

# Impact of Educational Intervention on Knowledge Regarding HIV/AIDS among Adults

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## ABSTRACT

**Background:** HIV/AIDS is the genuine public health problem; in which prevention is the mainstay of the response where adult can play principle role in the society. The study aimed at finding out the effectiveness of the education intervention in improving knowledge among adults regarding the HIV/AIDS.

**Methods:** A pre- experimental semi structured interview was conducted to measure research variables among a group of 67 adults, who were the members of Local Community Organizations (LCOs) of Bagashori VDC of Bhaktapur in pre- test and post test. The obtained data was analyzed by using descriptive and inferential statistics.

**Results:** The findings revealed that after intervention respondents had significantly higher ( $p=0.001$ ) mean knowledge about HIV/AIDS.

**Conclusion:** The test confirmed that the education program on HIV/AIDS was able to considerably improve people's knowledge about HIV/AIDS.

**Key words:** adults, educational intervention, knowledge, HIV/AIDS

## INTRODUCTION

After 25 years later since its discovery in 1981, 40.3 million people worldwide are living with HIV and 3.1 million people died by AIDS and is capable of "hollowing out" the every core of a society, destroying the often most economically productive age group (25 to 45 years).<sup>1</sup> High risk groups within South Asian countries are showing evidence of dangerously high prevalence rates of HIV in the ranges of 60% to 70%.<sup>2</sup>

South East Asia Region has the second largest number of people living with HIV/AIDS, next only to Sub-Sahara Africa Nepal is a highly diversified country in terms of

geography, ethnicity, language, and culture, where the topography, environmental degradation, poverty and economic migration are all linked to HIV.<sup>3</sup> Since HIV infection is noted in all regions of the country, the highest prevalence rates found in the Central Region.<sup>4</sup>

In 1988 when the first case of HIV/AIDS was diagnosed, Ministry of Health and Population (MoHP) and Department of Health Science (DoHS) and other stakeholders came forward to address HIV and AIDS issues by preventive aspects.

This study aimed at finding out the effectiveness of the education intervention in improving knowledge about

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HIV/AIDS among adults by; determining the knowledge before and after education intervention and finding out the difference between the pre-test and post-test knowledge about HIV/AIDS among the adults.

## METHODS

The design of the study was pre- experimental, where Pre- test, intervention and post test method were used to identify the impact of education intervention on knowledge about HIV/AIDS among the adults (male and female of age group between 20 to 50 years) .A group of 67 adults were drawn from all 25 local community organizations (LCOs) of Bagashori VDC in Bhaktapur district, who were the members and were participated in the chairman- manager conference. Those organizations which were formed by the local people of Bagashori VDC in their own initiation with the help of local development fund (LDF), district development committee (DDC) Bhaktapur, in each ward, were considered as LCOs.

In order to measure the research variables a semi structured interview questionnaire was developed and was translated to Nepali.

The content validity of the instrument was established by literature review, consultant of HIV/AIDS, research advisor and subject teachers. The reliability of the instrument was established by pre testing the instrument on 7 adults who were the LCOs members of Dadhikot VDC of Bhaktapur district. On the basis of feedback, Questionnaire number 3.1 (a, d and e) of the Nepali version instrument was modified to make the language simple. The respondents were interviewed only by the Investigator.

An educational package was developed by the researcher with the help of literature available on HIV/AIDS. This consisted of meaning about HIV/AIDS, nature of disease, high risk groups, mode of transmission symptoms of AIDS, availability of drug, and preventive aspects of HIV/AIDS. Package was also translated in Nepali language.

Written permission to conduct the study was obtained from the authorities of the selected district. Informed consent was obtained from the subjects prior the interview. Identification number was used during pre and post interview. After pre-testing one and half hour teaching session was conducted for the same 67 respondents who had participated in the pre-test. The method used for teaching was lecture combined with active group participation. Educational materials used in intervention were; brochures, pamphlets and training materials. The educational intervention was carried out in two sessions at the convenience of the subjects of the study. After 1 and 1/2 weeks following intervention post-test was undertaken by using the same interview

questionnaire that was used in the pre-test. All 67 respondents participated in the post-test.

Both descriptive and inferential statistics were applied to show the significant difference of pre-test and post-test knowledge about HIV/AIDS.

## RESULTS

Total 40.3% of respondents were literate followed by 25.4 were illiterate (Table 1). Farming was the occupation of 40.2% of respondents followed by 10.5% each were service and business. Female were the principal participants of the study, which accounted 92.5% followed by 7.5% male. Most of the respondents (79.1%) were married and only one (1.4%) respondent was widow.

