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Original Research Article

## Knowledge and attitude of menstruation hygiene, contraception and sexual transmitted disease among school girls of Lunawada, Mahisagar, Gujarat, India

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### ABSTRACT

**Background:** Around ¾<sup>th</sup> of adolescent girls have experiencing menstrual dysfunction and it disturbs the routine daily workout. UNICEF reported that total number of adolescent girls in India is 243 million which cover almost 20% of the Indian population. The objectives of the current study were to observe the knowledge and attitude regarding menstruation, contraception and sexually transmitted diseases among secondary and higher secondary school girls.

**Methods:** A cross-sectional study was conducted in the city of Vadodara during August 2016 to September 2016. The study included girls high school of standard 8<sup>th</sup> to 12<sup>th</sup> of Vadodara city. Around 310 adolescent students of standard 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup>. From each standard, 62 girls were selected by simple random technique with the help of their attendance register.

**Results:** Around 71.4% participants believed that menstruation is natural process and 22.7% believed as abnormal process. Around 62.6% of participants believed for reason of menstruation is “Female becomes capable of child bearing”. Almost 9.0% participants did not know about organ of reproduction and 18.4% did not know about the physical changes during puberty. only 14.5% participants believed that coitus is the culprit of STD transmission. Teacher and mother were the main source of information for participants regarding STD. Almost 55.4% participants were aware about condom as contraceptive method followed by oral pills and permanent sterilization.

**Conclusions:** Menstrual hygiene and prevention of STD diseases should be considered important issue at all the levels of health care system, where number of factor influence in the awareness and practice in rural area. Education regarding reproductive health should be included in the curriculum in all schools.

**Keywords:** Adolescent girl, Menstruation hygiene, Reproduction, Sexually transmitted disease

### INTRODUCTION

Adolescence is duration of potent developmental and emotional period. According to World Health Organization (WHO), adolescent is belonged to age group of 10 to 19 years.<sup>1</sup> Most landmark milestone of women's life is starting of menstruation is menarche.

Menarche is a sensitive indicator of nutritional status, geographical location, environmental conditions and prevalence of socioeconomic inequalities in the community.<sup>2-4</sup> Around ¾ of adolescent girls have experiencing menstrual dysfunction and it disturbs the routine daily workout. UNICEF reported that total

number of adolescent girls in India is 243 million which cover almost 20% of the Indian population.<sup>1</sup>

Another study found that adolescents compose 20% of the world's total population and out of that, 85% reside in developing countries. In India, prevalence of adolescent pregnancies was 10-15% of total pregnancies in India because of early marriage.

Most common reasons for visiting doctors by adolescent girls are delayed, irregular, painful, and heavy menstrual bleeding. In adolescent girls, most dominant reason of activity limitation and school absenteeism is Dysmenorrhea. But usually it is ignored due to being treated as physiological pain.<sup>5-7</sup> Unplanned pregnancies are more reported among adolescents than adults which leads to sexually transmitted diseases including HIV/AIDS.

Most of adolescents still neither have approach to information and education on sexuality, reproduction, contraception and sexual and reproductive health and rights, nor do they have access to preventive and curative service.<sup>8</sup>

Teenage pregnancies considered as high-risk pregnancies result in unsafe abortions, low birth weight, and high maternal morbidity and mortality. Almost 40% HIV infection is found among teenagers.<sup>9</sup>

Study was conducted with objective to study the knowledge and attitude regarding menstruation, contraception and sexually transmitted diseases among secondary and higher secondary school girls.

## METHODS

This was a cross-sectional study conducted at Secondary and higher secondary School, Mahisagar district, Gujarat during August-September 2016 after ethical permission of Intuitional Ethical Committee of GMERS Medical College, Gandhinagar, Gujarat.

A sample size of 310 was obtained using the hypothesis testing method and based on following assumptions: 95% confidence intervals, considering maximum prevalence of 50% (KAP on reproduction, contraception, and STDs among high school girls) and 5% margin of error.

The calculated minimum sample had been inflated by 10% to account for anticipated subject nonresponse. For continuous variables mean and median had been calculated, and for categorical variables proportion and percentage had been obtained.

Study population included 310 adolescent students of standard 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup>. From each standard, 62 girls were selected by simple random technique with the help of their attendance register. Data were collected with prior permission of school principal and informed

consent was taken from participants before the questionnaire was administered.

