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A study on the knowledge and attitude towards HIV/AIDS among pre-university students

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Abstract

Introduction: India estimates third highest number of HIV infections in the world, with about 2.4 million people currently living with HIV/AIDS. Adolescents often face a significant barrier to get the in-formation, education and services required. Discussing reproductive and sexual matter freely is still a taboo in our society. Present study was designed to investigate current awareness and knowledge levels of pre university students about human immunodeficiency virus/ acquired immune deficiency syndrome (HIV/AIDS) transmission, misconcepts**,** prevention and attitude of students towards patients living with HIV/ AIDS.

Materials and Method: Totally 478 students were participated and were asked to fill out a structured questionnaire form which was consisted with 42 questions. The form contained two scales, one of socio-demographical profile of the individuals and the other scale was about knowledge and attitude levels of students.

Results: Findings show that overall general knowledge regarding HIV/AIDS transmission routes (60%), prevention (28.87%) and treatment (59.6%) was good among the study participants. Physics, chemistry, mathematics, biology (PCMB) student's knowledge regarding transmission, prevention, and attitude towards the People living with HIV/ AIDS (PLHA) was better compared to Physics, chemistry, mathematics, computer science (PCMCS) and Commerce students (p value <0.01).

Conclusion: Knowledge on modes of transmission and prevention of HIV/AIDS is poor among pre university students. And biology students had better knowledge; hence the reproductive health education should be a part of curriculum in all schools, so that all learn before they are diverged into different study subjects for degree/ colleges. Public awareness programs should be directed to society.

Keywords: Pre university students, Knowledge levels, Human immunodeficiency virus/ acquired immune deficiency syndrome (HIV/AIDS)

Introduction

HIV has rapidly entrenched itself throughout the world over the past three decades. The adolescent cohort is one of the most vulnerable groups as far as risk of HIV/AIDS is concerned.(1)

According to HIV Estimations in 2012, the adult (15- 49 years) HIV prevalence at national level showed a steady decline from the estimated level of 0.41% in 2001 to 0.27% in 2011. At national level HIV prevalence among the young (15-24 years) population also declined from around 0.30% in 2001 to 0.11% in 2011.(2)

INDIA has world 3rd largest population suffering from HIV/AIDS. Adults (15-25years) constitute about 25% of Indians population, but they account for 30% of AIDS burden. Many adults who become mentally and sexually active at this age become vulnerable to contract disease and many of them are unaware about HIV transmission, routes and preventive methods.(3)

India is having a large population with low literacy levels leading to a lower the level of awareness of HIV/AIDS; the disease is posing an alarming hazard on the public health scenario. At the same time, discussing sex has been restricted in the Indian societal set-up. Adolescence is masked with myths and misconceptions about sexual health and sexuality.(4) Adolescents are potential asset for changing attitudes and behaviour towards AIDS, i.e. they are not just targets but actors in the campaign against HIV/AIDS.(5)

When young people are equipped with knowledge and skills, they can play a strong role during an epidemic. The spread of HIV/AIDS relies primarily on personal human behaviour, even if individuals everywhere had the full benefit of measures taken to reduce vulnerability and full access to the tools and skill to prevent transmission, it is factitious to think that all the spread would stop.(6)

After almost thirty years of existence of HIV/AIDS, students and teachers are still not equipped to battle against this pandemic, although school is considered to be a focal point or a very crucial platform to discuss these issues. Hence we have taken up this study to know the knowledge levels of HIV/ AIDS spread as well as prevention and attitude towards the people living with HIV/ AIDS (PLHA).

Materials and Method

A descriptive cross sectional study was conducted to know the awareness level regarding HIV/AIDS among pre university students of randomly selected one of the college in the Ballari city. The study was conducted from 6th July to 11th July 2015. We listed all the residential cum day scholar pre university colleges in the city and approached Principal of each college and explained about the study. And later we selected one

college depending upon the availability of students during the period of our study plan and the willingness for the study. The research protocol and procedures were reviewed and approved for the ethical considerations by the Ethical committee and School Principal. The written informed consent was taken from all study participants. The study was performed on pre university students of 15-19 years age group studying in randomly selected one of the Pre University College. Predesigned pretested Questionnaire was used to collect data. The proforma was pilot tested with 30 pupils to identify reliability and where revision was essential. Major revisions were made to facilitate understanding and applicability of questionnaire.

Final questionnaire consisted of 42 questions, which were better divided into five sections: Section A was to get the background information about socio demographic variables, Section B had some basic awareness questions to test the extent of awareness level of the students; section C contained awareness level regarding prevention of HIV/AIDS; Section D questions included testing the students attitude towards people living with HIV/AIDS and section E asked about organizations of AIDS. Data was analyzed using SPSS 16.0 version and Epi Info 3.5.x. Results are explained in the form of graphs and tables. Statistical analysis was done using Chi square test.

