

## Original Research Article

# Menstrual hygiene practices among Kom women in rural area of Chandel district, Manipur: a cross-sectional study

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## ABSTRACT

**Background:** Menstruation is a normal physiological process and a key sign of reproductive health in women; it plays a vital role in women's life. To acquire healthy reproductive menstrual hygiene is one significant aspect for women and this proper menstrual hygiene has not been fairly addressed in some rural tribal areas of Manipur. This study aimed to determine menstrual hygiene practices among Kom women in rural area of Chandel district, Manipur.

**Methods:** A community based cross-sectional survey using pre-tested self-structure questionnaire, the questionnaire consisting of socio-demographic profile, menstrual history and menstrual hygiene practices. 300 eligible participants' adult women were selected using purposive sampling method the study area was carried out among five kom villages residing in Chandel district of Manipur.

**Result:** The mean age of study population was  $34.63 \pm 8.76$  years. Majority of them belonged to aged group 40-49 years (36.7%) and 64.7% were married. Used of sanitary pad during menstruation was reported by 71% and reusable cloths 29%. 16.3% of females reported irregular menstruation state and in times of irregular menstruation 92% of them mentioned they don't seek medical treatment.

**Conclusions:** Hence, menstrual history and practices were found to be unsatisfactory among the rural Kom women. Further studies with more qualitative study are recommended to take a look in rural tribal areas of Manipur. Health education classes and intervention session on reproductive health and menstrual hygiene practices among rural tribal community must be encourage to overcome the challenges faced by the rural tribal women.

**Keywords:** Menstruation health, Rural areas, Kom women, Hygiene, Practices

## INTRODUCTION

Menstruation is a normal physiological process and a key sign of reproductive health in women, the term 'menstruation' has been coined from the latin word 'menses' meaning moon which signifies a 28 days lunar month.<sup>1</sup> The reproductive health component of general health increases during adolescence and, particularly for women. The health of the newborn is largely a function of the mother's health status and of her previous access to health care.<sup>2</sup> Women in India and notably the economically disadvantaged women suffer the highest rates of complications due to pregnancy such as sexually

transmitted diseases, and reproductive cancers.<sup>3</sup> Menstrual hygiene management (MHM) is defined as Women and adolescent girls using clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required.<sup>4</sup> Adequate management of menstrual hygiene is taken for granted in affluent countries; however, inadequate menstrual hygiene is a major problem for girls and women in resource-poor countries, which adversely affects the health.<sup>5</sup> Hence, healthy reproductive among women is vital for general health and it is crucial to study among vulnerable areas to

look at their menstruation issues and challenges. So, the study aims, to determine the menstrual hygiene practices among Kom adult women in rural area of Chandel district, Manipur (20-49 years).

## METHODS

### *Study design*

This study was community based cross-sectional study.

### *Study area and population*

The study was carried out among eligible 300 kom adult women of reproductive age group (20-49 years) in rural areas inhabited by the kom community in Chandel district, Manipur. Respondents were selected from five kom villages namely, (Litan Kom, Tonsen Khullen, Tonsen Tampak, Kakching Mantak and Mahouter Kom) of Chandel district respectively.

### *Sample size and sampling technique*

The sample size was determined using the formula  $n = \frac{z^2 pq}{d^2}$  where;  $n$ =the desired sample size  $z=95\%$  confidence interval or 1.96  $q=(1-p)$  or  $(100-p)$  and  $d$ =degree of precision set at 0.05%.

Calculation:  $1.96 \times 1.96 \times 28.6 \times 71.4 \div 0.5 \times 0.5 = 313.7$  A prevalence of 28.6% used of sanitary pads during menstruation was used based on the study done by (Angeline et al).<sup>6</sup> The minimum sample size was 313. Therefore 300 participants were selected for possible drop outs.

Household survey was adopted during the study. Eligible participants were selected using purposive sampling based on inclusion criteria

### *Inclusion and exclusion criteria*

Non-pregnant and non-lactating women of aged 20-49 years were included in the study. Pregnant or lactating women, those who are sick due to any chronic illness and those who have attained menopause were excluded from the study.

### *Data collection*

Data was collected from the eligible and willing participants using a pre-tested, structured questionnaire for the period of three months from January to march, 2025. The questionnaire had three sections consisting of socio-demographic, menstrual history and menstrual hygiene practices.

