

# Knowledge about menstrual hygiene, sexual health, and contraception in educated late adolescent age girls

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## ABSTRACT

**Aim:** Adolescents are future generation of our country. It is a vulnerable age making them susceptible to many health issues such as reproductive tract infections because of improper menstrual hygiene, sexually transmitted infections (STIs), human immunodeficiency virus (HIV), unexpected pregnancies because of lack of awareness about contraceptive practices, and no proper guidance about sexual health. The aim of this study is to assess the knowledge of college-going adolescent girls regarding menstrual hygiene and their awareness about HIV/AIDS, other STIs, and also their knowledge about contraception. **Materials and Methods:** Girls studying diploma in government polytechnic college were assessed on the basis of a questionnaire survey. A predesigned questionnaire was prepared with reference from WHO adolescent health questionnaire and a health talk was organized in college. The questionnaire survey was done for 150 college girls. A health talk was given after girls filled the questionnaire. Only 125 girls gave filled questionnaire, whereas 25 returned without filling it. Data were analyzed using SPSS software and results were interpreted into percentages. Menstrual hygiene was given a score based on five parameters in the questionnaire. Correlation between mother's education and menstrual hygiene was assessed by Chi-square method. Similarly, correlation between mother's education and contraceptive knowledge was assessed by Chi-square test. **Results:** Forty percent did not answer the question from where they knew about puberty. Mother was the most common source of information about puberty (28%). There was a high level of knowledge about menstrual hygiene; 88% of study population knew about HIV, but only 30.4% knew about other STIs. Fifty percent of them did not know about contraceptive options, and of the study population who knew about contraception, condom (32%) was the most aware method. There was no correlation between mother's education and knowledge about contraception ( $P$  value 0.16) by Chi-square test. Similarly, there was no correlation between mother's education and menstrual hygiene score ( $P$  value 0.222). **Conclusions:** Educated adolescents even though they belong to low socioeconomic class, irrespective of their mother's educational status, have a good knowledge about menstrual hygiene but lack knowledge about sexual health. School-based programs/Compulsory curriculum should be included by universities and colleges to encourage universal knowledge about contraception and sexual health.

**Keywords:** Adolescence, contraception, menstrual hygiene

## Introduction

WHO defines adolescent age as age group from 10 to 19 years.<sup>[1]</sup> Worldwide, more than 1.2 billion are adolescents: this indicates that roughly one in every six person is an adolescent. About 21% of Indian population are adolescents (about 243 million).

Government of India has formulated ARSH strategy (adolescent and sexual health),<sup>[2]</sup> under RCH II program, to increase awareness among adolescents about sexual health. A core package of services includes preventive, promotive, curative, and counseling services. Under this program, adolescent health clinics have been established at all levels of health care and staff are sensitized to health needs of adolescents.

Adolescents are not a homogenous group. Their situation varies by age, sex, marital status, class, religion, and cultural context. We can categorize the health needs of the adolescents

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**Table 1: Education of father and mother**

	Education of father		Education of mother	
Illiterate	23	18.4%	26	20.8%
<10 <sup>th</sup> class	50	40%	75	60%
10-12 <sup>th</sup> class	19	15.2%	9	7.2%
Degree	33	26.4%	15	12%

About 60% of mothers had only primary education (<10<sup>th</sup> class), whereas fathers were better educated than mothers.

**Table 2: The source of their knowledge about puberty and from whom they would prefer to know**

	Source of knowledge about puberty		From whom would they prefer to get knowledge	
Friends	5	4%	11	8.8%
Media	16	12.8%	8	6.4%
Mother	35	28%	39	31.2%
Teachers	17	13.6%	14	11.2%
Doctors	2	1.6%	21	16.8%
Did not answer	50	40%	32	25.6%

About 40% of study group did not answer the question - from whom did you learn about puberty and changes in puberty. About 28% had the knowledge from their mother and 31.2% would prefer mother to be the source of information

**Table 3: The knowledge about menstruation and hygiene practices during menstruation**

Knowledge about menstruation	Subtypes	Number	Percentage
1. Why does menstrual bleed happen?	Normal change	97	77.6%
	Curse of god	6	4.8%
	It is a disease	1	0.8%
	Did not answer	21	16.8%
2. Source of bleeding	Uterus	25	20%
	Vagina	24	19.2%
	Urinary bladder	5	4%
	Did not answer	71	56.8%
3. Absorbents used during menstruation	Sanitary pads	105	84%
	Old clothes	2	1.6%
	Did not answer	18	14.4%
4. Number of pads changed per day	<2	29	23.2%
	2-5	44	35.3%
	As per need	39	31.2%
	Did not answer	13	10.4%
5. Disposal of absorbent	Dustbin	107	85%
	Burn/Burly	9	7.2%
	Flush in toilet	2	1.6%
	Wash and reuse	1	0.8%
	Did not answer	6	4.8%
6. Cleaning genital area	<3	41	32.8%
	>3	51	40.8%
	Only during bath	8	6.4%
	During micturition	5	4.00%
7. Agent used for cleaning	Did not answer	20	16%
	Soap and water	59	47.2%
	Dettol	31	24.8%
	Only water	25	20.0%
	Did not answer	10	8.00%

broadly into three categories – physical, psychological, and social. The main health issues faced by the adolescents include

