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EDITORIAL DESK

Volume 3 of the West African Journal of Educational Administration and Planning (WAJEAP) has a total of ten articles that were the products of well researched papers presented at the international conference held in May 2024 at the Presbyterian University of East Africa in Kikuyu, Nairobi, Kenya. The conference had well over 100 participants that gathered at the ambiance of PUEA environment, which was well attended by over 25 universities across the globe including Nigeria, Serra Leone, Kenya, South Africa, Australia and University of South Alabama in United States of America. All the articles have been peer reviewed and plagiarism checks conducted on them before publication.

I, therefore, want to deeply appreciate the management team of the Presbyterian University of East Africa for making this publication a reality. All the writers and authors are congratulated for passing the stringent measures set by the guild of editors.

Congratulations to everyone, and I wish you a prosperous Christmas celebration in advance.

Prof. M. O. B. Mohammed FNAEAP,
Head, Editorial Team

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MENSTRUAL WASTE MANAGEMENT PRACTICES AND HYGIENE AMONG FEMALE UNDERGRADUATES AT LAGOS STATE UNIVERSITY, OJO

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Abstract

This research work examined menstrual waste management practices and hygiene among undergraduates at Lagos State University, Ojo. The research work discusses menstruation, menstrual waste practices, menstrual waste materials and hygiene. Two research questions and hypotheses were raised to accomplish the study's objectives. The use of descriptive survey research was adopted, populations of the study comprised all female undergraduate students from all selected faculties at Lagos State University. A mixed sampling technique was adopted. A stratified sampling technique was used in the selection of faculties in the university and a simple random technique was used to select three hundred (300) female undergraduate students in each faculty in Lagos State University. A modified structured questionnaire tagged: "Menstrual Waste Management Practices Questionnaire (MWMPQ) was employed., The questionnaire was divided into two sections A and B. Section A asked questions about the demographic information of the respondents whereas Section B asked questions on menstrual waste management methods among Lagos State University's female undergraduate students. The reliability of the instrument was achieved using the test-retest method, with Cronbach alpha test and R-value of 0.86. Data collected were analysed using frequency count and percentage for demographic data while inferential statistic of Chi-square was used to test the stated hypotheses at 0.05 level of significance. It was noted that poor menstrual waste management stems from a lack of awareness, poverty, and other factors. The research work emphasized the importance of menstrual hygiene and good menstrual waste disposal. Different ways of menstrual waste disposal, and menstrual waste materials were analyzed, and each effect on vaginal infections. It further recommended the need for the government to spread awareness, especially in rural, underdeveloped areas.

Keywords: Menstruation, Hygiene, Practices, Undergraduate, Waste, Management, Infection, Disposal.

Introduction

The health and wellness of the global population, in this decade, has attracted greater attention and intervention from governments of nations and other stakeholders than preceding decade (Akeredolu & Ogunbamowo, 2021). About half of all people have or will have menstruation, which is a normal and necessary component of the reproductive cycle. (Poureslami & Osati-Ashtiani, 2015). Sexual and reproductive health go hand in hand with menstrual health. Public health and access to excellent menstrual health are both fundamental human rights. Menstruation is one of the distinctive experiences a growing female goes through during adolescence. It entails the cyclical shedding of the uterus' inner lining, which is regulated by hormones generated by the brain's hypothalamus and pituitary glands.

(Poureslami & Osati-Ashtiani, 2015). Gultie, Hailu & Workineh, (2016) stated that 'the first menstrual flow in women also known as menarche, can happen at any age, although most research indicates that it usually happens between the ages of 11 and 15. Even though the age at which women cease menstruating varies from country to country (Thomas, Renaud, Benefice, De-Meeüs & Guegan, 2017). The advent of menstruation is celebrated in certain communities, but it is also the start of food and social limitations in others (Pokhrel, Mahantashetti, Angolkar & Devkota, 2018). Some menstrual females view this phenomenon as oppressive as well as an occurrence that ushers in anxiety, disgust, and humiliation because of the sociocultural imposition during this time.

