

KNOWLEDGE ATTITUDE AND PRACTICES OF TRIBAL ADOLESCENT GIRLS RELATED TO MENSTRUATION IN SOUTHERN RAJASTHAN

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Article Received: 23-03-2025

Article Accepted: 18-04-2025

Article Published: 12-05-2025

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ABSTRACT

Young girls up to 18 years of age comprise a quarter of Indian female population. A vast majority of adolescent girls in India are affected by reproductive health issues and menstrual problems are one of them. These problems arise mostly due to false beliefs & poor awareness regarding menstrual cycle. The objective of the study was to assess knowledge, attitude and practices towards menstrual cycle and its problems among school girls.

Method: A cross sectional study among 359 menstruating girls in 3 tribal hostels of Southern Rajasthan was carried out by interviewing them with predesigned & pretested questionnaire. Data were collected through face-to-face interactions in Hindi or local dialect, ensuring privacy and comfort. Responses were manually coded and analyzed using descriptive statistics in Microsoft Excel.

Result: The study revealed 55.3% adolescent girls had not heard about menstruation before attaining menarche. Mother was the main source of information for majority of them (40.1%). Most of them attained menarche at the age of 12 - 14 years, majority being at 13 yrs (46.5%). Duration of the menstrual cycle was 21- 35 days for most of them. Most of the adolescent tribal girls used torn clothes (57.6%) as the main absorbent material. Most of the girls disposed the used material in the household garbage (31.7%).

Conclusion: There is a need for adolescent girls to have accurate and adequate information about menstruation appropriate sanitary and hygienic management.

KEYWORDS: Menarche, Menstrual cycle, Knowledge, Attitude, Practice, Hygiene.

INTRODUCTION

Menstruation is a physiological process among females who experience shedding of blood for 1-7 days from uterus, every month from menarche until menopause.¹ In many societies, including tribal communities, menstruation is often surrounded by *silence, myths, and taboos*, leading to inadequate knowledge and potentially harmful practices.² The lack of proper menstrual health education can have significant implications for girls' physical health, emotional well-being, and overall development.³

Adolescence is characterized by physical, psychological, and social changes. WHO has defined adolescence as the age ranging from 10-19 years. It is the period between childhood and adulthood, marked by enhanced food requirement and basal metabolic activities and biochemical activities, endogenous processes like hormonal secretions with their influence on various organ systems.⁴

Adolescent years have been recognized as a special period in the life cycle of adolescent women as it requires specific and special attention. This transition phase makes them vulnerable to a number of problems for

example, psychosocial problems, reproductive health problems, and sexuality related problems. A vast majority of adolescent girls in India are suffering from reproductive health morbidities.⁴

Poor personal hygiene and unsafe sanitary conditions result in the girls facing many gynaecological problems. Infections due to poor hygiene during menstruation have been reported in many studies⁵. Repeated use of unclean cloth results in harbouring of micro-organisms resulting in the spread of vaginal infections among adolescent girls.

Myths and mysteries have long enveloped the truth about menstruation. It is customary for some girls to restrict their activities during the periods as per their social customs and religious beliefs. She is not allowed to touch items of food, growing plants, flowers etc. According to many studies most women (73.6%) reported restrictions in their daily activities during the menstrual period.⁴

The tribal communities in Southern Rajasthan, where this study was conducted, represent a population that is often underserved in terms of health education, infrastructure, and access to sanitary products. These communities typically have lower literacy rates, limited health outreach, and adhere more strictly to cultural traditions, all of which influence adolescent girls' menstrual experiences.

This study aims to evaluate the knowledge, attitudes, and practices related to menstruation among adolescent girls residing in tribal hostels in Southern Rajasthan. It seeks to understand the level of awareness these girls have, the sources from which they acquire information, the materials and methods they use to manage menstruation, and the societal restrictions they face. By doing so, the research intends to identify gaps and recommend interventions that can lead to healthier, more dignified menstrual experiences for these girls.

MATERIALS AND METHODS

This study was designed as a cross-sectional observational research project to assess the knowledge, attitudes, and practices (KAP) regarding menstruation among adolescent girls residing in tribal hostels in Southern Rajasthan. The study was conducted over a period of three months and included 359 menstruating adolescent girls between the ages of 10 and 18 years.

Study Setting and Population

The study was carried out in three government-run tribal hostels located in the rural areas of Udaipur district, Southern Rajasthan. These hostels are specifically meant for school-going girls from tribal backgrounds and are part of government initiatives to promote education in underserved areas.

