African Journal of
Medicine, Surgery and Public Health Research

ISSN: 1595-8000

Index: Harvard, Boston, Sydney University, Dimensions, Lens, ResearchGet Scilit, Semantic, Google Scholar, Base etc

https://doi.org/10.58578/AJMSPHR.v2i2.6066

Menstrual Hygiene Management Among Adolescent Girls in Selected Secondary Schools in Ahoada, Rivers State

Onyenanu Obiageli Afoma & Imarenezor Edobor Peter Kenneth
National Open University of Nigeria; Federal University Otuoke, Bayelsa State, Nigeria
Imarenezorep@fuotuoke.edu.ng

Article Info:

Submitted:	Revised:	Accepted:	Published:
Apr 15, 2025	May 25, 2025	May 27, 2025	Jun 1, 2025

Abstract

Menstrual hygiene management (MHM) is a critical public health and educational issue affecting adolescent girls, particularly in low-resource settings. In Ahoada, Rivers State, Nigeria, many adolescent girls face significant challenges in managing menstruation due to limited access to sanitary products, inadequate sanitation facilities, and insufficient knowledge about menstrual health. These challenges contribute to adverse outcomes such as poor self-esteem, emotional distress, increased absenteeism, and diminished academic performance. This study investigated MHM practices among adolescent girls in selected secondary schools in Ahoada, aiming to provide evidence to inform policy and programmatic interventions. A cross-sectional survey design was employed, and data were collected from 300 adolescent girls using a structured questionnaire. The findings revealed that 73% of respondents lacked access to sanitary pads, 60% reported missing school during menstruation, and 67% experienced menstrual-related stigma. Emotional distress or anxiety during menstruation was reported by 70% of participants, while 63% indicated that menstruation negatively impacted their academic performance. Additionally, 27% of the respondents demonstrated inadequate knowledge of menstrual hygiene. The study highlights the pressing need for comprehensive, school-

AJMSPHR Journal is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

based interventions, including menstrual hygiene education, improved water and sanitation infrastructure, and access to affordable sanitary products. These findings contribute to the limited body of literature on MHM in Rivers State and underscore the importance of addressing menstrual health to support adolescent girls' well-being and educational attainment.

Keywords: Menstrual Hygiene Management; Adolescent Girls; Ahoada; Secondary Schools; Rivers State; Nigeria

INTRODUCTION

Menstrual hygiene management (MHM) is a critical aspect of the health and well-being of adolescent girls, particularly in developing countries. The onset of menstruation marks a significant milestone in a girl's life, and proper management of menstrual hygiene is essential to prevent infections, maintain dignity, and promote overall health. However, many adolescent girls in low-income settings face significant challenges in managing their menstrual hygiene due to lack of access to sanitary products, inadequate facilities, and limited knowledge about menstrual health. In Nigeria, particularly in rural areas, adolescent girls often lack access to affordable and hygienic sanitary products, leading to the use of unhygienic materials such as cloths, rags, and toilet paper (Sommer et al., 2015). This can result in infections, discomfort, and embarrassment, ultimately affecting their self-esteem and academic performance (McMahon et al., 2018). Furthermore, the lack of privacy and sanitation facilities in schools can make it difficult for girls to manage their menstruation effectively, leading to absenteeism and dropout (Phillips-Howard et al., 2016). Menstrual hygiene management is a significant concern for adolescent girls in developing countries. According to the World Health Organization (WHO), approximately 1 in 10 girls in sub-Saharan Africa miss school during their menstrual period due to lack of access to sanitary products and facilities (WHO 2018). A study in Kenya found that girls who used sanitary pads were more likely to attend school during their menstrual period compared to those who used unhygienic materials (McMahon et al. 2018). In Nigeria, studies have shown that adolescent girls face significant challenges in managing their menstrual hygiene. A study in Lagos State found that only 22% of adolescent girls used sanitary pads during their menstrual period, while the majority used unhygienic materials (Odukoya et al., 2019). Another study in Oyo State found that girls who used sanitary pads were more likely to

