

Research Article

IMPACT OF EDUCATIONAL INTERVENTION IN IMPROVEMENT OF KNOWLEDGE AND ATTITUDE TOWARDS HIV/AIDS AMONG RURAL COLLEGE STUDENTS

***Madhusudan M.¹, Mohammed Imran², Mahadeva Murthy T.S.¹, Shwetha N.³ and Suresha D.S.¹**

¹*Department of Community Medicine, MVJ Medical College and Research Hospital, Bangalore Karnataka*

²*Department of Community Medicine, Dr BR Ambedkar Medical College, Bangalore Karnataka*

³*Urban Health Centre, MVJ Medical College and Research Hospital, Bangalore Karnataka*

**Author for Correspondence*

ABSTRACT

An Interventional study carried out to assess the knowledge and attitude about HIV/AIDS among rural college going students and to assess the effect of educational Intervention in improvement of knowledge and attitude among them. A total of 521 students (230 boys and 291 girls) aged between 16 – 18 years were included in the study, where knowledge and attitude towards HIV/AIDS was assessed at baseline using pre tested questionnaires. Health education sessions were conducted on HIV/AIDS. Post Health education questionnaires were later distributed to assess the change in knowledge and attitude towards HIV/AIDS among study participants. It was found that, overall general knowledge regarding HIV/AIDS, knowledge regarding its mode of transmission, prevention and treatment was poor among the study participants. Following educational sessions a significant improvement was observed in knowledge and attitude of the students towards patients living with HIV/AIDS. Some misconceptions about HIV/AIDS were corrected through the health education intervention, as detected by improved correct response rates. Thus a planned HIV/AIDS education program has significantly improved the HIV/AIDS knowledge and attitude towards patients living with HIV/AIDS

Keywords: *AIDS, Education Intervention, Rural College Students, HIV*

INTRODUCTION

As per Global update on HIV treatment, WHO (2013), adolescents (10–19 years) and young people (20–24 years) continue to be vulnerable both socially and economically to HIV infection despite efforts to date. As per UNAIDS report on the global AIDS epidemic (2013), in 2012 there were approximately 2.1 million adolescents living with HIV. About one-seventh of all new HIV infections occur during adolescence.

According to Adolescents in India: a profile, WHO (2003) in young countries like India where more than 22.8% of its population is between 10 to 19 years, HIV can be a formidable threat both in terms of incidence and prevalence. According to Preventing HIV/AIDS in young people, WHO (2006) factors such as the lack of knowledge about HIV/AIDS, inaccessibility to healthcare services and commodities, lack of education and life skills, and early marriage have increased their vulnerability to HIV/AIDS. Despite the prominence of young adults in the HIV epidemic, prevention research regarding adolescents has been scant.

As per Report on the global AIDS epidemic, UNAIDS (2007) researches carried worldwide have shown that participating in schooling is a critical factor in protecting young people and especially girls, from HIV infection. According to Impact of HIV and Sexual Health Education on the Sexual Behaviour of Young People, UNAIDS (1997) health education has been described as a ‘social vaccine’ and it can serve as a powerful preventive tool. There is further evidence that HIV and AIDS education does not result in an earlier age of sexual debut, and in fact it may delay the initiation of sexual activity and encouraging protective behavior upon sexual initiation.

Research Article

Very few intervention studies on HIV/AIDS awareness among pre-university college students have been done. Thus, this study was primarily designed to assess the level of awareness, attitude and beliefs regarding HIV/AIDS among pre-university college students as well as to improve their awareness regarding the same through health education.

MATERIALS AND METHODS

Study design: Educational interventional study

Study duration: Two month December 2013 to January 2014

Study participants: Study was carried out in two government pre-university colleges in Hoskote, Bangalore (Government Boys PU College and Government girls PU College, Hoskote). All the college students aged between 16-18 years who were present at the time of study were included. A total 521 students (230 boys and 291 girls) were present at the time of study.

