

## Original Research Article

# A COMPARATIVE MIXED METHOD STUDY REGARDING MENSTRUAL HYGIENE MANAGEMENT AMONG REPRODUCTIVE AGE WOMEN IN URBAN & RURAL COMMUNITIES OF MADHYA PRADESH, INDIA

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### ABSTRACT

**Background:** Poor menstrual hygiene management leads to numerous health hazards among women. This study aims to explore various aspects of menstrual hygiene among women of reproductive age group in urban & rural areas.

**Materials and Methods:** A mixed-method study involving 136 women (69 from urban and 67 participants from rural areas of Rewa) aged 20 to 49 years was conducted. A semi-structured questionnaire was used to gather quantitative data regarding sociodemographic profile, menstrual hygiene practices etc. Qualitative aspect of study was explored through focus group discussion regarding menstrual hygiene practices, socio-cultural practices and related issues. Data was entered in MS excel, Chi -Square test was used for analysis and thematic analysis was done for qualitative data.

**Results:** Many participants used old cloth as absorbent during menstruation. Majority of urban participants (72.5%) disposed the menstrual waste to municipal waste vans while majority rural (92.5%) participants in open fields. Adequate menstrual hygiene had significant association with age (p-.0007), education (p-.0001) and place of residence (p-.0272). Qualitative analysis revealed hesitancy to use sanitary napkins, lack of knowledge, economic constraints and inadequate menstrual waste management facilities as obstacles to adequate menstrual hygiene management.

**Conclusion:** Adequate menstrual hygiene waste management is less prevalent among rural women. Unaffordability and lack of knowledge are the major barriers leading to poor menstrual hygiene management. Adequate Menstrual hygiene management is necessary for better reproductive health of women and to live freely without restrictions or fear.

**Keywords:** Focused group discussion, menstrual waste management, sanitary napkins.

## INTRODUCTION

WHO/UNICEF Joint Monitoring Programme 2012 defines menstrual hygiene management as use of clean menstrual blood absorbent, use of soap & water for washing and access to safe disposal.<sup>[1]</sup> WHO recognizes menstruation as not merely a hygiene issue, but as a health issue with physical, psychological & social dimensions.<sup>[2]</sup> Various factors like socio-cultural norms, availability of menstrual hygiene products and proper menstrual waste

disposal, determine menstrual hygiene practices in India.<sup>[3]</sup> Poor menstrual hygiene poses risk of reproductive tract infections.<sup>[4]</sup> Many Indian studies have focused on menstrual hygiene management among adolescent girls with less focus on women of reproductive age group. This study was conducted to assess menstrual hygiene management among reproductive age women in urban and rural communities of district Rewa, Madhya Pradesh, India. This study also explored varied realms of

attitude, barriers, practices & suggestions related to menstrual hygiene.

## MATERIALS AND METHODS

**Study Design & Sample Size:** Present study was a sequential, quantitative-qualitative mixed methods research, which was conducted in the urban and rural areas of Rewa block of Rewa district, Madhya Pradesh.

Women aged between 20 to 49 years willing to participate were included in the study.

A total of 136 participants (69 from urban and 67 participants from rural areas of Rewa), were involved in the quantitative part, while four Focused Group Discussions (two each in urban & rural areas) were conducted till a point of data saturation was reached, for the qualitative part.

**Sampling Technique:** Multistage sampling was used to select study participants from 3 wards in urban areas and 3 villages in rural areas randomly. The ethical clearance is obtained by institutional ethical committee study was conducted after obtaining informed written consent from the participants.

**Data Collection:** A semi-structured questionnaire with variables such as socio-demographic variables, menstrual hygiene practices as type of absorbent used, no. of times of changing pads, use of soap & water for washing and provision of separate washroom facility, was used for the quantitative data collection. Content validity of the questionnaire was ensured with the help of subject matter experts. Those domains of quantitative part of study which required further exploration (such as menstrual hygiene practices, reasons for using cloth / sanitary napkins as absorbent, safe disposal practices, etc.), were considered for developing a Focus Group Discussion guide, which was utilized for conducting the qualitative part of research.

Quantitative data was collected first, using a pre-designed proforma and the participants were

invited for focused group discussions at Anganwadi centers nearest to them. For FGDs, homogeneous group of participants (with similar age group, education levels and socio-economic status) were chosen, and over all, four such groups were involved, till we reached a point of data saturation. The investigator and co-investigator acted as moderator and rapporteur, respectively. After obtaining informed written consent, the discussion was conducted, in local Hindi language and was recorded using an audio-recorder. Each FGD group consisted of six to ten participants and it was held for a minimum duration of 45 minutes.

**Data Analysis:** The quantitative data was checked for its completeness and then entered in an excel sheet. This data was analyzed in the form of frequencies & proportions, using MS Excel and SPSS demo version 20.