**Table 4: Correlation between mother’s education and menstrual score**

Education of mother	Score ≤4	Score 5	Total No.
Illiterate	23	3	26
Literate	94	5	99
-	117	8	125

P (Chi-square test) - 0.229. There was no significant correlation between mother's education and menstrual hygiene

**Table 5: The knowledge of study population about HIV and other STDs**

	Yes		No	
Knowledge about HIV	102	88%	14	11.25
There is cure for HIV	38	30.4%	65	52.4%
Simple test to find out HIV	69	55%	26	20.8%
Do you know any other STDs	38	30.4%	67	53.6%

About 88% of study population knew about HIV, 52.4% knew that there is no cure for HIV, 69% knew that there is a simple blood test to check for HIV, which indicates adequate knowledge about HIV in the study group, and 53.6% of study population did not know about other STDs which show lack of knowledge about STDs

**Table 6: Awareness about contraceptive methods**

Knowledge about contraception		
Condoms	40	32%
Pills	13	10.4%
EC	11	8.8%

About 50% of them did not know about any contraceptive method and 83.2% did not answer when asked about best contraceptive method for young people showing lack of awareness about contraceptive methods

mental health problems, early pregnancy and childbirth, human immunodeficiency virus/sexually transmitted infection (HIV/STI), and other infectious diseases, violence, unintentional injuries, malnutrition, and substance abuse.<sup>[3]</sup> Since service provisions for adolescents are influenced by many factors, such as level of health care system, socioeconomic class which they belong, judgmental attitude of service providers, level of education among adolescents, and lack of information about sexual health in adolescent age group, programs to improve their health should be customized to that group of population.

Further addressing adolescents will yield dividends in terms of delaying age at marriage, reducing incidence of teenage pregnancy, prevention, and management of obstetric complications, and improving access to safe abortion practices and reduction of unsafe sexual behavior. These will indirectly impact on targets of RCH II program which are reduction in maternal mortality rate (MMR), infant mortality rate (IMR), and total fertility rate (TFR).

We wanted to study about awareness of menstrual hygiene and knowledge about reproductive and sexual health and contraceptive options of this late adolescent age group, who belong to low socioeconomic class but are educated so that we can recommend a program for this pilot study group.

## Materials and Methods

A health questionnaire, which had set of questions regarding knowledge about puberty, menstrual hygiene, contraceptive

**Table 7: Correlation between mother's education and awareness about contraception (condom method) was assessed using Chi-square test**

Education of mother	Knowledge about contraception (condom method)		Total
	Yes	No	
Illiterate	9	1	10
Literate	31	6	37
	40	7	47

*P* (Chi-square test) - 0.624. There was no statistically significant association between mother's education and awareness about contraceptive method

options, awareness about HIV, and other STIs, was formulated; this questionnaire was prepared from WHO adolescent health manual as reference base.

Permission was taken from hospital ethical committee to conduct this study.

We approached public polytechnic college, run by government, which caters to low socioeconomic class population. Permission was taken from principal of that college to conduct the questionnaire survey; confidentiality was maintained as questionnaire did not have any personal information. All the girls were invited for a health talk and asked to fill the questionnaire. Health talk was given after collecting the survey forms from them.

Data were analyzed using SPSS software and results expressed in percentages. A correlation between mother's education and menstrual hygiene and mother's education and knowledge about contraception was assessed using Chi-square test.

## Results

Of the 150 girls who were given questionnaire only 125 gave filled up forms, 25 did not answer any questions, reasons not evaluated.

Age group of the study group was from 14–18 yrs, 63.4% were in age group of 14–16, while 36.5% were in age group 16–18.

94.4% were Hindhu by religion, 4.00% were Christian and 1.6% were Muslim by religion.

Table 1 compares education of father and mother. 60% of mother had only primary education (<10<sup>th</sup> class), while fathers were better educated than mothers.

Table 2 shows the source of their knowledge about puberty and from whom they would prefer to know. 40% of study group did not answer for the question, - from whom did you learn about puberty and changes in puberty. 28% had the knowledge from their mother. 31.2% would to prefer mother to be the source of information.

