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A Study of Knowledge, Attitude and Practice of Menstrual Hygiene Awareness in School Going Girls

Dr. Akshita Kansal[1], Dr. Abhijit Shinde[2], Dr. Sonal Nikam Shinde[3], Dr. Sunil Natha Mhaske[4], Dr. Suresh Waydande[5]

[1]Junior Resident, Department of Paediatric,[2] Associate Professor, Department of Paediatrics, [3]Assistant Professor, Department of Paediatrics, [4]Professor and Dean, Department of Paediatrics ,[5]Head of Department, Department of Paediatrics
DVVPF's Medical College, Ahmednagar, India.

Corresponding Author: Dr. Akshita Kansal

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ABSTRACT

Menstruation is part of the female reproductive cycle and represents an important developmental stage where menstrual hygiene should be observed to protect the health and dignity of women and girls[4]. wash with soap, water, etc. and maintain personal hygiene[5.] Our study Shows that the majority, or 60% (300 participants), identified their mother as their main educator about menstruation. Reactions when first menses occurred shows Half of the participants (50%) reported that their menarche was celebrated, indicating a positive and culturally significant acknowledgment of this milestone. However, 70 girls (14%) reacted by crying, suggesting feelings of sadness or distress. The most commonly used product, pads were utilized by 70% of participants (350 girls). This suggests that disposable sanitary pads are the preferred choice, likely due to ease of use and widespread availability. Our study sheds light on the menstrual health practices, challenges, and support needs of school-going girls. We identified key challenges in managing menstrual hygiene, including inadequate disposal facilities, lack of privacy, and restricted access to menstrual products, compounded by stigma.

Keywords: *Menstrual hygiene, adolescent girls, knowledge, attitude, practice.*

INTRODUCTION

Young people make up one-fifth of India's population (21.4% or 243 million) and have the potential to drive economic change and growth in the country[1]. The time between childhood and adulthood is known as adolescence. Adolescence is the time when girls first get their period. Periodic and cyclical endometrial shedding along with blood loss is known as menstruation. It occurs roughly 28 days apart from the menarche, when menstruation begins, and the menopause, when menstruation stops[2]. Menstrual hygiene has been the subject of numerous studies conducted in India and outside, however to yet, relatively few of these studies have been conducted in West Bengal's rural areas. For instance, research conducted in India by Ray S et al.[3] in West Bengal and Jailkhani et al. [1] in Mirat. Menstruation is part of the female reproductive cycle and represents an important developmental stage where menstrual hygiene should be observed to protect the health and dignity of women and girls[4]. wash with soap, water, etc. and maintain personal hygiene.[5]

MATERIALS & METHODS

Study design- Cross sectional study
Study area – Schools near Tertiary care centre
Study –
Inclusion criteria

- All school going girls of age 10-18 years whose parents had given the consent for interviewing them on menstrual health were included in the study.

Exclusion criteria

- Those who denied consent.
- Those who are in co-operative.

Study population - All school going adolescent girls were of age 10–18 years
Study period- 12 months
Sample size -500 school going girls were interviewed and were included in our study

Data collection
Study started after taking permission from ethical institutional committee a survey made in Schools near our tertiary care centre were visited and A structured questionnaire was administered to gather information on participants' knowledge about menstruation, attitudes towards menstrual hygiene, and their hygiene practices.

