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Menstrual Knowledge and Biosocial Aspects among the Poumai Adolescents of Manipur, Northeast India

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ORIGINAL STUDY

Menstrual Knowledge and Biosocial Aspects Among the Poumai Adolescents of Manipur, Northeast India

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Abstract

Background: **Menstrual knowledge, hygiene, and perception are often neglected worldwide, especially in smaller and less developed societies, exposing adolescents to menstrual health hazards. Against the poor communication of menstrual health and hygiene, the present paper attempts to assess the attitude, knowledge, and perceptions towards menstruation among Poumai adolescents of Manipur, Northeast India.**

Methods: **It is a cross-sectional study with data collected from 491 Poumai adolescents through a cross-sectional study using a self-structured schedule on menstrual knowledge.**

Results: **The mean age of the respondents was 17.11 ± 1.33 years. 73.12% of adolescents did not know about menstruation before attaining menarche. Most of the adolescents learned about menstruation from their mothers (39.39%), followed by sisters (29.55%), friends (28.79%), and aunts (2.27%), respectively. The study exhibits a significant relationship between age, educational qualification, and advanced knowledge about menstruation before menarche and attitude and perception towards menstruation (<0.05). The study highlights poor knowledge and awareness about menstruation before menarche among Poumai adolescents.**

Conclusion: **The present study highlights the importance of health communication in reproductive health to minimize stigmas, misconceptions, taboos, and invalid menstruation restrictions. The study seeks the attention of healthcare management, not only in the regional but the whole world, to educate the public about menstrual health and hygiene.**

Keywords: Menstruation, Adolescent, Knowledge, Perception, Attitude, Poumai

1. Introduction

Menstruation is a boon to human reproduction that only women can acquire. The first onset begins in adolescence which varies with ethnicity and geographically, but the mean age of menarche is typically between 12 and 13 years across well-nourished populations in developed countries [1]. Menarche is an important development process initiated in the adolescent stage (10–19 years) that marks a critical stage of growth and development associated with physiological and social changes and hormonal secretion. Different social perceptions surround menstruation throughout the world though there are differences between countries, cultures, religions, and ethnic groups. In almost many parts of the world, menstruation is still linked with several cultural taboos and feelings of shame and uncleanliness. Menstruation is a secret talk of mother and daughter in many families that do not discuss it openly yet in the common room. There are limited knowledge and misconceptions about menstruation among young women in India before and even after menarche. This usually leads to undue fear, anxiety, and undesirable practices [2]. Adolescent girlhood is a critical time of identity formation and a period of transition from childhood to womanhood [3], and vulnerable to menstrual-related health problems. Hence, it is of great challenge to the parents, the child, and those concerned for the upbringing of the adolescent as it is characterized by physical, psychological, mental, and social changes that are critical to well-being [4].

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Studies have shown that superstitions, illogical beliefs, and misinterpretation are more common than understanding the process of menstruation, menstrual hygiene, and self-care practices [5]. These practices hint that menstrual blood loss is an 'impure' state and not a normal human physiological phenomenon [6]. In India, young girls are generally said nothing about menstruation until their first experience. Lack of information on menstrual preparedness and management is common amongst adolescent girls, while the shyness and embarrassment with which discussions about menstruation have made the situation even worse. In several cultures, various restrictions are imposed on women and girls during their menstruation period, thus resulting in poor personal hygiene and unsafe sanitary conditions leading to gynaecological problems. Such practices expose adolescent girls to menstrual complications and menstruation-related health issues. In this background, the present study was planned to assess the attitude, knowledge, and perception toward menstruation among the Poumai adolescent girls of Manipur.

