



Exploration of Traditional Menstrual Hygiene Management Practices Among Women in Selected Rural Communities of Katsina State, Nigeria

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KEYWORDS

Menstrual Hygiene Management,
Period Shaming,
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ABSTRACT

This study was undertaken in response to growing concerns about period poverty and its implications for women's reproductive health and personal dignity. The study aimed to explore traditional menstrual hygiene practices among women of reproductive age. A cross-sectional design was adopted. The study population comprised 400 women aged 15–49 years residing in selected rural communities of Katsina State. A multi-stage sampling technique was employed, involving the use of purposive sampling technique to select five culturally diverse and accessible Local Government Areas. Convenience sampling was also used to select eligible and consenting participants. Data were collected using structured questionnaire. Analysis was conducted using SPSS version 25. Descriptive and inferential statistics were used to analyse and present data. Findings revealed a high reliance on old cloths and rags compared to sanitary pads. Women were found to indulge in use of herbs and other traditional methods to manage menstrual health. Also, there is a strong association between marital status and cost of pads. The findings also shows significant relationship between types of menstrual material used and exposure to reproductive health challenges. The study concluded that the persistence of period poverty and reliance on unconventional materials and traditional methods to manage menstruation in rural Katsina State is shaped by economic hardship, sociocultural norms, and infrastructural limitations. The study thus recommends that coordinated efforts is required to address these challenges; government and NGO partnerships will provide subsidized or free menstrual products, there should be promotion of safe reusable alternatives, and the integration of menstrual hygiene education into schools and primary healthcare services.

CITATION

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INTRODUCTION

Menstruation is a common and natural experience for females during their productive years, accompanied by significant physiological and emotional changes (Ilim, 2025). Menstrual hygiene management (MHM) is a critical aspect of women's reproductive health, influencing their physical well-being, dignity, and social participation. Globally, an estimated 1.8 billion women and girls menstruate monthly, yet many in low-resource settings

lack access to adequate sanitary products and facilities (UNICEF, 2019). According to Mubarick, *et al.*, (2022), proper menstrual management involves the use of clean materials to absorb or collect menstrual blood, which should be changed consistently in privacy as needed, alongside maintaining personal hygiene with soap and water. This is essential for all female of menarche age. Unfortunately, millions of women and girls worldwide lack these essentials, leading to what is commonly referred to

as *period poverty*. The lack of access to menstrual management products and facilities not only affects women's health but also their dignity, education, and participation in public life (UNESCO 2020). Anju and Godara (2023) added that the situation where girls are for example made to use the same toilets with the boys, and the embarrassment that girls feel in sharing their menstrual needs may also account for reasons that affects MHM particularly among adolescent. Also, in a situation or community where there is no running water, eco-friendly waste disposal bin, available secured building for girls to change absorbent during menstrual emergency, as well as inadequate access to sanitary pads and proper knowledge for its effective use put menstruating women in a difficult situation as it relates to MHM. To mark the 2019 International Women's Day, expert argued that persistent harmful socio-cultural norms, period shame, menstrual taboos, stigma, misconceptions and restriction around and against menstruation, also continue to compromise women's effort in maintaining excellent menstrual hygiene (Global Health Vision 2020).

According to Abdurraheem, *et al.*, (2024) lack of access to menstrual management product or not having the privacy to change absorbent can lead to poor menstrual hygiene. Wearing one sanitary pad for too long for instance is unhealthy, absorbing menstrual blood with newspapers or dirty clothes, and not washing one's hand or washing the vagina with dirty water consistently during menstrual flow may expose women to sexual and reproductive health challenges. According to Mubarick *et al.*, (2022) these unhealthy practices can create a favourable environment in the body for things like fungal, bacterial, yeast infections, and Urinary or Reproductive Tract Infections (UTIs/RTIs). These infections have the capacity to cause infertility, cervical cancer and other reproductive health issues. The negative experiences of menstruation can equally lead to discomfort, distraction, absenteeism and even dropping out of school for some.

