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Research Article

Knowledge, information and need for sexual health education in a rural area of Mandya district

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ABSTRACT

Background: Objective: To assess the student's knowledge, need & information on Sexual Health Education (SHE), Sexually transmitted diseases, pregnancy preventive measures and to explore their on content, source and need for implementation of sexual health education.
Methods: A descriptive and explorative questionnaire based study done in rural Pre-university colleges of BG Nagara, Mandya, Karnataka. Adolescents were included and categorised based on their age and gender. Questions were broadly categorized under pubertal changes, STD's, pregnancy preventive measures and menstruation and analysis was done.
Results: A total of 430 students were enrolled for the study, 59.1% boys and girls constituted 40.9%. The right age for SHE was 16 years (37%), followed by 18 years (32%). Need for SHE was observed in 72.3%. Preferred source for SHE was doctor's (35.3%). The mean knowledge about pubertal changes was 65.4 ± 23.5 (P = 0.000), about STD's was 61.39 (P = 0.00), pregnancy preventive measures was 52.69 ± 27.89 (P = 0.00) and menstruation among girls was 68.75 ± 39.8. Signs of physical maturity were correctly known in 69%. AIDS/HIV was heard and known to be a STD by 69.3%. Most common contraceptive known was oral pill (68.8%) and most common source being internet (40.5%). Information to be included under SHE by the students was mainly regarding general changes at puberty (74.7%), HIV and other STD's (63%).
Conclusions: Rural adolescent students have lesser minimum knowledge than prescribed in understanding reproductive health issues. Most of them expressed an essential need for SHE and to avail this knowledge of SHE from their doctors and teachers. Hence it is recommended to generate greater awareness to adopt safe behavioural practices for prevention.

Keywords: Sexual health education, Sexually transmitted diseases (STD/HIV) Pregnancy preventive measures

INTRODUCTION

Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality and not merely the absence of disease, dysfunction or infirmity.[1] Human sexuality is constructed through interactions between the individual and wider society, and its development depends on the expression of basic human needs, including intimacy, emotional expression and love.[2] Even in the 21st century hesitation persists especially in rural India about sexual health education, despite India being the country that gave the world Kama Sutra. Adolescence is the most important and sensitive period of one's life.[3] In India, there are 190 million adolescent girls comprising 21% of India's total population.[4] The morbidity associated with sexual ignorance, poor decision making and inadequate sexuality education is rising in India day by day. The possibility of sex related

public health problems like sexual abuse, teenage pregnancies, abortions, unmarried motherhood, Sexually Transmitted Diseases (STD's) infections etc. remains high in students.

In this background to assess the student's knowledge, need & information on sexual health education (SHE), STD's ,contraceptive measures and to explore the views of students on content, source and need for implementation of a SHE programme this study was conducted.

METHODS

A descriptive and explorative study was done in rural pre-university colleges of BG Nagara, Mandya, Karnataka. It was a questionnaire based study. The study population included adolescents and were categorised based on their age, a) 16 years b) 17 years c) 18 years and gender (boys and girls). All the questions were broadly categorized under the sub headings-pubertal changes, STD's, pregnancy preventive measures and menstruation and analysis was done.

Data collection procedure

A total of 430 students participated in the study. A self-structured questionnaire was administered which included baseline characters and to test their present knowledge regarding pubertal changes, STD's including HIV, pregnancy preventive measures, and separate questions for girls on menstruation.

Other details collected were what is the right age to receive SHE, what was their preferred content and source, minimum age of marriage for boys and girls by law, source of information regarding pregnancy preventive measures, and their views on need and implementation of SHE programme.

Statistical analysis

This descriptive and explorative study data was analyzed using the statistical Package for Social Sciences (SPSS) Version 16 for windows. After taking a test value of 70**,** findings were described in terms of descriptive statistics, t test (one sample and independent sample), ANOVA one way test and product moment correlation.

RESULTS

A total of 430 students were enrolled for the study, boys constituted 59.1% (256) and girls constituted 40.9% (176) of which 16,17 and 18 year groups formed 57.4%, 30.74% and 11.9% respectively. Based on religion classification, there were 69.5% Hindu's, 29.5% Muslim's and 0.9 % Christian.

The right age for SHE according to study group was 16 years (37%), followed by 18 years (32%). Need for SHE was observed in 72.3% (boys 70.1% and girls 75.6%) and 27.7% students did not find it essential. Students preferred doctor's as the source for SHE (35.3%), followed by teachers (25.8%).

