Effect of Educational Intervention on Knowledge Regarding HIV/AIDS among Nursing Assistant Students of Shree Birendra Hospital, Nepal

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ABSTRACT

Introduction: : HIV/AIDS is a serious health problem all across the world. The modes of HIV transmission are unprotected sex with infected individual, injection or transfusion of HIV infected blood or blood products, donations of infected semen, organ transplants taken from an infected person and sharing of unsterilized injection equipment. The alarmingly increasing rate of prevalence of HIV among the youths due to engagement in high risk behaviors show that there is a desperate need for assessments to be conducted to ascertain the existing knowledge, attitudes and sexual practices of youths. **Methods:** One group pre and post-test experimental research design was adopted for the study. The pretest study was conducted on 4 December, 2012; followed by post- test study after two weeks. The study group was provided with course on HIV/AIDS between the tests. The study was carried out in 121 students of nursing assistants of Shree Birendra Hospital. **Results:** The findings show that the level of knowledge after educational intervention increases significantly. **Conclusion:** Educational intervention is likely to be significant in increasing awareness about HIV/AIDS.

Keywords: HIV/AIDS; knowledge; educational intervention.

INTRODUCTION

The worldwide spread of Human Immunodeficiency Virus (HIV) infection and Acquired Immuno Deficiency Syndrome (AIDS) is internationally recognized health problem of extraordinary scope and unprecedented urgency. Since it was first diagnosed in 1980s, the struggle against HIV continues. Almost 34.2 million people in the world have HIV, of them over 12.2 million are women. More than 8 million people have access to antiretroviral therapy[1] .

Regarding knowledge about the disease, Diclement[2] argues that there is a poor correlation between knowledge about HIV/AIDS and its transmission; and sexual behavior. Various studies show that people practice unsafe sex despite their knowledge of HIV/AIDS. Prevention programs of HIV/AIDS include communication targeted at behavioral change of most at risk populations (MARPs) like female sex workers (FSW) and their clients, men having sex with men (MSM) and at risk population like prison security services, youth, adolescent and security service personnels (Army and Police)[3].

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This study was carried out to find out the effectiveness of educational intervention on level of knowledge of HIV/AIDS on nursing assistant students of our institute.

METHODS

The design of the study was pre-experimental one group pre-test and post- test design (Figure 1). Census method was used for the study. Participants enrolled in courses being conducted by medical training department of Shree Birendra Hospital (SBH) were included. Altogether 121 nursing assistant students were enrolled in the study.

A self-administered structured questionnaire was developed as an instrument to measure the effectiveness of educational intervention on knowledge regarding HIV/AIDS. Respondent's knowledge about HIV/AIDS was considered as a dependent variable and the educational intervention as independent variable. The content validity of the instrument in terms of its adequacy and appropriateness was established by developing instrument based rigorous literature review, and by seeking the opinion of consultant physician working in the field of HIV/AIDS research. The reliability of the instrument was established by pre-testing instrument.

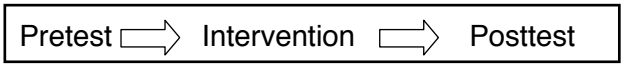

Figure 1: Study design

'Chi Square' test was used to compare the difference in knowledge scores on HIV/AIDS before and after intervention. The difference in gain score of responses between before and after intervention in both groups was computed using 'paired t test'.

Table 1: Distribution of respondents according to socio-demographic Characteristics (n=121).

Characteristics	Number	Percent
Age group		
20-24years	43	28.1
25-29 years	76	62.8
30-34 years	11	9.1
Sex group		
Male	117	96.7
Female	4	9.1
Marital status		
Married	81	66.9
Unmarried	38	31.4
Separated	1	0.1
Widower	1	0.1
Types of Family		
Nuclear	83	61.0
Joint	53	39.0

RESULTS

Among the respondents 62.8 % belonged to age group 25-29 years, followed by age group 20 - 24 years (28.1 %) and age group 30-34 years (9.1 %) (Table 1). The ethnic background, religion and education of the participations are shown in table 2. The level of knowledge of students on HIV/AIDS before intervention varied significantly and after the educational intervention the level of knowledge of HIV/AIDS was significantly increased (Table 3).

