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Original Research Article

Menstrual hygiene and its awareness among adolescent girls-a study from an urban area

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ABSTRACT

Background: Menstrual hygiene management is vital for the health and well-being of adolescent girls, especially in developing countries like India, where menstruation is surrounded by cultural taboos and stigmas. These societal attitudes can impact physical and psychological health, making MHM crucial for dignity, comfort, and infection prevention. In urban areas of India, despite better access to education and healthcare compared to rural regions, many girls still face challenges such as limited access to sanitary products, inadequate school facilities, and insufficient menstrual health education. Addressing these issues is essential for achieving Sustainable Development Goals related to health, education, gender equality, and sanitation.
Methods: This cross-sectional study aimed to evaluate menstrual hygiene awareness and practices among 500 urban adolescent girls aged 11-16 years who had attained menarche. A structured questionnaire developed by Chettinad Hospital's Department of Obstetrics and Gynecology was used, covering awareness of menstruation, hygiene practices, and access to products.
Results: The study found that most of the participants had good knowledge when it came to awareness of menstruation, but faced limitations in understanding it's management and the social restrictions associated with it.
Conclusions: This study shows that there is progress in menstrual hygiene management but also reveals ongoing challenges. Effective interventions should focus on improving menstrual education, providing resources, and combating cultural stigmas to support adolescent girls to manage menstruation with dignity and confidence.

Keywords: Adolescent girls, Menstrual health education, Menstrual stigma, Urban area

INTRODUCTION

Menstrual hygiene management (MHM) is essential for the health and well-being of adolescent girls, particularly in developing countries.[1] Menstruation, though a natural process, is often surrounded by taboos and stigmas, impacting both physical and psychological health. The onset of menstruation coincides with significant changes in an adolescent girl's life, making proper MHM crucial for dignity, comfort, and preventing infections.[2] In India, adolescent girls face numerous challenges during menstruation, including inadequate sanitation facilities, insufficient menstrual products, and poor education on menstrual health.[3] Cultural taboos exacerbate these issues, leaving many girls unprepared for menarche, which leads to confusion and poor hygiene practices, increasing the risk of infections. Despite better access to education and healthcare in urban areas compared to rural regions, many urban girls still face significant challenges.[4] These include limited access to sanitary products, insufficient facilities in schools, and a lack of comprehensive menstrual health

education.[5] Cultural taboos and misinformation also persist, contributing to inadequate hygiene practices. Access to sanitary products remains a major barrier. While products are more available in urban areas, affordability is a significant issue. Many families struggle to purchase sanitary pads or tampons regularly, leading girls to use unhygienic materials like old cloths, which can cause infections.[6] Additionally, inadequate waste management systems in urban areas lead to improper disposal of menstrual waste. Schools play a crucial role in menstrual hygiene management.

Many schools lack clean and private toilets, water for washing, and proper disposal systems, causing girls to miss school during their periods. This absenteeism negatively impacts academic performance and overall educational attainment. The absence of comprehensive menstrual health education in schools means many girls lack accurate information about menstruation, leading to misconceptions and poor hygiene practices.[7]

Addressing menstrual hygiene is crucial for achieving several sustainable development goals (SDGs), including health (SDG 3), education (SDG 4), gender equality (SDG 5), and water and sanitation (SDG 6).[8] Ensuring adolescent girls have the knowledge, resources, and support to manage menstruation with dignity is essential for adolescent girls to ensure their empowerment. Proper MHM leads to better health outcomes, higher education attainment, and greater gender equality, all critical for sustainable development.[9] Girls who manage their menstruation effectively are more likely to attend school regularly, participate in activities, and contribute to their communities. This increased participation will foster personal and professional development, contributing to the country's economic growth.[10]

This study aims to assess menstrual hygiene awareness and practices among urban adolescent girls in India. The results from the study will help to identify gaps in knowledge and barriers to proper MHM, the research seeks to inform interventions and policies to policy makers to enhance the health and well-being of adolescent girls.

Understanding the current state of menstrual hygiene in urban settings is critical for developing targeted strategies to address their needs effectively. This study seeks to recognize the unmet needs of adolescent girls in an urban setting.

METHODS

Study type

A cross-sectional study design was employed, involving 500 students who met the inclusion criteria: adolescent girls aged 11 to 16 years who had attained menarche and resided in an urban area under the field practicing area of Chettinad Hospital and Research Institute.

Study duration

The study duration of 3 months for March 2014 to June 2024.

