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AWARENESS ABOUT HIV/AIDS IN YOUNG EDUCATED ADULTS OF LAHORE

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ABSTRACT

Introduction: The epidemic of Acquired Immunodeficiency Syndrome (AIDS) caused by Human Immunodeficiency Virus (HIV) is intimidating the world population since a long period of time. The purpose of this study is to determine the awareness about HIV/AIDS in young educated adults of Lahore, Pakistan. **Setting:** Lahore, Pakistan **Material and Methods:** This cross-sectional, descriptive study was conducted in Lahore during January 2016 to July 2016. The study population includes adults from Lahore with more than 10 years of formal education, 18 years and above of age who voluntarily participated in online survey. Doctors, nurses and medical students were excluded from the survey. Subjects were included in the study after taking consent. For statistical analysis IBM SPSS version 23 was used. **Results:** Total sample included 351 young adults in which 230 (65.5%) were females and 121 (34.5%) were males. They were aged 18-30 years (mean age: 24.8 years). The range of correct answers about Acquired Immunodeficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV) and its transmission was between 42–88%. The maximum numbers of individuals responded correctly when asked that if having multiple sex partners can increase a person's chance of being infected with HIV (94.9%). 70% were convinced that there is a difference between HIV and AIDS. 43% of total sample responded that a person can get HIV through contact with saliva, tears, urine or sweat, 25% believing that a person can get infection by sharing a glass of water with an HIV patient. 13% think there is a vaccine available to prevent individuals from getting AIDS. **Conclusion:** There is a deficiency of knowledge among young educated adults about HIV/AIDS. There is a need for increased efforts to spread public awareness about this disease and its transmission.

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INTRODUCTION

Human Immunodeficiency Virus (HIV) is responsible for Acquired Immunodeficiency Syndrome (AIDS) an epidemic threatening the whole world since more than 30years. HIV attacks defense system of the body by primarily affecting cluster of differentiation 4(CD4+) T cells. After infection, HIV causes diminutionof CD4+ cells in body, leading to collapse of immune system of the body. A decrease in number of CD4+ cells along with development of opportunistic infections in patientindicate a transition from HIV to AIDS.[1]

Body fluids like blood, rectal and vaginal, breast milk and semen from HIV positive individual can transmit HIV. A contact of any of these fluids with bloodstream, mucous membrane or injured tissue leads to transmission of the virus. Body structures having mucous membranes include rectum, vagina, penis, and mouth.

Pakistan is a country struggling with various challenges of socioeconomic nature like poverty, low literacy rates, growing sex industry, low level of awareness about prevention of sexually transmitted diseases (STDs), health practices that are unsafe and prevalent unemployment, all of which are risk factors for STDs like an

HIV/AIDS.[2] The overall literacy rate of this region is only 54%.[3] In Pakistan, first case of HIV infection was reported in 1987.[4] Since then, the number of HIV/AIDS patients as per the reports of Pakistan National AIDS Control Program (NACP), has been increasing.[5] According to United Nations International Children's Emergency Fund (UNICEF) estimate (2012), there are about 50-160 thousand people with AIDS in Pakistan.[6] The province with highest number of cases of HIV is Sindh province while its least prevalent in Azad Jammu Kashmir (AJK).[7] However, this data is not much reliable as due to social stigma attached with this condition, all patients with HIV/AIDS are not registered, that can only be referred as the tip of the iceberg. The real number of HIV/AIDS patients is expected to be much higher, which can be confirmed with proper screening and proper education of public about the disease. Keeping in mind the above mentioned facts, in this study, an effort has been made to assess the common knowledge and attitude of people about AIDS, HIV transmission, and methods of prevention among young educated individuals of Lahore, Pakistan.

METHODOLOGY

This cross-sectional, descriptive study was conducted in Lahore during January 2016 to July 2016. Lahore is the capital city of province of Punjab, the second largest city of Pakistan. A consumer-based survey (Google Forms – Annexure A) was completed by 351 young adults ($\geq$18 years$\leq$30years) over a period of 6 months. Data from these surveys were used to monitor awareness about HIV/AIDS in the population.

They were asked to complete anonymous pre-validated questionnaires. Data collection survey was both electronic mail (e-mail) based and web-based. The link of the survey was also published on Facebook and in the form of pamphlets. The questionnaire administered to all participants was based on a review of comparable international surveys and included questions used in previous similar surveys in different comparable studies. The questionnaire before finalization was sent to experts on HIV and reproductive health surveys and infectious disease specialists, both in Pakistan and internationally for their review. During survey, the definition of word “sex” was 'having vaginal or anal intercourse'. For data collection a17-item questionnaire was developed in English. Questions included knowledge about HIV/AIDS, its symptoms, prevention, transmission, major risk groups, possible complications, and transmission route. Socio-demographic information about participants was also collected .Questions could be answered with a Yes, No or Do not know” options (Annexure attached).

