

Original Research Article

DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20192310>

Knowledge, attitude, practice and perception about menstruation and menstrual hygiene among adolescent school girls in rural areas of Raigad district

Jyoti Parle*, Zoya Khatoon

Department of Physiotherapy, MGM College of Physiotherapy, Kamothe, Navi Mumbai, Maharashtra, India

Received: 14 March 2019

Revised: 10 May 2019

Accepted: 13 May 2019

***Correspondence:**

Dr. Jyoti Parle,
E-mail: ajparle@gmail.com

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ABSTRACT

Background: Menstrual hygiene is essential to decrease susceptibility of urinary and reproductive tract infection and promotes better health of women. Cultural and religious beliefs concerning menstruation such as food taboos and untouchability have harmful impact on dignity and wellbeing of adolescent girls. As a consequence many girls lack appropriate and satisfactory information regarding menstruation and menstrual hygiene. Thereby it is crucial to assess knowledge, attitude, practice and perception about menstruation and menstrual hygiene.

Methods: It was a cross-sectional study, conducted among 600 adolescent school girls in rural areas of Raigad district to assess knowledge, attitude, practice and perception about menstruation and menstrual hygiene via self made questionnaire. The data collected was analyzed using SPSS version 24. Chi square test was applied to find association between variables.

Results: Overall more than half 53.3% and 52.8% of the respondent had poor knowledge and poor practice on menstruation and menstrual hygiene respectively. Despite of poor knowledge majority of respondent 55.2% heard about menstruation before attaining menarche. Factors that were significantly associated with knowledge of menstruation and menstrual hygiene were adolescent age ($X^2=267.294$, $p=0.00$), mother's education ($X^2=77.331$, $p=0.00$) and practice on menstruation ($X^2=111.745$, $p=0.00$).

Conclusions: Health education strategies and awareness programme on menstruation and menstrual hygiene should be framed to promote better health of adolescent girl.

Keywords: Menstruation, Menstrual hygiene, Knowledge, Practice, Rural areas

INTRODUCTION

In India, adolescence accounts for 20% of countries population.¹ According to Census 2011, there are around 1.2 million female in which 0.8 million lives in rural areas of Raigad district. Adolescent belong to vital age group, not only because they are entrant population to parenthood but also because they are threshold between childhood and adulthood. Menarche is the most important event take place in adolescent girl; generally it starts age

between 10-15 years. Menstruation is the onset of puberty, it is a physiological process among females who experience shedding of blood for 1-7 days from uterus, in every month from the age of maturity until menopause.¹ Bleeding generally lasts between 2-7 days, some with lighter flow and some with heavier.

Menstruation is still regarded as something unclean, dirty and matter of embarrassment in Indian society. Various aspects such as physiology, pathology and psychology of

menstruation culture, religion and socio-demographic status have been found to be associated with health and wellbeing of adolescent girls, consequently it is an imperative issue in relation to morbidity and mortality of female population.¹

Personal hygiene is hygienic and safe practice during menstruation. Menstrual hygiene is an issue for adolescent girls in developing countries, predominantly when attending school. Good menstrual hygiene means sufficiently cleaning external genitalia daily, use of sanitary pad and regularly changed pad every 3-5 hours per day to prevent odour and infection.² Practice related to menstrual hygiene is essential to ensure prevention of disease and better health of adolescent girls. Unhygienic menstrual practices can affect the health of the girls and there is an increased vulnerability to reproductive tract infections, urinary tract infections, pelvic inflammatory diseases and other complications. To reduce burden of all reproductive phase complications, it is important to educate adolescence girl. Women having better knowledge about menstrual hygiene and out of harm's way practices are most likely to practice adequate sanitation during their menstruation are less vulnerable to urinary and reproductive tract infection.¹

In India, women's perceptions of menstruation differ with regards to their tradition, culture and religion.³ Adolescent girls generally hesitate and embarrassed to talk about menstruation and menstrual problem with their parent, friend and teacher which can affects their health. Many studies has shown that majority of adolescent girls had inadequate and inappropriate knowledge on menstruation, physiology of menstruation and follow inaccurate menstrual practice to maintain hygiene. Studies have shown that young girls, who lack knowledge about menstruation, are prone to suffer from gynaecological problems. Hence it is indispensable to assess knowledge, attitude, practice and perception about menstruation and menstrual hygiene among adolescent school girl, which will help to plan and execute necessary educational programs or interventions in school curriculum to create awareness.

