Assessment of Knowledge related to HIV/AIDS among Medical Students

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Abstract

Background: WHO estimates that approximately 36.7 million people living with HIV at the end of 2015, out of which 46% were receiving antiretroviral treatment. About 77% of all pregnant women living with HIV globally received medicines that prevent transmission to their babies in 2015. National adult (15–49 years) HIV prevalence in India is estimated at 0.26% in 2015. The total number of People Living with HIV (PLHIV) in India is estimated at 21.17 lakhs in 2015 compared with 22.26 lakhs in 2007 out of which Undivided Andhra Pradesh and Telangana have the highest estimated number of PLHIV (3.95 lakhs). This study was conducted to assess the extent of Knowledge related to HIV/AIDS among medical students in a private medical college in South India. **Methodology:** This was a cross sectional study conducted among 126 second year medical students of a private medical college of south India for a period of 3 months. After taking informed consent, information regarding Knowledge related to HIV, modes of its transmission, prevention and socio-demographic variables were collected from them using a predesigned, pretested semi-structured questionnaire. Data was entered and analyzed using Microsoft Office Excel 2010 and the results were expressed in percentages. **Results:** out of 126 students participated; 38.1% were males and 61.9% were females. Correct knowledge regarding HIV transmission from mother to child through pregnancy and breast feeding were 81.7% and 45.2% respectively. About 14.3% of the students opinioned that they will consider suicide if they were discovered HIV positive. **Conclusion:** Most of the students were having basic knowledge of HIV/AIDS although there were some misconceptions which should be corrected. There is a need of Information, Education activities related to HIV/AIDS to increase the knowledge and awareness among medical students.

Key words: *HIV, AIDS, medical students, knowledge*

Background

WHO estimates that approximately 36.7 million people living with HIV at the end of 2015, out of which 46% were receiving antiretroviral treatment. Acquired immunodeficiency syndrome (AIDS) is a fatal illness caused by a retro virus known as the human immunodeficiency virus (HIV) which breaks down body's immune system, leaving the victim vulnerable to a host of life-threatening opportunistic infections, neurological disorders, and unusual malignancies. HIV/AIDS is affecting mainly young people in the sexually active age group. Majority of HIV infections (88.55%) are found in the age group of 15-49 years, out of which 31.8% are in the age group of 15-29 years.[1,2]

National adult (15–49 years) HIV prevalence in India is estimated at 0.26% (0.22% - 0.32%) in 2015 with 0.30% among males and at 0.22% among females. As per the state specific estimates, Manipur has the highest estimated adult HIV prevalence of 1.15%, followed by Mizoram (0.80%), Nagaland (0.78%), Andhra Pradesh

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& Telangana (0.66%), Karnataka (0.45%), Gujarat (0.42%) and Goa (0.40%). The total number of People Living with HIV (PLHIV) in India is estimated at 21.17 lakhs (17.11 lakhs–26.49 lakhs) in 2015 compared with 22.26 lakhs (18.00 lakhs-27.85 lakhs) in 2007 out of which Undivided Andhra Pradesh and Telangana have the highest estimated number of PLHIV (3.95 lakhs) followed by Maharashtra (3.01 lakhs), Karnataka (1.99 lakhs), Gujarat (1.66 lakhs), Bihar (1.51 lakhs) and Uttar Pradesh (1.50 lakhs). These seven States together account for two thirds (64.4%) of total estimated PLHIV.[3]

About 77% of all pregnant women living with HIV globally received medicines that prevent transmission to their babies in 2015.[4] Young people are vulnerable to HIV infections because of risk-taking behaviour and negligent attitude towards preventive measures.[5] The main mode of HIV transmission in India is heterosexual intercourse with commercial sex workers, long distance truck drivers and migrant labour serving as vehicles of spread except in North Eastern states were Intravenous Venous (IV) drug users are common. Other routes of infection are transfusion of blood and blood products and transplacental.[6] The World Health Organization in its report on the role of HIV-related medical education in the South Asia region has stressed the importance of including training in sensitivity, communication skills, and the development of compassionate attitudes toward HIV infected patients in the medical curricula.[7] Studies in India concerning HIV-related knowledge and attitudes amongst both health professionals and medical students suggest that early educational intervention has the potential to address the gaps both in knowledge and the negative attitudes directed towards those with HIV infection [8-10]

Objectives

To assess the extent of Knowledge related to HIV/AIDS among medical students in a private medical college in South India

Materials and Method

Study design: Observational cross sectional study

Study setting: ASRAM medical college of Eluru city, Andhra Pradesh

Study period: 3 months from October 2016 to December 2016

Sample size: 126 second year medical students of ASRAM Medical college, Eluru

Sampling technique: All the second year medical students who were present on the day of data collection were included in the study

Exclusion criteria: Students who were absent on the day of data collection and who are not willing to give consent were excluded from the study.

