

## **Knowledge about HIV/AIDS among First Year and Final Year Female College Students: A Cross-Sectional Study**

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### **I. Introduction**

The Acquired Immunodeficiency Syndrome (AIDS) is a major emerging public health problem in India. The first case of HIV/AIDS was reported in India in Tamil Nadu in 1986 and since then HIV infection has been reported in all states and union territories. India has the third largest number of people living with HIV in the world (2.1 million at the end of 2013). According to National AIDS Control Organization (NACO) of India, the prevalence of AIDS in India in 2013 was 0.27, which is down from 0.41 in 2002 (NACO annual report, 2014). The numbers of new HIV infections (130,000 in 2013) declined by 19 per cent and a 38 per cent decline in AIDS-related deaths between 2005 and 2013. Still 51% of deaths in Asia are in India (NACO annual report, 2014).

People of any age and gender are susceptible to HIV. According to the World Health Organization and the Joint United Nations Program on HIV/AIDS, youths (aged 15 to 25 years) are much more prone to HIV infection due to lack of correct health information, indulgence in risky behaviours, and lack of access to adequate reproductive health services (UNAIDS, Gap report, 2014). But, women, have a higher incidence of STIs/HIV than men because of their greater biological susceptibility. About 32% of AIDS (Acquired Immunodeficiency Syndrome) cases were reported under age 15–29 years (young adults) in India and the number of young women living with HIV/AIDS was twice that of young men ( McManus and Dhar, 2008). India has an estimated 220,000 children infected by HIV/AIDS due to more HIV positive mothers who unknowingly pass the virus on to their children.

As there is no cure for AIDS, so awareness is the only effective way of preventing this infection in general population and high risk groups especially youth. The purpose of Red Ribbon Club formation in colleges is to encourage peer to peer messaging on HIV prevention and to provide a safe space for young people to seek clarification to their doubts and on myths surrounding HIV/AIDS. Knowledge and awareness about HIV/AIDS in female students can positively affect the community, since they are the future of the society.

It is essential to understand the dynamics of HIV/AIDS among youth through regular surveys about awareness and knowledge. This information will also be helpful in assessing changes over time as a result of prevention efforts. Though, there are limited studies which have explored knowledge of female students regarding to HIV/AIDS, particularly a comparison between first year and final year female undergraduate students in Chandigarh. Thus, the present study was conducted to assess the awareness regarding HIV/AIDS among college female Students and comparison between them.

### **II. Methods**

A cross-sectional study was conducted among first year (Group 1) and final year (Group 2) undergraduate girl students of Government College in Chandigarh, India, from July to October 2013. The sample comprised 327 female students from two different classes, 178 students from first year class consider as 'group 1' and 148 students from final year class consider as 'group 2'.

The information was collected from them using self designed, pretested and structured questionnaires. The questionnaire consisted of questions related to general knowledge and mode of transmission of HIV/AIDS, their knowledge regarding treatment and prevention of HIV/AIDS and their source of information regarding HIV/AIDS.

All data were entered using SPSS (Statistical Package for the Social Sciences, Version 16). Percentage and frequency were assessed for each question to verify that responses were within the defined range of possible values. Incorrect entries were examined and verified against the original questionnaires. In addition all missing responses were recorded and checked against the original questionnaire.

### **III. Results**

There were 326 female students of which 178 first year female students in the age group of 17 to 19 years with a mean age of 17.9±0.70 and 148 final year female students in the age group 18 to 21 years with a mean age of 19.4±0.73 years.

**a) Information regarding HIV/AIDS**

During the last 3 months, 75% students from group 1 and above 65 % student of group 2 had heard or seen anything on radio, TV or newspaper about HIV/AIDS prevention. All the students participated in the study knew about HIV (Human Immunodeficiency Virus) that causes AIDS. Most of the students (89%) participated in the study knew that a healthy-looking person to have the AIDS virus but a very few of them students (25%) had met anyone personally who has AIDS or the virus that causes AIDS or someone who died from AIDS ( Table 3).

**b) Preferred source of getting present information**

The results of study (Table 1) showed that all students from both groups obtained information from varied sources. Nurse and doctors were the leading source of information for group 1 (58.4%) and group 2 (64%) students regarding the present knowledge about HIV/AIDS. Even both the groups would not like to share their information with parents (less than 25%) and relatives (appr.10%). Only 16 % students from both groups acquired information from community or public meeting. About 40 % students of both groups relied on newspaper /magazines for knowledge about it.

