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## RESEARCH ARTICLE

### STRUCTURED TEACHING PROGRAMME ON HIV/AIDS: AN EVALUATORY APPROACH

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#### ABSTRACT

##### Background and objective of the study

HIV/AIDS is a disease of human immune system caused by HIV Virus. During the initial infection a person may experience a brief period of influenza like illness. This is typically followed by prolonged period without symptoms as illness progress it interfere more and more with the immune system. HIV is transmitted primarily via unprotected sexual intercourse, (including anal and even oral sex) contaminated blood transfusion, hypodermic needles and from mother to child during pregnancy, delivery or breast feeding. Some body fluids such as saliva and tears do not transmit HIV. Prevention of HIV infection primarily through safe sex and needle exchange programmes is a key strategy to control the spread of the disease<sup>1</sup>.

##### Objective of the study

1. To assess mean pre test and post test knowledge score of pre-university college students on HIV/AIDS
2. To determine the effectiveness of STP on prevention and control of HIV/AIDS
3. To find out the association between the pre- test mean knowledge score and selected demographic variables

##### Hypothesis

(All hypotheses will be tested at 0.05 level of significance)

**H1:** The mean post-test knowledge score of adolescents will be significantly higher than their mean pre- test knowledge score regarding prevention of HIV/AIDS.

**H2:** There will be a significant association between the mean pre- test knowledge score regarding prevention of HIV/AIDS among adolescents with their selected demographic variables

##### Methods

One group pre-test post test design was for this study. The sample consisted of 100 of adolescents who are studying in the selected P U College at Mangalore. Sample was selected by stratified random technique. Structured knowledge questionnaire was used to collect the data from samples. The collected data was analyzed by using descriptive and inferential statistics.

##### Results

The mean pre-test knowledge score is 7.57 and mean post test knowledge 19.62. Paired 't' test was done to find out the difference in mean knowledge score. Obtained 't' value was highly significant at 0.05 level of significance indicating that adolescents have improvement in their post-test knowledge while comparing with the pre-test knowledge. There was no significant association between mean knowledge score and selected demographic variables such as sex, age, type of family, income per month, place of residence, source of information, stream of education.

##### Interpretation and Conclusion

The finding of this study showed that there is a significant difference in the pre-test and post-test score of the adolescents. Adolescents are having more knowledge in the post-test comparing to the pre-test. In general adolescents have lack of knowledge regarding the prevention of HIV/AIDS. There is a need to educate adolescents regarding HIV/AIDS in order to prevent the occurrence of HIV/AIDS in the society.

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## INTRODUCTION

### Background of Study

"Live as if you were to die tomorrow. Learn as if you were to live forever." Mahatma Gandhi

HIV/AIDS is a disease of human immune system caused by HIV Virus. During the initial infection a person may experience a brief period of influenza like illness. This is typically followed by

prolonged period without symptoms as illness progress it interfere more and more with the immune system, making the person much more likely to get infection, including opportunistic infection, tumor that do not affect person who have working immune system<sup>1</sup>. HIV is transmitted primarily via unprotected sexual intercourse, (including anal and even oral sex) contaminated blood transfusion, hypodermic needles and from mother to child during pregnancy, delivery or breast feeding. Some body fluids such as

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saliva and tears do not transmit HIV. Prevention of HIV infection primarily through safe sex and needle exchange programmes is a key strategy to control the spread of the disease<sup>1</sup>. There is no cure of vaccine. However Anti Retroviral Therapy can slow the course of disease and may lead to a near normal life expectancy. While Anti Retroviral Therapy reduced the risk of death and complication from the disease<sup>1</sup>. Adolescence is the age of curiosity. The internet and television is being squarely blamed for increasing sexual awareness. News paper and magazines too have been found to be major influence. Cultural influences from youth oriented media all teens to become sexually sophisticated, while parents and teachers exhort there to abstain from sex<sup>2</sup>.

Historically the assumption of an active sexual life was thought to be situated in heterosexual monogamous relationship between young adults. Today initiative of sexuality reflects wide acceptance of multiple kinds of intimate relationship beginning early to adolescence. This phenomena relatively new societal norm creates a dangerous dilemma for many adolescents who are engaging unprotected sex. It brings pleasure, yet invites early child bearing as well as exposure to human immune deficiency virus (HIV) and other potentially emerging sexually transmitted diseases (STD)<sup>3</sup>. Sexually transmitted diseases, 'STD' for short are infections transmitted from one person to another during intercourse or other intimate contact. The people often believe that STD's are something that affects some category of people. The fact is that sexually transmitted disease can affect men and women from all backgrounds. It's just a question of who's having unprotected sex and sex with multiple partners. Often people who have contracted STD's show no symptoms, but as long as they are infected they can pass the disease on to their sexual partners<sup>2</sup>.

