

Research Article

A STUDY ON HIV AND AIDS PREVENTION AWARENESS PROGRAM FOR IST YEAR BSC NURSING STUDENTS AT SRI RAMANAMAHARSHI COLLEGE OF NURSING SIRA ROAD TUMAKUR

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ABSTRACT

Objectives: 1. To assess the pre-test level of knowledge regarding the prevention of HIV and AIDS among 1st year B.Sc. Nursing students in Sri Ramana Maharshi college of Nursing at Tumakuru. 2. To evaluate the effectiveness of a structured teaching programme by comparing pre-test and post-test knowledge scores on prevention of HIV and AIDS among the study participants. **Methodology:** The research design of the study was pre –experimental one group pre-test and post test design .The sample consists of 60 1st Bsc nursing students Sri Ramana Maharshi college of Nursing Tumakuru, convenient sampling technique was used for the present study, the post test was conducted after 7 days of intervention by using same questionnaire. the data obtained was analysed by using descriptive and inferential statistics **Results:** The recent study evaluates and found that demographic variables majority of the subjects 22 (36.7%) were in the age group of 22 year and above, 15 (33.3%) were in the age group of 20-21 years, 10 (16.7%) were in the age group of 21-22 years and 08 (13.3%) were in age group of 19-20 years. Table 2 represents that majority of the subjects 40 (66.7%) were belonged to joint family, 20 (33.3%) were belonged to nuclear family. **Conclusion:** The data were analysed by applying descriptive and inferential statistics, the result of the study indicate that focus of this study was to explore level of knowledge regarding prevention of HIV and Aids among 1st B.Sc. Nursing students, analysis data shows highly significance difference found between pre test and post test knowledge score at the level of 0.05 the hypothesis is proved and accepted.

Keywords: HIV, Aids.

INTRODUCTION

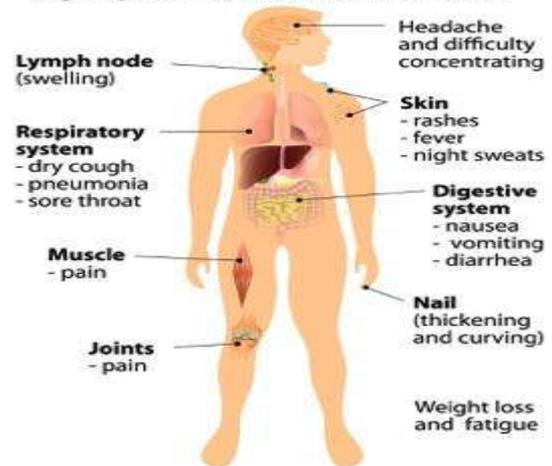
HIV (human immunodeficiency virus) is a virus that attacks the body's immune system. Without treatment, it can lead to AIDS (acquired immunodeficiency syndrome). There is currently no effective cure. Once people get HIV, they have it for life long. But the proper medical care can control the virus.



HIV signs and symptoms vary by stage, but early signs can include flu-like symptoms such as fever, chills, rash, sore throat, headache, swollen lymph nodes, and muscle or joint pain, HIV is spread through contact with genitals, such as during sex without a condom. This type of infection is called a sexually transmitted infection, also called an STI.

HIV also is spread through contact with blood.

Symptoms of HIV infection



PRIMARY MODES OF TRANSMISSION

Sexual contact:

The most common way HIV is transmitted is through anal or vaginal sex with someone who has HIV. The virus can enter the body through mucous membranes or tiny cuts in the skin. HIV. The virus can enter the body through mucous membranes or tiny cuts in the skin.

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1 Sharing needles:

Sharing needles, syringes, or other drug injection equipment can transmit the virus, as it can be present in the blood.

2 Mother to child:

An HIV-positive mother can transmit the virus to her child during pregnancy, childbirth, or breastfeeding. However, with proper medical care, such as antiretroviral therapy, the risk of transmission can be significantly reduced to about 1%.

Acquired Immunodeficiency Syndrome (AIDS) causes the significant public health challenges globally, with millions people have affected in all regions, cast, creed. HIV leads to weakness in the immune system by attacking CD4 cells and increasing vulnerability for opportunistic infectious diseases, without timely diagnosis and treatment. HIV can progress to AIDS, a life-threatening condition. Effective prevention strategies are essential to reducing the incidence of HIV and controlling its spread.