Menarche, or the first menstrual flow in women, can happen at any age, although most research indicates that it usually happens between the ages of 13 and 15 years (Anand, Singh & Unisa, 2015). Menopause is said to typically occur between the ages of 45 and 50 years, however, the age at which women cease menstruation varies by country (Vidiya & Rekha, 2016). As a result, a woman spends around 2100 days – or over 6 years of her reproductive life menstruating (Prajapati, Shah & Kedia, 2015). During puberty, menstruation causes several changes in a young girl's life. A girl who experiences this alone will feel some sort of burden, which will have an impact on her day-to-day existence when she is having her period. Inadequate awareness about menstruation and poor menstrual hygiene habits, which have resulted in unfavourable attitudes, have been documented in a few studies among students, particularly teenagers, across the world (Water Aid, 2009). But there are so many things that have been linked to this attitude among young females.

The methods and actions necessary to manage rubbish throughout its full life cycle are covered in waste management. The most popular ways to dispose of menstrual waste are in latrines, by burning, and by burying during menstruation. These practices are frequently driven by deeply ingrained taboos and social conventions around menstruation and menstrual blood. During the menstrual cycle, it is crucial to follow good menstrual hygiene practises including cleaning your genitals thoroughly and using sanitary pads. Good menstrual hygiene practices will boost women's confidence in a variety of ways. On the other side, poor menstrual hygiene habits will make people more vulnerable to issues with reproductive health, such as vaginal infections (Prajapati, Shah & Kedia, 2015). Poor menstrual hygiene is a highly widespread problem, especially among rural female students, and is usually recognised as one of the most prevalent issues that affect teenagers. Menstruation has traditionally been seen in most communities as a ritually dirty and humiliating occurrence and in some societies, it is a traditional practice that forbids women from touching anything and forces them to live alone (in a shed) while they are menstruating (Prajapati, 2015).

These practices have been linked to rapes and other physical assaults, and they have a negative influence on women's capacity to control their periods (Sudheshna & Dasgupta, 2019). Even if it's been said that many schools don't help female instructors or teenage girls manage menstrual hygiene with respect, Menstruation management is extremely difficult in areas with inadequate water and sanitation facilities, and utilizing subpar sanitary products can result in garments becoming stained with blood, which can be stressful and embarrassing. They typically have limited control over finances for sanitary supplies or access to a private restroom even at the home level (Vidiya & Rekha, 2016). However, researchers will utilize this study as a guide to develop better ways for counselling students, providing them with high-quality information and communication, and promoting menstrual hygiene practices. The study's goal is to ascertain how female undergraduates at Lagos State University handle their periods. Gynecological problems are mostly brought on by inadequate personal hygiene and

unsanitary environments. Infections brought on by poor hygiene during menstruation are frequently reported; reusing dirty napkins repeatedly, or drying cotton napkins poorly before reuse, can retain microorganisms that cause vaginal infections (Adinma & Adinma, 2019). Hygiene significantly prevents diseases and infection and avoids undesirable odor that also enhances the confidence and quality of life of females (Sivakumar, 2016). Menstruation is a part of the female reproductive cycle that begins with adolescence. Menstruation is a usual change, and it relates to numerous malpractices and misconceptions that may contribute to adverse health consequences. Numerous women have experienced difficulties throughout menstruation, which include stomach pain, headache, joint pain, painful breasts, etc. During menstruation, hygiene is an essential part of health education in a woman's life. Different conditions such as pathology, psychology and physiology of menstruation are linked with women's health and can also lead to several diseases that can be incurable. Hence, it is a major problem regarding the mortality and morbidity of the female population (Tegegne & Sisay, 2014).

Menstrual hygiene defines a particular medical care that is needed for women's monthly menstrual cycle. During menstruation, poor hygiene maintenance can cause serious illness, which includes the urinary tract and reproductive tract infection. Infection of the reproductive tract is a silent epidemic that can affect women's lives because of the improper maintenance of menstrual hygiene. Each year nearly 10% of women are susceptible to genital infections along with bacterial vaginitis and urinary tract infections (Pokhrel, Mahantashetti, Angolkar, & Devkota, 2014; Sivakumar, 2016). Poor hygiene along with pregnancy is the risk factors for vaginal infection. The improper use of sanitary napkins can cause trouble in the menstrual areas such as sudden blood leakage and pain. Most women change absorbent material during the night, whereas a few percent of women changed their pads at midnight because of over bleeding. The number of sanitary napkins used by women depends on the menstrual flow of the person (Sivakumar, 2016). Many young girls in our nation may not have access to adequate knowledge about dysmenorrhea and menstrual hygiene, which can lead to hazardous health problems when a girl is menstruating. Based on this context, this study will critically evaluate the methods used by female undergraduate students at Lagos State University to manage their menstrual waste.