A study by Bryant A on "Creativity in AIDS education" (1996) reveals that the most common form of transmission of HIV/AIDS is Heterosexual contact. In an effort to educate the people about AIDS by creating role play, reading, education on AIDS<sup>4</sup>. The desire to have sex is normal and healthy for an individual. But identify the permissible age, ethics of abstinence and virtues of virginity. Even though AIDS can be treated if caught in the early stages, but "prevention is better than cure" as the proverb says. So researcher found that it is very essential to educate the adolescents on prevention and control of AIDS by conducting Structured Teaching Programme. So they will become aware of the dreadful disorder.

### **Need For Study**

AIDS was first detected in USA in 1981, and it continues its expansion across the globe with approximately 8500 new infections per day at the end of 2003, approximately 1,039,000--1,185,000 persons in the United States were living with HIV/AIDS<sup>5</sup>. Since the beginning of the epidemic, almost 70 million people have been infected with the HIV virus and about 35 million people have died of AIDS. Globally, 34.0 million [31.4-35.9 million] people were living with HIV at the end of 2011. An estimated 0.8% of adults aged 15-49 years worldwide are living with HIV, although the burden of the epidemic continues to vary considerably between countries and regions<sup>6</sup>.

In Asia and Pacific, nearly 372,000 people became newly infected in 2011, bringing total number of people living with HIV/AIDS there to nearly 5 million. AIDS claimed an estimated 310,000 lives in region in 2011<sup>7</sup>. According to a recent study in the British Medical Journal, India has an HIV/AIDS population of approximately 1.4-1.6 million people. While it was originally estimated that India might have had as many as 5.5 million people

infected in 2005, more accurate estimates put the number at below 2.5 million in 2007. These new figures are supported by the World Health Organization and UNAIDS<sup>8</sup>. As per the HIV estimations 2010, India is estimated to have 23.9 lakh people infected with HIV in 2009 at an estimated adult HIV prevalence of 0.31%. Adult HIV prevalence among men is 0.36%, while among women, it is 0.25%<sup>9</sup>.

In India according to the Health Ministry, National AIDS Control Organization (NACO) approximately 21 lakh people are living with HIV/AIDS globally, according to UNAIDS Report 34.0 million people have been estimated to be living with HIV/AIDS in 2011 and about half of them don't know their HIV status<sup>10</sup>.

The first case of HIV in India was reported in 1986 from Madras. Since then there has been an increase in the number of HIV infections over the years. As per the National AIDS Control Organization (NACO), it is estimated that about 3.8 million people were living with HIV and AIDS in India in the year 2000. About 20,000 cases of AIDS so far have been reported to NACO by States till 31st March 2001. Studies conducted in various parts of the country have confirmed that HIV infection has shifted from high-risk population to general population in India<sup>11</sup>. India has the third largest number of people living with HIV/AIDS. As per the 2008-09 HIV estimates, there are an estimated 23.9 lakh people currently living with HIV/AIDS in India with an adult prevalence of 0.31 percent in 2009<sup>12</sup>. Adolescents constitute a considerable proportion of India's population (22%) They are a rich human resources and an important part of development process. Good health of adolescents will help in raising health status of community. But adolescents are highly vulnerable to HIV/AIDS and Sexually Transmitted Diseases<sup>13</sup>. Review of literature and clinical experience made the investigator to realize that HIV/AIDS is one of the most spreading communicable diseases. Youngsters are more at risk because of unhealthy life style. This motivated the investigator to undertake a study on Prevention of HIV/AIDS among adolescents.

### **Objectives**

1. To assess mean pre test and post test knowledge score of pre-university college students on HIV/AIDS
2. To determine the effectiveness of STP on prevention and control of HIV/AIDS
3. To find out the association between the pre- test mean knowledge score and selected demographic variables

### **Methods**

One group pre-test post test design was for this study. The sample consisted of 100 of adolescents who are studying in the selected P U College at Mangalore. Sample was selected by stratified random technique. Structured knowledge questionnaire was used to collect the data from samples. The collected data was analyzed by using descriptive and inferential statistics.

### **Inclusion criteria**

1. Adolescents who are studying in selected higher secondary school at Mangalore.
2. Adolescents who are willing to participate in the study.

### **Exclusion criteria**

1. Students who are above 19 years of age and below 15 years of age

**Statistical analysis**

Descriptive and inferential statistics will be used to analyze the data. Findings will be presented in the form of Tables and Figures.

1. Demographic data will be presented in terms of frequency, percentage, mean and standard deviation.
2. Effectiveness of STP will be analyzed by using Paired t- test.
3. The association between selected demographic variables and mean pre- test knowledge score regarding prevention of HIV/AIDS will be determined by chi- square test.