The mean knowledge about pubertal changes among the study group was 65.4 ± 23.5 with (P = 0.000), and age wise mean distribution was 65.35 ± 24.8, 65.47 ± 20.5 and 65.82 ± 25 for 16,17 and 18 years respectively and gender mean distribution for boys and girls was 66.53 ± 23.7 and 63.87 ± 23.3 respectively. The mean knowledge among religion group Hindu Muslim Christian were 62.78 ± 23.2, 71.87 ± 23.3 and 60.71 ± 13.6 respectively with P value 0.001 (Table 1).

Table 1: T-test one-sample statistics.

	N	Mean ± Std. Deviation	Std. error mean	t	P value
Pubertal Changes	430	65.4485 ± 23.57848	1.13706	-4.003	0.000
STD's	430	61.3953 ± 18.70735	0.90215	-9.538	0.000
Pregnancy preventive measures	430	52.6910 ± 27.89954	1.34544	-12.865	0.000
Need for SHE	430	59.7674 ± 29.43740	1.41960	-7.208	0.000
Menstrual	176	68.7500 ± 39.86585	3.00500	-0.416	0.678
Total	430	60.0465 ± 17.28704	.83366	-11.940	0.000

The mean knowledge regarding STD's in the study group was 61.39 (P = 0.00) of which the age group 16 17 & 18 had a mean value of 60.89 ± 19.05, 63.00 ± 17.20 & 59.64 ± 20.7 respectively, and that in boys and girls was 62.43 ± 19.86 and 59.89 ± 16.84 respectively and the mean value of 62.4 ± 19.09, 59.18 ± 17.31 and 56.2 ± 29.9 seen in Hindus, Muslims and Christians respectively (Table 2).

The mean knowledge regarding pregnancy preventive measures in the study was 52.69 ± 27.89 (P = 0.00) of which the age group 16 17 & 18 has mean value of 48.12 ± 27.01, 62.12 ± 26.23 & 50.42 ± 30.68 respectively (P =

0.00), the mean value regarding preventive measures among boys and girls were 52.86 ± 27.67 and 52.43 ± 28.3 respectively, the mean value of 51.40 ± 28.4, 56.46 ± 25.88 and 28.57 ± 34.9 seen in Hindus, Muslims and Christians respectively (Table 3).

Table 2: T-test group statistics.

	Sex	N	Mean ± Std. Deviation	Std. error mean	T	P value
Pubertal changes	M	254	66.5354 ± 23.74885	1.49014	1.149	0.251
	F	176	63.8799 ± 23.30825	1.75693		
STD's	M	254	62.4344 ± 19.86370	1.24636	1.385	0.167
	F	176	59.8958 ± 16.84208	1.26952		
Pregnancy preventive measures	M	254	52.8684 ± 27.67160	1.73627	0.158	0.874
	F	176	52.4351 ± 28.30254	2.13338		
Need for SHE	M	254	57.9178 ± 29.44301	1.84742	-1.568	0.118
	F	176	62.4369 ± 29.30704	2.20910		
Menstrual	M	0(a)	.	.		
	F	176	68.7500 ± 39.86585	3.00500		
Total	M	254	60.1800 ± 17.70670	1.11102	0.192	0.848
	F	176	59.8539 ± 16.71094	1.25963		

Table 3: One-way descriptives.

		N	Mean ± Std. Deviation	Std. error	F	Significance
Pubertal changes	hin	299	62.7807 ± 23.28094	1.34637	6.902	0.001
	mus	127	71.8785 ± 23.39344	2.07583		
	che	4	60.7143 ± 13.67753	6.83877		
	Total	430	65.4485 ± 23.57848	1.13706		
STD's	hin	299	62.4025 ± 19.09534	1.10431	1.473	0.230
	mus	127	59.1864 ± 17.31015	1.53603		
	che	4	56.2500 ± 29.94980	14.97490		
	Total	430	61.3953 ± 18.70735	.90215		
Pregnancy preventive measures	hin	299	51.4095 ± 28.44940	1.64527	3.002	0.051
	mus	127	56.4679 ± 25.88619	2.29703		
	che	4	28.5714 ± 34.99271	17.49636		
	Total	430	52.6910 ± 27.89954	1.34544		
Need for SHE	hin	299	61.5385 ± 30.77632	1.77984	1.862	0.157
	mus	127	55.9055 ± 25.84784	2.29363		
	che	4	50.0000 ± 26.44973	13.22487		
	Total	430	59.7674 ± 29.43740	1.41960		
Menstruation	hin	135	68.8889 ± 41.36959	3.56053	0.223	0.800
	mus	39	69.2308 ± 35.56940	5.69566		
	che	2	50.0000 ± 0.00000	.00000		
	Total	176	68.7500 ± 39.86585	3.00500		
Total	hin	299	60.0573 ± 18.44516	1.06671	0.693	0.501
	mus	127	60.3375 ± 13.95357	1.23818		
	che	4	50.0000 ± 24.96256	12.48128		
	Total	430	60.0465 ± 17.28704	.83366		