In Nigeria, women in rural communities often rely on traditional MHM practices due to limited access to modern sanitary materials, cultural preferences, and economic constraints. Previous studies in Katsina State indicate that only 36% of girls and women maintain good menstrual hygiene with modern and conventional materials during menstruation (Ilim 2025). The remaining 64% use a variety of other materials including rags, pieces of mattress and other non-sanitary materials. Women who use menstrual cloth often dry them in dark shadowy places due to fear of being seen by male relatives or friends (Aladeselu, M 2023). Others who engage in blue collar jobs or work long hours on the farm surrounded by men often lack the privacy to regularly change the absorbent. Traditional MHM practices, such as the use of herbs, charms, leaves, or other locally sourced materials to maintain menstrual hygiene may persist in rural communities among women

yet little is known about their prevalence, effectiveness, or associated health risks. Poor menstrual hygiene is linked to reproductive tract infections (RTIs) and social stigma, which can limit women's participation in education and community activities (House *et al.*, 2012). This study seeks to explore traditional MHM practices among women in selected rural communities of Katsina.

Studies revealed that access to modern menstrual hygiene products like sanitary pads is limited by poverty, poor infrastructure, and supply chain challenges in most rural community in Nigeria (Ilim 2025). The Nigeria Demographic and Health Survey (NDHS) indicates that only 57% of Nigerian women use hygienic menstrual materials, with rural areas lagging behind urban centers (NPC & ICF, 2019). Studies by Mason, *et al.*, (2013) and Kuhlmann, *et al.*, (2017) although acknowledged the influence of cultural norms and taboos surrounding menstruation, the study only made a brief mention of specific hygiene practices. There was no detailed examination of specific hygienic practices like regular use and change of pads, availability of water, as well as other locally home-made alternative products commonly used by women in rural communities. Furthermore, other existing studies, by Chandra-Mouli and Patel (2017), focused much on urban or semi-urban populations, where access to information on proper use of modern menstrual products and availability of different infrastructural facilities may differ significantly from the situation in rural areas. This creates a gap in understanding the challenges faced by women in remote, rural areas where information, knowledge, infrastructure and supply chains are less developed. It is on these bases that the present study aims to examine traditional sanitary practices among menstruating women in rural communities of Katsina State. This study therefore, aims to among others;

Examine the traditional menstrual hygiene management practices commonly adopted by menstruating women in selected rural communities of Katsina, highlight the barriers associated with access and use of sanitary pads and to examine the effect of unhygienic menstrual management practices in rural Katsina.

Hypotheses

1. Educational Level of women does not significantly affects the type of Menstrual Material Used
2. Cost of sanitary pad is less likely to be reported by married women as a barrier to consistent use of Pads.
3. Women who indulge in use of cloth pads are less likely to be exposed to experience of infections.

METHODOLOGY

The study adopted across-sectional survey design employing quantitative techniques to explore traditional menstrual hygiene management (MHM) practices among women in rural communities of Katsina. The quantitative

approach involved a cross-sectional survey to collect numerical data on the prevalence, types, and frequency of traditional MHM practices.

Study Population

The target population consisted of women of reproductive age (15–49 years) residing in the selected rural communities.

Sample Size and Sampling Technique

A sample size of approximately 400 women was determined using the Taro Yamane model. A multi-stage sampling technique was employed:

Where purposive sampling was adopted in the first stage to selection of 5 rural local governments areas (LGAs) in Katsina State based on cultural diversity and accessibility. In the second stage simple random sampling was used to select 2 communities from each of the 5 sampled LGAs. Systematic sampling was used to select households within each community to identify eligible participants for the study. Convenience or availability sampling techniques was thus used to select eligible participants who were available and willing to participate in the study. Given the cultural and perhaps religious sensitivity of the subject matter, getting participants who could easily volunteer information on the topic was difficult. The practice of purdah among some of the homes visited further compounded the difficulty of getting a time with the women. A significant number of the participants were therefore approached outside their homes, mosque, in the markets. Only a few were interviewed at homes. Several visits were made to established rapport and schedule appointments. Participants who expressed discomfort and conflict of interest on the subject as well as those who expressed unwillingness to participate were not selected for participation hence excluded from the study.

