

Original Research Article

A study to assess knowledge and attitude towards HIV among students from Mumbai university

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ABSTRACT

Background: India has the third largest HIV epidemic in the world. The Indian epidemic is characterized by low levels in the general population and elevated concentrations among high-risk groups. The present study was planned to determine the awareness of HIV among students from Mumbai University.

Methods: A cross-sectional study was carried out among students from Mumbai University, India during May–June 2017. Two hundred and fifty students were approached to participate in the study of which 199 agreed to participate (males: 132; females: 67). Pretested questionnaire was distributed and collected data was analyzed using IBM SPSS version 23.

Results: Study participants had high knowledge (86%) and attitude score (87%). There was no significant difference between males and female participants for attitude and knowledge, except for one question regarding knowledge about HIV transmission via breastfeeding to child.

Conclusions: Present study showed that there are no misconceptions or negative attitudes regarding HIV among students. A longitudinal study with a larger sample size across India is recommended for further investigation.

Keywords: AIDS, Attitude, HIV, Knowledge

INTRODUCTION

As per the World Health Organization (WHO), human immunodeficiency virus (HIV) continues to be a major global public health issue, having claimed more than 39 million lives so far.¹ The first cases of HIV infection in India were detected in 1986 among female sex workers in Chennai, a rapid increase followed in many states.² India has the third largest HIV epidemic in the world. In 2016,

HIV prevalence in India was an estimated 0.3%.³ This figure is small compared to most other middle-income countries but because of India's huge population (1.324 billion) this equates to 2.1 million people living with HIV.³ In the same year, an estimated 62,000 people died from AIDS-related illnesses.³ New HIV infections reached a peak in 1998 and have since declined by 60%, although the total number of HIV-positive persons remains stable at 2.1 million, largely probably due to the

increased life expectancy following antiretroviral therapy.²

This epidemic in India is characterized by low levels in the general population and elevated concentrations among high-risk groups. Transmission is mainly heterosexually driven, with differential burdens across the states. The four main drivers of HIV infection in India differ in order from those elsewhere in the world and are commercial sex work, general heterosexual intercourse, injecting drug use and unprotected anal sex between men who have sex with men.² Over the last two decades, India's National AIDS Control Programme (NACP) has evolved and expanded to provide HIV prevention, testing and treatment services countrywide. Scaling up has been uniform across all strategic components and has not only halted, but also reversed, the spread of the epidemic and ensured a major reduction in the number of AIDS-related annual deaths.⁴ However, challenges and gaps remain, including stigma and discrimination and access to testing services for people from certain sections of society. The other major challenge that the program faces is funding.⁴ There is a need to identify the detection and treatment gaps in high-burden areas and key affected populations and address them. Work should start from the identification of people with HIV, then carries on through their linkage to treatment services.

Young students could be educated to create an awareness in the society which can be very helpful in prevention, control and early diagnosis of HIV. The objective of this study was therefore to determine the awareness of HIV among students from Mumbai University, so as to know the kind of education and awareness strategies would be applicable to them.

METHODS

This descriptive study was performed in May-June 2017, among students from Mumbai University, India. The study protocol was approved by V. V. research Independent Ethics Committee, Mumbai, India. Two hundred fifty students were contacted by study team member in their classrooms and were given a brief introduction about the research project. Those who desired to participate were explained the purpose and objectives of the study. On the basis of the eligibility criterion (those who gave a written informed consent and are registered students of Mumbai University) 199 students were selected for the present study.

The survey questionnaire was prepared in English after reviewing the literature for similar studies. The questionnaire was framed to gather information on demographics and knowledge, behavior and attitude towards antibiotic use.

A pilot study was done with a sample of 30 students, to know the average time required for face to face interview for completing the questionnaire and to ensure that it is

appropriate and understandable to students. Pilot study population was not part of the final study.

Collection of data

Students were interviewed face to face in the student office with prior appointment by a study member from a team of 5 trained master of pharmacy students. The purpose of the research was explained to the respondents, anonymity and confidentiality were guaranteed and maintained. The researchers complied with the international ethical guidelines for research. The data was recorded into the predesigned questionnaire by interviewers.

Data entry and analysis

Collected data from individual questionnaire was entered into Microsoft excel and was verified by the authors other than interviewers. Data were analyzed by using descriptive statistical methods and a bivariate analysis was conducted with all relevant independent variables, p-value ≤ 0.05 was considered as significant. IBM SPSS version 23 was used for statistical analysis.

RESULTS

Table 1 shows respondents knowledge and attitude towards HIV as well as bivariate analysis to determine differences between male and female responses. There were 199 participants consisting of 132 (66%) males and 67 (34%) females. Participants had overall good knowledge and attitude as seen by average knowledge score of 86% and average attitude score of 87%. Out of 15 questions regarding knowledge about HIV other than 3 questions regarding transmission through breastfeeding, kissing/hugging, and insect bite, more than 80% of the participants gave right answers. Only 48% of the participants gave correct response "yes" to HIV transmission through breastfeeding. Similarly, only 62% and 72% participants gave correct response "no" to HIV transmission through kissing/hugging and insect bite respectively. Out of 11 questions focused on attitude towards HIV, other than only 1 question focusing on secrecy about family member's HIV, more than 80% of the participants gave the right answers. Thirty-five percent of the participants felt the need to keep secrecy if family member becomes infected with HIV.

Bivariate analysis revealed that, except for 1 out of 15 questions about HIV knowledge, there was no significant difference in male and female responses.