The purpose of this study includes the following:

1. To examine the relationship between disposable sanitary pads and vaginal infection during menstrual circles of Female Undergraduates at Lagos State University
2. To find out the relationship between menstrual hygiene practices and reproductive health problems among Undergraduates at Lagos State University who are female.

Research Questions

The following research questions were answered for the study:

1. Will there be any relationship between the disposable sanitary pads and vaginal infection during a menstrual circle of female undergraduates at Lagos State University?
3. Will there be any relationship between menstrual hygiene practices and reproductive health problems among Female Undergraduates at Lagos State University?

Research Hypotheses

The following hypotheses were formulated for the study:

1. There will be no significant relationship between disposable sanitary pads and vaginal infection during a menstrual circle of female undergraduates at Lagos State University?

2. There will be no significant relationship between menstrual hygiene practices and reproductive health problems among Female Undergraduates at Lagos State University.

Methodology

The descriptive survey research methodology was used in this study because the researcher believes it is conceptually valid and suitable for addressing the study's topic. The populations of the study comprise all female undergraduates from all selected faculties at Lagos State University. A mixed sampling technique was adopted. A stratified sampling technique was used in the selection of faculties in the university while a simple random technique was used to select three hundred (300) female undergraduate students in each selected faculty in Lagos State University. The research instrument used for this study was a self-developed structured modified questionnaire titled, "Menstrual Waste Management Practices Questionnaire (MWMPQ)". The research instrument consists of two sections A and B. Section A consists of the demographic information while Section B contains questions on menstrual waste management practices of female undergraduates at Lagos State University. The questionnaire used a four-point modified Likert scale with the options of strongly agreeing (SA), agreeing (A), disagreeing (D), and strongly disagreeing (SD). The replies were graded on a scale of 4, 3, 2, and 1. 4 = SA, 3 = A, 2 = D, and 1 = SD. Experts at the Department of Human Kinetics, Sports, and Health Education and Department of Public Health, College of Medicine, Lagos State University validated the instrument for content and construct validity. The test-retest reliability approach was used. The Cronbach alpha approach was used to assess the instrument's dependability. An R-value of 0.78 was found and utilised as the basis for the instrument's acceptance for data collection. Three hundred copies of the questionnaire were physically delivered by the researcher to the respondents with the assistance of three trained research assistants and gathered on the spot, with data collected lasting four (4) weeks among Lagos State University's female undergraduates, before leaving the study area and copies were examined to confirm that they were properly completed. The data acquired was analysed using descriptive statistics of frequency count and percentages for data representation, and an inferential statistic of Chi-square was employed to evaluate all stated hypotheses at the 0.05 level of significance. The data was analysed using the Statistical Package for Social Science (SPSS) version 23.

Results

Data Presentation

Table 1: Distribution of Respondents by Gender, Age and Marital Status.

Gender	Frequency	Percentage %
Male	0	0
Female	300	100.0
Total	300	100.0
Age	Frequency	Percentage %
15-20	116	38.67
21-25	78	26.0
26-30	15	45
31-35	90	30
36 years above	1	0.3
Total	300	100.0
Marital Status	Frequency	Percentage %

Single	10	3.3
Married	290	96.7
Total	300	100.0

Table 1 showed that approximately 300 (100%) of the respondents were Female while 116 (38.67%) of the respondents were between the ages of 16 and 20, 78 (26.0%) were between the ages of 21 and 25, 15 (4.5%) were between the ages of 26 and 30, 90 (30%) were between the ages of 31 and 35, and 1 (0.3%) were 6 years or older. Finally, the table revealed that 3.3% of the respondents were Single while approximately 96.7% were Married.

Testing Stated Hypotheses

Hypothesis One

According to hypothesis one, there will be no significant difference in the usage of menstrual waste material among female undergraduates at Lagos State University. The Chi-Square (X^2) test was used to test this hypothesis at the 0.05 level of significance. The outcome is shown in the table below.

