

## Original Research Article

# Emerging issues and barriers in access to menstrual hygiene management in a tribal district of India

Jyoti Kakwani<sup>1</sup>, Jitendra Kumar Meena<sup>2\*</sup>, Anjana Verma<sup>3</sup>, Neha Dahiya<sup>4</sup>

<sup>1</sup>MHM Project Manager and District Supply Officer, Udaipur, Rajasthan, India

<sup>2</sup>Department of Preventive Oncology, National Cancer Institute, All India Institute of Medical Sciences, Jhajjar, Haryana, India

<sup>3</sup>Department of Community Medicine, Geetanjali Medical College and Hospital, Udaipur, Rajasthan, India

<sup>4</sup>Department of Community Medicine, Post-graduate Institute of Medical Education and Research, Chandigarh, Haryana, India

**Received:** 15 January 2021

**Revised:** 15 February 2021

**Accepted:** 18 February 2021

### \*Correspondence:

Dr. Jitendra Kumar Meena,

E-mail: [drmeenajk@gmail.com](mailto:drmeenajk@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Access to Menstrual Hygiene Management (MHM) remains a critical challenge to Indian women especially in remote areas. The problem of poor availability, acceptance, and affordability of MHM products is further aggravated by negative social construct and environmental concerns. Poor menstrual hygiene is linked to significant morbidity and mortality due to reproductive tract infections (RTIs) and cervical cancer etc.

**Methods:** A campaign “Chuppi Todo” was organized in Udaipur; a tribal district in Rajasthan aiming for menstrual health education of adolescent girls and mothers across public schools through interactive means. During the campaign interviews were conducted by trained field staff with participating girls to elicit perspectives related to menstrual hygiene and feedback of the education sessions.

**Results:** Based on qualitative assessments it was observed that women largely ignore menstrual hygiene or follow old traditional practices. They don't prefer using modern MHM products like sanitary pads etc owing to the difficulty in their disposal and embarrassment.

**Conclusions:** The present study highlights existing knowledge gaps and barriers in providing universal access to MHM to adolescent girls and women living in remote areas in India.

**Keywords:** Menstrual hygiene, Sanitary pads, Qualitative research, Universal access, Reproductive health

## INTRODUCTION

The debate surrounding Menstruation hygiene often gets overshadowed in social stigma, taboos, and socio-cultural restrictions. It is a natural, normal biological process experienced by all adolescent girls and women, yet it is not spoken about openly fearing unnecessary embarrassment and shame. Global literature has shown that menstrual hygiene management is a major problem for school going girls as schools lack water sanitation and hygiene facilities,

poor puberty education, fear, and humiliation from leaking blood which ultimately leads to increased absenteeism from school.<sup>1-3</sup> Need for secrecy from their family members, to wash and sundry reusable cloths, staying up late and getting up early so that no one sees their cloth in the home also adds further stress to their lives.<sup>4-7</sup> Girls in previous studies have reported that owing to negative social construct, many adolescent girls do not avail sanitary methods and practices of Menstrual Hygiene Management (MHM) resulting in adverse health outcomes

like: Cervical Cancer, Reproductive Tract Infections (RTIs) etc.<sup>8-10</sup>

The Indian study revealed that risk associated with the use of unclean cloth was 2.5-fold higher for the development of CIN III and malignancy as compared to the use of clean cloth or use of sanitary napkins. The factor remained statistically significant even after adjustment with other factors such as age, age at marriage, promiscuity, and education, thus highlighting the importance of menstrual hygiene.<sup>11</sup> In a similar case-control study of 226 newly diagnosed, histo-pathologically confirmed cases of cancer cervix at Regional Cancer Centre, Himachal Pradesh, It was observed that poor genital hygiene is an independent risk factor of cervical cancer.<sup>12</sup> In another study among 2141 cervical cancer cases in Kolkata, most of the patients used old / reused cloth pieces during menstruation. Majority of the patients (65.2%) with gynecological malignancies used only water for cleaning of external genitalia during menstruation.<sup>13</sup> A very recent study in Mali also highlights the use of home-made napkins as a statistically significant risk factor in the development of cervical cancer. It is important to mention that poor hygiene has been observed to be a co-factor for cervical cancer with prevalent HPV infection.<sup>14</sup> A report from WHO also suggests genital hygiene to be an important component associated with cervical neoplasia.<sup>15</sup>

The present study was planned to do a situational analysis of menstrual hygiene management (MHM) among school going adolescent girls and their mothers. The study aims to explore various emerging issues and barriers to adoption and access to menstrual hygiene and provide interactive menstrual health education with feedback to school going adolescent girls in the tribal district.

