



A Study on Knowledge and Attitude about Reproductive Health and AIDS among Young Girls: A Cross Sectional Study

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Authors' contributions

This work was carried out in collaboration between all authors. Author SD was the sole researcher who designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author DM collected the data and did critical revision. Author NP managed the analyses and interpretations of the study and drafted the article. Author NN managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Aim: In the current scenario, the understanding of reproductive health, Acquired immunodeficiency syndrome and other sexually transmitted diseases among the young adolescent girls are very poor. A large number of girls at the end of their schoolings and early collegiate environment those who are sexually active and exposed to peer pressure are in a vulnerable situation. Thus, this study is aimed to analyze the knowledge and attitude of reproductive health and Acquired immunodeficiency syndrome among female adolescents.

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Methodology: This study is a cross sectional descriptive analysis that was undertaken in Tiruchirapalli for about a month. Subjects were interviewed face to face using pretested semi-structured questionnaire after obtaining informed consent. The questionnaire contained information regarding socio-demographic details, reproductive health, sexually transmitted infections/ sexually transmitted diseases, including Human immunodeficiency virus/ Acquired immunodeficiency syndrome, pregnancy and reproduction, prevention strategies and reproductive health services. Privacy and confidentiality were strictly maintained and the analysis was done with percentages.

Results: Among the 150 subjects included, 64% and 36% are from urban and rural areas respectively. Only 11.3% know about internal reproductive organs and 74% know about physiological changes during menstrual cycle. The idea about the virginity was observed among 64%. The knowledge about HIV/ AIDS was observed as 78.7% but among them very few having ideas about STIs and the maximum source of information are from internet than other sources. Most of them (65%) answered that the Human immunodeficiency virus/ Acquired immunodeficiency syndrome is spreading mainly through sex and they are having very poor knowledge about other mode of transmission. Some girls are feeling shy to answer the questions like condom usages for avoiding pregnancy and process of women getting pregnant.

Conclusion: Providing awareness about the reproductive health and sexually transmitted infections must be started from home itself and the educational institutions have to take necessary steps to arrange awareness camps and clubs to teach adolescents.

Keywords: AIDS; attitude; girls; knowledge; reproductive health.

1. INTRODUCTION

Education about female reproductive health among adolescents and adults is critical to realize their full potentials [1]. In most of the Indian families, the awareness about the female reproductive health is given by the mother or any other elders of the family. For male reproductive health, the awareness is self explanatory [2]. In education system also, there is no access to sexual and reproductive health information, and even the existing health services are adult centered [3].

Despite the rhetorical attention there is little programmatic guidance to ensure how best that women and men have the awareness and education about sexual and reproductive health services, that helps them realize their reproductive goals, while ensuring protection of their human rights [4]. A dynamic relationship exists between the manner in which health services and programmes are delivered [5] and the individuals who seek these services will be analyzed in the future scenario. Further, the review of the literature shows clear gaps and highlights areas of concern not yet sufficiently addressed in any part of the country.

The delivery and usage of health services especially for adolescents and adult's sexual and reproductive health and programmes related to their health is shaped by the underlying determinants of people's access to and use of

these services, the health systems in place at community and country level, and the legal and policy environment these systems operate in [3,4,6]. Few non-governmental organizations (NGOs) and private educational institutions can provide the moderate to complete range of reproductive health services that might be required by their populations in the agenda of Men's and Women's clubs. In most places, people access health services from a variety of formal and informal providers, and health-related behaviour is influenced from many directions, allocation of financial resources play a mandatory role [7,8].

Traditionally, reproductive health and family planning were included in maternal and child health services, which focused on females and young adolescents, and not on adult males. Thus, the availability of quality information on sexual and rural health (RH) services for men was inadequate. However, men are active in sexual activities; he is not having space in this society to clarify his doubts related to reproductive health [7,9]. There are still difficult choices to face concerning sexuality, parenthood desires and family life. Structural, social and cultural issues, as well as the lack of programmatic support, hinder the fulfilment of the right to quality sexual and reproductive health care and support for having a family [10].