The inclusion criteria were:

- Girls aged 10–18 years who had attained menarche.
- Residents of the selected tribal hostels.
- Willingness to participate with informed consent.

Exclusion criteria included:

- Girls who had not yet attained menarche.
- Those unwilling to participate or unable to provide consent.
- Incomplete questionnaire responses.

Sampling Technique

A convenient sampling method was used to select the participants. All eligible menstruating girls present at the hostels during the time of data collection were invited to participate. Hostel wardens facilitated initial contact and ensured that data collection occurred in a comfortable, private environment for the participants.

Ethical Considerations

Prior to data collection, ethical clearance was obtained from the institutional ethical committee. Permissions were also taken from school authorities and hostel wardens. Written informed consent was obtained from each participant after explaining the purpose and nature of the study in detail. For minors, verbal assent was obtained in addition to permission from the hostel authority acting in loco parentis. The confidentiality and anonymity of participants were strictly maintained.

Data Collection Tool

A pre-designed, pre-tested structured questionnaire was used for data collection. The questionnaire was developed based on existing literature and expert inputs to capture essential information regarding:

- Demographic profile.
- Knowledge of menstruation before menarche.
- Source of information about menstruation.
- Menstrual hygiene practices (materials used, frequency of change, methods of disposal).
- Cultural and social restrictions during menstruation.
- Availability of water and sanitation facilities.

To ensure accessibility, the questionnaire was translated into Hindi and the local dialect spoken by the participants. Assistance was provided to those with limited literacy to ensure accurate responses.

Procedure

The data collection was carried out through face-to-face interactions in a private and comfortable setting within the hostel premises. Each participant was provided with a pre-tested, structured questionnaire, which was carefully designed to capture relevant information related to menstrual knowledge, attitudes, and hygiene practices. The questionnaire had been piloted prior to the study to ensure clarity, cultural appropriateness, and reliability.

For girls who were literate and comfortable reading and writing, the questionnaire was self-administered. However, for those with limited literacy or comprehension difficulties, the questionnaire was administered orally by trained female investigators who read out the questions and recorded their responses.

Before distributing the questionnaire, the purpose of the study was explained in detail, and participants were reassured about the confidentiality of their responses. Interviews or questionnaire sessions lasted approximately 15–20 minutes per participant. Assistance was provided in either Hindi or the local dialect to ensure full understanding and accurate responses.

All interactions were conducted respectfully, in a non-judgmental manner, and in an environment where participants felt safe to express themselves openly. The data collected was then reviewed for completeness and consistency before being entered into a spreadsheet for analysis.

Data Analysis

The responses from the questionnaires were manually coded and entered into Microsoft Excel for analysis. Descriptive statistics such as frequencies and percentages were used to summarize the data. The findings were then organized into tables and charts to illustrate key trends and comparisons. The focus of analysis was on identifying knowledge gaps, common practices, and the socio-cultural context influencing menstrual health management in the study population.

RESULTS

Majority of the girls included in the study had no knowledge about menstruation before attaining menarche (55.7%) and only 44.3% of the participants were aware of menstruation before actually attaining menarche. (Fig 1)

For most of the girls the main source of information about menstruation process and hygiene was their mother (40.1%) and only 14.5% among them had received information regarding menstruation from their teachers, 35% of them received information from friends and 8.3% gained knowledge from sister .(Fig 2)