Data Collection Methods

A structured questionnaire was administered to participants by the researcher and research assistants. The questionnaire was clear unambiguous and design in line with the specific objectives of the study. It contained both closed and open-ended questions and was pre-tested in a similar rural setting to ensure clarity and validity.

Data Analysis

Data generated through questionnaire was entered into a Statistical Package for Social Science software package (SPSS version 25) for cleaning and analysis. Descriptive statistics (frequencies, percentages) was used to summarize demographic characteristics and some substantive issues of the study like types of materials use for MHM and reusable absorbent. Inferential statistics (cross tab) was used to examine associations between demographic factors and traditional menstrual practices and other substantive issues in the study.

Ethical Considerations

Ethical approval were obtained from the school's management through the Department of Sociology, Federal University Dutsin-Ma (FUDMA) Katsina State Nigeria. Informed consent was also sought and obtained from all participants, with explanations and clarifications provided in the local language. Participants' confidentiality and anonymity was respected and ensured by assigning unique identifiers instead of names. Participation was voluntary, and participants were made to understand they had the options to withdraw from the study at any time without consequences.

RESULTS AND DISCUSSION

This sub-section is for presentation and analyses of data generated from the field. The result presented is consistent with the objectives of the study; beginning with the socio-demographic variables of the participants.

Table1: Frequency Distribution of the Respondents According to Socio-Demographic Characteristics

Variable	Frequency (f)	Percentage (%) Total
Age		
15-19	80	20.0
20-25	120	30.0
30-35	90	22.5
40-45	70	17.5
50 and above	40	10.0
Marital Status		
Single	160	40.0
Married	180	45.0
Divorced	40	10.0
Widowed	20	5.0
		400 (100)

Level of Education			
Non-Formal	60	15.0	
Primary Level	100	25.0	
Secondary	140	35.0	
Tertiary	100	25.0	400 (100)
Religion			
Christianity	120	30.0	
Islam	280	70.0	400 (100)
Occupation			
Housewife	90	22.5	
Trader	130	32.5	
Farmer	110	27.5	
Civil Servant	70	17.5	400 (100)

Source: Researcher's Field survey 2025

The data on table 1 above indicates the distribution of socio-demographic characteristics of 400 respondents from field survey. These frequency distributions are based on an analyses of quantitative data collected from field from the sampled participants. With regards to age distribution, data on the table reveal that the distribution skews towards the younger demographic with 20-25 age group being the largest (30%) participants, followed by 30-35 (22.5%). This suggests a predominantly young adult sample. Older participants (40+ and 50+) make up only 27.5% combined, indicating less number of seniors. This may be due to the fact that the subject matter menstruation and menstrual hygiene, involved more of the younger women than the seniors. Similarly, married women dominate (45%) the sampled population based on

the data presented in table. This is closely followed by singles (40%). Divorced and widowed women are smaller (10% and 5% respectively). With regards to level of education, secondary education is the most common level of education among the sampled population (35%). This may suggest a moderately educated population. Non-formal education is low (15%), while primary and tertiary are balanced at 25% each.

Presentation and Analyses of Substantive Issues

This section deals with presentation and analyses of data on issues that directly relates to the objectives of the study. Data will be presented using descriptive (frequency tables) and inferential statistics (cross tabulations).