The mean knowledge regarding menstruation among girls were assessed and the mean value was 68.75 ± 39.8 P = 0.678 of which the mean value for the age group 16, 17 and 18 were 68.87 ± 40.30, 71.05 ± 37.73 and 61.90 ± 44.4 respectively and mean value among religion group Hindu Muslim and Christian were 68.88 ± 41.3, 69.23 ± 35.56 and 50.00 ± 0.00 respectively.

The mean value regarding the need for sexual health education in the study group was 59.76 ± 29.43 of which mean value for the age 16, 17 and 18 was 54.97 ± 28.86, 67.08 ± 28.81& 64.05 ± 29.78 respectively and the mean value need for sexual health education among boys and girls were 57.91 ± 29.44 & 62.43 ± 29.30 and the mean value for need of sexual health education among the religion group Hindu Muslim and Christian were 61.53 ± 30.77, 55.90 ± 25.84 and 50.00 ± 26.44 respectively.

Signs of physical maturity were correctly known in 72.45% of boys and 65.7% of girls. Earlier physical maturity is seen in girls was known to 63.3% (53.5% boys and 77.3% of girls). In India minimum age of marriage by law for boys was correctly known to 52.8% and that for girls was correctly known to 62.3%.

The term AIDS/HIV was heard and known to be a STD by 69.3% (boys 66.9% and girls 72.7%), and that it can be diagnosed by blood test was known to 68.9%of boys and 71.6% of girls. Other STD's like gonorrhea and syphilis was known to a mere 23%. Symptoms of STD's include ulcers in the genital area, discharge and pain duration urination was known to 46.3%, 53% and 49% respectively.

Table 4: Correlations.

		GKC	STDC	PREC	NEEDC	MENC	Total
GKC	Pearson correlation	1	0.233(**)	0.246(**)	0.344(**)	0.017	0.590(**)
	Significance (2-tailed)	.	0.000	0.000	0.000	0.823	0.000
	N	430	430	430	430	176	430
STDC	Pearson correlation	0.233(**)	1	0.392(**)	0.310(**)	-0.005	0.697(**)
	Significance (2-tailed)	0.000	.	0.000	0.000	0.949	0.000
	N	430	430	430	430	176	430
PREC	Pearson correlation	0.246(**)	0.392(**)	1	0.440(**)	0.173(*)	0.728(**)
	Significance (2-tailed)	0.000	0.000	.	0.000	0.022	0.000
	N	430	430	430	430	176	430
NEEDC	Pearson correlation	0.344(**)	0.310(**)	0.440(**)	1	0.098	0.789(**)
	Significance (2-tailed)	0.000	0.000	0.000	.	0.195	0.000
	N	430	430	430	430	176	430
MENC	Pearson correlation	0.017	-0.005	0.173(*)	0.098	1	0.106
	Significance (2-tailed)	0.823	0.949	0.022	0.195	.	0.162
	N	176	176	176	176	176	176
Total	Pearson correlation	0.590(**)	0.697(**)	0.728(**)	0.789(**)	0.106	1
	Significance (2-tailed)	0.000	0.000	0.000	0.000	0.162	.
	N	430	430	430	430	176	430

Condom was known to only 60% (boys 60.4% and 61.1% girls) of which 76% knew it cannot be reused and 72% were aware it can give protection against STD's.

Pregnancy preventive measures known were oral pills (68.8%), condoms (60.9%), cupper T (60.2%), emergency contraception (60%), tubectomy (59.5%) and vasectomy (57.4%).

Source of information regarding pregnancy preventive measures was internet in 40.5%, followed by TV (20.9%) and least by radio (2.8%).