2. Methods

The present study is a cross-sectional study where the data were collected from Poumai adolescent girls aged 15–19 years, where the attitude, knowledge and perception towards menstruation were assessed. The respondents were recruited from eight schools and colleges in Senapati District, Manipur, i.e., Mt. Zion College, Mt. Everest College, New Life College, Don Bosco College, Mt. Pisgah College, Lao Radiant School, Grace English School, Vei-o Memorial School, respectively, during June 2019 and January 2020. These colleges offer a secondary education level, and many adolescent girls attend, so both the schools and colleges were approached to enrol an adequate number of adolescent girls for the study. The Poumais are one of the main indigenous tribal groups of Manipur that belong to Naga groups. According to 2011 census, there are 1,27,096 Poumai population in the state. Assuming 16% of the population to be adolescents as per world population structure, it gives around 20,000 adolescents, of which about 10,000 could be female adolescents. On this population size, at a confidence level of 95%, confidence limits of 5% and at 50% expected frequency of poor menstrual knowledge, the sample size for the study accounted for 370 adolescent girls. Including a non-response rate of 30%, a total sample of 491 adolescent girls was included in the study.

Before data collection, a group discussion was organized with the authority, principal, and concerned teachers of the schools and colleges, explaining the study's objectives, seeking permission, and getting the students' prior consent and their respective parents. A self-structured schedule was employed for data collection in a separate hall or free classroom during the off-periods, extra class schedule, and in absentees of teacher, with the best possible way not to affect the normal classes. The schedule seeking data on personal information, knowledge on menstruation, attitude, source of information, and support during menstruation was pretested and administered. The importance of menstruation and awareness of its impacts on reproductive health and allied health hazards were also explained to the participants. Descriptive statistical analysis and chi-square analysis were calculated. Coefficients of the relationship were also calculated for those significant to understand the degree of association. All statistical analysis was done using XLSTAT 20.

3. Results

Table 1 shows that the respondents' mean age and age at menarche are 17.11 ± 1.33 (C.I. 16.99–17.22) years and 13.43 ± 1.43 (C.I.13.32–13.53) years, respectively. About 73.12% of the adolescents didn't know about menstruation before attaining menarche (Table 2). Among those who have prior knowledge about menstruation, 39.39% of the adolescents got the information from their mother followed by sisters (29.55%), friends (28.79%), and aunts (2.27%). The maximum support during menstruation was given by friends (75.15%), and then the mother (73.93%), sister (60.49%), and others (2.44%), with almost negligible support from menfolks: brother and father with 1.43% each. Most adolescents used codeword or language describing and naming menstruation to hide from people among their friends (52.34%), and 84.93% were unable to purchase sanitary pads, and 97.35% of them wrapped the hygienic pads out of embarrassment. Table 3 reveals that most of the students encounter an emotional experience of being afraid (59.47%) and embarrassed (18.13%) at menarche. 25.87% of the girls have a negative attitude towards menstruation. 31.17% of the students perceive menstruation as unclean-impure and 39.71% as a shameful event.

Table 1. Age characteristics and mean age at menarche among the studied Poumai adolescents

Parameters studied	Mean Age	95% CI Interval
Age of Respondents	17.11 ± 1.33	16.99–17.22
Age at Menarche	13.43 ± 1.43	13.32–13.53

Table 2. Menstrual knowledge and behavioural characteristic of the Poumai adolescents (n = 491)

Parameters	Percentage frequency
1. Advanced Knowledge of Menstruation before menarche	
i) Yes	26.88
ii) No	73.12
2. Sources of Information	
i) *Mother*	39.39
ii) *Sister*	29.55
iii) *Friends*	28.79
iv) *Aunt*	2.27
3. .Support during Menstruation	
i) *Friends*	75.15
ii) *Mother*	73.93
iii) *Sister*	60.49
iv) *Brother*	1.43
v) *Father*	1.43
vi) *Others*	2.44
4. Stigmatic attitude towards Menstruation	
i) *Use of code word*	52.34
ii) *Unable to buy sanitary pads*	84.93
iii) *Wrapping of Pads*	97.35

23.63% of the students disagreed on consulting and sharing about menstruation with men, while 14.46% remained undecided.

