

AWARENESS OF HIV/AIDS AMONG ADOLESCENTS OF A RURAL AREA OF HARYANANeelu Saluja¹, Ajay Kumar², Seema Choudhary³, Seema Sharma⁴, Salil Dube⁵, S. M. Pandey⁶**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: BACKGROUND: The Acquired Immune Deficiency Syndrome (AIDS) caused by Human Immuno-deficiency Virus (HIV) remains the most serious of infectious disease challenges to public health. Adolescents are exposed to the risk of being victims of HIV/AIDS, mostly because of a low level of awareness of HIV/AIDS and inadequate access to HIV prevention and treatment services. School education has been described as a 'social vaccine', and it can serve as a powerful preventive tool. Objective: To assess awareness of HIV/AIDS amongst adolescents of a rural area of Haryana. **STUDY DESIGN:** Cross-sectional. Setting: Senior Secondary Schools of a rural area of district Hisar, Haryana. Participants: 340 secondary school students. **METHODOLOGY:** A total of 340 students aged 11-19 years of 9th, 10th, 11th and 12th standard participated in the study. A structured pretested and predesigned questionnaire consisting of close ended questions was used to assess study subjects' level of awareness regarding modes of transmission, preventive and curative measures of HIV/AIDS and the attitude towards People Living with HIV/AIDS (PLWHA). Statistical Analysis: Percentages and Chi-square test. Results: In this study, for majority of the students (91.2%), the source of information about HIV/AIDS was the television. Regarding awareness about the modes of transmission of HIV/AIDS 82.4% students (58.2% boys and 24.1% girls) said that it was through unprotected sex followed by sharing injections (78.5%), blood transfusion (67.6%), and from infected mother to baby (62.4%). Two hundred and eighty five (83.8%) students (22.1% girls and 61.8% boys) had knowledge about condoms as means of protection. The awareness regarding modes of transmission, methods of prevention and treatment was found to be significantly higher among boys as compared to girls (P <.001). **CONCLUSION:** There is need for developing programmes to spread awareness and to induce behavioral changes among the adolescents especially among girls in rural areas.

KEYWORDS: Awareness, HIV/AIDS, adolescents.

INTRODUCTION: The Acquired Immune Deficiency Syndrome (AIDS) caused by Human Immuno-deficiency Virus (HIV) remains the most serious of infectious disease challenges to public health. HIV has become a serious problem in India with one of the highest rates of spread in the world.¹ Many features contribute to India's vulnerability concerning the transmission of HIV; poverty, illiteracy, a large and young population and an increasing level of urbanization.² Of all the various age groups affected by this pandemic, Dehne and Riedner³ identified the adolescent age group as that group that is most at risk of contracting HIV/AIDS and other sexually transmitted diseases (STDs). The epidemic of HIV/AIDS is now progressing at a rapid pace among young people. Adolescents aged 10-19 years of age accounting for nearly 23% of the population of India are exposed to the risk of being victims of HIV/AIDS.⁴ Studies have reported that young people form a significant segment of those attending

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sexually transmitted infection (STI) clinics and those infected by HIV⁵. Since many risk behaviours, associated with the transmission of HIV, are adopted in young ages it's very important to put much of the prevention efforts on adolescents.

To prevent the further spread of HIV it's fundamental that people have a good knowledge about the disease. Programme managers and policy makers have often recommended that schools can act at the center point for disseminating information and education on HIV/AIDS. Thus, school education has been described as a 'social vaccine', and it can serve as a powerful preventive tool.

Offering HIV/AIDS awareness education and training to these school going students as well to their parents and teachers is a major challenge. For developing a programme for creating AIDS awareness among school/college children and providing them motivation to lead sexually healthy life, one needs to get baseline epidemiological information regarding existing knowledge and attitudes of school / college going children.⁶ Hence the present study was undertaken to assess the level of awareness regarding preventive and curative measures of HIV/AIDS among secondary school students of rural area of district Hisar, Haryana.