Table 4: Difference in usage of menstrual waste materials among female undergraduates of Lagos State University

Menstrual Material	Observed N	Expected N	Residual	X^2	Sig
Disposable Sanitary Pad	151	75.0	76.0	104.960	0.000
Tissue Paper	55	75.0	-20.0		
Re-Useable Cloth	55	75.0	-20.0		
Tampon	39	75.0	-36.0		
Total	300				

From the result presented in Table 4 above, hypothesis 1 is consequently rejected since it cannot be noticed that a significant Chi-Square value ($=104.960$; $P<0.05$) was achieved at the 0.05 level of significance. This suggests that there was a significant difference in the use of menstrual waste materials among female undergraduates of Lagos State University.

Hypothesis Two

Hypothesis two states that there will be no significant practice of appropriate menstrual waste management among female undergraduates of Lagos State University. This hypothesis was tested using Chi-Square (X^2) at a 0.05 level of significance. The result is presented in the table below.

Table 5: Difference in usage of menstrual waste materials among female undergraduates of Lagos State University

	Observed N	Expected N	Residual	X^2	Sig
Strongly Agreed	50	75.0	-68.0	424.453	0.000
Agreed		227	75.0	-59.0	
Disagreed	16	75.0	152.0		
Strongly disagreed	7	75.0	-25.0		
Total	300				

From the result presented in Table 5 above, it can be observed that a significant Chi-Square value ($=424.253$; $P<0.05$) was discovered at a significance level of 0.05, hence the second

hypothesis is hereby rejected. This implies that there was significant practice of appropriate menstrual waste management among female undergraduates of Lagos State University.

Discussion

Hypothesis one states that there will be no significant difference in the usage of menstrual waste material among female undergraduates at Lagos State University. Suggests that there was a significant difference in the use of menstrual waste materials among female undergraduates of Lagos State University. The distribution of menstrual waste usage showed that the majority (151) of respondents use disposable sanitary pads, followed using tissue paper and reusable clothes by 55 respondents each while fewer respondents (39) use tampons as menstrual waste material. These findings showed that there was a substantial variance in the use of menstrual waste materials among female undergraduates of Lagos State University, which agrees with UNICEF's (2015) point of view that if the health and dignity needs of girls are being met with both commercial and homemade menstrual waste materials. Many countries still don't have suitable processes in place for getting rid of used menstruation products (Kaur, 2018). Most women discard their sanitary pads and other period supplies in trash cans or household solid waste since there aren't many methods for managing menstruation, which eventually contributes to the global solid waste problem. According to Dhingra (2018), there are prohibitions on washing in some areas of Africa and a taboo against burying menstruation fabric that has been stained. Before being buried or reused, clothes should first be cleaned. These unhygienic practices were also observed in most girls in Ethiopia (Erulkar et al., 2015).

Hypothesis two states that there will be no significant practice of appropriate menstrual waste management among female undergraduates of Lagos State University. This implies that there was significant practice of appropriate menstrual waste management among female undergraduates of Lagos State University. The distribution of respondents' responses showed that the majority (227) agreed to have practiced appropriate menstrual waste management followed by 50 respondents who strongly agreed, 16 respondents who disagreed and 7 respondents strongly disagreed. Additionally, the results of hypothesis two demonstrated that female undergraduates at Lagos State University significantly practised proper menstrual waste management, in contrast to UNICEF's (2015) claim that many nations across the world still do not practise proper menstrual waste management. The menstrual material was disposed of following the kind of product used, cultural norms, and disposal location. To prevent stains, odours, and infections, girls should replace their pads, toilet tissue, or anything else they use, often. During the menstrual cycle, girls should replace their napkins often, especially in the first three days (Pokhrel, Mahantashetti, Angolkar & Devkota, 2018).

Conclusion and Recommendations

Following the findings revealed by the study, the study concludes that the utilisation of menstrual waste products among Lagos State University's female undergraduate students varied significantly. Most of Lagos State University's female undergraduate students practised proper menstrual waste management. Based on the conclusion of the study.

It was recommended that:

1. Public health professional and counsellors, should counsel young girls on how to discuss menstrual issues with their mothers and health professionals
2. There is a need for serious awareness programs that will stimulate the proper menstrual waste management practices among girls to improve menstrual hygiene.
3. Mass media should also be encouraged to do more on enlightenment most especially on proper menstrual hygiene on how to decrease vaginal infections.

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