A Study of Knowledge Attitude and Practice Regarding HIV/AIDS among Adolescents

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Abstract

Introduction: In this world of 7.2 billion people, 1.2 billion live in India and out of these, 243 million, i.e., 20.9% of the population are adolescents, between 10 and 19 years, as per 2011. This makes India the world’s largest adolescent-living country. As per WHO, HIV is the second leading cause of death among adolescents. In Dist. Bathinda, 99,595 people were tested out of which 1339, i.e., 1.34% were found to be positive till February 2014. 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.

Materials and Methods: A cross-sectional study was conducted among adolescents (14 to 19 years) in three randomly chosen co-educational schools in Bathinda. Adolescents from 14 to 19 years in randomly chosen schools were included in the study. A pre-designed, pre-structured, pre-tested questionnaire was introduced to the participants by the interviewer in English and Hindi. Privacy of the schools and the participants was maintained by not mentioning their names anywhere in the study. Data was collected regarding knowledge, attitude and prevalence regarding HIV/AIDS.

Results: A total of 401 adolescents were enrolled in our study out of which 282 were males and 119 females. Almost all the adolescents, i.e., 99.8% had heard about the term HIV/AIDS. 74.8% had TV and 61.6% internet as their source of information. A large number, i.e., 85.3% adolescents (87.6% male adolescents and 79.8% female adolescents) knew that sexual contact could be the mode of transmission of HIV/AIDS. A large number, i.e., 71.82% (80.14% males and 52.1% females) knew that HIV/AIDS could be prevented by using condoms. 52 adolescents had history of previous sexual exposure out of whom 48 used condoms during the last sexual contact. The association was significant between the knowledge and practice regarding the use of condom (highly significant: p<0.01). Conclusion: Thus this study reveals that still much has to be done towards imparting information about HIV/AIDS among adolescents, which could be done through many ways, like involving them in various activities at health centers as and when any IEC activities are carried out. Moreover schools and parents should also involve themselves and impart them more information regarding the disease. Mothers play an important role in providing more information to girl adolescents. Thus a collective effort is needed so as to have a bright future of these adolescents.

Keywords: Adolescents, School, HIV/AIDS, KAP

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How to cite this article: Dhruvendra L, Onam G, Tanvir SK. To Study Knowledge Attitude and Practice Regarding HIV/AIDS among Adolescents. Ind J Youth Adol Health 2017; 4(2): 44-50.

Digital Object Identifier (DOI): https://doi.org/10.24321/2349.2880.201716

ISSN: 2349-2880

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Introduction

In this world of 7.2 billion people, 1.2 billion live in India and out of these, 243 million, i.e., 20.9% of the population are adolescents, between 10 and 19 years, as per 2011. This makes India the world’s largest adolescent living country. Adolescents face many problems like lack of knowledge and information, anemia, malnutrition, HIV/AIDS, early marriages, teenage pregnancy, school dropouts, drug abuse, accidents and injuries, mental health problems, etc.

As per WHO, In the early stage (10-13 years), independence-dependence struggles are heralded by rapid physical changes with the onset of puberty (8-11 years in females and 9-11.5 years in males). The middle stage (14-16 years) is characterized by an increased scope of feelings, and increased importance of peer group values and more risk-taking behaviors. The late stage (17-19 years) represents emerging adults who have successfully transitioned into accepting responsibility for their behaviors.

In 2012 globally, the leading causes of death among adolescents were road injury, HIV, suicide, lower respiratory infections, and interpersonal violence.

As per WHO, HIV is the second leading cause of death among adolescent. Adolescents and young people represent a rapidly growing share of people living with HIV worldwide. In 2013 alone, 670,000 young people between the ages of 15 and 24 were newly infected with HIV, of whom 250,000 were adolescents between the ages of 15 and 19. Among youth living with HIV infection in 2010, CDC estimates that almost 60% had undiagnosed infections and were unaware they were HIV-infected. Many parents and adolescents have observed a paucity of communication between parents and their own teenagers about sexuality. Consequently, programs have been developed to increase this communication and thereby to decrease adolescent sexual risk-taking behavior. Because these programs encourage discussion of sexuality between adolescents and their own parents, they avoid controversy that sometimes thwarts the implementation of other effective programs. The primary drivers of the HIV epidemic in India are unprotected paid sex/commercial sex work (87.1%), unprotected anal sex between men (1.5%), and intravenous drug users (IDUs) (1.6%). Apart from that, 5.4% accounted for parent-to-child transmission (PTCT) of the infection.

