



## Knowledge of menstrual hygiene among the in-school adolescent girls in Oji River Local Government Area, Enugu State, Nigeria

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### Abstract

*Menstrual hygiene is highly vital to women; however, adolescent girls who may not have had prior information before menarche, or who have not been educated always face a difficult situation. This study examined the knowledge of menstrual hygiene among the in-school adolescent girls in Oji River LGA. The data was obtained using a questionnaire survey. The statistical techniques employed to analyze the data was descriptive statistics, such as simple percentages and frequency tables. Evidently, the study shows that a good number of students have knowledge of menstrual hygiene in the study area. In addition, the study reveals that mothers play a good role in educating their girls about menstrual hygiene. Based on the findings, the study recommends that: girls should be educated about menstrual hygiene prior to their puberty, however, this should continue throughout their adolescent years; mothers of adolescent girls should be an integral part of all programs on menstrual hygiene; more sensitization programs on menstrual hygiene are needed by the government and non-governmental organizations, among others.*

**Keywords:** Menstrual Hygiene, In-School, Adolescent Girls, Knowledge, Management

### Introduction

According to the United Nations Children Fund (UNICEF, 2019), good menstrual hygiene management is defined as access to necessary resources, such as menstrual materials to absorb or collect menstrual blood effectively, soap and water, facilities, a private place to wash, change and dry re-usable menstrual materials from collection point to final disposal point and education about menstrual management for males and females. Menstruation, on the other hand, is seen as a part of the female reproductive cycle by the American College of Obstetricians and Gynecologists (2015), which begins when girls reach sexual maturity during puberty.

In a research of 148 adolescent girls, Ezra, Aloyce, Mayo, and Kimwaga (2014) discovered that mothers are the main source of information on menstruation for adolescent girls, which is



consistent with results published in Wardha district and south India, respectively. In their research in Pakistan, Ali and Rizvi (2009) found that among females with some prior knowledge of menstrual hygiene management, the majority learned it mostly from their elder sisters. Sisters, followed by friends and teachers, were the second most common sources of information on menstrual hygiene management in this study. Unfortunately, advice about menstrual hygiene management provided by mothers, sisters, and friends is often limited and wrong, based on cultural misconceptions, personal experiences, and viewpoints, which can lead to mistaken perceptions and harmful menstrual habits.

The majority of adolescent girls are unaware of the scientific facts about menstruation and proper hygiene practices (Belayneh & Mekuriaw, 2019). According to a study conducted in West Bengal with 160 respondents, the majority of girls did not fully comprehend the physical process of menstruation, and thus were unprepared for their first period (Dasgupta & Sarkar, 2008). In a study conducted by Dhingra and Kumar (2009), it was discovered that adolescent girls have a poor understanding of menstrual hygiene, with the common view being that menstruation involves the evacuation of harmful blood from the body, which is required to avoid diseases. From these studies, it can be determined that formal reproductive health education is quite limited among girls in school.

Furthermore, Shanbhag, Shilpa, D'Souza, Josephine, Singh, and Goud (2012) discovered that schoolgirls have insufficient knowledge of the menstruation process. The majority of the girls in the study had heard of menstruation but had no understanding of how it works (Shanbhag et al, 2012).

These studies have undoubtedly contributed to a better understanding of menstrual hygiene knowledge and management. However, to the authors' knowledge, there are few, if any, published studies that look at the knowledge of menstrual hygiene among the in-school adolescent girls in Oji River LGA. As a result, this study's findings can provide some references and valuable information for similar scholars, and can help to better educate the female students about menstrual hygiene management.

## **Materials and Methods**

### **Study Area**



The study area is Oji River Local Government Area in Enugu State, Nigeria. Inyi, Achi, Awlaw, Akpugoeze, and Ugwuoba are the towns that make up the Oji River Local Government Area. Urban Secondary School, Oji River, Girls Secondary School, Inyi, Girls Secondary School, Ugwuobia, Awlaw High School, Awlaw, Anglican Girls Secondary School, Achi, and Model Comprehensive Boys Secondary School, Inyi are some of the Secondary Schools in Oji River Local Government Area. Police College, one of four national sites for the recruitment and training of police cadets, is located in Oji River. Other security personnel, such as immigration officers, do receive training at the college. Federal Cooperative College, Oji River, Enugu State College of Health Technology, Oji River, and the Federal Medium Security Prisons, Oji River are all located in the town.

