

Full Length Research Paper

Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV/AIDS): Knowledge, attitudes of university students of the State of Azad Kashmir (Pakistan)

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Epidemic of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) is a significant threat to humankind. This threat is more alarming to developing countries, where poverty and illiteracy may contribute towards higher risk for HIV transmission. To preclude the further feast of HIV, it is very important that people should have a good knowledge of HIV disease. The aim of this study was to examine the level of awareness and attitudes to HIV/AIDS among students at the University of Azad Jammu and Kashmir. A descriptive cross sectional survey was conducted over population samples of 467 students. Significance of data trend was measured by Chi-square test. Our findings showed that 97.9% of the students had heard about HIV/AIDS, 94% respondents considered HIV/AIDS as a fatal disease. About 81.6% of the respondents considered HIV/AIDS as a communicable disease, 84.6% of the respondents agreed that HIV/AIDS can be prevented. 66% of students said that there is no vaccine for HIV. Results of this study show that there is a mediocre level of knowledgeable awareness among the university students in Azad Kashmir. In order to increase the level of awareness to satisfactory level, it is recommended that HIV education should be part of curriculum among all levels of education. Mass media or public media campaigns can not only raise the knowledge in students but also in general public.

Key words: Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV/AIDS), Azad Kashmir, communicable disease, cross sectional study.

INTRODUCTION

Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV/AIDS) is the second widely spread communicable disease worldwide and the sixth common cause of death globally (WHO, 2004). About 65 million people have been affected and more than 25 million people have died of AIDS related causes. The situation

situation will even be gloomier, with 29 million new infections estimated by the year 2020, if prevention and treatment efforts are not accelerated. It is estimated that the number of persons living with HIV worldwide is 33.2 million. Deaths related to HIV/AIDS declined from 2.2 million in 2005 to 2.0 million in 2007. However, the number

of new infections rose to 2.5 times higher than the number of infected persons receiving treatment (UNAIDS, 2008). Global statistics and studies have shown that young people are more vulnerable to HIV and AIDS. At present, the proportion of young people between the ages of 10 and 24 is over 40% in Pakistan. At present, about 36 million children and young people are enrolled in schools, colleges, and universities in Pakistan (National AIDS Control Programme, 2009). Rather than being complacent, this underscores the need for countries to increase their commitment to prevention efforts. This is necessary if this pandemic must start reversal in order to meet the 2015 target by the millennium development goals (MDGs) and to save humanity from an impending scourge.

Situation in Pakistan

Pakistan is perceived as a 'high risk low prevalence country' concerning HIV/AIDS virus. There are 2,622 HIV and 321 AIDS cases in the country. However, HIV/AIDS cases are under-reported in the country and perhaps prevalent among 70,000 to 80,000 people in the country or 0.1% of the adult population (UNAIDS, 2008)

The Pakistan National AIDS Control Programme (NACP) is the one organization that coordinates national AIDS strategies. In the present scenario, HIV/AIDS prevention and control in Pakistan has gained attention due to donor driven pressure and allocations of large amounts of funding (\$40 million USD) through a comprehensive, five-year enhanced HIV/AIDS program (2003 to 2008) executed by NACP under the leadership of the Ministry of Health (Government of Pakistan) with financial assistance from the World Bank and other bilateral donors such as the Department for International Development (DFID) and Canadian International Development Agency (Canadian CIDA). The contract for the Enhanced Program was signed in 2002; however, the funds were released to the provinces only in 2004 (Ministry of Health Pakistan, 2009).

Population makes Pakistan vulnerable to the threat of a generalized epidemic. Moreover, the existence of a number of high risk sexual behaviors among the general population, internal and external migration, high level of injecting drug use, unsafe and invasive medical practices and inadequate health and social services are some of the factors increasing the risk of a generalized HIV epidemic in the country. Particular risk behaviors make some groups of people more-at-risk of infection, and these groups include Female Sex Workers (FSWs), Male Sex Workers (MSWs), Injecting Drug Users (IDUs), prison inmates, coal miners, etc. Moreover, denial about risks and vulnerability, and social stigma attached to HIV/AIDS further aggravates the problem (NACP, 2008). Also people visit barber shops for hair cutting and shaving purposes. Barbers are quite ignorant of the fact

