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To study to Assess the Effectiveness of Planned Teaching on Knowledge and Attitude Regarding Transmission and Prevention of HIV/AIDS among Students of Junior Colleges

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: HIV/AIDS is becoming a growing global danger to mankind. Since the first cases were reported, HIV/AIDS has been spreading at an alarming rate.
Background: In India, The age group of 15-24 years accounts for 35% of all AIDS cases, indicating that the younger population is especially vulnerable to epidemics.
Methods: The study was based on an interventional evaluatory approach and one group pretest-posttest design used. 60 junior college student samples were collected using Non-probability

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purposive sampling technique. one way ANOVA and t-test used to estimate the association between post-test knowledge and posttest attitude score transmission and prevention of HIV/AIDS among students of junior college the and the selected demographic variables.

Results: This study revealed that the Mean value of the pretest knowledge score was 21.51 and the post-test knowledge score was 26.46 and the standard deviation of the pre-test knowledge score was ±4.96 and the post-test standard deviation was ±5.66. The t-value is 5.09 and the p-value is 0.0001. The mean value of the pretest attitude score was 28.48 and post-test attitude score was 40.25 and the standard deviation of the pre-test attitude score was ±4.13 and the post-test attitude score was ±2.45. The t- value is 18.98 and the p-value is 0.0001. There was a significant association of post-test knowledge score with the source of information about HIV/AIDS and there was no significant association of post-test attitude score regarding transmission and prevention of HIV/AIDS.

Conclusion: The study concluded that planned teaching on knowledge and attitude regarding transmission and prevention of HIV/AIDS among students of junior college was effective as a teaching strategy.

Keywords: Assess; effectiveness; knowledge; attitude; transmission; prevention; HIV/AIDS; students; junior college.

ABBREVIATIONS

HIV : Human Immunodeficiency Virus
AIDS : Acquired Immunodeficiency Syndrome
IEC : Institutional Ethical Committee

1. INTRODUCTION

HIV/AIDS is becoming a growing global danger to mankind. Since the first cases were reported, HIV/AIDS has been spreading at an alarming rate [1]. India has the world's third largest HIV epidemic, and adolescents are given special attention in the Indian epidemic [2]. The first case of HIV was diagnosed by Dr. Suniti Solmon in 1986 in a female sex worker from Chennai, India [3]. Over the years there has been an increase in the number of HIV infections [1]. Maharashtra was one of the first and earliest states to be affected by HIV/AIDS, with the first case being discovered in Mumbai in May 1986 [4].

The 10–19 year age group includes adolescents. This phase brings about transformation from childhood to adulthood through physical growth and psychological and behavioural changes. Sexual maturation often leads to intimate relationships. The experiences of adolescents change in social expectations and perception [1].

The lack of information on knowledge, perceptions and behaviours regarding HIV risk and preventive behaviours in Indian adolescents is alarming [5].

Human Immunodeficiency Virus infection leads to AIDS [Acquired Immunodeficiency Syndrome]. The final stage of HIV infections is when the CD4 Cells count falls below 200 cell/cu.mm of blood.

HIV is transmitted by mainly three primary routes i.e. unsafe sexual intercourse with infected person, parenteral transmission and perinatal transmission. Heterosexual intercourse is the main mode of transmission of HIV in India [6].

In India, The age group of 15-24 years accounts for 35% of all AIDS cases, indicating that the younger population is especially vulnerable to epidemics [2]. HIV/AIDS is one of the most serious public health issues of the late twentieth and early twenty-first centuries, and it is now one of the leading causes of morbidity and mortality worldwide. In the current situation, where researchers are still unable to find a cure and infection results in death, efforts around the world have concentrated on preventing the spread of HIV/AIDS [3].

A cross-sectional survey of urban adolescent schoolgirls in South Delhi concluded that more than one-third of them were unaware of the signs and symptoms of STDs other than HIV/AIDS. About 30% of respondents thought HIV/AIDS could be cured, 49% thought condoms should not be available to youth, 41% were unsure whether the contraceptive pill could protect against HIV infection, and 32% thought it should only be used by married women [7].

According to UNAIDS' Global AIDS Epidemic report (2014), the total number of people living with HIV in 2014 was 31.4-35.3 million, while the total number of AIDS deaths was 1.6-2.1 million

[8]. Poor, unemployed, underemployed, mobile and migrant youth, and street children are especially vulnerable to HIV because they have less access to HIV information and prevention, and they may be at risk of HIV infection multiple times [9].