Results

478 Pre university students participated in our questionnaire with age range of 15 to 19 years, and their socio-demographic findings were summarized in Tables 1. More than half of the students (61.09%) were of 17 year, male students (69.87%) and 75.1% belong to Hindu religion. More than half (57.11%) were studying PCMB combination as study subjects.

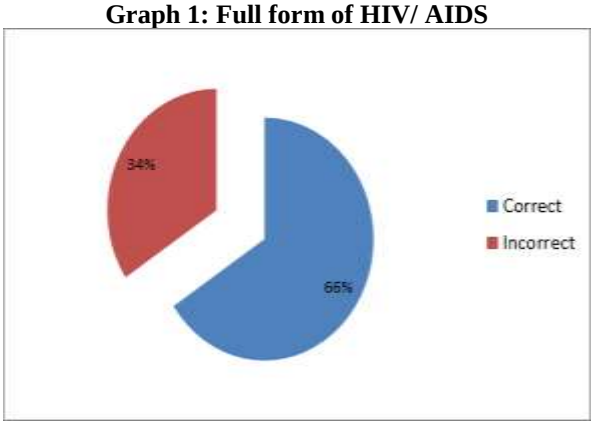
Table 1: Distribution of study participants according to socio- demographic variables

Variable	Number	%
Age in Years		
15	14	2.93
16	115	24.06
17	292	61.09
18	55	11.51
19	2	0.41
Sex		
Male	334	69.87
Female	144	30.13
Religion		
Hindu	359	75.1
Christian	24	5.02
Muslim	72	15.06
Others	23	4.82
Education Subjects*		
PCMB	273	57.11
PCMCS	85	17.78
Commerce	120	25.11

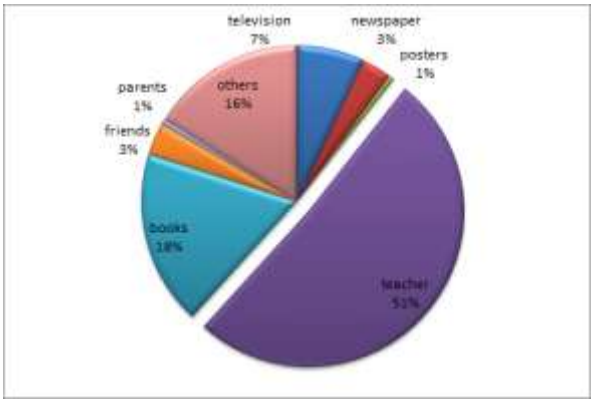
* PCMB= Physics, chemistry, mathematics, biology, PCMCS = Physics, chemistry, mathematics, computer science

Among all the students 314 (66%) students wrote correct full form of HIV/AIDS where as others did wrong (Graph 1). Half of the students told that the channel of acquiring knowledge regarding HIV/AIDS was from teachers (51%). Other channels explained in Graph 2. Students were asked about main routes of transmission of HIV/AIDS and results have been shown in Graph 3. Only 7% of students had told the correct answer.

Graph 1: Full form of HIV/ AIDS



Graph 2: Channel of aquiring knowledge regarding HIV/AIDS



Respondents were also asked a number of questions bordering on the etiology of HIV/AIDS, transmission of HIV/AIDS, prevention of HIV/AIDS, as well as attitude of the participants towards PHLA. These results are shown in Table 2and 3.

Table 2: Knowledge and awareness of pre-university students about HIV/AIDS (N=478)

Questions	Correct Knowledge		Incorrect/ Poor Knowledge	
	Frequency	%	Frequency	%
Section B				
Basic Awareness about etiology				
Full form of HIV/AIDS?	314	65.7	164	34.3
Is both HIV and AIDS are same?	92	19.25	386	80.75
Causative agent of HIV/AIDS	382	79.92	96	20.08
How many main routes of transmission of HIV/AIDS?	32	6.69	446	93.31
Awareness regarding mode of transmission				
Unsafe sexual contact	409	85.56	69	14.44
Blood transfusion	429	89.74	49	10.26
Unsterilized needles/ Drug abusers	395	82.6	83	17.4
Mother to fetus	360	75.3	118	24.7
Breast feeding	282	59	196	41
Sharing food/utensil	357	74.7	121	25.3
Mosqito bite	282	59	196	41

