

# Knowledge About Attitude towards HIV/ Aids among First Year Medical Students - A Cross-Sectional Study

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## ABSTRACT

**Aim:** To assess the extent of knowledge and attitude towards HIV/AIDS among first year medical students of a private medical college in Lahore.

**Methods:** This was a cross-sectional study conducted among all (97) first year medical students of Continental Medical College Lahore. After taking informed consent, the information regarding knowledge and attitude towards HIV/AIDS was collected from them using a predesigned, pretested structured questionnaire.

**Results:** Of the 97 students who participated, 52 were males and 45 were females. All the students were aware of HIV/AIDS in terms of definition and causation. But knowledge was low on modes of transmission and treatment. Attitudinal scores in the areas of precautions and need for training on HIV was low for all students and no statistically significant difference among males and females about their knowledge of and attitudes towards HIV/AIDS. The willingness to treat HIV/AIDS patient was found to be high amongst study participants.

**Conclusion:** There is a need and scope to provide correct and detailed information on HIV/AIDS for new entrants in medical sciences to help them acquire adequate knowledge to develop appropriate attitudes towards HIV/AIDS and to correct misconceptions.

**Key words:** Attitude, HIV/AIDS, knowledge, 1<sup>st</sup> yr. medical students

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## INTRODUCTION

Human immune-deficiency virus (HIV) is An emerging public health challenge in Pakistan .On the Asian sub-continent, an estimated 4.87 million people were living with HIV in 2009<sup>1</sup>. In the light of evidence that HIV/AIDS cases are continuously increasing in the developing countries like India but with lesser incidence in Pakistan. Healthcare professionals are required to be adequately trained, so that they can play a vital role in combating this pandemic. Even though it is widely accepted that healthcare professionals play a crucial role in prevention and control of HIV/AIDS, less attention has been given to assess knowledge and attitude of the healthcare professionals. A study conducted by the Asia Pacific Network of people living with HIV/AIDS (APN+)in the South Asian region (India, Indonesia, Thailand and Philippines) reported stigma & discrimination by healthcare professionals when treating HIV- positive patients. Results of the study revealed that about one sixth of HIV- positive patients were denied treatment<sup>2</sup>. Similarly, lack of knowledge about transmission of HIV was observed among the healthcare professionals in private and government hospitals in India. That study had identified serious

knowledge gaps among medical practitioners leading to refusal of treatment to persons living with HIV(PLHIV)<sup>3</sup>. But Study conducted at Peshawar University, regarding knowledge and attitude between medical students entering in to medical profession, clinical, preclinical and non-clinical students revealed satisfactory awareness among those entering in to the medical profession while poor among others<sup>4</sup>. In contrast a study conducted at a private University in Karachi revealed that knowledge about Hep. B, C and HIV/AIDS was crucial for health care professionals. Because of increasing prevalence of these infections and occupational risk to themselves as well as for prevention of transmission to the public, knowledge is mandatory<sup>5</sup>. There are reports of reluctance by dentists to treat patients, including denial of treatment<sup>6</sup>. In another study, dentists reported fear of contracting the infection, resistance of support staff and perceived-lack of clinical skills as barriers to treating HIV positives<sup>7</sup>. A study on MBBS students has shown certain misconceptions among them such as urine is being potential source of infection and tattooing can't spread HIV. About 90%students stressed for HIV testing for patients before admission, 60%were not willing for mouth-to-mouth resuscitation and 40% were unwilling to assist in surgical procedures on HIV/AIDS patients<sup>8</sup>.

