



# Menstrual Hygiene Management: A Literature Review

Prasad Pagore <sup>a†</sup> and Sonali Chaudhari <sup>b\*#</sup>

<sup>a</sup> *Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (Meghe), Wardha-442001, Maharashtra, India.*

<sup>b</sup> *Department of Community Medicine, Datta Meghe Institute of Medical Sciences (Deemed To Be University), Sawangi (Meghe), Wardha-442001, Maharashtra India.*

## Authors' contributions

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

## Article Information

DOI: 10.9734/JPRI/2021/v33i60B34881

## Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/80325>

**Review Article**

**Received 20 October 2021**  
**Accepted 24 December 2021**  
**Published 25 December 2021**

## ABSTRACT

**Background:** Menstruation is seldom regarded as an act of immense kindness put forward by a woman to ensure the human race doesn't cease but ironically, it is now too in this so called modernized world is considered a dirty, unclean, shameful, taboo linking it with the so called term of women's weakness in which she is at times even considered untouchable. A considerable lot of ridiculous and unhuman superstitious acts, often due to ancestry taboos carried forward, have made menstruation more intensely shamed in today's so-called advanced world. In many parts of the world, there are still restrictions enforced upon women and girls undergoing menstruation to carry out their normal routine involvement in society, whether it be their home kitchen, religious places, communal gathering, outdoor group activities, etc. In this article, we primarily focus on the management of hygiene during menstruation. Menstruation is subjected to many superstitions that may lead to unhygienic practices. Menstruation, often considered a shame or taboo in various poor undedicated and undeveloped classes of society, need awareness for hygiene, sanitation, and management across the globe. The writer searched web sites like PubMed and Google Scholar for works the usage of the keywords "Menstruation" or "Menstrual Hygiene" and "Menstrual Management." The writer reviewed case reviews and series, retrospective and potential studies,

<sup>†</sup>MBBS Student;

<sup>#</sup>Professor;

<sup>\*</sup>Corresponding author: E-mail: [sonalic27@yahoo.com](mailto:sonalic27@yahoo.com);

systematic opinions and meta-analyses, and different narrative critiques. The hints and helping quotation of papers covered within the observation have been additionally tested via way of means of the creator. Systemic critiques and meta-analyses have been favored after they have been available. When change facts became no longer available randomized management trials, potential studies, retrospective studies, case reviews, and different narrative critiques have been carried out in order.

**Conclusion:** Hygiene is the most crucial aspect of living a healthy life, and it is essential during menstruation. On the other hand, the situation is stuck in India's rural areas, where women still confront hygienic issues, particularly when it comes to menstruation.

*Keywords: Menstrual health; menstrual hygiene management; menstruation; menstrual products; waste disposal management.*

## 1. INTRODUCTION

Bleeding is a god-talented organic procedure that many ladies and women stumble upon each quit of the month. Menarche represents the start of a woman's reproductive age organization and her turning into a complete person woman status in many cultures. In urban-bad nations, menarche happens barely overdue than in metro-wealthy nations [1]. 10–19 years of his age is classed as a teen through the World Health Organization. Adolescence is the degree of transition among formative years and adulthood, and it's far described via way of the kid's boom and development. During this time, the kid's physical, psychological, and organic boom occurs [2]. Menstrual hygiene control (MHM) problems and issues in low and middle earnings international locations have become greater interest within the worldwide water, sanitation, and hygiene (WASH) sector. Women should use smooth menstrual hygiene control cloths t accumulate blood or soak the blood. The mentality of society must be modified so that each girl ought to begin the use of proper hygiene during the menstrual period. They must use cleaning soap of properly maintained pH and water for laundry the frame as required. They should have ease of centers the to waste used menstrual hygiene control materials. These recommendations are in keeping with WHO and UNICEF [3].

### 1.1 Aim

The control of menstrual hygiene and girls' fitness is vital for primary hygiene, cleanliness, and puberty fitness care. Conversely, negative private hygiene consciousness, an unscientific mentality, misconceptions, and prejudices critically affect ladies' menstrual fitness and social lives.