2. METHODS

2.1 Study Setting and Design

The study was conducted at Seloo Dist. Wardha, Maharashtra, India. The pretest posttest design was used.

2.2 Sample Size and Sampling Technique

The aim of the study is to assess effectiveness of planned teaching on knowledge and attitude regarding transmission and prevention of HIV/AIDS. The 60 junior colleges students were selected using non probability purposive sampling.

2.3 Data Collection

The data was collected using demographic variables and questionnaires regarding knowledge and attitude about HIV/AIDS. Pre-test knowledge and attitude regarding transmission and prevention of HIV/AIDS was carried out on the first day of the test and after that intervention was given to the students for that planned teaching on HIV/AIDS was given at same day. The posttest was conducted on the 7th day after pretest. The 30 minutes was given to fill up test.

2.4 Study Questionnaire

The questionnaire was divided into three sections: demographic data, knowledge regarding HIV/AIDS and attitude regarding transmission and prevention of HIV/AIDS. In demographic sections gender, residents, family income, discuss personal matter freely with, are you aware HIV/AIDS?, any sources of information regarding HIV/AIDS? were included. In the knowledge section total 40 questions were included. The correct answer coded 1 point and wrong answer coded 0 points. There was no negative scoring for the wrong answer. The total score range from 0 to 40 points. The attitude section consists of total 10 questions. The correct answer frequency was scored on a Likert scale of 1.0 (strongly agree), 2.0 (agree), 3.0 (neutral), 4.0 (disagree), and 5.0 (strongly disagree), and each individual score of individual questions was summed and then transformed into proportion to characterize the attitude score.

2.5 Statistical Analysis

Statistical analysis will be conducted using SPSS version of statistical analysis software 23. To analyse the data ANOVA (Analysis of Variance), Independent t-test will be applied.

3. RESULTS

3.1 Section A: Distribution of Students of Junior Colleges According to Their Demographic Variables

The study deals with percentage wise distribution of students of junior colleges with their demographic variables. The 60 samples were drawn from non-probability purposive sampling with their demographic variables. The data described to characterised by gender, residence, family income, discuss personal matter freely with, are you aware HIV/AIDS?, any sources of information regarding HIV/AIDS?.

Distribution of samples with regards to their ‘gender’ showed that 43.3% (26) were male and 56.7% (34) were female.

Distribution of samples with regards to their ‘residence’ showed that 15% (9) were urban and 85% (51) were rural.

Distribution of samples with regards to their ‘monthly family income’ showed that 31.6% (19) were 3000-5000 Rs., 11.7% (7) were 50001-8000 Rs., 20% (12) were 8001-10000Rs., 36.7% (22) were >11000 Rs.

Distribution of samples with regards to their ‘Discuss personal matter freely’ showed that 35% (21) was mother, 1.7% (1) was father, 61.1% (37) was friends and 1.7% (1) was teacher.

Distributions of samples with regards to there ‘Are you aware HIV/AIDS?’ showed that 1.7% (1) was parents, 28.3% (17) teacher 13.3%(8) was friends, 8.3% (5) was health workers 8.3% (5) was TV/Radio,26.7% (16) was internet 13.3% (8) was newspapers, 0% (0) was posters/ pamphlets. The table no. 2 shows the demographic variables of students of junior colleges.

3.2 Section B: Assessment of Knowledge and Attitude Regarding Transmission and Prevention HIV/AIDS among Students of Junior College

3.2.1 Part I [a]: Assessment of existing knowledge score regarding transmission and prevention HIV/AIDS among students of junior college

Assessment of existing knowledge score ranges from 0-40. The finding of study shows that 0%(0.0) had poor level of knowledge, 11.7% (7) had average level of knowledge, 55%(33) had good level of knowledge, 33.3% (20) had very good level of knowledge and 0% (0). Minimum score was 10 and maximum score was 32 with mean score was 21.51±4.96 and mean % score was 53.77±12.4. The table no. 3 shows the existing knowledge score regarding transmission and prevention of HIV/AIDS among students of junior college.

