

MENSTRUAL HYGIENE PRACTICES, SOCIAL TABOOS AND RESTRICTIONS: A STUDY AMONG ADOLESCENT SCHOOLGIRLS OF MANIPUR

ELIZABETH LALRAMNGHAKI, HUIDROM SURAJ SINGH

Department of Anthropology, Manipur University, Canchipur, Imphal, Manipur, India

ABSTRACT

Although menstruation is a normal phenomenon, many girls across the world are subjected to social taboos and misconceptions and are denied the right to control their menstruation in a dignified and healthy manner. This results in poor menstrual hygiene and a high risk for adverse physical, emotional, and mental health outcomes. Therefore, this study aims to assess the menstrual hygiene practices and social taboos among the adolescent girls of Manipur. A school-based, cross-sectional study was conducted among 215 adolescent girls aged 10–19 years from different ethnic groups of Manipur. The mean menarcheal age is 12.4 ± 1.2 years. The majority of the participants (95.35%) are aware of the essence of menstruation. However, only half of the studied population follow hygienic practices concerning the type of absorbent used and the frequency of changing absorbents. Approximately 40% of the respondents are associated with social taboos and restrictions, and these belong exclusively to the Meitei community. In general, the menstrual hygiene practices of the studied adolescent girls are poor. Many girls, irrespective of different ethnic groups, are associated with unhealthy menstrual-related cultural beliefs and taboos. Therefore, future intervention programmes should be introduced to maintain hygienic and safe menstruation practices. Moreover, awareness should be developed, imparting adequate knowledge on menstrual hygiene and waste management practices to prevent associated adverse health outcomes.

Keywords: *menstrual hygiene and practice; adolescent; reproductive health; social taboos*

INTRODUCTION

The onset of menstruation is one of the most significant physiological changes that girls go through during their adolescent years. Meanwhile, millions of adolescent women worldwide are denied the right to control their menstruation in a dignified and healthy manner [24]. Access to safe and dignified menstruation is a fundamental need for women and girls. Despite being a natural phenomenon, it has always been surrounded by myths and taboos worldwide. In many societies, menstruation is still considered a “taboo topic”, which causes hurdles in advancing the knowledge on the subject. Lack of adequate information leads to unhygienic and unhealthy menstrual practices, creating misconceptions and negative attitudes towards menstruating women. This impacts their emotional state, mentality and, most importantly, health. Unhygienic menstrual practices and lack of self-care can result in adverse health outcomes such as reproductive tract infections (RTI), urinary tract infections (UTI), scabies in the vaginal area, atypical abdominal pain, pregnancy complications and more [18]. Therefore, managing menstrual health and hygiene practices among adolescent girls has become a serious concern, particularly among adolescent girls in low and middle income countries [20].

Menstrual hygiene management (MHM) practice is a serious concern in low and middle income countries (LMICs) [11, 20]. It is evident from previous studies that more than 50% of girls follow unsatisfactory MHM in LMICs, while the percentage is higher in rural than in urban areas [4, 6, 7]. In many Indian societies, menstruation is seen as an unclean, dirty, and impure phenomenon [2, 7, 13, 19]. While the situation has improved over the years, cultural myths and taboos still exist in different societies. There are many taboos like the menstruating girl being prevented from going to the temple, cooking food, attending weddings, and so forth. There is limited knowledge and many misconceptions about menstruation among young women in India around menarche, which usually leads to undue fear, anxiety, and undesirable practices [15]. Studies in Maharashtra and Tamil Nadu show that menstruating women are bound by various restrictions, such as being prohibited from performing religious activities, cooking or entering the kitchen, and are often isolated from the rest of the family and are not allowed to play or even go to school [3,6].

