

STUDENT CORNER:

Awareness Regarding HIV-AIDS Among Non Medical University Students

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ABSTRACT:

Objectives: To assess the awareness regarding HIV-AIDS among non medical students.

Materials and Methods: This descriptive cross sectional Institute based study was conducted by the fourth year medical students of Bahria University Medical and Dental College, Karachi as their assigned project in the subject of Community Health Sciences. The study was carried out among non-medical students of NUST, NED and Bahria University, Karachi from Jan 2013 — June 2013. A five question, knowledge based questionnaire developed from Carey and Schroder was used to assess the awareness of the students regarding HIV-AIDS. Convenient sampling technique was used for selecting the participants. After verbal informed consent 105 students participated in the study. Five questionnaire forms were excluded due to incomplete filling.

Results: A total of 133 students were approached and 105 (79%) responded that they were aware of the term HIV/AIDS. 100 students completely filled out the proforma and out of these only 39% responded that they knew the relationship of HIV positive and having AIDS. 90% responded in favor of sexual contact as the main mode of transmission. Homosexuals were regarded to be the highest risk group (71%) for having HIV-AIDS by the students. Regarding preventive measures highest response (50%) came in favor of commercial sex control.

Conclusions: Assessment of awareness regarding HIV-AIDS among non medical students was found to be deficient in context to relationship of HIV positive and having AIDS, mode of transmission, high risk group, and preventive and control measures.

Keywords: HIV-AIDS, Awareness, University students, Non-medical.

INTRODUCTION:

AIDS is an infectious disease of immune system caused by retroviruses Human Immunodeficiency virus I and II. In 1981 Pneumocystis carinii pneumonia (PCP) and kaposi sarcoma is identified in gay men in Los Angeles and New York. Initially the syndrome was named Gay Related Immune Deficiency (GRID).¹ In 1982 The syndrome is re-named Acquired Immunodeficiency Syndrome (AIDS) as it became clear that it did not just affect gay men. 1983 Doctors at the Institute Pasteur in France isolated the virus and named it named lymphadenopathy-associated virus (LAV).² In 1984 The virus was named Human immunodeficiency virus (HIV) by the Americans and Western Blot test for HIV infection is introduced. In 1985 AIDS had been reported in 51 countries.³

The HIV- 1 pandemic is a complex mix of diverse epidemics within and between countries and regions of the world, and is undoubtedly the defining public-health crisis of our time. Research has deepened our understanding of how the virus replicates, manipulates, and hides in an infected person. Although our understanding of pathogenesis and transmission dynamics has become more pronounced and prevention options have expanded,

a cure or protective vaccine remains elusive.⁴ Antiretroviral treatment has transformed AIDS from an inevitably fatal condition to a chronic, manageable disease in some settings. This transformation has yet to be realized in those parts of the world that continue to bear a disproportionate burden of new HIV- 1 infections and are most affected by increasing morbidity and mortality. It was in June 1981 that scientists in the United States reported the first clinical evidence of a disease that would become known as Acquired Immune Deficiency Syndrome or AIDS and within twenty years AIDS epidemic spread to every corner of the world.

According to WHO estimates by 2010, 35 million people died of AIDS and almost 70 million people were infected with the HIV virus. Globally an estimated 34 million people lived with HIV in 2011, including 3.3 million children and 2.5 million people being infected each year.⁴ Sub-Saharan Africa remains the global epicenter of the AIDS pandemic (68% of all HIV positive people). Largest HIV positive population in South Africa followed by India and Nigeria. Life expectancy in some countries have dropped from 65 to 35 (Botswana 23% population HIV +ve).⁷

The pathophysiology of AIDS is complex. After the virus enters the body there is a period of rapid viral replication, leading to an abundance of virus in the peripheral blood. During primary infection, the level of HIV may reach several million virus particles per milliliter of blood. This response is accompanied by a marked drop in the numbers of circulating CD4T cells. This acute viremia is associated in virtually all people with the activation of CD8 T cells, which kill HIV-infected cells, and

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subsequently with antibody production, or sero conversion. The CD8 T cell response is thought to be important in controlling virus levels, which peak and then decline, as the CD4 T cell counts rebound. A good CD8 T cell response has been linked to slower disease progression and a better prognosis, though it does not eliminate the virus. Ultimately, HIV causes AIDS by depleting CD4 T helper lymphocytes. This weakens the immune system and allows opportunistic infections. T lymphocytes are essential to the immune response and without them, the body cannot fight infections or kill cancerous cells. The mechanism of CD4T cell depletion differs in the acute and chronic phases.¹⁰