These include promoting consistent condom use, encouraging regular HIV testing, implementing harm reduction programs for people who inject drugs, expanding access to pre-exposure prophylaxis (PrEP), and preventing mother-to-child transmission through antiretroviral therapy (World Health Organization [WHO], 2023). Additionally, public education campaigns and stigma reduction play a vital role in supporting prevention efforts by fostering greater awareness and behavioral change.¹

The comprehensive HIV prevention requires a multi-pronged approach tailored to different populations, risk factors, and regional challenges. Biomedical interventions, such as antiretroviral therapy (ART) and pre-exposure prophylaxis (PrEP), have significantly reduced the risk of transmission when used consistently. ART not only improves the health and longevity of people living with HIV but also helps achieve viral suppression, effectively eliminating the risk of sexual transmission—a concept known as “undetectable = untransmittable (U=U)” (Cohen *et al.*, 2016).²

NEED FOR THE STUDY

HIV is the third-largest problem in India. However, globally, continues to face a significant public health challenge despite progress in combating the epidemic. As per the India HIV Estimations 2021 report by the National AIDS Control Organization (NACO), approximately 2.4 million people are living with HIV in the country, with new infections estimated at around 63,000 annually (NACO, 2022). Although the rate of new infections has declined by over 46% since 2010, the persistence of high-risk behaviors, socio-cultural barriers, and regional disparities underscores the need for sustained and targeted prevention efforts.³ There is a critical need to expand and strengthen HIV prevention strategies in India due to several factors. First, key populations—including sex workers, men who have

sex with men (MSM), transgender persons, and people who inject drugs (PWID)—continue to face high HIV prevalence, limited access to services, and significant stigma and discrimination. Second, adolescent and young adult populations are increasingly vulnerable due to inadequate sexual education, lack of awareness, and gender-based vulnerabilities (UNICEF, 2021).³ Moreover, urban-rural healthcare disparities, low testing rates, and limited access to pre-exposure prophylaxis (PrEP) remain significant challenges.

The integration of HIV prevention into broader primary healthcare and reproductive health services is still evolving and requires greater investment and policy prioritization. The COVID-19 pandemic has further disrupted HIV services, highlighting the need for resilient and adaptable healthcare systems (UNAIDS, 2022).³ Therefore, this study is essential to evaluate current gaps in prevention efforts, understand emerging risk patterns, and propose context-specific, evidence-based strategies to enhance the reach and effectiveness of HIV prevention programs across India. It also contributes to the broader global goal of ending AIDS as a public health threat by 2030.³

WORLD: Global HIV/AIDS Prevention: Status, Strategies, and Innovations

Current Global Burden and Trends By the end of 2024, cumulative efforts had led to a 40% decline in new HIV infections and a 56% reduction in AIDS-related deaths since 2010. Nonetheless, in 2023 and 2024, approximately 1.3 million new infections occurred each year, with AIDS-related deaths continuing to mount around 630,000 annually. As of 2023, around 39.9 million people were living with HIV globally, with 9.3 million lacking access to lifesaving antiretroviral therapy. Treatment access has improved: 77% of people living with HIV had access to ART by the end of 2024, though treatment among children lagged at 55% for those aged 0–14. In pregnant women with HIV, 84% received antiretroviral drugs to prevent mother-to-child transmission.²

Prevention Approaches:

Evidence-Based Interventions Combination prevention—integrating condoms, PrEP, voluntary medical male circumcision (VMMC), harm reduction, and treatment as prevention (TasP)—remains a foundational approach. Condom use, when consistent, reduces HIV transmission by approximately 80–98% over time. VMMC lowers HIV acquisition risk in heterosexual men by 38–66% over 24 months. Treatment as prevention (TasP): Early initiation of antiretroviral therapy (ART) reduces HIV transmission by over 90%, with global rollout now standard practice. PEPFAR’s impact: By late 2024, PEPFAR had saved 26 million lives, supported ARV treatment for 20.6 million people, initiated 2.5 million PrEP users, and enabled 5.5 million babies to be born HIV-free.³

Gaps, Disparities, and Funding Challenges Key populations (e.g. sex workers, MSM, people who inject drugs) account for about 55% of new HIV infections globally. In countries of the Global HIV Prevention Coalition (38 nations), new HIV infections dropped by 66% since 2010—outpacing the global average reduction of 38%. However, globally, many countries remain off-track to meet prevention goals.

Funding remains insufficient: In 2023, just US\$19.8 billion was available for HIV programs in low- and middle-income countries—nearly \$9.5 billion less than needed by 2025. UNAIDS warned that continued funding shortfalls could lead to 6 million additional infections and 4 million AIDS-related deaths by 2029.

Emerging Innovations in Prevention The long-acting injectable lenacapavir (administered twice a year) has shown nearly 100% effectiveness in trials—especially among young women in

sub-Saharan Africa, where participants receiving injections had zero new infections versus 55 in the oral PrEP group .

Gilead and partners aim to provide 2 million doses at cost in low-income countries, leveraging PEPFAR and the Global Fund for distribution .According to UNAIDS, lenacapavir heralds a potential "HIV prevention revolution," provided global cooperation ensures equitable access to this and other long-acting prevention tools .

OBJECTIVES

To assess the pre-test level of knowledge regarding the prevention of HIV and AIDS among 1st year B.Sc. Nursing students in Sri RamanaMaharshi college of Nursingat Tumakuru.2. To evaluate the effectiveness of a structured teaching programme by comparing pre-test and post-test knowledge scores on prevention of HIV and AIDS among the study participants.

METHODOLOGY

The research design of the study was pre –experimental one group pre-test and post test design. The sample consists of 60 1st Bsc Nursing students Sri RamanaMaharshi college of Nursing Tumakuru, convenient sampling technique was used for the present study, the post test was conducted after 7 days of intervention by using same questionnaire. the data obtained was analyzed by using descriptive and inferential statistics.