Adolescence is a phase of experimentation and risk that includes early sexual debut, sexual coercion and violence, trafficking, and substance abuse. Along with these, other factors such as the lack of knowledge about HIV/AIDS, inaccessibility to healthcare services and commodities, lack of education and life skills, and early marriage have increased their vulnerability to HIV/AIDS. Reports of sexual initiation with commercial sex workers vary widely, but a large proportion of unmarried male adolescents and college students report having had sex with commercial sex workers or with older women. Such gender-based sexual patterns are analogous to those observed in other regions of Asia and suggest that young men engaged in unprotected sexual activities could be the bridging population between the high-risk groups (sexual workers) and the general population.

Adolescents constitute a considerable proportion of India’s population (22%). They are a rich human resource and an important part of the development process. Good health of adolescents will help in raising the health status of the community. Adolescents are highly vulnerable to human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) and other sexually transmitted infections (STIs) The Center for Disease Control and Prevention (CDC) estimates that 26% of the approximately 50,000 new HIV infections diagnosed in 2010 were among youth 13 to 24 years of age. In addition, particular groups of adolescents (e.g., males who have sex with males, injection drug users, and teens who have sex for drugs) engage in even greater risk-taking behavior. Consequently, an estimated 25% of all people with HIV in the United States contracted HIV when they were teenagers.

Ironically, very little work has been done to comprehend the nature of the epidemic in Asia, especially in India, which harbors the third-highest HIV-affected population in the world. Although the Government of India conducts HIV Sentinel Survey annually to monitor outcomes and impacts of national efforts and monitor trends in HIV prevalence amongst the major population groups, but adolescents remain under-reported.

In Punjab, the estimated adult cases (PLWHA) as per 2011 estimation is 31,961, i.e., 0.18% and in Dist. Bathinda, 99,595 people were tested out of whom 1339, i.e., 1.34% were found to be positive till February 2014.

According to the United Nations, there are about 4 million HIV infected people in India, and India is considered a high-risk country. Despite the high prevalence of HIV/AIDS, it has been reported that many adolescents do not know the modes of transmission of this disease. 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.18

Aims and Objectives

Primary Objective

To assess knowledge, attitude and practice regarding HIV/AIDS in adolescents

Secondary Objective

1 To know about the source of their information
2 To compare knowledge and attitude regarding HIV/AIDS among mid and late adolescents
3 Interventions required to fill the gap in information

Materials and Methods

A cross-sectional study was conducted among adolescents (14 to 19 years) in three randomly chosen co-educational schools in Bathinda. Adolescents from 14 to 19 years in randomly chosen schools were included in the study.

Consent was taken from individual school principals to conduct the study. Also informed verbal consent was taken from the participants.

A pre-designed, pre-structured, pre-tested questionnaire was introduced to the participants by the interviewer in English and Hindi. Privacy of the schools and the participants was maintained by not mentioning their names anywhere in the study.

To calculate sample size, following formula was used:

$$n = \frac{4 \times p \times q}{L^2}$$

Where: $n$: Sample size

$p$: Expected prevalence or proportion

$q$: 100−$p$

$L$: Permissible error (here 5%, i.e., for 95% confidence limit)

Prevalence of awareness about HIV/AIDS according to KAP study conducted among high school students in Municipal Corp. School, Pune, by Pankaj Kumar et al. was 63%. So using the above formula, our sample size comes to be 372.96 (373).

Inclusion Criteria

Adolescents (9th to 12th class) who were given permission by the school to participate in this survey.