**RESULTS**

**Section A: Description of demographic variables of the samples**

- Among the subjects 38.0% were in the age of 15-16 years and 62.0% were in the age group of 17-19 years.
- Among the subjects 54% were males and 46% were females.
- Majority of subjects (76.0%) were from nuclear family and (24.0%) from joint family.
- Among subjects (47.0%) had monthly income 0- 10,000 rupees and above and the remaining subjects (53.0%) had income 10,000 and above.
- Majorities (74.0 %) were staying in rural area and remaining (26.0%) were in urban.
- Among the subjects 48.0% had information on prevention on HIV/AIDS from news paper, magazine, internet. 16.0% received it from peer groups, family members, friends. 6.0% had information from health professionals and 30.0% received it from teachers.
- Among the subjects, 50% were science groups and 50% were commerce group. Majority of the subjects (72.0%) had excellent knowledge in the post-test whereas in the pre-test majority of subjects (85.0%) had poor knowledge (Table 1)

**Table 1** Frequency and percentage of distribution of sample characteristics

Sl.No	Demographic Variables	Frequency Percentage
<b>1. Age in years</b>		
a.15-16	38	38.0%
b.17-19	62	62.0%
<b>2. Sex</b>		
a. Male	54	54.0%
b.Fe-male	46	46.0%
<b>3. Type of family</b>		
a.Joint	24	24.0%
b.Nuclear	76	76.0%
<b>4. Income of the family</b>		
a. 0-10000	47	47.0%
b. 10000 and above	53	53.0%
<b>5. Place of residence</b>		
a. Urban	26	26.0%
b. Rural	74	74.0%
<b>6. Source of information</b>		
a. Newspaper, Magazine, Internet	48	48.0%
b. Peer group, Family members and friends	16	16.0%
c. Health professionals	6	6.0%
d. Teachers	30	30.0%
<b>7. Streams of education</b>		
a. Science	50	50.0%
b. Commerce	50	50.0%

N=100

**Table 2** Grading of pre-test and post-test knowledge scores of adolescents

Grading of knowledge	Range of score	Pre test	Percentage of subjects Post test
Excellent	80-100%	-	72.0%
Very good	60-80%	-	28.0%
Good	40-60%	-	-
Satisfactory	20-40%	15.0%	-
Poor	0-10%	85.0%	-

Maximum score: 26 , N = 100

**Section B: Knowledge of adolescents regarding prevention of HIV/AIDS**

Prior to the administration of Structured Teaching Programme, in the pre-test, majority(85.0%) had poor level of knowledge whereas in the post- test, none of the subjects had poor level of knowledge. In the pre-test, none of the subjects had good knowledge whereas in the post- test (72.0%) had excellent knowledge (Table 2).The mean post-test knowledge scores (75.46%) was higher than the mean pre-test test knowledge score (29.11%).(Table 3)

**Table 3** Range, Mean, mean percentage scores of pre-test and post-test knowledge scores

Area	Range	Mean±SD	Mean%
Pre-test	6	7.57 ± 1.74	29.11
Post test	6	19.62± 1.63	75.46

Maximum possible score: 26, N = 100

**Section C: Effectiveness of Structured Teaching Programme on knowledge regarding prevention of HIV/AIDS**

The mean post-test knowledge score (19.62) was higher than the mean pre-test knowledge scores (7.57). The computed ‘t’ value(46.8562) is higher than the table value at 0.05 level of significance (t99 = 46.8562).Hence the null hypothesis was rejected. The findings show that STP was highly effective in increasing the knowledge of the adolescents regarding prevention of HIV/AIDS. (Table 4)

**Table 4** Significant difference between the mean percentage of pre-test and posttest knowledge score

	Mean Score	Mean difference	SD	‘t’value	P
Pre-test	7.57		1.74		
Post test	19.62	12.05	1.63	46.8562	Significant

Maximum score=26, t99=46.8562, N = 100

**Section D: Association of post -test knowledge scores with demographic variables**

There was no significant association between knowledge of adolescents on prevention of HIV/AIDS and selected demographic variables such as sex, stream of education, type of family, income per month, place of residence, source of information, stream of education. Hence the null hypothesis was accepted. However there is no association between the knowledge of the adolescents and the demographic variables. Hence the hypothesis one is accepted.(Table 5)

