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Research Article

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A study of awareness regarding HIV/AIDS among secondary school students

Mohan Shinde¹*, Anshuli Trivedi¹, Anita Shinde², Santosh Kumar Mishra³

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*Correspondence:

Dr. Mohan Shinde,

E-mail: shinde_mohan@hotmail.com

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ABSTRACT

Background: HIV/AIDS has rapidly established throughout the world over the past three decades and has emerged as the important public health problem. Adolescents are at greater risk of acquiring infection because of changing behavior pattern. More than one third of reported cases of HIV/AIDS in India are among youth. Adolescents and youth need information to equip them in order to make choices in form of sexual behavior or relationships. Objective of the study was to assess the awareness of the school children regarding HIV/AIDS.

Methods: A cross-sectional study was conducted from November to January 2016 in four randomly selected government coeducational higher secondary schools of Bhopal city of Madhya Pradesh. A total of 256 students from 9th to 11th class were included in the study. The statistical analysis were performed using the Microsoft excel and epi-info software

Results: In the study, awareness regarding mode of transmission of HIV/AIDS was found expressed as unprotected sex by 85.94% students. Awareness regarding prevention of HIV/AIDS, 70.70% students believes condoms as a best means of protection against HIV followed by safe blood (43.75%), disposable syringes (40.23%).

Conclusions: The basic knowledge of HIV/AIDS over various issues is deficient among many students. Information, Education and Communication is the effective means to be disseminated as campaign at school level for preventing and protecting adolescents from the HIV/AIDS and spread awareness to induced behavioral change among the adolescents.

Keywords: AIDS/HIV, Awareness, Adolescents, Knowledge

INTRODUCTION

The acquired immune deficiency syndrome (AIDS) caused by human immunodeficiency virus (HIV) has been a significant public health problem and remains the most serious infectious disease challenge. HIV continues to be a major global public health issue, having claimed more than 39 million lives so far. It has become the serious problem amongst the people in India with utmost spread rate and of them adolescents are at the highest risk group contracting HIV/AIDS. 1 it has been reported that

young people from significant segment of those attending sexually transmitting infection clinics are infected by HIV.² The adolescent can be equipped with the information of prevention of HIV/AIDS at the school level. Presently in our education system the literature is not fortified with adequate information related to sexually transmitted infections.³ Adolescents aged 10-19 years of age accounting for nearly 23% of population in India are exposed to the risk of being victims of HIV/AIDS.⁴ Many adolescents are sexually active and due to many sexual contacts among them are unprotected, thus they are at the

¹Department of community medicine, Gandhi Medical College, Bhopal, Madhya Pradesh, India

²Institute for excellence in higher education, Bhopal, Madhya Pradesh, India

³Department of Orthopaedics, Gandhi Medical College, Bhopal, Madhya Pradesh, India

risk of contracting sexually transmitted diseases including HIV/AIDS due to lack of sex education and education on prevention of STD. Thus, in view of the rapid progressive epidemic of HIV/AIDS, it is imperative to convergent the focus on school health including awareness programme for prevention from HIV/AID and STI.

HIV/ AIDS is the infection that is transmitted as a consequence of a specific behavior pattern, which currently exists in young population. The information gap on STD/HIV/AIDS among the adolescents and population of reproductive age are high in our country. Most of the male adults (88%) and female adults (96%) are ignorant of prevention need for HIV/AIDS. The transmission of HIV virus may break any further, if we can make everyone aware of prevention. Knowledge of prevention to all is the only weapon to fight this pandemic.

METHODS

The present cross-sectional study was conducted from November to January 2016 in four randomly selected government coeducational higher secondary schools of Bhopal city of Madhya Pradesh. A total of 256 students from 9th to 11th class were included in the study, of whom 128 were boys and 128 were girls. In each school, out of four classes, 16 students (boys and girls) were included using systematic random sampling method from each class, if the class had two section, the number divided by two. Thus from each school 64 students (male and female) and from four school's 256 students were included in the study.

A structured pretested and predesigned questionere consisting of close ended questions was used. The consent was obtained from the school principals after explaining the purpose of study to them. The questionnaire was explained and all the queries were

clarified. Data entry and the stastical analysis were performed using the Microsoft excel and epi-info software.

RESULTS

Age and sex wise distribution of study subjects

In the present study majority of students (61.33%) belonged to age group of 15-17 years and most of them were females. 53 (20.70%) students were less than 14 years and 46 (17.97%) students were above 18 years of age (Table 1).

Table 1:Age and sex wise distribution of study subjects.

