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Retaining Female Students in School: Intervention for Improving Menstrual Hygiene

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ABSTRACT

The study investigated retaining female students in school through Menstrual Hygiene Management Intervention. The study adopted an action research design that aimed to provide an intervention to the problem of frequent absenteeism in school as a result of poor menstrual hygiene management. A random sampling technique was used to select two primary schools in Malete and Elemere. Participants consisted of all female teachers and pupils in the two primary schools. Six research instruments were developed and used for the research, namely: Teachers' Knowledge Test (TKT), Pupils' Knowledge Test (PKT), Teachers' Attitude towards Menstrual Hygiene Management (TAMHM), Pupils' Attitude towards Menstrual Hygiene Management (PAMHM), Manual for Teaching Menstrual Hygiene Management (MTMHM), and School Attendance Proforma (SAP). TKT, PKT, TAMHM, and PAMHM were tested for reliability using test-retest. Five research hypotheses were formulated to guide the study and were all tested at a 0.05 level of significance. A dependent t-test was used in testing all the hypotheses. The result showed that there was a significant difference in the attitude of pupils towards menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in the attitude of teachers towards menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in pupils' knowledge of menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in teachers' knowledge of menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in pupils' school attendance before and after menstrual hygiene intervention. Based on the findings, it was recommended that government should organize sensitization and training programs for teachers, parents, and pupils across all primary schools in Nigeria on menstrual hygiene management.

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ARTICLE INFO

Article History:
Submitted/Received 21 Feb 2023
First Revised 20 Apr 2023
Accepted 14 Jun 2023
First Available online 15 Jun 2023
Publication Date 01 Mar 2024

Keyword:
Female student,
Girl child,
Intervention,
Menstrual hygiene,
School attendance.

1. INTRODUCTION

There has recently been a great deal of research in the field of girls' education in Nigeria. Such studies aimed at improving girls' education in the nation because despite all efforts put in place to improve the education of Nigerian children by successive governments, international and national agencies, and funders, many Nigerian girls are often absent in school to the extent that they don't make anything out of schooling education (Boosey *et al*., 2014).

It has also been revealed that Nigeria not only has the largest number of out-of-school children in the world but that 60% of the 10.5 million children out of school are girls. Many factors that contribute to Nigerian girls' frequent absenteeism have been identified including poor menstrual hygiene management. This issue has not been given attention by the policymakers and other stakeholders of education, this could be because those research works linking poor menstrual hygiene management and girls' absenteeism appear not to provide a solution to the identified problem. This has informed this research project.

The girl-child when approaching menarche, though a natural biological process, is not educated on how to handle this phenomenon by both parents and teachers in Nigeria. There has been a great deal of secrecy surrounding menstruation as a result of religious beliefs, myths, and speculations.

These conceptions have quietly affected the attitude of educators, researchers, policymakers, and stakeholders so much that people shy away from the issue of menstruation during discussions that are meant to improve girls' education in Nigeria. However, the United Nations human rights council, on the 28th of September 2018 has, in her resolution, urged all countries to take decisive actions to ensure that women and girls have universal access to information, products, and facilities needed for menstrual hygiene.

Menstrual Hygiene Management (MHM) and school attendance are closely interconnected issues that have gained significant attention in recent years. The lack of proper menstrual hygiene management can often lead to increased absenteeism among girls, impacting their education and overall well-being. Obafemi (2015) asserted that regular attendance in school is important for children's future.

Research studies (McMahon *et al*., 2011; Mason *et al*., 2013; Hennegan *et al*., 2019) have consistently highlighted the impact of menstrual hygiene on school attendance. To address the issue of menstrual hygiene and school attendance, it is essential to implement comprehensive and sustainable interventions that can help to promote better menstrual health, girls' attendance, and uninterrupted education. For example, in 2015, United Nations Children's Emergency Fund (UNICEF) in conjunction with Emory University conducted the only MHM research that has national coverage.