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Students from medical, dental and allied health professions are strategically placed to be sensitized on the factual knowledge pertaining to HIV/AIDS transmission and prevention. It is also necessary that these future healthcare workers should inculcate healthy attitude towards persons living with HIV/AIDS. However, there are limited studies which have explored knowledge and attitudes of healthcare students pertaining to HIV/AIDS, particularly in the eastern part of India. Keeping this in view, a study was conducted to assess the knowledge & attitudes related to HIV/AIDS among medical and allied health sciences students

### METHODOLOGY

The present study was a cross-sectional study conducted during the month of January 2014. The study participants were first year medical students who had just taken admission to the first year MBBS course. Out of 100 participants, 97 students participated in the study and 3 students were on a long leave. The information was collected from them using a predesigned, pretested, and structured questionnaire which consisted of six parts. The questionnaire consisted of questions related to socio-demographic information, general knowledge about HIV/AIDS, knowledge regarding transmission of HIV/AIDS, their knowledge regarding treatment and prevention of HIV/AIDS, their attitude towards HIV/AIDS, and their source of information regarding HIV/AIDS. Informed consent was taken from all the students who participated in the study. The students were encouraged to write only what is known to them

and avoid cross-consultations among themselves and other references. They were also free to refuse to complete the questionnaire or any particular question(s). Confidentiality was ensured by not recording their names or any other information which would reveal their identity. The questionnaires were completed in the college lecture hall. Before the start of the study, ethical approval was taken from the institutional ethics committee. Rates and percentages were used to express the responses among the students. The comparison of the responses among male and female students was done using chi-square test.

### RESULTS

Out of 97 participants, 52 were males and 45 were females. All students were aware of HIV/AIDS in terms of definition and causation. The information regarding the knowledge about transmission of HIV/AIDS is presented in Table 1. All the study participants knew that HIV/AIDS does not spread by shaking hands with the HIV/AIDS-infected person. No statistically significant difference was found between boys and girls about the knowledge regarding the mode of transmission of HIV/ AIDS [Table 1]. Table 2 depicts the knowledge of participants regarding the treatment and prevention of HIV/AIDS. Ninety-eight percent of participants knew that HIV/AIDS can be prevented by the use of condoms. Table 3 reflects the attitude of students towards an HIV/ AIDS-infected person. Twenty-four percent participants opined that an HIV-infected couple should not have their own children.

Table 1: Knowledge about transmission of HIV/AIDS

Knowledge	Boys			Girls			Total			P value
	Yes	No	DK	Yes	No	DK	Yes	No	DK	
Un safe sex with high risk woman	49(94%)	2(4%)	1(2%)	44(98%)	1(2%)	-	93(96%)	3(3%)	1(1%)	>0.05
Pregnant woman to her baby	50(96%)	2(4%)	-	45(100%)	-	-	95(98%)	2(2%)	-	>0.05
Clothes of HIV infected person	49(94%)	3(6%)	1(2%)	43(96%)	1(2%)	92(45%)	4(4%)	-	-	>0.05
Having Inj. with infected needle	52(100%)	-	-	45(100%)	-	-	97(100%)	-	-	>0.05
Shaking hands with infected person	52(100%)	-	-	45(100%)	-	-	97(100%)	-	-	>0.05
Sharing common toilets	3(6%)	48(92%)	1(2%)	3(6%)	38(85%)	4(9%)	6(6%)	36(85%)	5(5%)	>0.05
By breast feeding	33(62%)	9(18%)	10(10%)	28(62%)	13(29%)	4(4%)	61(63%)	22(23%)	14(14%)	>0.05
Untested blood transfusion	52(100%)	-	-	45(100%)	-	-	97(100%)	-	-	>0.05
Females are more likely to be infected than males	3(6%)	48(92%)	1(2%)	3(6%)	38(85%)	4(9%)	6(6%)	36(85%)	5(5%)	>0.05
Virus is present in saliva?	26(50%)	10(10%)	18(40%)	10(20%)	20(40%)	15(35%)	36(40%)	30(36%)	31(26%)	>0.05
Transmissible through dental instruments	33(62%)	9(18%)	10(10%)	28(62%)	13(29%)	4(4%)	61(63%)	22(23%)	14(14%)	>0.05
By mosquito	7(13%)	41(80%)	4(1%)	6(13%)	36(80%)	3(7%)	13(13%)	77(88%)	7(7%)	>0.05

