

Knowledge About HIV/AIDS Among Secondary School Students

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Abstract

Background: HIV/AIDS has emerged as the single most formidable challenge to public health. School children of today are exposed to the risk of HIV/AIDS. **Aims:** The study was conducted to determine the knowledge among secondary school students regarding HIV/AIDS and provide suggestions for HIV/AIDS education in schools. **Materials and Methods:** A cross-sectional study was conducted among students of tenth to twelfth standard in the intermediate schools of Lucknow, India, from July to October 2011. A total of 215 students, both boys and girls, were enrolled in the study. **Results:** In this study, for majority of the students (85%), the source of information about HIV/AIDS was the television. Regarding knowledge about modes of transmission of HIV/AIDS among girl students, 95.1% of them told that it is through unprotected sex. A total of 75.8% students said that it was transmitted from mother to child. **Conclusion:** It was observed that the knowledge of the school students was quite satisfactory for most of the variables like modes of transmission, including mother-to-child transmission of the disease. However, schools should come forward to design awareness campaigns for the benefit of the students.

Keywords: AIDS, HIV, Knowledge, Students

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Introduction

HIV/AIDS has emerged as the single most formidable challenge to public health, human rights, and development in the new millennium.^[1] School children of today are exposed to the risk of HIV/AIDS, which was quite unknown to their predecessors a few decades ago. The epidemic of HIV/AIDS is now progressing at a rapid pace among young people. Studies have reported that young people form a significant segment of those attending sexually transmitted infection (STI) clinics and those infected by HIV.^[2]

Adolescents comprise about 22% of the population of India.^[2] Adolescents are defined by the World Health Organization (WHO) as persons between 10

and 19 years of age (WHO 1998). Many adolescents around the world are sexually active and because many sexual contacts among them are unprotected, they are at a risk of contracting sexually transmitted diseases (STDs) including HIV/AIDS. Another reason for their vulnerability to STDs is the lack of sex education, including education on the prevention of STD.^[3] Program managers and policy makers have often recommended that schools can act as the center point for disseminating information and education on HIV/AIDS. Hence, school education has been described as a 'social vaccine', and it can serve as a powerful preventive tool. In India, there is a wide gap between the inputs in the HIV/AIDS curriculum for schools and the actual education that is imparted.^[4]

As children are a valuable resource for the future of a country, it is imperative that they be equipped with the requisite information so as to protect themselves and their counterparts from falling a prey to this still-an-incurable killer disease. In the absence of an effective cure for this disease, it can be very easily prevented by Information Education and Communication (IEC) activities with regard to behavioral changes. With this intention, the present study was conducted with the following

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objectives: (i) To study the awareness among secondary school students regarding HIV/AIDS; (ii) to provide suggestions for HIV/AIDS education in schools.

Materials and Methods

This study was conducted after ethical clearance from the ethical committee of Era's Lucknow Medical College Lucknow. A cross-sectional study was conducted between July and October 2011 in two randomly selected coeducational schools of Lucknow district, India. The two schools were selected by random sampling technique from the list of schools in Lucknow. Students from tenth to twelfth grade were included in the study. A total of 215 students, both boys and girls, were enrolled.

Tools of data collection

The investigating tool used was a prepared, pretested questionnaire. This had both open and close-ended questions related to various aspects of HIV/AIDS. Written consent was obtained from the school principals after explaining the purpose of the study to them, the entire questionnaire was explained to the sample students, and all the queries raised by them were clarified. Care was taken to minimize consultation among the school children. Different factors related to HIV/AIDS and information was gathered. The subjects were assessed for knowledge of various aspects of HIV/AIDS and associated risk factors. It was subsequently followed by an open discussion on HIV/AIDS with the students. During the discussion, misconceptions and apprehensions regarding HIV/AIDS were clarified.

Statistical analysis

Data were collected, compiled, and tabulated using Microsoft Excel and analyzed using SPSS 17.0 version. In this study, 95% level of significance was taken for analysis. The Chi-square test was applied for finding an association between knowledge and gender.

Results

Source of information about HIV/AIDS

A total of 215 students were studied, of whom 113 were boys and 102 were girls. In the present study, among majority of the students (85.0%), the source of information about HIV/AIDS was the television, followed by the newspaper and friends/relatives (39.5%). There were no significant differences between boys and girls about the source of information regarding HIV/AIDS [Table 1].