RESULTS

SOCIODEMOGRAPHIC VARIABLES.

Table No 1: Distribution of Subjects by their Age

N=60

Age in Years	Frequency(f)	Percentage(%)
a. 19-20	08	13.3
b. 20-21	20	33.3
c. 21-22	10	16.7
d. 22 and Above	22	36.7
Total	60	100.0

Table 1 depicts that majority of the subjects 22 (36.7%) were in the age group of 22 year and above, 15 (33.3%) were in the age group of 20-21 years, 10 (16.7%) were in the age group of 21-22 years and 08 (13.3%) were in age group of 19-20 years.

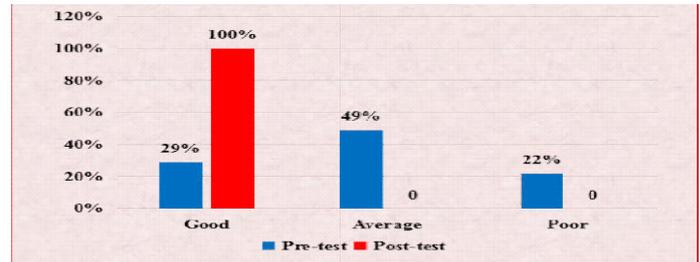
Table No: 2 Below table shows Frequency and percentage distribution of knowledge scores regarding a cardio pulmonary resuscitation.

n=60

Level of knowledge	Pre-test		Post-test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Good (above 25.79)	17	29	60	100
Average (25.79-21.49)	30	49	00	00
Poor (below 21.49)	13	22	00	00

It reveals that, distribution of level of knowledge among 1st year BSC students knowledge regarding Prevention of HIV and aids during

pre-test and post-test. Most of them in the pre-test 30 (49%) had average knowledge, 17 (29%) had good knowledge and 13 (22%) had poor knowledge. In post-test after Structured Teaching Programme, majority of the subjects 60 (100%) had good knowledge regarding prevention of HIV and aids.



Graph: The Column graph represents percentage distribution of subjects According to their level of knowledge scores in pre-test and post-test

DISCUSSION

To assess the pre-test level of knowledge regarding the prevention of HIV and AIDS among 1st year B.Sc. Nursing students in Sri Ramana Maharshi college of Nursingat Tumakuru. A pre-experiment alone group pre-test, post- test design was used to assess the effectiveness of structured teaching programme on knowledge regarding Prevention of HIV and AIDS among 1st year BSC Nursing students. A structured questionnaire was use to collect the data.

A structured teaching programme was implemented to find out the effectiveness. The investigator utilized the convenient sampling technique to select the subjects. Pre-test was conducted prior to implementation of intervention (structured teaching programme) and post-test was conducted after a week, using the same questionnaire as employed for pre-test.

- 1 HIV attacks immune system especially CD4 –T Cells, gradually Weakening body ability to fight infection.
- 2 Advanced stage of HIV infection causes certain causes cancer in the body
- 3 Anti retroviral (ART therapy) most people with HIV leave long and healthy lives
- 4 HIV is mainly transmitted through Unprotected vaginal and anal sex, Sharing Contaminated needles, syringes, transmission of infected blood from mother to child during the pregnancy, delivery or breast feed in if not treated.
- 5 HIV is not spread by casual contact such as hugging ,shaking hands ,sharing toilets, food, water or mosquito bites
- 6 This information to keep in the mind to reduce the stigma towards HIV .

PREVENTION

- 1 SAFE SEX
- 2 Correct and consistent use of male and female condoms
- 3 Limiting multiple sex partners
- 4 Regular testing of HIV and other STI
- 5 Pre exposure of prophylaxis for HIV Negative people within 72 hours of high risk exposure never share injected equipment .
- 6 Safe blood Screening

TESTING AND TREATING

- 1 HIV status is testing through rapid test or laboratory

- 2 Early Initiation of ART, prevent opportunistic infection, reduce sexual and vertical transmission

ROLE OF NURSES

- 1 Nurses and other health care workers place an important role in education, pre test, post test, counselling, monitoring side effects and strict infection prevention and standard precautions

COUNSELLING AND STIGMA

HIV counseling is a confidential support dialogue between client and therapist, home emotionally reduce the risk behavior and make informed discussion about treatment and disclosure

KEY EFFECTIVE HIV PREVENTION

- 1 The most HIV Infection prevention methods for community for comprehensive, combining, biomedical and structural approaches to local needs
- 2 Condom uses
- 3 post exposure

CONCLUSION

Replication of the study with large sample size required in order to generalization. Raising awareness about HIV transmission prevention options Prevent stigma towards HIV, Safe sexual practice. counseling service through mobile door to door outreach integration into community, Contraceptive methods should be practice, community engagement HIV & AIDS awareness and prevention, respects human rights and supportive environment and protect the individual and others

RECOMMEDATION

.A similar study can be done with large sample size. More voluntary organization& Ngo's should take part in create awareness about prevention HIV & AIDS. Create more awareness in the Schools & college students.

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