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Original Research Article

A study to estimate the knowledge and practice regarding safe sex among teenage girls attending a rural hospital

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ABSTRACT

Background: This work was planned to assess knowledge about sexually transmitted diseases (STDs), contraceptive methods available and the practice of use of contraceptives and personal hygiene among teenage girls attending the outpatient department (OPD) of a rural medical college.
Methods: Consenting, non-pregnant teenage girls (14-19 years) attending the gynaecology and obstetrics OPD with minor ailments were asked to respond to a questionnaire and blinded data collection was done by two lady counsellors. Statistical analysis was performed.
Results: Knowledge of STI, unwanted pregnancy and family planning was significantly higher in teenage girls with sexual exposure, and in those who had completed standard 12 education ($p<0.001$).
Conclusions: Our work suggests that in this particular rural setting knowledge level of STD, HIV and unwanted pregnancy is high but practice of safe sex and contraceptives are low. We suggest implementation of age-appropriate gender based, culturally sensitive sex education curriculum in schools to cope up the increasing vulnerability of young girls. Additionally, community participation, health care institutions and media can raise awareness in teenage girls and their families and remove the taboo regarding family planning practices.

Keywords: Knowledge, Practice, STIs, Contraception, Family planning

INTRODUCTION

Neglected world of daughters of our country is especially precarious in the rural areas.[1,2] The situation of the teenage female child is mostly swept under the carpet.[3] In the rural areas, general education is often neglected while education regarding sexual practices, sexual infections and contraceptive usage is a taboo and probably non-existent.[4] Early marriage, early child bearing and repeated pregnancy are all harmful for young girls.[3,5] Due to early marriage, girls cannot complete their education or become economically independent. Girls' knowledge about safe sex, menstrual hygiene and genital cleanliness remains incomplete because they have dropped out of school. The world of education and technology is slowly percolating through our society, whether rural or urban. It is the hope of our leaders that technological advances will transform our country for the better. However, no amount of technology or money will ever be able to make a positive change unless the girl child, her education and her health is safe. Most developing countries lack school programs enhancing knowledge of sex education, family planning and contraception.[6,7] Even in advanced countries of Europe, knowledge and attitudes towards safe sex and STIs is often unsatisfactory.[8] It is noted that knowledge, positive attitude towards safe sex and practice of safe sex can reduce incidence of STIs.[8] In India, there is an additional problem of taboo on talking about sex and family planning in much of older generation. This is exaggerated by religious and social dogma, stigmatization of premarital sex and contraception usage.[9,10]

In this background we commenced on our journey to elucidate the current knowledge and practice regarding safe sex, sexual infections and contraceptive usage among teenage girls (14-19 years) attending our rural hospital. Our hospital is located near Sunderban mangrove forest in South-Eastern coast of West Bengal, India, and caters to a neglected population, primarily rural, poor and extremely vulnerable population. A major chunk of the catered population either belongs to tribal/ a neglected caste or religious minority.

This study was conducted among OPD attendees to our gynaecology and obstetrics clinic. Many adolescents attend this clinic and some are already married. Aim of study was to assess educational qualification, knowledge about STIs and pelvic inflammatory disease and knowledge about contraceptive methods available and to assess practice of use of contraceptives and personal hygiene among teenage girls attending our OPD.

METHODS

Type of study

This is cross sectional descriptive study.

Period of study

Study conducted from 1st December 2021-30th June 2022.

Inclusion criteria

Teenage girls (14-19 years) attending G and O OPD with minor ailments were included.

Exclusion criteria for observational study

Female patients who are very sick and are suffering from major ailments, patients who do not give consent or assent, female patients not belonging to the age group 14-19 years and currently pregnant female patients were excluded.

Sampling procedure and sample size

Convenient sampling was done; sample size was calculated to be 390, calculated by applying formula of estimating proportion taking z=1.96, p=0.5, q=.5, SD=5% (0.05). the 400 questionnaires were distributed during study period. However, 07 did not give consent/ assent to be part of the study. At the end of the study period 393 teenage girls could be included in study after consent or the assent.

Human subject protection

As this study was non interventional, so there was no chance of harm to human subjects. Identities of participants are not disclosed in this study.

