



**Knowledge, Attitude and Practice of Menstrual Hygiene among Female Athletes in University of Uyo, Akwa Ibom State**

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**Abstract**

The purpose of this study was to investigate knowledge, attitude and practice of menstrual hygiene among female athletes in University of Uyo, Akwa Ibom State. In order to achieve this purpose, two null hypotheses were formulated and tested at 0.05 level of significance. Literature review was carried out according to the variables of the study. Census sampling approach was adopted for the selection of the one hundred and fifty six respondents (156) used for the study. A twenty item modified four point Likert scale questionnaire was the instrument used for data collection. The instrument was validated by relevant authorities. To test the hypotheses formulated for the study, Pearson product moment correlation statistical tool was employed for data analysis. The result obtained from analysis of data and testing of hypotheses revealed that there was a significant relationship between knowledge of menstruation, attitude towards menstruation, and practice of menstrual hygiene among female athletes in the study area. Based on the findings from this study, it was recommended among other things that reproductive health educators should continue to sensitize female athletes with the basic knowledge they need on how to manage their menses and practice effective menstrual hygiene.

*Keywords: Knowledge, Attitude, Practice, Menstrual Hygiene, Female Athletes and Tertiary Institutions.*

**Introduction**

Menstruation is a natural biological process experienced by most women of reproductive age. It involves the shedding of the uterine lining, resulting in bleeding from the vagina. Menstruation typically occurs once a month, although the menstrual cycle length may vary. Maintaining proper menstrual hygiene is crucial for women's health and well-being (Danjin, Moda, Danjin, Doka, Kelechi-Ebisike & Kelechi, 2023). Menstrual hygiene, the practice of

keeping the body cleansed during menstruation. Indeed, menstrual hygiene practices are integral to the health, dignity, and empowerment of individuals who menstruate (Ezeh, Ezeh, Nwankwo, & Nwankwo, 2019). The importance of addressing barriers to menstrual hygiene management, including access to products, education, sanitation facilities, and cultural taboos cannot be overstated. Menstrual health promotes comprehensive menstrual hygiene initiatives, which can empower individuals to manage their menstrual cycles safely, hygienically, and with dignity. Due to lack of awareness or access to menstrual hygiene products, practicing menstrual hygiene has posed a significant challenge to many menstruating women in low and middle income countries, (Esan, Tola, Akingbade, Ariyo, Ogunniyi & Agbana, 2023).

According to Chandra, Movil and Patel (2017), comprehensive menstrual education can play a crucial role in promoting proper hygiene practices and dispelling myths and taboos surrounding menstruation. Recent studies emphasized the need for menstrual education programs that addresses topics such as menstrual health, hygiene, and menstrual disorders, empowering individuals to manage their menstrual cycles with confidence and dignity (Sumpter & Torondel, 2020). Effective menstrual hygiene management is essential for preventing infections, discomfort, and other health issues associated with poor menstrual hygiene practices.

It also promotes women's confidence, dignity, and social inclusion (Inyang & Ekpenyong, 2023). In many cultures, including Nigeria, menstruation is often surrounded by stigma, myths, and cultural beliefs. These beliefs can influence how menstruation is perceived and managed, impacting women's access to menstrual hygiene products, information, and facilities. Within academic institutions such as the University of Uyo, where female athletes are part of the student body, addressing menstrual hygiene is essential for promoting gender equity, health, and well-being.

Female athletes face unique challenges regarding menstrual hygiene due to the physical demands of their sport and the potential discomfort or inconvenience caused by menstruation during training or competitions. Despite these challenges, there is limited research focusing

specifically on menstrual hygiene among female athletes, particularly within the Nigerian context, (Abubakar & Ilu, 2020). Understanding knowledge and attitudes towards menstrual hygiene among female athletes in University of Uyo is crucial for several reasons. For instance, female athletes who maintain good menstrual hygiene are less likely to experience disruptions in their training and performance due to menstrual-related issues. It is also crucial for athletic performance because menstrual cycle-related symptoms such as fatigue, cramps, and mood changes can affect female athletes' performance.