### *Statistical analysis*

Obtained data was entered using Microsoft Excel and analysis of data was done in standard statistical package

for social sciences (SPSS) software version 21. Descriptive statistic (such as frequency, percentage, mean and standard deviation) was used to describe the socio-demographic, menstrual history, and menstrual hygiene practices.

### *Ethical approval and informed consent*

Prior to data collection, ethical approval was obtained from institution of ethical committee and written consent form and permissions was obtained from head chief of the five respected villages, eligible participants were explained about the purpose of the study, written consent along with verbal informed consent were obtained from participants after explaining about the objectives of the study.

## RESULTS

### *Socio-demographic characteristics of the study population*

A total of 300 adult females participated in the study. The socio-demographic characteristic of the study respondents are summarized in Table 1.

Nearly 37% of the participants were in the age group of 40-49 years, and 31.3% lies in the age group of 20-29 years. About 16% of the females were illiterates and majority 29% had education upto intermediate school level. With regard to employment status, 49% were employed in different sectors. Socio economic status was classified according to modified BG Prasad classification 2024; 10% of the subjects fell upper middle class, 30% respondent's family fell under lower middle class and 35% under lower middle class. About 53.3% of females were married and 55.7% belonged to nuclear family and majority 60.7% belongs to medium family consisting of 4 to 5 family members.

### *Menstrual history of the study participants*

The menstrual history of the study females participants are presented in Table 2. Among 300 females interviewed, 60% reported menarche under aged group 11-13years. 83.6% of females reported regular menstrual cycles. Regarding treatment of irregular menstruation 92% reported no treatment. The 46.3% has complaint in menstrual cramp dysmenorrhea and about 27% females reported they had moderate pain during menstruation.

### *Menstrual hygiene practices by the study participants*

Menstrual hygiene practices followed by the study participants during menstruation are summarized in Table 3. Regarding the menstrual hygiene practices, about 71% mentioned to use commercial pad and 29% used reusable cloth absorbent as menstrual product, among females who practice use of reusable cloths, 13.3% of them mentioned to use detergent in washing. 14.3% reported drying in

sunlight whereas 12.3% dried them inside the house, without any exposure to sunlight. Regarding personal hygiene, about 93.3% reported washing their hands in soap and water every after-absorbent change. Majority 32.3% reported to take bath every third day of menstruation. 72.3% of females mentioned that during menstruation their menstrual absorbent is changed every

4-6 hours. Majority 41.7% of them had the habit of changing absorbent 3 times during menstrual cycles. 20.3% absorbents were disposed in toilet. Nearly 81.3% of the females didn't seek medical treatment during any reproductive illness, among private and government health facilities 8% and 7% were preferred place of treatment for any reproductive illness.

**Table 1: Sociodemographic characteristics of participants, (n=300).**

| Characters   | Category                   | N   | Percent (%) | Mean       |
|--|----------------------------|-----|-------------|------------|
| Age (in years)   | 20-29                      | 94  | 31.3        | 34.63±8.76 |
|  | 30-39                      | 96  | 32.0        |            |
|  | 40-49                      | 110 | 36.7        |            |
| Education  | Honours                    | 6   | 2.0         | 4.01±1.72  |
|  | Graduate                   | 54  | 18.0        |            |
|  | Intermediate               | 87  | 29.0        |            |
|  | High school                | 57  | 19.0        |            |
|  | Middle school              | 30  | 10.0        |            |
|  | Primary school             | 19  | 6.3         |            |
|  | Illiterate                 | 47  | 15.7        |            |
| Occupation   | Employed                   | 147 | 49.0        | 1.51±0.50  |
|  | Unemployed                 | 153 | 51.0        |            |
| Socio-economic status<br>Modified BG Prasad<br>classification 2024 | Upper class (I)            | 15  | 5.0         | 3.54±1.07  |
|  | Upper middle class (II)    | 31  | 10.3        |            |
|  | Middle class (III)         | 90  | 30.0        |            |
|  | Lower middle class (IV)    | 105 | 35.0        |            |
|  | Lower (V)                  | 59  | 19.7        |            |
| Marital status   | Married                    | 160 | 53.3        | 1.69±0.94  |
|  | Unmarried                  | 106 | 35.3        |            |
|  | Separated                  | 1   | .3          |            |
|  | Widow                      | 33  | 11.7        |            |
| Type of family   | Joint                      | 133 | 44.3        | 1.44±0.50  |
|  | Nuclear                    | 167 | 55.7        |            |
| Size of family   | Large family (6 and above) | 102 | 34.0        | 2.29±0.56  |
|  | Medium family (4-5)        | 182 | 60.7        |            |
|  | Small family (2-3)         | 16  | 5.3         |            |