Study questionnaire

A study questionnaire was formed comprising age, marital status, educational qualification, knowledge about sexually transmitted disease, HIV, unwanted pregnancy, knowledge about common contraceptive methods (barrier methods and hormonal pills), use of contraceptive methods and pond bathing habit. Study questions were formatted by researchers and blinded data collection was done with the help of two lady counsellors of department.

Ethical clearance and consent of participants

Researchers took consent or assent verbally, sent girls to counsellors who filled the consent/assent form and question sheet. The study proposal was approved by the institutional ethics and scientific committee (Approval Number DHGMC/2022/47)

The presence of serious health issues and pregnancy was ruled out before filling the consent form and question form. No examination or investigation was done for the study population. Minor health issues were advised and treated accordingly by the medical researchers.

Statistical analysis was done on spreadsheets using Microsoft excel® and WHO Epi-info software version 7.2. Chi-Square test was performed to determine significance of difference in proportions.

RESULTS

The age distribution, educational achievement attained, marital status and the positive history of sexual exposure of the study participants is detailed in Table 1. The knowledge of study participants about STIs, unwanted pregnancy and family planning are detailed in Table 2.

School education (39.1%), family (27.9%) and friends (27.6%) and internet (5.5%) were the sources of knowledge of STDs, unwanted pregnancy and family planning methods in descending order of frequency (Figure 1). The contraceptive usage and history of bathing in ponds is shown below in Table 3 and Figure 2.

The unhygienic practice of pond bathing was significantly less prevalent in teenage girls who completed standard 12 education ($p<0.001$) (Table 4). Knowledge of STI and unwanted pregnancy was significantly higher in teenage girls with sexual exposure ($p<0.001$), married teenagers ($p<0.001$), and in those who had completed standard 12 education ($p<0.001$). Knowledge of family planning was significantly higher in teenage girls with sexual exposure ($p=0.001$), in those with knowledge of STDs and unwanted pregnancy ($p<0.001$) and in those who had completed standard 12 education ($p<0.001$) (Table 4). Knowledge of family planning was significantly lower in teenage girls who had completed education only up to standard 8 ($p<0.001$) (Table 4).

Table 1: Baseline characteristics of study participants.

Parameters		N (%)
Age (in years)	14	8 (2.04)
	15	36 (9.16)
	16	64 (16.28)
	17	70 (17.81)
	18	111 (28.24)
	19	104 (26.46)
Marital status	Married	200 (50.89)
	Unmarried	193 (49.11)
Education	Completed study till standard 8	97 (24.66)
	Completed study till standard 10	158 (40.20)
	Completed study till standard 12	138 (35.11)
History of sexual exposure	Yes	210 (53.44)
	No	183 (46.66)
Total teenage girls in study population		393

Table 2: Knowledge of study participants about STIs, unwanted pregnancy and family planning among study participants.

Parameters	N (%)	Number in those with sexual exposure, N (%)	Number among married teenage girls, N (%)
Knowledge of STDs and unwanted pregnancy	348 (88.55)	203 (96.67)	192 (96)
No knowledge of STD and unwanted pregnancy	45 (11.45)	7 (3.33)	8 (4)
Knowledge of family planning	334 (84.99)	190 (90.48)	180 (90)
No knowledge of family planning	59 (15.01)	20 (19.52)	20 (10)

Table 3: Usage of family planning methods and source of supply of oral contraceptive pills in study population.

Variables	N (%)
Use of family planning methods	
Not applicable, unmarried, unexposed	182 (46.31)
Don't use even though engage in regular sexual activity	91 (23.16)
Use one of the family planning methods	119 (30.28)
Use barrier method	86 (21.88)
Use oral contraceptive pill	48 (12.21)
Use both methods	15 (3.82)
Unmarried, exposed using barrier method	9 (2.29)
Unmarried, exposed, not using any family planning method	2 (0.51)
Intrauterine device use	0
Source supply of OCP	
Government supply	63 (16.03)
Medicine shop	56 (14.25)

Table 4: Proportion of study participants with particular characteristics who indulge in pond bathing, knowledge of STIs and unwanted pregnancy and knowledge of family planning.