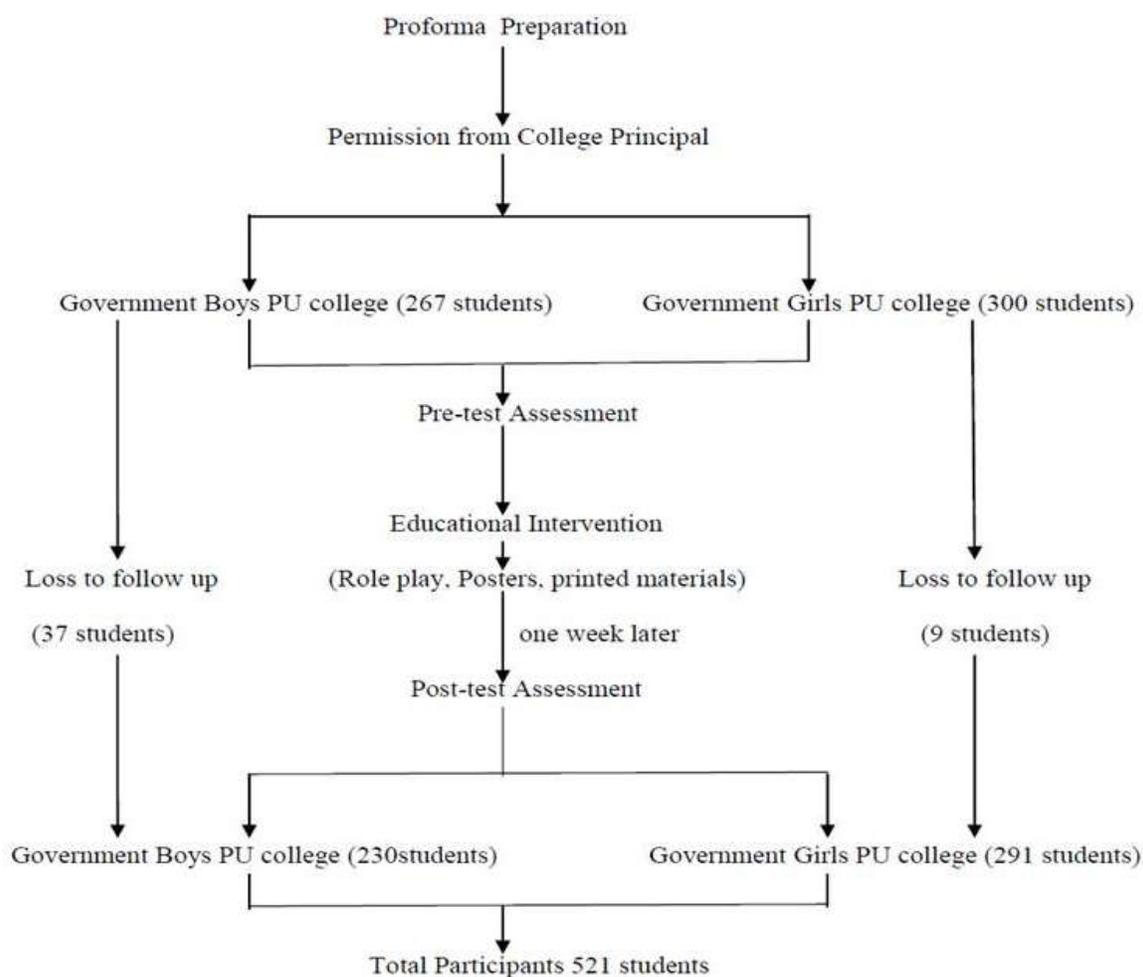


Figure 1: Methodology Flow Chart

Study Process

A pre structured proforma was prepared both in English and local language Kannada. Permission from the college Principal was taken before the study. Brief introduction was given to the students regarding the importance and purpose of the study by the investigator. Questionnaire was distributed among the students to assess their baseline knowledge and attitude. No information pertaining to personal identity

Research Article

was collected to ensure unbiased response. An educational intervention was done with the help of posters, printed materials and a role play done by group of intern's after proper training given by the investigator. Some of the issues given in A Manual on HIV/AIDS Prevention, Care, Support and Treatment published by Karnataka State AIDS Prevention Society, July 2010 in Kannada language was used for role play making. One week after an intervention a post test was undertaken by using same questionnaire that was used in pre test to assess the improvement of their knowledge and attitude about HIV/AIDS.

