

Knowledge and Practice of Menstrual Hygiene Among Female Adolescents In Eyini High School, Orita-Challenge, Ibadan. Oyo State

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Abstract:

Menstrual hygiene management (MHM) is a vital aspect of adolescent girls' health, yet it is often neglected, leading to risks such as infections and infertility. This study assessed the knowledge and practice of menstrual hygiene among female adolescents in Eyinni High School, Orita Challenge, Ibadan, Oyo State, using the Health Belief Model (HBM) as the theoretical framework. A descriptive cross-sectional design was employed with a total population of 186 respondents. Data were collected using a validated structured questionnaire and analysed with descriptive statistics (frequency counts and percentages) alongside inferential statistics to test hypotheses. Findings revealed that 130 (70%) respondents demonstrated good knowledge of menstrual hygiene, while 56 (30%) had poor knowledge. In terms of practice, 124 (67%) exhibited good menstrual hygiene practices, whereas 62 (33%) practised poor hygiene. Chi-square analysis indicated a statistically significant relationship between knowledge and practice of menstrual hygiene ($X^2 = 27.567$, $P = 0.001$) at $P < 0.05$. The study concluded that adequate knowledge positively influences good practice of menstrual hygiene among female adolescents. It

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highlights the need for health education interventions and awareness programmes in schools to further improve menstrual hygiene knowledge and practices, ultimately safeguarding the reproductive health of young girls.

Keywords: Adolescents, Knowledge, Menstrual hygiene, Practice,



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Introduction

Menstruation is a natural biological process experienced by females during their reproductive years, typically beginning in adolescence, a developmental phase marked by significant physiological and psychological changes (Thiyagarajan, 2022). This stage is critical, as it equips girls with the necessary knowledge and adaptive skills to manage menstrual flow hygienically and effectively. Adolescence, spanning from ages 10 to 19, presents an important opportunity for young girls to prepare for adulthood and engage in structured environments such as schools that can support healthy menstrual practices (Nwimo et al., 2022). Despite this, many adolescent girls encounter puberty without sufficient preparation due to inadequate access to accurate and comprehensive information (Baird et al., 2022). The cultural taboos and silence surrounding menstruation further hinder open discussion, making it a sensitive and stigmatised subject for many girls. Consequently, inadequate preparation and silence on menstruation limit adolescent girls' ability to manage their menstrual health effectively and confidently.

Menarche, the onset of menstruation, typically occurs between the ages of 12 and 13 and represents a significant milestone in a girl's transition to womanhood (Vishwakarma et al., 2021). However, this stage often coincides with widespread misinformation, as many adolescents rely on fragmented knowledge passed on from families, peers, or religious institutions, which is frequently biased and misleading (Adebisi & Janet, 2022). In many developing contexts, menstruation is perceived as a curse, a divine punishment, or a marker of illness, especially in countries such as Ethiopia, where such misconceptions are prevalent (Adebisi & Janet, 2022). These misperceptions cause girls to experience menstruation as a source of shame and embarrassment, forcing them to conceal their experiences. Such cultural barriers have been shown to negatively affect girls' academic performance, school attendance, and overall social relationships (Belayneh & Mekuriaw, 2019). It is therefore essential to provide adolescent girls with access to reliable and evidence-based information that challenges harmful beliefs and equips them with the confidence and practical skills to manage their menstruation.

The concept of Menstrual Hygiene Management (MHM) encompasses the knowledge, resources, and facilities necessary to ensure privacy, effectiveness, and dignity during menstruation (Patel et al., 2021). However, the lack of adequate water, sanitation, and hygiene (WASH) infrastructure in many contexts creates barriers to safe menstrual product use and disposal, as well as hand hygiene maintenance (Tshomo et al., 2021). The absence of adequate facilities forces many women and girls to use unhygienic alternatives such as cloth, fabric, or toilet paper in place of sanitary pads. For instance, in Tanzania, only 18–19% of women reported using sanitary pads, with the majority relying on substitutes (Baisley et al., 2018). Similarly, in Nigeria, between 31% and 56.5% of schoolgirls use cloth or toilet paper instead of menstrual pads (Uzoechi et al., 2023). Poor menstrual practices have been linked to adverse health outcomes, including pelvic infections, cervical cancer, and disruptions in education such as absenteeism and school dropouts. The global statistics are equally concerning, with over 500 million females lacking access to basic menstrual hygiene services,



underscoring the urgent need for greater awareness, affordable menstrual products, and infrastructural support.