## METHODS

### *Study type*

Cross-sectional study.

### *Study place*

Government senior secondary schools across study district.

### *Study period*

June 2019 to February 2020.

### *Sampling*

Purposive sampling

### *Study population*

Chuppi Todo: Khulkar Bolo (Break the Silence, Speak up) was an ambitious campaign that aimed at reaching to every adolescent girl in the district enrolled in public schools. The campaign involves interactive menstrual health

education sessions with adolescent girls and their mothers using multimedia tools for eliminating myths and providing accurate information on the subject.

### *Data collection*

As a pilot formative qualitative research, interviews of randomly selected participants were done to gather their personal experiences and understanding of ground realities and challenges to MHM. Through the campaign such discussions were carried out regarding usage, cleaning, and disposal practices of MHM items and to discuss any related socio-cultural concerns. The interviews were done before educational sessions and girls were conveniently selected at schools. The girls were then approached and interviewed by trained field staff (Medical Social Workers) after obtaining their and mother's informed consent. The interviews didn't follow a set guide but used an exploratory approach to delve into personal and societal perspectives and practices of MHM. AV recorders, mobile phones, and notepads were used for recording daily programs and IDs which were later transcribed, translated, and digitized for narratives and content analysis. Some of the participants were followed up for evaluating the short- and long-term effectiveness of Health education sessions. Ethical approval for the project and permission from the District administration were taken.

### *Statistical analysis*

The data collected in form of audio recordings and notes was translated into English by experts and after cross-checking a consensus final report was made. Transcribed data were organized into categories and content thematic approach was used for analyzing data using categories from the dataset. Relevant quotes were also mentioned in the text to illustrate these categories. Simple quantitative proportions for different variable groups were also used to analyze the data

## RESULTS

Present study was conducted during first phase of campaign where 5 remote tribal blocks in the district. Purposive selection two girls (secondary, senior secondary) was done at each school with a total sample size of 76. The mean age of the participants was 15.8±1.5 years. The majority participants were in 9th and 10th std, Hindu and belonged to Scheduled tribe social group. (Table 1)

Based on the analysis of qualitative data it was observed that ignorance of menstrual hygiene, practicing old traditional ways, poor awareness of health impact, and negative perceptions attached to use and disposal of MHM products were frequent among study participants. The perception that menstrual hygiene relates to the availability of water and sanitation has gradually evolved.

The majority of participants displayed an initial hesitancy to talk on Menstrual Hygiene. However later during

interaction they mentioned of getting first exposed to sanitary pads through school distribution and remarked that initially they used them but later discontinued as some dropped out of school and reverted to cloth due to unavailability. Others said their mother objected for pads as they weren't sensitized to its usage which made it difficult for them to continue using pads. As for their preferred one of the girls said, "The cloth is better because I can wash it at home at any time and use it again. After using the pads, I was always worried about where to throw them. I always had to wait for a five-days to collect the used pads and bury them in fields or burn it in a pot in secrecy. It used to be very stressful storing them in the house for that particular period".

**Table 1: Socio-demographic profile of participants.**

Variable	N (%)
<b>Age (Mean±SD)</b>	15.8±1.5 years
<b>Education</b>	
9 <sup>th</sup> -10 <sup>th</sup> std.	38 (50.0)
11 <sup>th</sup> -12 <sup>th</sup> std.	15 (19.7)
7 <sup>th</sup> -8 <sup>th</sup> std.	13 (17.1)
5 <sup>th</sup> -6 <sup>th</sup> std.	10 (13.1)
<b>Religion</b>	
Hindu	64 (84.2)
Muslim	9 (11.8)
Christian	2 (2.6)
Others	1 (1.3)
<b>Social class</b>	
ST	41 (53.9)
SC	17 (22.3)
OBC	13 (17.1)
General	5 (6.5)

But when participants were argued that women in urban areas routinely use sanitary pads and manage their disposals, most opined related to difference between socio-cultural context and environment in rural and urban areas. One of the participants asserted "There is a stark difference in the urban and rural scenarios. We neither have bag-dustbin disposal and collection system nor modern flushes to drain them out unnoticed. For us, cloth serves well and good".