## RESULTS

Table 1 represents that mean age of participants was 15.1±1.4 years. Highest numbers of participants (33.0%) belonged to 16 years age. Almost 65.5% participants were residing in joint family. Around 44.2% and 35.5% participant's mother and father had got education up to primary level respectively.

**Table 1: Socio-demographic information of participants (N=310).**

Variables	Number (%)
<b>Age (in years)</b>	
11	4 (1.3)
13	57 (18.4)
14	56 (18.1)
15	41 (13.2)
16	102 (32.9)
17	39 (12.6)
18	11 (3.5)
Mean age (Mean±SD)	15.1±1.4
<b>Family type</b>	
Nuclear	107 (34.5)
Joint	203 (65.5)
<b>Mother education</b>	
Illiterate	66 (21.3)
Primary	137 (44.2)
Secondary/higher	97 (21.3)
Secondary graduate/post graduate	10 (3.2)
<b>Mother occupation</b>	
Housewife	210 (67.7)
Unskilled worker	57 (18.4)
Skill worker	22 (7.1)
Services	21 (6.8)
<b>Father education</b>	
Illiterate	4 (1.3)
Primary	110 (35.5)
Secondary/higher	181 (58.4)
Secondary graduate/post graduate	15 (4.8)
<b>Father occupation</b>	
Unskilled worker	160 (51.6)
Service	80 (25.8)
Skilled worker	67 (21.6)
Unemployed	3 (1.0)

Almost 67.7% mothers were working as housewife and 51.6% fathers were working as unskilled worker.

Table 2 denotes that 71.4% participants believed that menstruation is natural process and 22.7% believed as abnormal process. Around 62.6% of participants believed for reason of menstruation is "Female becomes capable of child bearing".

**Table 2: Distribution of participants according to their knowledge, attitude, and practice of menstruation (N=310).**

Variable	Number (%)
<b>What is menstruation</b>	
Normal process	221 (71.4)
Abnormal process	68 (22.7)
Disease	5 (1.6)
Do not know	16 (4.3)
<b>Why menstruation occurs</b>	
Female becomes capable of child bearing	194 (62.6)
Cleans body of dirty blood	65 (21.0)
Sign of attaining physical maturity	33 (10.6)
Do not know	18 (5.8)
<b>Organ of reproduction</b>	
Vagina	148 (47.7)
Uterus	103 (33.2)
Ovaries	31 (10.0)
Do not know	28 (9.0)
<b>Physical changes during puberty</b>	
Growth of pubic hair	112 (36.1)
Breast budding	65 (21.0)
Hair in the armpit	54 (17.4)
Do not know	57 (18.4)
Voice changes	22 (7.1)
<b>Do you follow the ritual/restriction during menstruation?</b>	
No	94 (30.3)
Yes	216 (69.7)
<b>Source of information</b>	
Mother	193 (62.3)
Teacher	59 (19.0)
Elder sister	32 (10.3)
Friends	11 (3.5)
TV and radio	9 (2.9)
Book and magazine	6 (1.9)

Almost 9.0% participants did not know about organ of reproduction and 18.4% did not know about the physical changes during puberty.

Around 69.7% participants had followed cultural ritual/restriction during menstruation. Mother is the most frequent source of information regarding menstruation among participants.

Table 3 indicates that 12.9% participants were not aware about the features of STD. Pain in lower abdomen was the commonest sign (49.4%) felt by participants during menstruation followed by fever, redness of skin, itching sensation and burning micturition.

According to participants, vertical transmission (55.2%) is the commonest mode of transmission of STD followed by syringe, blood transfusion and kissing.

**Table 3: Distribution of participants according to their knowledge, attitude, and practice of Sexually transmitted diseases (N=310).**

Variables	Number (%)
<b>What are the sign/symptoms of STD?</b>	
Pain in the lower abdomen	153 (49.4)
Fever	98 (31.6)
Redness of skin	59 (19.0)
Itching sensation	55 (17.7)
Burning micturition	51 (16.5)
Foul smelling discharge	37 (11.9)
Genital ulcer	25 (8.1)
Painful defecation	10 (3.2)
Do not know	40 (12.9)
<b>Mode of transmission of STD</b>	
Vertical transmission	171 (55.2)
Syringe	126 (40.6)
Blood transfusion	68 (21.9)
Kissing	46 (14.8)
Coitus	45 (14.5)
Hugging	26 (8.4)
Shaking hands	10 (3.2)
Do not know	18 (5.8)
<b>Source of Information</b>	
Teacher	124 (40.0)
Mother	106 (34.2)
Friends	98 (31.6)
Books and magazines	93 (30.0)
Health worker/doctor	23 (7.4)
Relatives	12 (3.9)
<b>Preventive measures for STD</b>	
Safe sex	51 (16.5)
Safe blood transfusion	9 (2.9)
Use of disposable syringe	5 (1.6)
Do not know	245 (79.0)

Almost 5.8% participants did not know about mode of transmission of STD and only 14.5% participants believed that coitus is the culprit of STD transmission.