A comprehensive questionnaire was developed by the Department of Obstetrics and Gynaecology at Chettinad Hospital and Research Institute, Kelambakkam, India. This questionnaire covered three main areas, awareness about menstruation before menarche, menstrual hygiene practices, and access to menstrual products and experiences of social stigma or restrictions associated with menstruation.

The questionnaire was distributed to 500 eligible girls during school hours in a classroom setting, ensuring a controlled environment. Researchers provided instructions on completing the questionnaire and were available to answer questions. All collected data were kept confidential, and anonymity was ensured by using unique identification codes.

The questionnaire assessed knowledge and beliefs about menstruation, including understanding physiological aspects, sources of information, and pre-menarche awareness. It also addressed menstrual hygiene practices, such as the use of sanitary products, frequency of changing menstrual products, bathing habits during menstruation, and methods of disposal. Additionally, it explored the availability and affordability of sanitary products and inquired about any social or familial restrictions faced during menstruation and their impact on daily activities.

Statistical analysis

Data were analysed using SPSS version 20. Descriptive statistics summarized the data, assessing levels of knowledge, hygiene practices, and experiences of social stigma. Misconceptions or gaps in knowledge were identified, and associations between variables such as age, education level, and menstrual hygiene practices were explored.

The study, conducted over three months, aimed to provide a comprehensive assessment of menstrual hygiene management and awareness among urban adolescent girls. The findings were intended to identify gaps in knowledge and practices, guiding interventions to improve menstrual health and hygiene and contributing to the well-being and empowerment of adolescent girls.

RESULTS

Table 1 and figure A shows the age of menarche among the participants varied, with the highest frequency observed at age 13 (33%), followed by age 12 (24%) and age 14 (14.6%).

The data indicated that a majority of the girls (60.2%) were aware of menstruation before attaining menarche, while

39.8% were not. The primary sources of information about menstruation were mothers (53.6%), followed by friends (23.6%), and schools (8.2%). A small percentage reported receiving no information at all (8.8%).

Table 1: Age of menarche onset.

Category	Frequency	Percent	Valid percent	Cumulative percent
Age of menarche onset (years)				
10	27	5.4	5.4	5.4
11	68	13.6	13.6	19
12	120	24	24	43
13	165	33	33	76
14	73	14.6	14.6	90.6
15	21	4.2	4.2	94.8
16	26	5.2	5.2	100
Total	500	100	100	

Table 2: Type of menstrual products used.

Category	Frequency	Percent	Valid percent	Cumulative percent
Material used during menstrual cycles				
Cloth	10	2	2	2
Sanitary Napkins	477	95.4	95.4	97.4
Tampons or menstrual cap	13	2.6	2.6	100
Total	500	100	100	
Frequency of changing sanitary napkin				
Once every 6 hours	378	75.6	75.6	75.6
Once in 12 hours	25	5	5	80.6
When fully soaked	97	19.4	19.4	100
Total	500	100	100	
Adequate privacy to change sanitary napkins				
No	25	5	5	5
Yes	475	95	95	100
Total	500	100	100	
Availability of menstrual hygiene products				
No	55	11	11	11
Yes	445	89	89	100
Total	500	100	100	

Table 3: Social Stigma and Restrictions.

Category	Frequency	Percent	Valid percent	Cumulative percent
Restrictions faced				
Household restrictions- from doing household chores, separate utensils and sleeping quarters	45	9	9	9
No restrictions	170	34	34	43
Religious restrictions- from entering the temple, praying, attending functions	283	56.6	56.6	99.6
Restricted from attending school or playing with others	2	0.4	0.4	100
Total	500	100	100	

Continued.

Category	Frequency	Percent	Valid percent	Cumulative percent
Allowed to talk about menstrual cycle				
No	22	4.4	4.4	4.4
Only to women	97	19.4	19.4	23.8
Yes	381	76.2	76.2	100
Total	500	100	100	
Comfort in asking male family members for menstrual hygiene products				
No	114	22.8	22.8	22.8
Yes	386	77.2	77.2	100
Total	500	100	100	

Regarding the cause of menstruation, 98% correctly identified it as a physiological process, while 2% incorrectly believed it to be an impurity due to sin. When asked about the source of menstrual blood, 98.4% correctly identified the uterus, whereas a few participants mistakenly thought it came from the stomach (1%) or were not aware (0.6%). In terms of menstrual hygiene products, 81.2% of the participants reported that sanitary napkins should ideally be used during menstruation, 13% mentioned tampons or menstrual cups, and 5.4% indicated cloth. Only 0.4% were not aware of what should be used.