This report presents findings of the study on female reproductive health and Acquired

immunodeficiency syndrome (AIDS) among college girls in Tiruchirapalli district of India. The general objective of the study was to study the knowledge and attitude regarding female reproductive health including Human immunodeficiency virus/ Acquired immunodeficiency syndrome (HIV/ AIDS) among college girls and implementing reproductive health programs. Further suggestions and recommendations may be forwarded to educational policy makers to include reproductive health issues of both boys and girls in college curriculum and also encourage to establish men's and women's club to clarify reproductive health related doubts.

2. MATERIALS AND METHODS

This study includes the study design, sampling procedures, survey methods, scope of the survey and survey management. While the basic principle governing the selection of a representative sample in any scientific study is that the process must be random. The random selection of samples may be much helpful to minimize the sampling errors. The Selected subjects were the girls from a private engineering college, in Tiruchirapalli, India, and the selection of subjects was purposefully determined via red ribbon club of the college.

This study adopted three stage selection criterions (willingness, who understand the basic science and person with understanding questionnaire terminology) together with random procedures of select eligible respondents within the study group, population and area.

Willingness – Some girls were not willing due to shyness and other external environmental pressures, such subjects are not included.

Understand basic science – the willing subjects were preliminarily tested for their understanding of basic science about the reproductive health including HIV/AIDS.

Understanding questionnaire terminology – the questionnaire prepared were having some basic and scientific terms; so before distributing the questionnaire the terminology were defined clearly to all willing subjects.

The questionnaire details including *Sociodemographic details* - Age, current residence, educational attainment, religious affiliation and source of livelihood; *Media access*; *Reproductive health* - about menstrual cycle, virginity and sexual organs; *STI/STDs including*

HIV/AIDS - knowledge and incidence of STIs, knowledge of HIV/ AIDS, knowledge of HIV testing, management of STIs, HIV/AIDS and STI risk perception and sources of HIV/ AIDS information; *Pregnancy and reproduction* - incidence of pregnancy, knowledge about pregnancy termination, know how to get pregnancy, health seeking pregnancy termination practices and knowledge of danger signs of pregnancy; *Prevention strategies* - Knowledge about condom, Knowledge about contraception and Risk details of contraceptive pills usage; *Reproductive health services* - Knowledge of reproductive health services and Sources of reproductive health information.

The one day pre testing exercise was conducted by providing information which were used in the questionnaire. The final questionnaire was explained to the subjects and doubts were clarified. This (helped) in the standardization of probes and thus likely responses, which are fundamental to quality outputs. The questionnaire was distributed among 150 engineering college girls of Tiruchirapalli district of India. The survey was (conducted) in the month of December 2015 after getting the institutional ethical clearance.

3. RESULTS AND DISCUSSION

All the participants of this study were in the age group of 20 to 22 years. All the respondents were from second year engineering not the senior students. No postgraduates or teachers were included in this study. The residential areas of these respondents were classified as urban and rural thereby 96 (64%) are from urban areas and 54 (36%) are from rural residential areas (Fig. 1).

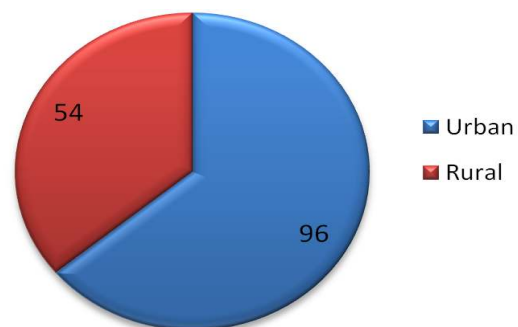


Fig. 1. Distribution of respondents by residence

Majority of the respondents were Hindus and few were Christians and none of the Islamic girls showed willingness. Among them, more Christian

respondents were found in urban areas than in rural. The reason for inclusion of religion was to determine the home based education related to reproductive health (Fig. 2). As found in the result, compared to Christians, Hindus had more awareness due to the availability of reproductive health data in their culture, stories, and historical events including Ramayana, Mahabharatha etc.