Teacher and mother were the main source of information for participants regarding STD. Table 4 signifies that 75.2% participants were aware about contraceptive methods. Almost 55.4% participants were aware about condom as contraceptive method followed by oral pills and permanent sterilization. Friend was the most frequent source (26.8%) source of information about contraceptive method.

## DISCUSSION

Poor knowledge in girls about contraception, STD (other than HIV/AIDS) and reproductive health is a matter of serious concern.<sup>1</sup> Present study found mean age of participants was 15.1 years which higher than the similar study done by Das B et al, Deb T et al, Balasubramanian P et al, Goel MK et al, Khanna A et al, Haldar A et al, Grover S et al, Kumar D et al and Joshi BN et al where

mean age was 10.7, 12.0, 13.5, 13.1, 13.2, 13.0, 17.2, 16.8 and 10.8 years respectively.<sup>4,9-15</sup>

**Table 4: Distribution of participants according to their knowledge and attitude of contraception.**

Variable	Number (%)
<b>Aware about sex education</b>	
No	82 (26.5)
Yes	228 (73.5)
<b>Aware about any contraceptive method</b>	
No	77 (24.8)
Yes	233 (75.2)
<b>If yes, name the method (n=233)</b>	
Condom	129 (55.4)
Oral pills	127 (54.5)
Female sterilization	95 (40.8)
Male sterilization	85 (36.5)
Copper –T	45 (19.3)
Withdrawal	9 (3.9)
Periodic abstinence	8 (3.4)
<b>Source of information</b>	
Friends	83 (26.8)
Mother	75 (24.2)
Health Worker/Doctor	53 (17.1)
Teacher	51 (16.5)
Media	28 (9.0)
Books and magazines	20 (6.5)

Study observed that less than 50.0% parents of participants had reached up to primary education level which is higher than the similar study done by Kumar D et al.<sup>4</sup> This shows low literacy level at study setting area. Almost 2/3 participants of our study were belonged to joint family which quite higher than the similar study done by Kumar D et al which is because of difference in study setting area of both the studies.

Present study found that 2/3 participants were of the view that menstruation is a normal cyclic process which is quit comparable with the similar study done by Khanna A et al and Dube S et al.<sup>4,16</sup> Only 4.3% participants gave answer “Do not know” about menstruation process which is not comparable with similar study done by Dube S et al, Khanna A et al and Kamalam JK et al.<sup>4,16,17</sup> Present study got satisfactory answer of the question ‘reason of menstruation cycle’ and ‘physical changes during puberty’ from higher number of participants. Regarding source of information, mother was the most frequent source. Similar finding was also observed by the similar study done by Das B et al, Kumar D et al, Nair P et al, Cakir M et al, Deo DS et al and Shanbhag D et al. In present study, around 69.7% participants had followed cultural ritual/restriction during menstruation which is higher than the similar study done by Das B et al.<sup>4,7,9,18-20</sup>

Almost 9.0% participants did not know about organ of reproduction which similar with the study done by Das B et al, Patel P et al, Drakshyani DK et al and Ali TZ et

al.<sup>9,21-23</sup> In present study, 12.9% participants were not aware about STD diseases which is very low in comparison to the similar study done by Das B et al, Tiwari VK et al and Grover S et al.<sup>9,11,24</sup> This study found that pain in lower abdomen was the commonest sign (49.4%) felt by participants during menstruation followed by fever, redness of skin, itching sensation and burning micturition. This finding is comparable with study done by Das B et al and Kumar D et al.<sup>9,14</sup> Present study found low awareness regarding mode of transmission of STD which is not comparable with study done by Das B et al and Basir G et al.<sup>9,25</sup>

## CONCLUSION

Menstrual hygiene and prevention of STD diseases should be considered important issue at all the levels of health care system, where number of factor influence in the awareness and practice in rural area. Education regarding reproductive health should be included in the curriculum in all schools. It can be given by didactic session, interpersonal communication, mass media, television and health lecture by specialist. Policy makers should be make policy regarding to increase awareness reproductive health especially in rural area.

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