In table 2 When asked about the materials they actually use during their menstrual cycles, 95.4% of the girls reported using sanitary napkins, 2.6% used tampons or menstrual cups, and 2% used cloth. In terms of changing their sanitary napkins, 75.6% did so every six hours, 5% every 12 hours, and 19.4% only when fully soaked.

A significant majority (95%) reported having adequate privacy to change their sanitary napkins, while 5% did not. Additionally, 89% of the participants stated that menstrual hygiene products were readily available to them, whereas 11% reported difficulties in accessing these products.

The survey in table 3 on social stigma revealed that 56.6% of the participants faced religious restrictions, such as being prohibited from entering temples, praying, or attending functions. Household restrictions, such as being exempt from household chores or using separate utensils and sleeping quarters, were reported by 9% of the girls.

Only 0.4% were restricted from attending school or playing with others during menstruation, and 34% reported facing no restrictions. Regarding the ability to talk about their menstrual cycle, 76.2% felt comfortable discussing it openly, 19.4% only with women, and 4.4% were not allowed to talk about it at all. When asked if they felt comfortable asking male family members to buy menstrual hygiene products, 77.2% of the participants responded affirmatively, while 22.8% did not.

The study highlights that while a majority of adolescent girls in urban areas have access to menstrual hygiene products and possess adequate knowledge about menstruation, there are still significant gaps in awareness and persistent cultural taboos. Efforts should be directed towards comprehensive menstrual health education and addressing cultural stigmas to ensure that all adolescent girls can manage their menstruation with dignity and confidence.

DISCUSSION

The present study on menstrual hygiene awareness among adolescent girls in an urban area provides important insights and allows for a comparative analysis with previous studies.

Age of menarche and pre-menarche awareness

The age of menarche among the participants in our study predominantly fell between 12 and 14 years, with 33% experiencing menarche at age 13, consistent with global data. However, 39.8% of the girls were unaware of menstruation before menarche, highlighting a significant gap in pre-menarche education. This finding aligns with the study by Thakre et al, where only 36.95% of girls were aware of menstruation before it occurred.[13] In comparison, the study by Yasmin et al found even lower awareness levels, with only 42% of girls knowing about menstruation before menarche.[11] These figures underscore the need for improved education on menstruation before it begins to reduce confusion and anxiety.

Sources of menstrual information

In our study, mothers were the primary source of information for 53.6% of the girls, followed by friends (23.6%) and schools (8.2%). This is consistent with the findings of Van Eijk et al who noted that mothers are often the main source of menstrual information. However, the relatively low contribution of schools in our study indicates an area for potential intervention.[15] Schools can play a crucial role in providing accurate and comprehensive menstrual education, as also suggested by Yasmin et al, who emphasized the importance of proper education to address the gap in menstrual awareness.[11]

Understanding of menstruation as a physiological process

An encouraging 98% of participants in our study correctly identified menstruation as a physiological process, though

2% held incorrect beliefs, seeing it as an impurity due to sin. This reflects persistent cultural myths, a challenge also noted by Mukherjee et al in their study on socio-cultural perceptions in Nepal.16 The need for thorough education on the biological aspects of menstruation remains critical to dispelling these myths.

Menstrual hygiene practices

Our study found that 95.4% of participants used sanitary napkins, indicating good access to menstrual hygiene products in urban areas. In contrast, Deshpande et al reported that in an urban slum area, only 60% of girls used sanitary pads, with the remainder using cloth pieces, suggesting variations based on economic and residential status.[12] The frequency of changing sanitary napkins is also crucial, and while 75.6% of our participants changed their napkins every six hours, 19.4% only changed when fully soaked. This contrasts with the findings of Van Eijk et al, who noted that improper menstrual hygiene management is a common issue, with significant health risks.[15]

Privacy and social restrictions

Privacy for changing menstrual products was adequate for 95% of our participants, a positive finding that contrasts with the experiences reported by Thakre et al, where economic and residential status influenced access to private facilities. Social restrictions affected 56.6% of our participants, with religious prohibitions being the most common. This is consistent with the findings of Yasmin et al and Verma et al who emphasized the impact of societal stigma and cultural taboos on menstruation, leading to restrictive practices and feelings of shame.[14]

Openness and support within families

A significant portion of our participants (76.2%) felt comfortable discussing menstruation and 77.2% felt comfortable asking male family members for menstrual hygiene products. This openness contrasts with the findings of Verma et al, who noted that societal stigma often limits discussions on menstruation. However, the challenges in normalizing menstruation persist, as indicated by the 4.4% of participants in our study who were not allowed to discuss menstruation and the 22.8% who felt uncomfortable asking for products from male family members.[14]

Overall, our study highlights the ongoing challenges and progress in menstrual hygiene management among adolescent girls in urban areas. While some findings are encouraging, there remains a critical need for targeted education and awareness campaigns to address cultural myths, improve access to menstrual hygiene products, and reduce social stigma. These efforts are essential for promoting healthy and informed menstrual practices, as supported by previous research in the field.