The stigma surrounding this subject matter also makes it hard for ladies to state their wishes and worries about menstrual fitness control explicitly. Providing enough expertise on menstruation hygiene and control to teenage ladies boosts their shallowness and improves their performance.

According to information furnished via way of means of The World Bank, a minimum of 500 million girls and women during the arena lack the right to enter menstrual hygiene equipment.

"About 113 million teenage ladies are mainly inclined at some point of the begin of menarche in India," in step with menstrual hygiene control guidelines launched via way of means of the Ministry of Drinking Water and Sanitation of the Government of India.

Maintaining proper sanitation at some point of menstruation is vital, particularly given the multiplied hazard of infections within the reproductive system. As a result, it's essential to realize the importance of menstruation fitness and hygiene in girls' universal fitness.

## 2. MENSTRUAL HYGIENE MANAGEMENT ARBITRATION

Arbitration to improve Menstrual Hygiene Management have been classified into two sets as given below:

- 1) Hardware Arbitration
- 2) Software Arbitration

### 2.1 Hardware Arbitration

Hardware Arbitration, such as the free public distributor of sanitary pads or easy water availability for hygiene purposes, and hygiene

facilities such as clean public washrooms and dustbin nearby to dispose of the waste without any shame, are meant to be used remedy material deprivations [4].

The higher price and ubiquitous nature of sanitary pads and the undergarments in which to utilise them are a significant problem to Menstrual hygiene management. Factory-made sanitary pads are often out of reach in rural regions or at a too high price. Sanitised menstrual pads (e.g., factory made or homemade abs. These material) are very helpful to reduce the embarrassment and fear or shame of staining outer clothing. Enhanced handling and help can also reduce the guilt, humiliation, and shame that prevents women and girls from going to school or affect their daily work [4]. Women may be able to wash the cloth to again for menstruation and public washroom to maintain the hygiene of their genitals by washing them with soap. They can now menstruate hygienically in washrooms at every possible public place. This also can reduce guilt and humiliation. When a woman is menstruating, after using sanitary pads soaked with blood is dumped in open-pit toilets or public toilets and restrooms because of lack of dustbin in the public washroom that might cause embarrassment and social guilt. Things changed for better management are more womens supportive such as:

- 1) Separate washroom with dustbins,
- 2) Toilets should have an internal locking system with proper water and soap kept in it,
- 3) Many other facilities for changing sanitary pads or washing their private part, these ways put forward as the key to improving Menstrual Hygiene Management [4].

## 2.2 Software Arbitration

Software Arbitration addresses knowledge deficits in menstruation and management by providing education [4].

Adolescent females have been reported to be unaware of the physiology and hoo manage menstrual bleeding in many countries. Less than half of the girls polled received knowledge about menstruation before reaching menarche in some countries. Only about fifteen percent received information regarding the management of menstrual blood flow. Because of the lack of important information or behaviors that may

cause infections, cultural or social faiths and social stigma significantly contribute to poor Menstrual Hygiene Management. Social stigma concerning the disposal of menstrual blood has been recorded in studies across contexts and behaviors such as restricted bathing, which may cause the infection or participation in social activities, and females were not allowed to touch anything in the house [4].

## 2.3 Affordability and Accessibility

The evaluation indicates that now no longer adolescent female (12-sixteen age group) in the colleges turned into given a pad. Some faculties claimed to have a listing of recipients to whom the pads had been distributed. Disposable pads and correct facts approximately her menarche have been given to the women in a few colleges. To help women of reproductive age classes address their preliminary menstruation without panic while it happens at faculty, but they're on their own for the relaxation of its existence in terms of menses. Those who no longer obtain disposable pads in faculty said that shops have no longer been available due to society and better prices. They have been offered at an exorbitant price. They said that the provision of cash makes a decision which form of menstruation product they're going to apply for each ladies and woman so that they began out the use of opportunity of disposable pads like with antique cloths which have been now no longer usually accessible as unhygienically practiced techniques can motive the very crucial infection. The majority of them can't have the funds to buy them every month at the stop of the month so that they flip to use antique cotton to control their menstruation [5].