that they may be the source of HIV transmission from one customer to the other. There is a potential risk of HIV and other blood borne disease transmission among the barbers who use unfavorable sterilization and disinfection procedures as well as poor knowledge, attitude and practices regarding disinfection and sterilization HIV transmission. A comprehensive and intensified public health approach has to be adopted with the involvement of all relevant sectors and barbers should not be neglected (Fantahun and Yeshambel, 2012). Knowledge about HIV/AIDS in barbers, have no result in any risk reduction practice, because barbers perceived HIV/AIDS to be an uncommon disease in our country (Janjua and Nizami, 2006). Even in some case, same syringe is used by multiple patients. These facts make the people of Pakistan more susceptible to HIV disease. Very few surveys have been conducted by individuals in Pakistan to raise the awareness of people regarding HIV. Janjua and Nizami (2006) reported that there should be a campaign to focus on two groups, a high risk group and general population. A study carried out by Ali (2008) through Population Council Pakistan (2008), new and cost effective measures should be introduced against the spread of sexually transmitted infections (STIs) to the general population. The recommendations that emerged from the study suggest a three pronged holistic approach that addresses behavior change through information, education and communication (IEC) strategies, health care delivery and monitoring and evaluation. Activities such as community level messages, workshops and trainings for media procedures, news paper staff, and community activists should be started (NACP). Nafisa (2011) reported that heterosexuality and sex with a sex worker is the most common risk factor while mother to child and injectable drug abuse are the next common risk factors of HIV/AIDS. Zahid (1997) pointed out that public and governmental recognition of the threat of HIV epidemic in Pakistan is recent and implementation of prevention and education programme pertaining to HIV/AIDS is lagging. The status of being a low prevalence but high risk country for HIV make it critical that practical research and HIV prevention efforts targeted at high risk groups be implemented immediately. Khan (2000) pointed out that AIDS is still relatively a new subject in this part of world due to social restrictions on open discussion of sexuality, particularly amongst unmarried youths. The study carried out by Afsar (2002), about awareness of Pakistan adolescents showed disappointing results. This current survey was design to assess the level of awareness about HIV/AIDS in students of University of Azad Jammu and Kashmir.

Objectives of the study

This study was conducted by giving a questionnaire to the students of the University of Azad Jammu and Kashmir

Table 1. Frequency of different age groups of the respondents.

Age group	Frequency	Percentage
18 to 20	184	39.4
21 to 23	158	33.8
24 to 26	66	14.1
27 to 29	43	9.2
30 to 32	16	3.4

Kashmir to meet the following requirements:

- 1) To measure the level of awareness about HIV/AIDS.
- 2) To measure the level of knowledge about modes of transmission of HIV/AIDS.
- 3) To assess the knowledge of precautionary measures about HIV/AIDS.

STUDY METHODOLOGY

A descriptive cross-sectional study was conducted in University of Azad Jammu and Kashmir Muzaffarabad based on simple random sampling. Total sample of 467 (395 (84.6%) boys and 72 (15.4%) girl students) respondents was taken. The level of awareness among university students about HIV/AIDS was assessed through face-to-face interview and the answers given to the questions in the designed questionnaire for the purpose. Design of the close-ended questionnaire (contained 26 questions about general awareness about HIV/AIDS, modes of transmission, precautionary measures and some suggestive measures) was simple and the level was that of a layman's understanding. Data was analyzed by using Statistical Package for Social Sciences (SPSS) software.

RESULTS AND DISCUSSION

As earlier discussed, sample size of 467 students were selected for this survey. These students were classified on the basis of their age. Five age groups were made (18 to 20, 21 to 23, 24 to 26, 27 to 29 and 30 to 32). Majority of the respondents (39.4%) belonged to age group 18 to 20 years, while 33.8% of the respondents belonged to age group 21 to 23 years. Likewise, 14.1% of the respondents belonged to age group 24 to 26 years, 9.2% were in age group 27 to 29 years and 3.4% of the respondents were above the age category of 29 years (Table 1). It was noted that there is almost linear relationship between growing ages with respondent awareness about HIV infection (Figure 1). Younger students have less awareness as compared to older students.