**Table 2: Frequency and percentage distribution of women regarding menstrual history.**

| Menstrual history                              | N   | Percent (%) |
|--|-----|-------------|
| <b>Menarche</b>                                |     |             |
| 9-10 years                                     | 21  | 7.0         |
| 11-13 years                                    | 179 | 59.7        |
| 14-16 years                                    | 80  | 26.7        |
| Above 16 years                                 | 20  | 6.7         |
| <b>Menstruation state</b>                      |     |             |
| Regular  | 124 | 41.3        |
| Irregular                                      | 49  | 16.3        |
| Regular but less                               | 106 | 35.3        |
| Regular but heavy bleeding                     | 21  | 7.0         |
| <b>If irregular</b>                            |     |             |
| 1-2 months                                     | 37  | 12.3        |
| 3-4 months                                     | 12  | 4.0         |
| Normal period                                  | 251 | 83.7        |
| <b>Treatment during irregular menstruation</b> |     |             |
| Yes  | 11  | 3.7         |
| No   | 276 | 92.0        |
| Sometime                                       | 13  | 4.3         |

Continued.

| Menstrual history                     | N   | Percent (%) |
|---------------------------------------|-----|-------------|
| <b>Menstrual cramp (dysmenorrhea)</b> |     |             |
| Yes                                   | 139 | 46.3        |
| No                                    | 58  | 19.3        |
| Sometime                              | 103 | 34.3        |
| <b>Severity of menstrual cramp</b>    |     |             |
| Mild                                  | 63  | 21.0        |
| Moderate pain                         | 81  | 27.0        |
| Severe pain and back pain             | 41  | 13.7        |
| Severe pain and dizziness             | 27  | 9.0         |
| Severe pain and nausea                | 15  | 5.0         |
| Severe pain and no appetite           | 15  | 5.0         |
| No symptom                            | 58  | 19.3        |

Table 3: Menstrual hygiene practices during menstruation.

| Practice of menstrual hygiene   | N   | Percent (%) |
|---|-----|-------------|
| <b>Menstrual product</b>  |     |             |
| Cloth pad reusing   | 87  | 29.0        |
| Commercial pad  | 213 | 71.0        |
| <b>Method of washing reusable absorbent</b>                           |     |             |
| Soap only   | 32  | 10.7        |
| Soap and Dettol   | 8   | 2.7         |
| Detergent only  | 40  | 13.3        |
| Detergent and Dettol  | 7   | 2.3         |
| Sanitary napkin   | 213 | 71.0        |
| <b>Drying of reusable absorbent</b>                                   |     |             |
| Sunlight  | 43  | 14.3        |
| Room  | 37  | 12.3        |
| Ironing   | 7   | 2.3         |
| Sanitary napkin   | 213 | 71.0        |
| <b>Washing of hand in soap and water every after absorbent change</b> |     |             |
| Yes   | 280 | 93.3        |
| Sometime  | 20  | 6.7         |
| <b>Bath during menstruation</b>                                       |     |             |
| Everyday  | 40  | 13.3        |
| Every first day   | 22  | 7.3         |
| Every second day  | 90  | 30.3        |
| Every third day   | 97  | 32.3        |
| After menstruation  | 51  | 17.0        |
| <b>Absorbent change every 4-6 hours in a day</b>                      |     |             |
| Yes   | 217 | 72.3        |
| No  | 83  | 27.7        |
| <b>Change of menstrual absorbent in a day</b>                         |     |             |
| 1-2 times   | 83  | 27.7        |
| 3 times   | 125 | 41.7        |
| More than 3 times   | 92  | 30.7        |
| <b>Disposing menstrual product</b>                                    |     |             |
| Dump in toilet  | 61  | 20.3        |
| Throw in garbage  | 20  | 6.7         |
| Wash dry and burn   | 53  | 17.7        |
| Wrap and burn   | 39  | 13.0        |
| Wash and buried in soil   | 21  | 7.0         |
| Wrap and buried in soil   | 19  | 6.3         |
| Wash and reuse (cloth pad)  | 87  | 29.0        |
| <b>Treatment during any reproductive health sickness</b>              |     |             |
| Yes   | 17  | 5.7         |
| No  | 244 | 81.3        |
| Sometime  | 39  | 13.0        |