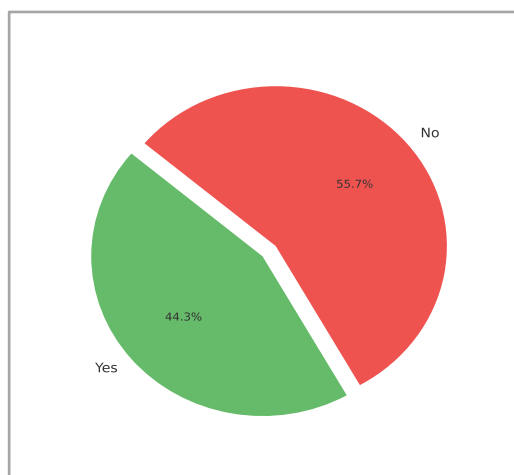


Fig 1 – Knowledge of Menstruation

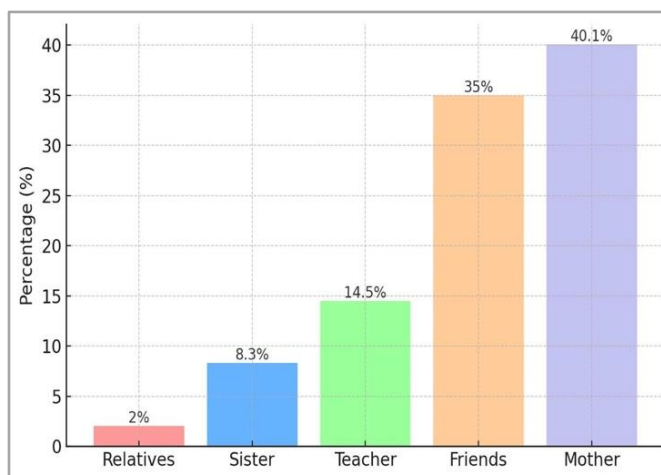


Fig 2 – Source of Information

Table 3 depicts menstrual profile of the study participants. Most of them attained menarche at the age of 12 - 14 years, majority being at 13 yrs (46.5%). Duration of the menstrual cycle was 21- 35 days for most of them (88.0%), and bleeding was for 2 - 6 days during each cycle in 86.3% subjects. Menstrual cycle was regular among 82.5% girls.

Variable	Category	Frequency (%)
Age at Menarche (Yrs)	10	3 (0.8)
	11	17 (4.7)
	12	72 (20.1)
	13	168 (46.5)
	14	82 (22.6)
	15	17 (4.7)
	16	3 (0.8)
Duration of Menstrual Cycle	< 21 days	6 (1.7)
	21 – 35 days	316 (88.0)
	> 35 days	37 (10.3)
Menstrual Bleeding During Each Cycle	< 2 days	20 (5.6)
	2 – 6 days	310 (86.4)
	> 6 days	29 (8.1)
Menstrual Cycle Pattern	Regular	296 (82.5)
	Irregular	63 (17.5)

Fig 3 – Menstrual profile of study Subjects

Only 27.2% adolescent girls are using sanitary pads as absorbent material, 57.6% used torn cloths, 10% used sand, 18% of them used leaves/paper as adsorbent material. This can be attributed to poor awareness about menstrual hygiene in tribal areas and irregular supply of sanitary pads in remote areas. (Fig 4)

Majority of the adolescent girls (31.7%) were disposing the used material in the household garbage, 30.6% burnt absorbent material, 20.8% of them were throwing the absorbent in the toilets. Many of them were not aware of proper disposing methods of absorbent material used. (Fig 5)

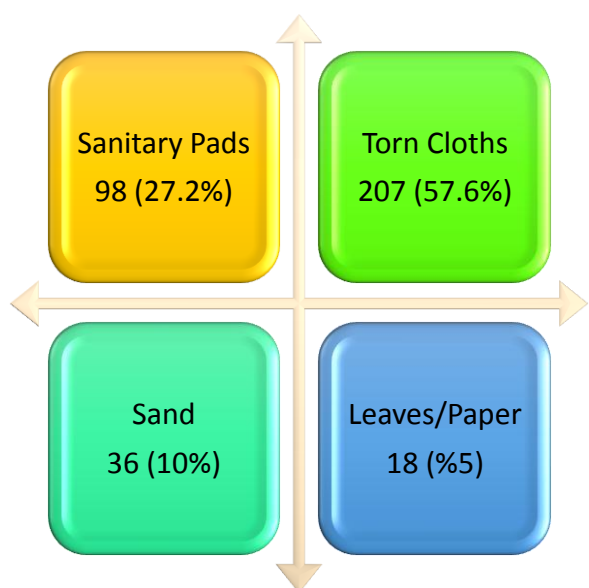


Fig 4 - Absorbent used during menstruation

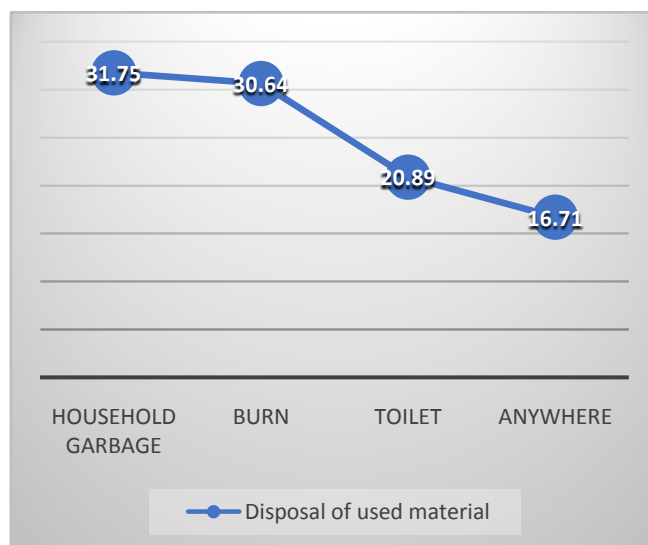


Fig 5 – Disposal of used Material

Fig6 shows that 85% girls had continuous water supply in the house, whereas 15% had intermittent. The surrounding of the houses of the participants was found to be dirty in almost all houses. The maximum of 79% of girls used common public toilet and 21% had separate private toilet in the house. About 65% of the girls lived in kaccha housing and 35% lived in pucca house.