3.2.2 Part I [b]: Assessment of existing attitude regarding transmission and prevention HIV/AIDS among students of junior college

Assessment of existing attitude score range from 0%-100%. The finding of study shows that 0% (0) strongly agree, 26.67% (16) agree, 68.33% (41) uncertain, 5% (3) disagree, 0% (0) strongly disagree. Minimum score was 18 and maximum score was 37 with mean score was 28.48±4.13 and mean % score was 56.96±8.26. The table no.4 shows the existing attitude score regarding transmission and prevention of HIV/AIDS among students of junior college.

3.2.3 Part II [a]: Assessment of post-test knowledge score regarding transmission and prevention HIV/AIDS among junior college students

Assessment of posttest knowledge score ranges from 0-40. The finding of study shows that 0%(0.0) had poor level of knowledge, 0%(0.0) had average level of knowledge, 40%(24)had good level of knowledge, 51.7% (31) had very good level of knowledge and 8.3% (5). Minimum score was 17 and maximum score was 38 with mean score was 26.46±5.66 and mean % score was 66.15±14.15. The table no. 5 shows the posttest knowledge score regarding transmission and prevention of HIV/AIDS among students of junior college.

3.2.4 Part II [b]: Assessment of post-test attitude score regarding transmission and prevention HIV/AIDS among students of junior colleges

Assessment of posttest attitude score range from 0%-100%. The finding of study shows that 53.33% (32) strongly agree, 46.67% (28) agree, 0% (0) uncertain, 0% (0) disagree, 0% (0) strongly disagree. Minimum score was 34 and maximum score was 45 with mean score was 40.25±2.45 and mean % score was 80.5±4.9. The table no.6 shows the posttest attitude score regarding transmission and prevention of HIV/AIDS among students of junior college.

3.3 Section C: Effectiveness of Planned Teaching on Knowledge and Attitude Regarding Transmission and Prevention of HIV/AIDS Among Students of Junior Colleges

3.3.1 Part I: Effectiveness of planned teaching on knowledge regarding transmission and prevention of HIV/AIDS among students of junior colleges

The majority of finding showed that there is a significant difference between pre-test and post-test knowledge scores interpreting effectiveness of planned teaching on knowledge regarding transmission and prevention of HIV/AIDS among students of junior colleges. Mean value of existing knowledge score was 21.51 and mean value of post-test knowledge scores was 26.46 and a standard deviation value of existing knowledge scores was ±4.96 and post-test knowledge scores was ±5.66. The calculated t-value was 5.09 and p-value was 0.0001. Hence it was statistically interpreted that effectiveness of planned teaching on knowledge regarding transmission and prevention of HIV/AIDS among students of junior colleges was effective. The table no.7 shows the effectiveness of planned teaching on knowledge regarding transmission and prevention of HIV/AIDS among students of junior college.

3.3.2 Part II: Effectiveness of planned teaching on attitude regarding transmission and prevention of HIV/AIDS among students of junior colleges

The majority of finding showed that there is a significant difference between pre-test and post-test attitude scores interpreting effectiveness of

planned teaching on attitude regarding transmission and prevention of HIV/AIDS among students of junior colleges. Mean value of existing attitude score was 28.48 and mean value of post-test attitude scores was 40.48 and a standard deviation value of existing attitude scores was ±4.13 and post-test attitude scores was ±2.45. The calculated t-value was 18.98 and p-value was 0.0001. Hence it was statistically interpreted that effectiveness of planned teaching on attitude regarding transmission and prevention of HIV/AIDS among students of junior colleges was effective. The table no.8 shows the effectiveness of planned teaching on attitude regarding transmission and prevention of HIV/AIDS among students of junior college.

3.4 Section D: Association of Posttest Knowledge and Attitude Score Regarding Transmission and Prevention of HIV/AIDS with Their Selected Demographic Variables

a: Association of posttest knowledge score

There was no significance association between knowledge score with associated with gender, residence, family income, discuss personal matter freely with, are you aware HIV/AIDS? and there was significance association between knowledge score with associated with any sources of information regarding HIV/AIDS?. The table no.9 shows the association of posttest knowledge regarding transmission and prevention of HIV/AIDS among students of junior college.

b: Association of posttest attitude score

There was no significance association between posttest attitude score with associated with gender, residents, family income, discuss personal matter freely with, are you aware HIV/AIDS? and any sources of information regarding HIV/AIDS?. The table no.10 shows the association of posttest knowledge regarding transmission and prevention of HIV/AIDS among students of junior college.