### 2.3.1 Types of absorbents used

One of the primary considerations that need to be taken care of as far as the topic of menstrual hygiene management is the use of appropriate use of sound and hygienic menstrual management products. These products collect and absorb menstruation blood in a comfortable, safe, and discrete manner to ensure proper hygiene. Menstrual hygiene products could be categorized on various bases, but for easy understanding, here in this review, we are dividing it into three broad categories:

- (1) Commercial sanitary napkins, which include disposable pads or reusable pads, which are usually made locally [6].

- (2) Traditional absorbents such as cloth which should be washed after use, clothing, cotton wool, and toilet paper [6].
- (3) Certain commercial unconventional products such as tampons for the absorption of blood and products such as menstrual cups for blood collection [6].

Absorbency capacity, leak protection, product comfort and size, dryness, thickness, sensitivities, biodegradability, etc are all important points to be taken care of when determining the product's quality. Specific authors do classify the menstrual management products based on whether they cause infection. Some people believe in the usage of conventional products, while others, on the other hand, believe the exact opposite [6].

### 2.3.2 Hygiene framework

Along with supportive menstrual substances, an expertise movement towards providing good enough water deliver and sanitation centers like dustbin close to lady washrooms that permit non-public converting of pads and discreet laundering or disposal of menstrual substances became highlighted maximum frequently. One look at observed that simply via way of means of adopting a easy gender-precise sanitation centers like washrooms should valuable resource withinside the layout of "women-friendly" sanitation centers, which function more significant privateness for Menstrual Hygiene Management, extra room for baby care that will increase safety a few of the society. Following the development of centers in lots of villages, it became observed that the usage of this type of device ended in elevated utilization of the sanitary centers [7].

When making plans such things, it becomes vital to don't forget whether absorbent menstruation merchandise is supported through right sanitation centers. Several coverage papers and interest reviews endorsed that populations should seek advice from approximately the suitability of substances and facility layout and need to be to be had easily. Many case research established that how consulting with human beings complements their pride toward the product, at the same time as no linkages to fitness or social effects had been made [7].

### 2.3.3 Menstrual hygiene scenario in developing country

Girls in under develop countries across the world tend to manage their menstrual bleeding with old

cloths, tissue paper, cotton or wool pieces, or a mix of these materials. Which might cause infection to them [8,9].

In some countries, a vast majority of girls found using factory produced sanitary pads or napkins instead of handmade menstrual hygiene products, which appears to be an exception to this tendency [10,11].

Qualitative research shows that girls who are aware of factory made sanitary products gives priority to them because they are more agreeable and less like to leak and also effortlessly available however these items are often unavailable and/or costly for many girls and womens [12-16].

Girls at private schools or private offices, which usually belongs to rich families are more likely to use factory made made sanitary pads [17,18]. Girls in profit oriented larger cities have received satisfactory training in how to use factory made sanitary products [19].

However, data from shanty towns is in opposition in some research study shows that increased utilization of sanitary pads [20] and rest of the study reporting higher use of old clothes [21]. In addition girls from urban regions have greater awareness about menstruation and menstrual hygiene than under develop region girls and women [22, 23][18] and older teenage girls have more information than younger adolescent girls [24,25][22].

## 2.4 Menstrual Health Management in India

About three-fourth of Indian adolescent females went through menarche without knowing what was happening to them, and just a one-fourth of girls knew why they were bleeding. Only one in every eight females did not face any problem at all, despite of fact that the majority of girls faced multiple difficulties and restrictions. Factory made pads were more often utilised in metropolitan areas or schools, case study amd investigations with rural girls and community based studies shows that they are more dependent on cloths. Approximately one-fifth of the girls discarded their dirty absorbents or used pads in improper places and not in dustbins. During menstruation, a one-fourth of females said that they didn't go to school due to stomach pain and fear of staining their clothes. School absence due to menstruation did not decrease with time; in univariate analysis, school absence was found to

be negatively correlated with the prevalence of pad use.

