

# Knowledge and attitude of pre-university adolescent girls regarding STDs/HIV and sexual health in Mysore city

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## Abstract

**Background:** Adolescent girls are less likely than older women to access sexual and reproductive health care. Information about knowledge and attitude is essential to better understand the dynamics of the STI epidemic and to plan preventive measures.

**Objective:** To assess the knowledge and attitude of pre-university adolescent girls regarding STDs/HIV.

**Materials and Methods:** A cross-sectional study was conducted among pre-university adolescent girls in Mysore city between June 2013 and November 2013. The sample size of 1500 was selected from the total population of 4155 using Proportional Stratified Sampling technique. Direct interview method was used to collect the information using a pretested, semi-structured questionnaire after taking consent from the students.

**Result:** Of all, 1425 (95%) of the study subjects had never discussed any sexual health-related matter with their fathers and similarly 1279 (85.32%) had not discussed with their mothers. A total of 1012 (67.46%) believed that girls should remain virgin until marriage and 1411 (94.06%) students had heard of HIV/AIDS but only 613 (40.86%) knew the abbreviation of AIDS. Among all, 931 (62.06%) students knew that HIV is incurable, and only 623 (41.53%) knew that there was a simple test to diagnose HIV. Although 646 (43.06%) students knew that there are other STI's apart from HIV, very few knew about its signs and symptoms. 102 (6.80%) study subjects had a misconception that hugging and kissing an infected person transmits HIV. 10% girls had a misconception that using oral pills and avoiding social interaction with HIV-infected people would prevent the transmission. For many 1129 (75.26%) study subjects, the source of information regarding HIV was from mass media. 1171 (78.71%) subjects felt that there should be classes on reproductive and sexual health in schools and colleges.

**Conclusion:** There is a substantial lacuna in the knowledge and perception of the girls regarding sexual health. A lot of myths and misconceptions are prevailing among the girls in the core areas such as condom use, HIV transmission, and prevention.

**KEY WORDS:** Adolescents, sexual health, HIV, STIs

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## Introduction

Adolescence is the most important and sensitive period of one's life. Adolescents comprise about 20% of the world's total population.<sup>[1]</sup> According to Census 2011 data, there are 225 million adolescents in the age group of 10–19 years comprising nearly one-fifth of the total population (21.8%) of India. Of this 21.8%, adolescents in age group of 10–14

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years constitute 12.15% and in the 15–19 years age group constitute 9.7%.<sup>[2]</sup>

For many girls in developing countries, the mere onset of puberty that occurs during adolescence marks a time of heightened vulnerability to school leaving, child marriage, early pregnancy, HIV, sexual exploitation, coercion, and violence. Adolescent girls are less likely than older women to access sexual and reproductive health care.<sup>[3]</sup>

Young people aged 15 to 24 years account for 41% of new HIV infections worldwide.<sup>[4]</sup> India has the second largest population of HIV-infected individuals which is estimated to be 5.2 million. About 35% of all reported HIV infection in India occurs among young people in age group of 15–24 years indicating that young people are highly vulnerable. The epidemic is becoming more “feminized” with more women becoming infected. The present challenge is to keep the young population free from HIV.<sup>[5]</sup>

The sensitivity attached to sexuality and reproductive health of adolescents makes them more vulnerable. There are many factors which contribute for their reproductive ill health. Higher risk taking behavior acquired during adolescence has long-term reproductive health consequences. Lack of access to appropriate information on STDs, HIV/AIDS, contraception, conception, and issues related to adolescent sexuality and a lack of preventive services, with limited access to the available services compounds the matter considerably.<sup>[6]</sup>

In India, school systems are ambivalent about imparting education on sexual health. Even in some schools where sexual and reproductive health education exists in the curriculum, teachers are often too embarrassed and uncomfortable to effectively instruct their pupils.

