



## KNOWLEDGE AND AWARENESS ABOUT HIV AND AIDS AMONG FIRST YEAR M.B.B.S STUDENTS

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### ABSTRACT

**BACKGROUND:** Acquired immunodeficiency syndrome (AIDS) caused by human immunodeficiency virus (HIV) is a major public health problem in India. Young people are much more prone to HIV infection as a result of a lack of correct health information, changing lifestyles and indulgence in risky behaviors. Increasing knowledge of HIV/AIDS can be a powerful means of fostering positive attitudes and building safe practices among populations. **OBJECTIVES:** The objective of this study was to assess the extent of knowledge and attitude about HIV/AIDS among first year medical students. **METHODS:** This was a cross-sectional study conducted on First year M.B.B.S students. A predesigned self-administered questionnaire was circulated among students after taking consent. The questionnaire was focused on various methods of transmission, high risk behaviors, and preventative measures. Data was collected by pretested questionnaire and analyzed using percentages. **RESULTS & DISCUSSION:** Of 240 medical students participated, 157 were males and 83 were females. The age of participants ranged from 18 to 22 years. Majority gave correct responses for sexual route of transmission and by blood transfusion. About mother to child transmission, 80% responded that the transmission is in-utero and only 69% realized the transmission through breast milk. They also have misconception about transmission through mosquitoes (62%). They had knowledge that HIV infection can be prevented by condom. **CONCLUSIONS:** The surveyed students had good knowledge about transmission and prevention about HIV/AIDS. Still, there is a need for specific educational modules for imparting positive attitudes in medical students and healthcare providers in relation to people living with HIV/AIDS.

**KEYWORDS :** Awareness, Youth, Medical students, AIDS, HIV, Transmission

### INTRODUCTION:

AIDS, the acquired immunodeficiency syndrome is a fatal illness caused by a retrovirus known as the Human Immunodeficiency Virus (HIV) which breaks down the body's immune system, leaving the victim vulnerable to a host of life-threatening opportunistic infection, neurological disorders, or unusual malignancies<sup>1</sup>.

HIV destroys the CD4 T lymphocytes (CD4 cells) of the immune system, leaving the body vulnerable to life-threatening infections and cancers. AIDS is the most advanced stage of HIV infection. To be diagnosed with AIDS, a person with HIV must have fining condition or have a CD4 count less than 200 cells/mm<sup>3</sup>(regardless of whether the person has an AIDS-defining condition).

HIV/ AIDS within decades of its described existence in 1981, has reached status of one of the most important public health diseases. It is now the leading cause of mortality in Africa and the fourth leading cause of death worldwide<sup>2</sup>.

In India, 35% of all reported AIDS cases are among the age group of 15-24 years, indicating the vulnerability of the younger population to the epidemic<sup>3</sup>. Though the HIV prevalence in India is low, the large population base of the country explains this enormous absolute number of HIV infected. The large population base also makes the country more vulnerable to HIV. In addition, several other factors contribute to this vulnerability including low levels of education, poverty, early age of sexual debut, limited access to health services especially in rural settings, inadequate information about modes of HIV transmission, and misconceptions and myths revolving around HIV/AIDS<sup>4</sup>.

HIV affects the immune system and reduces the body's defenses to protect against various infectious diseases and cancer. Treatment is available to delay the death of persons

suffering from the disease; however, there is no cure. Thus, it becomes necessary to educate young people so that they can protect themselves from getting infected. Various government and non-government organizations the world over have undertaken programs to raise awareness among people regarding HIV/AIDS. To stop the spread of HIV/AIDS in India, the Tenth Five Year Plan (2002-2007) was developed with targets set to achieve 90% coverage of schools and colleges through education programs and 80% awareness among the general population in rural areas<sup>5</sup>.

Young people are vulnerable to HIV infections because of risk-taking behavior and negligent attitude towards preventive measures<sup>6</sup>.

The main mode of HIV transmission in India is heterosexual intercourse with commercial sex workers, long distance truck drivers and migrant labor serving as vehicles of spread except in North Eastern states where Intravenous Venous (IV) drug users are common. Other routes of infection are transfusion of blood and blood products and transplacental<sup>7</sup>.

The lack of awareness and misconceptions about HIV/AIDS in general population is responsible for rapid spread and social stigma & discrimination in our country<sup>8</sup>.

Assessment of awareness levels in adolescents is important because it helps to determine the impact of previous awareness and prevention efforts made by the government and also to gauge the need for interventions. With this background, the present study was conducted to assess the current level of knowledge of 1<sup>st</sup> year MBBS students with regard to HIV/AIDS and to explore epidemiological determinants of awareness of HIV/AIDS among them.

### METHODS:

The present study was an anonymous random cross-sectional

survey which was done among the first year MBBS students (Batch 2018) in SMS Medical College, Jaipur. The study aims were explained to the students and verbal consents were obtained from them. They were advised that participation in the survey was anonymous and voluntary. The participants were not forced to answer any questions, and they were free not to respond or partially respond to any question. They were also informed that gender and age would be the only personal information required. A questionnaire containing 25 items was circulated in a classroom setting. The students were given 30 minutes to complete the questionnaire which included close ended questions to identify and assess their awareness about HIV/AIDS. The correct response for each item, obtained from the general literature and World Health Organization (W.H.O.) guidelines. Data was collected and analyzed using percentages.