METHODS

This is cross-sectional study conducted among 600 students in rural areas of Raigad district (Kalamboli, Navade) for 6 month from September 2018 to February 2019. Convenient sampling technique was used for sample collection. We had taken 6 schools from rural areas of Raigad district. The adolescent girls of age between 10-18 years and student who had menarche and regularly menstruate were included in study. The study was conducted after obtaining approval from ethical committee, permission also obtained from school principle. Informed and written consent of subject was taken before starting procedure. Method and purpose of this study was explained to the subject. Participation was entirely voluntary and confidentiality was ensured.

Respondent's who had not given consent and who had not completed questionnaire was excluded from the study. Data were collected using self made questionnaire which was validated by ethical committee. The questionnaire was translated into Marathi and Hindi for student who may find easier to complete in local language. Questions were asked about respondents' socio demographic characteristics, knowledge, attitude, practice and perception on menstruation and menstrual hygiene. The collected data was analyzed using SPSS version 24. Chi square test was applied to find association between different variables of menstruation and menstrual hygiene. P value less than 0.05 was considered to be significant.

RESULTS

The study was conducted among 600 adolescent girls from rural areas of Raigad district. The majority of respondents 430 (71.7%) are in age group 13-15 years. The mean age of participant was 13.7 years ($SD \pm 1.39$ years), around 257 (42.8%) participant are in 9th grade. The majority of respondent parent's had secondary School education (Table 1).

The most of respondent 332 (55.2%) had heard about menarche before menstruation and main source of information was the respondents mother 246(74.09%), about 409 (68.1%) said menstruation is normal process, around 168(28%) respondent said vagina is the organ from which menstrual blood came then abdomen 95 (15.8%) and bladder 94 (15.6%). Most of respondent 555 (92.4%) doesn't know about menstrual hygiene. Overall more than half 320 (53.3%) of the respondent had poor knowledge while 280 (46.7%) had good knowledge on menstruation and menstrual hygiene (Table 2).

About 352 (58.6%) of respondents describe their reaction to first menses was discomfort and scary 158(26.3%), around 174 (29.0%) of the participant remain absent from school during menstruation (Figure 1). The reason for absenteeism from school was mainly lack of toilet facilities 68 (39.08%) and fear of unexpected bleeding 71 (40.80%) (Figure 2), 397 (66.1%) respondent think buying pad from store is embarrassing, 360 (59.9%) participant attend social activity and 543 (90.3%) bath daily during menstruation. About 534 (88.9%) of respondent were not allowed to visit holy places during menstruation (Table 3).

The majority of participant 515 (85.8%) used absorbent material during menstruation and around 511 (85.2%) used sanitary pad where as 87 (14.5%) use cloth during menstruation. The respondent who used cloth during menses was clean their cloth with soap and water 79 (90.8%) and dries the cloth inside the house 62 (71.26%). About 295 (49.2%) changes their pad twice per day. Overall 317 (52.8%) of respondent had poor practice while 283 (47.1%) had good practice during menstruation (Table 4).

Table 1: Socio-demographic variables (n=600).

Variables	Frequency	Percentage (%)
Age (in years)		
10-12	111	18.5
13-15	430	71.7
16-18	59	9.9
Grade		
6 th	69	11.5
7 th	80	13.3
8 th	87	14.5
9 th	257	42.8
10 th	107	17.8
Religion:		
Hindu	544	90.7
Muslim	53	8.8
Christian	1	0.2
Others	2	0.3
Father's education		
Illiterate	18	3.0
Literate	169	28.2
Primary school	58	9.7
Secondary school	220	36.7
College/ diploma and above	135	22.5
Mother's education		
Illiterate	66	11.0
Literate	156	26.0
Primary school	115	19.2
Secondary school	192	32.0
College/diploma and above	71	11.8
Father's occupation		
Farmer	15	2.5
Government employee	100	16.7
Daily labourer	118	19.7
Other	367	61.2
Mother's occupation		
Housewife	539	89.8
Farmer	8	1.3
Government employee	9	1.5
Daily labourer	13	2.2
Other	31	5.2
Family have TV/Radio		
Yes	551	91.8
No	49	8.2

Knowledge regarding menstruation and menstrual hygiene was poor still participant shows positive perception towards importance of education regarding menstruation and feels that more nutritious diet should be consumed during menstruation (Table 5).