The virtual absence of “adolescent care” in the prevailing education system has left most adolescents clueless on the right way to deal with the changes they experience. Even our traditional Indian culture considers such talks as taboo and discourages open discussion regarding the same.

Information about knowledge and attitude is essential to better understand the dynamics of the STI epidemic and to plan preventive measures. This information is also important in assessing changes over time as a result of prevention efforts. The aim of this study was to evaluate adolescent girls’ knowledge and attitude toward STIs/HIV and sexual health.

## Materials and Methods

A cross-sectional study was conducted between July 2013 and November 2013. Using the hypothesis testing technique with level of significance ( $\alpha$ ) = 5%, power = 80% , allowable error of 10% and assuming the level of knowledge regarding sexual health among urban adolescent girls as 35%,<sup>[7]</sup> a total sample size of 1500(n) was selected from the total population of 4155(N). Proportional stratified sampling technique was applied to get the sample from each college. Simple random sampling without replacement method was applied within the colleges. Study was initiated after obtaining the approval from the Institutional Ethics Committee of MMCRI, Mysore.

Necessary permission from the concerned authorities including Deputy Director of Pre University Board, Mysore and respective college Principals was obtained. The purpose of the study was explained and written consent was obtained from the participants before enrolling them in the study. Girls not giving consent were excluded from the study. To collect the required information from the sampled study subjects the “Direct interview method” of primary source of information technique was used. The relevant information from the selected subjects was captured through a pretested and semi-structured questionnaire. The questionnaire was prepared using brainstorming technique by referring the “Illustrative Questionnaire for Interview Surveys with Young People by John Cleland” available in the WHO website.<sup>[8]</sup>

## Statistical Analysis

Data were entered in Microsoft excel sheet and were analyzed using Microsoft excel. The statistical techniques, frequency and proportions, were used to analyse the data.

## Result

### Distribution of Study Subjects According to the Sociodemographic Variable

Majority of the girls were Hindus (75.73%) hailing from city (55.20%) and belonged to lower middle (48.60%) and upper lower class (34.81%) [Table 1].

### Distribution of the Study Subjects According to Discussion with their Parents about Sexual Health

Of all, 1425 (95%) of the study subjects had never discussed about sexual health-related matter with father and 1279 (85.32%) of them with mother whereas only 52 (3.46%) and 208 (13.87%) study subjects had spoken about sexual health with father and mother, respectively.

### Perception of the Study Subjects Regarding Sexuality

For 495 (33%) of the study subjects it was alright for unmarried girls and boys to have dates, however, 762 (50.8%) disagreed, and the rest 243 (16.2%) were not sure. Majority [i.e.1012 (67.46%)] of study subjects believed that the girls should remain virgin until marriage whereas 178 (11.86%) disagreed, and the rest 310 (20.66%) were not sure.

### Knowledge of the Study Subjects about STIs/HIV

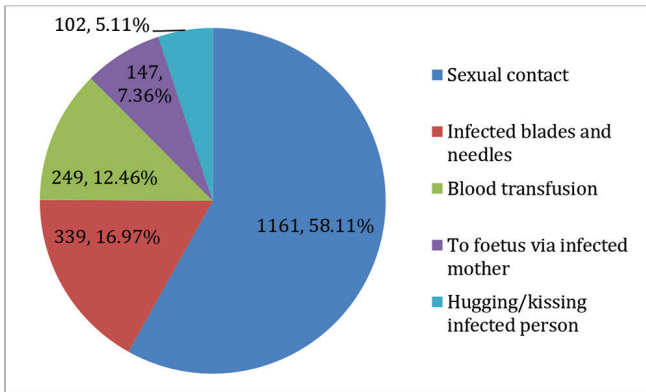
A good number 1411 (94.06%) of students had heard of HIV/AIDS but only 613 (40.86%) knew the abbreviation of AIDS. A total of 931 (62.06%) students knew that HIV is incurable, only 623 (41.53%) knew that there is a simple test to diagnose HIV. Although 646 (43.06%) students knew that there are other STIs apart from HIV, very few knew about its signs and symptom [Table 2]. Study subjects gave multiple responses regarding modes of transmission of HIV [Figure 1]. Majority knew that it is transmitted by sexual contact 1161 (77.40%), followed by infected needles and blades 339 (22.60%), and blood transfusion 249 (16.60%).