According to the media access, most of the respondents mentioned that they obtained the information about STIs including HIV/ AIDS from internet followed by television, friends, news papers, brochures and pamphlets, teachers, and at last parents. Fig. 3 determined the distribution of media awareness among the respondents. Among the 150 respondents, 118 (78.7%) knew both HIV/AIDS and STIs, but 32 (21.3%) knew only HIV/AIDS by name and they were not aware of the diseases.

3.1 Awareness about Reproductive Health

This survey investigated the reproductive health issues and its awareness among healthy college girls. Among the reproductive health surveillance, 147 (98%) of the total respondents addressed the gender identification and 3 (2%) not clearly understand the question (provided with “not sure”). Very few addressed that they were not having complete awareness about internal and external sex organs (11.3%). Maximum respondents were having awareness regarding the normal age of breast development and sexual characters (70%). Nearly 74% of respondents knew the physiological changes occurring during menstrual cycle and almost all having awareness that the menstrual cycle is the safest period. Nearly 78% do not know that white discharge is a normal physiology (Table 1).

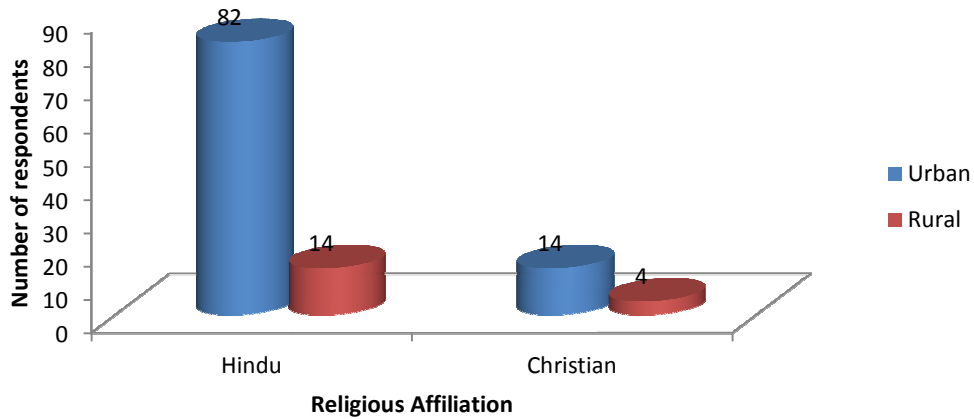


Fig. 2. Distribution of respondents by residence and religious affiliation

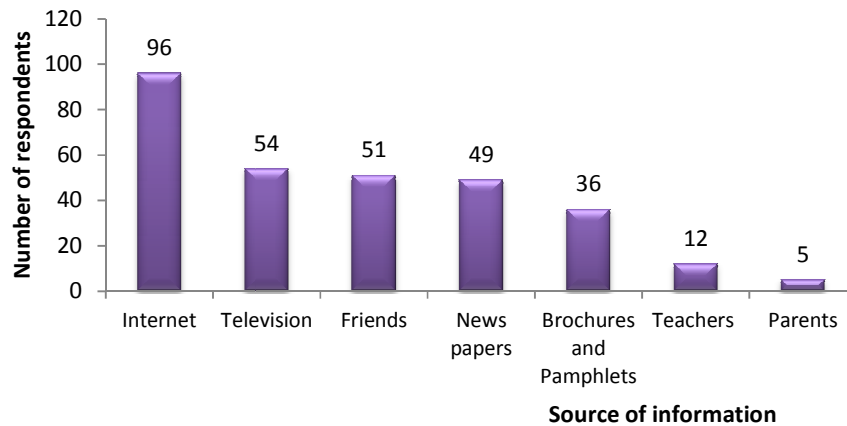


Fig. 3. Distribution of sources that teach to understand about HIV/AIDS

3.2 STI/STDs Including HIV/AIDS

Knowledge about the sexually transmitted infections was also investigated in the survey. Knowing about various STIs were also determined by which maximum respondent's didn't know about other STIs except HIV/ AIDS. Nearly 65% of the subjects answered that HIV/AIDS is spreading mainly through sex only. The awareness regarding various STIs including HIV/ AIDS were depicted in Table 2.