Table 2: Knowledge on menstruation and menstrual hygiene (n=600).

Variables	Frequency	Percentage (%)
Menstruation		
Normal process	409	68.1
Disease	7	1.2
Curse of god	23	3.8
Don't know	161	26.8
Cause of menstruation		
Hormones	317	52.7
Curse of god	18	3.0
Caused by disease	6	1.0
Don't know	259	43.1
Organ does menstrual blood comes		
Uterus	89	14.8
Vagina	168	28.0
Bladder	94	15.6
Abdomen	95	15.8
Don't know	154	25.6
Heard about menstruation before attaining menarche		
Yes	332	55.2
No	268	44.6
*Source of informant		
Mother	246	74.09
Teacher	22	6.62
Friend	54	16.26
Book	5	1.50
Media(TV/Radio)	4	1.20
Know about menstrual hygiene		
Yes	45	7.5
No	555	92.4
Menstrual blood is unhygienic		
Yes	184	30.6
No	227	37.8
Don't know	189	31.4
Common to experience pain/discomfort		
Yes	433	72.1
No	81	13.5
Don't know	86	14.3
Symptoms prior to menstruation		
Yes	310	51.6
No	103	17.1
Don't know	187	31.1
Menstruation continue throughout life		
Yes	153	25.5
No	302	50.2
Don't know	145	24.1
Knowledge score		
Good	280	46.7
Poor	320	53.3

There is a statistically significant association between the knowledge ($4.09 \pm 2.20.7$) and practice (5.27 ± 1.266) of menstruation and menstrual hygiene ($X^2 = 111.745$,

$p=0.00$). There is a statistically significant association between the knowledge ($4.09\pm2.20.7$) and selected variables such as age (13.7 ± 1.399) of participant

($X^2=267.294$, $p=0.00$) and Mother's education (3.08 ± 1.221) respectively on menstruation and menstrual hygiene ($X^2=77.331$, $p=0.00$) (Table 6).

Table 3: Attitude on menstruation and menstrual hygiene (n=600).

Variables	Frequency	Percentage (%)
Reaction to first menses		
Happy	27	4.5
Scared	158	26.3
Discomfort	352	58.6
Emotional disturbance	63	10.5
Attend school during menses		
Yes	426	70.9
No	174	29.0
*If no why		
Lack of toilet facilities	68	39.08
Fear of unexpected bleeding	71	40.80
Lack of material or pad	8	4.59
Presence of menstrual symptoms	18	10.34
Lack of water	4	2.29
Lack of disposal facilities	3	1.72
Menstruation good for health		
Yes	432	71.9
No	168	28.0
Buying pad is embarrassing		
Yes	397	66.1
No	203	33.8
Attend social activities		
Yes	360	59.9
No	240	39.9
Bath daily during menses		
Yes	543	90.3
No	57	9.5
Influences of hot & cold food on menses		
Yes	102	17.0
No	159	26.5
Don't know	339	56.4
Visit holy places during menses		
Yes	66	11
No	534	88.9
Perform household activities during menses		
Yes	389	64.7
No	211	35.1

Table 4: Practices of menstruation (n=600).

Variables	Frequency	Percentage (%)
Use absorbent material		
Yes	515	85.8
No	85	14.2
Type of material use during menstruation		
Sanitary pad	511	85.2
Napkin	2	0.3
Toilet roll	0	0
Cloth	87	14.5
Other	0	0

Continued.