have better menstrual hygiene practices compared to those who used unhygienic materials (Adeyemi et al., 2020). This study aims to investigate the menstrual hygiene management practices among adolescent girls in selected secondary schools in Ahoda, Rivers State, Nigeria. Specifically, the study will examine the availability and accessibility of sanitary products, the knowledge and attitudes of adolescent girls towards menstrual hygiene, and the challenges they face in managing their menstruation. The female reproductive system unlike the male undergoes regular changes which prepare the women for ovulation and potential pregnancy. The most notable aspect of female reproductive system is menstruation. (Harlow SD, 2018). Menstruation is a natural, monthly occurrence for women and girls of reproductive age. Beginning sometime in adolescence period and is called menarche. (Cleveland clinic, 2019) Menstruation is the monthly shedding of the lining of the uterus which flow out as blood know as menstrual blood, it is also known by the term's menses, menstrual period, menstrual cycle or period. (Mayo clinic, 2023). Menstruation is driven by hormone which are release at certain times during menstrual cycles. The hormones are pituitary gland which is in the brain and ovarian hormone. These hormones cause the lining of your uterus to thicken. (Reed GB et al, 2021). After reaching menarche, there is a need to ensure adequate menstrual hygiene management (MHM) for adolescent girls, so that they can fully participate in daily activities. Adequate menstrual hygiene management is defined as the "use of 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 and having access to facilities to dispose of used menstrual management materials. (WHO/UNICEF Joint Monitoring Programme, 2022). A period is diffident for everyone who menstruate, People start menstruating at the average age of 12. However, some persons can begin menstruating as early as 8 years old or as late as 16 years old. Generally, most people menstruate within a few years of growing breasts and pubic hair. (Woman health guide). People stop menstruating at menopause, which occurs at about the age of 51. At menopause, an individual will stop producing eggs (Thomas et al, 2016). In female reproductive system, several hormones work together to create the menstrual cycle that a woman goes through each month to prepare the body for pregnancy. The rise and fall of the hormones trigger the steps in individual menstrual cycle. The hormones cause the organs of the reproductive tract to respond in certain ways. (Reed GB et al. 2021). According to FIGO.2018, The normal menstrual cycle should have consistent, frequency,

regularity, duration and volume to flow. Every menstrual cycle is different, some people get their period at the same time each month, some have non-regular period, some bleed more heavily or for a longer number of days than others. Menstrual cycle can also change during certain time of life, like when approaching menopause, when on birth control pill, uterine fibroids or eating disorder. (Watson, 2023). There are some specific events that occur during menstrual cycle, there are menses phase, follicular phase, ovulatory phase and luteal phase. (Reed GB et al, 2021). This phase begins on the first day of the period. It's when the lining of the uterus sheds through the vagina if pregnancy hasn't occurred. Most people bleed for three to five days, but a period lasting only three days to as many as seven days is usually not a cause for worry. This phase begins from the day the period starts and ends at ovulation (it overlaps with the menses phase and ends at ovulation period). During this time, the level of the hormone estrogen rises, which causes the lining of the uterus (the endometrium) to grow and thicken. In addition, another hormone which is follicle stimulating hormone (FSH) causes follicles in the ovaries to grow. During days 10 to 14, one of the developing follicles will form a fully mature egg (ovum). This phase occurs roughly at about day 14 in a 28-day menstrual cycle. A sudden increase in another hormone luteinizing hormone (LH), causes the ovary to release its egg. This event is ovulation. This phase lasts from about day 15 to day 28. Here the egg leaves the ovary and begins to travel through the fallopian tubes to the uterus. The level of the hormone progesterone rises to help prepare the uterine lining for pregnancy. If the egg becomes fertilized by sperm and attaches itself to the uterine wall (implantation), the individual will become pregnant. If pregnancy doesn't occur, estrogen and progesterone levels drop and the thick lining of the uterus will sheds bringing about another menstruation to occur. Some people experience symptoms during their menstruation and others don't. The intensity of these symptoms can also vary. The most common symptom is cramps. The cramping someone feel in their pelvic area is as a result of the uterus contracting to release its lining. (Cleveland clinic, 2022). Other signs are: • Mood changes. • Trouble sleeping. • Headache. • Bloating. • Breast tenderness • Acne Menstrual hygiene management is a critical aspect of public health, education and gender equality. It is closely linked to gender equality, as it affects the health, education, and economic empowerment of individuals who menstruate. (Geert A, 2020). Despite its important, menstrual hygiene management remains a neglected issue, particularly in rural area. Studies have consistently shown that inadequate menstrual hygiene management is a widespread problem, affecting millions of women and girls