**Table 1:** Distribution of study subjects according to the sociodemographic variable

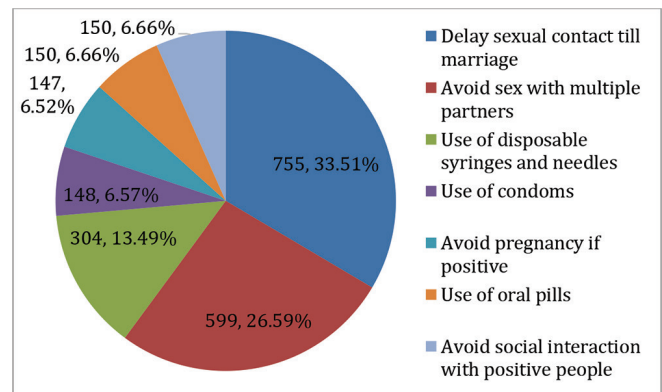
Variables	Categories	Frequency	Percentage
Religion	Hindu	1136	75.73
	Muslim	236	15.73
	Christian	128	8.53
	Total	1500	100
Residence	Village	456	30.40
	Town	216	14.40
	City	828	55.20
	Total	1500	100
Type of family	Nuclear	907	60.46
	Joint	509	33.93
	Three generation	84	5.60
	Total	1500	100
Socioeconomic status	Upper	0	
	Upper middle	67	4.57
	Lower middle	712	48.60
	Upper lower	510	34.81
	Lower	176	12.01
	Total	1500	100

**Table 2:** Distribution of study subjects according to their knowledge about STIs/HIV

Variables	Variable value	Frequency	Percentage
Ever heard of HIV/AIDS	Yes	1411	94.06
	No	89	5.93
Abbreviation of AIDS	Knew	613	40.86
	Did not know	881	59.13
HIV is incurable	Yes	931	62.06
	No	569	37.93
Availability of simple test to diagnose HIV	Yes	623	41.53
	No	877	58.46
HIV test is done free of cost in ICTC or government hospital	Yes	335	22.33
	No	1165	77.66
There are other STIs also apart from HIV	Yes	646	43.06
	No	854	56.93
Ulcers in the genital area is a sign of STIs	Yes	215	14.33
	No	1285	85.66
Vaginal discharge could be a sign of STIs	Yes	300	20
	No	1200	80
Treatment of both the partners is must for STIs	Yes	293	19.53
	No	301	20.06
	Do not know	906	60.40
Perception about condoms in preventing HIV/AIDS	Agree	1003	66.86
	Disagree	231	15.40
	Not sure	266	17.73



**Figure 1:** Knowledge of the study subjects regarding modes of transmission of HIV.



**Figure 2:** Various modes of prevention of HIV according to the study subjects.

Surprisingly 102 (6.80%) study subjects had a misconception that hugging and kissing infected person transmits HIV. Regarding the prevention of HIV, a majority 755 (50.33%) thought that delaying sexual contact till marriage would prevent HIV followed by other routes as mentioned in Figure 2. 150 (10%) girls had a misconception that using oral pills and avoiding social interaction with HIV-infected people would prevent the transmission. For many, source of information regarding HIV was from mass media 1129 (75.26%), followed by friends 231 (15.4%), teachers 110 (7.33%), and least was from parents and siblings 30 (2%) [Figure 3].