Analysis of data showed that there was significant difference between existing knowledge and attitude score and post knowledge and attitude score. Hence it was concluded that the knowledge and attitude significantly brought improvement on the knowledge and attitude regarding transmission and prevention of HIV/AIDS.

The following results were interpreted by analysis of data.

4. DISCUSSION

This study revealed that the Mean value of the pretest knowledge score was 21.51 and the post-test knowledge score was 26.46 and the standard deviation of the pre-test knowledge score was ±4.96 and the post-test standard deviation was ±5.66. The t-value is 5.09 and the p-value is 0.0001. The mean value of the pretest attitude score was 28.48 and post-test attitude score was 40.25 and the standard deviation of the pre-test attitude score was ±4.13 and the post-test attitude score was ±2.45. The t- value is 18.98 and the p-value is 0.0001. Hence, it was statistically interpreted planned teaching on knowledge and attitude regarding transmission and prevention of HIV/AIDS among students of junior colleges was effective. Thus, the H_1 was accepted and H_0 was rejected in this study. There was a significant association of post-test knowledge score with the source of information about HIV/AIDS and there was no significant association of post-test attitude score regarding transmission and prevention of HIV/AIDS.

Table 1. The Knowledge includes five parts

Sr. No.	Section	Content	Total No. of Question
1.	Section I	8 multiple choice items on meaning and general knowledge of HIV/AIDS.	08
2.	Section II	10 multiple choice items on transmission of HIV/AIDS	10
3.	Section III	15 multiple choice items on signs and symptoms and diagnosis of HIV/AIDS	15
4.	Section IV	7 multiple choice items on prevention of HIV/AIDS	07
5.	Section V	10 items on attitude scale on transmission and prevention of HIV/AIDS.	10

Table 2. Percentage wise distribution of students of junior colleges according to their demographic variables (n=60)

Demographic variables	No. of students	Percentage (%)
Gender		
Male	26	43.3
Female	34	56.7
Residence		
Urban	9	15.0
Rural	51	85.0
Monthly Family Income (Rs)		
3000-5000 Rs.	19	31.6
50001-8000 Rs.	7	11.7
8001-10000Rs.	12	20
>11000 Rs.	22	36.7
Discussed Personal Matter Freely		
Mother	21	35.0
Father	1	1.7
Friends	37	61.6
Teacher	1	1.7
Awareness about HIV/AIDS		
Yes	40	66.7
No	20	33.3
Source of information about HIV/AIDS		
Parents	1	1.7
Teacher	17	28.3
Friends	8	13.3
Health Workers	5	8.3
TV/ Radio	5	8.3
Internet	16	26.7
Newspapers	8	13.3
Posters/ Pamphlets	0	0

- **SECTION B: Assessment of Knowledge and Attitude Regarding Transmission and Prevention HIV/AIDS among Students of Junior College**

Part I [a]: Table 3. Assessment of existing knowledge score regarding transmission and prevention HIV/AIDS among students of junior college. (n=60)

Level of knowledge score	Score Range	Percentage Score	Pre test	
			Frequency	Percentage
Poor	1-8	0-20%	0	0.0
Average	9-16	21-40%	7	11.7
Good	17-24	41-60%	33	55
Very Good	25-32	61-80%	20	33.3
Excellent	33-40	81-100%	0	0.0
Minimum score	10			
Maximum score	32			
Mean knowledge score	21.51±4.96			
Mean % knowledge score	53.77±12.4			

Part I [b]: Table 4. Assessment of existing attitude regarding transmission and prevention HIV/AIDS among students of junior college (n=60)

Level of attitude score	Score range	Percentage score	Pre test	
			Frequency	Percentage
Strongly agree	5	81-100%	0	0.0
Agree	4	61-80%	16	26.67
Uncertain	3	41-60%	41	68.33
Disagree	2	21-40%	3	5.00
Strongly disagree	1	0-20%	0	0.0
Minimum score	18			
Maximum score	37			
Mean attitude score	28.48±4.13			
Mean % attitude score	56.96±8.26			

Part II [a]: Table 5. Assessment of post-test knowledge score regarding transmission and prevention HIV/AIDS among junior college students (n=60)