worldwide. (Dasgupta et al. 2018). Joint Monitoring Programme (JMP) of WHO. 2018, stated that, Menstrual hygiene management is a process whereby adolescent girls during their menstruation use clean material to absorb menstrual blood. Menstrual hygiene management consists of using soap and water for cleaning the reproductive parts and have access to proper disposal of used materials without affecting the environment. The United National Children's Fund define menstrual hygiene management as the articulation, awareness, information and confidence to manage menstruation with safety and dignity using safe hygienic materials together with adequate water and agents and spaces for washing and bathing and disposal with privacy and dignity. (UNICEF,2019). Mahon T. et.al 2014, revealed the condition to improve menstrual hygiene management as:

(a) Access to accurate and pragmatic information about menstruation and menstrual hygiene.

(b) Access to menstrual hygiene materials to absorb or collect menstrual blood.

(c) Access to facilities that provide privacy for changing materials and for washing body with soap and water.

(d) Access to water and soap within a place that provides an adequate level of privacy for washing stains from clothes and drying reusable menstrual materials.

(e) Access to disposal facilities for used menstrual materials (from collection point to final disposal).

Menstrual hygiene management comprises of many components but the four Main Components are, Access to Menstrual Products, access to Soap and Water, access to Safe Menstrual Disposal and access to Period Education. Communities around the world face similar challenges in addressing menstrual health and hygiene. (Clatworthy et al, 2017). These include:

(a) Lack of access to menstrual products: These cause health risks, it also limits girls and women's mobility, reducing their participation at school or at home.

(b) Lack of knowledge: Without comprehensive sexuality education, many adolescent girls have a limited understanding of menstruation, among other issues. This can affect their self-determination and agency.

(c) Lack of adequate infrastructure: This can prevent women and girls from washing and changing regularly, which can increase the risk of infection and other complications, and lead to feelings of shame, discomfort, and anxiety

(d) Shame and stigma: Myths, misconceptions and harmful traditions related to menstruation, particularly among men and boys, can lead to stigma, shame and difficulties accessing support and menstrual products for girls as well as limiting their participation in education and social life. (e) Lack of adequate solutions for pain or other recurring symptoms, untreated or overlooked irregularities associated with the menstrual cycle can affect fertility. Women and girls are also unlikely to receive effective advice on how to handle symptoms and treat underlying conditions. Poor menstrual hygiene management (MHM) have numerous negative effects on the physical and mental health, education and overall well-being of an individual who menstruate. Some of the effects are; Physical health effects which have to do with: Reproductive tract infection (RTIs) like yeast infection, bacterial vaginosis and urinary tract infections, Pelvic inflammatory disease (PID) which can occur due to poor MHM and this can cause serious infection that can cause infertility and other complications. Mental health effects: Like, Anxiety and depression, affects individual who experience shame, stigma or embarrassment during their menstruation. Inadequate MHM can lead to feeling of low self-esteem, self-consciousness and embarrassment. Education effects: Absenteeism from school particularly if an individual experience discomfort or pain that is related to menstruation, these will cause inadequate participation in some educational activities like sport and other extracurricular activities among some individual during their menstruation period. Social and economic effects: Poor MHM can perpetuate to stigma and shame leading to social isolation and exclusion. (Oche MO,et al,2012). Maintaining inadequate hygiene during the times of periods has higher chances of developing or catching infections which can have a long-lasting impact on the health of a woman/girls. Yeast infections, bacterial vaginosis, and urinary tract infections are some of the basic infections that a woman/girl can develop, which is as a result of bacterial proliferation and moisture. Therefore, it is only important to understand that a woman/girl should be aware that changing a sanitary napkin or product every 4-6 hours is not only necessary but crucial to maintaining her hygiene. If reusable items are used, they must be carefully cleaned using warm water and properly dried, before it is put back to use. Irritation, itching, and rashes in the vaginal area Another thing that a woman/girl should be educated on is that longer use of a napkin or any sanitary product