MHM is a neglected issue in India and other developing nations. On attaining menarche, many girls drop out of school due to limited access and inability to purchase sanitary napkins, lack of toilets and water facilities on the school premises [9]. Another study utilized NFHS-4 data to analyse the hygienic

practices of 244,500 women aged 14–24 years and found that 57% practiced hygienic methods, while more than 60% used cloth during their menstruation to prevent blood stains [14]. A study has also reported that only 12% of India's 355 million menstruating women use sanitary pads [16]. In a study, more than 88% of women depend on alternatives like unsensitized cloth or rugs, ashes, and husk sand [10]. A study on reproductive and sexual health awareness among adolescent girls highlights the menarche and menstrual hygiene practices in Churachandpur district (2007). The study reveals that cloth was the only absorbent used by girls from Moldenphai village. Also, few girls were found to use tampon and cloth [23]. To combat such period poverty and to introduce healthy and hygienic menstrual management, the government of India launched the National Menstrual Hygiene Scheme under the 'Rashtriya Kishor Swasthya Karyakram' programme in 2014 where sanitary pads are provided to rural adolescent girls at a subsidised rate of Rs 6/- for a packet of six napkins. While the government takes such measures, there is still a major section of adolescent girls in remote areas who are not reached by the scheme and, thus, continue to suffer menstruation as a burden. The literature covering this area is limited, although it is a high global health concern. Two different districts of Manipur, namely Churachandpur and Thoubal district, were selected for the present study as the communities from both districts differ greatly regarding to their social beliefs, traditions, culture, and lifestyles. In addition, the availability of literature on menstruation and its hygienic practices and the associated taboos was found to be limited in both districts. Therefore, the present study assessed the knowledge, attitudes, and hygiene practices toward menstruation among the adolescent girls of Manipur. An attempt was also made to explore the ethnic variation (if any) regarding cultural beliefs and taboos among the studied population.

MATERIALS AND METHODS

The present study is a cross-sectional study undertaken among adolescent schoolgirls aged 10–19 years. The data were collected from two districts of Manipur, namely Churachandpur and Thoubal, from April 2019 to March 2020. A total of 215 adolescent girls who have experienced menarche were included in the study. Of these, 150 participants were from Rengkai Village, Churachandpur, and 65 participants were from Nongpok Sekmai village, Thoubal. The Chin-Kuki ethnic group majorly inhabits the Rengkai village of Churachandpur,

whereas the Meiteis majorly inhabit the Nongpok Sekmai village, Thoubal. The participants in the study were recruited with their consent from all the high schools located in the villages.

The interview method was employed for data collection. Each participant was asked about the age at menarche, menstrual knowledge, hygiene practices, and associated cultural beliefs and taboos using a semi-structured schedule after getting informed consent. Tabulation and statistical analysis were done using Microsoft Excel and SPSS software. The chi-square test was used as a test of significance. Statistically significant level was considered at a p-value < 0.05.

RESULTS

Demographic and age at menarche

The present study comprises both early and middle adolescent girls, the majority of which (65.11%) are of the middle adolescent group. The study population includes eleven communities where the majority belongs to the Hmar community (48.83%), followed by Meiteis (33.95%); the other communities are Gangte, Mizo, Neihzial, Paite, Simte, Thadou-Kuki, Tangkhul, Vaiphei and Zou community with smaller frequencies. The studied population followed three religions that are Christianity (66.51%), Hinduism (17.21%), and Meiteism (16.25%) (Table 1).

Table 1. Socio-demographic characteristics of the studied population

		Frequency (n, %)
Age		
	Early adolescent (10–13 yrs)	75 (34.88)
	Middle adolescent (14–17 yrs)	140 (65.11)
Community		
<i>Churachandpur (n=150)</i>		
	Hmar	105 (48.83)
	Gangte	2 (0.93)
	Mizo	5 (2.32)
	Neihzial	8 (3.72)
	Paite	4 (1.86)
	Simte	3 (1.39)
	Thadou Kuki	4 (1.86)
	Tangkhul	1 (0.46)
	Vaiphei	5 (2.32)
	Zou	5 (2.32)
<i>Thoubal (n=65)</i>		
	Meitei	73* (33.95)
Religion		
	Christianity	143 (66.51)
	Hinduism	37 (17.21)
	Meiteism	35 (16.25)

*Of 73 Meitei adolescent school students, 8 are from Rengkai Village, Churachandpur

The overall mean age at menarche for the studied population from both districts was 12.4 ± 1.2 years (Figure 1). Meanwhile, girls from the Churachandpur district were found to experience menarche at an earlier age with a mean value of 12.27 ± 1.04 years than the girls from Thoubal district whose mean value was 13.2 ± 1.8 years. The difference was found to be statistically significant ($p < 0.0001$).