Knowledge of students about modes of transmission of HIV/AIDS

As regards knowledge about the modes of transmission of HIV/AIDS among girl students, 95.1% of the girls said that it was through unprotected sex followed by sharing injections (88.2%), blood transfusion (84.3%), and sex with multiple partners (69.6%). Similar findings were observed among boy students; about 92.0% felt that it was transmitted through sharing injections followed by unprotected sex (89.4%) and blood transfusions (86.7%). There were no significant differences in the knowledge between boys and girls about modes of transmission of HIV/AIDS except for transmission through a mosquito bite [Table 2].

Knowledge of students about transmission of HIV/AIDS from mother to child

A total of 75.8% students (73.5% girls and 77.9% boys) said that it was transmitted from mother to child. Most of the girls (62.7%) and boys (71.7%) said that it was transmitted during pregnancy followed by during breast feeding (27.4% girls and 20.3% boys). Only 9.8% girls and 7.9% boys told that was transmitted during delivery. There was no significant difference between girls and boys about mother-to-child transmission of HIV/AIDS [Table 3].

Knowledge of students regarding high-risk groups and treatment for HIV/AIDS

Regarding high-risk groups, 29.4% girls and 32.7% boys opined that prostitutes were high-risk group for HIV/

Table 1: Source of information about HIV/AIDS

Source of information	Girls (102)		Boys (113)		Total (215)		Chi sq	P value
	No.	%	No.	%	No.	%		
Television	91	89.2	92	81.4	183	85.0	2.57	0.109
Radio	47	46.1	38	33.6	85	39.5	3.48	0.062
Newspaper	52	50.9	50	44.2	102	47.4	0.97	0.324
Friends/relatives	39	38.2	46	40.7	85	39.5	0.14	0.711
Street plays	9	8.82	4	3.5	13	6.1	2.63	0.105
NGOs	13	12.7	11	9.7	24	11.2	0.49	0.484

Chi sq: Chi square; NGO: Nongovernment organization

Table 2: Knowledge of students about modes of transmission of HIV/AIDS

Modes of transmission	Girls (102)		Boys (113)		Total (215)		Chi sq	P value
	No.	%	No.	%	No.	%		
Unprotected sex	97	95.1	101	89.4	198	92.1	2.41	0.121
Sharing injections	90	88.2	104	92.0	194	90.2	0.88	0.349
Blood transfusions	86	84.3	98	86.7	184	85.6	0.25	0.615
Injecting illegal drugs	53	51.9	73	64.6	126	58.6	3.53	0.060
Sex with prostitutes	66	64.7	74	65.5	140	65.1	0.01	0.905
Sex with multiple partners	71	69.6	83	73.5	154	71.6	0.39	0.532
Kissing	31	30.4	30	26.5	61	28.4	0.39	0.532
Mosquito bites	29	28.4	50	44.2	79	36.7	5.77	0.016
Sharing blades	65	63.7	75	66.3	140	65.1	0.17	0.684
Sharing toilets	25	24.5	32	28.3	57	26.5	0.40	0.528
Road accidents	8	7.8	18	15.9	26	12.1	3.30	0.069
Sweat/saliva/breast milk	57	55.8	55	48.7	112	52.1	1.12	0.291
Homosexuality	61	59.8	55	48.7	116	53.9	2.67	0.102

Chi sq: Chi square

Table 3: Knowledge of students about transmission of HIV/AIDS from mother to child

Mother-to-child transmission of HIV/AIDS	Girls (102)		Boys (113)		Total (215)		Chi sq	P value
	No.	%	No.	%	No.	%		
No	17	16.7	15	13.3	32	14.9	0.49	0.485
Don't know	10	9.8	10	8.8	20	9.3	0.06	0.810
Yes	75	73.5	88	77.9	163	75.8	0.55	0.457
During pregnancy	64	62.7	81	71.7	145	67.4	1.95	0.163
During delivery	10	9.8	9	7.9	19	8.8	0.23	0.635
During breast feeding	28	27.4	23	20.3	51	23.7	1.49	0.222

Chi sq: Chi square

Table 4: Knowledge of students regarding high-risk groups for HIV/AIDS

High-risk groups	Girls (102)		Boys (113)		Total (215)		Chi sq	P value
	No.	%	No.	%	No.	%		
Adolescents	24	23.5	25	22.1	49	22.8	0.06	0.806
Truck drivers	1	0.9	5	4.4	6	2.8	2.34	0.126
Prostitutes	30	29.4	37	32.7	67	31.2	0.28	0.598
Homosexuals	24	23.5	23	20.3	47	21.9	0.32	0.574
Drug addicts	10	9.8	8	7.08	18	8.4	0.52	0.471
Don't know	13	12.7	15	13.3	28	13.0	0.01	0.908

Chi sq: Chi square

AIDS followed by adolescents and homosexuals (23.5% girls and 22.1% boys; 23.5% girls and 20.3% boys, respectively). Only less than 1.0% girls and 4.4% boys felt that truck drivers were high-risk group for HIV/AIDS [Table 4].