Clothes have traditionally been used to soak menstrual flow they are less costly and less polluting and easily available but pads are rapidly replacing them, especially in metropolitan areas. If females do not have access to water, privacy or a drying area, cleaning and drying cloths could be a challenge for a school girl [26,27].

While using cloth and its proper management like for its microbicidal action, drying in the sun rather than wet cupboards or beneath other clothing is advised very frequently, however girls hide their washed cloths due to embarrassment [28]. Commercial pads were preferred by the experts of the evaluated research and the participants but higher cost restrict widespread usage. Because of their high amount of non-biodegradable components, commercial pads are difficult to dispose of so they are not so eco friendly. While the uncontrolled burning of dirty menstrual material is prevalent in certain regions, it is prohibited in some region [29].

As more women switch to factory made pads, safe disposal will become a significant issue in India, with the potential for 9000 tonnes of garbage (for 432 million pads) that will produce annually.

## 2.5 Impacts

Problems associated with Menstruation associated that have been anticipated and skilled had been in large part bad (with a few useful outcomes while women have been well stated approximately menstruation). According to the survey each 8 out of ten survey members in advanced nations anticipated as a minimum one nice extrade after menarche and predicted at the least one bad extrade. The 9 maximum expected adjustments amongst city and rural women have been now no longer favourable, together with discomfort, concern, and cramps. Overall, 80.9 percentage of pre-menarcheal women expected adjustments have been bad, at the same time as 88.7% of post-menarcheal women skilled modifications had been terrible [30].

- 1) Emotional Impacts
- 2) Physical Impacts

### 2.5.1 Emotional impacts

In various Low to center earnings countries, 8 out of each ten women stated they have been now

no longer mentally organized for menarche. Many younger girls have horrible reports with their first period. In few research in India, for example, the bulk of faculty going elderly women skilled menarche as a traumatic or horrifying event, with many crying once they noticed their blood which they had been in the main unaware and commenced crying [30].

Girls in beneath advanced usa additionally indicated that impure due to the fact she draws unlucky and regularly harsh attention. More over two-thirds of faculty going women in india skilled temper swings and infection associated with menstruation [30].

### 2.5.2 Physical impacts

Premenstrual symptoms or premenstrual syndrome, as well as painful periods, were widespread physical effects of menstruation described throughout studies. At least half of the participants almost always reported these outcomes. At most, ninety three percent of rural dwelling Indian girls reported having a premenstrual symptom or painful periods, while ninety four percent of Egyptian school aged girls reported having dysmenorrhea (absence of periods). Dysmenorrhea was more common in Ethiopian girls with premenstrual symptoms than in those without pre menstrual symptom. In Ghana, approximately two-thirds of females with dysmenorrhea had symptoms during most or all of their periods. In Malaysia, the majority of rural-living females voted out thought dysmenorrhea was a normal part of menstruation [30].

## 3. DISCUSSION

A few ladies from church groupings participated in institution discussions. These firms have been critical due to the fact they had been acknowledged of the problems that girls and women suffers throughout menstruation, and a few have been already running on advocacy troubles for girls and women. A woman researcher led 4 recognition businesses with a complete of 40 girls. With a lady researcher, girls felt relaxed of addressing such hard topics [31]. Focus organization discussions (FGDs) have been used to acquire data on Menstrual hygiene management (MHM) knowledge, awareness, attitudes, behaviours, beliefs, expectations, impressions, and/or expected issues. The qualitative assessment, which blanketed awareness discussion companies, turned into

mentioned to pick out gaps and provide hints for destiny modelling of the deliberate Menstrual hygiene management (MHM) intervention in Masvingo district and Zimbabwe as a whole. The waft of the conversations changed into guided through a focal point organization guide. More critical worries had been added to the primary subject matter due to large probing, and barriers to Menstrual hygiene management (MHM). As a result conversation had been reduced [31-35].