RESULT

Table 1 Distribution of girls according to age

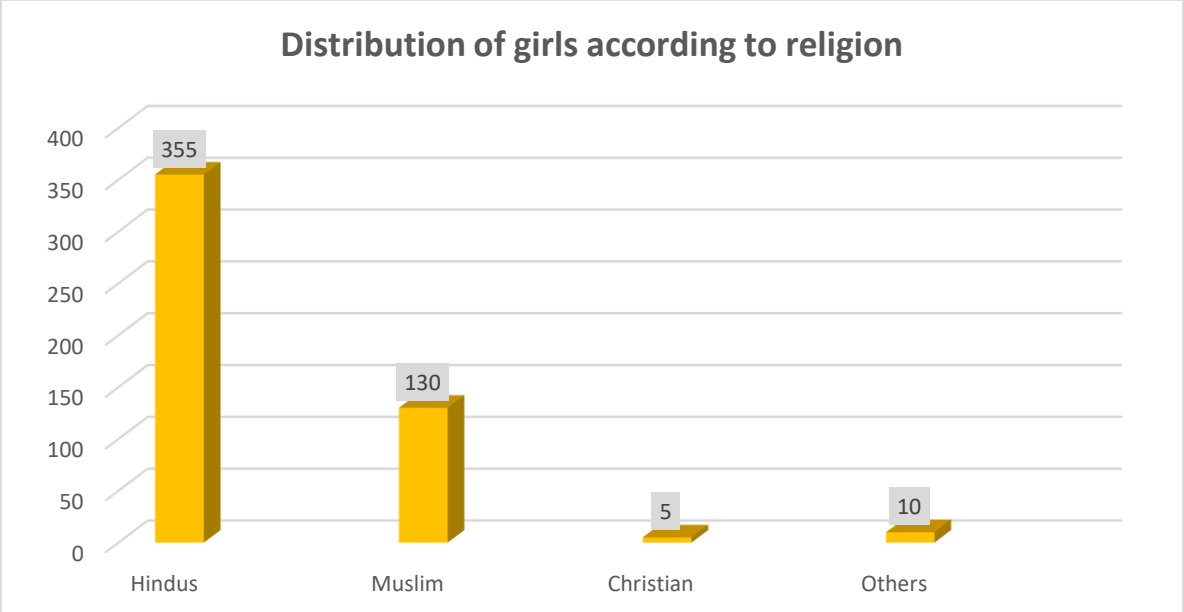
Age group (in years)	Frequency	Percentage
10–12	250	50.00%
13-15	200	40.00%
16-18	50	10.00%
Total	500	100%

The largest group, aged 10–12 years, comprised 250 participants, making up 50% of the total sample. This was followed by the 13–15-year age group with 200 participants, representing 40% of the sample. The smallest group, aged 16–18 years, included 50 participants, accounting for 10% of the total.

Table 2- distribution of girls according to class

Class	Frequency	Percentage
6-8	250	50.00%
9-10	200	40.00%
11-12	50	10.00%
Total	500	100%

The study participants were categorized based on their class in which they studied, with a total of 500 girls. The majority, or 50% of the sample, were students from classes 6 to 8, totalling 250. Below bar chart shows distribution of girls according to religion participants. This was followed by 200 students from classes 9 to 10, making up 40% of the sample. Finally, 50 students from classes 11 to 12 represented the remaining 10%.



The study participants were categorized by religious affiliation, with a total sample size of 500. The majority of participants were Hindu, comprising 355 individuals, or 71% of the sample. Muslim participants made up the second largest group, with 130 individuals, representing 26%. Christians accounted for 1% of the sample, totalling 5 participants, while individuals from other religions made up the remaining 2%, with 10 participants.

Table 3. Distribution of girls according to who give first education regarding menses

Educator	Frequency	Percentage
Mother	300	60.00%
Friend	80	16.00%
Teacher	50	10.00%
Health professional	50	10.00%
Other	20	4.00%
Total	500	100.00

The above table shows: The majority, or 60% (300 participants), identified their mother as their main educator about menstruation. This highlights the role of family, especially mothers, in providing initial guidance and support on menstrual health. Friend: Friends were the source of information for 16% (80 participants), suggesting peer influence and the value of shared experiences in learning about menstruation. Teacher: Teachers served as educators for 10% (50 participants), pointing to the role of schools in providing menstrual health information, though to a lesser extent than family or friends. Health Professional: Another 10% (50 participants) received menstrual education from health professionals, indicating that some girls accessed formal, health-based knowledge outside of school. Other Sources: A smaller group (4%, or 20 participants) cited other sources for information, which may include siblings, relatives, or media.

Table 4. Distribution of girls according to knowledge about menstrual health and hygiene.