Table 4 shows the effects of biosocial parameters understudy on the attitudes-perception characteristics among the Poumai adolescents of Manipur. There is a significant relationship between the adolescent's age with the perception of menstruation ($\chi^2 = 21.66$, $p < 0.05$) and their willingness to consult even with a man ($\chi^2 = 17.57$, $p < 0.05$). With the increase of age among adolescents, there is a positive perception towards menstruation, and they don't mind sharing the menstruation talk with the male members. Similarly, a higher educational level of the adolescents correlates with a positive perception of menstruation and don't mind sharing period talks with menfolks ($\chi^2 = 13.39$, $p < 0.05$; and $\chi^2 = 15.97$, $p < 0.05$, respectively). While having prior knowledge of menstruation before attaining their first bleeding is associated with menarchal emotional experience, those who don't have prior knowledge felt embarrassed significantly ($\chi^2 = 288.28$, $p < 0.0001$). Having prior knowledge makes the adolescents disagree, considering menstruation as a shameful event ($\chi^2 = 11.27$, $p < 0.05$). Interestingly, the maternal educational status shows a significant association with menarchal emotional experience ($\chi^2 = 19.59$, $p < 0.05$) as the adolescents of higher maternal educational levels have normal attitudes.

Table 3. Percentage frequency of Attitudes-Perception characteristics among the Poumai adolescents of Manipur

Attitudes-Perceptions characteristics	Percentage frequency
Menarchal-Emotional Experience	
i) Afraid	59.47
ii) Embarrassed	18.13
iii) Normal	22.40
Perception towards Menstruation	
i) Negative	25.87
ii) Neutral	32.79
iii) Positive	41.34
Menstruation as Unclean-Impure	
i) Agree	31.17
ii) Undecided	25.25
iii) Disagree	43.58
Menstruation as Shameful Event	
i) Agree	39.71
ii) Undecided	13.65
iii) Disagree	46.64
Consultation and Knowledge to Man	
i) Disagree	23.63
ii) Undecided	14.46
iii) Agree	61.91

4. Discussion

Menstruation is a universal experience in women's lives, yet it is rarely explicitly talked about, and their emotional combat and experiences of menstruation remain unnoticed and poorly understood. In fact, communication about menstrual health and hygiene is almost low, even if various organizations have been vocal about this. Such deprived communication or avoidance has encouraged the rise of social stigma, misconceptions and poor health practices that ultimately may lead to reproductive health issues.

The mean age at menarche in the present study is congruent to another study done among the Meitei females of Manipur [7]. The women in the family generally provide information on menstruation to the young growing child. Of them, the mother plays a vital role in imparting a child's sexual or menstrual education. Such findings are also reported in other studies where women provide the knowledge and brief to the young adolescent girls [8–11]. The formal and informal talks in the family and with friends need to be emphasized to deliver information and knowledge on menstrual importance and its impact. Because of the vital role of the mothers, they must be armed with the correct and appropriate information on reproductive health. Our study indicates that a considerably high percentage of the adolescent didn't know (73.13%) about menstruation before menarche, which is significantly very high as compared to the study where 30–40% of young girls did not receive any information about menstruation before menarche [12]

Table 4. Chi-square analysis showing effects of Bio-Social parameters on Attitudes-Perception characteristics among the Poumai adolescents of Manipur

Attitudes-Perception characteristics	Age	Self Educational Qualification	Knowledge Before	Maternal Educational Qualification
Menarchal-Emotional Experience i) Afraid ii) Embarrassed iii) Normal	11.5	0.50	288.28[a]	19.59[a]
Perception towards Menstruation i) Negative ii) Neutral iii) Positive	21.66[a]	13.39[a]	3.34	7.85
Menstruation as Unclean-Impure i) Agree ii) Undecided iii) Disagree	10.78	6.36	0.51	16.27
Menstruation as Shameful Event i) Agree ii) Undecided iii) Disagree	8.76	5.36	11.27[a]	14.48
Consultation with a Man i) Disagree ii) Undecided iii) Agree	17.57[a]	15.97[a]	4.65	4.69

[a] Significant at 0.05.

and slightly similar as to the study where 71% of girls in India reports of having no knowledge of menstruation before their first period [13]. Hesitant to purchase sanitary pads and wrapping the pads out of embarrassment has become a trend among adolescents who do not need to feel embarrassed or ashamed. A similar study from rural areas of the Raigad district reports that 66.1% of adolescent school girls thought that buying pads from the store was embarrassing [14]. The present study reports comparatively higher such a situation, which impacts the social stigma attached to menstruation because of which women generally hide from people in remorse about their menstruation. Such social stigma needs to be addressed before many adolescents get scared to come out of such a situation, which is not healthy.