Exclusion Criteria

Adolescents who were absent during the time of study and adolescents reluctant to participate in the study.

The data was analyzed using MS Excel.

Results

A total of 401 adolescents were enrolled in our study out of whom 282 were males and 119 females. Almost all the adolescents, i.e., 99.8% had heard about the term HIV/AIDS. 74.8% had TV and 61.6% had internet as their source of information (Fig. 1). 49.6% of adolescents said that they had been imparted sex education in school and a very small number, i.e., 18.7% at home. Around 30.7% adolescents thought HIV and AIDS are the same (Table 2). Large number, i.e., 85.3% adolescents (87.6% of male adolescents and 79.8% female adolescents (Fig. 2) knew that sexual contact could be the mode of transmission of HIV/AIDS. Male adolescents had more knowledge regarding sexual contact as mode of transmission ($p<0.05$ significant).

While a large number, i.e., 71.82% (80.14% males and 52.1% females (Table 2) knew that HIV/AIDS could be prevented by using condoms, 52 adolescents had history of previous sexual exposure out of which 48 used condoms during the last sexual contact. The association was significant between the knowledge and practice regarding the use of condom (highly significant: $p<0.01$). 56.36% (60.28% male adolescents and 47.05% female adolescents (Table 2) thought that HIV/AIDS could be avoided by remaining faithful to their single partner. 58.1% adolescents knew that IV drug users are at high risk of contracting the disease (Table 1). Many of them (83.64%) acknowledged that HIV/AIDS can be prevented by not sharing needles, syringes and razor blades (Fig. 4, Table 1) but still some of them (39 adolescents, 9.7%) indulged in sharing needles, syringes and razor blades. Large number of adolescents, i.e., 89.8% said that HIV/AIDS could be transmitted by blood transfusion (Table 1) and 72.81% knew that the disease could be prevented by prior blood testing (Table 2). Large number, i.e., 43.4% adolescents had the misconception that HIV/AIDS could be transmitted by eating, drinking from the same plate/glass of HIV/AIDS-
infected person. Many (72.3%) had the misconception that HIV/AIDS could be transmitted by sharing clothes of HIV-infected person and similarly large number (70.1%) thought that the disease could be transmitted by sharing toilets and almost half of them (43.6%) thought that it could be transmitted through mosquito bite (Fig 5, Table 1). A very large number of adolescents, i.e., 85.8% had fairly good knowledge that HIV/AIDS decreases the body ability to fight against infections (Table 2) and around 38.40% adolescents had the misconception that HIV is curable using medicines (Table 2), while 40.39% thought HIV could be prevented by vaccination (Table 2). A very large number of adolescents, i.e., 85.53% (85.4% males and 85.71% females) said that they would take care of anyone diseased with HIV/AIDS, while 83.3% (57.1% males and 26.2% females) said that they would continue friendship with a HIV+ve friend. A large number 37.2% said that a diseased teacher should not be allowed to continue teaching in any school. 42.1% adolescent males and 14% females said that they would buy grocery or other items from a HIV+ve shopkeeper and 60.3% (43.9% males and 16.5% females) said that if a student has HIV, he/she should be allowed to continue studying with them. Almost 88.5% said that if someone known to them is affected with this disease, they would recommend him to go for treatment.

![Figure 1: Source of Knowledge](image1)

![Figure 2](image2)

![Figure 3](image3)

Can HIV/AIDS be Transmitted by Sexual Contact? Can HIV/AIDS be Transmitted from Mother to Child?
Figure 4. Can HIV/AIDS Be Transmitted by Sharing Needles, Syringes, and Razor Blades?

Figure 5. Can HIV/AIDS Be Transmitted by Mosquito Bite?