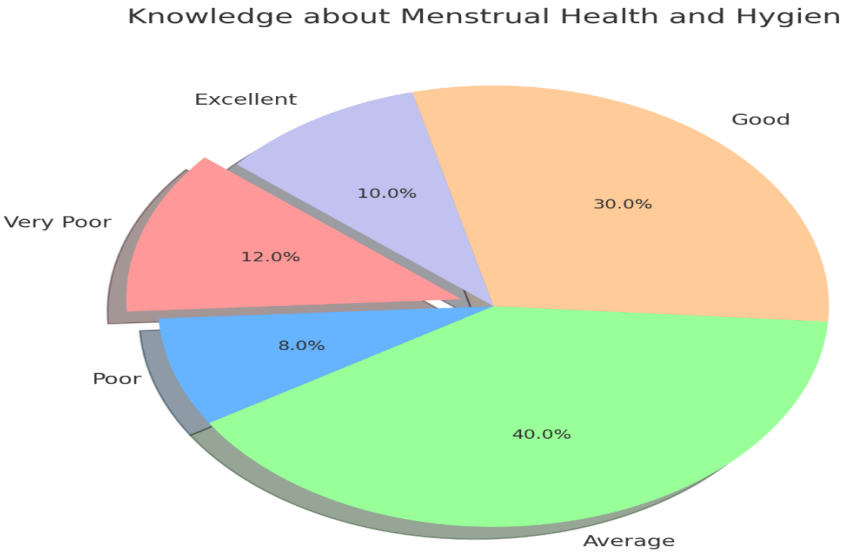
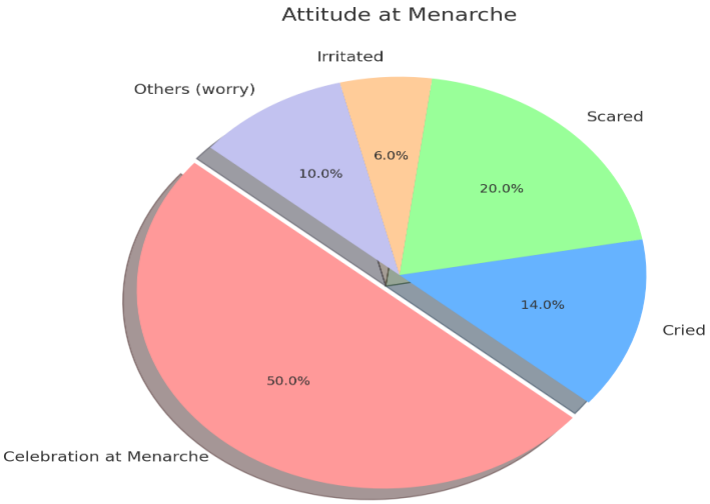


Table 5. Distribution of girls according to location

Location	Frequency	Percentage
Urban	200	40.00%
Rural	300	60.00%
TOTAL	500	100.00

The above table shows rural participants accounted for 60% of the sample, total of 300 individuals, while urban participants made up the remaining 40%, with 200 individuals.

Table 6. Distribution of school girls according to knowledge of menstruation



The Above pie chart shows Half of the participants (50%) reported that their menarche was celebrated, indicating a positive and culturally significant acknowledgment of this milestone. However, 70 girls (14%) reacted by crying, suggesting feelings of sadness or distress. A further 100 participants (20%) reported feeling scared, reflecting fear or apprehension about this new experience. Some participants (6%, or 30 individuals) expressed irritation, possibly due to the discomfort or unfamiliarity of the situation, while 10% (50 participants) described other negative emotions, such as worry.