Level of knowledge score	Score range	Percentage score	Post test	
			Frequency	Percentage
Poor	1-8	0-20%	0	0.0
Average	9-16	21-40%	0	0.0
Good	17-24	41-60%	24	40
Very Good	25-32	61-80%	31	51.7
Excellent	33-40	81-100%	5	8.3
Minimum score	17			
Maximum score	38			
Mean knowledge score	26.46±5.66			
Mean % knowledge score	66.15±14.15			

Part II [b]: Table 6. Assessment of post-test attitude score regarding transmission and prevention HIV/AIDS among students of junior colleges (n=60)

Level of attitude score	Score range	Percentage score	Post test	
			Frequency	Percentage
Strongly agree	5	81-100%	32	53.33
Agree	4	61-80%	28	46.67
Uncertain	3	41-60%	0	0.0
Disagree	2	21-40%	0	0.0
Strongly disagree	1	0-20%	0	0.0
Minimum score	34			
Maximum score	45			
Mean attitude score	40.25±2.45			
Mean % attitude score	80.5±4.9			

- **SECTION C: Effectiveness of Planned Teaching on Knowledge and Attitude Regarding Transmission and Prevention of HIV/AIDS among Students of Junior Colleges**

Part I: Table 7. Statistical test results of effectiveness of planned teaching on knowledge (n=60)

Tests	Mean score	SD	't'-value	p-value	Significant
Pretest knowledge score	21.51	±4.96	5.09	0.0001	S, p<0.05
Post Test knowledge score	26.46	±5.66			

Part II: Table 8. Data statistics of effectiveness of planned teaching on attitude (n=60)

Tests	Mean score	SD	't'-value	p-value	Significant
Pretest attitude score	28.48	±4.13	18.98	0.0001	S, p<0.05
Post Test attitude score	40.25	±2.45			

SECTION D: Association of Posttest Knowledge and Attitude Score Regarding Transmission and Prevention of HIV/AIDS with their Selected Demographic Variables

Part I: Table 9. Association of posttest knowledge score (n=60)

Demographic variables	No. of students	Percentage (%)	Mean post test knowledge score	t value/ F value	p value
Gender	**No. of students**	**Percentage (%)**	**Mean post test knowledge score**	**t value/ F value**	**p value**
Male	26	43.3	29.42±4.41	3.951	0.168,
Female	34	56.7	24.20±5.51		NS p>0.05
Residence	**No. of students**	**Percentage (%)**	**Mean post test knowledge score**	**t value/ F value**	**p value**
Urban	9	15.0	29.00±4.73	0.391	1.470
Rural	51	85.0	26.01±5.73		NS, p>0.05
Monthly Family Income (Rs)	**No. of students**	**Percentage (%)**	**Mean post test knowledge score**	**t value/ F value**	**p value**
3000-5000 Rs	19	31.6	25.68±5.78		0.124,
50001-8000 Rs	7	11.7	30.57±5.91	2.002	NS,
8001-10000Rs	12	20	27.66±5.51		p>0.05
>11000 Rs	22	36.7	25.18±5.16		
Discussed Personal Matter Freely	**No. of students**	**Percentage (%)**	**Mean posttest knowledge score**	**t value/ F value**	**p value**
Mother	21	35.0	25.61±1.14		0.793
Father	1	1.7	30.00±0.0	0.345	NS,
Friends	37	61.6	26.81±6.01		p>0.05
Teacher	1	1.7	28.00±0.0		
Awareness about HIV/AIDS	**No. of students**	**Percentage (%)**	**Mean posttest knowledge score**	**t value/ F value**	**p value**
Yes	40	66.7	26.22±6.06	0.289	0.324
No	20	33.3	26.68±4.85		NS, p>0.05
Source of information about HIV/AIDS	**No. of students**	**Percentage (%)**	**Mean posttest knowledge score**	**t value/ F value**	**p value**
Parents	1	1.7	32.00±0.0	2.489	0.034
Teacher	17	28.3	24.76±4.90		S,
Friends	8	13.3	23.62±5.57		p>0.05
Health Workers	5	8.3	23.60±4.82		
TV/ Radio	5	8.3	25.40±8.25		
Internet	16	26.7	28.25±4.35		
Newspapers	8	13.3	31.12±4.35		
Posters/ Pamphlets	0	0	0		

Part II: Table 10. Association of posttest attitude score (n=60)