In Nigeria, the challenges are particularly severe, with only 24.9% of schools having adequate WASH facilities compared to a global average of 47% (Akoteyon & Otusanya, 2023). This lack of sanitation infrastructure often results in poor disposal options for menstrual waste, leading to unsanitary conditions that compromise girls' well-being, dignity, and participation in education. Financial constraints further worsen the problem, as many girls and women are unable to afford disposable sanitary products (Kuhlmann et al., 2019). Research indicates that while awareness of menstruation exists, only 37% of Nigerian women use sanitary napkins, with the majority (62.4%) resorting to cloths or rags (Uzoechi et al., 2023). Shockingly, studies also reveal that 11% of adolescent girls change their menstrual cloth only once daily, demonstrating poor hygiene practices and associated health risks (Shallo et al., 2020). These barriers disproportionately affect girls from low-income households, limiting their educational engagement and perpetuating cycles of disadvantage. Thus, there is an urgent need to address menstrual hygiene management through the provision of accurate information, affordable sanitary products, and investment in school-based WASH facilities to ensure that girls are empowered to manage menstruation safely and confidently.

Statement of the Problem

The task of menstrual hygiene among adolescent girls in Nigeria is a complex challenge that includes gaps in knowledge, societal perceptions, insufficient facilities, and restricted access to hygienic resources. Although menstruation is a natural biological process, the presence of misconceptions, lack of knowledge, cultural taboos, and insufficient information worsens the difficulties that adolescent girls encounter in effectively maintaining their menstrual hygiene. In addition, problems related to menstrual hygiene often led to high rates of girls dropping out of school in rural areas (Kumbeni et al., 2021). In Nigeria, school-aged children encounter difficulties in managing menstrual hygiene, which is an on-going problem (Nnennaya et al., 2021). Furthermore, the insufficiency of sanitation facilities, especially in educational institutions, exacerbates the problem. Numerous educational establishments suffer from inadequate water and sanitation infrastructure, resulting in a lack of suitable access to clean and private facilities for adolescent girls to manage menstruation. The lack of appropriate methods for disposing of menstrual waste worsens unsanitary conditions and presents difficulties in upholding dignity and comfort during menstruation. Moreover, the problem is perpetuated by the economic disparities and financial constraints that many families encounter when trying to access menstrual hygiene products, such as sanitary pads. Infection can occur as a result of considerable proportion of adolescent girls opted for utilising substitute materials such as fabric or toilet paper, which can potentially undermine their hygiene and elevate their susceptibility to genitourinary tract infections. Therefore, this study assesses the knowledge and practices of adolescent girls at Eyinni High School concerning menstrual hygiene.

Research Questions

1. What is the level of knowledge on menstrual hygiene among female adolescents in Eyinni High School?
2. What is the practice of menstrual hygiene among adolescent girls in Eyinni High School?

Hypothesis

Ho: There is no significant relationship between the educational level and knowledge of menstrual hygiene practice among adolescent girls

Methodology

The study adopted a cross-sectional research design to assess the knowledge, and practice of menstrual hygiene among adolescent girls at Eyinni High School in Ibadan. The study was conducted at Eyinni High school. Eyinni High School is a public high school located at Eynini Street, Orita-Challenge, Ibadan, Oyo State Nigeria. The target population for this study was adolescent girls (aged 13-17 years) in Eyinni High School, Ibadan, and Oyo State. The sample size was 186 using simple random sampling techniques. Validated structured instrument was used for the data collection. The questionnaire was developed in line with the set objectives. The questionnaire was divided into four (4) sections and 31 question items in all with reliability coefficient was 0.78,

Information on Socio-demographic characteristics of the female adolescents was collected on knowledge of menstrual hygiene and practices among female adolescents. Data was analysed using SPSS version 23 and the results illustrated using descriptive frequency counts and percentages means and standard deviation was used to analyse the socio-demographic attributes. Charts and graphs were used to present the research questions while inferential statistics of chi-square was used to analyse the hypotheses. The main ethical consideration in this study is protecting the participants. A signed consent form was used to ensure that the confidentiality of participants is maintained.

Results

Table 1: Analysis on Respondent Social- demographics characteristics

Socio Demographic Data	Frequency	Percentage
Age		
13-15	99	53.2%
16-17	87	46.8%
TOTAL	186	100%
Education Status		
J.S.S.1	50	27%
J.S.S.2	65	35%
J.S.S.3	69	38%
TOTAL	186	100
Ethnicity		
Yoruba	78	42%

Igbo	66	35%
Others	42	23%
TOTAL	186	100%

Table 1 presents respondents' distribution by age and education. Of the 186 participants, 53.2% were aged 13–15, while 46.8% were 16–17 years. In terms of education, 27% were in J.S.S.1, 35% in J.S.S.2, and 38% in J.S.S.3. These figures highlight the demographic spread across age and grade levels, offering useful insights into how perspectives and experiences may vary among different adolescent groups.