Statistical Analysis

Z test for proportions was used to compare the pre and post test knowledge and attitude towards HIV/AIDS among the college students. The statistical significance was evaluated at 5% level of significance.

RESULTS

Out of total 521 study subjects, 230 were boys and 291 were girls aged between 16 to 18 years. It was found that the general knowledge regarding HIV/AIDS were high among boys compared to girls. Knowledge regarding AIDS caused by virus was known by 94.3% boys and 89.7% girls in pre test assessment which was increased to 95.7% and 95.9% in boys and girls respectively which was found to be statistically significant. Overall only 34% study subjects were aware about National Aids Control Programme which was increased to 90.2% post educational intervention. Knowledge regarding place where HIV testing is done and free treatment availability was 45.5% and 44% respectively which was increased to 88.7% and 82.1% post educational intervention and this finding was found to be statistically significant (Table 1)

Table 1: Knowledge about HIV/AIDS among study participants pre and post educational intervention

Knowledge questions	Percentage of correct response					
	Boys (%)		Girls (%)		Total (%)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
AIDS caused by virus	94.3	95.7	89.7	95.9	91.7	95.8
					p<0.01	
AIDS is completely curable	51.3	84.3	70.8	83.3	62.2	83.7
					p<0.01	
AIDS is the most deadly disease	76.1	93	78	89.3	77.2	91
					p<0.01	
Place where HIV testing done	53.9	79.1	38.8	96.2	45.5	88.7
					p<0.01	
Know about NACO*	47.4	87.4	23.4	92.4	34	90.2
					p<0.01	
Govt. provides free treatment for AIDS patients	50	68.7	39.2	92.8	44	82.1
					p<0.01	

*NACO= National Aids Control Organization

The overall knowledge regarding modes of transmission for AIDS was high among the girls compared to boys. Only 64.8% boys were aware that it is transmitted through unprotected sexual intercourse compared to 80.4% girls. Some of the misconceptions were identified that 26% of study subjects responded that AIDS is transmitted through mosquito bite, 16.7% through walking together with AIDS patients, 31.3% through using same toilet seat, 20.3% by touching AIDS patients and 16.7% by having food through same plates. Only 61.4% subjects were aware that HIV can be transmitted from infected mother to baby which was increased to 78.1% post educational intervention (Table 2)

Research Article

Table 2: Knowledge regarding modes of transmission among study participants pre and post educational intervention

Mode of transmission questions	Percentage of correct response					
	Boys (%)		Girls (%)		Total (%)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Unprotected sex (sex without condom)	64.8	92.6	80.4	83.5	73.5	87.5
Bitten by a mosquito	63.5	87	82.1	95.9	73.9	91.9
From a toilet seat	56.1	86.1	78.7	88	68.7	87.1
Reusing someone else's syringe	57.4	79.1	83.2	91.8	71.8	86.2
Receiving a HIV infected blood	62.2	75.2	78	83.2	71	79.7
Kissing cheek	55.2	77.4	74.6	75.3	66	76.2
From mother to baby	54.8	71.3	66.7	83.5	61.4	78.1
Touching person living with HIV	67.8	69.6	89	95.9	79.7	84.3
Walking together with person living with HIV	70.9	79.1	93.1	96.6	83.3	88.9
Having food in same plate	72.6	98.7	91.8	89.7	83.3	93.7

Overall 60.8% of study subjects responded that AIDS patients cause harm to the society which was reduced to 32.1% post educational intervention. Attitude towards showing sympathy to AIDS patients was increased from 77.3% to 83.8% in girls where as in boys it was increased from 72.2% to 75.5%. Overall attitude regarding sitting next to AIDS patients and allowing them to attend public functions was increased from 73.3% to 82% and 75.2% to 88.5% pre and post educational intervention respectively which is statistically significant finding (Table 3)

Table 3: Attitude of study participants towards HIV/AIDS patient's pre and post educational intervention