DK; Does not Know

Table 2: Knowledge about prevention and cure of HIV/AIDS

Knowledge about prev. and cure	Boys			Girls			Total			P value
	Yes	No	DK	Yes	No	DK	Yes	No	DK	
HIV/AIDS can be cured if diagnosed early	19(36%)	27(52%)	6(12%)	15(33%)	26(57%)	4(10%)	34(35%)	53(54%)	10(11%)	>0.05
Treatment for HIV/AIDS is available	17(32%)	28(54%)	7(14%)	28(62%)	15(33%)	2(5%)	45(46%)	43(44%)	9(10%)	>0.05
Vaccine for HIV/AIDS is available	8(15%)	38(73%)	6(12%)	3(7%)	40(88%)	2(5%)	11(11%)	78(79%)	8(8%)	>0.05
It can be prevented by following methods of contraception										
a. OCP	5(10%)	35(67%)	12(23%)	5(11%)	34(75%)	6(14%)	10(10%)	69(71%)	18(19%)	>0.05
b. ICU	19(36%)	31(60%)	2(4%)	9(20%)	34(75%)	2(5%)	28(29%)	65(67%)	4(4%)	>0.05
c. Condom	51(98%)	1(2%)	-	44(98%)	1(2%)	-	95(98%)	2(2%)	-	>0.05
d. Postcoital	6(12%)	38(73%)	8(15%)	4(10%)	37(80%)	4(10%)	10(10%)	10(10%)	12(13%)	>0.05
It can be prevented by health education	49(49%)	-	3(6%)	44(98%)	-	1(2%)	93(95%)	-	4(5%)	>0.05
Is there any vaccine to prevent HIV	8(15%)	38(73%)	6(12%)	3(7%)	40(88%)	2(5%)	11(11%)	78(79%)	8(8%)	>0.05
Is there any test to detect HIV in blood?	17(32%)	28(54%)	7(14%)	28(62%)	15(33%)	2(5%)	45(46%)	43(44%)	9(10%)	>0.05
It can be prevented by changing behaviour	32(61%)	14(27%)	6(12%)	28(62%)	11(24%)	6(14%)	60(61%)	25(26%)	12(13%)	

DK: Does not know

Table 3: Attitude of students towards an HIV/AIDS infected person

Knowledge	Boys			Girls			Total			P value
	Yes	No	DK	Yes	No	DK	Yes	No	DK	
HIV infected person should be isolated	6(11%)	44(86%)	2(3%)	44(98%)	1(2%)	6(6%)	88(91%)	3(3%)	-	>0.05
Treat HIV patient differently	4(6%)	43(84%)	5(10%)	5(9%)	41(91%)	8(9%)	84(86%)	5(5%)	-	>0.05
Prior marriage HIV testing should be done	46(88%)	3(6%)	3(6%)	42(93%)	3(7%)	88(90%)	3(3%)	6(7%)	-	>0.05
HIV couple can have their children	35(67%)	12(23%)	5(10%)	31(69%)	11(24%)	3(7%)	66(68%)	23(24%)	8(8%)	>0.05
HIV transmission from infected person	6(11%)	44(86%)	2(3%)	44(98%)	1(2%)	6(6%)	88(91%)	3(3%)	-	>0.05

DK: Does not know

Table 4: Source of present information regarding HIV / AIDS

Source of information	Boys		Girls		Total		P value
	Yes	No	Yes	No	Yes	No	
Media	50(96%)	2(4%)	43(95%)	2(5%)	93(95%)	4(5%)	>0.05
Friends	46(88%)	6(12%)	41(91%)	4(9%)	93(95%)	10(11%)	>0.05
Family members	27(52%)	25(48%)	34(75%)	11(25%)	61(62%)	36(38%)	>0.05
Teacher	43(82%)	9(18%)	42(92%)	3(8%)	85(87%)	12(13%)	>0.05
Doctor	41(78%)	9(18%)	41(92%)	3(8%)	85(87%)	12(13%)	>0.05