### **Method of Data Collection**

#### ***Population of the Study***

According to Enugu State School Census 2010, the population of in-school adolescent girls in Oji-River is 2730. The inclusion criteria for the study population consisted of the following: girls aged 11 to 22, who have attained menarche. The study participants were from two secondary schools in Oji-River Local Government which were randomly selected for the study. The exclusion criteria for the study population were girls who had not reached menarche, were out of school or were pregnant or had given birth. The study units were secondary schools in the local government area. (Both private and public)

#### ***Sample Size***

The sample size for this study was 270 in-school adolescent girls who have attained menarche resident in Oji River L.G.A. This sample size is statically determined using the Fisher's (1977) formula. This is because the study population is not up to 10,000. The formula is given as follows:

$$n = \frac{n}{1 + (n/N)}$$

Where

n = Sample size



$n =$  The desired sample size = 300

$N =$  The estimated population = 2730

$$nf = \frac{300}{1 + 300/2730}$$

$$1 + 300/2730$$

$$nf = \frac{300}{1 + 0.1099}$$

$$1 + 0.1099$$

$$nf = \frac{300}{1.1099}$$

$$1.1099$$

$$nf = 270.29462$$

$nf = 270$  (to the nearest 10<sup>th</sup>)

The sample size is considered large enough to accommodate the statistical techniques to be employed for the data analysis.

### **Sampling Technique**

The sampling technique employed in this study was the Multi stage sampling technique which is combined with systematic simple random sampling technique. This was to ensure that every in-school adolescent girl had equal opportunity of being selected. The process ensured the fair representation of schools (private and public) as well as adolescents in junior and secondary levels of their secondary education. In the first stage of sampling, secondary schools in Oji-River LGA were clustered into two groups. These are public secondary schools and private secondary schools. From the two clusters, one secondary school each was randomly selected. Stage two of the sampling process involved selection of respondents from JSS1-SS3 in each school through systematic random sampling process. The class register was used for the process. Altogether, 135 students were sampled per school to aggregately make up our sample size of 270.

Accordingly, all respondents for the qualitative tool were purposively drawn. They include one junior and one senior secondary school student per school for in-depth interview (IDI) Principals of the two schools were exposed to in-depth interview. There were two sessions of



focus group discussion per school segmented along junior and senior classes/girls. There were 8 participants in each session, all of whom were purposively chosen using yardsticks like prefects and class performance and have reached menarche to ensure their ability to communicate.

### **Instruments of Data Collection**

Three instruments were employed for data collection. They include structured questionnaire designed by the researcher, tagged “Knowledge and Practices of Menstrual Hygiene Measurement. The questionnaire is divided into two sections A and B. Section A addresses demographic or respondents’ bio-data such as age, sex, educational qualification etc. Section B deals with the substantive issues of the study. Focus Group Discussion and In-depth interview were also used.

### **Administration of Instruments**

In conducting the research proper, the researcher trained two research assistants on the objectives of the study and the ethics of research. The questionnaire was self-administered by the researcher and two research assistants. The second instrument which is in depth interview schedule which was administered on one junior and one senior secondary student per school as well as the principal of each school. During interview, one of the two research assistants helped in writing down verbal and non verbal responses while the other was in charge of the tape recorder. The third instrument is a focus group discussion (FGD) guide, administered on two groups of students (junior and secondary to ascertain their menstrual hygiene practices. It was conducted in the place of convenience in the school premises chosen by the respondents)

### **Method of Data Analysis**

The data collected were analyzed using the simple percentages and frequency tables. Generally, the Statistical Package for social Sciences (SPSS) was used to process the data. The qualitative data were first transcribed and analysed in line with themes of the study.

### **Result and Discussion**

Two hundred and sixty five (265) questionnaires out of two hundred and seventy (270) were validly filled and completed for the analysis. The qualitative data collected through FGDs and In-Depth Interviews were used to complement the study.