Attitude questions	Percentage of correct response					
	Boys (%)		Girls (%)		Total (%)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
HIV/AIDS patients cause harm to society	30.9	70	45.7	66.3	39.2	67.9
Have sympathy for AIDS patients	72.2	75.2	77.3	83.8	75	75.6
Will they sit next to AIDS patients	63	71.7	81.4	90	73.3	82
Should AIDS patients be allowed to attend public functions	64.8	82.2	83.5	93.5	75.2	88.5

Research Article

Overall awareness regarding method of prevention was high among girls with respect to screening of blood before transfusion (91%), using new sterile syringes (81.4%), having sex only with faithful partners (90.4%) compared to 81%, 63.5% and 76% among boys respectively but awareness regarding prevention by using condom during sexual intercourse was high among boys (83.9%) compared to 52.9% in girls. Post educational intervention awareness regarding prevention of transmission by using condom using sexual intercourse and using new sterile syringes was increased from 83.9% to 100% and 63.5% to 100% in boys compared to 52.9% to 91.1% and 81.4% to 92.8% respectively among girls (Table 4)

Table 4: Knowledge regarding methods of prevention among study participants pre and post educational intervention

Methods of prevention	Percentage of correct response					
	Boys (%)		Girls (%)		Total (%)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Using condom during sexual intercourse	83.9	100	52.9	91.1	66.6	95
Screening blood before blood transfusion	81	94	91	98.3	86.6	96.4
Using new sterile syringe	63.5	100	81.4	92.8	73.5	96
Having sex only with your faithful partner	76.1	93	90.4	95.9	84	94.6

Out of 521 study subjects for 134(25.7%) subjects the source of information regarding HIV/AIDS is from combination of sources (friends, jatha, newspaper, radio and television), followed by 99 (19%) from combination of newspaper and television, newspaper 81(15.5%), television alone 67(12.9%), combination of newspaper, television and friends 53(10.2%), friends alone 50(9.6%), jatha 25(4.8%) and radio 12(2.3%). (Table 5)

Table 5: Source of information regarding HIV/AIDS among study participants

Source of Information	Boys No (%)	Girls No (%)	Total No (%)
Friends+ Jatha+ newspaper+ radio+ television	55(23.9)	79(27.1)	134(25.7)
Newspaper +Television	31(13.5)	68(23.4)	99(19)
Newspaper	52(22.6)	29(10)	81(15.5)
Television	34(14.8)	33(11.3)	67(12.9)
Newspaper +Television+ Friend	19(8.3)	34(11.7)	53(10.2)
Friends	24(10.4)	26(8.9)	50(9.6)
Jatha	7(3)	18(6.2)	25(4.8)
Radio	8(3.5)	4(1.4)	12(2.3)
Total	230	291	521

DISCUSSION

Awareness is the key to prevention of HIV/AIDS. Thus health education has been described as a “social vaccine” and can serve as a powerful preventive tool. The present study showed that 91.7% study subjects were aware that AIDS is caused by virus and this finding is in concordance with study done by Sugathan *et al.*, (2012) showed that 94.8% of students were aware. In our study the post test knowledge regarding this was increased to 95.8% compared to 99% in study done by Sugathan *et al.*, (2012)

In present study 37.8% students stated that AIDS can be cured, before educational intervention which was reduced to 16.3% post intervention. Study done by Sharma *et al.*, (2013) also showed that this misconception was reduced to 32% from 68% pre and post educational intervention respectively.

Research Article

This study showed that knowledge regarding modes of transmission was poor in general and it varied for different modes of transmission. It was observed that students were less aware of transmission of infection from mother to child (only 61.4%) in comparison to other modes of transmission. Similar finding was reported in a study done by Yadav *et al.*, (2011) and in Behavior Surveillance Survey Report (2006) across the country. However it was increased to 78% post educational intervention in present study.

Present study also revealed some misconceptions, 26.1% students thought that HIV can be transmitted through mosquito bite and 31.3% students believed that HIV can spread from common toilet seat. Similar findings were also reported in a study done by Bhosale *et al.*, (2010). Health education intervention succeeded to reduce these misconceptions significantly.

The present study showed that the overall knowledge regarding methods of prevention of AIDS was poor among study students, especially condom usage during sexual intercourse as preventive method was very poor (only 66.6% were aware). Similar findings were also observed in a study done by Yadav *et al.*, (2011). This observation highlights the level of ignorance about this important preventive measure in the sexually active young population in rural areas.