On discussion topic of practical feasibility and acceptability of home distribution of free sanitary pads majority participants appreciated the move as it would ensure availability and increase in the use however it will not benefit fully as challenges linked to disposal and social stigma will remain. One nonuser participant expressed willingness to use pads but wished for more information regarding best practices and method of using sanitary pad and disposal options. One user participant said that the pad was convenient to use, but disposal was stressful to her. She mentioned "I have now adopted cloth and feel free and relieved using it, without any disposal worries and reusability".

When advised for cloth not being a healthy MHM method as advertised on television networks and cloth being difficult to wash properly with required desiccation in open sunlight. One participant rebutted the advice and asserted "Such claims are just advertisement ploys by sanitary pad companies without any facts. She added if that was a valid argument women underwear is unhealthy since there is a risk of disease spread with that also. She acknowledged that it's difficult to properly wash and dry cloth in the sun but there isn't a better option. Another participant added "We barely make ends meet, it's not feasible for us to use expensive sanitary pads. Even if we manage to get them there is always a big concern of disposing of them. Many of the girls in schools are neither burying the pads used nor are burning them but instead throwing them away in the village pond. Now, I don't even feel like putting my foot in the pond".

## DISCUSSION

### Present scenario

First-hand feedbacks highlight significant MHM and health-related issues and priorities attached to them by people. People attribute less importance to Reproductive tract infections (RTI's) compared to apparent anemia and malnutrition. The debate surrounding MHM is complex, Hence, critical review of claims favoring sanitary pads, their advertisements, expert opinions, research, and relevant govt. data records is warranted. Review pending there is a significant possibility that in pursuit of solving one problem another might evolve in the shape of an environmental hazard.

At present, most agencies and stakeholders have restricted MHM scope for schools going girls in policy and planning. There is an acute understanding of MHM being synonymous with the use of sanitary pads. Examples as cited above aptly highlight the challenges faced by school dropouts and left out adolescent girls. As per recent estimates, India currently has a population of about 355 million women and girls who have menstruate. Despite which the National Family Health Survey (NFHS) 2015-16 reported that even today 71% of Girls do not know about menstrual hygiene during their menarche which is a matter of concern.<sup>16</sup>

In India menstruation is still considered a curse to women, with superstitious beliefs and practices. About 45% of women use household items, old clothes, etc., available to them during menstruation. In rural areas most of the sanitary pad users are school-going girls (availability bound) only as others do not have access to them. Neither are these products readily available in rural areas nor women are willing and able to buy them freely. Unfortunately, women are despised if they purchase pads in the village or dispose them off severely limiting countrywide MHM efforts. With existing socio-cultural challenges and environmental threats certain reverse

campaigns like “Green the Red” are underway across the globe promoting traditional but improvised ways of MHM.

### ***Health and environmental impact***

In fact, with new technological innovations, sanitary napkins have become increasingly modern. With the inclusion of polymer fiber sheets and gels in place of natural material to increase the capacity and shelf life of the product. Pads are being treated with carcinogenic bleaching agents like dioxin to give a whitish and healthier appearance the impact of which is under research.<sup>17</sup> On an average woman use 10000 to 11000 pads throughout her life and gets exposed to them every month. The silver lining for avoiding stains increases the risk of bacterial and fungal infections and the absorbent gel from petroleum polymers can induce allergies and harbor infections.<sup>18</sup>

If we talk about the environmental hazards of sanitary pads, they are innumerable. Today, about 57% of women in India use pads, thereby generating around 12 billion tons of waste every year.<sup>16</sup> Without any proper and accessible means disposal, used pads are largely burnt or buried. Both ways, it pollutes the soil and air and drastically impacts the food chain. Despite warnings, women flush-out these pads which later clog sewer lines ultimately risking the lives of sanitation workers. Sanitary pads aren't biodegradable It may take more than 800 years for a pad to naturally decompose.<sup>19</sup> Therefore, it is evident that while sanitary napkins are convenient in use, they have a detrimental impact on the environment and health. This situation is concerning the scope of menstrual hygiene programs. Whether high priority ascribed to sanitary pad use in menstrual hygiene management programs is justifiable or there is a scope of better alternatives, menstrual health education, and research, etc.

### ***Socio-cultural perspective***

While debating on the role of sanitary pads in MHM its particularly important to sensitize people openly about the issue and tackle shame and superstitions surrounding the subject. So much is the secrecy and shame that even mothers hesitate to openly discuss with their daughter and fail to mentally prepare her for menarche. This shroud of shame and secrecy breeds wrong discriminatory practices that are detrimental to women's health. Due to which women using menstrual cloth, don't clean it properly and dry it in dark areas moreover they fail to report to the doctor in case of any RTIs.