**Table 1: Personal Data of Respondents**

<b>Variable</b>	<b>Response</b>	<b>Frequency</b>	<b>Percent%</b>
<b>Distribution Of Respondents By Age</b>	11-14	128	48.3
	15-22	137	51.7
	Total	265	100
<b>Distribution Of Respondents By Class Level</b>	Junior Secondary	91	34.3
	Senior Secondary	174	65.7
	Total	265	100
<b>Distribution Of Respondents By Mother's Educational Status</b>	Primary	30	11.3
	Secondary	111	41.9
	Tertiary	94	35.5
	No Formal Education	30	11.3
	Total	265	100
<b>Distribution Of Respondents By Mothers Occupation</b>	Farming	48	18.1
	Civil Servant	95	35.8
	Business/Trading	116	43.8
	Full Time Housewife	6	2.3
	Total	265	100
<b>Distribution Of Respondents By Ethnic Affiliation</b>	Igbo	252	95.1
	Hausa/Fulani	4	1.5
	Yoruba	3	1.1
	Others	6	2.3
	Total	265	100
<b>Distribution Of Respondents By Religious Affiliation</b>	Christianity	259	97.7
	Islam	5	1.9
	ATR	2	4
	Total	265	100
<b>Distribution Of Respondents By Parents Socio-Economic Class</b>	Low	31	11.7
	Medium	132	49.8
	Upper	102	38.5
	Total	265	100

**Source: Author's compilation from field survey, 2017**

Table 1 shows the frequency distribution of the respondents by age, class level, mothers' educational status, mothers' occupation, ethnic affiliation, religious affiliation and parents' Socio-Economic Status. From the Table, it was indicated that 48.3% of the respondents were within the age of 11-14 years, 50.6% were the age of 15-18 years while 1.1% of the respondents within the age bracket of 19-22. The mean age of the study respondents is 14.48. The table 1 above also shows that 34.3% of the respondents were in Junior Secondary (JSS) while 65.7% were from the Senior Secondary (S.S.S). AS previously noted, this indicates that respondents were drawn from both Junior and Senior Secondary classes. Again, the table shows that 11.3% of the respondent's mothers have first school leaving certificate, 41.9% have SSCE, 35.5%



attended tertiary institutions and 11.3% had no certificate at all. More so, the table shows that 18% of the parents were farmers, 35.8%, 43.8% were civil servants and 6 2.3% were fulltime housewives. Furthermore, the table indicates that 95.1% of the respondents were Igbo, 1.5% were Hausa/Fulani, 1.1% were Yoruba and 2.3% were from other minority tribes. This indicates that Oji- River located in South East Nigeria is Igbo dominated. The table also clearly shows that 97.7% of the respondents were Christians, 1.9% were Islam and 0.4% of the respondents practiced African Traditional Religion (ATR). This can be because the study area is mostly dominated by Igbos, who is most of the time Christians. And finally, the table shows that 11.7% of the respondent’s parents’ socio- economic status were low income earners, 49.8% were medium income earners and 38.5% were from upper class income earners.

**Table 2: Distribution of respondents by their opinion on whether menstruation is a disease**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
<b>Yes</b>	26	9.8
<b>No</b>	239	90.2
<b>Total</b>	<b>265</b>	<b>100.0</b>

Source: Authors’ compilation from field survey, 2017

The analysis in table 2 above also shows that 239 representing 90.2% said no that menstruation is not a disease while 26 representing 9.8% said that menstruation is a disease. This also shows a high level of knowledge among the respondents.

**Table 3: Distribution of respondents by their view on whether pregnant women menstruate**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
<b>Yes</b>	32	12.1
<b>No</b>	233	87.9
<b>Total</b>	<b>265</b>	<b>100.0</b>