In order to take the feedback of the university student's awareness about HIV disease, questionnaires were distributed. Table 2 shows student's feedback. As shown in Table 2 that majority of the students (about 97.9% of the students had heard about HIV/AIDS, 94% respondents consider HIV/AIDS as a fatal disease, 81.6% of the

respondents considered HIV/AIDS as a communicable disease. 95.3% of the respondents agreed that HIV/AIDS infection decreases the immunity, 66% of the respondents were of the view that there is no vaccine available for HIV/AIDS treatment, 87.8% of the respondents agreed that HIV/AIDS can be transmitted by having sexual intercourse with HIV/AIDS infected person, 82.7% of the respondents were aware that HIV/AIDS can be transmitted by transfusion of HIV/AIDS infected blood and blood components, 95.7% of the respondents were aware about HIV/AIDS being transmitted by sharing syringes/needles with infected person, 84.6% of the respondents were agreed that HIV/AIDS is being transmitted from HIV/AIDS infected mother to child, 84.8% of the respondents were aware that HIV/AIDS cannot be transmitted by blades used by HIV/AIDS infected person, 92.9% respondent admitted that individuals having bisexual and heterosexual behavior are at higher risk for contracting HIV/AIDS, 91% respondents were aware that there is test available for diagnosing HIV/AIDS infections whereas 9% respondents were not aware about it) have considerable awareness about HIV disease.

Majority of the respondents (77.3%) agreed that imparting sex education to students play an important role in prevention of HIV/AIDS and 74.5% of the respondents agreed there should be adult education at school and college levels. 70.4% of the respondents agreed that religious institutes can play important role in the prevention of HIV/AIDS while 29.6% did not agree. 79.2% of the respondents agreed that media can play an important role in creating awareness about HIV/AIDS while 20.8% did not agree.

Phase 2 of the study

Phase 2 of the study was designed to check the knowledge of the students about persons which are at high risk for HIV infections and number of possible precautionary steps to avoid HIV infection. At last, possible outcomes of government campaign for producing HIV severity awareness through print and electronic media in general public have been assessed.

Students were asked whether life style of peoples affects the chances of HIV infection or not. Their response was gathered in "yes" and "no" replies. Information obtained is given in Table 3. Table 3 shows that 22.9% of the respondents understand unsafe sex, drug use; heroine and other such addictions, addiction to pornographic material are the high risk life styles.

In order to access the knowledge of students regarding precautionary measures that can prevent the peoples from HIV infections following questions were asked from students. Information obtained is given in Table 4. The respondents were asked what measures should be taken to prevent HIV/AIDS infection, use of new blades, transfusion

Table 2. Response of respondents about HIV awareness survey.

S/N	Question	Response	
		Yes (%)	No (%)
1	Have you heard about HIV/AIDS?	457 (97.9)	10 (2.1)
2	Is HIV/AIDS a fatal disease?	439 (94)	28 (6)
3	Is HIV/AIDS a communicable disease	381 (81.6)	86 (18.4)
4	Do HIV/AIDS infections decrease immunity?	445 (95.3)	22 (4.7)
5	Is HIV/AIDS diagnosed by blood?	411 (88)	56 (12)
6	Is HIV/AIDS diagnosed by urine?	139 (29.8)	328 (70.2)
7	Can HIV/AIDS be transmitted by having sexual intercourse with HIV/AIDS infected person?	410 (87.8)	57 (12.2)
8	Can HIV/AIDS be transmitted by transfusion of HIV/AIDS infected blood and blood components?	386 (82.7)	81 (17.3)
9	Can HIV/AIDS be transmitted by sharing syringes/needles with infected person?	447(95.7)	20 (4.3)
10	Can HIV/AIDS be transmitted by tattoo making?	390 (83.5)	77 (16.5)
11	Can HIV/AIDS be transmitted by sharing toilet with infected people?	95 (20.3)	372 (79.7)
12	Can HIV/AIDS be transmitted by kissing with infected person?	190 (41.7)	277 (59.3)
13	Can HIV/AIDS be transmitted from HIV/AIDS infected mother to child?	395 (84.6)	72 (15.4)
14	Can HIV/AIDS be transmitted by sharing food with HIV/AIDS infected person?	103 (22.1)	364 (77.9)
15	Can HIV/AIDS be transmitted by sneezing or coughing of HIV/AIDS patient?	110 (23.6)	367 (76.4)
16	Can HIV/AIDS be transmitted by shaking hand with HIV/infected person?	85 (18.2)	382 (81.8)
17	Can HIV/AIDS be transmitted by blades used by HIV/AIDS infected person?	396 (84.8)	71 (15.2)
18	Is person having multi sex partner at higher risk for contracting HIV/AIDS infections?	434 (92.9)	33 (7.1)
19	Can precautionary measures save human beings from HIV/AIDS? Answer of 68 (14.6%) was that they do not know.	329 (70.4)	70 (15)
20	Can imparting sex education to students play an important role in prevention of HIV/AIDS?	361 (77.3)	106 (22.7)
21	Can religious institutes play important role in the prevention of HIV/AIDS?	329 (70.4)	138 (29.6)
22	Can media play a vital role in creating awareness about HIV/AIDS among general public?	370 (79.2)	97 (20.8)