Table 7. Distribution of school girls according to restrictions

Restrictions	Frequency	Percentage
Don't enter pooja room or read Quran	300	60.00%
Don't play/physical work/exercise	30	6.00%
Don't go to school	5	1.00%
Don't talk to boys	5	1.00%
Don't enter the kitchen	50	10.00%
Don't visit others' homes	5	1.00%
Don't attend family functions	10	2.00%
Segregated in the house	5	1.00%
No restrictions	90	18.00%

The study examined cultural and social restrictions experienced by 500 school-going girls during menstruation, revealing various limitations: Religious Restrictions: The majority (60%, or 300 participants) reported being restricted from entering prayer rooms or reading holy texts, such as the Pooja room or Quran, highlighting strong religious-based limitations during menstruation. Restricted Physical Activity: A smaller percentage (6%, or 30 participants) mentioned they were not allowed to engage in physical activities, such as playing or exercising, which may impact their daily routines and well-being. Kitchen Restrictions: Around 10% (50 participants) were restricted from entering the kitchen, reflecting cultural beliefs around purity and food preparation. Other Restrictions: Minor restrictions included not attending school (1%, or 5 participants), avoiding interaction with boys (1%, or 5 participants), and refraining from visiting others' homes (1%,

or 5 participants). Additionally, 1% (5 participants) experienced segregation within the household, and 2% (10 participants) were restricted from attending family gatherings. No Restrictions: Encouragingly, 18% (90 participants) reported facing no restrictions, indicating a shift toward more accepting attitudes in some families and communities.

Table 8. Distribution of school girls according to attitude towards restrictions

Attitude Towards Restrictions	FREQUENCY	PERCENTAGE
By own wish	90	18.00%
By force of family members	320	64.00%
No restrictions	90	18.00%

Table 9. Distribution of school girls according place where they get their menstrual products

Place of getting menstrual products	Frequency	Percentage
Home	250	50.00%
School	100	20.00%
Local store	100	20.00%
Health clinic	25	5.00%
Others	25	5.00%
Total	500	100.00%

Table 10. Distribution of school girls according Change your menstrual product during school hours

Change your menstrual product during school hours?	Frequency	Percentage
Every 2-3 hours	150	30.00%
Every 4-6 hours	200	40.00%
Once in the school day	100	20.00%
Not sure	50	10.00%
Total	500	100.00%

Table 11. Distribution of girls according to Material used

Material used	Frequency	Percentage
Pads	350	70
Cloth/napkin	100	10
Tampoons /cup	0	0
Others	50	5

The most commonly used product, pads were utilized by 70% of participants (350 girls). This suggests that disposable sanitary pads are the preferred choice, likely due to ease of use and widespread availability. Cloth/Napkin: Cloth or reusable napkins were used by 10% of participants (100 girls), indicating that some girls rely on traditional methods, possibly due to cultural practices, cost, or limited access to disposable products. Tampons/Cups: None of the participants reported using tampons or menstrual cups, which may reflect a lack of awareness, availability, or cultural acceptance of these alternatives in the population. Other: 5% of participants (50 girls) used other types of products, which may include homemade solutions or less common menstrual products.

Table 12. Distribution of girls according to number of pads used

Number of pads used	Frequency	Percentage
≥4 pads	50	14.29%
2-3 pads	250	71.43%
<2 pads	50	14.29%
Total	350	100.00%

Table 13. Distribution of girls according to Method of discarding pads/clothes

Method of discarding pads/cloths	Frequency	Percentage
Dustbin	300	60.00%
Burn	100	20.00%
Flush in toilet	50	10.00%
Others	50	10.00%

The above table shows Dustbin: The majority, 60% (300 participants), disposed of used menstrual products in dustbins, indicating a common, accessible, and environmentally safe disposal method. Burning: Another 20% (100 participants) reported burning used products, a practice that may be influenced by cultural or practical reasons but can have environmental and health implications if not done properly. Flushing in Toilet: About 10% (50 participants) flushed used products down the toilet, which can cause plumbing issues and environmental concerns, highlighting a need for better disposal education. Other Methods: The remaining 10% (50 participants) used other disposal methods,

Table 14. Distribution of girls according to access to a cleaning of vagina.