Findings from this 14-country research revealed many challenges that Nigerian secondary school girls faced when they had to be in school during their menstrual periods. Many of them had to stay out of school for the entire menstrual period every month because they could not afford to buy disposable sanitary towels which, according to them, were more absorbent than the clothes they used. One recommendation made from the 14-country UNICEF/Emory University research in 2015 was that special teachers be trained to teach students about menstrual hygiene management.

Giving attention to this recommendation becomes necessary in the Nigerian context because the curriculum content for teacher preparation in the different teacher training institutions in Nigeria does not include the areas of menstrual hygiene management, puberty,

DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

and sexuality education. This makes it necessary to provide professional development for teachers through in-service training that will focus on this area.

This will ensure that teachers are adequately equipped with the knowledge and skills needed to teach and manage puberty, menstruation, and sexuality education classes. It will equip the girls (and even boys) with the needed knowledge for MHM in schools. Another recommendation was that girls should be trained on how to make reusable sanitary towels. this also becomes very important in Nigeria because some research findings in this area revealed that many Nigerian girls particularly those in rural communities avoid going to school monthly during their menstrual flow because they cannot afford to buy disposable sanitary towels which according to them, are more absorbent than the cloths they use.

There is therefore a need to equip teachers working with the girls with the skills of how to improvise sanitary towels that will meet the needs of the girls using local materials. This intervention program, therefore, will aim at exposing teachers to the methods of teaching puberty, menstruation, and sexuality education as well as training them on how to make reusable sanitary towels using local and affordable materials in the two rural communities in Kwara State Nigeria.

Girls in rural communities are chosen for this action research because they are highly vulnerable due to poverty, ignorance, and the level of education of their parents. Many of them have non-literate parents who are mainly peasant farmers or petty traders who cannot afford to buy them sanitary towels or give adequate information on menstruation or menstrual hygiene. And this is the research gap the study intended to fill.

Nigeria had the largest number of out-of-school and absent children globally, with 60% of them being girls. Poor menstrual hygiene management was identified as one of the factors that contributed to girls' frequent absenteeism. Therefore, it was crucial to implement a comprehensive intervention that addressed menstrual hygiene and improved school attendance.

The action research project aimed to equip female teachers and pupils in two rural communities in Kwara State, Nigeria, with the knowledge and skills to teach puberty, menstruation, and sexuality education. They were also trained to create reusable sanitary towels using locally available materials, addressing the existing research gap.

Hypotheses are the following:

(i) Ho1: There is no significant difference in the attitude of pupils towards menstrual hygiene before and after menstrual hygiene intervention
(ii) Ho2: There is no significant difference in the attitude of teachers towards menstrual hygiene before and after menstrual hygiene intervention
(iii) Ho3: There is no significant difference in pupils' knowledge of menstrual hygiene before and after menstrual hygiene intervention
(iv) Ho4: There is no significant difference in teachers' knowledge of menstrual hygiene before and after menstrual hygiene intervention
(v) Ho5: There is no significant difference in pupils' school attendance before and after menstrual hygiene intervention.

2. METHODS

The study adopted an action research design that aimed to provide an intervention to the problem of frequent absenteeism in school as a result of poor menstrual hygiene management. A random sampling technique was used to select two primary schools in Malete and Elemere. Participants consisted of all female teachers and pupils in the two primary

DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

schools. It was deemed necessary for all female teachers to be well-equipped to teach and work with the girls to ensure that the girls they worked with continuously benefited from the training program.

Six research instruments were developed and used for the research, namely: Teachers' Knowledge Test (TKT), Pupils' Knowledge Test (PKT), Teachers' Attitude towards Menstrual Hygiene Management (TAMHM), Pupils' Attitude towards Menstrual Hygiene Management (PAMHM), Manual for Teaching Menstrual Hygiene Management (MTMHM), and School Attendance Proforma (SAP). All the instruments were validated. TKT, PKT, TAMHM, and PAMHM were tested for reliability using test-retest, and the reliability coefficients were 0.74, 0.71, 0.76, and 0.79, respectively. The first intervention was a three-week training workshop for female primary school teachers in Malete and Elemere.