Moreover, menstrual hygiene within the university setting can contribute to creating a supportive environment that fosters gender equity and health promotion among students. By promoting proper menstrual hygiene practices, athletes can better manage these symptoms and optimize their performance during training and competitions (Ezebialu & Eke, 2018). This study therefore seeks to find out the knowledge, attitude and practice of menstrual hygiene among female athlete in University of Uyo Akwa Ibom.

Knowledge of menstrual hygiene involves understanding one's menstrual cycle, knowing how to use menstrual products correctly, being aware of potential health risks, and having access to appropriate sanitation facilities and products (Sumpter & Torondel, 2020). In many places, there are still stigmatization and misinformation surrounding menstruation, leading to inadequate hygiene attitudes. With the appropriate knowledge, individuals can make informed choices about hygiene products, understand the importance of hygiene during menstruation, and recognize signs of menstrual health issues. Additionally, education about menstrual hygiene reduces stigma, promotes openness, and encourages seeking medical help when needed (Gaith, 2021). In a study by Danjin, Moda, Danjin, Doka, Kelechi-Ebisike and Kelechi, (2023), majority (80.9%) of the respondents exhibited a medium to high level of knowledge of menstrual hygiene, which consequently resulted in the majority of the participants adopting hygienic menstrual practices such as changing pad/absorbent more than once in a day, bathing two to three times a day, using soap and water for cleaning of their external genitalia, and washing their genitalia from front to

back. Some barriers to menstrual hygiene identified in the study were lack of money to buy sanitary pad and privacy concerns to change regularly among others.

Conversely, Esan, Tola, Akingbade, Ariyo, Ogunniyi and Agbana (2023) submitted that majority of the respondents in their study (72.3%) had poor knowledge of menstrual hygiene, while around half (49.2%) maintained good practices. They identified factors like fatigue and limited water access as common barriers to practicing menstrual hygiene. Parker (2020) reported that although poor knowledge and unsafe menstrual hygiene practices have significant clinical implications for girls and their future offspring, adolescent girls' knowledge of menstruation is poor and their practice is unhygienic, in particularly in developing countries.

Not having learnt about menstruation at school, rural residency and lower grade level were some of the factors associated with poor knowledge of menstrual hygiene management (Henneqan, Shannon, Rubil, Schwab & Melendez, 2019). This could have clinical implications for integrating the promotion of menstrual hygiene practice into the health care system and global efforts are needed including policies to improve girls' knowledge and safe hygiene practices towards menstruation. Every girl within the reproductive age is expected to acquire relevant knowledge that would enable her practice safe and healthy menstrual hygiene.

According to Thompson (2018) attitudes towards menstrual hygiene are diverse and multifaceted. The attitude of athletes towards menstrual hygiene can vary depending on factors such as their cultural background, personal beliefs, and access to resources. While some athletes exhibit a positive attitude, viewing menstrual hygiene as a means to promote overall health and well-being during menstruation, others may harbour reservations or negative perceptions (Santos, 2019). Concerns about potential harm to the body, fear of complications, or uncertainty about the appropriate types and intensity of menstruation are common factors influencing negative attitudes towards menstrual hygiene. The socio-cultural context also plays a pivotal role in shaping attitudes towards menstrual hygiene.

In a qualitative study by Gerald (2019), cultural norms and societal expectations emerged as significant determinants of athletes' attitudes towards menstrual hygiene. Cultural beliefs about the fragility of young athletes or traditional gender roles may contribute to apprehensions about engaging in hygienic practices during this period. Addressing and understanding these cultural nuances is crucial for tailoring interventions that resonate with diverse populations (Browson, 2021). Jarrah and Kamel (2018) in their study found that menstrual knowledge and practices were positively correlated and that poor attitude towards menstrual hygiene and low menstrual hygiene practices were significantly associated with inadequate premenstrual preparation.

### **Purpose of the study**

- i. The purpose of this study is to investigate the relationship between knowledge and attitude in the practice of menstrual hygiene among female athletes in University of Uyo, Akwa Ibom State.

### **Research question**

What is the extent of knowledge, attitude and practice of menstrual hygiene among female athletes in the University of Uyo, Nigeria?

### **Research hypotheses**

- i. There is no significant relationship between knowledge of menstruation and menstrual hygiene practice among female athletes in University of Uyo, Akwa Ibom State.
- ii. Attitude towards menstruation does not significantly relate with practice of menstrual hygiene among female athletes in University of Uyo, Akwa Ibom State.