Source: Authors’ compilation from field survey, 2017



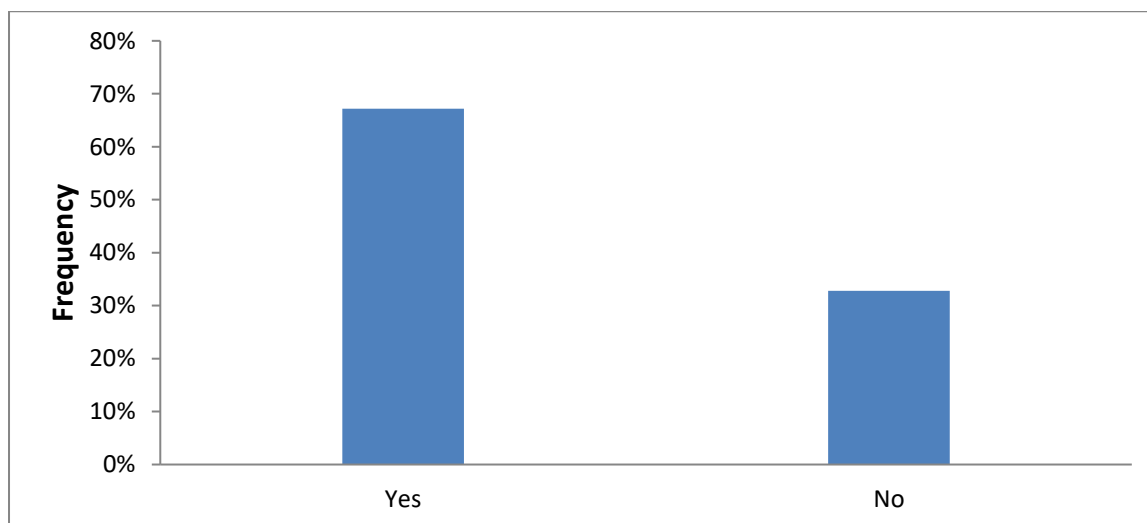
Table 3, which asked whether pregnant women menstruate, the result reveals majority of the respondents. 87.9% said no that pregnant women do not menstruate while 12.1% said that pregnant women menstruate. This equally revealed a high level of knowledge among the respondents.

**Table 4: Distribution of respondents by their opinion on whether menstrual blood comes from the stomach**

Responses	Frequency	Percent
Yes	70	26.4
No	195	73.6
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

In table 4, when asked whether menstrual blood comes from stomach, 73.6% said no that menstrual blood does not come from the stomach while 26.4 answered yes that menstrual blood comes from the stomach. By the majority of the respondents answering no indicates a high level of knowledge of menstrual hygiene among the respondents.



**Figure 1: Respondents views on whether menstrual blood comes from the womb.**





From the figure 1, the findings revealed that 67.2% said that menstrual blood comes from the womb while 32.8% said that it does not come from the womb. This also shows a very high knowledge about menstruation.

**Table 5: Distribution of respondents by their opinion on whether menstrual blood contain dangerous substances**

Responses	Frequency	Percent
Yes	115	43.4
No	150	56.6
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table 5 shows that 43.4% said that menstrual blood contains dangerous substances while 56.6% said no that it does not contain dangerous substances. By majority of the respondents answering no, shows that majority of the respondents have a good knowledge of menstrual hygiene.

**Table 6: Distribution of respondents by their view on whether menstrual pain during menstruation means the individual is sick**

Responses	Frequency	Percent
Yes	65	24.5
No	200	75.5
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

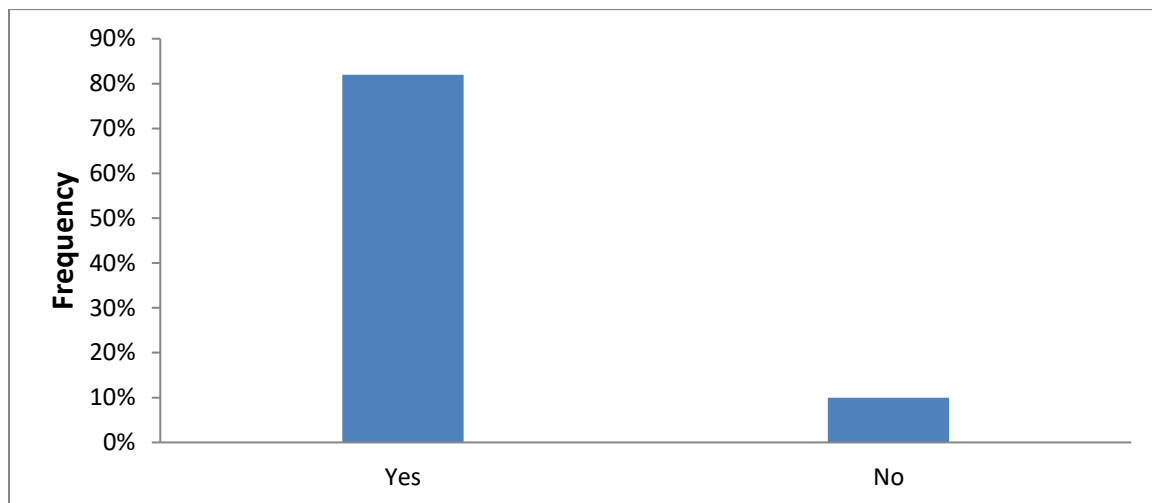
Table 6 when asked whether menstrual pain is a disease 75.5% of the respondents said that pain during menstruation is not a disease while the remaining 24.5% said that pain during menstruation is a sign of disease. By majority of the respondents answering that menstrual pain is not a disease indicates also a very high knowledge of menstrual hygiene among the respondents.