3.3 Pregnancy and Reproduction

Only few participants had some awareness related to pregnancy and reproduction. Almost all the subjects were known the basic physiological changes and observations during pregnancy. Some girls were feeling shy to answer the questions like condom usages for avoiding pregnancy and process of women get pregnancy. As per our culture concerned, most of the respondents were not supported the pre-marital sex. Most of them also knew the methods

of avoiding pregnancy apart from physical methods. The detailed observation of this study related to pregnancy and reproduction was impregnated in Table 3.

3.4 Prevention Strategies

As prevention strategies of STIs including HIV/ AIDS and pregnancy, a detailed knowledge analysis was done according to the questionnaire listed in Table 4.

This study will help us to concentrate much on providing awareness about the knowledge and attitude towards the reproductive health, physiological changes during those periods and also complete awareness about STIs including HIV/ AIDS. Most of the subjects included in this study had very less knowledge about their reproductive health. Health education starting from the home itself is required to motivate them to understand the basic science and even therapeutics.

Table 1. Distribution of awareness about reproductive health (n=150)

Criteria	Yes	No	Don't know
Gender identification	147 (98)	-	3 (2)
Awareness about internal and external sex organs	129 (86)	17 (11.3)	4 (2.7)
Normal age of breast development & sexual characters	105 (70)	42 (28)	3 (2)
Physiological changes during menstrual cycle	110 (73.3)	28 (18.7)	12 (8)
Menstrual cycle is a safe period	97 (64.7)	29 (19.3)	24 (16)
White discharge is a normal physiology	34 (22.7)	47 (31.3)	69 (46)
Awareness about virginity	96 (64)	54 (36)	-

Figures in parenthesis denoted percentages

Table 2. Proportion over heard of STIs including HIV/ AIDS (n=150)

Criteria	Yes	No	Don't know
Ever heard of term STIs	97 (64.7)	23 (15.3)	30 (20)
Ever heard of Syphilis	12 (8)	138 (92)	-
Ever heard of Gonorrhoea	7 (4.7)	143 (95.3)	-
Ever heard of Genital warts	2 (1.3)	148 (98.7)	-
Ever heard of Candidiasis	2 (1.3)	148 (98.7)	-
Ever heard of AIDS	150 (100)	0	-
Can the AIDS person identified by the appearance	41 (27.3)	97 (64.7)	12 (8)
HIV spread by sex with infected person	123 (82)	12 (8)	15 (10)
HIV spread by blood transfusion	106 (70.6)	34 (22.7)	10 (6.7)
HIV spread by sharing sharp objects	97 (64.7)	46 (30.7)	7 (4.6)
HIV spread from infected mother to child (before birth)	99 (66)	48 (32)	3 (2)
HIV spread from infected mother to child (at birth)	87 (58)	34 (22.7)	29 (19.3)
HIV spread from infected mother to child (after birth - lactation)	73 (48.7)	63 (42)	14 (9.3)
HIV spread by shaking hands	4 (2.7)	142 (94.6)	4 (2.7)
HIV spread by sharing rooms	3 (2)	147 (98)	-
HIV spread by sharing foods	7 (4.7)	141 (94)	2 (1.3)

Figures in parenthesis denoted percentages

Table 3. Distribution of respondents by pregnancy and its prevention (n=150)

Criteria	Yes	No	Not like to respond
Whether pregnancy is a normal physiology	138 (92)	9 (6)	3 (2)
Whether at any age the girl may get pregnant	88 (58.7)	59 (39.3)	3 (2)
Are you aware of process by which a woman get pregnant	104 (69.3)	43 (28.7)	3 (2)
Whether the girl get pregnancy without sex	21 (14)	124 (82.7)	5 (3.3)
Whether pre marital sex is acceptable	4 (2.7)	142 (94.6)	4 (2.7)
Whether any pregnancy related complications occur in relative marriage	132 (88)	14 (9.3)	4 (2.7)
Whether condom alone is helpful for pregnancy prevention	58 (38.7)	73 (48.7)	19 (12.6)
Can pregnancy be avoided by other methods	131 (87.4)	14 (9.3)	5 (3.3)