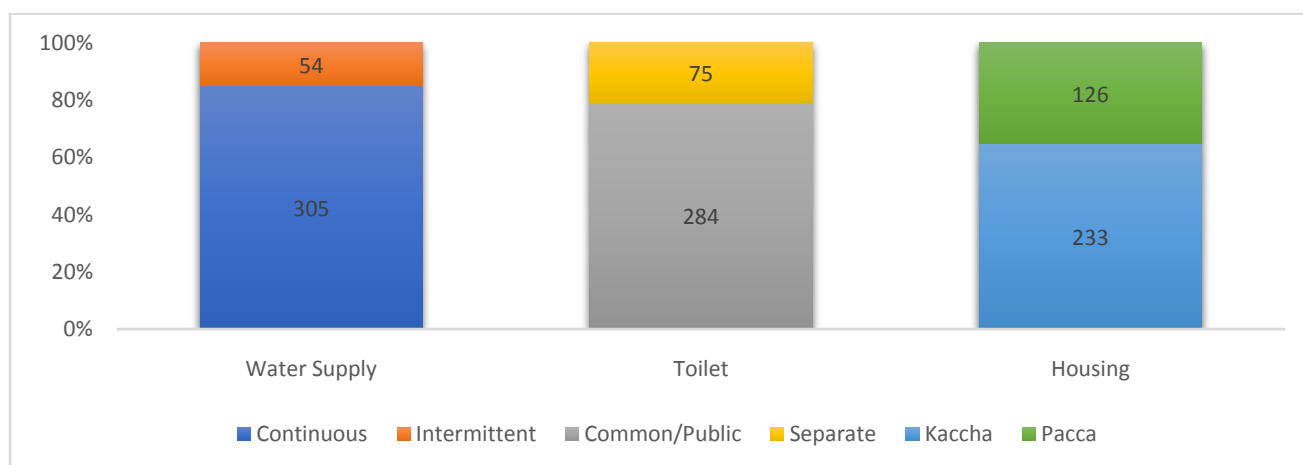


Fig 6: Distribution of data according to environmental condition

Because of many traditional beliefs and social taboos, 43.4% girls were restricted going near flowing water (River, Lakes etc), 46.7% girls avoided attending any religious ceremonies, 82.4% menstruating girls were not allowed to enter kitchen during menstruation, 90.20% of them were not allowed to enter religious places. (Fig 7)