MATERIAL AND METHODS: The study was conducted on a sample of 340 students in the adolescent age group (11-19 years). Adolescents from the ninth to twelfth grade classes (170 from each school) were selected by simple random sampling, from two large Government Senior Secondary schools of a rural area of district Hisar which falls under the Primary Health Training Center (PHTC) Agroha. The Primary Health Training Centre (PHTC), Agroha covers seven villages namely Agroha, Mirpur, Kuleri, Siwani Bolan, Saberwas, Khasa Mahajan & Fransi. The two schools were selected by simple random sampling from a list of schools from all the villages falling under the PHTC. The cross sectional study was carried out over a period of three months (December 2011 to February 2012). The response rate of students was 100 percent. A structured pretested and predesigned questionnaire consisting of close ended questions was used to assess study subjects' level of awareness regarding modes of transmission, preventive and curative measures of HIV/AIDS and the attitude towards PLWHA. The entire questionnaire was explained to the sample students, and all the queries raised by them were clarified. Written consent was obtained from the principals of the respective schools after explaining to them the purpose of this study. Data entry and statistical analysis were performed using the Microsoft Excel and epi info software. Tests of significance like Pearson's Chi- square test were applied to find out the results.

RESULTS: Out of 340 respondents studied, 222 (65.3%) respondents were males and 118 (34.7%) were females. Overall, 45 (13.2%) students were less than 15 years, 280 (82.4%) students were between 15-18 years and 15 (4.4%) students were above 18 years of age (Table 1).

All the students had heard about HIV/AIDS. Three hundred and ten (91.2%) students had heard about HIV/AIDS from television while 186 (54.7%) mentioned radio as main source of information to them (Table 2).

As regards awareness about the modes of transmission of HIV/AIDS 82.4% students (58.2% boys and 24.1% girls) said that it was through unprotected sex followed by sharing injections (78.5%), blood transfusion (67.6%), and from infected mother to baby (62.4%). The awareness regarding modes of transmission (unprotected sexual intercourse, infected blood transfusion, sharing of needles and syringes) was found to be significantly higher ($P < 0.05$) among boys as compared to

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girls. Only 22.1% of the students could name homosexual intercourse as a mode of transmission (Table 3).

Two hundred and eighty five (83.8%) students (22.1% girls and 61.8% boys) had knowledge about condoms as means of protection while 79.4% (25.0% girls and 54.4% boys) stated that HIV/AIDS can be prevented by using sterilized or disposable syringes. Only 44.7% respondents (9.4% girls and 35.3% boys) knew that not having sex with stranger can prevent HIV/AIDS. The awareness regarding methods of prevention of HIV/AIDS was also significantly higher ($P < .001$) among boys as compared to girls. (Table 4)

Seventy five (22.1%) of the students had a false notion that mosquito bite could transmit the disease. (Table 5)

Only 37.5% students knew the difference between HIV and AIDS. One hundred and seventy eight (52.4%) students thought that PLWHA should be socially supported and cared (Table 6).

DISCUSSION: Even though the HIV prevalence is still low, India faces an explosive spread of the disease and has one of the most rapidly growing HIV/AIDS epidemics globally. To prevent the spread of HIV in India it's very important to raise the level of knowledge about the disease.

In the present study majority of the respondents (82.4%) belonged to the age group of 15-18 years. Those less than 15 years of age accounted for 13.2% while the remaining 4.4% of the respondents were above 18 years of age. All the students had heard about HIV/AIDS which is similar to the observations of a study carried out by Goyal R C⁷ et al, Srivastava et al⁸ and Lal et al.⁹ In contrast studies conducted by Yadav et al¹⁰ (61%) and Sunil et al¹¹ (80%) showed a lower percentage of students who have heard about HIV/AIDS. In the present study, the main source of information about HIV/AIDS was the television (91.2%) followed by the radio, friends and newspaper. Similar findings were observed by Srivastava et al⁸ and Poddar A K et al.¹² Similarly in a study conducted by Gupta et al.¹³ in Lucknow, 85% students knew about HIV/AIDS through the television followed by newspaper and friends/relatives. In another study conducted by Lal et al⁹ in Delhi among senior secondary school children, 79.6% students knew about HIV/AIDS through television and radio. Television being the most powerful and popular media, it has become the most important source of information to students.