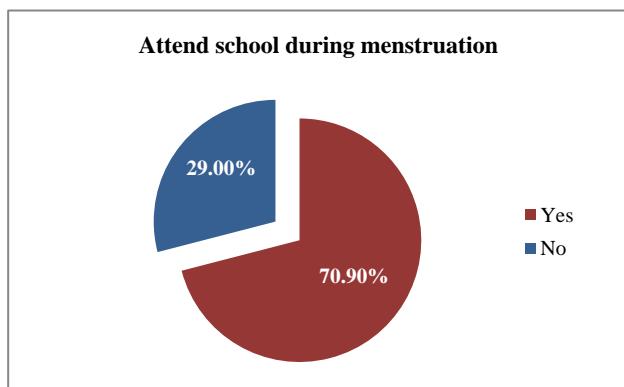
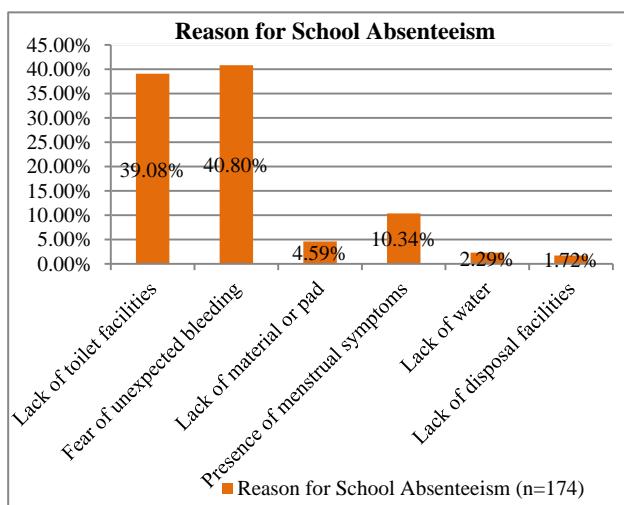
Variables	Frequency	Percentage (%)
Using cloth how do you clean it		
Soap and water	79	90.80
Only water	5	5.74
Other	2	2.29
How do you dry the cloth		
Sunlight	22	25.28
Inside house	62	71.26
Number times pad/cloth change per day		
Three and more	254	42.3
Twice	295	49.2
Once	50	8.3
Dispose pads		
Dustbin	462	77.0
Drain	4	0.7
Toilet	47	7.8
Open field	0	
Other	3	0.5
Types of wrap used for disposing pad		
Papers	257	42.8
Plastic bag	239	39.8
Not wrap	19	3.2
Other	1	0.2
Change panty daily during menses		
Yes	489	81.5
No	111	18.5
Clean your genitalia during menses		
Yes	573	93.5
No	27	4.5
Practice score		
Good	283	47.1
Poor	317	52.8

Table 5: Perception on menstruation and menstrual hygiene.

Variables	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Menstruation curse from god	300 (50)	127 (21.2)	79 (13.2)	81 (13.5)	13 (2.2)
Women should be isolated During menstruation	252 (42.0)	148 (24.7)	103 (17.2)	82 (13.7)	15 (2.5)
Okay to do household activities	79 (13.2)	118 (19.7)	77 (12.8)	243 (40.5)	83 (13.8)
Okay to visit holy places during menses	203 (33.8)	161 (26.8)	88 (14.7)	96 (16.0)	52 (8.7)
Women should restricted from attending social function during menstruation	229 (38.2)	171 (28.5)	89 (14.8)	74 (12.3)	37 (12.3)
More nutritious diet should consumed	28 (4.7)	38 (6.3)	76 (12.7)	208 (34.7)	250 (41.7)
Talking about menstrual health is embarrassing	129 (21.5)	112 (18.7)	93 (15.5)	189 (31.5)	77 (12.8)
Comfortable to confide to relative/friend regarding menstrual problem	101 (16.8)	164 (27.3)	90 (15.0)	163 (27.2)	82 (13.7)
Hide my menstrual period from male members of my family	62 (10.3)	66 (11.0)	63 (10.5)	232 (38.7)	177 (29.5)
Education regarding menstruation is important	24 (4.0)	25 (4.2)	74 (12.3)	192 (32.0)	285 (47.5)

Table 6: Association between knowledge and practice and selected variables.

Variables	Mean & SD	Statistical indices
Knowledge	4.09±2.20.7	$\chi^2=111.745$ df= 63
Practice	5.27±1.266	p=0.00
Knowledge	4.09±2.20.7	$\chi^2=267.294$ df= 63
Age	13.7±1.399	p=0.00
Knowledge	4.09±2.20.7	$\chi^2=77.331$ df= 36
Mother's education	3.08±1.221	p=0.00

**Figure 1: School absenteeism.****Figure 2: Reason for school absenteeism.**

DISCUSSION

Knowledge on menstruation and menstrual hygiene

Knowledge on menstruation and menstrual hygiene is essential in life of every adolescence girl. It is known fact that poor menstrual hygiene can lead to reproductive and urinary tract infection. So it's today's need to assess knowledge, attitude, practice and perception on menstruation and menstrual hygiene in adolescent girls, which will help to implicate necessary awareness among them. In this study, knowledge on menstruation and menstrual hygiene was poor (53.3%) which was contradicting the study done in Nigeria.⁴ That shows

health education programme needs to be strengthened in rural areas.