For the question "Can HIV be transmitted to a child through breastfeeding significantly ($\chi^2=4.02$; p-value=0.04) more females (39/67; 58%) answered yes as a correct response than male respondents (57/132; 43%). There was no significant difference between males and females regarding attitude towards HIV.

Table 1: Knowledge and attitude towards HIV.

Variable	Expected answer	Male n (%)	Female n (%)	Total n (%)	χ^2 value	p-value
Gender		132 (66)	67 (34)	199	NA	NA
Education						
BS		106(80)	61(91)	167(84)	4.13	0.13
MS		18(14)	5(8)	23(12)		
PhD		8(6)	1(1)	9(4)		
HIV Knowledge						
HIV can be transmitted through contaminated syringes.	Yes	124(94)	64(95)	188(94)	0.21	0.64
HIV can be transmitted through blood or blood product transfusion.	Yes	128(97)	67(100)	195(98)	2.07	0.15
HIV is a sexually transmitted disease.	Yes	130(98)	67(100)	197(99)	1.03	0.31
HIV testing before marriage decreases the spread of disease.	Yes	118(89)	61(91)	179(90)	0.13	0.71
A pregnant woman can transmit HIV to her fetus.	Yes	114(86)	60(90)	174(87)	0.41	0.52
HIV can be transmitted by sharing public telephone.	No	129(97)	63(94)	192(96)	1.79	0.18
HIV can be transmitted through shaking hands.	No	126(95)	64(95)	190(95)	0.0	0.98
Healthy-looking individuals can be living with HIV.	Yes	113(86)	55(82)	168(84)	0.42	0.52
People can protect themselves from contracting HIV by using condoms.	Yes	122(92)	61(91)	183(92)	0.11	0.74
HIV can be transmitted by sharing a meal with a person living with HIV.	No	121(92)	59(88)	180(90)	0.67	0.41
HIV can be transmitted to a child through breastfeeding.	Yes	57(43)	39(58)	96(48)	4.02	0.04
HIV can be transmitted by swimming in a public pool.	No	121(92)	63(94)	180(90)	0.36	0.55
HIV can be transmitted by using a public toilet.	No	118(89)	62(93)	180(90)	0.51	0.48
HIV can be transmitted through kissing/hugging a person living with HIV.	No	97(73)	47(70)	144(72)	0.25	0.62
HIV can be transmitted through mosquito or other insect bites.	No	82(62)	42(63)	124(62)	0.01	0.94
Average knowledge score		1285/15=86	1304/15=87	1287/15=86		
HIV attitude						
Would go to a restaurant if knew that the owner is living with HIV?	Yes	110(83)	48(72)	158(79)	3.71	0.05
I am willing to share a meal with a person living with HIV.	Yes	112(85)	56(84)	168(84)	0.05	0.82
Individuals living with HIV should be quarantined.	No	109(83)	54(81)	163(82)	0.12	0.73
A female /male teacher living with HIV should be allowed to continue teaching.	Yes	127(96)	64(96)	191(96)	0.05	0.82
Will host an individual living with HIV at home?	Yes	118(89)	55(82)	173(87)	2.09	0.15
Member of my family can become friend with an individual living with HIV.	Yes	120(91)	62(93)	182(91)	0.15	0.7
I am willing to work in an institution that tends to individuals living with HIV.	Yes	116(88)	63(94)	179(90)	1.86	0.17
Will volunteer in an institution that works for people with HIV?	Yes	115(87)	64(96)	179(90)	3.47	0.06
Want to remain secret if family member becomes infected with HIV.	No	84(64)	46(69)	130(65)	0.5	0.48
An individual living with HIV can go to school and earn a degree.	Yes	130(98)	65(97)	195(98)	0.49	0.48
Will maintain friendship if a friend becomes infected with HIV?	Yes	128(97)	65(97)	193(97)	0.0	0.99
Average attitude score		961/11=87	961/11=87	959/11=87		

DISCUSSION

The finding from our study indicated good knowledge (overall knowledge score; 86%), as well as positive attitude (overall attitude score; 87%) HIV in students from Mumbai University. Our results are similar to a studies done among students from Government College in Chandigarh, India, among medical students from coastal Karnataka, India and among dental students from Shimla, India.⁵⁻⁷ Similar results were seen among students from Peshawar University, Pakistan.⁸ Knowledge and attitude scores reported in our study are better than those reported in studies from Nepal and UAE.^{9,10} A study done among university students in UAE showed that 85% of students expressed negative attitudes towards people living with HIV.¹⁰ These low knowledge and attitude scores might be the result of participants agreeing for stigmatizing and discriminative actions against those having HIV. There was no significant difference in attitude between male and females. In terms of knowledge except for one question there was no significant difference between male and female participants. Regarding transmission of HIV to child through breastfeeding, significantly more female participants answered correctly than male participants. Similar results were seen from studies in UAE, India.^{10,7}

CONCLUSION

Present study showed that there are no misconceptions or negative attitudes regarding HIV among students. Knowledge levels of medical students about basics of transmission, prevention and diagnosis and their attitude towards HIV positive patients are important. Many young people are travelling worldwide and experiencing rapid changes in cultural as well as religious changes contributing to heightened risk of HIV. On this background it is extremely important to have adequate knowledge about the disease so that they can help to protect themselves and others against possible risks. The generalizability of study results is limited due to the sample size, differences in the level of education, and cultural values among people from different states and cities. A longitudinal study with a larger sample size across India is recommended for further investigation.

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Conflict of interest: None declared

Ethical approval: The study was approved by the V. V. research Independent Ethics Committee, Mumbai, India

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