

Evaluation of Knowledge, Attitude and Awareness of HIV/AIDS among School Children

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Abstract: World is slowly getting into the monstrous grip of HIV/AIDS. It is alarming to know that the number of adolescents attending the sexually transmitted diseases and HIV clinics are increasing day-by-day. So urgent need is to create awareness and safeguard them from this dreaded disease. As a first step, their present knowledge on HIV should be assessed. The present work is designed accordingly. 203 male and female students studying in 11th and 12th standard participated in this study. Prepared questionnaire with 30 items on various aspects of HIV/AIDS were provided to them and were instructed to answer them. The results reveal that basic knowledge about HIV was better with 54.83% of correct answers. But regarding the routes of transmission of HIV, correct answers were only 41.26% whereas 44.58% of wrong answers and 14.16% of "don't know" answers were seen. The knowledge on mode of transmission (62.36%) and prevention and treatment (53.55%) was fairly good but the knowledge on identification of HIV infected person was poor with only 39.63% of correct answers. These results are convincing for strong recommendation of sexual health education and HIV/AIDS prevention interventions as the utmost urgency at the school level.

Keywords: HIV, AIDS, Questionnaire, Sexually transmitted diseases, Prevention interventions

I. Introduction

Modern world is in the threatening grip of epidemic breakdowns and human immunodeficiency virus (HIV) tops in the list. It poses serious challenges to mankind on a global scale. HIV is more dreaded not because of its identity but because of HIV derived acquired immune deficiency syndrome (AIDS) that emerged as the most dreaded cause of global morbidity and mortality in the late twentieth and early twenty-first centuries [1]. Since its recognition in 1981, the HIV/AIDS has become the most serious infectious diseases in the world [2, 3].

As per the 2011 estimation, almost 5 million people are living with HIV in South, South-East and Eastern regions and unfortunately, majority of them are found in Asia combined five countries namely India, Indonesia, Myanmar, Nepal, and Thailand (4). It is very disheartening to know that it progresses rapidly, especially among the youth, according to the reports from one of the sexually transmitted infection (STI) clinics [5]. There were many attempts to probe the reason for this younger generation to be more affected by HIV/AIDS and all focus on one point viz. lack of sex education and sexually transmitted diseases (STD) and its prevention [6]. So, schools can emerge as the center point in imparting the knowledge of sex education and creating an awareness about HIV/AIDS among them and save them from the future disaster. This has to be given a serious thought, especially in India where a wide gap exists in the curriculum of HIV/AIDS and the actual education imparted to the students [7].

This budding age of adolescence and youth open the gate of adulthood through which the curiosity and the emerging sexual urge start entering into their life. If they are not guided properly at this stage, the future may become a big question mark in terms of sexual behaviour and sexual relationship [8]. It is said that prevention is better than cure. But as far as HIV/AIDS is concerned, there is possibility for prevention but not for cure. With this background, the present study was designed with the objective of assessing the awareness and knowledge of HIV/AIDS among school children of 11th and 12th standard who are at the doorstep of adolescence.

II. Materials And Methods

It is a cross sectional questionnaire based study. The participants were the students of higher secondary school, in and around Porur in Chennai. The study was conducted after getting the permission from the concerned authorities of the schools and informed consent from the students and their parents. The Institutional Ethical Committee cleared the study. 200 students participated in the study out of which 65 students were in 12th standard and 135 students were in the 11th standard. The questionnaire contained 30 selected questions pertaining to HIV and AIDS adopted from HIV KQ45 [9].

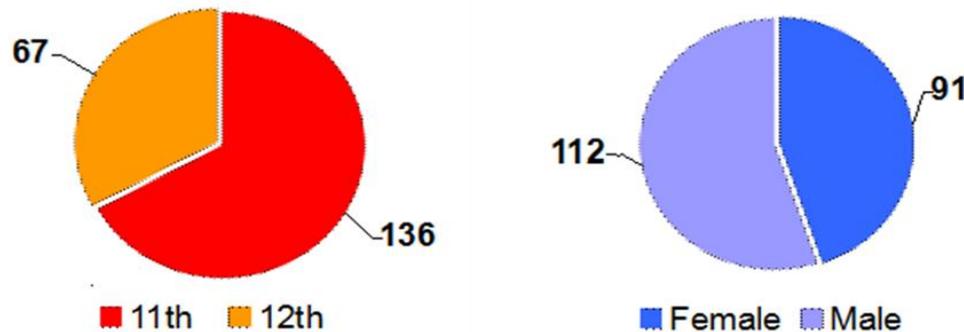
2.1. Procedure

The questionnaire was in English. Before starting of the procedure, each question was translated into their mother tongue (Tamil). The participants were allowed to clarify their doubts before starting the task. Before giving the questionnaire, a brief explanation was given regarding the importance of the study and how it will help in shaping their future life. 30 to 45 minutes was given to answer the questions. After completing the answering, the sheets were collected for correction. Statistical analysis: After corrections, the data were entered in the SPSS 21st version data sheet and the outcome was expressed as mean ± SEM and in percentage.