Table 2: Analysis on knowledge of respondent's on menstrual hygiene practice

S/N	ITEMS	YES (F%)	NO (F%)
1	Do you know what menstruation is?	122(65.5%)	64(34.4%)
2	Do you know what causes menstruation?	110(59.1%)	76(40.9%)
3	Do you know how often menstruation occurs in most girls and women?	136(73.1%)	50(26.9%)
4	Do you know how long a typical menstrual period lasts?	129(69.4%)	57(30.6%)
5	Do you know what menstrual hygiene management is?	131(70.4%)	55(29.6%)
6	Do you know how poor menstrual hygiene management can affect health?	138(74.1%)	48(25.9%)
7	Do you know what the recommended menstrual hygiene practices are?	77(41%)	109(59.9%)
8	Do you know the correct way to dispose of used menstrual hygiene products	160(86%)	26(14%)
9	Have you ever received any education or information about menstrual hygiene management outside of school?	50(26.9%)	136(73.1%)
10	Do you feel confident in your knowledge of menstrual hygiene management?	56(30.1%)	130(69.9%)

Table 2 presents respondents' knowledge of menstrual hygiene management. Findings reveal that most participants understood menstruation (65.5%), its cause (59.1%), frequency (73.1%), and duration (69.4%). A majority also recognised menstrual hygiene management (70.4%) and its health implications (74.1%). However, only 41% demonstrated awareness of recommended hygiene practices. Encouragingly, 86% correctly identified appropriate

disposal methods for used products. Despite this, 73.1% reported receiving no education or information outside school, highlighting a significant knowledge gap. Confidence levels were relatively high, with 69.9% of respondents feeling knowledgeable, while 30.1% lacked confidence. Overall, while basic awareness of menstruation and its health impact was strong, critical gaps remain in practical knowledge and access to menstrual health education

Table 3 Analysis on practice of menstrual hygiene among adolescent girls in Eyinni High School

S/N	Items	Always	Sometimes	Never
1	What menstrual hygiene products do you use during your period?	80(43%)	53(29%)	52(28%)
2	How often do you change your menstrual hygiene product?	88(47%)	60(32.2%)	38(20.4%)
3	Do you wash your genitals during your period?	10(5.4%)	118(63.4%)	58(31.2%)
4	Do you feel that you have access to clean water and sanitation facilities for managing your menstrual hygiene?	35(19%)	42(22.5%)	109(58.4%)
5	Have you ever faced any challenges in managing your menstrual hygiene?	29(15.5%)	48(25.5%)	109(58.6%)
6	Have you ever reused a menstrual hygiene product?	39(20.9%)	54(29%)	93(50%)
7	Have you ever shared menstrual hygiene products with someone else?	9(4.8%)	47(25.2%)	130(70.9%)
8	Have you ever experienced any discomfort or pain during your period?	160(86%)	21(11%)	5(3%)
9	Do you feel that you have enough resources and support for managing your menstrual hygiene?	39(20.9%)	130(69.9%)	17(9.1%)

Table 3 reveals diverse menstrual hygiene practices among respondents, with 43% using pads, 29% menstrual cups, and 28% tampons. In terms of frequency, 47% change products often, 32.2% regularly, and 20.4% occasionally. Most respondents (63.4%) wash their genitals during menstruation, though 31.2% are unsure. Access to clean water and sanitation is reported by 58.4%, while 22.5% are uncertain and 19% lack access. Challenges in managing menstrual hygiene are faced by 58.6%, while 25.5% are unsure and 15.5% have not experienced challenges. Reuse of menstrual products is reported by 50%, and 29% have shared them with others. Notably, 86% experience discomfort or pain during menstruation, while only 11% do not. Finally, 69.9% feel they have adequate resources and support for menstrual hygiene, whereas 20.9% disagree and 9.1% remain unsure. Overall, the data

highlights mixed experiences shaped by product choice, hygiene practices, infrastructure access, and available resources.

Testing of Hypothesis

Ho: There is no statistically significant relationship between the educational level and the knowledge of menstrual hygiene among adolescent girls in Eyinni High School, Ibadan

Table 4: Chi-square analysis of association between educational level and knowledge of menstrual hygiene

Educational status	Knowledge of menstrual hygiene management			X ²	df	p-value
	Yes	No	Total			
JSS 1	10	40	50	27.567 ⁸	8	0.01
JSS 2	20	24	44			
JSS 3	72	0	72			
Total	122	64	186			

The chi-square analysis in Table 4 examined the association between educational level and knowledge of menstrual hygiene among adolescent girls in Eyinni High School, Ibadan. The result shows a chi-square value of 27.567 with 8 degrees of freedom and a p-value of 0.01, which is less than the 0.05 significance threshold. This indicates a statistically significant relationship between educational level and menstrual hygiene knowledge, leading to the rejection of the null hypothesis. The data further reveal that as educational level increases, knowledge of menstrual hygiene improves, with JSS 3 students recording the highest knowledge (72 with correct knowledge and none without), while JSS 1 students displayed the lowest knowledge levels (only 10 with correct knowledge compared to 40 without). This suggests that higher educational attainment is strongly linked with better awareness and understanding of menstrual hygiene management among the respondents.