**Table 7: Distribution of respondents by their opinion on whether it is harmful for a woman's body if she runs or dances during her period.**

Responses	Frequency	Percent
Yes	108	40.8
No	157	59.2
<b>Total</b>	<b>265</b>	<b>100.0</b>

Source: Authors' compilation from field survey, 2017

Table 7 revealed that 59.2%, girls said no that it is not harmful for a woman's body if she runs or dances during menstruation. The answer revealed a high level knowledge of menstrual hygiene.



**Figure 2: Respondents views on whether women stop menstruating at old age.**

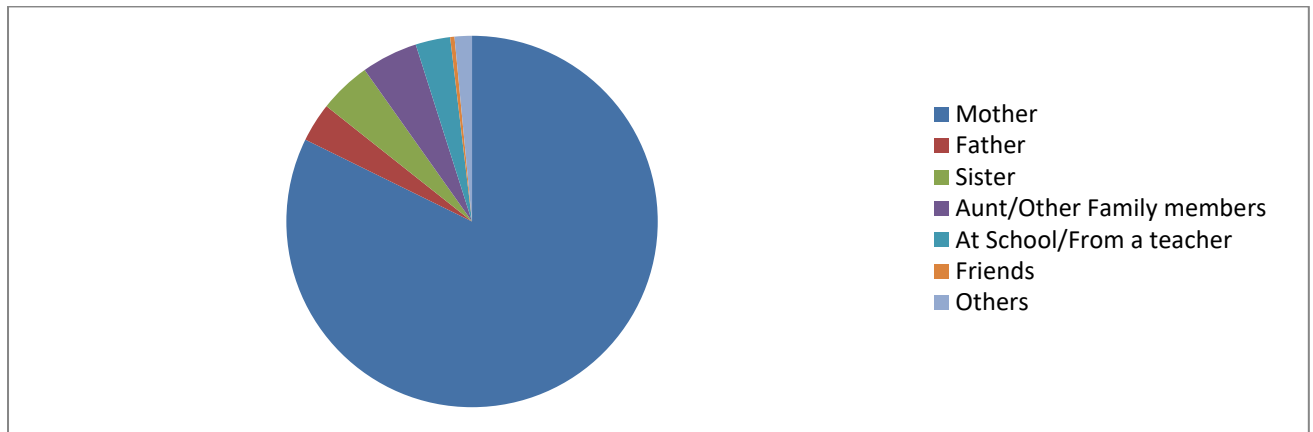
Figure 2 shows the level of knowledge on menstrual hygiene management, when asked whether women stop menstruating when they grow very old, 89.2% said yes that women stop menstruating when they grow old and 10.9% said no that women do not stop menstruating when they become very old. This shows a high level of knowledge about menstrual hygiene practices among the respondents.

**Table 8: Distribution of respondents by their opinion about whether they have learnt about menstruation from anyone before menarche**

Reponses	Frequency	Percent
Yes	241	90.9
No	24	9.1
<b>Total</b>	<b>265</b>	<b>100.0</b>