Cleaning of vagina	Frequency	Percentage
>2 times	350	70.00%
≤2 times	150	30.00%

Table 15. Distribution of girls according to access to a clean and private place to change menstrual products at school

Access to a clean and private place	Frequency	Percentage
Yes	200	40.00%
No	100	20.00%
Sometimes	200	40.00%
Total	500	100.00

Table 16. Distribution of girls according to handwash

Handwash	Frequency	Percentage
Always	200	40.00%
Sometimes	200	40.00%
Rarely	90	14.00%
Never	10	6.00%
Total	500	100.00%

Table 17. Distribution of girls according to wheather they feel comfortable discussing menstrual hygiene with teachers or school staff

Feel comfortable discussing menstrual hygiene with teachers or school staff	Frequency	Percentage
Yes	300	60.00%
No	200	40.00%
Total	500	100.00

Table 18. Distribution of girls according to challenges faced

Challenges	Frequency	Percentage
Lack of access to menstrual products	50	10.00%
Inadequate disposal facilities	150	30.00%
Insufficient privacy	150	30.00%
Stigma or embarrassment	50	10.00%
Lack of information or education	50	10.00%
Other	50	10.00%
Total	500	100.00%

The study identified several challenges faced by school-going girls in managing menstrual hygiene, with a sample of 500 participants reporting various obstacles:
Inadequate Disposal Facilities: The most common challenge, cited by 150 participants (30%), Insufficient Privacy: Also reported by 150 participants (30%), insufficient privacy was a major concern. Lack of Access to Menstrual Products: A total of 50 participants (10%) reported limited access to menstrual product Stigma or Embarrassment: Another 50 participants (10%) expressed feelings of stigma or embarrassment surrounding menstruation. Lack of Information or Education: Also cited by 50 participants (10%), Other Challenges: An additional 50 participants (10%) mentioned other issues, such as discomfort or lack of support.

Table 19. Distribution of girls according to additional support or resources would help improve your menstrual hygiene practices?

Additional support or resources would help improve your menstrual hygiene practices	Frequency	Percentage
More information and education	80	16.00%
Better access to menstrual products	100	20.00%
Improved facilities for changing and Disposing of products	140	28.00%
Supportive staff and policies	40	8.00%
Increased privacy	140	28.00%
TOTAL	500	100.00

More Information and Education: 80 participants, or 16% of the sample, expressed a need for more comprehensive education about menstruation, indicating a gap in knowledge that could be addressed through school-based programs. Better Access to Menstrual Products: A total of 100 participants, accounting for 20%, identified the need for more accessible menstrual products, emphasizing affordability and availability as essential for improved menstrual health management. Improved Facilities for Changing and Disposal: 140 participants (28%) noted a lack of adequate facilities for changing and disposing of menstrual products, highlighting infrastructure as a major area for improvement. Supportive Staff and Policies: 40 participants, or 8%, felt the need for more supportive school staff and policies around menstruation, suggesting that a positive school environment is crucial for menstrual comfort and hygiene. Increased Privacy: Also 140 participants (28%), increased privacy was identified as a critical need, underscoring the importance of personal space for menstrual hygiene practices.

DISCUSSION

Age

Our study shows the largest group, aged 10–12 years, comprised 250 participants, making up 50% of the total sample. This was followed by the 13–15-year age group with 200 participants, representing 40% of the sample. The smallest group, aged 16–18 years, included 50 participants, accounting for 10% of the total however stud by Purva Shoor et al [6] Most of the adolescent girls were in the age group of 10–13 years (44.24%) followed by 13–16 years (42.04%) and 16–19 years (13.72%).which is similar to study .The study participants were categorized based on their class in which they studied , with a total of 500 girls. The majority, or 50% of the sample, were students from classes 6 to 8, totalling 250 participants. This was followed by 200 students from classes 9 to 10, making up 40% of the sample. Finally, 50 students from classes 11 to 12 represented the remaining 10%.