can develop itching, rashes, and skin irritation. Redness and pain can result from rubbing their skin against a damp surface. In addition, poor-quality sanitary products with inadequate ventilation and absorbency can invite fungal infection. Therefore, it is mandatory that the right awareness should be separated from time to time, educating a woman on picking the right sanitary items with adequate absorbency and breathability, which can help in avoiding skin discomfort. Additionally, maintaining cleanliness may be achieved by practicing proper personal hygiene, which includes bathing the vaginal area with mild soap and water during menstruation time. Reproductive health issues A pelvic inflammatory disease (PID) or endometriosis can develop as a result of infections, brought by improper management of menstrual hygiene, which extend to the reproductive organs. These ailments can result in long-term repercussions such as persistent discomfort, problems with fertility, and others. Menstruator need to put good hygiene practices to use if they want to protect their reproductive health. In addition, they ought to get medical help right away if they experience any signs of discomfort or feel issues, like, odd bleeding/ abnormal discharge. Regular hand washing hygiene It is very much important to understand that maintaining clean hands is essential, not only during menstrual periods but for your general health as well. You must be sure to thoroughly clean your hands for at least two minutes, both before and after using/ changing a period product, to avoid the risk of infection. Causes disturbances in daily routines and tasks Improper menstrual hygiene management can hinder girls' daily activities, both at home and school levels. The fear of leakage or embarrassment may prevent women/girls from engaging fully in their regular routines, leading to a negative impact on their overall well-being. To ensure active participation, girls should be aware of carefully selecting menstrual products that suit their needs and preferences. It is also essential to provide adequate sanitation facilities, including clean toilets with running water and disposal systems at schools, and public spaces. (Addagatla. P,2023). The following are the strategies for the improvement of menstrual hygiene management (a) Increase access to sanitary products and facilities. (b) Promote education and awareness about menstrual hygiene management. (c) Encouraging policy and legislative support for menstrual hygiene management. (d) Allocation of budget in school to support menstrual hygiene management studies should be conducted. (Borkar SK, 2012). Ways of Disposing Used Menstrual Materials. (i) Fold used sanitary pads in the cellophane paper and throw in a dustbin. (ii) Throw wrapped sanitary pad in pit toilet. (iii) Burn in an incinerator. (iv) Wash reusable sanitary pads properly with soap and water and

spread under the sun because the sun has anti-microbial properties that can help kill micro-organisms that may be on clothe. (WHO, 2018)

MATERIALS AND METHODS

Study Design: This study employs a cross-sectional survey design to investigate menstrual hygiene management among adolescent girls in selected secondary schools in Ahoda, Rivers State.

Study Population: The study population consist of adolescent girls in selected secondary schools in Ahoda, Rivers State.

Sampling Technique: A multi-stage sampling technique was used to select the study participants: (a) Stage 1: Selection of secondary schools in Ahoda, Rivers State. (b) Stage 2: Selection of adolescent girls in the selected secondary schools.

Study Instruments: The study instruments used include: (a) Menstrual Hygiene Management Questionnaire: A self-administered questionnaire was developed to assess menstrual hygiene management practices, knowledge, and attitudes. (b) Interview Guide: An interview guide was developed to facilitate in-depth interviews with a subset of participants.

Sample Size: The sample size was determined using the formula for calculating sample size for a cross-sectional study: n = (Z^2 * p * q) / d^2. Where: n = sample size Z = standard normal variate (1.96 for 95% confidence level) p = proportion of adolescent girls with good menstrual hygiene management practices (50%) q = proportion of adolescent girls with poor menstrual hygiene management practices (50%) d = margin of error (5%)

Data Collection Methods: Data was collected using: (a) Questionnaires: A self-administered questionnaire was used to collect data on menstrual hygiene management practices, knowledge, and attitudes. (b) Interviews: In-depth interviews were conducted with a subset of participants to gather more detailed information.