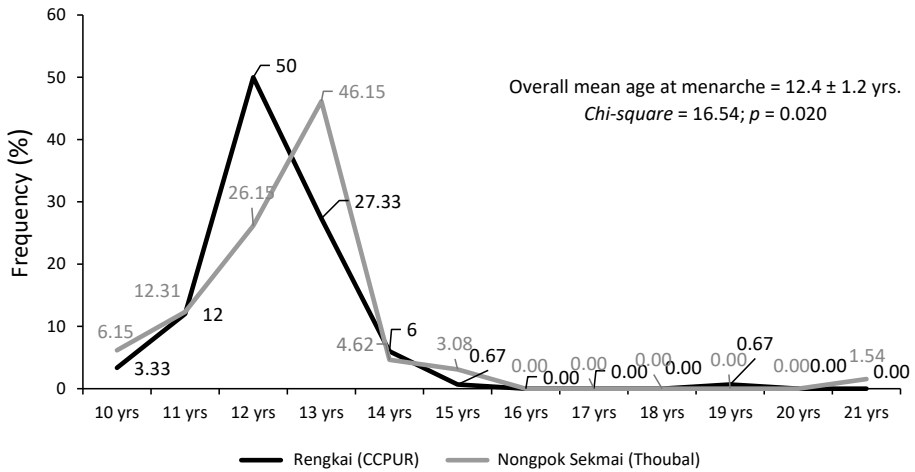


Figure 1. Age at menarche among the studied population. Note: The point of the curve is the percentage of age at menarche observed at different age categories of the respective population; CCPUR – Churachandpur.

Menstrual hygiene practices

In the study population, 4.65% of the respondents were unaware of menstruation before attaining their menarche. However, most of the respondents (95.35%) were aware of it, and the main source of knowledge is the respondent's mother (61.46%). Sisters (18.54%) and peer groups (20.00%) are the other sources of knowledge about menstruation (Table 2).

Regarding the type of absorbent, the sanitary pad is the commonly used absorbent during menstruation by most of the adolescent girls in the studied population. Approximately 30% of the respondents use a pad and cloth as absorbent. A considerable proportion of adolescent girls (13.03%) in the studied population depend on cloth as an absorbent during their menstruation. Of the studied 215 adolescent girls, 2 girls who belong to the Meitei community were found to use no absorbent (neither pad nor cloth) during menstruation. They claim that at the time of menstruation, they double the '*phanek*' (a traditional skirt/wrap around worn by Meitei women) they wear to prevent menstrual blood stain.

The study also found that most girls change their absorbents twice to thrice a day, whereas 18.78% change the absorbents only once a day. On the other hand, 12.21% of the studied adolescent girls change their menstrual absorbents four times and above in a day. All the pad users discard the pad after every use, and none were found to reuse the pad. However, 27.56% of pad users wash the

absorbent before disposal. Among the cloth users, however, the majority of girls (69.56%) reuse the cloth as the next menstrual absorbent, and among these cloth users, 60.7% wash the cloth before disposing of it (Table 2).

Table 2. Menstrual knowledge and hygiene practices

		Frequency (n, %)
Knowledge of menstruation before menarche		
	No	10 (4.65)
	Yes	205 (95.35)
Sources of knowledge about menstruation*		
	Mother	126 (61.46)
	Peer Group	41 (20.00)
	Sister	38 (18.54)
Type of absorbent used		
	Pad	121 (56.27)
	Cloth	28 (13.03)
	Both pad & cloth	64 (29.76)
	Nothing	2 (0.94)
Frequency of changing absorbents (in a day)**		
	Do not change	0
	Once	40 (18.78)
	Twice	81 (38.03)
	Thrice	62 (29.11)
	Four times	26 (12.21)
	Five times and above	4 (1.88)
Reuse of absorbents		
	Pad	0
	Cloth	64 (69.56)***
Washing of absorbents before disposal**		
Pad	No	134 (72.43)
	Yes	51 (27.56)
Cloth	No	11 (39.28)
	Yes	17 (60.7)

* The analysis was performed among 205 participants who have knowledge of menstruation

** 2 participants do not use any absorbent during menstruation, so they were excluded from analysis

*** Among pad users, no one was found to reuse the pad. Among cloth users (cloth users+ both pad and cloth users were counted, total=92), 64 were found to reuse the menstrual cloth.