#### 4. CONCLUSION

Hygiene is the most crucial aspect of living a healthy life, and it is especially important during menstruation. The situation, on the other hand, is stuck in India's rural areas, where women still confront hygienic issues, particularly when it comes to menstruation.

#### CONSENT

It is not applicable.

#### ETHICAL APPROVAL

It is not applicable.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

#### REFERENCES

1. Kuhlmann AS, Henry K, Wall LL. Menstrual Hygiene Management in Resource-Poor Countries. *Obstet Gynecol Surv.* 2017;72(6):356–76.
2. Kaur R, Kaur K, Kaur R. Menstrual Hygiene, Management, and Waste Disposal: Practices and Challenges Faced by Girls/Women of Developing Countries. *J Environ Public Health.* 2018;2018:1730964.
3. Sinha RN, Paul B. Menstrual hygiene management in India: The concerns. *Indian J Public Health.* 2018;62(2):71.
4. Hennegan J, Montgomery P. 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.* 2016; 11(2):e0146985.
5. Kambala C, Chinangwa A, Chipeta E, Torondel B, Morse T. Acceptability of menstrual products interventions for menstrual hygiene management among women and girls in Malawi. *Reprod Health.* 2020;17:185.
6. Elledge MF, Muralidharan A, Parker A, Ravndal KT, Siddiqui M, Toolaram AP, et al. Menstrual Hygiene Management and Waste Disposal in Low and Middle Income Countries—A Review of the Literature. *Int J Environ Res Public Health.* 2018;15(11):2562.
7. VanLeeuwen C, Torondel B. Improving menstrual hygiene management in emergency contexts: literature review of current perspectives. *Int J Womens Health.* 2018;10:169–86.
8. Abioye-Kuteyi EA. Menstrual knowledge and practices amongst secondary school girls in Ile Ife, Nigeria. *J R Soc Promot Health.* 2000;120:23–26.
9. Zegeye DT, Megabiaw B, Mulu A. Age at menarche and the menstrual pattern of secondary school adolescents in northwest Ethiopia. *BMC Womens Health.* 2009;9: 29.
10. El-Gilany AH, Badawi K, El-Fedawy S. Menstrual hygiene among adolescent schoolgirls in Mansoura, Egypt. *Reprod Health Matters.* 2005;13:147–152.
11. El-Shazly MK, Hassanein MH, Ibrahim AG, et al. Knowledge about menstruation and practices of nursing students affiliated to University of Alexandria. *J Egypt Public Health Assoc.* 1990;65:509–523.
12. Averbach S, Sahin-Hodoglugil N, Musara P, et al. Duet for menstrual protection: a feasibility study in Zimbabwe. *Contraception.* 2009;79:463–468.
13. Jewitt S, Ryley H. It's a girl thing: menstruation, school attendance, spatial mobility and wider gender inequalities in Kenya. *Geoforum.* 2014;56:137–147. [Google Scholar]
14. McMahan SA, Winch PJ, Caruso BA, et al. 'The girl with her period is the one to hang her head'. Reflections on menstrual management among schoolgirls in rural Kenya. *BMC Int Health Hum Rights.* 2011;11:7.
15. Crofts T, Fisher J. Menstrual hygiene in Ugandan schools: an investigation of low-cost sanitary pads. *J Water Sanitation Hyg Dev.* 2012;2:50–58.
16. Sommer M. Where the education system and women's bodies collide: the social and