Continued.

| Practice of menstrual hygiene                                 | N   | Percent (%) |
|---|-----|-------------|
| <b>Health centre often visit during reproductive sickness</b> |     |             |
| Govt hospital   | 23  | 7.7         |
| Private hospital  | 24  | 8.0         |
| PHC   | 9   | 3.0         |
| No  | 244 | 81.3        |

## DISCUSSION

This study conducted among 300 adult females in rural area of Chandel district Manipur shows the present status of socio-demographic, menstrual history and hygiene practices in the study population with significant outcomes, which are discussed below.

The mean age was  $34.63 \pm 8.76$  years. Using socio economic status was classify according to modified BG Prasad classification 2024.<sup>7</sup> The 30% respondent's family comes under middle class. In the study by Jose et al 40.6% lies under middle class.<sup>8</sup> In present finding 55.7% and 44.3% belonged to nuclear and joint family whereas 97% were found to be joint family in study by Gupta et al.<sup>9</sup>

Among majority 83.6% has reported regular menstruation, in my study 35.3% reported regular but less which last for just 1-2 days whereas 74.68% had a bleeding time of fewer than 3 days were found in the study by Gupta et al.<sup>9</sup> Then, 16.3% reported irregular and 7% reported regular but heavy bleeding which last for more than 5-6 days for every cycle. Among for irregular menstruation 12.3% face the problem of 1-2 month missing period and 4% faced 3-4 months of missing menstrual cycle.

Regarding, menstrual hygiene practices nearly, 71% preferred to use commercial pad as their absorbent and similar study 99.7% as reported by Jose et al 91% and Neupane 93.8%.<sup>8,10,11</sup> used sanitary napkin during menstruation and present study 29% used absorbent as cloth pad (re-used) during their monthly menstrual cycle. Similar study 60% reused cloth in the study by Angeline et al.<sup>6</sup> using of cloth pad instead of sanitary napkin could be individual preference and personal reason. Furthermore, in present study majority 93.3% were reported to practice washing their hand with soap and water every after they change their absorbent during their menstrual cycle. similar result 95.9% were supported by Neupane et al.<sup>11</sup> Among 32.3% reported of bathing during every third day of their menstrual cycle, 30.3% bath every second day of their period in present study only 13.3% take bath every during period whereas another study report more than half 64.2% respondents bath every day during period.<sup>10</sup> When enquire about disposing of menstrual product 29% reported as wash and reuse, 20.3% dump in toilet, 17.7% wash dry and burn, 13% wrap and burn, 7% wash and buried in soil, 6.7% wrap throw in garbage and 6.3% wrap and buried in soil.

Among some adult females restriction have been practiced in some rural area of disposing menstrual absorbent by burning. Alternatively, some practice disposing of menstrual absorbent in the form of burying it in the soil. More awareness need to be created among living in rural areas about the significance of disposing menstrual absorbent.

During any kind of reproductive health sickness nearly, 81.3% reported they didn't take any medical treatment during illness and regarding the health care centre adult females 8% reported seeking private hospital, 7.7% visited government hospitals and 3% often visited Primary health centre. Whereas, in the study by Gopalakhrisnan et al reported 62.5% and 37.5% seeks medical treatment from government hospital and private hospital and similar study by Thakur et a reported seeks medical treatment in times of reproductive health problem by young women 10.3% and adult women 15.9%.<sup>12,13</sup>

## Limitations

It was a rural community based study. With a sample size of 300 eligible respondents, the findings may not fully represent the entire populations. A larger sample size might yield more comprehensive and generalizable results.

## CONCLUSION

From the study it can draw the inference that rural tribal women has reproductive health issues such as irregular menstruation. Above 50% were not aware and even ready of consulting doctors about their reproductive health issues. Hence, further studies with more qualitative study are recommended to explore in rural tribal areas. Health education class and intervention session on reproductive health and menstrual hygiene practices in school, anganwadi centers and rural tribal community should be encourage.

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