III. Results

3. 1. Figure 1 shows the number of participants in each class. Out of 203 participants, 136 belonged to 11th standard and 67 belonged to 12th standard classes. Figure 2 shows that out of 203 participants, 112 were males and 91 were females.

Fig 1.Class-wise distribution of participants **Fig 2.**Sex-wise distribution of participants.



11th& 12th indicate the standard of the classes. Numbers indicate the number of participants

3. 2. Table 1 depicts the consolidated report of the knowledge of school children regarding HIV. 54.83% of the children were good in their general knowledge about HIV. 37.49% of them were wrong and 7.68% of them were ignorant of the general factors regarding HIV. Regarding the knowledge about the routes of HIV infection, only 41.26% of them were aware of various route of HIV infection. 44.58% of them did not have correct knowledge and 14.16% of them were in “don’t know” category. As far as the mode of transmission of HIV is concerned, 62.36% of them gave right answers, 29. 66% of them gave wrong answers; only 7.98% of them were in the “don’t know” group. Regarding identification of HIV-infected patients, 51.05% wrong answers were found where as 9.32% answers were “don’t know” and only 39.63% gave the right answers. 53.55% of correct answers were found regarding the prevention and treatment of HIV whereas 36.01% wrong answers and 10.44% “don’t know” answers were also there..

3. 3. **Basic knowledge on HIV:** 93 of them were correct in answering that HIV and AIDS are the same. 119 out of 203 participants knew that AIDS could not be cured, 92 of them had the wrong idea that AIDS is the cause of HIV and 136 of them did not know that HIV could be killed by bleach (Table 2)

Table1. Consolidated evaluation of the knowledge on various aspects of HIV

S No	Questions on Knowledge regarding	Right	Wrong	DK
1	Basic knowledge about HIV	111.3 (54.83%)	76.10 (37.49%)	15.60 (7.68%)
2	Knowledge about the routes of HIV infection	83.75 (41.26%)	90.5 (44.58%)	28.75 (14.16%)
3	The mode of transmission of HIV	126.60 (62.36%)	60.20 (29.66%)	16.2 (7.98%)
4	The identification of a HIV infected person	80.40 (39.63%)	103.6 (51.05%)	19.00 (9.32%)
5	Prevention and treatment of HIV	108.17 (53.55)	72.33 (36.01%)	22.50 (10.44%)

Table 2. Evaluation of the basic knowledge about HIV/AIDS

No	Questions on Basic knowledge about HIV	Right	Wrong	DK
1	HIV and AIDS is the same thing (F)	93 (45.81)	98 (48.28)	12 (5.91)
2	There is a cure for AIDS (F)	119 (58.62)	59 (29.06)	25 (12.32)
3	AIDS is the cause of HIV (F)	56 (27.59)	92 (45.32)	55 (27.09)
4	HIV is killed by bleach (T)	67 (33.00)	113 (55.67)	23 (11.33)

A correct answer for each question is given in the parenthesis. DK - Don't know

3. 4. Knowledge about the routes of HIV infection: Most of them were aware of the routes of HIV infection. They knew that the infection could not occur from a toilet seat (115) or through coughing and sneezing (115) or through mosquito bites (112) or sharing a glass of water with infected person (111) or by speaking with infected persons (130) or by sharing the towel of the infected person (104) or coming in contact with saliva, tears, sweat and urine of the infected persons (105). The actual route of infection like having sex with more than one person was known to many of them (175). Only 78 of the participants were aware of the fact that having abnormal sex (like oral sex) could cause HIV infection (Table 3).

3. 5. Knowledge regarding the mode of transmission of HIV: Most of them were aware that HIV infection could be transmitted from mother to fetus (159), through tattoo (115), through blood transfusion (144) and sharing the syringe needles with HIV infected persons (155). But at the same time, many of them (117) were of the wrong opinion that all the babies born to an HIV infected mother would have HIV infection (Table 4).

3. 6. Knowledge regarding the identification of HIV infected person: Majority of them did not know that HIV infected persons could have normal and healthy appearance (128), the signs and symptoms would not appear immediately after infection (117), Aids would develop only after 5 years of HIV infection (81) and HIV infected person could not be identified by their appearance (112). However, 100 of them were aware that taking a test soon or within a weeks' time after having sex with infected person would not reveal whether they were infected or not (Table 5).