Table 3. Comparison of menstrual hygiene practices of adolescent school students

	Frequency (n, %)		Chi-square (p-value)
	Regnkai	Nongpok Sekmai	
Type of absorbent used			
Pad	109 (72.67)	12 (18.46)	57.49 (< 0.0000)
Cloth	10 (6.67)	18 (27.69)	
Both pad and cloth	31 (20.67)	33 (50.77)	
Nothing	0	2 (3.08)	
Frequency of changing absorbents (in a day)			
Do not change	0	0	33.82 (< 0.0000)
Once	17 (11.33)	23 (35.38)	
Twice	52 (34.67)	29 (44.62)	
Thrice	54 (36)	8 (12.31)	
Four times	25 (16.67)	1 (1.54)	
Five times and above	2 (1.33)	2 (3.08)	
Reuse of absorbents			
Pad	0	0	-
Cloth	13 (8.67)	51 (78.46)	

Pad is the most commonly used absorbent among the girls from Regnkai village (Churachandpur), whereas half of the girls from Nongpok Sekmai (Thoubal) used both pad and cloth to manage their period ($p < 0.0000$). Also, two girls from Nongpok Sekmai (3.08%) were found to use no absorbent during menstruation. Approximately 54% of girls from Regnkai village changed their absorbent thrice and above in a day according to the desirable American College of Obstetricians and Gynaecologists (ACOG) recommended level. In contrast, only 16.93% of girls from Nongpok Sekmai village were found to change their absorbent according to the recommended level ($p < 0.0000$). With regards to the reuse of menstrual absorbents, no girls from both districts were found to reuse the pad, whereas 8.67% and 78.46% of the girls from Regnkai village and Nongpok Sekmai reportedly reuse their menstrual cloth (Table 3).

Social taboos and restrictions

Of the total studied adolescent girl population, 33.95% of the girls reported to have certain restrictions associated with cultural believes and taboos during menstruation. Moreover, such restrictions are comparatively frequent in Meitei community girls who follow Hinduism and Meiteism. It is evident from the present study that 61 out of 215 girls (28.37%) faced restrictions with respect to participation in religious ceremonies and associated activities. Such restrictions are associated exclusively with the Meitei community that followed Meiteism (50.81%) and Hinduism (49.18%). Similarly, restrictions were imposed on taking bath during menstruation particularly among the Meitei community. Cooking and eating of some specific food items were restricted during the menstruation as reported by the respondents irrespective of the ethnic group (Table 4).

Table 4. Social taboos and restrictions during menstruation

		Frequency (n, %)
Social taboos and restrictions during menstruation		
Associated		73 (33.95)
Not Associated		142 (66.05)
Religion and menstrual restrictions		
Christianity		6 (8.21)
Hinduism		32 (43.8)
Meiteism		35 (47.9)
Restrictions during menstruation		
Christianity	Religious activities	0
	Cooking	3 (5.45)
	Food	75 (55.55)
	Bathing	0
Hinduism	Religious activities	30 (49.18)
	Cooking	23 (41.81)
	Food	29 (21.48)
	Bathing	27 (45.76)
Meiteism	Religious activities	31 (50.81)
	Cooking	29 (52.72)
	Food	27 (22.96)
	Bathing	32 (54.24)

DISCUSSION

The onset of menarche is considered the most crucial event in the women's reproductive life. However, the onset of menarche is influenced by different factors. Both early and late onset of menarche are reported to have adverse health outcomes, as revealed by other studies. The present study showed significant differences in the mean age of menarche between the girls from Nongpok Sekmai (majorly inhabited by Meitei) and Rengkai village (majorly inhabited by the Chin-Kuki ethnic group). Moreover, the overall mean menarcheal age of the studied population (12.4 ± 1.2 years) was found to be significantly earlier than the findings of the study conducted from May 2017 to April 2019 by Tampasana et al. at Imphal East, Manipur (majorly inhabited by Meitei) where the mean age was 15.45 ± 1.59 years [22]. These variations in the menarcheal age could be due to the differences in the ethnic group considered in the studies. It is further evident from the study conducted among the adolescent girls from Moldenphai village, Churachandpur, that there 80% of the adolescent girls experienced menarche at the age of 12 [23]. However, differences in menarcheal age could also be attributed to the differences in nutritional status, parent's education, socio-economic status, and lifestyle habits. However, further research needs to be carried out considering all possible associated risk factors of the onset of menarche.