Thus an estimated 38.6 (33.4-46.0) million people are living with HIV infection worldwide, while about 25 million have died already¹¹. In 2005 alone, there were 4.1 million new reported cases of HIV-1 infections and 2.8 million AIDS deaths. These estimates mask the dynamic nature of this evolving epidemic in relation to temporal changes, geographic distribution, magnitude, viral diversity, and mode of transmission. Today, there is no region of the world untouched by this pandemic.¹² Present study was designed to assess the awareness regarding HIV-AIDS among non medical students of three institutes of Karachi.

MATERIALS AND METHODS:

This descriptive cross sectional institute based study was conducted by the fourth year medical students of Bahria University Medical and Dental College, Karachi as their assigned project in the subject of Community Health Sciences. The study was carried out among non-medical students of NUST, NED and Bahria University, Karachi from Jan 2013 — June 2013. A 5 question knowledge based questionnaire developed from Corey and Schroder (HIV-QKQ18)¹³ was used to assess the awareness of the students regarding HIV-AIDS. Convenient sampling technique was used for selecting the participants. The students whose parents were doctors and those who had done HSC (pre-medical) were excluded from the study. Permission was taken from the heads of the respective universities. We asked 133 students regarding awareness of the term HIV-AIDS. Out of 133 students 105 responded 'yes'. After verbal informed consent these 105 students participated in the study and were explained the study purpose. Their confidentiality was maintained. Five questionnaires were incompletely filled and were excluded from the study.

Sr. No.	Question
Q1	Have you heard the term HIV-AIDS?
Q2	If someone is HIV positive, does it mean he/she has AIDS?
Q3	What is the mode of transmission of HIV-AIDS?
Q4	Which are the high risk people (group) to be affected by AIDS?
Q5	What are the preventive measures for HIV-AIDS?

The responses were tabulated as yes/no/don't know. Q3, Q4 & Q5 were provided with 7, 6 & 6 options respectively.

Results were expressed as percentage and frequency.

RESULTS:

Out of 100 non medical students 55 respondents were from Bahria University 27 from NUST and 18 from NED University Karachi. Out of these 50 were males and 50 were female students. Their Mean age was 18-24 years (Table 1)

133 students were asked the question 'Have you heard the term HIV —AIDS?' 105 students responded yes accounting to 79%. Out of 100 students who completely filled out the performa, 39 responded that HIV+ve means that the person has AIDS (Table 2) Regarding mode of transmission 90% responded in favour of sexual contact followed by blood transfusion 75% non sterile medical equipments use 71%, sharing razors/scissors and pregnancy 24% each, breast feeding 7%, coughing and sneezing 4% (Table 3a)

High risk groups in our study constituted the homosexuals 71% on the top of list followed by heterosexuals 65%, intravenous drug users 56%, truck drivers and office workers 24% (Table 3b) Awareness regarding preventive measures of HIV-AIDS revealed control of commercial sex 50%, proper sanitation and quarantine 18%, sticking to religious practice 6%, screening of blood 7%, burning personal belongings of HIV —AIDS patients 1% (Table 4)

Table 1
Gender, Mean age & Respondents
N=100

Gender	Number
Male	50
Female	50
Mean age	18-24 years
Respondents	
NUST	27
NED	18
Bahria	55

Table 2
Awareness regarding the term HIV-AIDS and their relationship
 N=133

Have you heard the term AIDS?			
Yes			105
No			18
Don't know			10
If someone is HIV +ve, does this means he/ she has AIDS?			
Yes	No	Don't know	Total
39	15	46	100

Table 3a
Awareness regarding mode of transmission of HIV-AIDS
 N=100

Sr.No	Mode of Transmission	Response
1	Coughing and sneezing	4%
2	Breast feeding	7%
3	Sharing razors /scissors	24%
4	Non sterile medical equipments	71%
5	Blood transfusion	75%
6	Sexual contact	90%
7	Pregnancy	24%

Table 3b
Awareness regarding high risk groups that can be affected with AIDS
 N=100

Sr. No	High risk group	Response
1	Homosexual	71%
2	Heterosexual	65%
3	Intravenous drug user	56%
4	Truck drivers	24%
5	Office workers	24%
6	Students	20%