In regards to the contributing factors to increase HIV/ AIDS in Nepal, respondents agreed with the statement, 'low level of condom use contributes in increasing HIV/

Table 2:Distribution of Respondent According to ethnic group, religion and education. Characteristics (n=121)

Characteristics	Number	Percent
Ethnic group		
Chhetri/Brahmin Hill	93	76.9
Janjati	23	19.0
Dalit	5	4.1
Religion		
Hindu	116	95.9
Christian	2	1.7
Muslim	2	1.7
Buddhist	1	0.8
Education		
Below SLC	5	4.1
SLC level	78	64.5
Certificate level	35	28.9
Bachelor level	3	2.5

AIDS,' which accounted for 96% of responses prior to intervention. It increased to cent percent after educational intervention package given (Table 4). Responders also chose literacy (99.2 %) and Girls Trafficking (98.3%) as major causes for spread of HIV/AIDS.

'The high risk group of population most vulnerable to HIV/AIDS' are 'female sex workers,' was chosen by 95 % of respondents prior to intervention. After intervention it was slightly increased and 98.3 % respondents agreed to this (Table 5). In post test 99.2 % respondents opined that 'Migrants Workers' are the population with the high risk of acquiring HIV infection.

In regards to the sources of transmission of HIV/ AIDS, breast feeding and organ / semen donation as possible method of transmission was chosen by 47.1 % to 50.4 % of respondents. It raised to 91.7 % and 94.2 % respectively after educational intervention (Table 6). In pretest 95% of respondents chose 'use of condom' as possible measure of prevention of HIV/AIDS transmission. It was followed by use sterile equipment such as sterile syringe and needles (91.7 %) (Tables 7). The respondents' knowledge regarding prevention of mother to child transmission (PMTCT) of HIV was poor before intervention (only about two respondents out of 5 reported that taking anti retroviral therapy (ARV) during pregnancy reduces the transmission). In Post test 90.9 % of respondents had knowledge about role of ARV during pregnancy of HIV infected mother (Tables 8).

Before educational intervention, out of the total respondents 47.9 % respondents had performed the low scoring on knowledge (Table 9) and 52.2 % performed high scoring or knowledge.

After the intervention, 0.8 % respondents had performed low scoring on knowledge and rest (99.2 %) scored high on knowledge with χ^2 (p=0.000). It shows the level of knowledge of respondents after the educational intervention significantly increased.

DISCUSSION

Many studies have been done to determine the outcome of educational intervention on knowledge and practice regarding HIV/AIDS and its transmission. Sharma M has concluded that there is significant impact of education on knowledge regarding HIV/AIDS among adults[4]. In our study only 64.5% respondents were aware that HIV/AIDS is a preventable disease before the educational intervention. It

Table 3:Knowledge about Meaning of HIV/AID before and after educational intervention.

HIV/AIDS is ….	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Sexually transmitted disease	119	98.3	121	100.0
Blood born disease	114	94.2	117	96.7
Preventable disease	78	64.5	100	82.6
Fatal disease	7	5.8	26	21.5

Table 4: Contributing Factors in Increasing HIV/AIDS in Nepal before and after intervention.

Contributing factors	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Girl trafficking	117	96.7	119	98.3
Low level of condom use	116	95.9	121	100.0
Low literacy level	115	95.0	120	99.2
Culture /religion	29	24.0	92	76.0
Stigma related discrimination	40	33.1	95	78.5
Unemployment	100	82.6	116	95.9

Table 5: Respondents' Knowledge Regarding Most at Risk & at risk population (MARPs & ARPs) of HIV/AIDS before and after intervention (n=121)

MARPs &ARPs	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Injecting drug users	98	81.0	117	96.7
Female sex workers	115	95.0	119	98.3
MSM	21	17.4	106	87.6
Migrant workers	102	84.3	120	99.2
Young people	100	82.6	119	98.3
Women	72	59.5	118	97.5
Uniform service	62	51.2	103	85.1
Infant (mother to child)	101	83.2	118	97.3
Refugee	50	41.3	98	81.0
Prisoners	23	19.0	103	85.1