Graph 3: Number of routes of transmission of HIV/AIDS

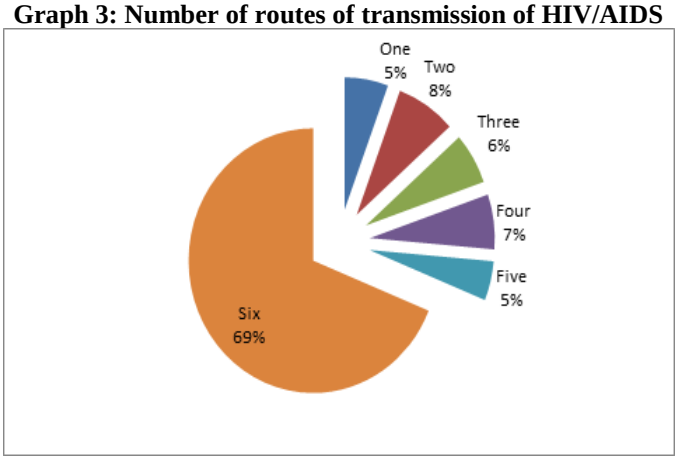


Table 3: Knowledge level about prevention, treatment and attitude towards PLHA of pre-university students (N=478)

Questions	Correct Knowledge		Incorrect/Poor Knowledge	
	Frequency	%	Frequency	%
Section C				
Knowledge level about prevention and treatment				
Whether HIV/AIDS is preventable?	329	68.8	149	31.2
Whether HIV/AIDS is curable?	285	59.6	193	40.4
Is there vaccine for HIV/AIDS?	171	35.8	307	64.2
Use of condom/barrier methods during sexual act	414	86.6	64	13.4
Avoiding tattoing	191	40	287	60
Staying away from the patient	319	66.7	159	33.3
Section D				
Attitude towards PLHA				
Your relative/friend has HIV/AIDS, will you care them?	357	74.7	121	25.3
Will you Play with children having HIV/AIDS?	309	64.6	169	35.4
If teacher is diagnosed, will you allow him/her to teach?	329	68.8	149	31.2

It is encouraging to see that PCMB students had better knowledge about HIV/AIDS transmission and prevention ($p< 0.01$) when compared with the other combination subject students such as PCMCS and commerce. As well they had good attitude towards the PLHA ($p<0.01$).

Table 4: Combination of study versus the HIV/AIDS awareness

Variables	PCMB(n=273)				PCMCS(n=85)				Commerce(n=120)			
	Correct	%	Incorrect	%	Correct	%	Incorrect	%	Correct	%	Incorrect	%
Routes of Transmission of HIV/AIDS												
	198	72.5	75	27.5	47	55.3	38	44.7	41	34.2	79	65.8
$\times^2$ =51.93 df=8 p= 0.00000												
Modes of Prevention												
	94	34.4	179	65.6	22	25.9	63	74.1	22	18.3	98	81.7
$\times^2$ =10.97 df=4 p= 0.0041												
Attitude towards PLHA												
	134	49.1	139	50.9	34	40	51	60	26	21.7	94	78.3
$\times^2$ =26.0 df = 2 p= 0.00000												
Full form of HIV/AIDS												
	233	85.3	40	14.7	53	62.4	32	37.6	28	23.3	92	76.7
$\times^2$ =1.428 df = 2 p= 0.00000												
Are both HIV/AIDS same?												
	69	25.3	204	74.7	10	11.8	75	88.2	13	10.8	107	89.2
$\times^2$ =18.78 df = 4 p= 0.001												
Name of the causative agent												
	200	73.3	73	26.7	42	49.4	43	50.6	17	14.2	103	85.8
$\times^2$ =18.78 df = 2 p= 0.001												
When is world AIDS day celebrated?												
	199	72.9	74	27.1	59	69.4	26	30.6	63	52.5	57	47.5
$\times^2$ =15.95 p= 0.0000												
Expand NACO												
	106	38.8	167	61.2	24	28.2	61	71.8	16	13.3	104	86.7
$\times^2$ =25.79 df = 2 p= 0.0000												
Draw the symbol of HIV												
	195	71.4	78	28.6	57	67.1	28	32.9	58	48.3	62	51.7
$\times^2$ =19.72 df = 2 p= 0.0000												

Associations with other demographic profile showed that, girl's (47.2%) attitude towards PLHA was found better than boys (37.7%) (p=0.02618) and their awareness about transmission (66.7%) was better than boys (57.2%) (p=0.02609) with the odds of 1.47. 56.8% and 67.8% students of age 17years have answered correctly for the questions; full form of HIV/AIDS and for the causative agent name respectively compared with the other age students and this difference was found to be statistically significant ($p < 0.05$).