Study tool: The data was collected using a pretested semi structured questionnaire regarding knowledge related to HIV/AIDS. A pilot study was conducted and tested for appropriateness of study questionnaire and the actual study was started after making necessary corrections and advises in it.

Consent: Importance of the study was explained and an informed consent was taken from all the study participants before data collection and the study was approved by institutional ethical committee.

Data collection: After taking informed consent from the study subjects, information regarding demographic variables, knowledge related to HIV/AIDS, modes of its transmission and prevention were collected using study questionnaire.

Data and statistical analysis: Data was entered and analyzed using Microsoft Office Excel 2010 and the results were expressed in percentages.

Results

Out of 126 medical students participated; 38.1% were males and 61.9% were females. The mean age of the study population was 19.1 ± 0.77 years ranging from 18 years to 21 years. Majority of the students opined that lectures (68%) are the major Source of information about HIV/AIDS followed by television (44%), internet (37%), newspapers (36%) (Figure 1). Regarding knowledge about preventive measures of HIV transmission; 54% of the students had knowledge that condoms will prevent HIV transmission and about 22% of the students had incorrect knowledge that there is a HIV vaccine available. Majority 96% of the students opined that diagnostic tests are available for detecting HIV and 57% of the students had knowledge that there is a cure for HIV. In our study, about 81% of the students are willing to check their HIV status and 14% of the students opined that they will consider suicide if they were detected as HIV positive.

Figure 1: Source of information about HIV/AIDS

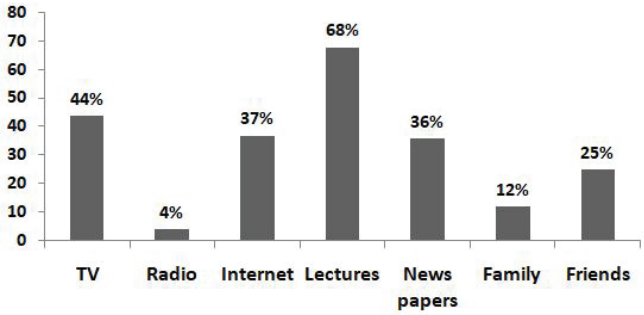

Table1: Knowledge regarding modes of HIV transmission

Modes of HIV transmission through	Yes	%
Sharing needle	123	98
Mother to child transmission	103	82
Breast feeding	57	45
Human bite	33	26

Figure 2: Knowledge about transmission of HIV/AIDS

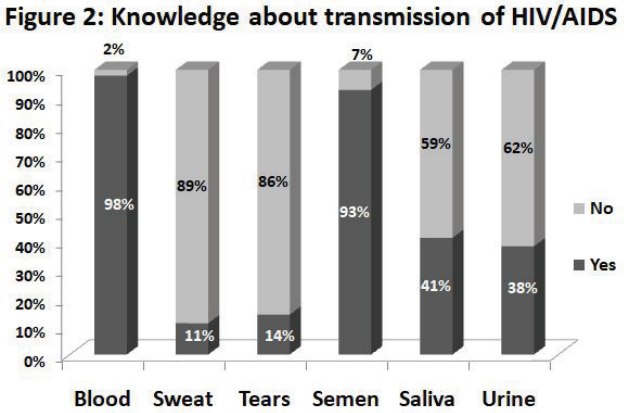

Table 2: Misconceptions regarding modes of HIV transmission with someone who has HIV/AIDS

Modes of HIV transmission through	Yes	%
Mosquito bite	19	15
Kissing	48	38
Sharing clothes	18	14
Drinking from same glass	27	21
Sharing cigarette	39	31
Living in the same house	11	9

Discussion

Source of Information About Hiv/Aids

In our study majority of the students (68%) opined that lectures are the major Source of information about HIV/AIDS followed by television (44%), internet (37%) and news papers (36%). Where as in a study done by Biradar SM et al.[11], majority (70%) of students had gained information from media (TV, Internet, Radio, Newspaper) followed by other sources like health staff (51.3%) , Friends & Family (48.6%), and Others 38.8% (school curriculum , teachers etc). In another study done by Joshi AV et al.[12], media was the leading source of information of participants regarding the present knowledge about HIV/AIDS (95%). Media plays an important role in the awareness regarding HIV/AIDS in the society.