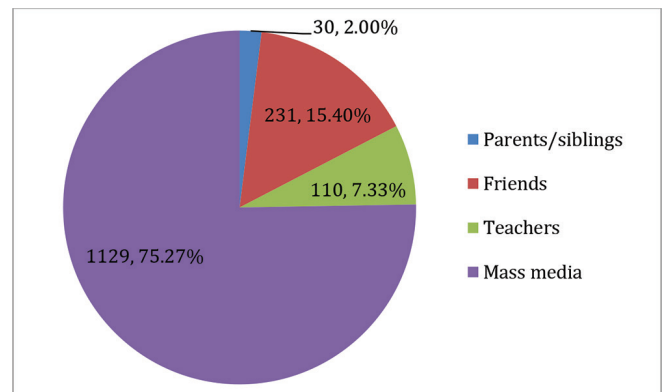
**Opinion of the study subjects regarding including Sexual health in the curriculum**

Of the 1500 study subjects 1171 (78.71%) felt that there should be classes on sexual health in schools and colleges, 299 (9.96%) disagreed, and the rest 28 (1.86%) were not sure. The strength of the study was the study design and the good representative sample size. No such study on sexual health has been carried out in the past in this study area. This study provides a good data on the sexual health of adolescent girls and gives the foundation for further research. The limitation of the study was that a few aspects of sexuality may have been missed which could be covered in future research.

**Discussion**

Majority of the girls in this study were Hindus (75.73%) hailing from city (55.20%) and belonged to lower middle (48.60%) and upper lower class (34.81%). 1425 (95%) of the study subjects had never discussed about sexual health-related matters with their fathers and 1279 (85.32%) with their mothers and this shows that talking about such matters is not entertained at home.

In our study, majority [i.e., 1411 (94.06%)] of the study subjects had heard of HIV/AIDS and only 613 (40.86%) study subjects knew the abbreviation of AIDS. In the study carried



**Figure 3:** Various source of information regarding HIV among the study subjects.

out by Lal et al.<sup>[9]</sup> in Delhi, all the students had heard of HIV/AIDS, 51.4% knew full form of AIDS and this is almost similar to our study. Regarding modes of transmission in our study, majority knew that it is by sexual contact 1161 (77.40%), followed by infected needles and blades 339 (22.60%), and blood transfusion 249 (16.60%) which is very much similar to study carried out by Lal et al.<sup>[9]</sup>

In a study conducted in South Delhi by Mcmanus and Lipidhar,<sup>[10]</sup> 80% adolescent girls considered HIV/AIDS could not be cured but in our study only 931 (62.06%) subjects knew this. In our study 623 (41.53%) knew that there is a simple test to diagnose HIV.

Regarding source of information about HIV, it was from mass media 1129 (75.26%), followed by friends 231 (15.40%), teachers 110 (7.33%), and least was from parents and siblings 30 (2%) in our study. Lal et al.<sup>[9]</sup> also found the similar findings. This reveals that Information, Education, and Communication (IEC) activities through mass media are effective. Subjects are getting least information from the teachers who otherwise should be playing a major role in educating the students and this shows that the students are getting the least information

in schools and colleges. Even parents and siblings are playing a minimal role in providing the information revealing that discussion regarding such matter is not encouraged at home.

A surprising fact in our study was that 102 (6.80%) study subjects had misconception that hugging and kissing the infected person transmits HIV and 150 (10%) had a notion that using oral pills and avoiding social interaction with HIV-infected people would prevent the transmission. There is a lot of misconception surrounding HIV among the study subjects and majority felt that they want sexual health in the curriculum. School education must directly address stigmatizing attitudes about HIV/AIDS and fill in the gaps regarding HIV/AIDS.

## Conclusion

There is a substantial lacuna in the knowledge and perception of adolescent girls regarding sexual health. A lot of myths and misconceptions are prevailing among the girls in the core areas such as condom use, HIV transmission, and prevention. Adolescents should be given education on sexual health in schools and colleges without disturbing the socio-cultural norms of the society. Preventions and precautionary measures regarding sexual health should be taught to the young generation to have a healthy nation.

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