The alternative approaches to MHM can only be effective when there is a social acceptance of menstruation being a normal physiological process. Such an environment will enable women to adopt safe menstruation practices and consult a doctor freely in case of any RTI symptoms. Until menstruation is freely discussed in households, the menstrual health and hygiene will be a distant dream whether sanitary cloth or Pads are used. MHM programs should take a comprehensive socio-behavioral and

environmental approach and not restrict to sanitary pad use. Menstrual waste management is a grave challenge, which calls for the development of alternative MHM strategies and adopting the “Cafeteria approach” to enable women in making menstrual choices by apprising them of benefits and harms of each product.

### **CONCLUSION**

Participant interviews shows that while the disposal of sanitary napkins is difficult for rural women, it is also beyond their income potential. There is a need to deliberate whether traditional cloth with good hygiene can be a feasible and scientifically sound alternative. If yes, there is an acceptability challenge for the reversal of the traditional method of MHM for women using sanitary pads. In lieu of this debate it's noteworthy to regard the feedback received from the Government of Rajasthan's “Chuppi Todo: Break the Silence” campaign. There is a heightened need for mass awareness and public debate on this topic. Especially important is to educate adolescent girls pending menarche to know about menstruation and practices by integrating the topic in the 7th -8th-grade school curriculum. This will allay fears and misconceptions among the majority of girls who aren't aware of it? if it's a natural process?, how to manage it? etc.

### ***Recommendations***

MHM practices are influenced by multiple factors: knowledge, socioeconomic characteristics, cultural acceptability, personal preferences, risk perception, affordability and accessibility to WASH facilities, etc.<sup>20</sup> Therefore, existing challenges should be weighed in planning a sustainable MHM policy which address disposal of sanitary pads, clothes, biodegradable pads or menstrual cups. Since the Government of India has integrated menstrual hygiene in Swachh Bharat Mission, parallel research on disposal options of sanitary pad be undertaken to minimize environmental damage.<sup>21</sup>

Global literature has shown not so popular menstrual cup as an acceptable and safe option for menstrual hygiene in resource constraint settings where water and sanitation facilities are poor(18). These cups are made of non-toxic silicone material which is reusable and lasts for around 5-10 years and they are environment friendly. Study from Kenya done among rural primary school girls did not find any harms associated with menstrual cup.<sup>22</sup> However it requires familiarization, education, and encouragement.<sup>23,24</sup> The menstrual hygiene guidelines issued by the Government of India in 2015 propose the use of menstrual cups, organic pads, clean washed cloth etc as safer options.<sup>20</sup>

Another choice could be the use of reusable sanitary pads, studies from Nepal have shown that the use of reusable pads has increased the school attendance and they were considered as a good alternative in disaster situations also when the lack of access to other alternatives is a

problem.<sup>25,26</sup> Lack of menstrual hygiene options in different settings, cost, prejudice, fears, lack of knowledge, and awareness to manage blood flow predisposes the women to a variety of RTI some of them being Human Papilloma Virus (HPV) leading to cervical cancer. Poor MHM practices are indirectly reflected in a huge burden of RTI's and cervical cancer especially among rural women. Considering the poor access and low affordability of menstrual products in rural areas it is important to develop scientifically sound and technically feasible solutions. Further research and innovations in MHM will be instrumental as cost-effective ways of protecting women health and ensuring them a dignified life without shame or embarrassment.

## ACKNOWLEDGEMENTS

Authors acknowledge support of District administration and School staff for their logistic support and encouragement. Authors also sincerely appreciate all the participating girls and their mothers for their active participation.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