Religion

Our study shows the study participants were categorized by religious affiliation, with a total sample size of 500. The majority of

participants were Hindu, comprising 355 individuals, or 71% of the sample. Muslim participants made up the second largest group, with 130 individuals, representing 26%. Christians accounted for 1% of the sample, totaling 5 participants, while individuals from other religions made up the remaining 2%, with 10 participants however study by Purva Shoor et al [6] shows Two hundred and fifty-eight (57.08%) girls were Hindus, 193 (42.69%) were Muslims, and 1 (0.22%) was a Christian which is lower than our study

First education regarding menses

Our study shows that the majority, or 60% (300 participants), identified their mother as their main educator about menstruation. This highlights the role of family, especially mothers, in providing initial guidance and support on menstrual health. Friend: Friends were the source of information for 16% (80 participants), suggesting peer influence and the value of shared experiences in learning about menstruation. Teacher: Teachers served as educators for 10% (50 participants), pointing to the role of schools in providing menstrual health information, though to a lesser extent than family or friends. Health Professional: Another 10% (50 participants) received menstrual education from health professionals, indicating that some girls accessed formal, health-based knowledge outside of school. However, study by Anitha Dharana et al[7] 88.6% acquired primary information from mother which is more than our study.

Reactions when first menses occurred shows Half of the participants (50%) reported that their menarche was celebrated, indicating a positive and culturally significant acknowledgment of this milestone. However, 70 girls (14%) reacted by crying, suggesting feelings of sadness or distress. A further 100 participants (20%) reported feeling scared, reflecting fear or apprehension about this new experience. Some participants (6%, or 30 individuals) expressed irritation, possibly due to the discomfort or unfamiliarity of the situation, while 10% (50 participants) described other negative emotions, such as worry. however Purva Shoor et al shows 49.2 percent celebrated which is similar to our study indicating a positive and culturally significant acknowledgment of this milestone.

Material used

The most commonly used product, pads were utilized by 70% of participants (350 girls). This suggests that disposable sanitary pads are the preferred choice, likely due to ease of use and widespread availability. Cloth/Napkin: Cloth or reusable napkins were used by 10% of participants (100 girls), indicating that some girls rely on traditional methods, possibly due to cultural practices, cost, or limited access to disposable products. Tampons/Cups: None of the participants reported using tampons or menstrual cups, which may reflect a lack of awareness, availability, or cultural acceptance of these alternatives in the population. Other: 5% of participants (50 girls) used other types of products, which may include homemade solutions or less common menstrual products. which is similar to study by Anitha Dharana et al shows 78.7% of participants use sanitary pads in the study which is similar to our study.

Method of disposal of pad

The above table shows Dustbin: The majority, 60% (300 participants), disposed of used menstrual products in dustbins, indicating a common, accessible, and environmentally safe disposal method. Burning: Another 20% (100 participants) reported burning used products, a practice that may be influenced by cultural or practical reasons but can have environmental and health implications if not done properly. Flushing in Toilet: About 10% (50 participants) flushed used products down the toilet, which can cause plumbing issues and environmental concerns, highlighting a need for better disposal education. However, study by Ram Naresh Yadav, et al [8] most commn method was burning (38.4%) followed by

burying (18.5%) which is different than our study this difference may be due to regional difference.

CONCLUSION

Our study sheds light on the menstrual health practices, challenges, and support needs of school-going girls, showing how social, cultural, and educational influences shape their experiences. Family, especially mothers, serves as the main source of menstrual education, with teachers and peers also contributing, though access to formal health education remains limited. Cultural practices around menstruation often impose restrictions on religious and household activities, highlighting traditional attitudes. However, some girls report fewer restrictions, suggesting a gradual shift toward more open perspectives.

We identified key challenges in managing menstrual hygiene, including inadequate disposal facilities, lack of privacy, and restricted access to menstrual products, compounded by stigma. The preference for disposable sanitary pads underscores convenience, though limited knowledge around safe disposal and alternative products indicates an area for improvement. In response, this study calls for better menstrual hygiene facilities, increased access to products, and culturally sensitive education. Supportive school environments and targeted awareness programs would address these challenges, empowering young girls with confidence, knowledge, and improved menstrual health management.

Declaration by Authors

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Conflict of Interest: The authors declare no conflict of interest.

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