Table 2: Frequency Distribution of Materials Commonly Used During Menstruation

Materials Commonly Used Maintain MH	Frequency	Percentage
Old Cloth/Rags.	176	44.0
Sanitary Pads.	144	36.0
Tissue Paper.	42	10.5
Mattress Foam/Cotton Wool	26	6.5
Others (leaves, Sponge etc)	12	3.0
Total	400	100.0

Source: Researcher's Field survey 2025

Table2 above shows that the most commonly used menstrual material among respondents was old cloth or rags (44.0%), followed by sanitary pads (36.0%). Smaller proportions of participants used tissue paper (10.5%) and

other improvised materials such as mattress foam or cotton wool (9.5%). This finding indicates a continued reliance on traditional and improvised menstrual materials.

Table 3: Method of Drying Reusable Menstrual Materials

Drying Methods	Frequency	Percentage
Sun-dried Openly	118	29.5
Dried Indoors/Shadows	214	53.5
Not Properly Dried.	68	17.0
Total	400	100.0

Source: Researcher's Field survey 2025

Table 3 above indicate that over half of the respondents (53.5%) reported drying reusable menstrual materials indoors or in shaded areas, while only 29.5% dried them openly under sunlight. About 17.0% indicated that materials were not properly dried. The practice of indoor or

poorly ventilated drying, often motivated by fear of stigma or cultural taboos, raises concerns about hygiene and increased risk of infection among women using reusable materials.

Table 4: Barriers to Access and Use of Sanitary Pads

Drying Methods	Frequency	Percentage
High Cost	158	39.0
Lack of Availability	84	21.0
Cultural/Religious Restrictions	72	18.0
Lack of Knowledge on proper Usage	54	13.5
Embarrassment/Shame	34	8.5
Total	400	100.0

Source: Researcher's Field survey 2025

Table 4 above revealed high cost as the most significant barrier to sanitary pad use (39.0%), followed by lack of availability in rural markets (21.0%). Cultural and religious restrictions accounted for 18.0%, while lack of knowledge

(13.5%) and embarrassment (8.5%) were also reported. These findings suggest that both economic and sociocultural factors jointly limit the adoption of sanitary pads among rural women in Katsina State.

Table 5: Reported Health and Social Effects of Unhygienic Menstrual Practices

Drying Methods	Frequency	Percentage
Vaginal itching/infections	122	30.0
Unpleasant Odour	96	24.0
Missed School/Work	84	21.0
Emotional Stress/Shame	66	16.5
No noticeable effect	32	8.0
Total	400	100.0

Source: Researcher's Field survey 2025

The table above indicates that 30.5% of respondents experienced vaginal itching or infections, while 24.0% reported unpleasant odour during menstruation. Additionally, 21.0% missed school or work due to menstrual-related challenges, and 16.5% experienced

emotional stress or shame. Only 8.0% reported no noticeable effects. This highlights the significant health, psychosocial, and productivity consequences of unhygienic menstrual management practices.

Table 6: Common Reported/Observed Traditional Menstrual Hygiene Management Practices among Women in Rural Communities of Katsina State

Common Reported Practices	Frequency	Percentage
Use of Leaves as Absorbent	19	4.7
Use of Charms to control Menstruation	14	3.5
Use of Herbs/Roots to wash vaginal	254	63.5
Dieting to control menstruation	109	27.3
Others (Using Ashes)	4	1
Total	400	100.0

Source: Researcher's Field survey 2025

Table 6 above indicate that a significant number (63.5%) of women in rural communities of Katsina use herbs and roots to maintain Menstrual hygiene. The same tale reveal that others (27.3%) mange menstruation by eating certain

foods. A few (3.5%) affirm that they use charms to control menstruation. Only an insignificant number (1%) indicate that they use other materials like ashes.