3. 7. Prevention and treatment of HIV: Most of the participants were aware that HIV infection could not be prevented by taking vitamins (103), washing genitalia after sexual intercourse (114) or by medicating with antibiotics (114). At the same time, many of them rightly answered that HIV infection could be prevented by using condoms during sexual intercourse (126). Only 74 of them were aware that no vaccine was developed so far to prevent HIV infection. 118 of the participants were aware that some drugs have been made for the treatment of AIDS (Table 6)

Table 3. Evaluation of the knowledge about the routes of HIV infection

S No	Questions on How does HIV infection occur.	Right	Wrong	DK
1	A person can get HIV from a toilet seat (F)	115 (56.65)	79 (38.92)	9 (4.43)
2	Coughing and sneezing DO NOT spread HIV (T)	115 (56.65)	85 (41.87)	3 (1.48)
3	HIV can be spread by mosquitoes (F)	112 (55.17)	74 (36.45)	17 (8.38)
4	A person can get HIV by sharing a glass of water with someone who has HIV (F)	111 (54.68)	80 (39.41)	12 (5.91)
5	Speaking with HIV patient can cause AIDS (F)	130 (64.04)	63 (31.03)	10 (4.93)
6	Sharing the towel of HIV patient does not cause AIDS (T)	104 (51.23)	74 (36.45)	25 (12.32)
7	A person cannot get HIV by having oral sex, mouth-to-penis, with a man who has HIV (F)	78 (38.42)	103 (50.74)	22 (10.84)
8	People are likely to get HIV by deep kissing, putting their tongue in their HIV infected partner's mouth (F)	68 (33.50)	116 (57.14)	19 (9.36)
9	Having sex with more than one partner can increase chance of getting HIV (T)	175 (86.21)	8 (3.94)	20 (9.85)
10	Can get HIV through contact with saliva, tears, sweat, or urine (F)	105 (51.72)	79 (38.92)	19 (9.36)

Table 4. Evaluation of the knowledge regarding the mode of transmission of HIV

S No	Questions on Mode of transmission of HIV	Right	Wrong	DK
1	Pregnant lady with HIV can give the virus to her unborn baby (T)	159 (78.33)	37 (18.22)	7 (3.45)
2	It is possible to get HIV when a person gets a tattoo (T)	115 (56.65)	80 (39.41)	8 (3.94)
3	HIV can be transmitted by blood (T)	144 (70.94)	49 (24.14)	10 (4.92)
4	All pregnant women infected with HIV will have babies born with AIDS (F)	60 (29.56)	117 (57.64)	26 (12.80)
5	HIV can be spread by using the syringes used by HIV patient (T)	155 (76.35)	18 (8.87)	30 (40.78)

IV. Discussion

The results of the present study reveal that the knowledge of the budding youngsters regarding various aspects of HIV/AIDS is good but the real worry is about the aspects they did not know. HIV/AIDS are two dangerous entities that threaten the modern world. Few decades ago, HIV/AIDS were not known to the public, especially the youngsters. But this epidemic is spreading very fast and it is alarming to know that among the population attending sexually transmitted diseases (STD) and HIV clinics, many of them belong to younger group [5]. It was reported that in 1990, tens of thousands of people only were living with HIV in India and it had been steadily increasing and reached to millions in 2000 [10, 11].

It is disheartening to know that the adolescents who are coming out of the shell of childhood and entering into the fort of adulthood through the mental and physical changes are the ones in the grip of such danger. This adolescent age is precious because the future of the social and economic development of the

Table 5. Evaluation of the knowledge regarding the identification of a HIV infected person

S No	Questions on How to identify a HIV infected person.	Right	Wrong	DK
1	A person with HIV can look and feel healthy (T)	67 (33.01)	128 (63.05)	8 (3.94)
2	People who have been infected with HIV quickly show serious signs of being infected (F)	80 (39.4)	117 (57.64)	6 (2.96)
3	A person can be infected with HIV for 5 years or more without getting AIDS (T)	81 (40.00)	81 (40.00)	41 (20.00)
4	You can usually tell if someone has HIV by looking at them (F)	74 (36.45)	112 (55.17)	17 (8.38)
5	Taking a test for HIV one week after having sex will tell a person if she or he has HIV (F)	100 (49.26)	80 (39.41)	23 (11.33)