Table 3. Understanding of public high risk life styles.

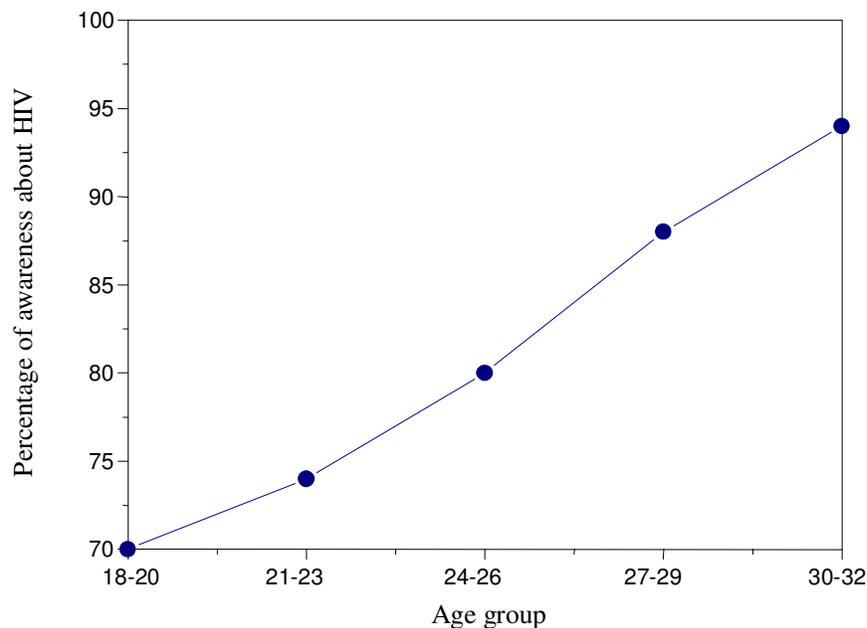
Response	Frequency	Percent
Unsafe sex	236	50.5
Drug use	59	12.6
Heroin and other such addictions	39	8.4
Addiction to pornographic material	14	3.0
None of the above	12	2.6
All of the above	107	22.9
Total	467	100.0

Table 4. Which one is the precautionary measure against HIV/AIDS?

Response	Frequency	Percent
Use of new blades	65	13.9
Transfusion of screened blood	38	8.1
New and disposable syringe	27	5.8
None of the above	73	15.6
All of the above	264	56.5
Total	467	100.0

Table 5. Influence of HIV/AIDS TV messages on students.

Response	Frequency	Percent
Awareness of HIV/AIDS	175	37.5
Awareness of dangerous practices which may lead to HIV/AIDS	94	20.1
Messages are frightening	30	6.4
Have no effect	52	11.1
All of the above	116	24.8
Total	467	100.0

**Figure 1.** Awareness response of different age groups of respondents.

of screened blood, new and disposable syringe (56.5%), use of new blades (13.9%), transfusion of screened blood (8.1%), new and disposable syringe (5.8 and 15.6%) have no knowledge about precautionary measures.

