

## Original Research Article

# A study on awareness of HIV/AIDS among adolescent school girls in an urban area of North Bengal, India

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## ABSTRACT

**Background:** HIV/AIDS has recognized throughout the world as the important public health problem and adolescents are at greater risk of having this infection because of varying behavior pattern. Adolescents need correct information to prepare them to make better choices in sexual behavior. The present study was conducted to find out the existing knowledge regarding the causes, modes of transmission, prevention and social impact of AIDS.

**Methods:** Setting based cross-sectional study done in the secondary and higher secondary students of Siliguri Girls School during July-September 2018. A self-administered, well designed pretested semi structured questionnaire with anonymity of the respondent was used for data collection with the help of interview.

**Results:** 66.2% of girls knew sexual intercourse as the primary route of transmission whereas 22.9% knew airborne as the method. 60.8% of them thought isolation could prevent HIV/AIDS and safe sex can prevent transmission 59.4%. All the correct four routes of transmission were known by only 14.2% of students. 12.55% of them knew about AIDS vaccine. Working with AIDS patient, using same toilet or sharing meals or swimming were the common myths among them to contract HIV/AIDS.

**Conclusions:** Prevention being the only strategy available for HIV/AIDS is of utmost importance that knowledge regarding its various aspects should be dispersed among the adolescents through addition of chapter of AIDS and sex education in school curriculum.

**Keywords:** Knowledge, Students, Myths, HIV/AIDS

## INTRODUCTION

HIV/AIDS has become the most serious public health problem with one of the highest rates of spread in the world. The sheer magnitude of the problem, coupled with the lack of any effective vaccine and certainty of painful death following infection, easily make it one of the most devastating health problem that mankind has ever faced.

Progress has been made in understanding the epidemiological and psycho social determinants of this disease during the past two decades. Presence of infection

everywhere highlights spread from urban to rural areas from high risk to the general population and from permissive to conservative societies. Thus creating awareness and providing motivation to create an attitude of healthy sexual practices is going to be tool in our battle against AIDS in the next decade or so.<sup>1</sup> Sexual attitudes and practices take long time to get established in an individual with the seeds having sown during the early adolescence.<sup>2</sup> Thus providing correct knowledge and motivation to the adolescents, a positive change could be achieved. Youths are potential resources for changing attitudes and behavior towards AIDS. The prevalence among young population (15-24 years) at national level is

estimated at 0.11 percent.<sup>3</sup> Awareness generation could be achieved by providing universal education to all children, school and college children- towards whom educational and motivational efforts need to be directed.<sup>4,5</sup>

This study was undertaken among adolescent schoolgirls from an urban setting school situated in Siliguri, West Bengal. The present study was conducted to find out the existing knowledge regarding the causes, modes of transmission, prevention, cure and social impact of AIDS.

## METHODS

The study was cross-sectional, epidemiological study among the secondary and higher secondary students of Siliguri Girls School. The study was conducted during July to September 2018. All the students of classes IX, X, XI and XII were assembled in a big hall. The school authorities and the students were explained the purposes of the study and the methodology, their queries were clarified. The students were not permitted to communicate with each other and they were assured about the confidentiality of their responses. The total number of students who responded from the four classes was 318 in the age range of 13-19 years.

A self-administered, well designed pretested semi structured questionnaire with anonymity of the respondent was used for data collection. Knowledge based questions included general awareness about AIDS, Cases, and modes of transmission, prevention, management and social impact of AIDS. Anonymity and confidentiality was ensured to each of the student.

### Data collection

Data was collected with the help of teachers. Information regarding knowledge of transmission, prevention, symptoms and societal perception towards AIDS were assessed. Ethical approval was taken from the Institutional Ethics Committee Permission was also obtained from school administration authority.

### Data analysis

Analysis of the data was done by using IBM statistical package for social sciences version 20 (SPSS 20). Distribution was measured in percentages and presented in tables.

## RESULTS

A total of 296 students submitted fully completed questionnaires, representing a valid response rate of 93%. About 90% of the study participants heard the name of AIDS but the sources differed. It is revealed that the most popular source of knowledge about AIDS was through television (79.1%) followed by newspaper (43.9%) and radio (33%). Only 31% of students heard from health

personnel and 10% from peer groups. This suggests the importance of involving parents, teachers and students in AIDS education programmes.

**Table 1: Knowledge regarding transmission and prevention of AIDS (n=296).**

Knowledge	Students	
Routes of transmission	No.	%
Sexual transmission	196	66.2
By infected blood and blood products	142	47.9
From infected mothers to children	96	32.4
Using unsterilized needles or blades	112	37.8
From mosquito bite	104	35.1
By simple contact	88	29.7
Airborne	68	22.9
Modes of prevention		
Safe sex	176	59.4
By using safe blood and blood products	150	50.6
From mothers to children	52	17.6
By using sterilized needles or blades	144	48.6
Isolation of cases	180	60.8

\*\*42 (14.2%) students knew the correct four routes of transmission. ## 36 (12.1%) students knew all the correct four modes of prevention.

Table 1 show that the knowledge about transmission of AIDS was not sufficient. Most of the students i.e.296 out of 318 (93.8%) had heard about AIDS, still 6.92% never heard about AIDS. The knowledge about sexual transmission, transmission through blood and blood products, transmission through unsterilized needles and vertical transmission were 66.2%, 48%, 37.8% and 32.4% respectively. Only 14.2% of students knew all the four routes of transmission. On the other hand, misconception regarding transmission by mosquito prevailed among 35.1% while 22.9% of girls considered AIDS as airborne disease, one third of the students still believe that AIDS can be caused by simple contact.