The recordings of FGD were transcribed by the investigator & co-investigators independently in English language, and codes were generated. A common code was generated after reaching a final point of consensus between all the research team members. Sub-themes and Themes were generated and data from both urban and rural participants was compared. Some quotes of study participants were presented verbatim, to provide more insight in understanding the topic.

## RESULTS

**Quantitative Analysis:** Table shows distribution of study participants according based on socio-demographic profile. Majority of the urban (69.6%) and rural (56.7%) participants belonged to 20-35 years age group. Majority of urban participants were educated till Secondary classes (34.8%), while most of the rural participants were illiterate (44.8%). Most of the participants belonged to lower middle socio-economic class as per modified BG Prasad SES Scale.

**Table 1: Distribution of Study Participants based on Socio-demographic Profile.**

Variable	Urban N=69 (%)	Rural N=67 (%)
Age group		
20-35	48 (69.6)	38 (56.7)
36-49	21 (30.4)	29 (43.3)
Education Levels		
Illiterate	13 (18.8)	30 (44.8)
Primary	06 (8.7)	08 (11.9)
Middle	14 (20.3)	17 (25.4)
Secondary	24 (34.8)	06 (8.9)
Higher secondary	04 (5.8)	01 (1.5)
Graduate & above	08 (11.6)	05 (7.5)
Socio-economic Status		
I	02 (2.9)	00 (0.0)
II	12 (17.4)	02 (3.0)
III	21 (30.4)	22 (32.8)
IV	30 (43.5)	22 (32.8)
V	04 (5.8)	21 (31.3)

**Table 2: Distribution according to Menstrual Hygiene Practices**

Variable	Urban N=69, (%)	Rural N=67, (%)
Absorbent Used during Menstruation		
Old Cloth	37 (53.6)	45 (67.2)

Sanitary Napkins	32 (46.4)	22 (32.8)
If old cloth is used, how many times you use a single cloth?		
Once only	39 (56.5)	38 (56.7)
More than once	02 (2.9)	07 (10.4)
Practice of washing genital region during menstruation		
Yes	58 (84.1)	46 (68.7)
No	11 (15.9)	21 (31.3)
Separate Washroom Facility		
Yes	68 (98.6)	64 (95.5)
No	01 (1.4)	03 (4.5)
Separate Bin for Menstrual Waste Disposal		
Yes	09 (13.04)	00 (00)
No	60 (86.95)	67 (100)
Menstrual Waste Disposal Practices		
Municipal waste vans	50 (72.5)	00 (00)
Open field	12(17.4)	62 (92.5)
Burning	07(10.1)	05 (7.5)

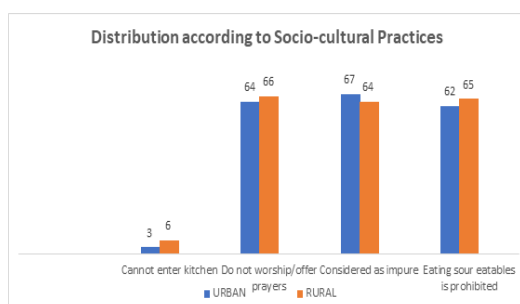
About 50% of the participants used old cloth as absorbent during menstruation and practiced washing genitalia during menstruation. Only 13.04% urban participants had separate bins at their homes for menstrual waste disposal. Most of the urban participants (72.5%) disposed the menstrual waste in municipal waste vans while 92.5% of rural participants dumped it in open field areas. On scoring

the above mentioned parameters for assessing menstrual hygiene practices, participants were divided into 2 groups- Score > 50% Adequate and score < 50% as not having adequate menstrual hygiene practices.

Only about 26.1% of urban and 8.9% rural participants had knowledge that sanitary napkins are provided at subsidized rates.

**Table 3: Association of Menstrual Hygiene Practices (Adequate / Not Adequate) with Socio-demographic variables and Gynecological symptoms-**

Variables	Menstrual Hygiene Practices		Chi-square	P-value
	Adequate N=108, (%)	Not Adequate N=28, (%)		
Age Group				
20-35	76 (70.4)	10 (35.7)	11.4871	.0007
36-49	32 (29.6)	18 (64.3)		
Education Levels				
Illiterate	23 (21.3)	20 (71.4)	24.808	.0001
Primary	13 (12.0)	01 (3.6)		
Middle	30 (27.8)	01 (3.6)		
Secondary	24 (22.2)	06 (21.4)		
Higher secondary	04 (3.7)	01 (3.6)		
Graduate & above	12 (11.1)	01 (3.6)		
Socio-economic Status				
I	01 (0.9)	01 (3.6)	9.249	.0551
II	13 (12.0)	01 (3.6)		
III	37 (34.2)	06 (21.4)		
IV	41 (37.9)	11 (39.3)		
V	15 (13.8)	10 (3.6)		
Place of Residence				
Urban	60 (55.6)	09 (32.1)	4.8764	.0272
Rural	48 (44.4)	19 (67.9)		
Gynecological symptoms* present				
Unpleasant smelling vaginal discharge	08 (7.4)	24 (85.7)	0.9354	.9194
Itching in external anogenital region	05 (4.6)	14 (50.0)		
Ulcers in external anogenital region	01 (0.9)	02 (7.1)		
Persistent Lower abdominal pain	03 (2.7)	16 (57.1)		
Increased frequency of micturition	06 (5.5)	18 (64.3)		