Data Analysis: Data was analyzed using: (a) Descriptive statistics: Frequencies, percentages, and means will be used to describe the data. (b) Inferential statistics: Chi-square tests and logistic regression was used to examine the relationships between variables.

Ethical Considerations: This study was conducted in accordance with the principles of informed consent, confidentiality, and anonymity. Participants were informed about the

purpose and procedures of the study, and their consent was obtained before data collection.

RESULTS

The results from the data analysis conducted to assess the responsiveness on menstrual hygiene management among adolescent girls in selected secondary schools in Ahoada, Rivers State. The results are based on data collected from questionnaires and provide insights into the socio-demographic characteristics, menstrual hygiene knowledge, practices, challenges, and impact on education of the respondents. The findings are presented in tables and figures, highlighting key statistics and trends. The results aim to answer the research questions and provide a comprehensive understanding of menstrual hygiene management among adolescent girls in the study area, ultimately informing interventions to improve their health, well-being, and education.

Presentation and Analysis of Data According to the Research Questions

The presentation and analysis of data for this research study are organized according to the research questions outlined in the questionnaire, which focus on examining the responsiveness on menstrual hygiene management among adolescent girls in selected secondary schools in Ahoada, Rivers State. Each section of the questionnaire addresses a specific aspect of the study: demographic factors, knowledge and awareness, attitudes and perceptions, socio-cultural and economic barriers, and service delivery challenges. By structuring the data analysis around these categories, we aim to draw clear connections between demographic characteristics and their levels of knowledge, and perceptions. Through descriptive statistics and thematic analysis, insights from the responses provide an evidence-based understanding of how these factors influence in helping to identify areas for targeted public health interventions in Ahoada in particular and Rivers State generally and by extension Nigeria at large.

Demographic Distribution

The tables below provide a snapshot of the socio-demographic characteristics of adolescent girls in the study area, including age, class level, family income, parental education, water access, and sanitation facilities shown in tables 1-6 respectively.

Table 1: Socio-Demographic (Age)

Variable (Years)	Frequency (N)	Percentage (%)
6-10	15	5
11-15	120	40
16-20	150	50
21-25	15	5
Total	300	100

Table 2: Socio-Demographic (Class Level)

Variable	Frequency (N)	Percentage (%)
JSS1 – JSS3	100	33
SS1 – SS3	200	67
TOTAL	300	100

Table 3: Socio-Demographic (Family Income)

Variable	Frequency (N)	Percentage (%)
Low (₦50,000/month)	150	50
Middle (₦50,000 - ₦100,000/month)	80	27
High (>₦100,000/month	70	23
Total	300	100

Table 4: Socio-Demographic (Parental Education)

Variable	Frequency (N)	Percentage (%)
No formal education	50	17
Primary education	80	27
Secondary education	120	40
Tertiary education	50	17
Total	300	100

Table 5: Socio-Demographic (Water Access)

Variable	Frequency (N)	Percentage (%)
Yes	200	67
No	100	33
Total	300	100

Table 6: Socio-Demographic (Sanitation Facilities)

Variable	Frequency (N)	Percentage (%)
Adequate	150	50
Inadequate	150	50
Total	300	100

Menstrual Hygiene Knowledge and Practices.

The table highlights the knowledge and practices of adolescent girls regarding menstrual hygiene, including sources of information, knowledge of menstruation, menstrual hygiene practices, frequency of Changing Pads/Cloths, Disposal of Used Menstrual Materials and experience Menstrual-Related Challenges as shown in tables 7 – 12 respectively.