- 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(4):521-9.
- Mason L, Nyothach E, Alexander K, Odhiambo FO, Eleveld A, Vulule J, et al. 'We keep it secret so no one should know'--a qualitative study to explore young schoolgirls attitudes and experiences with menstruation in rural western Kenya. *PloS One*. 2013;8(11):e79132.
- Vashisht A, Pathak R, Agarwalla R, Patavegar BN, Panda M. School absenteeism during menstruation amongst adolescent girls in Delhi, India. *J Fam Community Med*. 2018;25(3):163-8.
- 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.
- El-Gilany A-H, Badawi K, El-Fedawy S. Menstrual hygiene among adolescent schoolgirls in Mansoura, Egypt. *Reprod Health Matters*. 2005;13(26):147-52.
- Gautam O. Is menstrual hygiene and management an issue for adolescent school girls in Nepal? 2010;19-21.
- Ahmed R, Yesmin K. Beyond construction: Use by all, A collection of case studies from sanitation and hygiene promotion practitioners in South Asia. *Menstrual hygiene: breaking the silence*. London: WaterAid. 2008.
- Dasgupta A, Sarkar M. Menstrual hygiene: How hygienic is the adolescent girl? *Indian J Community Med*. 2008;33(2):77.
- Balamurugan SS, Bendigeri ND. Community-based study of reproductive tract infections among women of the reproductive age group in the urban health training centre area in Hubli, Karnataka. *Indian J Community Med*. 2012;37(1):34.
- Bhatia JC, Cleland J. Self-reported symptoms of gynecological morbidity and their treatment in south India. *Stud Fam Plann*. 1995;26(4):203-16.
- Juneja A, Sehgal A, Agarwal SS, Singh V, Murthy NS, Mitra AB. A study of obstetric and hygienic practices in development of high and low grade lesions of uterine cervix. *Obs Gynae Today* 2002;7:535-7.
- Thakur A, Gupta B, Gupta A, Chauhan R. Risk factors for cancer cervix among rural women of a hilly state: A case-control study. *Indian J Public Health*. 2015;59(1):45.
- Sarkar M, Konar H, Raut DK. Gynecological malignancies: epidemiological characteristics of the patients in a tertiary care hospital in India. *Asian Pac J Cancer Prev APJCP*. 2012;13(6):2997-3004.
- Bayo S, Bosch FX, de Sanjosé S, Muñoz N, Combita AL, Coursaget P, et al. Risk factors of invasive cervical cancer in Mali. *Int J Epidemiol*. 2002;31(1):202-9.
- Control of cancer of the cervix uteri. A WHO meeting. *Bull World Health Organ*. 1986;64(4):607-18.
- International Institute for Population Sciences (IIPS) and ICF. 2017. National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS.
- Bae J, Kwon H, Kim J. Safety evaluation of absorbent hygiene pads: a review on assessment framework and test methods. *Sustainability*. 2018;10(11):4146.
- Wendee Nicole 2014. A Question for Women's Health: Chemicals in Feminine Hygiene Products and Personal Lubricants. *Environmental Health Perspectives*. 2014;122:3.
- Nielsen AC. Sanitary Protection: Every Woman's Health Right. A survey undertaken by AC Nielsen. Reviewed and endorsed by community development organization Plan India, the survey was conducted in October. 2010.
- Ministry of Drinking Water and Sanitation, Government of India. *Menstrual Hygiene Management-National Guidelines*; 2015. <http://www.mdws.gov.in/sites/default/files/Menstrual%20Hygiene%20Management%20-%20Guidelines.pdf>. Last accessed on 2nd December, 2020.
- Sinha RN, Paul B. Menstrual hygiene management in India: The concerns. *Indian J Public Health*. 2018;62(2):71.
- Eijk AM van, Zulaika G, Lenchner M, Mason L, Sivakami M, Nyothach E, et al. Menstrual cup use, leakage, acceptability, safety, and availability: a

- systematic review and meta-analysis. *Lancet Public Health*. 2019;4(8):e376-93.
23. Juma J, Nyothach E, Laserson KF, Oduor C, Arita L, Ouma C, et al. Examining the safety of menstrual cups among rural primary school girls in western Kenya: observational studies nested in a randomised controlled feasibility study. *BMJ Open* [Internet]. 2017;7(4).
  24. Sommer M, Sutherland C, Chandra-Mouli V. Putting menarche and girls into the global population health agenda. *Reprod Health*. 2015;12(1):24.
  25. Sommer M, Sahin M. Overcoming the Taboo: Advancing the Global Agenda for Menstrual Hygiene Management for Schoolgirls. *Am J Public Health*. 2013;103(9):1556-9.
  26. Birat Nepal Medical Trust. A Report on Menstrual Hygiene Management Project in Morang, Nepal Birat Nepal Medical Trust. Kathmandu. 2020.

**Cite this article as:** Kakwani J, Meena JK, Verma A, Dahiya N. Emerging issues and barriers in access to menstrual hygiene management in a tribal district of India. *Int J Community Med Public Health* 2021;8:1985-90.