Parameters	Pond bathing, N (%)	No pond bathing, N (%)	Knowledge of STI and unwanted pregnancy, N (%)	No knowledge of STI and unwanted pregnancy, N (%)	Knowledge of family planning, N (%)	No knowledge of family planning, N (%)
Overall	143 (36.39)	250 (63.61)	348 (88.55)	45 (11.45)	334 (84.99)	59 (15.01)
Those with sexual exposure	86 (40.95)	114 (54.29)	203 (96.67)*	7 (3.33)*	190 (90.48)**	20 (9.52)**
Among married teenage girls	87 (43.50)	127 (63.50)	192 (96)*	8 (4)*	180 (90)***	20 (10)***

Continued.

Parameters	Pond bathing, N (%)	No pond bathing, N (%)	Knowledge of STI and unwanted pregnancy, N (%)	No knowledge of STI and unwanted pregnancy, N (%)	Knowledge of family planning, N (%)	No knowledge of family planning, N (%)
Among those with knowledge of STDs	120 (34.48)	228 (65.52)	--	--	321 (92.24)*	27 (7.76)*
Among those who engage in pond bathing	--	--	120 (83.92)	23 (16.08)	110 (76.92)*	33 (23.08)*
Among those who completed standard 8 education	46 (47.42)	51 (52.58)	78 (80.41)	19 (19.59)	69 (71.13)*	28 (28.87)*
Among those who completed standard 10 education	66 (41.77)	92 (58.23)	136 (86.08)	22 (13.92)	135 (85.44)	23 (14.56)
Among those who completed standard 12 education	31 (22.46)*	107 (77.54)*	134 (97.1)*	4 (2.9)*	130 (94.2)*	8 (5.8)*

Legends: * P value by chi-square test<0.001;· ** p value by Chi-square test=0.001; · *** p value by Chi-square test=0.005.

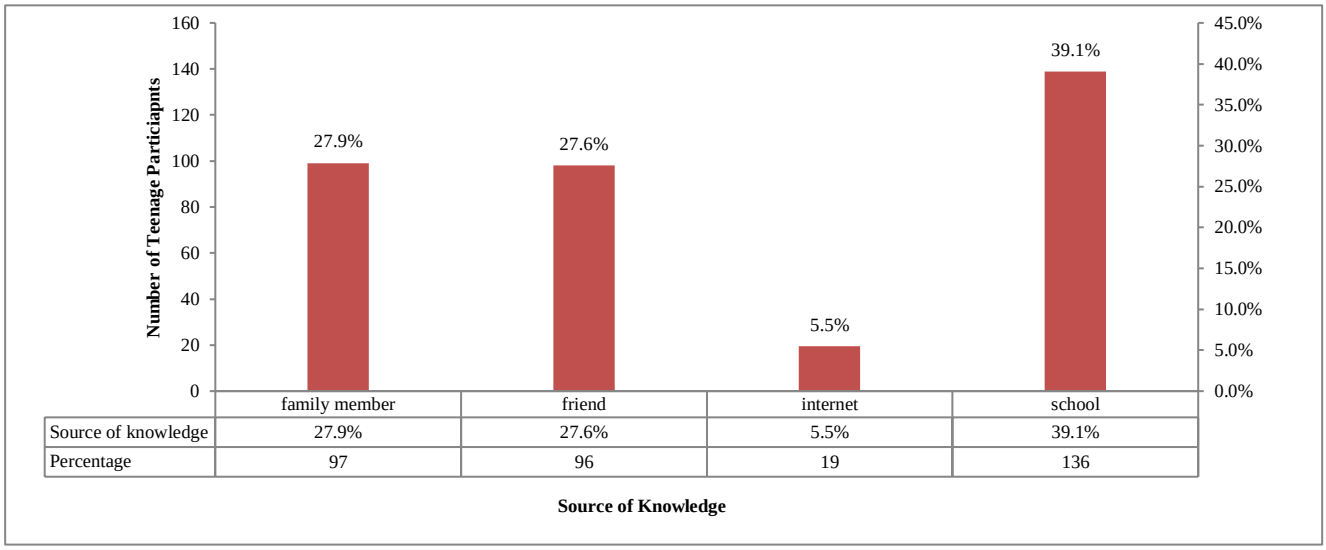

Figure 1: Source of knowledge of STDs, unwanted pregnancy and family planning methods among teenage girl study participants.