Table 6. Evaluation of the knowledge regarding prevention and treatment of HIV

S No	Questions on Prevention and treatment of HIV	Right	Wrong	DK
1	Taking vitamins keeps a person from getting HIV infection (F)	103 (50.74)	69 (33.99)	31 (15.27)
2	Using a latex condom or rubber can lower a person's chance of getting HIV (T)	126 (62.07)	46 (22.66)	31 (15.27)
3	Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV (F)	114 (56.16)	73 (35.96)	16 (7.88)
4	There is a vaccine that can stop adults from getting HIV (F)	74 (36.45)	113 (65.67)	16 (7.88)
5	Some drugs have been made for the treatment of AIDS (T)	118 (58.13)	65 (32.02)	20 (9.85)
6	A person will NOT get HIV if she or he is taking antibiotics (F)	114 (56.16)	68 (33.5)	21 (10.34)

country depends upon this age group [5]. In India, this adolescent group forms about 22% of the total population which is substantial for doing any constructive work [5]. Unfortunately, many of them become victims of this dreaded disease knowingly or unknowingly and according to UNESCO, UNAIDS and WHO Case studies, every year, the rate of HIV infected youngsters is increasing at the rate of 0.46% in males and 0.96% in females [12, 5, 4]. These reports were substantiated by Agarwal & Kumar [13], Gaash et al [14] and Singh et al [15]. This scenario must be changed and the future of the younger generation should be saved from the grip of this slow killing monster. The best way to do it is to catch them early and furnish them with the basic information on HIV/AIDS. The best place to do it is the school and the best people to do it are the teachers. Teachers must have a positive approach regarding this without any false modesty. Still better way to do it is not to make this particular subject to stand alone but to treat it like any other subject [16]. Experts are also of the opinion that prevention of HIV/AIDS is best done at the school level before they initiate their sexual life, i.e., definitely at or before seventh standard and not later than that [17]. Keeping this in mind, the present study was designed.

In our present study, we found that 119 out of 203 students were aware of the fact that there was no cure for AIDS and only 93 of them rightly knew that HIV and AIDS were not the same (Table 2). These two can be taken as the strong points to prepare the minds of the children and keep them away from this danger. As far as the mode of transmission is concerned, most of them were aware that infection can occur through the blood, the syringe needles and from mother to fetus. Most of them have the wrong idea that HIV infected persons do not appear normal and symptoms can appear soon after the infection (Table 5). US Department of Health and Human Services also found similar results in their study. Actually, it takes about 6 to 8 weeks to get the positive results if infected [18]. Regarding the knowledge about prevention of HIV infection, they were aware of the usage of condoms during sexual intercourse, and the availability of some drugs to prevent HIV infection. Shailesh et al and Lal et al also found almost similar results regarding the prevention of HIV/AIDS. [11, 19]

Similar studies were done in other parts of the country also [6, 7, 8]. Abraham et al and Kaur et al found that school children were found to be poor in the knowledge of mode of transmission and importance of sterilization of needle and screening of antenatal mothers for prevention of HIV/AIDS. Bella et al also found almost similar results [20]. Our participants seemed to have better knowledge in this respect: 62.36% of the children were aware of the mode of transmission of HIV (Table 1) and 76.35% of them correctly answered that sharing syringe needles of the HIV infected persons was one of the important modes of transmission (Table 4).

Though many of the students had correct knowledge about many concepts of HIV/AIDS, some misconceptions like children would not be affected by HIV/AIDS, affected persons would be recognized by their appearance, AIDS could be cured and vaccine was available for AIDS etc were found in our study. In another study done in Kolkata, Chatterjee et al found poor knowledge regarding general aspects and transmission of HIV/AIDS among secondary school children [21]. In one survey conducted with similar group of students in Udupi district, Karnataka, only 24.3% were found to be aware of the availability of drugs while 34% of the students in Mumbai knew about the availability of antiretroviral drugs [22, 23].

One consolation is that many of our participants knew that HIV infection will not occur simply by shaking hands, deep kissing and hugging the infected persons, bitten by the mosquitoes from infected person or/and using public toilets which is in accordance with some previous reports [24, 25, 26, 27]. They were also aware that it could be spread through blood, and syringe needles and razors used by infected persons which again coincide with similar reports in the literature with different percentage of the participants [28, 29, 30, 2, 7, 13, 19, 20, 27].

Limitations in the present study

Being a cross-sectional study, more number of participants would have been better. Inclusion of the 7th, 8th and 9th standard students should have been done because at this age they become matured physically, physiologically and psychologically. We did not classify the study group on their type of school, demographic factors, socioeconomic status etc, which also play a role in the knowledge of HIV/AIDS. Still we are happy about our present study because the questionnaire with correct answers and the participants' answers may provide comprehensive, easy-to-administer and easy-to-score measures of HIV/AIDS related knowledge, not only to the student population but also to the educators, program evaluators and researchers.

V. Conclusion

Results of the present study show that more than 50% of the 11th and 12th standard students who are adolescents by age, mind and body are not aware of many aspects of HIV/AIDS, particularly the mode of transmission, appearance of HIV affected persons, consequences of abnormal sex etc. And the beliefs like spread of HIV on touching and sharing the food, towels glass of water etc. with the HIV patient are the area to be considered though the percentage of this is comparatively less. Thus, the authors strongly believe and

recommend that sexual health education and HIV/AIDS prevention interventions are the utmost urgent need at the school level.

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