Table 3 shows the knowledge about menstruation and hygiene practices during menstruation. A score system was formulated for menstrual hygiene considering five factors - use of sanitary

pads, change of pads 2–5 times a day, disposing pads in dust bin, cleaning genital area more than 3 times and using soap water to clean genital area. score of 4 and above was considered high level of knowledge about menstrual hygiene.

Correlation between mothers education and level of menstrual hygiene was assessed using chi square test.

Table 4 shows the correlation between mothers education and level of menstrual hygiene - *P* value (chi-square test) -0.229. There was no significant correlation between mothers education and menstrual hygiene.

Table 5 shows the knowledge of study population about HIV and other STDs. 88% of study population knew about HIV, and 52.4% knew that there is no cure for HIV, 69% knew that there is a simple blood test to check for HIV, which indicates adequate knowledge about HIV in the study group. 53.6% of study population did not know about other STDs which show lack of knowledge about STDs.

Table 6 shows awareness about contraceptive methods. 50% of them did not know about any contraceptive method. 83.2% did not answer when asked about best contraceptive method for young people showing lack of awareness about contraceptive methods.

Correlation between mothers education and awareness about contraception (condom method) was assessed using chi square test.

Table 7 shows the correlation - *P* value (chi-square test) - 0.624. There was no statistically significant association between mother's education and awareness about contraceptive method.

## Discussion

The age group in the present population was from 14 to 18 years, similar to the study done by Jain *et al.*<sup>[4]</sup> In another study from central India, 85% of girls were from 14 to 15 years age group.<sup>[5]</sup> In the present study, 18% of fathers and 20% of mothers are illiterate similar to the study done by Jain *et al.* where 20% of parents were illiterate. In our study, 48% of study population did not know about puberty, whereas 64% of girls did not have knowledge about menstruation before menarche in the study done by Alam *et al.* in Bangladesh.<sup>[6]</sup> Menstruation was considered normal physiological change by 78% of girls in our study, 50% of the adolescent girls felt the same in the study done by Jain *et al.*<sup>[4]</sup> and also, as seen previously in a meta-analysis; similarly, in some other studies also, approximately 85% of girls were of the same opinion.<sup>[5,7,8]</sup> However, in one study, this perception was present only among 18% of girls.<sup>[9]</sup> About 84% of girls used sanitary pads in the present study, similar to study done by Jain *et al.* in which 78% used sanitary pads.

In our study, there was no statistically significant correlation between mother's education and menstrual hygiene practices, whereas in study done by Upashe *et al.* in western Ethiopia, girls whose mothers' educational status was till secondary school and above were 2 times more likely to have good practice of menstrual hygiene than their counterparts [AO = 2.03, 95% CI: 1.38–2.97].<sup>[10]</sup>

About 88% of study population knew about HIV, but 50% of them did not know about other STDs like gonococci and syphilis, similar to the study done by Kaur *et al.*<sup>[11]</sup>

Fifty percent of study population had knowledge about the contraceptive methods, but 84% did not know about best method for young people, although as per data published by NFHS 3, 94% of girls in India were aware of contraception.<sup>[12]</sup>

Through adolescent-friendly health clinics, counseling and curative services are provided at primary, secondary, and tertiary levels of care on fixed days and fixed time with due referral linkages. These clinics are set up by Government of India under RCH program. Delay of first pregnancy, decreasing teenage pregnancies, and meeting contraceptive needs of adolescents are important mandates of the adolescent health program. Reduction in incidence of sexually transmitted diseases and proportion of HIV-positive cases in adolescents is another mandate. Unless adolescents are aware of contraception and STIs, they cannot avail these services when required. Clinicians providing these services should be sensitive to knowledge of adolescents about these issues and not be judgmental in providing services.

The limitation of the study is that many girls did not answer some questions in questionnaire such as awareness about contraception. We could not analyze as to why they did not answer; is it their lack of knowledge or they did not understand the question or felt awkward in answering these questions. This pilot study represents only educated adolescents belonging to low socioeconomic group and conclusions cannot be generalized to whole adolescent population of India.

## Conclusions

Adolescents are very vulnerable group, with rapidly changing physical and emotional changes in their body. They are susceptible to many health problems and are targets for permanent disability. The present study done on educated girls, belonging to low socioeconomic class, shows that they are aware of healthy menstrual hygiene practices, have good knowledge about HIV, but less knowledge about other STDs and contraception. This awareness is irrespective of their mothers' educational status, implying that they had this knowledge through school or their curriculum. Government of India had made several programs on educating adolescents about menstrual hygiene and HIV.

Further attempt to increase basic knowledge about contraception and other STDs through school curriculum or compulsory workshops might strengthen our future generation.

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## Conflicts of interest

There are no conflicts of interest.

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