The intervention included orientation on puberty, menstruation, and sexuality education, as well as training the primary school teachers on how to improvise reusable absorbent sanitary towels using local materials. TKT and TAMHM were administered to the female teachers before and after the intervention.

The second intervention involved the teachers teaching pupils about puberty, menstruation, and sexuality education, as well as training the girls on how to improvise reusable sanitary towels from local materials. The training included hands-on activities, discussions, questions, and answers. PKT and PAMHM were also administered to pupils before and after the intervention. The school attendance profile of the female pupils was recorded using SAP both before and after the intervention. All data from the female teachers and pupils were.

3. RESULTS AND DISCUSSION

3.1. Ho1: There is no Significant Difference in the Attitude of Pupils Towards Menstrual Hygiene Before and After Menstrual Hygiene Intervention

Table 1 shows the difference in the attitude of pupils towards menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in the attitude of pupils towards menstrual hygiene before and after menstrual hygiene intervention ($t = -22.702$; $df = =119$; $p< 0.05$). The hypothesis is therefore rejected in light of the result since the significant value is less than 0.05. The attitude of the pupils after the intervention (Mean = 32.61) was better than their attitude before the intervention (Mean = 17.16).

This implies that the intervention had a significant effect on the attitude of pupils towards menstrual hygiene. This could be a result of the content of the intervention that has to do with educating the pupils on menstrual hygiene management. This finding is in line with the report of Yadav *et al*. (2018).

Table 1. Table showing the difference in the attitude of pupils towards menstrual hygiene before and after menstrual hygiene intervention.

Variable	n	Mean	Std.D	t	df	Sig.	Remark
Pupils' Attitude Before	120	17.16	4.80	-22.702	119	0.000	Significant
After	120	32.61	8.11				

DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

3.2. Ho2: There is No Significant Difference in The Attitude of Teachers Towards Menstrual Hygiene Before and After Menstrual Hygiene Intervention

Table 2 shows the difference in the attitude of teachers towards menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in the attitude of teachers towards menstrual hygiene before and after menstrual hygiene intervention ($t = -16.004$; $df = =59$; $p < 0.05$). The hypothesis is therefore rejected in light of the result since the significant value is less than 0.05. The attitude of the teachers after the intervention (Mean = 31.82) was better than their attitude before the intervention (Mean = 16.73).

This implies that the intervention had a significant effect on the attitude of teachers towards menstrual hygiene. There was a significant difference in the attitude of teachers towards menstrual hygiene before and after menstrual hygiene intervention.

The significant difference in the attitude of teachers towards menstrual hygiene could be a result of the content of the intervention given to the teachers that have to do with educating them on the menstrual hygiene management of pupils. This finding is in line with the report of Yadav *et al*. (2018).

Table 2. Table showing the difference in the attitude of teachers towards menstrual hygiene before and after menstrual hygiene intervention.

Variable	n	Mean	Std.D	t	df	Sig.	Remark
Teachers' Attitude							
Before	60	16.73	4.61	-16.004	59	0.000	Significant
After	60	31.82	7.95				

3.3. Ho3: There is no Significant Difference In Pupils' Knowledge of Menstrual Hygiene Before and After Menstrual Hygiene Intervention

Table 3 shows the difference in pupils' knowledge of menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in pupils' knowledge of menstrual hygiene before and after menstrual hygiene intervention ($t = -75.65$; $df = 119$; $p < 0.05$). The hypothesis is therefore rejected in light of the result since the significant value is less than 0.05.

The pupils' knowledge of menstrual hygiene after the intervention (Mean = 57.75) was better than their knowledge before the intervention (Mean = 23.25). This implies that the intervention had a significant effect on pupils' knowledge of menstrual hygiene. The findings were in tandem with the finding of Aluko *et al*. (2014) who investigated the knowledge and menstrual hygiene practice among adolescents in senior secondary schools in Ile-Ife, South Western Nigeria. The finding also corroborated the research report of Aniebue *et al*. (2009).