Table 1. Respondents' Demographic Characteristics

Demographic Characteristics	Number=67	percentage
Education Level		
Illiterate	17	25.4
Literate	27	40.3
10+2 and higher	23	34.3
Marital Status		
Unmarried	13	19.4
Married	53	79.1
Widow	1	1.4
Occupation		
Farmer	27	40.2
Housewife	26	38.8
Service	7	10.5
Business	7	10.5
Ethnicity		
Brahmin	35	52.2
Chhetri	27	40.2
Newer	3	4.4
Disadvantage	2	2.9
Gender		
Male	5	7.5
Female	62	92.5

In the pre-test most of the people meant HIV/AIDS was blood borne disease and in the post-test majority said HIV/AIDS is sexually transmitted and blood borne disease as well (Table 2). The mean score on knowledge about the meaning of HIV/AIDS was 1.3 in the pre-test and 2.4 in the post-test while standard deviation was 0.67 in the pre-test and 0.50 in the post-test respectively. The difference between pre-test and post-test mean knowledge was significant indicated by Z p value (0.016).

Table 2. Respondents' Knowledge about the Meaning of HIV/AIDS

Meaning of HIV/AIDS	Pre-test		Post-test		X Square p value
	No.	%	No.	%	
Sexually transmitted disease	27	40.3	60	89.5	0.000
Preventable disease	6	8.9	35	52.2	0.000
Blood born disease	32	47.7	56	83.6	0.000
Fatal disease	23	34.3	15	22.4	0.125
Mean Knowledge	1.3		2.4		0.016*
Standard deviation	0.67		0.50		

n=67, \* Z test

Total 55.2% and 14.9% respondents answered that sharing syringes and needles and sharing razors and blades transmit HIV/AIDS in the pre-test followed by 98.5% in the post-test (Table 3). Similarly 35.8% and 14.9% respondents respond that HIV/AIDS transmit to baby during pregnancy and during breast feeding in the pre-test followed by 98.5% and 92.5% in the post-test. Similarly 38.8% - 68.7% respondents were confused about different modes which do not transmit HIV/AIDS.

The mean scores on knowledge about the mode of transmission of HIV/AIDS as a whole in the pre-test and the post-test were found 6.37 and 13.92 with the standard deviations of 4.85 and 1.63 respectively. Further the difference in knowledge as a whole between pre-test and the post-test was found highly significant (0.000).

Table 3. Respondents' Knowledge about Mode of Transmission of HIV/AIDS

Mode of Transmission	Pre-test		Post-test		X square P Value
	No.	%	No.	%	
Unprotected sex	54	80.6	67	100	0.000
Unscreened blood transfusion	34	50.7	66	98.5	0.000
Sharing syringes and needles	37	55.2	66	98.5	0.000
Sharing razors and blades	10	14.9	66	98.5	0.000
Mother to baby:					
during pregnancy	24	35.8	66	98.5	0.000
during breastfeeding	10	14.9	62	92.5	0.000
Sharing meal *	21	31.3	67	100	0.000
Kissing*	30	44.8	67	100	0.000
Shearing toilet*	32	47.8	66	98.5	0.000
Sharing the swimming pool*	31	46.3	66	98.5	0.000
Insects/ animals bite*	33	49.3	66	98.5	0.000
Handshaking*	43	64.2	65	97.0	0.000
Hugging*	28	41.8	66	98.5	0.000
Sitting together	29	43.3	66	98.5	0.000
Mean knowledge	1.3		3.9		0.000†
Standard deviation	0.68		1.0		

n=67, \* Negative responses, † Z test

About 55.2 % and 37.3% respondents answered about the abstain from sex work and use condom are the ways of prevention of HIV/AIDS transmission in the pre-test followed by 100% in the post-test (Table 4). Similarly, 47.8% respondents argued to be faithful between partners in the pre-test followed by 97.0% in the post-test. In addition, 26.9% respondents answered that avoid transfusion of unscreened blood and its product and do not share syringes and needles are the ways to prevent from getting HIV/AIDS in the pre-test followed by 95.5 % in the post-test. More so, 8.9% respondents answered that if someone come in contact of blood it should be wash out immediately in the pre-test followed by 97.1% in the post-test.

Mean scores on knowledge about the ways to prevent transmission of HIV/AIDS as a whole in the pre test and the post test were found 1.94 and 4.88 with the standard deviation of 1.98 and 0.56 respectively. Further the

difference in knowledge between the tests found highly significant ( $P < 0.05$ ).

Respondents mean knowledge about HIV/AIDS in general such as its meaning, high-risk groups, symptoms of AIDS, mode of transmission, preventive aspects, consequences and drug used for HIV / AIDS was increased significantly in the post-test (Table 5). Whereas, on the whole, mean knowledge about HIV/AIDS was 2.12 in the pre-test and 4.8 in the post-test with standard deviation 4.5 in the pre-test and 1.0 in the post-test. Further, the difference between pre-test and post-test was calculated by applying Chi square test where p value was 0.001 at the 0.05 level of significance showed rejection of null hypothesis, and it is concluded that there is significant increase in the level of knowledge about HIV/AIDS in the post-test. Therefore educational intervention was effective to bring significance increase in the knowledge about HIV/AIDS, among the participants of the study.