Young adults (18-30 years), from Lahore, Pakistan, with at least 10 years of formal education who agreed to take part in the original survey were included in the population. Health care workers (doctors, nurses and medical students), people from other cities of Pakistan were excluded from the sample. Ethical approval was obtained from the Institutional Review Board (IRB). All participants were informed that their participation was voluntary and it was assured to them that their participation will be kept anonymous.

The questionnaire was pre-tested in one college and after analyzing the data, the Cronbach's was calculated to assess the internal consistency of knowledge questions ($\alpha = 0.67$).

Statistical Package of Social Science (SPSS Inc., Chicago, IL) for Windows version 23.0 was used for data analysis. A *p*-value of <0.05 was consideredas statistically significant.

RESULTS

A total of 351 young adults took part in the study of which230 (65.5%) were female and 121 (34.5%) were male. They were aged 18-30 years (mean age: 24.8 years). The sample included 21% of individuals who had a master degree while 79% had at least studied till 10th grade (Matriculation).

The range of correct answers about Acquired Immunodeficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV) and its transmission was between 42–88%(average correct answer percentage: 66.2%).The individuals who had their Masters degree had a higher percentage of correct answers as compared to individuals with at least 10th grade. The maximum numbers of individuals responded correctly when asked that if having multiple sex partners can increase a person's chance of being infected with HIV (94.9%)-(table II). However, many misconceptions were still noted relating to HIV/AIDS, with 43% of total sample believing that a person can get HIV through contact with saliva, tears, urine or sweat, 27%were of the view that all pregnant women infected with HIV will have babies born with AIDS, 25% believing that a person can get HIV by sharing a glass of water with an infected individual. 13% think there is a vaccine available to prevent individuals from getting AIDS.

Table 1: Epidemiological Characteristics of Sample	
GENDER	
Male	121 (34.5%)
Female	230 (65.5%)
AGE	
18-25 years	211 (60.2%)
25-30 years	140 (39.8%)
Mean age	24.8 years
EDUCATIONAL QUALIFICATION	
Above 10th grade	276 (78.6%)
Masters	75 (21.4%)
Epidemiological Characteristics of Sample (n=351)	

Majority of participants (95%) knew that having sex with more than one partner could increase a person's chance of being infected with HIV. 70% knew that there was a difference between HIV and AIDS. 13% were not sure whether HIV can be transmitted from coughing and sneezing while 19% thought it could be spread via this route. Importantly, 25% believe that a person can be infected by sharing a glass of water with HIV positive patients. About transmission via oral sex, 48% either did not know or thought that oral sex

Table 2: Response to the questions asked about HIV awareness

		Sample n=351		
Question	Correct Answer	Percentage of people who gave correct answer	People with Masters degree	People with at least 10th grade
1.HIV and AIDS are the same thing	FALSE	69.5%	48.7%	20.8%
2.HIV/AIDS is a disease of homosexuals or bisexuals ONLY	FALSE	86.1%	45.2%	40.9%
3.Heterosexual person cannot get HIV/AIDS	FALSE	88%	41.8%	46.2%
4.Coughing and sneezing do not spread HIV	TRUE	68.4%	39.3%	29.1%
5.A person can get HIV by sharing a glass of water with a person who has HIV	FALSE	61.5%	47%	14.5%
6.Showering or washing one's genitals/private parts, after sex keeps a person from getting HIV	FALSE	68.1%	49.4%	18.7%
7.A person can get HIV through contact with saliva, tears, urine or sweat	FALSE	42.1%	22.1%	20%
8.A person can get HIV after having oral sex	TRUE	52.1%	36.7%	15.4%
9.A person can get HIV if he/she has sex only once in his/her life	TRUE	71.8%	36.6%	35.2%
10.A person can get HIV if he/she has sex with only one partner	TRUE	63.5%	43.3%	20.2%
11.All pregnant women infected with HIV will have babies born with AIDS	FALSE	36.7%	14.6%	22.1%
12.People who have been infected with HIV quickly develop signs of severe disease	FALSE	64.1%	37.3%	26.8%
13.A person with HIV can look and feel normally	TRUE	74%	45.3%	28.7%
14.There is a vaccine that can stop adults form getting HIV	FALSE	59%	38.7%	20.3%
15.People are likely to get HIV by deep kissing if their partner has HIV	FALSE	44.4%	18.2%	26.2%
16.A person will not get HIV if he or she is taking antibiotics	FALSE	81.5%	42.4%	39.1%
17.Having sex with more than one partner can increase a person's chance of being an infected with HIV	TRUE	94.9%	48.5%	46.4%

can not be a source of transmission of HIV. 72% agreed that a person can get HIV if he/she had sex only once in his/her life. Table I: Epidemiological Characteristics of Sample

DISCUSSION

In our study, awareness about HIV/AIDS among young educated adults of Lahore, Pakistan was estimated by means of a survey. To best of our knowledge, only small number of studies have been conducted in this country on this issue. Pakistan like many other countries of the world, has been shifted from low prevalence high risk group to concentrated epidemic category.[7] An epidemiological study done by Iqbalet al.[8] showed that in Pakistan, 86.8% of reported HIV positive cases are found to be men and 13.20% are females. Furthermore 51.88% of the HIV infected men fall within the age group of 20-40 years. 24.59% of the reported cases are of unknown origin and 45.10% of the total HIV carriers acquired the disease through sexual contact.