The menstrual practices to which a girl responds are highly influenced by the knowledge she received before menstruation. In the present study, most girls (95.36%) received this knowledge before menarche from their mother. Similar findings are also reported where mothers are the key source of knowledge [5]. Sisters and peer groups are the other sources of information about menstruation. Despite having prior information about menstruation, the hygienic practice based on the type of absorbent used is poor, as approximately half of the studied adolescent girls depend on cloth, combination of pad and cloth, and use of no absorbent during menstruation. Poor menstrual hygiene practices, specifically unhygienic use of menstrual hygiene products, can pose risks to women's health, such as an increased risk of urogenital infections. A systematic review revealed an association between the worse MHM, not using disposable sanitary pads, and reproductive tract infections (RTI) [21]. Adolescent girls' low percentage of hygienic menstrual practices could be due to inadequate knowledge, negligence, poverty, and shame in buying pads. A study among rural adolescent girls in India reports that most respondents practice unhygienic methods and only 42% use hygienic products such as pads, tampons, and menstrual cups.

Another important parameter of menstrual hygiene practices is the frequency of changing the absorbents. Menstrual absorbents, when kept for a long time can lead to bacterial infection, skin irritation, and other associated complications. According to the ACOG, absorbents should be changed every 4 to 8 hours. In the present study, most of the respondents do not change the absorbent to the ACOG recommended level, as only 43% of the girls change their absorbents every 4 to 8 hours, which is highly alarming. Similar studies show that only 11.7% and 33.3% of the girls, respectively change their absorbents according to the desirable level [25, 26]. It could be because of many external modifiable factors including lack of water, sanitation, and hygiene facilities in the school, lack of information on good practices, and a supportive environment to manage menstruation without embarrassment or stigma. Concerning the reuse of absorbents, among the cloth users, most of the girls in the study reuse the cloth as absorbent during menstruation. However, the present study failed to incorporate how the cloth is hygienically prepared for reuse, such as washing properly with detergent, soap and water and sun-dried to prevent health issues.

Across different societies, girls and women face many problems and are also subjected to stress and anxiety regarding menstrual waste management. The association of shame and silence with menstruation consequently bound girls with various restrictions and urged them to take measures to hide traces of menstrual blood. As a result, girls may wash used pads or smear them with mud [1, 13]. Similarly, in the present study, it is evident that most of the girls were found to practice washing absorbents (both pad and cloth users) before disposal. Washing of absorbent before disposing of it was found to be rooted in the local belief of its association with evil spirits which may curse and harm the girl. The girls of Meitei community strictly practice this belief.

Restrictions associated with menstruation are still in practice by different societies in India. The present study also found menstruation-associated cultural restrictions. These include restricting participation in religious activities, cooking, consuming specific food items, and bathing during menstruation. It is also evident from the study that only the girls who belong to the Meitei community are associated with such taboos and restrictions. As such, the reason behind such practice is reported to be rooted in the Meitei tradition. In the Meitei society, participating in religious ceremonies during menstruation is regarded as showing disrespect to God. This tradition is strictly followed to date among the Meitei adolescents practising Hinduism and Meiteism. Meanwhile, such practice was not followed by the Christians of the Meitei community and

the adolescents belonging to the other community following Christianity. Likewise, since time immemorial, the Meiteis have considered menstruating women impure and do not allow them to prepare food or enter the kitchen. Also, they are not allowed to eat together with their male partners. This practice is still followed by most Meitei adolescents, irrespective of religion, while such practice was not seen among the other communities included in the present study. This belief is also similar to the Hindu faith, which considered women impure during menstruation. Concerning food, the Meiteis believe that consuming fruits such as gooseberry and fig during menstruation is bad for health and decreases or may even stop the menstrual flow. It is also believed to give a dark complexion. Fruits, brinjal, and chilli are the most common food items that are restricted during menstruation. There are no such societal restrictions concerning food among the other communities. Still, some adolescents are found to avoid some foods during menstruation which is based on their perception.