Table 4. Respondents' Knowledge about Prevent of HIV/AIDS Transmission (n= 67)

Preventive Measures	Pre-test		Post-test		X Square P Value
	No.	%	No.	%	
Avoiding multiple sex partner	37	55.2	67	100	0.000
Using condom	25	37.3	67	100	0.000
Being faithful to partner	32	47.8	65	97.0	0.000
Using only screened blood and its products	18	26.9	64	95.5	0.000
Not sharing syringes and needles	18	26.9	64	95.5	0.000
Immediately washing out the blood if get contact	6	8.9	65	97.1	0.000
Mean Knowledge	2.05		5.65		0.000**
Standard deviation	2.02		0.76		

\*Multiple responses \*\* Z test

Table 5. Respondents Knowledge about HIV/AIDS as a Whole (n=67)

Knowledge	Pre-test		Post-test		Z test P value
	Mean	SD	Mean	SD	
Meaning of HIV/AIDS	1.3	0.67	2.4	0.50	0.016
Symptoms of AIDS	1.3	0.68	3.9	1.0	0.000
Consequences	1.6	1.35	3.4	0.67	0.000
High risk groups	1.9	1.13	3.2	1.22	0.000
Mode of transmission	6.4	4.85	13.9	1.63	0.000
Prevention	2.0	2.02	5.6	0.75	0.000
Drug used for AIDS	0.3	0.54	1.5	0.80	0.000
Total mean score	2.12	4.5	4.8	1.0	0.001

## DISCUSSION

The study revealed that all of the respondents heard about HIV/AIDS, and mostly they acquire information from television and radio. The study highlighted that before intervention mean knowledge about HIV/AIDS was 1.3 which was changed to 2.4 later after intervention. However, a study done among adolescence showed that 84.0% respondents had knowledge about meaning of HIV/AIDS.<sup>5</sup> The study revealed that only 43.3% respondents had knowledge that carrier stage of HIV virus is life long and more than 85% respondents knew about it after intervention. The study also presented that respondents' knowledge about mode of transmission was ranged from 14.9% to 80.6% in the pre-test and 92.5% to 100% in the post-test followed by mean score of 6.37 in the pre-test and 13.92 in the post-test. However the study carried out among adolescence revealed that knowledge about different mode of transmission was ranged from 91.4% to 77.7%.<sup>5</sup> Before intervention only 49.2% respondents' had knowledge that HIV virus weakens immunity power, where after intervention, 89.5% knew about weakened immunity. The important aspect of HIV/AIDS is carrier state, which was known by 43.3% in the pre-test and by 85.1% in the post test.

The findings of the study showed that education intervention played an important role in increasing knowledge about HIV/AIDS which can be supported by the study "Evaluation of a School Based HIV/AIDS Educational Intervention in Ukraine".<sup>6</sup> Regarding the mode of transmission, 80.6% respondents had knowledge that HIV/AIDS get transmitted through sexual contact, 55.2% had knowledge about sharing injections. Only 14.9% to 35.8% had knowledge that HIV/AIDS get transmitted from infected mother to baby during breast-feeding and during pregnancy in the pre-test, and in the post-test, more than 98.5% respondents had knowledge about different modes of transmission and 92.5% had knowledge about the mother to child transmission of HIV/AIDS. Findings of the study revealed that most of the respondents had misconception about the mode of not transmission of HIV/AIDS such as mosquito/ insects bites, kissing, hugging, and sharing toilet, food and handshaking. This finding was supported by the study among street children of Kathmandu valley.<sup>7</sup> After intervention 92% had knowledge about transmission through sexual contact and 76% knew that mosquito bites doesn't transmit HIV/AIDS. Before intervention, mean knowledge for ways to prevent transmission of HIV/AIDS was 2.05 which were increased to 5.65 after intervention.

Most of the respondents of this study were female, only literate and only 23.9% had taken training about HIV/AIDS, which might be the reasons behind relatively limited knowledge of the respondents about HIV/AIDS before education intervention and after intervention there was a significant increase in respondents' knowledge. The study findings indicated that there was significant increase in the knowledge in all the aspects of HIV/AIDS after education intervention. All of the respondents indicated that there is a need of awareness program about HIV/AIDS

## CONCLUSION

From the above discussion it can be concluded that education played an important role in increasing knowledge of the respondents about HIV/AIDS. If they are aware about different mode of transmission and preventive aspects of HIV/AIDS, their chance of involvement in risk behavior might be reduced.

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