Table 1. No. of Adolescents, Male and Female Agreeing to the Questions*

| Questions regarding Transmission     | Male                        | Female                      |
|-------------------------------------|-----------------------------|-----------------------------|
| Mother to child?                    | 218 (54.4%)                 | 106 (26.4%)                 |
| Sharing needles, syringes, and razor blades? | 246 (61.3%)               | 100 (24.9%)                 |
| Injectable/IV drug users?           | 169 (42.1%)                 | 64 (16.0%)                  |
| Blood transfusion?                  | 247 (61.6%)                 | 113 (28.2%)                 |
| Mosquito bite?                      | 124 (30.9%)                 | 51 (12.7%)                  |

Table 2. Number of Adolescents Saying Yes to a Question*

| Questions                                                                 | Male                        | Female                      |
|---------------------------------------------------------------------------|-----------------------------|-----------------------------|
| HIV and AIDS same thing?                                                 | 74 (18.4%)                  | 49 (12.2%)                  |
| Can it be decrease in body ability to fight against infections?           | 236 (58.8%)                 | 108 (26.9%)                 |
| Can it be prevented by using condom during sexual contact?                | 226 (56.4%)                 | 62 (15.4%)                  |
| Can it be avoided by remaining faithful to your single partner?           | 170 (42.4%)                 | 56 (13.9%)                  |
| Can it be avoided by using blood testing before transfusion?              | 198 (49.4%)                 | 94 (23.4%)                  |
| Can HIV+ve person’s immunity be increased?                               | 99 (24.7%)                  | 31 (7.7%)                   |
| Can HIV+ve person get cured with medicine?                               | 102 (25.4%)                 | 52 (12.9%)                  |
| Can HIV be prevented by taking vaccine?                                  | 103 (25.7%)                 | 59 (14.7%)                  |
| Ever had sexual contact?                                                 | 50 (12.7%)                  | 2 (0.49%)                   |
| Did you use condom during last sexual activity?                           | 44 (10.9%)                  | 4 (0.99%)                   |

*Percentage is expressed as total i.e. out of 401 adolescents.
In our study of 401 adolescents, we find that 99.8% of adolescents knew and had heard about HIV/AIDS as compared to a study by Pankaj et al. in Pune in which only 63.72% of adolescents had knowledge about HIV/AIDS. For 74.81% TV and for 61.59% internet was the main source of information. Large number, i.e., 85.3% had correct knowledge regarding sexual contact as one of the sources of HIV/AIDS infection as compared to the study by Pankaj et al. in Pune (61.76%) and 71.82% knew that HIV/AIDS could be prevented by using condoms during sexual contact. There were a few misconceptions regarding HIV/AIDS mode of transmission as revealed by adolescents; 43.4% thought HIV/AIDS could be transmitted by eating, drinking from same plate/glass of HIV/AIDS-infected person, 72.3% thought HIV/AIDS can be transmitted by sharing clothes of HIV-infected person and similarly again a large number 70.1% had misconception that HIV/AIDS could be transmitted by sharing toilets and 43.6% said that HIV/AIDS can be transmitted by mosquito bite. 38.40% adolescents had misconception that HIV could be cured with medicine and 40.39% adolescents said that HIV could be prevented by vaccination. Many of them had a positive attitude regarding behavior towards an infected person. The association was significant between the knowledge and practice regarding the use of condom. Male adolescents had more knowledge regarding sexual contact as mode of transmission (P<0.05 significant). 39 adolescents (9.7%) indulged in sharing needles and syringes for substance abuse and the association between knowledge and practice regarding substance abuse through needles and syringes was significant (sig P<0.05). Thus although adolescents had fair knowledge and had good attitude towards HIV/AIDS, yet there are misconceptions regarding its transmission and also 49.6% of adolescents said that they had been imparted sex education in school and a very small number, i.e., 18.7% had been imparted sex education at home which can be improved by proper education and sensitizing them on this issue at home as well as in school. Thus this study reveals that still much has to be done towards imparting information about HIV/AIDS among adolescents, which could be done through many ways, like involving them in various activities at health centers as and when any IEC activities are carried out. Moreover, schools and parents should also involve themselves and impart them with more information regarding the disease. Mothers play important role in providing more information to girl adolescents. Thus a collective effort is needed so as to have bright future of these adolescents.

Conflict of Interest: Nil

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Date of Submission: 29th May 2017
Date of Acceptance: 15th Jun. 2017

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