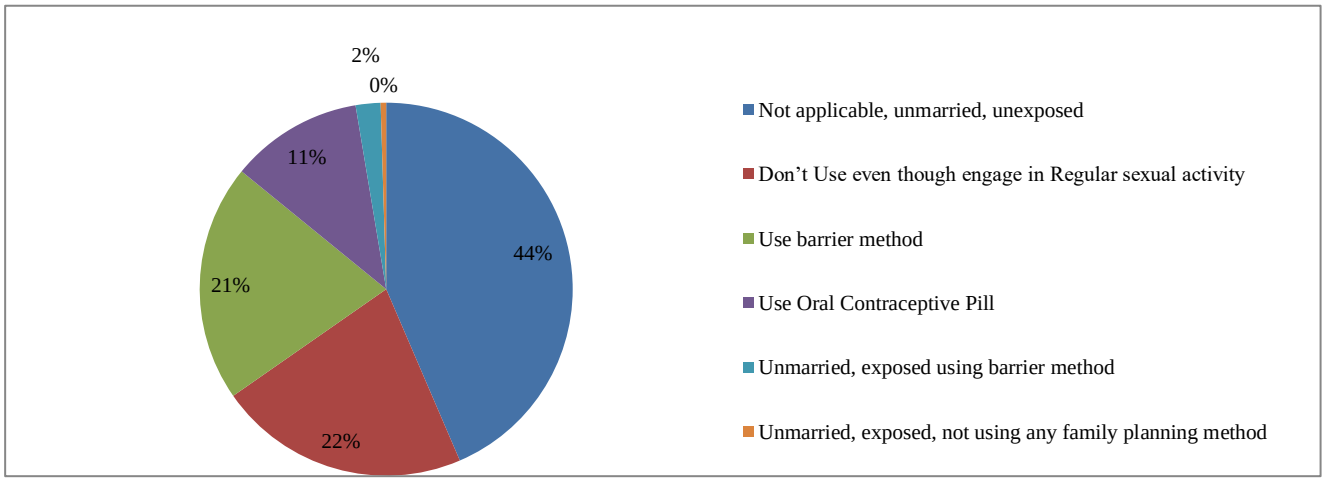

Figure 2: Usage of family planning methods in teenage girls.

DISCUSSION

The percentage of female teenagers who had completed standard 8 of middle school was much less than that noted in the NFHS-5 survey 2019-21 in West Bengal (25.2 % vs 45.5%) while the proportion completing standard 12 of high schooling was nearly double (35.1% vs 18.3%) that reported in the national survey.[10] One must note that though the total fertility rate in West Bengal is low, the proportion of teenage girls who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing is high at 16.4%. Knowledge of contraceptive and family planning method was lower (85.5% vs 98.8%) in our study cohort than as reported in NFHS-5.[10] This was probably because our cohort contained nearly half unmarried and never sexually active teenage girls.

Knowledge about available family planning methods was higher amongst our teenagers, than recorded in a study from a developed country like Portugal (85.5% vs 42-48%.[11] However, the 14.5% of vulnerable female teenagers who lack knowledge of safe sexual practices, family planning, contraceptives, sexual health, and HIV/AIDS should be a cause of great concern to us HCWs and the health care planners. Lack of knowledge has been documented to be due to awkwardness in the family about talking of things like sexual practices, family planning, contraceptives, and sexual health.[12,13]

We found that our study population had attained knowledge about STD, HIV and unwanted pregnancy mostly from family members, friends, and school. The Internet was not an important source of information unlike other studies.[11] This could be due to poverty, and lack of access to the internet in our study subjects. This knowledge should ideally come through a combination of a non-judgemental education system (school) and empathetic, sensitized students. Reality is different as shown in our study where around 27.5% obtained information from friends. This is involvement of friends in gaining knowledge on sexual practices, family planning and HIV/AIDS, STIs and contraceptive usage has also been documented by others and is considered inappropriate and most often incomplete and incorrect.[6] The education system (schools, colleges) should be more focussed and the government bodies should take more initiative. In our study we found knowledge of STI and unwanted pregnancy was significantly higher in teenage girls with sexual exposure ($p<0.001$), married teenagers ($p<0.001$), and in those who had completed standard 12 education ($p<0.001$). Sex education and family planning education could as well be targeted to adolescents with girls receiving differential and greater education regarding these matters. Educating a girl is often stated to be akin to educating the whole family. However, we need to follow the words with constructive action. Community health education to prevent teenage pregnancy, repeated pregnancy and unwanted pregnancy should be a focus area for us. Lack of community health education and guidance can lead to adolescent pregnancy and preterm pregnancy.[14] Unwanted pregnancy is a significant health hazard as it can lead to unsafe abortion practices, especially in rural and tribal areas like ours.