In the present study, knowledge regarding modes of transmission of HIV/AIDS 82.4% respondents said that it was transmitted through unprotected sex followed by sharing injections (78.5%), blood transfusion (67.6%) and from infected mother to baby (62.4%). Similar findings were observed by Kotech and Patel¹⁴ 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. Awareness regarding prevention of HIV/AIDS through condom, 83.8% students had knowledge about condoms as means of protection. Our finding regarding knowledge about condoms as a means of protection is much higher than the findings of Yadav et al¹⁰ and Lal et al⁹ where only 69.67% and 14.9% knew the role of condoms in preventing HIV respectively. In our study 70.6% students knew the role of blood safety and 79.4% understood the importance of safe injection practices whereas a higher percentage of respondents (84.58%) knew the role of blood safety and safe injection practices (82.75%) in a study by Yadav et al.¹⁰ The awareness regarding modes of transmission and methods of prevention of HIV/AIDS was found to be significantly higher among boys as compared to girls. This is compatible to the findings reported in the studies conducted

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among secondary school students of Bareilly,⁸ Kolkata¹⁵ and Maharashtra¹⁶ respectively. There are several factors which could contribute to the gender differences in knowledge of HIV /AIDS. Usually boys enjoy greater degree of social freedom compared to girls. Girls are subjected to more social restrictions than boys of same age and this contributes to the lower knowledge scores of the girls.

Misconceptions regarding the transmission of HIV were noted in the study subjects. 22.1% of the students believed that mosquito bite could transmit the disease; 21.5% thought that HIV can be acquired through eating food with HIV positive individuals. Similar misconceptions were noted by Srivastava et al.⁸ In our study, 19.1% of the students thought that HIV can be spread through kisses.

The study done in Himachal Pradesh showed that 45% of the students had the misconception that HIV can be transmitted by kissing.¹

In the current study 70.3% students stated that HIV/AIDS can be prevented by having a single sexual partner. This finding is lower than the observations reported among rural youth of Gujarat.¹⁰ Only 37.5% students in our study knew that HIV and AIDS are not synonymous. This is in conformity to findings (39.6% & 35%) reported in a study among school adolescents of Bareilly⁸ and Gujarat respectively.¹⁷ More than half of the students thought that PLWHA should be socially supported, sympathized and cared. Favorable attitudes towards PLWHA were also found among senior secondary school children of Delhi.⁷ However, this favorable attitude towards HIV positive patients was not observed among college students in Nashik.¹⁸

Impact of social exposure is clearly visible in all areas of awareness among males in comparison to females. IEC programs should be undertaken with regard to HIV/AIDS, safe sex and avoidance of high risk behavior in schools to increase the awareness of adolescents especially for females as they are less aware as well as more vulnerable.

CONCLUSION: The knowledge about how HIV is transmitted is incomplete among the students. Though all the students had heard about the HIV/AIDS but there are still many misconceptions about the disease. The majority of the students first heard about HIV/AIDS from media. Media is an effective way of spreading information but the school also plays an important role. The awareness of protection against HIV is insufficient among the students and there are misunderstandings about it. The most important way to prevent the rapid spread of HIV is to raise the level of knowledge about the transmission of and the protection against HIV. The gap in knowledge between boys and girls, suggests the need for targeting girls in rural areas in the national AIDS education and awareness campaigns.

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Age (years)	Male No. (%)	Female No. (%)	Total No. (%)
< 15	30 (8.8)	15 (4.4)	45 (13.2)
15-18	180 (52.9)	100 (29.4)	280 (82.4)
>18	12 (3.5)	3 (0.9)	15 (4.4)
Total	222 (65.3)	118 (34.7)	340 (100)

Table 1: Age and gender wise distribution of study subject

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Source of Information	Male (n=222) No. (%)	Female (n=118) No. (%)	Total (n=340) No. (%)
Television	210 (61.8)	100 (29.4)	310 (91.2)
Radio	118 (34.7)	68 (20.0)	186 (54.7)
Newspaper	62 (18.2)	35 (10.3)	97 (28.5)
Health Worker	5 (1.5)	3 (0.9)	8 (2.4)
Friend	90 (26.5)	35 (10.3)	125 (36.8)

Table 2: Distribution of respondents according to source of information regarding H