The findings of the present study depict an association of adolescents' age with attitude and perception. This shows resemblance with the study done among the female students where it has a significant relationship on attitude toward menstruation with age [15]. It could be related to a higher age, as they tend to have more acquaintances and understandings about menstruation, so maybe they have better knowledge, following the attitude. Our study reveals a significant relationship between the educational qualifications of adolescents with their attitude towards menstruation. The higher the educational status, the higher the accessibility to get more information and enlightenment, reducing poor knowledge and misconception about menstruation and thus bringing the positivity to their attitude and perception about menstruation.

Researchers have found that girls who report having knowledge and preparedness before menarche have positive initial experiences with menstruation [16–18]. Ulman (1984) reported that if girls are mentally prepared for menarche, the chances of depression or low self-esteem decrease after experiencing menarche [18]. Our study reveals similarities between a work done among students, which indicates a significant relationship between the level of knowledge of adolescent girls and attitudes toward menstruation [19–21]. So, it can be well understood and estimated that those who don't have prior knowledge or preparedness before the onset of menstruation may have an impact, negative attitude, and perception towards menstruation. The present findings revealed a significant influence of a mother's educational qualification on the adolescent's menarchal and emotional experience. Mothers have a fundamental role in educating their daughters about menstruation. They should have more positive attitudes, be emotionally supportive, and be well informed on the issue of how a mother relates to her daughter concerning the issues of menarche and menstruation may influence the girl's future experiences. If the mothers communicated a positive view of menstruation, then the daughters, for the most part, are also expected to have a favourable

outlook. But if the mothers presented an opposing view, the daughters were more likely to hold a similar view of menstruation [22].

4.1. Limitation and implication

The present study could be more insightful if the qualitative analytical approach to understanding menstrual knowledge and hygiene were included. Besides this limitation, the study highlights the effects of biosocial characteristics on menstrual health knowledge and hygiene.

5. Conclusion

This study has highlighted a high percentage of poor knowledge before menarche and negative attitudes and perceptions towards menstruation, which presents a significant public health concern that is often neglected. It is of immense importance to develop accurate and adequate educational interventions to facilitate understanding of normal menstrual function and variability across the reproductive lifespan and the types, causes, and appropriate treatments for menstrual dysfunction in pre-menarchal and post-menarchal girls as well as the general community. Such an approach should not be restricted to any community but should reach every community. Much more effort is needed to curb the false beliefs, misconceptions, restrictions, and taboos among school girls. Undertaking qualitative and quantitative research to better understand the nature of women's menstrual complaints and their impact on women's lives and to assess how to elicit such information, including more precise and valid questions about menstrual dysfunction in future studies of gynaecological morbidity, is required. The study raises concerns about promoting health communication to educate the public. The health sector and educational professionals need to play a proactive role in promoting increased awareness, information, and effective treatment measures.

Conflict of interest

There is no actual or potential conflict of interest among the authors.

Ethical consideration

The study was approved by the Institutional Ethical Committee of Manipur University, with reference no. MU/IHEC/2020/012.