### **Research design and Methods**

The research design adopted for the study is the survey research design. This research design assesses situations as they are occurring at the time of a research activity. The population of the study consisted of all female athletes that were registered and recognized by the University

of Uyo Sports council. The total population as at the time of this study stood at 156, this population is a manageable size, so the researcher adopted the total population as sample for the study (Sports Council, University of Uyo, 2024). This was because the sample was small and can be easily covered by the researcher in the course of the study. The coaches for various sports in the University of Uyo assisted in identifying athletes that have been taking part in competitions and training. These formed the sample for the study.

The instrument used for data collection was a structured questionnaire titled Knowledge, Attitude and Practice of Menstrual Hygiene (KAWPMHQ). It was divided into two sections. Section A contained items on respondents' personal data. Section B was developed using four point modified Likert scale response options of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

It contained twenty items covering the variables of the study. The instrument was duly validated by lecturers in Test and measurement in the faculty of Education, University of Uyo, Nigeria.. The instrument was also tested for reliability using Cronbach alpha method. The researchers visited the University of Uyo Sports Council and with the assistance and permission of the coaches, the researchers were able to reach out to all the athletes and administered copies of the questionnaire to them. One hundred and fifty six copies of the research instrument were administered and retrieved in two days.

## **Results and discussions**

### Hypothesis one

There is no significant relationship between knowledge of menstruation and menstrual hygiene among female athletes. The independent variable in this hypothesis is knowledge of menstruation while the dependent variable is practice of menstrual hygiene among female athletes. Pearson product moment correlation statistical tool was employed for data analysis. The result obtained is presented in Table 1.

Table 1: Pearson product moment correlation analysis of the relationship between knowledge of menstruation and practice of menstrual hygiene among female athletes in University of Uyo, Akwa Ibom State (N = 156)

Variables	$\sum x$ $\sum y$	$\sum x^2$ $\sum y^2$	$\sum xy$	Cal.r	P.value
Knowledge of menstruation	2272	2859	4412	0.348*	0.000
Practices of Menstrual hygiene	4637	5338			

\*Significant at 0.05; df = 154

As presented in Table 1, the result of data analysis shows that the calculated r-value of 0.348 is higher than the p-value of 0.000 at 0.05 level of significance with 154 degree of freedom. This implies that the null hypothesis is rejected. Therefore, there is a significant relationship between knowledge of menstruation and practice of menstrual hygiene among female athletes in the University of Uyo, Akwa Ibom State.

#### Hypothesis two

Attitude towards menstruation does not significantly relate with practice of menstrual hygiene among female athletes. The independent variable in this hypothesis is attitude towards menstruation, while the dependent variable is practice of menstrual hygiene among female athletes. Pearson product moment correlation statistical tool was utilized for data analysis. The result obtained from the analysis is presented in Table 2.

As presented in Table 2, the result of data analysis shows that the calculated r-value of 0.354 is higher than the p-value of 0.000 at 0.05 level of significance with 154 degrees of freedom. This implies that the null hypothesis is rejected. Therefore, there is a significant relationship between attitude towards menstruation and practice of menstrual hygiene among female athletes in the University of Uyo, Akwa Ibom State.

Table 2: Pearson product moment correlation analysis of the relationship between attitude towards menstruation and practice of menstrual hygiene among female athletes in University of Uyo, Akwa Ibom State (N = 156)

Variables	$\sum x$	$\sum x^2$	$\sum xy$	Cal.r	P.value
	$\sum y$	$\sum y^2$			
Attitude towards menstruation	2253	2781			
			4305	0.354*	0.000
Menstrual hygiene of students	4637	5338			

\*Significant at 0.05; df = 154

### **Discussion of findings**

#### Hypothesis one

The finding that was obtained from analysis of data and testing of hypothesis one in the study showed that the null hypothesis was rejected. This implied that there was a significant relationship between knowledge of menstruation and practice of menstrual hygiene among female athletes of University of Uyo, Akwa Ibom State. The finding of this study could be as a result of the fact that there is an increasing awareness among females of reproductive age on the need to understand their menstrual cycle and how to manage, themselves during such period. This knowledge has enabled several athletes to conduct themselves properly as expected during their menstrual flow.