Demographic variables	No. of students	Percentage (%)	Mean posttest attitude score	t value/ F value	p value
Gender	**No. of students**	**Percentage (%)**	**Mean posttest attitude score**	**t value/ F value**	**p value**
Male	26	43.3	40.26±2.25	0.056	0.192
Female	34	56.7	40.23±2.65		NS, p>0.05
Residence	**No. of students**	**Percentage (%)**	**Mean posttest attitude score**	**t value/ F value**	**p value**
Urban	9	15.0	39.22±2.58	0.097	0.757
Rural	51	85.0	40.43±2.41		NS, p>0.05
Monthly Family Income (Rs)	**No. of students**	**Percentage (%)**	**Mean posttest attitude score**	**t value/ F value**	**p value**
3000-5000 Rs	19	31.6	40.31±2.42	0.133	0.940
50001-8000 Rs	7	11.7	40.57±2.87		NS, p>0.05
8001-10000Rs	12	20	40.41±2.10		
>11000 Rs	22	36.7	40.25±2.45		
Discussed Personal Matter Freely	**No. of students**	**Percentage (%)**	**Mean posttest attitude score**	**t value/ F value**	**p value**
Mother	21	35.0	40.66±2.61	0.756	0.524
Father	1	1.7	42.00±0		NS, p>0.05
Friends	37	61.6	39.91±2.38		
Teacher	1	1.7	42.00±0		
Awareness about HIV/AIDS	**No. of students**	**Percentage (%)**	**Mean posttest attitude score**	**t value/ F value**	**p value**
Yes	40	66.7	40.07±2.36	0.040	0.842
No	20	33.3	40.68±2.68		NS, p>0.05
Source of information about HIV/AIDS	**No. of students**	**Percentage (%)**	**Mean posttest attitude score**	**t value/ F value**	**p value**
Parents	1	1.7	39.00±0		0.265
Teacher	17	28.3	40.76±2.41	1.320	NS
Friends	8	13.3	38.62±2.82		p>0.05
Health Workers	5	8.3	40.40±2.88		
TV/ Radio	5	8.3	39.00±3.46		
Internet	16	26.7	41.06±1.87		
Newspapers	8	13.3	40.00±1.92		
Posters/ Pamphlets	0	0	40.25±2.45		

The findings are supported by following:

The department of OBGY from Hospital of Sion conducted a study on HIV/AIDS in college going adolescents were they collect 400 samples from three different faculties. The only pretest design was used. According to the findings, adolescent with alarming attitudes have a woefully inadequate understanding of HIV/AIDS [10].

A cross-sectional study conducted at Isfahan city among high school students were they select samples randomly. After agreeing to participate in the study, the students responded to a self-administered questionnaire. The total knowledge level of 60.2% of students was good, of 34.1% of them was moderate and 5.7% of subjects had poor knowledge levels, and it wasn't significantly different among girls and boys. Negative

attitudes towards AIDS and HIV positive people were found in the present study [11].

A school based study was conducted on HIV/AIDS education for adolescent at Bombay, India. The pretest posttest design was used to collect the samples. The pretest knowledge was conducted from 2919 students on transmission and prevention of HIV/AIDS after that educational program was provided for 10 secondary schools. The posttest was conducted from 2400 students after 1 month from pretest. The study revealed that, in pretest the 50% of students knew about HIV/AIDS is transmitted sexually, 34% students knew that there are no medicine that cure HIV/AIDS and 24% thought that HIV is transmitted by mosquito bites. The posttest knowledge that 95% of the students knew that HIV/AIDS is transmitted sexually, 92% knew that there is no HIV/AIDS cure and 76% knew that HIV/AIDS is not transmitted by mosquitos. The study concluded that there was a substantial increase in correct knowledge about HIV/AIDS among students after our single educational program and this showed school-based educational programs for adolescents in India can succeed in providing basic information regarding HIV/AIDS [12].

5. CONCLUSION

The study concluded that planned teaching on knowledge and attitude regarding transmission and prevention of HIV/AIDS among students of junior college was effective as a teaching strategy.

Mass media and schools can also play important role be used to spread information, knowledge about HIV/ AIDS, transmission and its preventative measures among adolescents.

CONSENT

We took written consent from all participants who were willing to participate in the study. All participants must be request to read and sign informed consent.

ETHICAL APPROVAL

The research is endorsed by Committee on Institutional Ethics of Datta Meghe Institute of Medical Sciences (DMIMS (DU)/IEC/2015-16/1710).

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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