Attitude towards family planning has been linked with female educational status, income level, social security, use of family planning methods, spousal support for family planning, and family planning training.[15] Scientists have noted that adolescent girls in Phalombe district Malawi, Africa were hesitant in using family planning methods fearing stigma and embarrassment.[16] Young age and multiple sexual partners has been noted to predispose women to sexually transmitted infections.[8] Even our study participants had a substantially low uptake of contraceptives even though they had adequate knowledge of these methods. As suggested by Chimatiro community participation and health education programmes could have an important bearing on the rates of teenage pregnancy, and adolescent girl health in our community.[16] Non-judgemental dealing by health care workers (HCW) while involved in family planning has been emphasized before. All HCW must keep judgements far away when dealing with premarital sex, family planning, teenage pregnancy, sexually transmitted infections as this behaviour is detrimental to gaining confidence of the individual patient, her opening up about further health issues. Apart from health education, paramount to getting community participation is keeping confidentiality, being non-judgemental, showing empathy to the suffering teenagers and professionalism on behalf of HCW.

As the girls enrolled in our study are mostly nulliparous, IUCD use was not considered and practised. Increased chances of infection are seen in nullipara using IUCD.[17] For teenage girls, those who have not reached menarche, hormonal contraception is not recommended.[18] Barrier method usage like condoms can be advised in such teenage girls who have not reached menarche. Oral contraceptive pills are better for those in whom not contraindicated as they have lower failure rate and useful in controlling irregular menstruation. They also help to reduce excess bleeding and hence reduce prevalence of anaemia. Effectiveness of OCPs in reducing dysmenorrhoea is an important consideration in teenagers where this disease is common. Among those receiving hormonal contraceptives, it was seen that majority used government supply oral contraceptive pills which contain higher dosage of hormones and are associated with greater adverse events. Policy makers need to look into the pills available in government supply and change them to low hormone pills for better health care of women.

Even educated cohorts of students and youngsters do not seem to practice safe sex as shown in a study from Nigeria and Croatia.[6,19] This is clear in our study participants too though they had clearly less educational attainment. Some scientists suggest that constant provision of relevant information on safe sex through appropriate channels would be appropriate to influence practice among these

adolescent groups.[19,20] In those who do use family planning methods, an urge to avoid sexually transmitted infections and prevention of unwanted pregnancy are the key factors to consistent usage. Continuous awareness campaigns, involvement of key stakeholders like parents, teachers, policy makers and government planners is required to confirm persistent usage of contraceptives in our society.[6,12,19,20]

CONCLUSION

Sex education and STD education is very crucial weapon for STI, HIV and unwanted pregnancy prevention in adolescents. School education is a vital means of reaching adolescents specially girls. Current study identifies, that knowledge level of STD, HIV and unwanted pregnancy is high but practice of safe sex and contraceptives are low. Girls should also know signs and symptoms of STD, unwanted pregnancy to seek early medical care. There should be implementation of appropriate gender based, culturally sensitive sex education curriculum in schools to cope up the vulnerability of young girls. Family, schools, health care institutions and media can raise awareness.

Recommendations

Destigmatization of family planning and contraceptive usage is the need of the hour in our rural and tribal areas. Low cost and easy local availability of family planning devices and contraceptives must be a priority area for district health authorities in far-flung localities like ours. Curriculum based sex education should be introduced into middle, secondary and higher secondary schools and colleges.

Continuous awareness campaigns in the audiovisual media about safe sexual practices, family planning, contraceptives, STIs, and HIV/AIDS is of pertinent importance.

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