Table 6: Knowledge Regarding Source of Transmission of HIV/AID before and after intervention

Sources of transmission of HIV/ AIDS	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Unprotected sexual contact	115	95.0	120	99.2
Contaminated blood transfusion	116	95.9	120	99.2
Organ/semen donation	61	50.4	114	94.2
Sharing contaminated needle/syringe	112	92.6	117	96.7
Contaminated blade razor	104	86.0	117	96.7
HIV transmit to child during pregnant	110	90.9	118	97.5
HIV transmit to child in breast feed	57	47.1	111	91.7
HIV transmit to child in labour	98	81.0	119	98.3

Table 7: Knowledge Regarding Prevent HIV/AIDS Transmission before and after intervention

Methods to prevent HIV/AIDs	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Sex only with faithful	103	85.1	118	97.5
Use screen blood or blood product	90	74.4	108	89.3
Use sterile needle/syringe	111	91.7	119	98.3
Use condom safer	115	95.0	120	99.2
Not sharing blade/razor	99	81.8	105	86.0
HIV infected mother take ARV	13	10.7	102	84.3
Use sterile equipment	111	91.7	114	94.2

was seen in post test that this increased to 82 % with P value of 0.001, this is a significant change.

There was also significant change in knowledge regarding contributing factors that has led to increasing prevalence of HIV/AIDS in Nepal. Before educational intervention 33.1 % to 95.9 % of respondents were aware that girl trafficking, low level of condom use, low literacy level, cultural & religious values, social stigma, discrimination and unemployment were the chief causes leading to rising prevalence of HIV/AIDS. After the education intervention it was raised to 76 % to 100 %. Paudel B N et al. have reported that migrant laborers (38.8%) and illeterates (77%) form the major chunk of people infected by HIV/AIDS[5]. Similarly 12.9 % of people infected by HIV/AIDS had only primary level

Table 8: Knowledge Regarding Prevention of Mother to Child transmission (PMTCT) of HIV before and after intervention (n=121)

PMTCT of HIV	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Take ARV during pregnancy	48	39.7	110	90.9
Take ARV during labour	30	24.8	98	81.0
Perform caesarean section	21	17.4	62	51.2
Avoid breast feeding	31	25.6	77	63.6
Start ARV treatment to infant	30	24.8	90	74.4

Table 9: Comparison of level of knowledge regarding prevention of HIV/AIDS, P = 0.000

Level of knowledge	Before educational intervention		After educational intervention	
	Number	Percent	Number	Percent
Low (<60%)	58	47.9	1	0.8
High (60-80% above)	63	52.0	120	99.2
Total	121	100	121	100

of education[5]. The responses from the subjects of our study was coherent with Paudel's study.

Most at risk & at risk population (MARPs & ARPs) of HIV/AIDS to be young people, women, gay, prisoner, refugee, migrant workers, uniformed service , infant (mother to child), female sex worker and injecting drug users were correctly identified by 17.4% to 95.0% of respondents before intervention. The level of knowledge regarding MARPS and ARPs increased to 81.0% to 99.2 % after intervention. Such knowledge about MARPs and ARPs among general population will help focus the emphasis on prevention programs of HIV/AIDS[6].

One study done in adolescents of Bangladesh showed that 96.1 % of them had knowledge about transmission of HIV by sexual contact, 92.3 % knew about mother to fetus transmission and and 72.0 % of them thought that HIV is also transmitted by breast milk[7].

After educational intervention, 99 % respondents had knowledge that HIV/AIDS get transmitted through unprotected sexual contact. Before the course 47.1 % to 90.9% participants responded that HIV can be transmitted from mother to child during pregnancy, during labour and breast feeding; after the course this raised to 91.7 % t to 98.3 %. Similarly, before the intervention only 39.7% and 24.8 % participants were aware that taking ARV regularly during pregnancy and during labour reduces the chances of HIV transmission from mother to child. The level of knowledge was raised to 90.9 % and 81.0 % respectively after interventions.

CONCLUSION

It can be concluded that educational intervention has role to increase awareness about HIV/AIDS.

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