Table 7: Educational Level and Type of Menstrual Material Used

Level of Education	Type of Menstrual Products Used			Total
	Sanitary Pads	Cloth/Rags	Others	
No F/Education	32(20.3%)	108(68.4%)	18(11.3.0%)	158
Prim. Education	36(35.3)	52(51.0%)	14(13.7%)	102
Sec. Education	46(50.0)	38(41.3%)	8(8.7%)	92
Tertiary	30(62.5%)	18(37.5%)	0(0.0%)	48
Total	144	216	40	400

Source: Researcher’s Field survey 2025

$\chi^2= 27.234a$, $df =2$, $P=0.001$

The cross-tabulation reveals a clear positive association between educational attainment and the use of sanitary pads. Only 20.3% of women without formal education used sanitary pads compared to 62.5% among those with tertiary education. Conversely, reliance on cloth or rags

was highest among women with no formal education (68.4%). This finding amplifies education as a critical determinant of menstrual hygiene choices in rural communities.

Table 8: Type of Menstrual Material Used and Experience of Infection

Materials Used	Infection Experienced		Total
	Experience Infection	No Infection	
Sanitary Pads	28(19.4%)	116(80.6%)	144
Cloth/Rags	102(58.0)	74(42.0%)	176
Others	20(50.0)	20(50.0%)	40
Total	150	250	400

Source: Researcher’s Field survey 2025

$\chi^2= 37.804a$, $df =2$, $P=0.000$

The table shows a significant relationship between types of menstrual material used and the likelihood of being exposed to infections. Respondents using cloth or rags reported the highest incidence of infections (58.0%), followed by users of other improvised materials (50.0%). In contrast, only 19.4% of sanitary pad users reported

infections. This suggests a strong association between the type of menstrual material used and reproductive health outcomes, with modern sanitary pads offering better protection against infections compared to traditional materials.

Table 9: Marital Status and Cost as a Barrier to Sanitary Pad Use

Marital Status	Cost		Total
	Cost as Barrier	Not a Barrier	
Single	46	100	146
Married	92	122	214
Widowed/Divorced	18	22	40
Total	156	244	400

Source: Researcher’s Field survey 2025

$\chi^2= 67.757a$, $df =2$, $P=0.001$

The table indicate a strong association between marital status and cost of pads. Cost was a major barrier among married women (92 respondents), compared to single women (46 respondents). This may be attributed to household financial responsibilities and women’s limited control over income in marital settings. Widowed and divorced women also reported cost as a constraint, though to a lesser extent. Overall, the result highlights the role of economic dependency and household dynamics in shaping menstrual hygiene practices.

Discussion of Findings

The analyses of data for the study revealed that most women in the study relied on old cloth or rags (44.0%) as their main absorbent, with sanitary pads coming in second at 36.0%, followed by smaller shares using tissue paper (10.5%) or other makeshift items like mattress foam or cotton wool (9.5%). This heavy dependence on low-cost, reusable alternatives is a familiar pattern in rural communities across Africa, where affordability and limited

access influences choices. For example, studies in Ethiopia, Uganda, South Sudan, Tanzania, and Zimbabwe by Tamiru, *et al.*, (2015) found that around 41% of adolescent girls in rural communities used reusable cloth or rags. Oche *et al.*, (2012) and Garba *et al.*, (2024) found that majority of rural women in Northern Nigeria rely on reusable cloths due to poverty, limited availability of sanitary products, difficulty in disposing a used pads and cultural norms discouraging open discussion of menstruation (Okafor-Terver and Chuemchit 2017, Lawan *et al.*, 2010). This preference for cloth over commercial products stands out even more when compared to urban areas, where pads are more commonly used. With regards to menstrual practice of drying reusable absorbent, the finding indicate that over half (53.5%) of the participants in the study reportedly dried them indoors or in shaded spots, often to avoid stigma or cultural taboos around visible menstruation while only 29.5% used sunlight, and 17.0% didn't dry them properly at all. Ilim (2025) revealed after a careful study of menstrual management habits of rural women that this menstrual practice is common among women where sociocultural restriction perceived and associate menstruation and its materials to bad omen. Men thus avoid the sight and touch of used and used pad absorbent in such context. This common menstrual practice raises real concerns about bacterial growth and infection risks, as literature consistently links poorly dried cloths to higher chances of reproductive tract infections (RTIs) (Deriba, *et al.*, (2022).