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References

[1] Diaz A, Laufer MR, Breech LL. Menstruation in girls and adolescents: Using the menstrual cycle as a vital sign. Pediatrics 2006;18:2245–50.
[2] Mahon T, Fernandes M. Menstrual hygiene in South Asia: A neglected issue for WASH (water, sanitation and hygiene) programmes. Gend Dev 2010;18(1):99–113. https://doi.org/10.1080/13552071003600083.
[3] Kirk J, Sommer M. Menstruation and body awareness: linking girls' health with girls' education. 2006. p. 1–22. Published online, https://www.susana.org/_resources/documents/default/2-1200-kirk-2006-menstruation-kit-paper.pdf.
[4] Szilagyi PG. Future Child 2003;13(1):137–51.
[5] Aniebue U, Aniebue P, Nwankwo T. The impact of premenarcheal training on menstrual practices and hygiene of Nigerian school girls. Pan African Medical Journal 2010;2(1):9. https://doi.org/10.4314/pamj.v2i1.51708.
[6] Shukla S. Working on menstruation with girls in Mumbai, India: Vacha women's resource centre. Equals 2005;15:5.
[7] Devi KS, Dhall M, Kapoor S. Adiposity markers and its association with age at menarche: A comparative study among rural and urban Meitei females of Manipur, North-East India. Diabetes and Metabolic Syndrome. Clin Res Rev 2019;13(1):500–3. https://doi.org/10.1016/j.dsx.2018.11.028.
[8] Khanna A, Goyal RS, Bhawsar R. Menstrual Practices and Reproductive Problems: A Study of Adolescent Girls in Rajasthan. J Health Manag 2005;7(1):91–107. https://doi.org/10.1177/097206340400700103.
[9] Tiwari H, Oza UN, Tiwari R. Knowledge, attitudes and beliefs about menarche of adolescent girls in Anand district, Gujarat. East Mediterr Health J 2006;12(3–4):428–33.
[10] Nair P, Grover V, Kannan A. Awareness and practices of menstruation and pubertal changes amongst unmarried female adolescents in a rural area of East Delhi. Indian J Community Med 2007;32(2):156. https://doi.org/10.4103/0970-0218.35668.
[11] Sharma P, Malhotra C, Taneja DK, Saha R. Problems related to menstruation amongst adolescent girls. Indian J Pediatr 2008;75(2):125–9. https://doi.org/10.1007/s12098-008-0018-5.
[12] Thakur H, Aronsson A, Bansode S, Lundborg CS, Dalvie S, Faxelid E. Knowledge, practices, and restrictions related to menstruation among young women from low socioeconomic community in Mumbai, India. Front Public Health 2014;2:72. https://doi.org/10.3389/fpubh.2014.00072.
[13] Geertz A, Iyer L, Kasen P, Mazzola F, Peterson K. Menstrual Health in India | Country Landscape Analysis. https://menstrualhygieneday.org/wp-content/uploads/2016/04/FSG-Menstrual-Health-Landscape_India.pdf. [Accessed 16 May 2021]. Accessed.

[14] Parle J, Khatoon Z. Knowledge, attitude, practice and perception about menstruation and menstrual hygiene among adolescent school girls in rural areas of Raigad district. International Journal Of Community Medicine And Public Health 2019;6(6):2490–7. https://doi.org/10.18203/2394-6040.ijcmph20192310.
[15] Shanbhag D, Shilpa R, D'Souza N, Josephine P, Singh J, Goud BR. Perceptions regarding menstruation and practices during menstrual cycles among high school going adolescent girls in resource limited settings around Bangalore city, Karnataka, India. Int J Collab Res Intern Med Public Health 2012;4(7):1353–62.
[16] Rierdan J. Variations in the experience of menarche as a function of preparedness. In: Golub S, editor. Menarche. Lexington Books; 1983. p. 119–26.
[17] Rierdan J, Koff E. Timing of menarche and initial menstrual experience. J Youth Adolesc 1985;14(3):237–43. https://doi.org/10.1007/BF02090321.
[18] Ulman KH. Impact of menarche on self image and mood in adolescent girls. Meeting of the American Psychological Association. Published online 1984.
[19] Bahadoran P, Oreizy HR. The effect of different educational methods in changing girl students' negative attitude towards menstruation, in intermediate schools of Isfahan. Iranian Journal of Medical Education 2006;6(2):27–33.
[20] Chan SSC, Yiu KW, Yuen PM, Sahota DS, Chung TKH. Menstrual problems and health-seeking behaviour in Hong Kong Chinese girls. Hong Kong Med J 2009;15(1):18–23.
[21] Rabiepoor S, Valizadeh R, Barjasteh S. Study of menstrual attitudes and knowledge among postmenarcheal students, in Urmia, North West of Iran. Int J Pediatr 2017;5(5):4991–5001. https://doi.org/10.22038/ijp.2017.21905.1831.
[22] Gillooly JB. Making menarche positive and powerful for both mother and daughter. Women Ther 2004;27(3–4):23–35. https://doi.org/10.1300/J015v27n03_03.