In order to assess the government campaign outcomes regarding educating the peoples about possible causes of HIV, the followings questions were asked from student. Results obtained through the interviews are given in Table 5. Table 5 shows that 24.8% of respondents got awareness from TV messages about HIV/AIDS and awareness of dangerous practices which may lead to HIV/AIDS; messages are frightening and have no effect. 37.5% awareness of HIV/AIDS, 20.1% awareness of dangerous practices which may lead to HIV/AIDS, 6.4% said the messages are frightening and 11.1% said the messages have no effect.

In order to check the significance of the data, Chi-square (χ^2 -test) test of association was used to check the level of significance (P-value). Basic knowledge of student's about HIV/AIDS versus P-values is: have you

heard about HIV/AIDS (0.061), do you think AIDS is a fatal (0.004), do you think HIV/AIDS is a communicable disease (0.271), in your opinion can HIV/AIDS infection decrease immunity (0.124), HIV/AIDS is caused by virus named HIV (0.056), HIV virus transmits in the human body and then HIV/AIDS develops (0.588), HIV/AIDS can be prevented (0.778), do you think HIV/AIDS can be cured (0.83), is there any vaccine available for HIV/AIDS (0.032), and can a healthy looking man be infected by HIV/AIDS (0.699); whereas different factors (actions) associated with HIV/AIDS versus P-values HIV/AIDS can be transmitted by sharing syringes/needles with infected person (0.128), HIV/AIDS can be transmitted by tattoo making (0.613), HIV/AIDS can be transmitted by sharing toilet with infected people (0.073), HIV/AIDS can be transmitted by kissing with infected person (0.042), HIV/AIDS can be transmitted by mosquito biting (0.768), HIV/AIDS can be transmitted by sharing food with HIV/AIDS infected person (0.038), HIV/AIDS can be transmitted by sneezing or coughing of HIV/AIDS patient

(0.504), and HIV/AIDS can be transmitted by shaking hand with HIV/AIDS patient (0.052) showing the probabilities of different risk factors (syringes, toilet, food, and shaking hand) are strongly associated with HIV/AIDS

P-values of different factors (actions) associated with HIV/AIDS are: due to own life style risk (0.001), bi-sexual and heterosexual behavior are at higher risk for contracting HIV/AIDS (0.108), having multi sex partner (0.005), individual at higher risk for contracting HIV/ AIDS infection include people who buy sexual services (0.002), knowledge about sexually transmitted diseases are significantly associated with HIV/AIDS (0.001).

Significance of probabilities of different precautionary measures and some suggestive measures against HIV/AIDS can be seen for different factors. Precautionary measures against HIV versus P-values are: PM (Do you agree that precautionary measures can save human beings from HIV/AIDS?) (0.279), media campaign is associated positively with HIV awareness (0.067).

Conclusion

The results of this study indicate that carefully planned information, education and communication can be used to correct misunderstandings about HIV/AIDS and HIV/AIDS prevention practices. Mass media or public media campaigns can raise the bar of knowledge in students. AIDS awareness in curriculum should be included in all levels of education as researchers supported the idea of school-based education of HIV/AIDS being provided, it appears that these curricula were instrumental in increasing students' knowledge about AIDS, dispelling misconceptions about casual contact as a route of disease transmission; and decreasing student's fear and vulnerability about having classmates with AIDS or HIV infection especially at college level. Similarly, education has been recommended as the best line of defense against the spread of the AIDS. There is need to expand and strengthen existing preventive interventions introduced by the government of Pakistan, as well as to introduce new and cost-effective measures to reduce the spread of STIs to the general population (Ali, 2008). One way of promoting health practices in children is helping them have compassion and understanding of those who are infected, and coping with illness which is appropriate to their level

of cognitive development. A study among secondary school students in Islamabad reported that 95% of boys and 100% of girls knew about HIV/AIDS through television. The awareness through media has a strong impact on the knowledge regarding HIV/AIDS in Pakistani population (Shaikh, 2001). In conclusion, there is a satisfactory awareness among the university students entering into the profession. HIV education should be part of curriculum among all levels of education.

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