A similar study by Puri *et. al.*, found that not entering the *puja* room (a worshiping place where deities are kept and religious activities are performed) is the major restriction among urban girls, whereas not entering the kitchen is the main restriction among the rural girls of Punjab [17]. Also, sour food like curd, tamarind, and pickles are usually avoided by menstruating girls as it is believed that such foods will disturb or stop the menstrual flow [13]. When it comes to bathing, the Meiteis believed that bathing, especially washing hair during menstruation, can reduce the blood volume and may even stop the menstrual flow. Thus, it is most advisable to bathe after the completion of five days. Some women bathe on the 1st and 5th day. Some bathe on the 3rd day and 5th day. While bathing on these days, they avoid washing their hair. This restriction is practiced by most of the Meitei adolescent girls under study, whereas other communities included in the study do not follow such practice. Therefore, controlling such associated modifiable factors can decrease the morbidities related to poor menstrual hygiene practice in the studied communities. Inability to maintain good menstrual hygiene practices has been shown to be linked with educational attainment and socio-economic development besides serious other health consequences including physical, mental, and emotional health. However, the limited number of parameters in the present study and the lack of information on menstrual bleeding data that affect hygiene are the major limitations of the study as they fail to explain some of the present study's findings.

CONCLUSION

The study reveals that, although most girls know about menstruation before menarche, the hygienic practices based on the product used and frequency of changing absorbents are below the desirable level. The sanitary pad is considered the most hygienic product so far. Meanwhile, using cloth as an absorbent could also be considered hygienic if washed with soap and dried properly in the sun. Otherwise, damped and unsanitized cloth could lead to vaginal infections. However, this study fails to incorporate the manner in which such cloths are managed. The low percentage of girls that depend on pads and the high frequency of girls depending on cloth as absorbent shows that many girls are directly or indirectly at risk of health issues such as RTI, UTI, and pregnancy related complications. Lack of proper and adequate information could be the underlying factor. The study also reported that a fair percentage of the girls under study were associated with social taboos and restrictions during menstruation. This association is more likely community specific, and it could be one of the contributing factors to the unhygienic practices of the girls. Future intervention programmes are encouraged to address such taboos and focus on imparting the scientific phenomenon of menstruation and proper information on managing healthy menstrual hygiene practices and menstrual waste.

ACKNOWLEDGMENT

The authors would like to acknowledge all the study participants for their voluntarily participation.

CONFLICT OF INTEREST

The authors have no conflict of interest.

REFERENCES

1. Ali T. S., Rizvi S. N. (2010). Menstrual knowledge and practices of female adolescents in urban Karachi, Pakistan. *J Adolesc*, 33, 531–541. <https://doi.org/10.1016/j.adolescence.2009.05.013>
2. Arora A., Mittal A., Pathania D., Singh J. (2013). Impact of health education on knowledge and practices about menstruation among adolescent school girls of rural part of district Ambala, Haryana. *Indian J Comm Health*, 25, 492–7.