The bitter fact is that with the passage of time as number of people with HIV infection increases, people of Pakistan remain oblivious about this lethal disease and its ways of transmission. The Demographics and Health Survey 2012-13 reported that 38.9% of Pakistani men and 22% of women were aware that condoms can be used to prevent HIV transmission while 57.4% of men and only 31.7% women were aware that the risk of infection by HIV is higher if a person has multiple sexual partners.[9] A paper published by United Nations Office on Drugs and Crime in 2013 reported that only 50 percent of the Pakistani population that was part of the sample, knew elementary information about HIV and when asked to mention three modes of transmission, only 13% of individuals could do this simple task.[10] This is an alarming situation for institutions responsible for public awareness in Pakistan.

The results of our study are comparable to a study done by Ahmed et al,[11] which showed that most of the respondents had heard about HIV and agent of infection but didn't have clear idea about different mode of transmission of HIV. The results of another research carried out among individuals of Bangladesh[12] showed that66 % of the individual shad basic knowledge about HIV/AIDS. However their knowledge about the transmission and prevention of the HIV was not sufficient. A systematic literature review of studies related to awareness about STDs in Europe showed that awareness was generally high for HIV/AIDS (above 90%).[13]

Our study showed that 70% of individuals knew that HIV and AIDS were not the same thing while only 36.7% knew that all pregnant mothers with AIDS do not transmit HIV to new born. Comparing these results with a study done in India[14]among people with a professional university degree, 100 percent of them knew that HIV and AIDS are different and also that Mother to Child transmission is a possible route of infection but doesn't necessarily happen in all cases. Another study completed by Rehanet al[15] in Islamabad revealed that Average knowledge according to mean correct answers score was 68.4%, which was high among medical students (71.9%). Proportion of correct answers among female respondents was higher than males (68.3% versus 61.8%). General awareness was inadequate. A study[16]titled 'A study of knowledge and attitude of health care providers working at tertiary care hospitals of Lahore' concluded that even the attitude of professionals related to healthcare in tertiary hospital isprejudiced towards patients with HIV/AIDS, irrespective of their knowledge about the disease. These findings are terrifying and an eye opener for the stake holders of health department.

Our study had some limitations. The questionnaire was completed online by individuals. Only surveys always have some scientific and methodological limitations, most importantly the selection bias by people, who have to take the decision to participate or not in the survey. In contrast, samples selected via the

traditional scientific method, are more representative of the general population. Through this type of survey, verifying the participants is also very difficult task, so the reliability is not very high. On the other hand in a face to face survey or interview, the questionnaire can be stopped immediately in response to some unpredicted external factors, whereas in online surveys, we are unable to see the conditions that are surrounding the individual while he/she is responding to the questions.[17]

Generally the people in Pakistan believe that keeping in view the teachings of Islam and being an Islamic Republic HIV/AIDS doesn't have a potential to be a threat, for this reason, people along with doctors do not focus on HIV screening. However, keeping in view the surging incidence of HIV positive cases, there is a high risk of increased prevalence of this disease in Pakistan. The best method to prevent this disease is through spreading awareness. Print Media, Electronic Media, Seminars, Symposia, Posters must be used for this purpose. There is a need for initiative by political leadership to collaborate with health professionals so that HIV/AIDS and its prevention can be discussed in public places. Taking appropriate and timely steps can help in controlling this disease in this country.[18,19]

CONCLUSIONS

Results and discussion of this study show that basic knowledge about HIV/AIDS amongst educated people is insufficient. It is evident that a lot needs to be done to spread awareness about HIV/AIDS in our part of the world. Keeping in view the increasing number of patients, if actions are not taken in time, we might see a sudden surge in people infected with this virus. The widespread prevalence of myths and misconceptions need to be addressed. The success in educating masses about this disease in Pakistan has not been successful till date.

Recommendations

Pakistan has low literacy rate, so it is expected to have low level of awareness about HIV/AIDS. People should be made aware of this devastating disease. The government needs to play its part on their half and should provide the required legal and regulatory frame work for dealing with this silent killer disease. HIV/AIDS spreading continuously and only few cases are reported like tip of the ice berg. If not taken seriously then it seems extremely difficult to avoid its unstoppable spread.

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Disclosure

The authors declare that there is no conflict of interests.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

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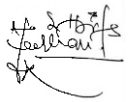
2	Miqdad Haider	Data collection data analysis, statistical analysis, Literature reviews	
3	Aijaz Zeeshan Khan Chachar	Data collection, analysis and article drafting	
4	Muhammad Nabeel Farooq	Data collection & Literature Review