**Table 1:** Preferred source of getting present information regarding HIV /AIDS

SOURCES	Group 1 N(%)	Group 2 N (%)
Nowhere	3(1.7)	4(2.8)
Nurse/ Doctor	104(58.4)	95(64.2)
Parents	39(21.9)	32(21.6)
Other relatives	11(6.2)	12(8.2)
Friends	79(44.4)	91(61.5)
Mass media/Radio /TV	56(31.5)	55(37.2)
Newspaper/ Magazines	76(42.7)	73(49.3)
Library	34(19.1)	29(19.6)
Community or public meetings	29(16.3)	24(16.2)
Others (specify).....INTERNET	40(22.5)	35(23.6)

**c) Different modes of transmission**

Table 2 depicted the different modes of transmission for HIV/AIDS virus. The results found that most of female students (85%) from group 1 knew that HIV/AIDS can be prevented by the use of condoms, and use of sterilized needles. In case of group 2 students, more than 90 % knew that it can also be prevented by avoiding HIV contaminating blood transfusion other than use of condoms and use of sterilized needles.

**Table 2:** knowledge about different ways of transmission

HIV/AIDS can be transmitted by	Group 1 N(%)	Group 2 N (%)
Stay faithful to one partner	100(56.2)	118(79.7)
Use of condoms	160(89.9)	140(94.6)
Avoid transfusions with blood that has not been tested for HIV	139(78.1)	135(91.2)
Avoid unsterilized needles and injections	155(87.1)	142(95.95)
Avoid kissing	59(33.14)	43(29.1)
Avoid mosquito bites	67(37.4)	44(29.7)
Avoid sharing razors, blades or any sharp object	119(66.9)	132(89.2)

**d) Knowledge and preventive methods regarding HIV/AIDS**

The results of the present study indicated about general knowledge and preventive measures for HIV/AIDS. As shown in Table 3 that more than 95 % and 65 %students from both groups knew that AIDS virus does not get transmitted by sharing of foods with a person who has AIDS and by having just one unaffected sex partner . The students of group 2 (75%) more believed that people can reduce their chance of getting the AIDS virus by using a condom everytime they have sex as compared to group 1 students(65%). But, in both groups, only 40% students were willing to buy condom herself. Group 1 students (95%) knew that AIDS virus can be transmitted from mother to child whereas only 81 % students of group have assured about it. As 86 and 92 percent students knew the way to transmittance of virus from mother during pregnancy. But, more than 65 % students were not aware about transmittance of virus during delivery and breast feeding.

**Table 3:** Knowledge and preventive methods regarding HIV/AIDS

	Group 1 YES N(%)	Group 1 NO N(%)	Group 1 NOT SURE N(%)	Group 2 YES N (%)	Group 2 NO N (%)	Group 2 NOT SURE N (%)
Is it possible for a healthy-looking person to have the AIDS virus?	159 (89.33)	12 (6.74)	7 (3.93)	137 (91.95)	3 (2.013)	9 (6.04)
Do you know someone personally who has AIDS or the virus that causes AIDS or someone who died from AIDS?	31 (17.42)	138 (77.53)	9 (5.06)	16 (10.74)	127 (84.56)	7 (4.70)
If you wanted to, could you yourself get a condom?	72 (40.5)	44 (24.7)	61 (34.3)	63 (42.3)	23 (15.4)	63 (42.3)
Can people get the AIDS virus by sharing food with a person who has AIDS?	5 (2.8)	169 (94.94)	4 (2.3)	6 (4.03)	143 (95.97)	0
Can people reduce their chance of getting the AIDS virus by having just one unaffected sex partner who has no other sex partners?	123 (69.1)	18 (10.1)	37 (20.8)	95 (63.8)	37 (24.8)	17 (11.4)
Do you know if having a sexually transmitted disease can increase the chance of a person getting AIDS?	116 (65.168)	23 (12.93)	38 (21.35)	113 (75.839)	12 (8.05)	24 (16.11)
Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	131 (73.59)	10 (5.62)	37 (20.79)	120 (81.08)	10 (6.71)	19 (12.75)
Can the virus that causes AIDS be transmitted from a mother to her baby:	171 (96.067)	0	7 (3.93)	139 (93.288)	0	10 (6.71)
A) During pregnancy	165 (92.7)	5 (2.81)	13 (7.30)	129 (86.58)	2 (1.34)	18 (12.09)
B) During delivery	27 (15.17)	28 (15.73)	123 (69.10)	19 (12.75)	20 (13.42)	110 (73.83)
C) Breast feeding	43 (24.16)	27 (15.17)	108 (60.67)	27 (18.12)	21 (14.09)	101 (67.79)

**e) Knowledge about treatments**

There were 61-65 % from group 1 students and 62-73 % students of group 2 have heard about voluntary counselling and testing centres for HIV/AIDS and state or national AIDS control society that are intended to help prevent infection with HIV/AIDS (Table 4).