This study revealed considerably high level of awareness of menarche (55.2%) and main source of information were the mother (74.09%). This was similar to finding of study done in Nigeria.⁴ This can be due the fact that in Indian culture children are usually closer to their mother. Also the respondent were not aware of menstrual hygiene (92.4%), this might be due to limited knowledge on menstruation and menstrual hygiene of mother itself. Generally mother and other women hesitate from discussing the menstrual issues with adolescent girls, because of which young girls grow up with limited knowledge on menstruation despite the fact that they know about menstruation before attaining menarche.

Attitude toward menstruation and menstrual hygiene

A variety of factors are known to influence menstrual behaviours and attitude, prominent ones residential status (urban and rural), culture and religion belief. The manner in which girls learn about menstruation and its associated changes may have an impact on her response to the event of menarche. In this study participant reaction to first menses was discomfort or scared. This was similar finding of study carried out in Pakistan by Ali et al and Nigeria (in tribal area).^{4,13} Girls are not given adequate information and not properly, mentally prepared for the first menstruation, that is why it's a normal tendency when girl first see blood they get scared. There are lots of myths, belief related to menstruation, also behaviour of family member changes because of which they feel discomfort. Study shows 29% of respondent remain absent during menstruation. Reason for absenteeism was girls having fear of unexpected bleeding and lack of toilet facilities in schools. More than half respondent (66.1%) think buying pad from the store is embarrassing. This is social stigma attached to menstruation because of which women generally hide their menstruation from other people, which causes many girl and women to carry out dangerous hygiene practice.

Practices on menstruation

Overall hygiene practice during menstruation was poor 52.8%. Though menstruation is natural process, it is linked with several misconceptions and poor menstrual practices that can result into adverse health outcomes.

Hygiene related practices of women during menstruation are of considerable important, as it has a health impact in terms of increased vulnerability to reproductive tract infection. Today millions of women suffers of reproductive tract infection and its complication and often transmitted to the offspring during pregnancy. Therefore increase knowledge of menstruation from childhood may escalate safe practice and may help in mitigating the suffering of millions women. Despite the study conducted in rural area we have found majority 85% of adolescent girls use sanitary pad during menstruation, but frequency of changing pad was twice a day which is not good menstrual hygiene practice. To have good practice women should change their pad 3-5 hourly per day.² study shows frequently practiced method of disposal of the used absorbent were, wrapping it in paper (42.8%) or plastic (39.8%) and disposing it in dustbin (77.0%). Regarding personal hygiene around 4.5% of respondent don't clean their genitalia during menses and others use only water to clean, which will increase growth of bacteria in genital area and prone to infection, which increase risk of gynaecological health problems among adolescent girls.

Perception about menstruation and menstrual hygiene

India is multicultural country, due to different culture and religion various restrictions were practice by adolescent girls. There are ignorance, unawareness, social stigma and false perception about menstruation, which hamper intellectual and mental development of young girls and women. Majority of respondent shows negative perception towards visiting holy place. They feels shy to discuss about menstruation, discomfort to confide to relative and friend about menstrual problem possibly because same were practiced by their mother, elderly sister in family and friend.

CONCLUSION

The study conclude that there was poor knowledge on menstruation and menstrual hygiene and majority of adolescent do not observed good hygienic practice. Effort has to be deposit into ensuring, adolescent girls are well knowledgeable on meaning of menstruation significance of good menstrual hygienic practice. Since mother was key source of information about menstruation, family member particularly mother have to aware of the menstruation and menstrual hygiene. The effort must be taken to bring about change in myths, misconception, restriction and traditional taboos concerning menstruation, so as to further develop and promote the menstrual hygiene and practice. Health education strategies and awareness have to be framed up for better health of adolescent girls.

ACKNOWLEDGEMENTS

We would like to thank all those who helped and guided us in conducting the study. We would like to thank all our

participants for giving us the opportunity to conduct this study and for completely co-operating throughout the study. Very special thanks to my parents, brother and colleagues for their co-operation and for creating friendly working atmosphere for successful completion of research.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Parle J, Khatoon Z. Knowledge, attitude, practice and perception about menstruation and menstrual hygiene among adolescent school girls in rural areas of Raigad district. *Int J Community Med Public Health* 2019;6:2490-7.