Figures in parenthesis denoted percentages

Table 4. Proportion in knowledge determination about prevention strategies (n=150)

Criteria	Yes	No	Not like to respond
How to avoid HIV infection	45 (30)	92 (61.3)	13 (8.7)
Abstinence	94 (62.7)	49 (32.7)	7 (4.6)
Being faithful	112 (74.7)	23 (15.3)	15 (10)
Use of condoms	43 (28.7)	102 (68)	5 (3.3)
Don't share sharp objects	39 (26)	109 (72.7)	2 (1.3)
Safe transfusion	92 (61.3)	43 (28.7)	15 (10)
Knowledge about barrier contraceptives	21 (14)	123 (82)	6 (4)
Oral contraceptive pills	15 (10)	134 (89.3)	1 (0.7)
Birth control and contraceptives	32 (21.3)	114 (76)	4 (2.7)
Complications of oral contraceptives	12 (8)	131 (87.3)	7 (4.7)

Figures in parenthesis denoted percentages

STIs (including HIV) can be controlled by reducing the risk of transmission in any sexual encounter (such as condom use); reducing the rate of sexual partner change and reducing the period of infectiousness in individuals [8,11]. Most of the subjects included in this study are also having less awareness about their reproductive health and STIs. Education is essential to assist young people to make informed decisions about their sexual health [12,13].

Availability and accessibility of information on reproductive health related issues are crucial for adolescents which help them to make informed decisions and to have safe and desirable sexual behaviour. Attempts should therefore be made, to increase awareness of parents, families and the community on the need and importance of communication and discussion of STIs including HIV/ AIDS [2,14].

Sexually Transmitted Infections (STI's), including HIV (Human Immunodeficiency Virus) mainly affects the sexually active young people. Young adults aged 15-29 years, account for 32% of AIDS (Acquired Immunodeficiency Syndrome)

cases reported in India and the number of young women living with HIV/AIDS is twice that of young men. Thus from this current study, it was confirmed that there is an immense need to implement gender-based sex education regarding STIs, safe sex options and contraceptives in schools in India [13]. In current days, most of the media and celebrities are highlighting the premarital sex are not sin and its rights for the individual. Thus the confusion observed among the youth and adolescents.

Menstruation is a normal physiology in females. Poor hygiene during menstruation has been associated with serious ill-health ranging from reproductive tract infection, urinary tract infection, etc. Females are generally expected to exercise good hygienic practices during menstruation to prevent themselves from these problems [14,15]. Very few respondents are having ideas about safe reproductive health practices in this study, and remaining all blinking while questions are asked. The study showed the lack of awareness regarding reproductive health matters among the study population. The gap in knowledge between rural and urban students suggests the need for targeting rural areas in the national AIDS

education and awareness campaigns. Since cases of STIs are at an increased risk of acquiring HIV infection, further studies are needed to develop educational strategies to increase the knowledge of adolescent boys about STIs [16].

Some youth held the view that they have been pregnant before and they attempted aborting the pregnancy and that abortion remains a challenge or risk associated with the youth [17]. The study however did not reveal the problems associated with youth pre-marital sex and abortion as indicated such as the problem of cervical cancer, breast cancer, early aging, infection and others [18]. Further finding is made from this present study: in that due to risky sexual behaviour, gonorrhoea infection leads among the STIs contracted by youth in the last anniversary. The findings provided in this study show that despite the appreciable level of youth sexual knowledge on sexual and reproductive health options and the risk associated, risky sexual behaviour among the youth is high.

4. CONCLUSION

From this study, there is a need for evolving appropriate information, education and communication strategies for increasing the awareness on reproductive health issues including STIs and AIDS. Most of the subjects were not much interested in answering the questions asked in this survey study. To overcome this strategy, adequate training should be given to one or two students from a peer circle who can educate other students would therefore be a useful for communication for this age group. In addition, state officers during routine school health examinations should sensitize the adolescents about STIs and AIDS.

CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this paper and accompanying images.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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