The present study showed that more than 25% of students having negative attitudes regarding HIV/AIDS patients regarding showing sympathy, sitting next to and allowing AIDS patients to attend public functions. Similar findings were reported in a study done by Avranci *et al.*, (2005). In present study even after intervention around 24% students responded not to show sympathy towards AIDS patients.

In our study higher proportion of students mentioned that combination of television, radio, newspaper and friends 134(25.7%) as their major source of information regarding HIV/AIDS whereas study done by Srivastav *et al.*, (2011) among adolescents showed television (59.5%) and radio (46.9%) as major source of information. These observations show the strength and effectiveness of media as source of information to students and very poor effort by health personnel which requires being strongly motivated.

Conclusion

From the present study it can be concluded that planned HIV/AIDS education program has significantly improved the HIV/AIDS knowledge and attitude towards patients living with HIV/AIDS.

ACKNOWLEDGEMENT

The Authors wish to thank the Principal of Government PU College both boys and girls college, management of MVJ Medical College for giving permission for this study. Our sincere thanks to all PU college students and intern's of MVJ Medical College who have been part of our study without whom the study would not have been possible.

ETHICAL CLEARANCE: Permission was taken from institutional head, Government PU College Hosakote, Bangalore.

REFERENCES

- Ayranci U (2005). AIDS knowledge and attitudes in a Turkish population: an epidemiological study. *BMC Public Health* 5 95-104.
- Bhosale SB, Jadhav SL, Singru SA and Banerjee A (2010). Behavioral surveillance survey regarding human immunodeficiency virus/acquired immunodeficiency syndrome among high school and junior college students. *Indian Journal of Dermatology Venereology and Leprology* 76(1) 33-37
- National Aids Control Organization(2006). Behavior surveillance survey, Ministry of Health and Family Welfare. Government of India, New Delhi.
- Sharma P, Vyas S, Davey A, Srivastava K and Pant B (2013). Mounting aids awareness through educational intervention: how effective can it be? *National Journal of Medical Research* 3(2) 151-55.
- Srivastava A, Mahmood SE, Mishra P, Shrotriya VP and Shaifali I (2011). Adolescence awareness: a better tool to combat HIV/AIDS. *National Journal of Community Medicine* 2(1) 86-90.

Research Article

Sugathan S and Swaysi M (2012). Knowledge about HIV/AIDS among Premedical Students in Misurata, Libya and the Effectiveness of a Health Education Intervention. *Journal of Community Medicine & Health Education* **2** 187.

UNAIDS (1997). Impact of HIV and Sexual Health Education on the Sexual Behaviour of Young People: A Review Update. Geneva, UNAIDS

UNAIDS (2007). Report on the global AIDS epidemic. Geneva, UNAIDS.

UNAIDS (2013). Global report: UNAIDS report on the global AIDS epidemic 2013. Geneva, Joint United Nations Programme on HIV/AIDS. Available: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2013/gr2013/UNAIDS_Global_Report_2013_en.pdf [Accessed on 20 March 2014]

WHO, UNICEF, UNAIDS (2013). Global update on HIV treatment: Results, impact and opportunities. Geneva, World Health Organization. Available: <http://www.who.int/hiv/pub/progressreports/update2013/en/index.html> [Accessed 3 March 2014]

World Health Organization (2003). Adolescents in India: a profile. Available: [http://www.whoindia.org/LinkFiles/Adolescent_Health_and_Development_\(AHD\)_UNFPA_Country_Report.pdf](http://www.whoindia.org/LinkFiles/Adolescent_Health_and_Development_(AHD)_UNFPA_Country_Report.pdf).

World Health Organization (2006). Preventing HIV/AIDS in young people—a systematic review of the evidence from developing countries. *WHO Technical Report Series* 938.

Yadav S B, Makwana NR, Vadera B N, Dhaduk KM and Gandha KM (2011). Awareness on HIV/AIDS among rural youth. *The Journal of Infection in Developing Countries* **5**(10) 711-716.