Table 4
Awareness regarding preventive measures of AIDS
 N=100

Sr. No	Preventive measure	Response
1	Religious practices	6%
2	Screening of blood	7%
3	Burn corps of HIV patient	1%
4	Quarantine HIV-AIDS infected person	18%
5	Proper sanitation	18%
6	Control of commercial sex	50%

DISCUSSION:

Human Immunodeficiency Virus (HIV) is a lentivirus that causes Acquired immunodeficiency syndrome (AIDS). It is believed to be a mutated form of SIV (Simian Immunodeficiency Virus), identified in chimpanzees found in west-central Africa.¹⁴ AIDS is an infectious disease of immune system caused by retroviruses Human Immunodeficiency virus I and II. It cripples body's immune system making it susceptible to opportunistic infections and tumors. It affects T helper and CT cells, B cells, some endothelial cells, CNS cells (astrocytes, microglia, oligodendrocytes and Neurons).¹⁵ Our study revealed that out of 133 students 105 students were aware of the term AIDS but only 39% knew the relationship between HIV +ve and having AIDS.

It is documented in the literature that groups worse affected are sex workers, truckers, Intravenous drug users and male transgender sex workers. 71% students responded that sex workers are at higher risk of having AIDS followed by intravenous drug user group. Heterosexual transmission is the dominant mode of transmission and accounts for about 85% of all HIV-1 infections. Southern Africa remains the epicentre of the pandemic and continues to have high rates of new HIV-1 infections.¹⁶

Although overall HIV-1 prevalence remains low in the emerging epidemics in China and India, the absolute numbers, which are fast approaching those seen in southern Africa, are of concern.¹⁷ Outside of sub-Saharan Africa, a third of all HIV-1 infections are acquired through injecting drug use, most (an estimated 8.8 million) of which are in eastern Europe and central and southeast Asia.¹⁸

The rapid spread of HIV-1 in these regions through injecting drug use is of importance, since it is a bridge for rapid establishment of more generalized epidemics. These results are in favor of our study however homosexuals in our study were the highest risk group instead of heterosexuals probably because our respondents were non medical undergraduates and were not aware of this. Regarding awareness about mode of transmission of HIV-1/AIDS our study revealed highest transmission mode according to respondents as sexual contact followed by blood transfusion and use of non sterile medical instruments.

Use of mass media for prevention, control, general

awareness and behavioral change, avoidance of intravenous drug use and commercial sex, protected sex, use of sterile needles and instruments, use of tested blood and blood products,¹⁹ targeting high risk groups such as sex workers, truckers and intravenous drug users²⁰ surveillance and research to compile data base of HIV, male circumcision that is said to reduce infection by 60% and cessation of breast feeding by HIV+ve mothers are some means and measures to control HIV-AIDS infection

Our study results showed that regarding prevention respondents were not aware of the importance of screening of blood. Only 7% students knew about the screening of blood and its role in the prevention of spread of AIDS. Our respondents were non medical students and they probably did not have exposure to blood donation campaigns being run in the medical colleges and universities. According to Sind AIDS control program (SACP) data presentation at a workshop recently it was highlighted that there has been almost a 300% increase in HIV-AIDS cases over past 5 years in the province of Sind alone. Out of 1,063 new cases of HIV-AIDS in 2013, 55% cases were related to injecting drug users while 33% to sex worker²² Measures and recommendations at individual level could be that parents should develop friendship and close bonding with their children, one should get in touch with the religion, discourage myths and conspiracy theories about AIDS amongst peers. Parents, teachers and elder siblings should keep reinforcing moral values Mass media should be used to promote anti AIDS campaigns. Mandatory testing and screening of blood, HIV-AIDS awareness and testing centers should be established. Hospitals should be equipped with dealing with AIDS patients and provide palliative care. In rural areas campaigns giving general awareness and precaution should be a priority. Needle exchange program should be established in collaboration with NGOs that provide sterile needles in exchange for contaminated ones.²⁵

CONCLUSION:

The assessment of awareness regarding HIV-AIDS among non medical students was found to be deficient. Health education through TV, radio, advertisements, newspapers, community health workers etc. should be disseminated to improve

the awareness in our youth and community. Recommendations at government level and draft of HIV-AIDS prevention and control policy, to prevent it from becoming an epidemic in our country should be undertaken.

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