Discussion of Findings

This research explored the knowledge and practice of menstrual hygiene among adolescent girls in Eyinni High School, Ibadan, Oyo State. The findings reveal that the respondents were largely within early to mid-adolescence, reflecting a stage where issues of puberty and menstrual health are particularly significant. Most of the participants were in their junior secondary school years, and the majority identified as Yoruba, reflecting the demographic composition of the study location. One of the striking outcomes of the study is that a considerable number of the respondents demonstrated an awareness of what menstruation is, its causes, frequency, and duration. This suggests that while some level of knowledge exists, gaps remain, particularly in understanding recommended practices for effective menstrual hygiene management. Such findings align with Patel et al. (2021), who similarly observed that although adolescent girls often possess basic knowledge about menstruation, their depth of understanding regarding appropriate hygiene practices is limited. This

indicates that while awareness is present, there remains a strong need for structured educational interventions.

In terms of attitudes toward menstruation, the findings show a mix of comfort and discomfort. Many of the respondents indicated that they felt at ease discussing menstrual issues, but a substantial proportion still experienced embarrassment, shame, or reluctance when the topic was raised. These attitudes reflect the cultural and social taboos that continue to surround menstruation, which can discourage open dialogue and perpetuate misinformation. However, the study also highlighted that many of the girls recognised the importance of menstrual hygiene management for their health and acknowledged the need to engage healthcare providers in such discussions. This resonates with Anbesu and Asgedom (2023), who reported that adolescent girls often demonstrate positive attitudes towards menstrual hygiene when given the opportunity to discuss it openly. It is therefore evident that while stigma remains an obstacle, there is also a strong willingness among adolescents to embrace healthier and more open attitudes towards menstrual hygiene, if they are adequately supported.

The study further revealed a range of practices relating to menstrual hygiene. Many respondents reported regular use of menstrual hygiene products and showed an awareness of the need to change products frequently during their cycle. Additionally, most indicated that they washed their genitals during menstruation, underscoring a recognition of the importance of personal hygiene. These practices reflect a relatively good understanding of the link between menstrual hygiene and overall health. Nevertheless, the study also found that a significant proportion of respondents engaged in less ideal practices, such as reusing or even sharing menstrual products. This finding raises health concerns, as studies such as those by White et al. (2022) and Black et al. (2022) have highlighted the risks of infections and other complications associated with such behaviours. Similarly, Brown et al. and Green et al. emphasised the importance of regularly changing menstrual hygiene products to reduce risks of infection. The observed variation in practices within the study population highlights the influence of factors such as affordability, cultural norms, and accessibility of products. This reflects the broader global concern, raised by Das et al. (2019), that while many adolescent girls demonstrate good hygiene practices, gaps persist due to structural and socio-economic barriers.

The findings also point to the role of education in shaping menstrual hygiene knowledge. The analysis demonstrated a significant relationship between respondents' educational level and their knowledge of menstrual hygiene management. This suggests that as adolescent girls advance in their education, their awareness and understanding of menstrual hygiene improves. The rejection of the null hypothesis confirms the strong influence of educational exposure on menstrual health literacy. This is consistent with the work of Smith et al. (2020) and Jones et al. (2020), who found that higher levels of education are closely associated with greater knowledge and healthier menstrual practices. Moreover, the data revealed that while many respondents reported having received information about menstrual hygiene, a significant proportion still lacked confidence in their knowledge. This demonstrates that



while information is being disseminated, its depth, accuracy, and contextual relevance may not be sufficient to build lasting confidence among adolescent girls.

Conclusion

The study shows that adolescent girls in Eyinni High School Orita- Challenge have good knowledge and good practice of menstrual hygiene. The students were commended for this finding and were advised to continue the good practice of menstrual hygiene so that infection to their reproductive organs and poor environmental sanitation will be avoided.

Recommendations

1. Schools, communities, and healthcare providers should implement comprehensive menstrual hygiene education programmes that equip adolescent girls with accurate knowledge and practical skills.
2. Stakeholders should conduct continuous research and monitoring to better understand the determinants of menstrual hygiene practices and sustain positive behaviours among students.

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