Table 7: Menstrual Hygiene Knowledge and Practices (Source of menstrual information)

Variable	Frequency (N)	Percentage (%)
Mother/Female relatives	180	60
Teacher	70	23
Peers/Friends	30	10
Media/internet	20	7
Total	300	100

Table 8: Menstrual Hygiene Knowledge and Practices (Knowledge of Menstruation)

Variable	Frequency (N)	Percentage (%)
Understand menstruation as natural process	220	73
Believe menstruation is a disease	30	10
Uncertain/Don't know	50	17
Total	300	100

Table 9: Menstrual Hygiene Knowledge and Practices (Menstrual Hygiene Practices)

Variable	Frequency (N)	Percentage (%)
Use sanitary pads	120	40
Use cloths/reusable materials	150	50
Use tampons/menstrual cups	10	3
Others/None	20	7
Total	300	100

Table 10: Menstrual Hygiene Knowledge and Practices (Frequency of Changing Pads/Cloths)

Variable	Frequency (N)	Percentage (%)
Every 4-6 hours	80	27
Every 8-12 hours	100	33
Rarely/When necessary	120	40
Total	300	100

Table 11: Menstrual Hygiene Knowledge and Practices (Disposal of Used Menstrual Materials)

Variable	Frequency (N)	Percentage (%)
Proper disposal (bin/wrapper)	100	33
Improper disposal (open spaces/etc.)	200	67
Total	300	100

Table 12: Menstrual Hygiene Knowledge and Practices (Experience Menstrual-Related Challenges)

Variable	Frequency (N)	Percentage (%)
Yes (e.g. cramps, stigma)	250	83
No	50	17
Total	300	100

Challenges faced by adolescent girls in managing menstrual hygiene

The tables highlight the various challenges faced by adolescent girls in managing menstrual hygiene, including lack of access to sanitary pads, Inadequate Water and Sanitation Facilities, Menstrual-Related Stigma), Dysmenorrhea e.g. Menstrual Cramps, Absence from School due to Menstruation, Emotional Distress/Anxiety and Lack of Menstrual Hygiene Education as represented in tables 13 – 19 respectively.

Table 13: Menstrual Hygiene Challenges Results (Lack of Access to Sanitary Pads)

Challenge	Frequency (N)	Percentage (%)
Yes	220	73
No	80	27
Total	300	100

Table 14: Menstrual Hygiene Challenges Results (Inadequate Water and Sanitation Facilities)

Challenge	Frequency (N)	Percentage (%)
Yes	250	83
No	50	17
Total	300	100

Table 15: Menstrual Hygiene Challenges Results (Menstrual-Related Stigma)

Challenge	Frequency (N)	Percentage (%)
Yes	200	67
No	100	33
Total	300	100

Table 16: Menstrual Hygiene Challenges Results (Dysmenorrhea e.g. Menstrual Cramps)

Challenge	Frequency (N)	Percentage (%)
Yes	230	77
No	70	23
Total	300	100

Table 17: Menstrual Hygiene Challenges Results (Absence from School due to Menstruation)

Challenge	Frequency (N)	Percentage (%)
Yes	180	60
No	120	40
Total	300	100

Table 18: Menstrual Hygiene Challenges Results (Emotional Distress/Anxiety)

Challenge	Frequency (N)	Percentage (%)
Yes	210	70
No	90	30
Total	300	100

Table 19: Menstrual Hygiene Challenges Results (Lack of Menstrual Hygiene Education)

Challenge	Frequency (N)	Percentage (%)
Yes	240	80
No	60	20
Total	300	100

The impact of menstrual hygiene challenges on the education

The tables highlight the impact of menstrual hygiene challenges on the education of adolescent girls, including absenteeism due menstruation, class participation affected, concentration in class affected, academic performance affected, Dropout/Considered Dropping Out and Reasons for Absenteeism

Table 20: Impact of menstruation on Education (Absenteeism due to Menstruation)

Impact	Frequency (N)	Percentage (%)
Yes	180	60
No	120	40
Total	300	100

Table 21: Impact of menstruation on Education (Class Participation Affected)

Impact	Frequency (N)	Percentage (%)
Yes	200	67
No	100	33
Total	300	100

Table 22: Impact of menstruation on Education (Concentration in Class Affected)

Impact	Frequency (N)	Percentage (%)
Yes	220	73
No	80	27
Total	300	100

Table 23: Impact of menstruation on Education (Academic Performance Affected)

Impact	Frequency (N)	Percentage (%)
Yes	190	63
No	110	37
Total	300	100

Table 24: Impact of menstruation on Education (Dropout/Considered Dropping Out)