**Figure 1: Distribution according to Socio-cultural Practices**

Adequate menstrual hygiene practices had a significant association with age groups, education levels, Socio-economic Status and place of residence.

### B. Qualitative Analysis

**Theme 1: Practices during menstruation & Barriers faced**

**Type of absorbent used during menstruation:** Majority of the participants used old cloth as absorbent during menstrual periods. Most of the study participants changed the absorbent once only, washing the cloth with soap & water & dry it under

sun, some have katcha houses, so could not dry them under sun as there is no rooftop. Some said that they do not practice drying underclothes openly as it was embarrassing for them.

#### **Illustrative Statement:**

1. “घर कच्चा है, छत ही नहीं है, कहाँ जाएँ धुप में सुखाने।□
2. “जहाँ पूरे परिवार के कपड़े सूखते हैं वहाँ अपने माहवारी के समय वाले कपड़े डालने में शर्म आती है।

□Most of the urban participants practiced changing absorbent at least thrice a day (24 hours), which shows a good practice among them. Many of the urban FGD participants had used old cloth as menstrual absorbent at some point in their lifetimes, but had switched over to using sanitary pads after knowing about its benefits from doctors, at health camps, and friends.

#### **Constraints faced in using sanitary napkins**

Chief constraint faced by the rural and urban participants in using sanitary napkins was unaffordability due to high cost of sanitary napkins. They had no knowledge that sanitary napkins are provided at discounted costs by the Jan Aushadhi Kendras. Almost all of them were of the view that sanitary napkins were very thin, become wet very quickly and had leakage issues. Some of them were hesitant to use despite availability as they were using cloth as absorbent since childhood, and due to lack of knowledge about how to use sanitary napkins.

1. “पैसा ही नहीं है, पैड कहाँ से लाएंगे।□
2. “पैड पतला रहता है, जल्दी भीग जाता है, कपडा मोटा बना के लेते हैं तो लम्बा चल जाता है।□
3. “मेरी उम्र ४० साल है, पैड कभी इस्तेमाल ही नहीं किया है, घिन्न आती है, बचपन से कपडा ही लेते हैं।□
4. “जब पैसा रहता है तो पैड ले आते हैं, नहीं रहता तो कपडा ही लेना पड़ता है।□

#### **Barriers in menstrual waste disposal**

Most of the urban study participants responded that they use to wrap the used menstrual absorbent in a polythene bag, throw it in the common household garbage bin which was handed over to the municipal corporation garbage van. While a few also replied that they throw the used absorbents in the vacant space available behind their houses and then burn all the waste collectively at the end of menses every month.

All the rural respondents responded that they either burned, or dumped the cloth used during menstruation, after washing, at any empty space near their houses.

#### **Illustrative statements:**

1. “कहीं जगह ही नहीं बची तो घर के आस-पास जहाँ खाली दिखा वहाँ फेंक देते हैं। □
2. “ये नगर निगम नहीं है, ग्राम पंचायत है इसलिए कूड़ा गाड़ी नहीं आती, तो कहीं भी खाली जगह में फेंक देते हैं। □

Majority of the participants, both urban & rural did not have separate bins in their homes, for disposing menstrual waste. Most of the rural participants were of the opinion that since there is no provision of facilities like municipal vans to carry the waste, they have no other option but to dump the menstrual waste products along with general domestic waste at any nearby vacant spaces.

#### **Theme 2: Socio-cultural practices during menstruation**

**Dietary constraints:** Most of the participants did not preferred eating sour food items like pickles & other sour eatables as they believed it to be harmful for them & that it might cause abdominal cramps and fear of increased menstrual blood loss.

#### **Illustrative statements:**

“कहते हैं कि महीने के समय खटाई खाने से खून ज्यादा जाता है, इसलिए हम खटाई नहीं खाते। □

**Religious beliefs:** While all the urban participants did not do worship during menstrual phase, main reason being brought up in this way only & never seen their mother or other women of house do so, chief reasons for not offering prayers, being stated by the rural participants were ‘I am not pure while I am menstruating, so prayers offered during this time will not be fruitful’.