It is found that about 60% students knew that AIDS can be prevented by safe sex while 17.5% of students believed that AIDS can be prevented in child by preventing pregnancy in infected women. Moreover 60% believed that if AIDS cases are isolated, the infection can be prevented. 48.6% of students opined that use of sterile needles and blades could prevent AIDS. But unfortunately only 12.1% students knew all the four modes of prevention.

As illustrated from Table 2, fever was the most common symptom (25.6%) of AIDs cited by the students and they thought it was commoner among females (41.9%). 82.8% thought AIDS is incurable and only 12.5% believed AIDS has a vaccine.

Table 3 describes the reaction of students towards AIDS patients. Sharing meals, swimming or sharing same toilet were restricted. But 51.2% didn't mind in working with an AIDS patient.

**Table 2: Distribution of students according to their knowledge about AIDS disease (n=296).**

Knowledge	Students	
	No.	%
<b>Symptoms of AIDS</b>		
Loss of weight	62	20.9
Fever	76	25.6
Diarrhea	46	15.5
Night sweats	32	10.8
*Multiple response	296	100.0
<b>Chances of AIDS infection</b>		
Common in males	100	33.8
Common in females	124	41.9
Common in both	72	24.3
*Multiple response	296	100.0
<b>AIDS is curable</b>		
Yes	51	17.2
No	245	82.8
*Multiple response	296	100.0
<b>AIDS vaccine is available</b>		
Yes	37	12.5
No	259	87.5
*Multiple response	296	100.0

**Table 3: Societal perception towards people living with AIDS (PLWA).**

Reaction of students towards AIDS patients	Positive	
	No	%
Staying with AIDS patients	64	21.6
Wearing clothes	82	27.7
Shaking hands	62	20.9
Hugging	32	10.8
Having meals	112	37.8
Swimming	112	37.8
Using same toilet	120	40.5
Working with AIDS patient	151	51.1

## DISCUSSION

The results of the present study reveal that the knowledge of the youngsters regarding various aspects of HIV/AIDS is not good. Few decades ago, HIV/AIDS were not known to the general population, especially the youngsters. But this epidemic is spreading very fast and it is alarming that patients attending sexually transmitted diseases (STD) and HIV clinics, many of them belong to younger group. Adolescents are potential resources for changing attitudes and behaviour towards AIDS, and hence most susceptible to infection because they engage in risky practices due to a lack of adequate information.

### Transmission and prevention of AIDS

This study finding corroborates with the findings of study conducted by Lal et al in Delhi among high school

students.<sup>5</sup> Low levels of knowledge about general aspects and transmission of HIV/AIDS have also been observed amongst secondary school students in Kolkata.<sup>6</sup> Studies conducted in other countries have reported higher levels of knowledge regarding transmission routes.<sup>7,8</sup> 95.1% of girls told that it is through unprotected sex in a study conducted in Lucknow.<sup>9</sup> This difference in knowledge could be attributed to early appearance of disease in these countries. Gender-based inequalities put girls and young women at increased risk of acquiring STIs which also affect their access to prevention and care services.<sup>10</sup>

60% students knew that AIDS can be prevented by safe sex while 17.5% of students believed that AIDS can be prevented in child by preventing pregnancy in infected women.

### Sources and knowledge about AIDS

Television (79.1%) was the most common source followed by newspaper (43.9%) in this study. 31.5% of health personnel were the source of information. Similarly 79.6% of the students mentioned that television and radio were the main sources of information to them in study conducted by Lal in Delhi. Likewise, a majority (62.7%) of senior secondary students belonging to a government school in Chandigarh reported that they derived most of the information from TV and radio.<sup>11</sup> Published literature indicates that peer education has a significant impact in reducing risk behavior.

82.8% of the students thought AIDS is incurable. In a study by Lal et al in Delhi among senior secondary school children reported that 72% of participants knew how to prevent HIV/AIDS 61.89% of participants had wrong perception regarding the availability of vaccine for HIV/AIDS; Benera et al in their study on under graduates at Delhi University reported that 59% knew that vaccination cannot prevent HIV/AIDS infection<sup>12</sup>. Only 12.5% in this knew about AIDS vaccine. A higher proportion of biology students were aware of the fact that HIV is caused by a virus and a fatal disease for which no vaccine is available for its cure in a study done by Bhalla in Jamnagar.<sup>13</sup>

Lal et al in their study reported that 83.5% felt that by using public toilets will not spread HIV virus.<sup>5</sup> Only 13.5% senior school students and 16.2% teachers had clear knowledge regarding AIDS, its general aspects, transmission and prevention in a study done in Kolkata.<sup>14</sup>

27.4% of pupils and 14% of trainee teachers thought there was a vaccine for prevention of AIDS in a study by Agarwal.<sup>15</sup> But there was a gap in knowledge among college students of Kerala done by Lal.<sup>16</sup>

### Reaction of students towards AIDS patients

The societal attitude of most of the adolescents towards people living with AIDS did not seem to be very positive.

However about 60% had no problem in working with them. About 46% of participants knew that using public toilets will spread HIV virus in a study in Khammam town Andhra Pradesh.<sup>17</sup> 50% had a negative attitude towards a shopkeeper or a housekeeper affected with HIV in a study in a study in urban students of Mysuru.<sup>18</sup>

But misconceptions were also high and almost equally present in technical and non-technical students.<sup>19</sup>

## CONCLUSION

Young people who are in the process of habit formation can be influenced to yield results. Prevention being the only strategy available for HIV/AIDS is of utmost importance that knowledge regarding its various aspects should be disseminated among the adolescents through inclusion of chapter of AIDS and sex education in school syllabus. More discussion by school teachers and health personnel can help them to improve their knowledge. So, health education sessions to both students and teachers are to be conducted by health personnel to improve the study material regarding AIDS.

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