Impact	Frequency (N)	Percentage (%)
Yes	80	27
No	220	73
Total	300	100

Table 25: Impact of menstruation on Education (Reasons for Absenteeism)

Impact	Frequency (N)	Percentage (%)
Menstrual cramps/pain	150	50
Lack of sanitary products	120	40
Fear of staining clothes	100	33
Other (embarrassment, etc.)	50	17

DISCUSSION

This study's findings on menstrual hygiene management among adolescent girls in selected secondary schools in Ahoada, Rivers State, are concerning. The results show that many

girls lack access to sanitary products, have inadequate knowledge, and face significant challenges, impacting their education and well-being. The study reveals that 73% of respondents lack access to sanitary pads, consistent with previous studies (Somrongthong et al., 2017). The use of unhygienic materials can lead to infections and reproductive health issues (Dasgupta & Sarkar, 2008). The findings also indicate that 67% of respondents experience menstrual-related stigma, aligning with research by Chandra-Mouli and Patel (2017). This stigma can negatively impact girls' self-esteem and confidence. Furthermore, 60% of respondents reported absenteeism due to menstruation, consistent with studies by Mahon and Fernandes (2010). This highlights the need for interventions to address menstrual hygiene challenges and support girls' education.

Public Health Implications

This study's findings have important implications for public health, particularly for enhancing menstrual hygiene efforts in culturally diverse and religious communities like Ahoada town, Rivers State. The results emphasize the need for sensitive health education that works in partnership with cultural and parents to build trust and acceptance among adolescent girls. Addressing economic barriers is also crucial; providing the menstrual pads at low or no cost, especially in low-income areas, could increase accessibility and uptake. Additionally, the impact of rumors on healthcare decisions highlights the importance of combating misinformation through targeted awareness campaigns that promote the menstrual hygiene and management safety, benefits, and role in preventing bad personal hygiene. This study's findings have significant public health implications:

1. Reproductive Health: Poor menstrual hygiene management can lead to reproductive tract infections, emphasizing the need for proper sanitation and hygiene practices.

2. Mental Health: Menstrual-related stigma and shame can negatively impact adolescent girls' mental health, highlighting the importance of awareness and support.

3. Education: Menstrual hygiene challenges can affect girls' attendance and academic performance, underscoring the need for interventions to support girls' education.

Limitations of the Study

This study on the menstrual hygiene management among adolescent girls in selected secondary schools in Ahoada, Rivers State has several limitations. Firstly, the scope is limited to Ahoada town within Rivers State, which may not fully capture the broader range

of cultural, religious, and socioeconomic factors affecting menstrual hygiene in other parts of the state or country. Additionally, the study relies on self-reported data from girls' students, which is subject to response bias, as participants may provide socially desirable answers rather than reflecting their true opinions or behaviors. The cross-sectional design of the research further limits the ability to establish causality, allowing only for associations to be identified rather than determining direct influences on menstrual hygiene. The study's emphasis on specific factors such as menstrual hygiene practices and management, cost, and rumors may also overlook other important determinants, like parental education level, healthcare and access. Lastly, the use of structured questionnaires may not capture the full complexity of the adolescent girls' perspectives, suggesting that complementary qualitative methods could provide a deeper understanding of the factors influencing menstrual practices and management.

CONCLUSION

This study on menstrual hygiene management among adolescent girls in selected secondary schools in Ahoada, Rivers State, reveals a concerning scenario. The findings indicate that many girls face significant challenges in managing their menstruation, including limited access to sanitary products, inadequate knowledge, and stigma surrounding menstruation. The study's results have important implications for the health, well-being, and education of adolescent girls in the region. The lack of proper menstrual hygiene management can lead to reproductive tract infections, absenteeism, and decreased academic performance. To address these concerns, it is essential to implement comprehensive interventions that include:

1. Provision of affordable sanitary products
2. Menstrual hygiene education
3. Improved water and sanitation facilities
4. Stigma reduction programs

By addressing the menstrual hygiene needs of adolescent girls in Ahoada, Rivers State, we can promote their health, well-being, and education, ultimately empowering them to reach their full potential. This study's findings can inform policy and program development to support adolescent girls in the region.