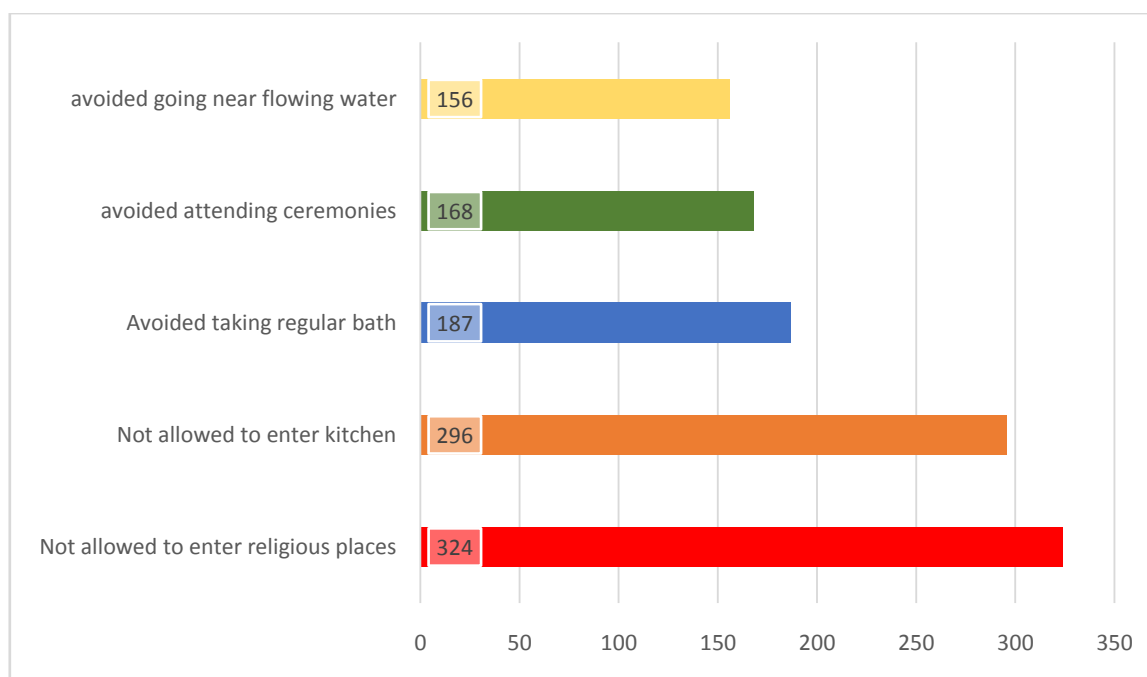


Fig 7 – Restrictions during Menstruation

DISCUSSION

The study showed that majority of the girls had no knowledge about menstruation (55.7%). This was similar to a study done in Raigad but contrary to a study done in Ethiopia⁶. This implies education programme needs to be strengthened in India especially in rural areas.

The main source of information for majority of girls in the present study regarding menstrual health management is mother constituting about 40.1% followed by friends 35%, teachers 14.5%, sister 8.3%. The main source of information was mothers 50.9% followed by teachers 45%, 19% from books, 5.8% from media and from other relatives according to Shamsudeen⁷. Mothers were the main source of information 38.3% followed by peers 16.3%, media 7.6%, relatives 6.4%, teachers 2.4% and others 1.3% in a study conducted by Belayneh⁸.

Only 27.2% adolescent girls were using sanitary pads as absorbent material contrary to a study done in urban slums of Assam⁹ where nearly 70% adolescent girls were using sanitary pads. This can be attributed to poor awareness about menstrual hygiene in tribal areas and irregular supply of sanitary pads in remote areas.

Disposal of absorbent was by throwing them into the household garbage (dust bins) in 31.7%, somewhat better percentage of girls (69%) in urban areas prefer this method.¹⁰ This can be attributed to wide variety of options available in rural areas to dispose them like burning along with the domestic refuse.

Menstrual hygiene is a taboo subject, a topic that many women in south Asia are uncomfortable discussing. There are so many cultural beliefs followed by adolescent girls. The various factors affecting practices related to menstruation include education, family environment, culture, and belief according to a study done in Ranchi.¹¹ Religion was found to play a major role affecting the practices related to menstruation.¹² In agreement with previous studies, the present research has also documented similar results about several restrictions related to menstruation. 43.4% girls avoided going near flowing water, 82.4% girls were not allowed to enter kitchen during menstruation, and majority of the girls (90.2%) girls were not allowed to visit religious places during menstruation.

In the present study, majority of the girls attained menarche at the age of 13 years (46.4%), with a range of 10-16 years, comparable to studies done by Prajapati D et al¹³, and Subhash B T et al¹⁴.

Poverty, illiteracy, and ignorance were the major factors which lead to poor environmental sanitation. Improper sanitation of the surrounding also contributes to adverse health outcomes. Lack of water supply majorly affects the status of hygiene. Privacy issues were mainly found in girls using public toilets. Hence, ignorance toward cleanliness was seen in these girls to avoid embarrassment. Girls using private toilets were found to practice better hygiene than those using common public toilets. Therefore, in our study a majority of 79% of girls used common public toilet and only 21% had separate individual toilets, while in a study by Yasmin et al., 80.3% of the respondents had private toilet and 19.7% girls used common public toilet.¹⁵

CONCLUSION

This study highlights the gaps in menstrual health awareness, hygiene practices, and societal attitudes among tribal adolescent girls in Southern Rajasthan. Many girls lack prior knowledge about menstruation, rely on unhygienic absorbents, and face cultural restrictions that limit their daily activities. Limited access to sanitary products and improper disposal methods further add to their challenges.

To address these issues, comprehensive menstrual health education, improved access to affordable sanitary products, and awareness campaigns are essential.

Encouraging open discussions and challenging taboos can empower these girls, promoting better menstrual hygiene and overall well-being.

Limitations of the study

This study was limited to a small sample from three tribal hostels in Southern Rajasthan, which may not represent the wider population. The use of convenient sampling and self-reported data could introduce bias. Language barriers and varying literacy levels may have affected response accuracy. Being cross-sectional, the study does not reflect changes over time or the impact of interventions.

Funding: no funding sources

Conflict of interest: none declared

Ethical approval: not required

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