Knowledge Regarding Modes of HIV Transmission

In our study regarding the knowledge of HIV transmission, most (98%) of the students had correct knowledge that HIV will be transmitted through sharing needle. Similar results were observed from other studies conducted by Biradar SM et al. (100%), Ravi Shankar et al.[13] (89.1%), Dalai et al.[14] (98%) and Baytner-Zamir et al.[15] (99%). Majority (82 %) of the students have correct knowledge about mother to child transmission of HIV in pregnancy. This was in similar to the studies done by Ravi Shankar et al. (77.82%), Baytner-Zamir et al. (91.9%), Biradar SM et al. (94.4%) and Dalai et al. (96%). In our study only 45% of the students had correct knowledge regarding HIV transmission from mother to child through breast feeding. Similar results were observed in studies done by Joshi AV et al. (37.11%) and Baytner-Zamir et al. (36.6%), where as it was 71.64% in a study done by Dalai et al. In our study, most (98%) of the students have correct knowledge that HIV will be transmitted through blood. This was in similar to the studies done by Chauhan AS et al.[16] (87.1%), Ravi Shankar et al. (89.88%), Baytner-Zamir et al. (94.2%) and Dalai et al. (98%). [11-16]

About 41% of the students had knowledge that HIV will be transmitted through saliva, where as it was 47.1% and 24.8% in the studies done by Chauhan AS et al. and Baytner-Zamir et al. respectively. There were misconceptions that mosquito bite transmit HIV in about 15% in the students, where as in various studies it was Biradar SM et al. (1.1%), Joshi AV et al. (20.61%),

Baytner-Zamir et al. (27.2%), Dalai et al. (27.86%) and Ravi Shankar et al. (39%). In our study, about 38% of the students had knowledge that HIV will be transmitted through kissing the person with HIV, where as in various studies it was Biradar SM et al. (0.5%), Dalai et al. (24.37) and Ravi Shankar et al. (89.1%). About 14% of the students had misconception that HIV will be transmitted through sharing clothes with the HIV infected person, where as in other studies it was Biradar SM et al. (0.4%), Joshi AV et al. (5.15%), Dalai et al. (25.87%) and Ravi Shankar et al. (75.87%). About 21% of the students had knowledge that HIV will be transmitted through sharing of common utensils or drinking from same glass with the HIV infected person, where as in various studies it was Biradar SM et al. (0.1%), Baytner-Zamir et al. (10.4%) and Ravi Shankar et al. (86%). [11-15]

Knowledge Regarding Preventive Measures of HIV Transmission

Only 54% of the students had knowledge that condoms will prevent HIV transmission, this was against the studies done by Ravi Shankar et al. (92.21%) and Joshi AV et al. (98%). About 22% of the students were having improper knowledge that there is a HIV vaccine available to prevent the HIV infection, this was similar to the studies done by Ravi Shankar et al. (12%), Joshi AV et al. (19.58%), Chauhan AS et al. (20%) and Biradar SM et al. (23.6%). Majority (96%) of the students had knowledge that diagnostic tests are available for detecting HIV, similar results were observed in studies conducted by Biradar SM et al. (100%), Chauhan AS et al. (98.8%) and Ravi Shankar et al. (75%). About 57% of the students were having improper knowledge that there is a cure for HIV, similar results were obtained in a study done by Joshi AV et al. (55.67%). [11-16]

Conclusion

Most of the students were having basic knowledge of HIV/AIDS, although there were some misconceptions which should be corrected. There is a need of Information, Education activities and periodical academic activities related to HIV/AIDS to increase the knowledge and awareness among medical students.

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Conflict of Interest: None declared

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