Table 5: Preferred Source of getting information regarding HIV / AIDS

Source of information	Boys		Girls		Total		P value
	Yes	No	Yes	No	Yes	No	
Media	42(80%)	10(20)	38 (84%)	7(16%)	80(82%)	17 (18)	>0.05
Friends	36(69%)	16 (31)	28(62%)	17(38%)	64(66%)	33(34)	>0.05
Family members	27(52%)	25 (48)	29(64%)	16 (36%)	56 (57%)	41	>0.05
Teacher	48 (92%)	4(8)	40(88%)	5(12%)	88(91%)	9(9)	>0.05
Doctor	46(88%)	6(12)	39 (87%)	6 (13%)	85(88%)	12(12)	>0.0

## DISCUSSION

All the first year medical students who participated in the study had heard about HIV/AIDS and were aware of it, in terms of definition and causation. Most of the students knew that HIV/AIDS can be transmitted by sex, from an HIV-infected pregnant woman to her baby, by breast feeding, and blood transfusion. Similar results were shown by the study conducted among medical students in Bijapur<sup>3</sup> among nursing

students of Kolkata<sup>4</sup> and among college students of Kerala<sup>5</sup>. Another study conducted by Kuruvilla among medical students showed that the male students had better knowledge regarding the transmission of HIV/AIDS than female students<sup>6</sup>. However, in our study no such difference was evident.

The present study brought out some misconceptions about the transmission of HIV/AIDS. Few students thought that HIV/AIDS can be

transmitted through mosquito bite (13%) and sharing common toilets (6%). These results were comparable with the study done by Basavayya<sup>7</sup> and in contrast with the study done by Udigiri *et al*.<sup>3</sup>. A total of 36% students reported that HIV/ AIDS can be cured, and 54% students were unaware of the availability of HIV/AIDS treatment. Majority of participants said that HIV/AIDS can be prevented by using condoms (98%) and 94% of them thought that HIV can be prevented by health education. There was no statistically significant difference found between boys and girls regarding the knowledge about HIV/AIDS prevention. The present study compares well with the study conducted in Kerala<sup>5</sup> among college students.

Similar study conducted at Peshawar University, regarding knowledge and attitude between medical students entering in to medical profession, clinical, preclinical and non-clinical students. Satisfactory awareness was concluded among those entering in to the profession while poor among others<sup>4</sup>.

Eleven percent students in this study said that an HIV/AIDS patient should be isolated while 23% participants thought that an HIV-infected couple should not have their own children. Similar results were shown by the study conducted in Kerala<sup>5</sup> in which 16% of students thought that HIV/AIDS patient should be isolated. In another study by Hansoon *et al.*, in Kazakhstan, 77% of students were against the HIV-infected couple to have their own children<sup>10</sup>.

Media (95%) was the leading source of information for participants regarding the present knowledge about HIV/AIDS which is similar to the findings shown by the study conducted in Kerala<sup>5</sup> and Delhi<sup>11,12</sup>. Teachers (91.7%) and the doctors (88%) were the preferred source of getting information regarding HIV/AIDS. Thus in our medical education, the medical teacher, i.e., the doctor who is also a teacher has a key role in providing information regarding HIV/AIDS to our students.

## CONCLUSION

Though the general level of knowledge of students about HIV/AIDS was not poor, they had a number of misconceptions about it. There is a need to consider the basic knowledge of the students about HIV/AIDS

and to clear the misconceptions regarding the disease by the medical teachers. There is also a necessity to stress upon attitudinal issues about sensitive diseases like HIV/AIDS in the medical undergraduate curriculum. Role modeling by medical teachers may improve the knowledge and attitudes of the students toward HIV/AIDS patients.

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