- health impact of girls' experiences of menstruation and schooling in Tanzania. *J Adolesc.* 2010;33: 521–529.
17. Ali TS, Rizvi SN. Menstrual knowledge and practices of female adolescents in urban Karachi, Pakistan. *J Adolesc.* 2010;33: 531–541.
  18. Salve SB, Dase RK, Mahajan SM, et al. Assessment of knowledge and practices about menstrual hygiene amongst rural and urban adolescent girls—a comparative study. *Int J Recent Trends Sci Technol.* 2012;3:65–70.
  19. Aniebue UU, Aniebue PN, Nwankwo TO. The impact of pre-menarcheal training on menstrual practices and hygiene of Nigerian school girls. *Pan Afr Med J.* 2009;2:9.
  20. Prateek B, Saurabh S. A cross sectional study of knowledge and practices about reproductive health among female adolescents in an Urban Slum of Mumbai. *J Fam Reprod Health.* 2011;5: 117–124.
  21. Kumar A, Srivastava K. Cultural and social practices regarding menstruation among adolescent girls. *Soc Work Public Health.* 2011;26:594–604.
  22. Narayan KA, Srinivasa DK, Pelto PJ, et al. Puberty rituals, reproductive knowledge and health of adolescent schoolgirls in South India. *Asia Pac Popul J.* 2001;16:225–238.
  23. Gultie T, Hailu D, Workineh Y. Age of menarche and knowledge about menstrual hygiene management among adolescent school girls in Amhara province, Ethiopia: implication to health care workers & school teachers. *PLoS One.* 2014;9:e108644.
  24. Lawan UM, Yusuf NW, Musa AB. Menstruation and menstrual hygiene amongst adolescent school girls in Kano, Northwestern Nigeria. *Afr J Reprod Health.* 2010;14:201–207.
  25. Shanbhag D, Shilpa R, D'Souza N, et al. 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;4:1353–1362.  
[Google Scholar]
  26. Narayan KA, Srinivasa DK, Pelto PJ, et al. Puberty rituals reproductive knowledge and health of adolescent schoolgirls in south India. *Asia Pac Popul J.* 2001;16: 225–38.
  27. Shamima Y, Sarmila M, Nirmalya M, et al. Menstrual hygiene among adolescent school students: an indepth cross-sectional study in an urban community of West Bengal, India. *Sudan J Public Health* 2013;8:60–4.
  28. Khanna A, Goyal RS, Bhawsar R. Menstrual practices and reproductive problems: a study of adolescent girls in Rajasthan. *J Health Manag* 2005;7:91–107.
  29. Nielsen India Private Limited. Baseline research of life skills & menstrual hygiene behavior among adolescent girls and women—East Singhbhum. New Delhi, India: Nielsen India Private Limited, UNICEF, 2013.
  30. Chandra-Mouli V, Patel SV. Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries. *Reprod Health.* 2017 Mar 1;14:30.
  31. Ndlovu E, Bhala E. Menstrual hygiene – A salient hazard in rural schools: A case of Masvingo district of Zimbabwe. *Jamba J Disaster Risk Stud.* 2016 Jan 13;8(2): 204.
  32. Abhay, Jyotsana, and Manjusha Agarwal. “A Rare Case of Unusual Urogenital Tract Foreign Body (Plastic Pen) Immigrated from Vagina Due to Masturbation/Autoerotism. *Journal of Evolution of Medical and Dental Sciences-Jemds.* 2020;9(46):3500–3502.  
Available:<https://doi.org/10.14260/jemds/2020/766>.
  33. Damke, Smita, Dhruva Chandi, and Ramesh Fule. “Study of Bacterial Vaginosis among Women of Reproductive Age Using Contraceptive Methods in a Tertiary Care Hospital.” *Journal of Krishna Institute of Medical Sciences University.* 2020;9(2):22–27.
  34. Kumari, Pooja, Bhawana B. Lakhkar, Sachin Damke, and Sham Lohiya. “Foreign Body in Vagina - An Unusual Presentation.” *Journal of Evolution of Medical and Dental Sciences-Jemds.* 2020;9(34):2487–89.  
Available:<https://doi.org/10.14260/jemds/2020/540>.

35. Kumari, Priyanka, and Sanjivani Wanjari. "Comparison of Transvaginal Colour Doppler Ultrasound and Progesterone Level Estimation in Outcome of Threatened Abortion in Early Pregnancy." *Journal of Clinical and Diagnostic Research*. 2020;14(4):QC11–15. Available:<https://doi.org/10.7860/JCDR/2020/43319.13665>.

---

© 2021 Pagore and Chaudhari; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*  
*The peer review history for this paper can be accessed here:*  
<https://www.sdiarticle5.com/review-history/80325>