**Table 4:** Knowledge about treatments of HIV/AIDS

	Group 1 YES N(%)	Group 1 NO N(%)	Group 1 NOT SURE N(%)	Group 2 YES N (%)	Group 2 NO N (%)	Group 2NOT SURE N (%)
Have you ever heard about Voluntary Counseling and Testing for HIV/AIDS?	113 (63.48)	48 (26.97)	17 (9.55)	108 <b>(72.48)</b>	32 (21.48)	7 (4.70)
Have you ever had a test for a HIV, the virus that causes AIDS?	31 (17.42)	141 (79.2)	06 (3.37)	12 (8.11)	134 (89.93)	3 (2.01)
Have you ever heard about Antiretroviral drugs for HIV/AIDS?	87 (48.88)	66 (37.08)	24 (13.48)	56 (37.58)	69 (46.31)	24 (16.11)
Antiretroviral drugs can prolong the life of people affected with HIV/AIDS?	85 (47.75)	24 (13.48)	68 (38.20)	54 (36.24)	7 (4.70)	88 (59.06)
People can easily get an Antiretroviral drugs for HIV/AIDS	68 (45.95)	22 (12.36)	87 (48.88)	46 (30.87)	8 (5.37)	95 (63.76)
Are you aware of State or National AIDS Control Society that are intended to help prevent infection with HIV/AIDS?	117 (65.73)	39 (34.27)	22 (12.4)	92 (61.75)	33 (37.58)	23 (15.6)
Do you know about 1097 helpline for information on HIV/ AIDS?	50 (28.09)	90 (66.29)	28 (15.7)	42 (28.19)	78 (71.81)	29 (19.6)

There were only 28 % students from both groups have heard about helpline no. 1097 for information on HIV/AIDS. The use of antiretroviral drugs and place to get these drugs were not known by more than 60% students of both groups.

**Table 5:** A comparison about knowledge regarding HIV/AIDS between Group1 and Group 2

Frequency (range)	Group1		Group2		
	N	(%)	N	(%)	
0-5	10	5.65	10	6.76	Poor
6-10	68	38.42	66	44.6	Average
11-15	90	50.85	69	46.62	Good
16-20	9	5.08	3	2.03	Best

**f) Comparison between two groups about knowledge regarding HIV/AIDS**

This table 5 showed that 56 % of students from group1 have attained very good knowledge regarding HIV/AIDS as compared to 49 % of students from group 2. There were only 6-7 % students from both groups showed poor knowledge about HIV/AIDS.

**IV. Discussion**

The findings of this study indicated good awareness about knowledge of the modes of HIV transmission and prevention among college girls. All the female college students who participated in the study had heard about HIV/AIDS and HIV virus. Most of the students (85%) knew that HIV/AIDS can be transmitted by sex, from an HIV-infected pregnant woman to her baby and blood transfusion. Similar results were shown by the study conducted among medical students in Bijapur (Udgiri et al 2011), and among college students of Kerala (Lal et al., 2000).

The present study showed that some misconceptions about the transmission of HIV/AIDS. Students from the both groups thought that HIV/AIDS can be transmitted through mosquito bite (29-33%) and kissing (29-37%) and sharing common razor/ sharp things (more than 65%). Most of the students knew about transmission of virus from mother to baby during pregnancy. But there were very less than 20 percent of students have knowledge regarding AIDS virus transferred during delivery and breast feeding. These results were comparable with the study done by Basavayya (2005) and in contrast with the study done by Udigiri *et al.* (2011) Majority of participants said that HIV/AIDS can be prevented by using condoms (98%) still more than 60 percent students were not able to buy condom herself. The present study compares well with the study conducted in Karnataka (Joshi et al., 2013) among college students. In this study, nurse and doctors (65%) were the main source of information for college students regarding the present knowledge about HIV/AIDS. Friends and magazines were the preferred source of getting information regarding HIV/AIDS. This study also showed that students did not like to get information from their parents and relatives. Media (95%) was the leading source of information for participants regarding the present knowledge about HIV/AIDS which is in contrast to the findings shown by the study conducted in Kerala (Lal et al., 2000) and Delhi. (McManus and Dhar, 2008;Bhalla et al., 2005). Teachers (91.7%) and the doctors (88%) were the preferred source of getting information regarding HIV/AIDS (Joshi et al., 2013).

The findings of this study showed that undergraduate female students of both groups showed good knowledge about different sources for getting information, main modes of transmission such as use of condoms, blood transfusion and prevention measures. But, this study also found that there were stigma in these students to buy condoms and use of helpline no. and counselling and state centre for prevention HIV/AIDS. This study suggests a gap between knowledge of HIV/AIDS prevention strategies and their practice, which indicates the need for intra- and interpersonal dialogue on these issues.

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