This finding is in agreement with that of Sumpter and Torondel, (2020) who reported that female athletes are like every other women experiencing menstruation, but their approach to menstrual hygiene might differ due to their training and competition schedules. Many athletes are educated about menstrual hygiene practices to ensure they can manage their periods effectively while training and competing. Some may use products like menstrual cups or period-proof underwear, while others stick to tampons or pads. It is essential for female athletes to maintain

good menstrual hygiene to prevent discomfort and potential health issues while staying focused on their performance.

The finding of this study also supported that of Gaith (2021) who revealed that knowledge of menstrual hygiene involves understanding one's menstrual cycle, knowing how to use menstrual products correctly, being aware of potential health risks, and having access to appropriate sanitation facilities and products. Practice of menstrual hygiene varies depending on cultural, social, and economic factors. In many places, there's still stigmatization and misinformation surrounding menstruation, leading to inadequate hygiene practices. Education and awareness campaigns play a crucial role in promoting proper menstrual hygiene practices, ensuring women and girls can manage their periods safely and with dignity. Knowledge plays a significant role in menstrual hygiene by empowering individuals with information about proper hygiene practices, access to menstrual products, and understanding menstrual health.

#### Hypothesis two

The finding that was obtained from analysis of data and testing of hypothesis two in the study showed that the null hypothesis was rejected. This implied that there was a significant relationship between attitude towards menstruation and practice of menstrual hygiene among female athletes of University of Uyo, Akwa Ibom State. The finding of this study could be as a result of the fact that menstruation is an integral part of the growing process of females. Menstruation is an inevitable biological process in young women. The attitude female students in the study have towards menstruation is positive and contributes significantly to their practice of menstrual hygiene in the study area.

The findings of this study align with those of Lema (2019), who reported that inadequate menarche advice negatively impacts menstruation, schooling, and social life. Additionally, the use of unhygienic menstrual absorbents was more common among females who received pre-menstrual training lacking timely information, influencing their attitudes towards menstruation and leading to poor menstrual hygiene practices. Likewise, Chandra, Movil and Patel (2017)

revealed that the practice of menstrual hygiene was significantly influenced by attitudes which had been developed as a result of cultural orientation, access to hygienic resources such as water, soap and pads among others.

This study also supports the findings of Sembulingah and Sembulingah (2017), who explained that the withdrawal of progesterone causes the breakdown of the endometrium, its glands, and blood capillaries. This results in the passage of blood, uterine secretions, an unfertilized ovum, and broken-down endometrial cells through the vagina, constituting menstrual flow. This phase lasts for 1-5 days, changes also occur in the cervix and vagina during the menstrual cycle. In the cervix, the mucous membrane undergoes cyclical changes, and it becomes thinner and more alkaline during the proliferative phase, aiding sperm survival and motility, also thicker and more adhesive during the secretion phase due to progesterone. In the vagina, the epithelial cells proliferate during the proliferative phase due to estrogen release from the ovary, and during the secretion phase, the vaginal epithelium proliferates due to progesterone, becoming infiltrated with leukocytes. These changes reduce infection resistance among female athletes.

## **Conclusion**

The study conducted at the University of Uyo in Akwa Ibom State focused on understanding the knowledge, attitudes, and practices (KAP) related to menstrual hygiene among female athletes. The primary goal was to explore how well these athletes' understood menstruation, their attitudes towards it, and their hygiene practices during their menstrual cycles. The analysis of the collected data and the testing of various hypotheses revealed a significant relationship between these three factors. Specifically, it was found that the level of understanding about menstruation among the athletes was directly linked to their attitudes and practices. Those with better knowledge tended to have more positive attitudes and better hygiene practices. Also, athletes' attitudes towards menstruation, whether positive or negative, significantly influenced their hygiene practices. A positive attitude was associated with better menstrual.

## Recommendations

The researchers made the following recommendations based on the findings obtained in the study;

- i. Reproductive health educators should continue to sensitize female athletes with the basic knowledge they need on how to manage their menses and practice effective menstrual hygiene
- ii. Female athletes should be encouraged to maintain positive attitude towards menstruation in order to promote the practice of menstrual hygiene among them

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