Regarding barriers to effective utilisation of materials and management of menstruation, the biggest hurdle identified in the study was highlighted as high cost (39.0%), followed by lack of availability in local markets (21.0%), cultural or religious restrictions (18.0%), limited knowledge (13.5%), and embarrassment (8.5%). These challenges amplifies patterns seen across Nigeria, where economic pressures and poor rural distribution make modern products feel out of reach. In conservative northern communities like Katsina, sociocultural taboos around discussing or buying menstrual items add another layer, widening the rural-urban gap (lawan 2010). Cross-tabulation results also showed that married women reporting cost as a barrier more often (92 cases) than single women (46 cases), likely due to household financial burdens and limited control over income in marital settings. This could be associated with the fact that pad may be an additional financial burden for the married women who may be operating on a lean budget due to competing family needs.

The study also uncover clear consequences of unhygienic menstrual practice. 30.5% of participant reportedly experienced vaginal itching or infections, 24.0% dealt with unpleasant odor, 21.0% missed school or work, 16.5% faced emotional stress or shame, and only 8.0% reported no issues. Cross-tabulations saw cloth/rag users reporting

the highest infection rates (58.0%), compared to just 19.4% among sanitary pad users. This strong link between improvised and reusable materials and poorer health outcomes is an indication of promoting only healthy alternatives for MHM (Belayneh, *et al.*, 2023). Beyond physical effects, the shame, absenteeism, and emotional toll highlighted by the study aligns with evidence showing how inadequate MHM contributes to school dropout, lower productivity, and social and emotional distress among rural women and girls (van Eijk, *et al.*, 2016).

A notable finding of the study is the widespread use of herbs and roots (63.5%) and dietary practices (27.3%) for managing menstruation, while a smaller proportion relied on charms or ashes. This reflects the persistence of indigenous knowledge systems and traditional health beliefs in rural Katsina State. Earlier Anthropological studies by Last (2000) and Ademola (2018) have shown that traditional medicine plays a central role in women's reproductive health management in northern Nigeria, particularly in rural areas where there is limited access to formal healthcare. Similarly, Ilim (2025) in his mix methods study revealed that women use various traditional techniques such as cloves, Black seed, Neem leaves, and Henna (Lalle) leaves to maintain menstrual hygiene and manage menstrual blood. Others (young girls) were reported in the study of using charms to delay menstrual flow to evade being giving out for marriage too early against their will.

Analyses from inferential statistics reveal that further sanitary pad use was much higher among those with tertiary education (62.5%) compared to those without formal education (20.3%), while cloth/rag reliance peaked at 68.4% among the uneducated. This pattern holds true in various rural Nigerian rural communities where higher personal or maternal education often leads to better awareness of risks, improved practices, and greater ability to afford or access hygienic options (UNICEF 2015). This may be due to the fact that education is known to empower women with knowledge, reduce stigma, and support economic choices that favour better materials usage.

CONCLUSION

Results from the study places Menstrual Hygiene Management by rural women within the larger picture of period poverty across Nigeria and sub-Saharan Africa where economic barriers, cultural taboos, and weak infrastructure keep traditional methods dominant among the rural dwellers who are face with limited options.

RECOMMENDATIONS

The findings thus reinforce the urgent need by NGO and government to initiate practical solutions such as subsidizing or making conventional sanitary products free for women low income communities. Government can also initiate program were the local and available

traditional menstrual materials can be made healthier for use. There should also be an intensification of community programs by government in partnership with Non-governmental organisations (NGOs) to reduce stigma, period shame, and integration of MHM education into schools and health services. NGOs, and peer education could make a real difference, as seen in successful initiatives in East African communities of Tanzania and Kenya.

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