Menstruation is a natural phenomenon was known to 80% girls and that it does not cause serious problem to health was known by 78% and 55.1% opined that age at menarche was 13-14 years.

Information to be included under SHE by the students was mainly regarding general changes at puberty (74.7%), HIV and other STD's (63%), menstruation (61%) conception/pregnancy (59%) and pregnancy preventive measures (57%).

DISCUSSION

Adolescence is defined by World Health Organization (WHO) as the period of life between 10 and 19 years of age and comprise 20% of the world's total population. The adolescents experience physical growth, emotional, psychological, social, and mental change. Physiological changes lead to sexual maturity and usually occur during the first several years of this period.[5] Adolescence represents a window of opportunity to prepare for a healthy adult life. About 19% of the total population-faces a series of serious challenges. Yet adolescents remain a largely neglected, difficult-to-measure, and hard-to-reach population, in which the needs of adolescent girls in particular are often ignored.[6] The adolescent pregnancies constitute 10-15% of total pregnancies in India[7] and are twice as likely to die from childbirth, due to their lack of information about reproduction and sexuality, misconceptions and little access to family planning and reproductive health services.

Girls account for less than 50% of enrolment at all stages of schooling as also observed in our study where girls constituted 40.9% and that rural girls are the most disadvantaged.

Awareness of legal minimum age of marriage for boys was correctly known to 52.8 % and that for girls was correctly known to 62.3% similar to Gupta et al.[8] study on reproductive health awareness in rural adolescents.

Shubhangna et al.[9] reported a mere 4.4% awareness of physical maturity signs correctly compared to 69% in our study.

Youth are vulnerable to STD'S and account for 31% of AIDS burden in the country[10]. Adolescent girls are being increasingly infected due to their vulnerable social and economic status within society.

Awareness on HIV/AIDS and that it is a STD was in 69.3% (boys 66.9% and girls 72.7%) compared to 86.5% (93% boys and 80% girls) according to population council and CARE India, 2002,[11] and 79% (81% boys and 77 % girls) according to Kotecha et al.[12]

Other STD's like gonorrhea and syphilis was known to only a quarter of the students, highlighting the lack of knowledge.

Symptoms of STD's include ulcers in the genital area, discharge and pain duration urination was known to 46.3%, 53% and 49% respectively similar to a study done in CMC Hospital Vellore.

Condom was known to only half our study population compared to Behaviour Sentinel Survey (BSS) figures for 2001 of 88.4% and 77 % in urban and rural areas respectively and 90.2% male and 75.2% female and 72% (girls vs. boys) were aware it can give protection against STD's compared to 84% of boys and 32% of girls.[11] Other studies from India have also revealed deficient knowledge among girls regarding contraception.[13]

Menstruation is a natural phenomenon was known to 80% girls and that it does not cause serious problem to health was known by 78%. Most common age at menarche was 13-14 years according to 55.1%, compared to another study[12] were large number believed that menstruation contaminates the body and makes it unholy, as a consequence the girls often see themselves as impure, unclean and dirty.[9]

Pregnancy preventive measures were known to 60% of the students, with most commonly heard being oral pills and least being vasectomy.

Francis et al.[14] study in Delhi observed that most frequent source of information on reproductive facts was books (53.8%) followed by friends (47.3%) in contrast to our study where internet (40.5%) was the most common source of information followed by TV (20.9%).

In our study it was observed 72.3% felt there is a need for SHE and preferred age was 16 years. Also a study commissioned by the WHO and Global Programme on AIDS reviewed 43 studies, 17 of which reported that education delayed the onset of sexual activity, reduced the number of sexual partners or reduced unplanned pregnancy and STD's.

A few positive comments given by the students included 'SHE is very important, especially for girls', 'Many things we are unaware of, so it is the right age for us before we start our family life, 'Doctors will be preferred to give us SHE', etc.

Ministry of health and family welfare also recommends the need to ensure for adolescents access to sexual and reproductive health information.

CONCLUSION

Rural students have lesser minimum knowledge than prescribed in understanding reproductive health, pubertal changes, STD's, pregnancy preventive measures and

related issues and easier access to unreliable sources that often misguides them.

Most of them expressed a desire to include it as a part of the school curriculum and majority want to avail knowledge of SHE from doctors. Hence it is recommended to spread information to generate greater awareness about how their own bodies work and the changes they experience throughout adolescence, the nature of STD's transmission and to adopt safe behavioural practices for prevention.

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