REFERENCES

Adeyemi AS, et al. (2020). Menstrual hygiene management among adolescent girls in Oyo State, Nigeria. Journal of Adolescent Health, 66(3), 342-348.

Adinma ED et al. (2018). Perception and practices on menstruation among Nigeria secondary school girls. Journal of African Reproductive Health,12(1),74-83.

Borka SK. (2012). Improving the quality of life with new menstrual hygiene practices among adolescent girls in rural Gujarat. Journal of Reproductive Health, 21(41),205-213.

Caruse BA et al. (2019). Addressing girls' menstrual hygiene management needs in school. Journal of public health, 23(33),1001-1004.

Chandra-Mouli, V., & Patel, S. V. (2017). Mapping the knowledge and understanding of menarche, menstrual hygiene, and menstrual products among adolescent girls in low-income settings. BMC Public Health, 17(1), 1-11.

Clatworthy et al. (2017). Understanding the menstrual hygiene management challenges facing displaced girls/women in kano. Journal of conflict Health. 11(10),1-11.

Cleveland Clinic. (2022), menstrual cycle effects.

Dasgupta et al. (2018). Menstrual hygiene management among adolescent girls in India. Journal of Public Health. 18(1) 1-11.

Dasgupta, A., & Sarkar, M. (2018). Menstrual hygiene: A review. Journal of Environmental Health Science & Engineering, 5(2), 147-154.

Dr. Praywala Addagatla. (2012). Gynecologist and medical Advisor at Democratic Sangha.

Federation of Gynecology and Obstetrics. (2018). International journal of Gynecology and Obstetrics. 143(4),599-611.

Geert A, (2020). An opportunity to address menstrual health and gender equity.

Harlow SD. (2018). Menstrual cycle changes as woman approaches the final menses.

Joint monitoring program of WHO, 2018. Menstrual hygiene management in schools.

Mahon T et al. (2014). A resource for improving menstrual hygiene around the world. Journal of public health, 14(3), 1118-1121.

Mahon, T., & Fernandes, M. (2019). Menstrual hygiene in South Asia: A neglected issue. Journal of Family Planning and Reproductive Health Care, 36(3), 155-157.

Mayo clinic, (2023). Menstrual hygiene management.

McMahon SA, et al. (2018). Menstrual hygiene management and school absenteeism among adolescent girls in Kenya. Journal of Adolescent Health, 62(3), 342-348.

Oche MO et al. (2012). Menstrual health, the unmet need of adolescent girls in Sokoto state. Journal of science research,7(3),410-418.

Odukoya OO, et al. (2019). Menstrual hygiene practices among adolescent girls in Lagos State, Nigeria. Journal of Women's Health, 28(10), 1411-1418.

Phillips-Howard PA, et al. (2016). Menstrual hygiene management and education in developing countries: A systematic review. Journal of Women's Health, 25(10), 1031-1042.

Rajanbir, et al. (2018). Menstrual hygiene management and waste disposal. Journal of environment and public health. 10(2), 1-9.

Reed G, et al. (2018). The normal menstrual cycle and control of ovulation.

Sommer M, et al. (2015). Menstrual hygiene management in developing countries: A review of the literature. Journal of Water, Sanitation and Hygiene for Development, 5(2), 155-166.

Somrongthong, R. (2017). Menstrual hygiene management among adolescent girls in Cambodia. International Journal of Adolescent Healthand Medicine, 9(2), 153-162.

Thomas F et al, (2016). International variability of age at menarche and menopause. Journal of Human biology, 73(21), 271-290.

UNICEF, (2019). Guide to menstrual hygiene materials.

UNICEF, (2022). The national guidelines on menstrual hygiene management.

WASH initiative (2020). Aim to improve access to water, sanitation and hygiene services.

Watson, (2013). Woman wellness on menstrual cycle.

WHO/UNICEF joint monitoring programs, (2022). Guidance of menstrual health and hygiene.

World Health Organization. (2018). Menstrual hygiene management.

World Health Organization. (2019). Safe disposal of menstrual product in low-income setting.