About treatment of HIV/AIDS, 36.3% girls and 43.4% boys said that it was a curable disease and 42.2% girls and 36.3% boys said that it was not curable. Similar percentage of girls and boys were not sure whether it was curable [Table 5].

Table 5: Knowledge of students about treatment of HIV/AIDS

HIV/AIDS curable	Girls (102)		Boys (113)		Total (215)		Chi sq	P value
	No.	%	No.	%	No.	%		
Yes	37	36.3	49	43.4	86	40.0	1.12	0.289
No	43	42.2	41	36.3	84	39.1	0.78	0.378
Don't know	22	21.6	23	20.4	45	20.9	0.05	0.827

Chi sq: Chi square

Discussion

The finding of the present study was satisfactory and consistent with previous research findings. In the present study, the source of information about HIV/AIDS was the television (85.0%) followed by the newspaper, and friends and relatives (39.5%). Similarly in a study conducted by Singh *et al.*^[5] in a district of northern India, for 90% women of reproductive age group, the source of information was the television. According to the baseline survey carried out by Kotech and Patel^[6] in the urban slums of Vadodara city, 47% women had heard about HIV and mass media was the most common source of information. In another study conducted by Bhalla^[7] in Jamnagar, Gujrat among senior secondary school

children, 78% students knew about HIV/AIDS through the television. It can thus be concluded that there is similarity in the source of information about HIV/AIDS in both rural as well as in urban areas.

In the present study, a significant proportion had adequate knowledge regarding modes of transmission of HIV/AIDS, that it was transmitted through unprotected sex (92.1% students) and from mother to child (75.8%); amongst girls, 95.1% said that it was through unprotected sex followed by sharing injections (88.2%), blood transfusion (84.3%), and sex with multiple partners (69.6%). Similar finding were observed amongst boys; about 92.0% said that it was transmitted through sharing injections followed by unprotected sex (89.4%) and blood transfusions (86.7%). In a study by Singh *et al.*^[5] in a district of northern India, the most common mode of transmission was heterosexual intercourse (79.1%), whereas according to the women of rural areas of the district, it was homosexual intercourse (74.1%), which was the mode most responsible for the transmission of HIV/AIDS. Similar findings were observed by Kotech and Patel^[6] in their study carried out in urban slums of Vadodara city and according to which knowledge regarding modes of transmission were the sexual act followed by needles and blood transfusion. Similarly, according to the study by Sarkar *et al.*^[8] in Pondicherry, 83% women knew one or more modes of spread of this disease. In the present study, however, knowledge of students about high-risk groups and curability (39.1%) of HIV/AIDS was not satisfactory. Similarly, in a study by Singh *et al.*,^[5] while responding about availability of cure of HIV/AIDS in rural areas, 11.6% women told that cure was available for the disease. The response was the same by 32.6% women in urban areas about availability of a cure for the disease.

Bourne^[9] documented that almost 6% of those with HIV had sexual relations with a commercial sex worker. Of those, 75% indicated that they had used a condom. Approximately 16% of those with HIV had contracted a sexually transmitted infection (STI) in the past, all of them knew that they had the HIV virus, and 61% were actively practicing religion. Twenty-nine percent of the HIV-infected individuals had given birth in the last two years or were at least six months pregnant. Twenty-seven percent of the sample indicated that they used a condom most times, 13.4% occasionally, 25.4% never, and 34.3% with their most recent partner.

As this study was conducted for a short duration of four months, we included two schools only. This was the limitation of the study. Sample size was too short to find any significant difference in knowledge

between girls and boys. In spite of these limitations, we succeeded in determining the level of knowledge about transmission and treatment of HIV/AIDS and about high-risk groups.

Conclusion

It was observed that the knowledge of the school students was quite satisfactory for most of the variables like modes of transmission of the disease. However, knowledge of students about high-risk groups and curability (39%) of HIV/AIDS was not satisfactory. Therefore, the school authorities and the others concerned should come forward to design awareness campaigns for the benefit of the students so as to help them develop proper understanding of HIV/AIDS, its spread, and prevention. The sources of information should also be strengthened by all the agencies and organizations of the region to spread knowledge and awareness about HIV/AIDS.

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