“महीने के समय पूजा करने से फल नहीं मिलता, जब फल ही नहीं मिलेगा तो पूजा क्या करें। इस समय पर हम अपवित्र रहते हैं। ये सब हम बचपन से ही मानते हैं। हमें भी लगता है कि ये सही है। □

**Problems faced:** Most of the study participants suffered from pain abdomen, lower backache, leg cramps, bloating etc. during menstrual phase.

**Family support:** Almost all the rural FGD participants responded that due to privacy and shyness concerns, they were not able to discuss menstrual issues and discomforts in their families. Also, their husbands had poor support towards menstrual pain, that they never brought medicines for easing their menstrual pain and only when they had severe health issues, then only the husbands would take them to a medical practitioner for seeking help. The spouse also did not help in household chores even while they have abdominal cramps.

1. “जब भी महीने वाला दर्द होता है, हम खुद जा के मेडिकल स्टोर से गोली ले आते हैं, पति को बोलो तो वो नहीं लाते हैं। उनको लगता है ये कोई बड़ी बात नहीं है, जब तकलीफ बहुत ज्यादा होती है तभी डॉक्टर के पास ले जाते हैं। □
2. “हम लोगों के अलावा और कोई खाना बनाने में मदद नहीं करता है।□

This is contrasting to what was observed among the urban participants. Husbands were more supportive & helped in household chores when they had abdominal cramps due to menstruation. Some of them also told small family size and nuclear family

as the reason for not getting any household help despite having menstrual pain.

**Theme 3:** Study participants feedback & suggestions regarding menstrual hygiene management

Almost all urban & rural participants were of the view that it would be better for them if they get sanitary napkins for free from their nearby Anganwadi centres. They also emphasized the need for increasing the thickness & quality of sanitary napkins so as to tackle the problem of leakage. Family members should also be counselled for better support during the time of menstruation.

“अगर पैड मोटा रहे और बड़ा रहे तो इस्तेमाल करने में अच्छा रहेगा।”

## DISCUSSION

In this study, a total of 136 females of reproductive age group were interviewed and most of them (79.4%) had adequate menstrual hygiene practices. Adequate menstrual hygiene practices had a significant association with age groups, education levels, socio economic status and place of residence (urban & rural).

This may be due to better awareness and knowledge among younger age group (20-34 years) and with higher education levels. Similar findings were reported by Saini et al,<sup>[5]</sup> who observed that 54.16% women aged 20-24 years while Kumar et al,<sup>[6]</sup> reported 81.7% women had good menstrual hygiene practices in urban areas of Delhi.

Sanitary napkins were used by 46.4% urban and 32.8% rural women while studies by Santra,<sup>[7]</sup> and Saini et al,<sup>[5]</sup> reported 65% and 69% women using sanitary napkins respectively. Better awareness and good general waste management facilities may be the reason behind better menstrual hygiene practices among urban participants. Government initiatives for distribution of sanitary napkins have improved accessibility, however their utilization still remains suboptimal due to lack of awareness and affordability issues, especially in rural areas.<sup>[8]</sup>

Menstruation involves many restrictions and taboos in women's lives and many household chores considered as 'holy' were prohibited. Garg et al,<sup>[9]</sup> also reported similar findings. There were restrictions like- not eating certain food items due to fear of heavy menstrual blood loss and other health problems and the piece of cloth worn during menstruation was considered as a thing to be concealed. This finding was similar to a study conducted by Paul et al,<sup>[10]</sup> who found worship and diet restrictions common during menstruation. Similar socio-cultural barriers influencing menstrual hygiene practices have also been reported in other Indian studies.<sup>[11]</sup>

The participants did not have separate bins for disposing menstrual waste and most of the rural participants opined that no provision of facilities like municipal garbage vans were available. Improper menstrual waste disposal practices such as open dumping and burning pose environmental and health

risks, highlighting the need for better waste management systems.<sup>[12]</sup> Unaffordability due to high cost of sanitary napkins was a major constraint in better menstrual hygiene management, as also reflected in another study by Bhattacharya et al.<sup>[13]</sup>

Poor menstrual hygiene practices have also been associated with increased risk of reproductive tract infections and urogenital symptoms, particularly among women using reusable absorbents without proper sanitation. Similar associations have been demonstrated in community-based studies from India.<sup>[14,15]</sup>

## CONCLUSION

Adequate menstrual hygiene management is still less prevalent, more so in the rural areas due to inadequate knowledge, lack of resources and menstrual waste management facilities. Lack of awareness regarding safe menstrual waste disposal practices add to the hazard of environmental pollution. Economic concerns like affordability and cultural silence contribute to the unmet needs of women regarding menstrual hygiene management.

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