3. Bharatwaj R.S., Vijaya K., Sindu T. (2014). Psychosocial impact related to physiological changes preceding, at and following menarche among adolescent girls. *IJOCSA*, 2(1), 42–53.
4. Chandra-Mouli V., Patel S. V. (2017). Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low-and middle-income countries. *Reprod Health*, 14, 30. <https://doi.org/10.1186/s12978-017-0293-6>
5. Das D., Gautam R. K. (2022). Problems and Practices Related to Menstruation among Adolescent Girls of Dongria Kondh of Rayagada, Odisha, India. *Frontier Anthropology*, 11, 13–23. <https://doi-ds.org/doilink/10.2022-36378497/Frontier%20Anthropology/06.2021-53228984/V11/A2>
6. Deo D. S., Ghattargi C. H. (2005). Perceptions and practices regarding menstruation: A comparative study in urban and rural adolescent girls. *Indian J Community Med*, 30(1), 33.
7. Dhingra R., Kumar A., Kour M. (2009). Knowledge and Practices Related to Menstruation among Tribal (Gujjar) Adolescent Girls. *Stud Ethno-Med*, 3(1), 43–48. <https://doi.org/10.1080/09735070.2009.11886336>
8. El-Gilany A-H., Badawi K., El-Fedawy S. (2005). Menstrual hygiene among adolescent schoolgirls in Mansoura, Egypt. *Reprod Health Matters*, 13(26), 147–52. [https://doi.org/10.1016/S0968-8080\(05\)26191-8](https://doi.org/10.1016/S0968-8080(05)26191-8)
9. Garg R., Goyal S., Gupta S. (2012). India moves towards menstrual hygiene: subsidized sanitary napkins for rural adolescent girls-issues and challenges. *Matern Child Health J*, 16(4), 767–74. <https://doi.org/10.1007/s10995-011-0798-5>
10. Goyal V. (2016). Scope and opportunities for menstrual health and hygiene products in India. *Int J Soc Sci*, 5(7), 1–5.
11. Hennegan J., Montgomery P. (2016). Do menstrual hygiene management interventions improve education and psychosocial outcomes for women and girls in low and middle income countries? A systematic review. *PLoS ONE*, 11(2), e0146985. <https://doi.org/10.1371/journal.pone.0146985>
12. Khanna A., Goyal R., Bhawsar R. (2005). Menstrual practices and reproductive problems: a study of adolescent girls in Rajasthan. *J Health Manag*, 7(1), 91–107. <https://doi.org/10.1177/097206340400700103>
13. Kumar A., Srivastava K. (2011). Cultural and social practices regarding menstruation among adolescent girls. *Soc Work Public Health*, 26(6), 594–604. <https://doi.org/10.1080/19371918.2010.525144>
14. Kumari P. (2019). Menstrual Hygiene Practices among Women Aged 15–24 years in India: Evidence from NFHS-4. *Soc Sci Spectr*, 5(3), 142–152.
15. Mahon T., Fernandes M. (2010). Menstrual hygiene in South Asia: a neglected issue for WASH (water, sanitation and hygiene) programmes. *Gend Dev*, 18, 99–113. <https://doi.org/10.1080/13552071003600083>

16. Nelson A.C. (2010). Sanitary Protection Every Women's Health Right. Plan India. New Delhi, India.
17. Puri S., Kapoor S. (2006). Taboos and myths associated with women health among rural and urban adolescent girls in Punjab. *Indian J Community Med*, 31, 168–70.
18. Ramachandra K., Gilyaru S., Eregowda A., Yathiraja S. (2016). A study on knowledge and practices regarding menstrual hygiene among urban adolescent girls. *Int J Contemp Pediatr*, 3(1),142–5. <https://doi.org/10.18203/2349-3291.ijcp20160147>
19. Singh A. (2006). Place of menstruation in the reproductive lives of women of rural North India. *Indian J Community Med*, 31(1), 10. <https://doi.org/10.4103/0970-0218.54923>
20. Singh A., Chakrabarty M., Singh S., Chandra R., Chowdhury S., Singh A. (2022). Menstrual hygiene practices among adolescent women in rural India: A cross-sectional study. *BMC Public Health*, 22, 2126. <https://doi.org/10.1186/s12889-022-14622-7>
21. Sumpter C., Torondel B. (2013). A Systematic Review of the Health and Social Effects of Menstrual Hygiene Management. *PLOS ONE*, 8(4): e62004. <https://doi.org/10.1371/journal.pone.0062004>
22. Tampasana T., Rajkumari B., Devi L. U. (2020). Knowledge, attitude and practise regarding menstrual hygiene among adolescent girls in Imphal East, Manipur: a cross-sectional study. *IJCMPh*, 7(7), 2595–2601. <https://doi.org/10.18203/2394-6040.ijcmph20202982>
23. The Free Library (2017). Reproductive and sexual health awareness among adolescent girls: a micro study in Churachandpur District of Manipur. Centre for Indian Development Studies.
24. UNICEF (2019). Guide to Menstrual Hygiene Materials. New York.
25. Parikh V., Nagar S. (2022). Menstrual hygiene among adolescent girls studying in a university of Gujarat. *J Family Med Prim Care*, 11(7), 3607–3612. https://doi.org/10.4103/jfmprc.jfmprc_2303_21
26. Kaluarachchi A., Sivapatham V., Vishnukumar S. N. (2017). Knowledge and Practice of Menstrual Hygiene among Adolescent Girls in Selected Kattankudy area, Batticaloa District. *Int J Public Health*, 119, 255–262.

Address for correspondence:

Huidrom Suraj Singh

Department of Anthropology, Manipur University

Canchipur, Imphal, Manipur – 795003, India

E-mail: hssingh@manipuruniv.ac.in