Table 3. Table showing the difference in pupils' knowledge of menstrual hygiene before and after menstrual hygiene intervention.

Variable	n	Mean	Std.D	t	df	Sig.	Remark
Pupils' Knowledge							
Before	120	23.25	10.86	-75.65	119	0.000	Significant
After	120	57.75	15.47				

DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

3.4. Ho4: There is No Significant Difference in Teachers' Knowledge of Menstrual Hygiene Before and After Menstrual Hygiene Intervention

Table 4 shows the difference in teachers' knowledge of menstrual hygiene before and after menstrual hygiene intervention. There was a significant difference in teachers' knowledge of menstrual hygiene before and after menstrual hygiene intervention ($t = -9.54$; $df = 59$; $p < 0.05$). The hypothesis is therefore rejected in light of the result since the significant value is less than 0.05.

The teachers' knowledge of menstrual hygiene after the intervention (Mean = 66.17) was better than their knowledge before the intervention (Mean = 35.00). This implies that the intervention had a significant effect on teachers' knowledge of menstrual hygiene. The significant difference in the knowledge of teachers towards menstrual hygiene could be a result of the content of the intervention given to the teachers that has to do with educating them on the menstrual hygiene management of pupils. This finding corroborated the findings of Aluko *et al*. (2014) and Aniebue *et al*. (2009).

Table 4. Table showing the difference in teachers' knowledge of menstrual hygiene before and after menstrual hygiene intervention.

Variable	n	Mean	Std.D	t	df	Sig.	Remark
Teachers' Knowledge							
Before	60	35.00	17.22	-9.54	59	0.000	Significant
After	60	66.17	20.59				

3.5. Ho5: There is No Significant Difference In Pupils' School Attendance Before and After Menstrual Hygiene Intervention

Table 5 shows the difference in pupils' school attendance before and after menstrual hygiene intervention. There was a significant difference in pupils' school attendance before and after menstrual hygiene intervention ($t = -47.998$; $df = 119$; $p< 0.05$). The hypothesis is therefore rejected in light of the result since the significant value is less than 0.05. The pupils' school attendance after the intervention (Mean = 96.13) was better than their school attendance before the intervention (Mean = 75.80). This implies that the invention had a significant effect on pupils' school attendance.

The significant difference observed in pupils' attendance before and after menstrual hygiene intervention could be a result of the training and sensitization given to the pupils on menstrual hygiene management. It has also been revealed that Nigeria not only has the largest number of out-of-school children in the world but that 60% of the 10.5 million children out of school are girls.

Many factors that contribute to Nigerian girls' frequent absenteeism and girls dropping out of school have been identified. These include a lack of female teachers, particularly in the north, fragmented families and broken relationships, and lack of guidance as well as becoming a parent (Benard *et al*., 2016), however, one major reason girls drop out of schools and probably become mothers early is menstrual hygiene management.

DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

Table 5. Table showing the difference in pupils' school attendance before and after menstrual hygiene intervention.

Variable	n	Mean	Std.D	t	df	Sig.	Remark
Pupils' Attendance							
Before	120	75.80	12.20	-47.998	119	0.000	Significant
After	120	96.13	10.41				

4. CONCLUSION

Based on the findings of the study, it was concluded that the menstrual hygiene intervention contributed to the improvement of female teachers' and pupils' knowledge of menstrual hygiene management, attitude, and female pupils' school attendance.

(i) Based on the findings of this study, the following recommendations were made:
(ii) Government should organize sensitization and training programs for teachers and pupils on menstrual hygiene management across all primary schools in Nigeria.
(iii) Teachers should teach menstrual hygiene management to pupils in primary schools in Nigeria.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

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DOI:
p- ISSN 2828-3287 e- ISSN 2828-3295

View publication stats