Age (years)	Male	Female	Total
	No. %	No. %	No. %
< 14	26 (20.31)	27 (21.09)	53 (20.70)
15-17	74 (57.81)	83 (64.84)	157 (61.33)
>18	28 (21.88)	18 (14.06)	46 (17.97)
Total	128 (50)	128 (50)	256 (100)

Distribution of study subjects according to their general awareness regarding HIV/AIDS

In this study most of the students (86.72%) had heard about HIV/AIDS, while only 18.75% knew that there is no vaccine available to protect from HIVAIDS. 64.84% participants had knowledge that Hugging & shaking with HIV/AIDS infected person will not transmit HIV virus. In the study, 45.31% participants expressed that Mosquito bite from HIV/AIDS infected person will not transmit HIV virus.

In the study 85.84% boys and 76.56% girls were preached that prostitute were high-risk group for HIV/AIDS followed by homosexuals (29.69% boys and 17.79% girls) (Table 2).

Table 2: Distribution of study subjects according to their general awareness regarding HIV/AIDS.

Response of study subjects	No. of correct responses			Chi-	P-value
	Male (n=128)	Female (n=128)	Total (n=256)	Square	
	No. (%)	No. (%)	No. (%)		
Heard about HIV/AIDS	120 (93.75)	102 (79.69)	222 (86.72)	10.9889	P<0.05
No vaccine for HIV/AIDS	26 (20.31)	22 (17.19)	48 (18.75)	0.4103	P<0.05
Hugging & shaking with HIV/AIDS infected	88 (68.75)	78 (60.94)	166 (64.84)	1.7135	P<0.05
person will not transmit HIV virus					
Mosquito bite from HIV/AIDS infected	65 (50.78)	51 (39.84)	116 (45.31)	3.0897	P<0.05
person will not transmit HIV virus					
Risk of HIV/AIDS amongst homosexuals	38 (29.69)	23 (17.97)	61(23.83)	4.8424	P<0.05

Table 3: Distribution of study subjects according to awareness regarding methods of prevention of HIV/AIDS.

Methods of Prevention	No. of aware students			Chi-	P-value
	Male (n=128)	Female (n=128)	Total (n=256)	Square	
	No. (%)	No. (%)	No. (%)		
Use of condom	118 (92.19)	63 (49.22)	181 (70.70)	56.046	P<0.05
Safe blood	64 (50.00)	48 (37.50)	112 (43.75)	4.0635	P<0.05
Disposable syringes	67 (52.34)	36 (28.13)	103 (40.23)	15.611	P<0.05
Not sharing injections/ blades	56 (43.75)	33 (25.78)	89 (34.77)	9.1115	P<0.05
Availability of treatment for	25 (19.53)	20 (15.63)	45 (17.58)	0.674	P<0.05
HIV/AIDS					

Table 4: Distribution of study subjects according to awareness regarding mode of transmission of HIV/AIDS.

Mode of Transmission	No. of aware stu	Chi-	P-value		
	Male (n=128)	Female	Total	Square	
	No. (%)	(n=128)	(n=256)		
		No. (%)	No. (%)		
Unprotected sexual intercourse	108 (84.37)	112 (87.5)	220 (85.94)	0.5172	< 0.05
Homosexual intercourse	32 (25.00)	30 (23.44)	62 (24.22)	0.0851	< 0.05
Infected blood transfusion	60 (46.87)	59 (46.09)	119 (46.48)	0.0157	< 0.05
Sharing injections/ blades	67 (52.34)	62 (48.44)	129 (50.39)	0.3906	< 0.05
HIV infected mother to baby	26 (20.31)	35 (27.34)	61 (23.83)	1.7433	< 0.05

Distribution of study subjects according to awareness regarding methods of prevention of HIV/AIDS

Awareness regarding prevention of HIV/ AIDS, in the present study shows that 70.70% students believe that condoms is the best means of protection against HIV followed by safe blood (43.75%), Disposable syringes (40.23%), not sharing injections and blade (34.77%) and availability of treatment for HIV/AIDS (Table 3).

Distribution of study subjects according to awareness regarding mode of transmission of HIV/AIDS

The present study reveals that the awareness regarding mode of transmission of HIV/AIDS was unprotected sex, as expressed by 85.94% students followed by sharing injections/ blades (50.39%), infected blood transfusion (46.48%), homosexual intercourse (24.22%) and HIV infected mother to baby (19.92%) (Table 4).

DISCUSSION

Age and sex wise distribution of study subjects

In the present study majority of students (61.33%) belonged to age group of 15-17 years. Most of them were females. 53 (20.70%) students were less than 14 years and 46 (17.97%) students were above 18 years of age.

Distribution of study subjects according to their general awareness regarding HIV/AIDS

Awareness is the key for prevention of HIV/AIDS. In the study most of the students (86.72%) had heard about

HIV/AIDS. In another study conducted by Yadav et al (61%) and Sunil et al (80%) showed more or less similar percentage of students who have heard about HIV/AIDS. 5.6 The study conducted by Goyal RC et al and Shrivastava et al revealed that all the students were heard about HIV/AIDS. In study done by Bhalla et al in Gujarat reported that all participants heard of HIV/AIDS. In another study done by Abdul Basir Mansoor et al in Afganisthan reported that 90.8% of participants aware of HIV/AIDS. In a study done by Lal et al in Delhi among senior secondary school children reported that all participants heard about HIV/AIDS. 10,11

In our study, only 18.75% of participants were new about the non-availability of vaccine for HIV/AIDS. Lal et al in their study at Delhi reported that 61.89% of participants had wrong perception regarding the availability of vaccine. In another study by Benera et al on under graduates at Delhi University reported that 59% participants knew that vaccination cannot prevent HIV/AIDS infection. In a participant was a prevent HIV/AIDS infection.