Students from Hindu religion have higher odds [OR 1.536, CI 1.025 – 2.3] of being able to give correct answer for name of the causative agent for HIV/AIDS and could able to draw correctly symbol of HIV with the odds of [OR 1.536, CI 1.025 – 2.3] when compared to other religion students and this difference was found to be statistically significant ($p < 0.05$).

Discussion

Awareness is the key to prevention of HIV/AIDS. HIV/AIDS infection is rapidly spreading in India. Unfortunately, in the 21st century also, awareness of people about the disease is still low. The current study assessed the awareness level of the pre university students (adolescents) about HIV/AIDS.

In the present study, only 66 per cent of the respondents were aware of the full form of HIV/AIDS. One study showed only 35% of respondents was aware of full form.[4] Other study showed more positive results.[7] Majority (68.8%) of them knew that HIV/AIDS is preventable. One study showed 58.67% of participants told it can be preventable.[8] This might be due to the reasons that mass media and many voluntary agencies; mainly in urban areas are actively involved in HIV/AIDS awareness campaigns.

In our study main channel of acquiring knowledge was teachers. Similar findings in one study.[9] The internet and media, particularly television and radio, were cited as the largest sources of information regarding HIV/AIDS.[10] Majority of the adolescent boys and girls had correct knowledge about the modes of HIV/AIDS transmission. (Table 2) similar findings from some other studies.[1,4] 86.6% of students said prevention of HIV/AIDS can be done with condom usage/ barrier methods.

In this study 74.7% of students correctly knew that AIDS does not spread by shaking hands, sharing food utensils. 73.33% of adolescent males and 64.67% of females knew that AIDS does not spread by shaking hands.[8] About 4.89% male and 6.48% female students told that it can be transmitted by casual contact and handshake in a study by Kore et al.[11] The level of misconception in the present study may be due to the fact that it was conducted in urban residential school. About 41% of the respondents thought it can be transmitted through mosquito bite. About 17% of respondents had a false impression that the disease could spread through mosquito bites, while 18%

believed that it could spread by sharing public toilets and 13.6% thought that it could spread by sharing food or utensils in our study.[8,11] Almost similar findings were reported by Malleshappa K.[12]

Most of the students had good attitude towards PLHA. They said they care for them (74.7%), where as in one study only 26% felt sympathetic with PLHA.[12] And students told they will play with affected children (64.6%) and will allow teachers to teach even though having HIV/AIDS (68.8%).

In the present study PCMB student's knowledge regarding HIV/AIDS was better compared to other combination study subject students like PCMCS and Commerce. ($p<0.01$) It may be because PCMB students learn reproductive health in biology subject where as it is not in the curriculum of the other subjects.

In the present study, girl's knowledge regarding transmission of HIV/AIDS was better than boys. ($p<0.05$) Bora Ekinci and Atilla Gokta[9] showed that the knowledge levels of females and males were 73.1 ± 5.75 and 69.3 ± 5.91, respectively ($p < 0.05$). Whereas some other studies resulted, no influence of gender criteria on knowledge and those results vary.[13,14,15] In the present study more positive attitude towards PLHA among girls than boys. ($p<0.05$). Similar findings in one study.[16]

Despite the moderately positive attitude of the pre university students toward PLHA and reasonably good levels of awareness regarding the modes of transmission, they also admitted certain misconceptions about the modes of transmission of HIV/AIDS. Despite the vigorous outreach programmes carried out by government along with NGOs, the misconceptions and discriminatory attitudes toward PLHA are the major hindrances in creating better awareness about HIV /AIDS.

In all schools, the reproductive health education should be a part of curriculum. There must be classroom based education programme on HIV/AIDS and STDs and the class teacher should be properly trained for educating the students effectively.

Conclusion

Nearly more than 60% of the students were aware of the disease transmission routes correctly, but few students 25-41% had misconceptions of spreading the disease through mosquito bite and sharing utensils. Nearly two third of students said it can be preventable and not curable. More than two third of the students had good attitude towards PLHA.

Our study has revealed some of the important issues about awareness levels among adolescent men and women and the action strategies needed for making them aware and in changing their attitudes towards PLHA on an urgent basis. Because HIV infection is a dynamic process and could change as a function of time, more and more similar studies targeted at general public particularly in rural areas are needed at regular intervals to test the results of the preventive measures & efficacy of the existing policies.

Limitations

1. We have done only cross sectional study involving randomly selected one college, because we dint get permission from the other college principals.
2. Still socio demographic data should have included about parents education also

Recommendation

1. Interventional study should be carried out, to see the impact of peer education regarding HIV/AIDS
2. Sampling should be carried out so that all colleges in the city are involved or get chance to be involved.

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