements were

seen in a study by Neupane et al. (2024) in Bangalore and by Mishra (2018) in Odisha, demonstrating broad geographical applicability of structured teaching models.[9],[10]

In addition to overall knowledge improvements, the current study found statistically significant associations between pre-test knowledge scores and demographic variables such as **age, gender, religion, and source of information**, but not with class level or family type. These associations are in line with findings from other studies. For example, Gulzar (2018) found a significant correlation between students' HIV knowledge and their parents' education and occupation, emphasizing how socio-demographic factors shape baseline awareness.[11] Similarly, a study in Calabar, Nigeria, observed higher awareness among students with better access to media and school-based education, and found gender differences in knowledge retention.[12]

Our findings regarding the **source of information** being significantly associated with knowledge levels also resonate with previous work. Neupane et al. (2024) emphasized the inadequacy of mass media alone and stressed the role of school-based interventions in correcting misconceptions. Likewise, Meena (2024) demonstrated that visual and interactive learning—such as video-assisted sessions—produced better knowledge retention than traditional sources alone.[13]

The **non-significant association with class level and family type** in the current study is consistent with findings from Jan (2020) and Gulzar (2018), suggesting that educational exposure to HIV/AIDS content—rather than mere grade level or family background—may be a more decisive factor in determining awareness. This underlines the importance of integrating structured HIV education uniformly across classes and demographics.

CONCLUSION

The present study, supported by multiple other findings, confirms that structured teaching programs are a highly effective and adaptable method for improving HIV/AIDS awareness among adolescents. Furthermore, demographic variables such as age, gender, and source of information significantly influence baseline knowledge, pointing to the need for tailored educational strategies. Incorporating structured, interactive health education into school curricula nationwide is essential to reduce misconceptions, stigma, and risk behaviors among youth.

Overall, our study adds to the growing evidence that structured teaching interventions are highly effective in improving HIV/AIDS awareness among adolescents. These programs must be scaled up and systematically included in school health curriculums to create an informed and stigma-free generation.

REFERENCES

1. Patsani P, Parida J, Jena S, Panda A, Kumar Patra P, Pati S, et al. A scoping review on knowledge, beliefs, and practices towards HIV/AIDS among Indian adolescents. Children and Youth Services Review, June 1, 2024; 161: 107608.
2. Srivastava S, Chauhan S, Patel R, Kumar P. A study of awareness on HIV/AIDS among adolescents: A Longitudinal Study on UDAYA data. Sci Rep., Nov. 24, 2021; 11(1): 22841.
3. Kaur G. Factors Influencing HIV Awareness amongst Adolescent Women: A Study of Slums in Delhi.
4. Borkar A, Deshmukh NN, Lone DK, Khamgaonkar M, Khakse G. HIV/AIDS Awareness and Knowledge in Rural Adolescent: A Cross-sectional survey in Central India. International journal of scientific research, 2012; 3: 765–8.
5. Tyagi A. To Study the AIDS Awareness among Adolescence in Urban and Rural Areas of Haridwar District. Indian Journal of Health and Wellbeing, 2014; 5(9): 1058–62.
6. Laxman KA. Effectiveness of Structured Teaching on the Knowledge of HIV/AIDS among Adolescents in Selected Schools, Ludhiana, Punjab. journal of medical science and clinical research, 2017; 5(12): 31403–8.
7. Jan N. Role of Structured Teaching Programmes regarding Preventive Measures of HIV/AIDS in Selected Schools of Bhopal, MP, India. International Journal of Advances in Nursing Management, 2020; 8: 133–7.
8. Stephen N, Gusen N, Kumzhi P, Gaknung B, Auta DA, Bulndi L, et al. Effectiveness of structured teaching programme on transmission and prevention of human immunodeficiency virus/acquired immune deficiency syndrome among adolescent girls in Lowry Memorial High School, Bengaluru. Indian Journal of Sexually Transmitted Diseases and AIDS, 2018; 41: 73–82.
9. Subidha N, Laishram D, Lakshmi D. A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Life Style Changes for Preventing Spread of HIV/AIDS among adolescents: In Polytechnic Students, Bangalore. International Journal of Recent Innovations in Medicine and Clinical Research, Feb. 17, 2024; 2(3): 1–7.
10. Mishra R. Effect of Planned Teaching Programme on Knowledge of Adolescent Girls on Prevention of HIV/AIDS. Nursing Journal of India, 2018; 2: 89–91.
11. Gulzar M. How effective are planned teaching programmes regarding HIV/AIDS amongst the adolescent girl students? A case study using Ludwig von Bertanlaffy's general system model. International Journal of Scientific Reports, Sept. 29, 2018; 4(10): 246–53.
12. Oyo-Ita A, Ikpeme B, Etokidem A, Offor JB, Okokon E, Etuk S. Knowledge of HIV / AIDS

among secondary school adolescents in Calabar - Nigeria. Annals of African Medicine, 2005; 4(1).
13. Meena R. A Pre-Experimental Study to Assess the Effect of Video-Assisted Teaching on Knowledge Regarding Preventive Measures of AIDS among Adolescents at Selected School of Bhopal (MP). The Nursing Journal of India, 2024; 2: 81–8.