Modes of Transmission	No. of aware students (%)			Chi-Square	P-value
	Male (n=222) No. (%)	Female (n=118) No. (%)	Total (n=340) No. (%)		
Unprotected sexual intercourse	198 (58.2)	82 (24.1)	280 (82.4)	20.57	<0.05
Homosexual intercourse	65 (19.1)	10 (2.9)	75 (22.1)	19.40	<0.05
Infected Blood transfusion	165 (48.5)	65 (19.1)	230 (67.6)	13.03	<0.05
Sharing needles/syringes/blades	195 (57.4)	72 (21.2)	267 (78.5)	32.87	<0.05
HIV infected Mother to baby	142 (41.8)	70 (20.6)	212 (62.4)	0.71	>0.05

Table 3: Distribution of respondents according to awareness regarding modes of transmission of HIV/AIDS

Methods of Prevention	No. of aware students (%)			Chi-Square	P-value
	Male(n=222) No. (%)	Female(n=118) No. (%)	Total(n=340) No. (%)		
Using condom	210 (61.8)	75 (22.1)	285 (83.8)	54.73	<0.001
Not having sex with stranger	120 (35.3)	32 (9.4)	152 (44.7)	22.61	<0.001
Having a single sexual partner	175 (51.5)	64 (18.8)	239 (70.3)	22.31	<0.001
Screening of blood prior to transfusion	170 (50.0)	70 (20.6)	240 (70.6)	11.05	<0.001
Using sterilized/disposable syringes	185 (54.4)	85 (25.0)	270 (79.4)	6.02	>0.001

Table 4: Distribution of respondents according to awareness regarding methods of prevention of HIV/AIDS

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Myths	No. of students with 'Yes' Responses (%)			Chi Square	P value
	Males (n=222) No. (%)	Females (n=118) No. (%)	Total (n=340) No. (%)		
Mosquito bite can spread HIV/AIDS	55 (16.2)	20 (5.9)	75 (22.1)	2.74	>0.05
HIV/AIDS can spread through kissing	50 (14.7)	15 (4.4)	65 (19.1)	4.80	<0.05
Sharing same utensils can spread HIV/AIDS	48 (14.1)	22 (6.5)	70 (20.6)	0.42	>0.05
Eating together can spread HIV/AIDS	55 (16.2)	18 (5.3)	73 (21.5)	4.14	<0.05
HIV/AIDS can spread through Shaking hands with an infected person	40 (11.8)	10 (2.9)	50 (16.2)	5.59	<0.05
Hugging an infected person	41 (12.1)	11 (3.2)	52 (15.3)	4.98	<0.05
HIV/AIDS can spread through common / public toilet	25 (7.4)	12 (3.5)	37 (10.9)	0.09	>0.05
Sneezing/talking with infected person	38 (11.2)	09 (2.6)	47 (13.8)	5.82	<0.05
Nose/Ear piercing	42 (12.4)	21 (6.2)	63 (18.5)	0.06	>0.05

Table 5: Distribution of respondents according to myths regarding HIV/AIDS

Responses (Yes)	Male (n=222) No. (%)	Female (n=118) No. (%)	Total (n=340) No. (%)	Chi-Square	P-value
PLWHA should be kept separate, isolated from others	95 (27.9)	60 (17.6)	155 (45.6)	2.02	>0.001
PLWHA should be socially supported and cared	122 (35.9)	56 (16.5)	178 (52.4)	1.74	>0.001

Table 6: Attitude of respondents towards people with HIV/AIDS

AUTHORS:

1. Neelu Saluja
2. Ajay Kumar
3. Seema Choudhary
4. Seema Sharma
5. Salil Dube
6. S. M. Pandey

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Community Medicine, MAMC, Agroha, Hisar.
2. Assistant Professor, Department of Physiology, MAMC, Agroha, Hisar.
3. Professor, Department of Community Medicine, MAMC, Agroha, Hisar.
4. Assistant Professor, Department of Community Medicine, MAMC, Agroha, Hisar.

5. Assistant Professor, Department of Community Medicine, MAMC, Agroha, Hisar.
6. Assistant Professor (Stats), Department of Community Medicine, MAMC, Agroha, Hisar.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Neelu Saluja,
Associate Professor,
Department of Community Medicine,
MAMC, Agroha, Hisar-125047,
Haryana.
Email: neelumd_12@yahoo.com

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