In this study 64.84% of participants knew that hugging and shaking hands with HIV/AIDS infected person will not transmit HIV virus. Similar results were observed by Chandrasekhar et al in their study where 56.38% participants were knew that hugging and shaking hands will not transmit HIV virus. In another studies done by Singh SK et al reported 53.9% of participants, Selcuk Koksal et al reported 73.1%, Basir Gaash et al reported 82.22% and Bhalla et al reported 90.8% participants knew that shaking hands with HIV/AIDS infected person will not transmit HIV virus. In the shaking hands with HIV/AIDS infected person will not transmit HIV virus.

In the study it has been observed that 45.31% of participants were new that mosquito bite from HIV/AIDS infected person will not transmit HIV virus. In another study done by Lal et al reported 70.04% of participants, Singh SK et al reported 44.67%, Koksal S et al reported 58.3% of participants knew that mosquito bite from HIV/AIDS infected person will not transmit HIV virus. 11,14,15

In our study 29.69% boys and 17.79% girls were preached that homosexuals were high-risk group for HIV/AIDS. In another study by Gupta et al the knowledge of students about high risk group was found 39.1%, which was not satisfactory. In a study by Singh A et al 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. 17.18

Distribution of study subjects according to awareness regarding methods of prevention of HIV/AIDS

In the study, finding regarding knowledge about condom as mean of protection is much higher than the findings of Yadav et al and Lal et al, where only 69.67% and 14.9% knew the role of condom in preventing HIV correspondingly.^{5,11} In the study 43.75% students were aware about the use of safe blood for blood transfusion and 40.23% student knew about the safe injection practices. In another by Yadav et al revealed that the higher number of respondents (82.75%) were aware of the blood safety.5 In a study by Selcuk Koksal et al reported that 78.51% participants knew that the sharing injections, needles and razors with a HIV/ AIDS infected person would transmit HIV virus. 15 In another study done by Basir Gaash et al reported 23.11% participant, Bhalla et al reported 50.35% and Lal et al reported 44.4% of participant knew that sharing injections with a needle from an HIV/AIDS infected person will transmit HIV virus.^{9,11,16}

Distribution of study subjects according to awareness regarding mode of transmission of HIV/AIDS

The similar findings were observed by Kotech et al in their study carried out in urban slums of Vadodara city revealed that the knowledge regarding modes of transmission were the sexual act followed by needles and blood transfusion. In another study by Gupta et al reveals the similar finding regarding mode of transmission of HIV/AIDS, that, it was through unprotected sex (92.1%) followed by sharing injections (88.2%) and blood transfusion (84.3%) as mentioned by female students. As per the male students 92.0% said that it transmits through sharing injections followed by unprotected sex (89.4%) and blood transfusion (86.7%). Sarkar et al describe in his study in Pondicherry that 83% women knew one or more modes of spread of HIV/AIDS. ^{17,19,20} In another

study by Yadav et al higher percentages of respondents (82.75%) knew the role of safe injection practices.⁵ In a study conducted in the state of Maharashtra, teenagers were less aware of the role of improperly sterilized syringes and needles as a mode of transmission of HIV in comparison to other modes of disease transmission.²¹

In our study 119 (46.48%) participant were had the knowledge of transmission of virus through blood transfusion, while in the study done by Bhalla et al reported that 96.65% of participants, Basir Gaash et al reported 73.3%, Kamala et al Rekha Udgiri et al and Lal et al reported 31.1 % of participant knew that infected blood transfusion will spread HIV virus. 9,11,22,23 In a study by Yadav et al higher percentage of respondents (84.58%) knew the role of blood safety. 5

It has been observed that students were less aware of transmission of infection from mother to child in comparison to other modes of transmission. Similar findings were reported by the District level household survey in Gujarat State and Behaviour Surveillance Survey across the country. Another study by Yadav et al also describe the similar findings.

CONCLUSION

The basic knowledge of HIV/AIDS over various issues like prevention and mode of transmission is deficient among many students. Adolescents are more vulnerable and are less aware of the knowledge to protect themselves from HIV/AIDS. The awareness campaign should be designed at school levels for preventing and protecting adolescents from the HIV/AIDS and to spread awareness to induced behavioral change among the adolescent. The effort as regards HIV/AIDS education be initiated, as a part of school curriculum with all the literature available at school level to enhance the knowledge related to HIV/AIDS among the students

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