**Table 5** Association between mean pre-test knowledge scores and selected variables

Sl.No.	Variable	Knowledge score		$\chi^2$	df	Inference
		≤ Median	> Median			
1	<b>Age in years</b>			0.091	1	Not Significant
	a.15-16	14	24			
	b.17-19	21	41			
2	<b>Sex</b>			0.039	1	Not Significant
	a. Male	21	33			
	b. Fe-male	17	29			
3	<b>Type of family</b>			0.0015	1	Not Significant
	a. Joint	16	8			
	b. Nuclear	48	28			
4	<b>Income of the family</b>			0.004	1	Not Significant
	a. 0-10000	28	19			
	b. 10000 and above	37	16			
5	<b>Place of residence</b>			2.19	1	Not Significant
	a. Urban	29	45			
	b. Rural	6	20			
6	<b>Source of information</b>			0.81	3	Not Significant
	a. Newspaper, Magazine, Internet	17	31			
	b. Peer group, Family members and friends	6	10			
	c. Health professionals	2	4			
	d. Teachers	8	22			
7	<b>Streams of education</b>			0.047	1	Not Significant
	a. Science	17	33			
	b. Commerce	18	32			

$\chi^2 = 3.84$  at  $P \leq 0.05$ ,  $N=100$

## DISCUSSION

The study intended to find out the knowledge of adolescents regarding prevention of HIV/AIDS and the effectiveness of Structured Teaching Programme. The findings of the study have been discussed with reference to the objective and hypothesis stated in chapter two.

### Sample characteristics

1. 54 % of subjects were males and remaining 46% were females.
2. All the subjects were studying in Pre-University College.
3. Highest number of the subjects was living in nuclear family (76.0%).
4. 50 % students were studying in science group and remaining 50% were in commerce.

### Effectiveness of STP in terms of gain in knowledge scores

1. In the post-test most of the subjects (72.0%) had excellent knowledge score as compared to the pre-test where majority (85.0%) had poor knowledge score.
2. The mean post-test knowledge scores (19.62) was higher than mean pre-test knowledge score (7.57) suggesting that the STP helped in improving the knowledge of adolescents regarding prevention of HIV/AIDS.
3. The mean percentage of post-test knowledge score was (75.46%) higher than the mean percentage of pre-test knowledge score (29.1%).

### Significant difference of mean pre-test and post-test knowledge scores on prevention of HIV/AIDS

The mean difference between the post-test and pre-test knowledge scores of adolescents regarding prevention of HIV/AIDS was found to be highly significant ( $t = 46.8562$ ,  $p < 0.05$ ).

### Association between the pre-test knowledge score of adolescents and selected variables.

1. There was no significant association between the pre-test knowledge scores and age ( $\chi^2 = 0.09$  at 0.05 level of significance).
2. There was no significant association between the pre-test knowledge score and sex ( $\chi^2 = 0.03$  at 0.05 level of significance).
3. There was no significant association between the pre-test knowledge scores and type of family ( $\chi^2 = .0015$  at 0.05 level of significance).
4. There was no significant association between the pre-test knowledge scores and income ( $\chi^2 = 0.004$  at 0.05 level of significance).
5. There was no significant association between the pre-test knowledge scores and place of residence ( $\chi^2 = 2.19$  at 0.05 level of significance).
6. There was no significant association between the pre-test knowledge scores and source of information ( $\chi^2 = 0.81$  at 0.05 level of significance with 3 df).
7. There was no significant association between the pre-test knowledge scores and stream of education ( $\chi^2 = 0.04$  at 0.05 level of significance).

The findings of present study are supported by various other studies where in researcher have proved that Structured Teaching Programme is effective in improving the knowledge. Studies have also shown that students, as well as general public lacked knowledge regarding HIV/AIDS. A quasi experimental study conducted to assess the effectiveness of Planned Teaching Programme in relation to knowledge and attitude of HIV/AIDS, among 160 adolescents in Karnataka in a selected pre-university college. The findings shows that the mean post test scores in relation to knowledge and attitude of HIV/AIDS was significantly higher than the mean pre-test scores which proved that the teaching programme was effective<sup>14</sup>. Based on the findings of the present study it could be concluded that adolescents need to

improve their knowledge regarding prevention of HIV/AIDS. Structured Teaching Programme is an effective and accepted teaching strategy.

#### **Limitation**

- The samples were chosen from only one institution. This restricts the generalize ability of the results.

#### **Delimitation**

- This study is delimited to the adolescents who are studying in a selected higher secondary school at Mangalore.
- Study was delimited to a small number of adolescents

#### **Recommendations**

On the basis of study findings, the following recommendations are made for further study:

1. A study could be conducted on a larger sample; thereby the findings can be generalized.
2. An exploratory study could be conducted to identify the knowledge and Practice of adolescents regarding prevention of HIV/AIDS.
3. An experimental study could be undertaken by having a Experimental group
4. A follow-up study of STP could be carried out to find the effectiveness in terms of retention of knowledge.
5. A similar study can be conducted along with health practices in adolescents regarding prevention of HIV/AIDS.

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**Conflict of interest: NIL**

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