**RESULTS:**

*Distribution of study subjects according to their general awareness regarding HIV/AIDS (Table 1)*

**Table 1: Awareness about HIV/AIDS**

Awareness	No.	Percentage (%)
Heard about HIV/AIDS	240	100
Full form of HIV	240	100
Full form of AIDS	218	91
Difference b/w HIV and AIDS	227	95

It was observed that all the students (100%) had heard about HIV/AIDS, they all were aware about full form of HIV and AIDS, while 95% knew about the difference between HIV/AIDS.

*Distribution of study subjects according to awareness regarding mode of transmission of HIV/AIDS (Table 2)*

**Table 2: Knowledge about modes of transmission**

Modes of transmission	No.	Percentage (%)
Unprotected sex	171	71
Blood transfusion	219	91
Mosquito bite	151	62
Sharing needles / syringes	240	100
Tattooing / piercing ear	84	35
Breast feeding	164	69
HIV-infected pregnant woman to her baby	192	80
Sharing shaving blades and razors	240	100

The present study reveals that the awareness regarding mode of transmission of HIV/AIDS was by sharing needles syringes/ shaving blades/ razors, as expressed by 100% students followed by infected blood transfusion (91%), HIV infected mother to baby (80%). The respondents believed HIV infection can be transmitted from: breast feeding (69%), mosquito bite (62%) and tattooing or ear piercing (35%).

*Distribution of study subjects according to awareness regarding risk category (Table 3)*

**Table 3: Knowledge about risk category**

Risk category	No.	Percentage (%)
Intravenous drug users	225	94
Thalassemic patients	225	94
Truck drivers	204	85
Sex workers	224	93

Majority of students (>85%) were aware that migrant workers, lorry drivers, commercial sex workers are high-risk groups for HIV/AIDS.

*Distribution of study subjects according to awareness regarding methods of prevention (Table 4)*

**Table 4: Knowledge about treatment or prevention of HIV/AIDS**

Treatment or prevention measures	No.	Percentage (%)
Blood testing in pregnancy	216	90
Blood testing before surgery	238	99
Blood testing before marriage	224	93
Blood testing before blood transfusion	240	100
Using condoms	240	100
Using disposable needles and syringes	240	100
Using oral contraceptive pills	21	09
Using antibiotics	46	19
Using Intrauterine contraceptive devices	43	18

Majority of the participants (>90%) knew the role of blood testing in pregnancy, before marriage and surgery, use of condoms and disposable needles and syringes in preventing HIV. It was good to observe that very few students had the misconceptions about prevention measures by using oral contraceptive pills (9%), intrauterine contraceptive devices (18%) and antibiotics (19%).

**DISCUSSION:**

Knowledge about HIV/AIDS is important among medical students because of its increasing prevalence. Medical students should be able to protect themselves against HIV infection during practice. Their perception is important as medical students should be able to provide treatment to AIDS patients. They also have an important role in educating the public about HIV/AIDS. A previous study done in 1999 had revealed AIDS phobia among medical students and the authors had suggested that medical educators help students overcome the phobia<sup>9</sup>.

It was found in this study that all students (100%) had heard about HIV/AIDS, which is similar to the results of the study done by many other authors<sup>6,10,11,12,13</sup>.

In the study it has been observed that only 38% of participants knew that mosquito bite from HIV/AIDS infected person will not transmit HIV virus. In another study done by Lal et al reported 70.04% of participants, Singh SK et al reported 44.67%, Koksai S et al reported 58.3% of participants knew that mosquito bite from HIV/AIDS infected person will not transmit HIV virus<sup>14,15,16</sup>.

A survey carried out in India among new medical students had shown good knowledge and few misconceptions about HIV/AIDS<sup>17</sup>.

Knowledge regarding modes of transmission among students are better in our study compared to Ravi Shankar et al were students had correct information about different modes of transmissions viz. sexual route (98%), transmission through infected blood or its products (90%), mother to child transmission (78%), and sharing of needle/syringes (89%)<sup>6</sup>.

In the study, finding regarding knowledge about condom as mean of protection is much higher than the findings of Yadav et al<sup>18</sup>.

In the study 91% students were aware about the use of safe blood for blood transfusion. In another by Yadav et al revealed that the higher number of respondents (82.75%) were aware of the blood safety<sup>18</sup>.

It has been observed that 80% students were aware of transmission of infection from mother to child in comparison to other modes of transmission. Similar findings were reported by the District level household survey in Gujarat State and Behavior Surveillance Survey across the country<sup>19,20</sup>.

Present study reveals that 93% students believed that prior-marriage HIV testing should be done. This result is similar to the study done by Khade et al<sup>21</sup>.

It was observed that majority of students had good knowledge about preventive measures. These findings are comparable to study by Ravi Shankar et al and Kumar A et al<sup>6,22</sup>.

#### CONCLUSION:

The results of our study are encouraging as most of students had good awareness regarding HIV/AIDS disease. The basic knowledge of HIV/AIDS over various issues like prevention and mode of transmission was sufficient among many students still they had some misconceptions about it. There is a need 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.

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#### CONFLICT OF INTEREST:

The authors and planners have disclosed no potential conflicts of interest, financial or otherwise.

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