CONCLUSION

This study highlights both progress and persistent challenges in menstrual hygiene management among adolescent girls in urban areas. While there is good access to menstrual hygiene products and a high level of awareness about menstruation, significant gaps remain in pre-menarche education and the eradication of cultural myths and stigmas. Schools play a crucial role in providing comprehensive menstrual education, and efforts should be made to ensure that all girls receive this information in a timely and supportive manner. The persistence of social restrictions and the lack of privacy for some girls underscore the need for broader societal changes to fully support menstrual health and hygiene. Interventions should aim not only to provide accurate information and resources but also to challenge and change the cultural taboos and stigmas that continue to impact the lives of adolescent girls. By addressing these issues, we can move towards a future where all girls can manage their menstruation with dignity, confidence, and support, contributing to their overall health, well-being, and empowerment.

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REFERENCES

1. Kuhlmann AS, Henry K, Wall LL. Menstrual hygiene management in resource-poor countries. Obst Gynecol Sur. 2002;72(6):356-76.
2. Deshpande TN, Patil SS, Gharai SB, Patil SR, Durgawale PM. Menstrual hygiene among adolescent girls-A study from urban slum area. Journal of family medicine and primary care. 2019;7(6):1439-45.
3. Sivakami M, Maria van Eijk. Effect of menstruation on girls and their schooling, and facilitators of menstrual hygiene management in schools: surveys in government schools in three states in India. Journal of global health. 2015;9(1):104-8.
4. Kuhlmann AS, Henry K, Wall LL. Menstrual hygiene management in resource-poor countries. Obst Gynecol Sur. 2005;72(6):356-76.
5. Mann S, Byrne SK. Period Poverty from a Public Health and Legislative Perspective. International journal of environmental research and public health. 2023;20(23):7118.
6. Regional Health-Americas TL. Menstrual health: a neglected public health problem. Lancet regional health. Americas. 2022;15:100399.
7. Vashisht A, Pathak R, Agarwalla R, Patavegar BN, Panda M. School absenteeism during menstruation amongst adolescent girls in Delhi, India. J Fam Comm Med. 2018;25(3):163-8.
8. Sommer M, Torondel B, Hennegan A. How addressing menstrual health and hygiene may enable

progress across the sustainable development goals. Global health action. 2021;14(1):920315.
9. UNICEF (2019). Guidance on menstrual health and hygiene. Available at: https://www.unicef.org/media/91341/file/UNICEF-Guidance-menstrual-health-hygiene. Accessed on 17th March 2024.
10. Rossouw L, Ross H. Understanding period poverty: socio-economic inequalities in menstrual hygiene management in eight low- and middle-income countries. International journal of environmental research and public health. 2021;18(5):25-71.
11. Yasmin S, Manna N, Mallik S, Ahmed A, Paria B. Menstrual hygiene among adolescent school students: An in-depth cross-sectional study in an urban community of West Bengal, India. IOSR J Dent Med Sci. 2013;5(6):22-6.
12. Deshpande TN, Patil SS, Gharai SB, Patil SR, Durgawale PM. Menstrual hygiene among adolescent girls–A study from urban slum area. J Fam Med Prim Care. 2018;7(6):1439-45.
13. Thakre SB, Thakre SS, Reddy M, Rathi N, Pathak K, Ughade S. Menstrual hygiene: knowledge and practice among adolescent school girls of Saoner, Nagpur district. J Clin Diagn Res. 2011;5(5):1027-33.
14. Verma A, Patyal A, Meena JK, Mathur M. Breaking the silence around menstruation: experiences from urban and rural India. Int J Comm Med Pub Heal. 2021;8(3):1538.
15. Van Eijk AM, Sivakami M, Thakkar MB, Bauman A, Laserson KF, Coates S, et al. Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis. BMJ open. 2016;6(3):10290.
16. Mukherjee A, Lama M, Khakurel U, Jha AN, Ajose F, Acharya S, et al. Tymes-. Perception and practices of menstruation restrictions among urban adolescent girls and women in Nepal: a cross-sectional survey. Reproductive health. 2020;17:1-10.

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