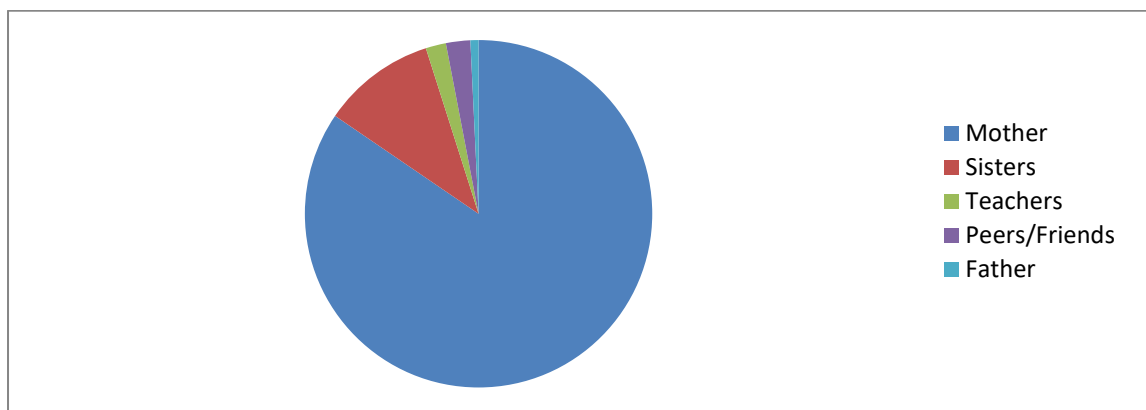
Source: Authors’ compilation from field survey, 2017

Table 8 addressed prior knowledge of menstrual hygiene before menarche. The table revealed that 90.9% of the respondents were taught about menstruation prior to menstruation. While 9.1% said they were not informed about the issue. The result of this table signifies that a greater percentage of the respondents were taught about menstruation prior to menarche.



**Figure 3: Respondents views on whom they learnt most about menstruation from.**

Figure 3 addressed the sources of menstrual hygiene management, it revealed that 82.3% said they learnt from their mother, 3.4% learnt from their father, 4.5% learnt from their sisters, 4.9% learnt from other members of the family, 3.0% learnt from teachers in the school, .4% learnt from friends and 1.5% learnt from other people. This is because menstruation is still regarded as male thing. Findings from this figure revealed that mothers are the major source of knowledge on menstrual hygiene management.



**Figure 4: Respondents views on whom they meet over their menstrual hygiene issue?**

Figure 4 above addressed the person usually consulted on menstrual hygiene issues. 84.5% said mother, 10.6 sisters, 1.9% teachers, 2.3% said friends and only .8% said father. Findings from this table also revealed that mothers are usually the persons confided in over menstrual hygiene issues.

**Table 9: Distribution of respondents by their view on whether there are functional toilets provided in the schools for dealing with menstrual flow**

Responses	Frequency	Percent
<b>Yes</b>	207	78.1
<b>No</b>	58	21.9
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table 9 shows the availability of functional toilets in the school for menstrual hygiene management in schools. 78.1% of the respondents said that there is functional toilet in the school while 21.9% said that there are no functional toilets for dealing with menstrual hygiene. Findings from this table revealed that there are no sufficient toilets in the school for dealing with menstrual flow.

Contrary to the above answer, an FGD participant from the government school revealed that the school has no functional toilets for the students; however, the available toilets in the school are for the teachers. She also noted that the female students make use of the surrounding bushes, most of the time in company of their female friends.



**Table 10: Distribution of respondents by their view on the toilet condition in their school**

Responses	Frequency	Percent
<b>Clean</b>	169	63.8
<b>Fairly clean</b>	44	16.6
<b>Dirty</b>	36	13.6
<b>Others</b>	16	6.0
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

In table 10, 63.8% said that the toilet conditions in the school are neat 16.6% said the toilets are fairly clean, 36 (13.6%) said the toilets are dirty, and 6.0% said others.

**Table 11: Distribution of respondents by their view on whether there is enough water in the school for washing**

Responses	Frequency	Percent
<b>No</b>	47	17.7
<b>Yes</b>	160	60.4
<b>Not always</b>	58	21.9
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table 11 dealt with availability of clean water in the school, 17.7% said no, that there is no sufficient water in the school, 60.4% said yes that there is sufficient water in the school. 21.9% said that they don't have constant water supply. Findings revealed that there is sufficient water supply in the school.

**Table 12: Distribution of respondents by their view on where they dispose off their absorbent material while in school**

Responses	Frequency	Percent
<b>Bin</b>	57	21.5
<b>Toilet latrine</b>	44	16.6
<b>Dumping site</b>	38	14.3
<b>Take them home to dispose</b>	126	47.5
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table12, which talked about method of disposal, 21.5% said they dispose in the waste bin, 16.6% said toilet latrines, 14.3% said dumping site. And 47.5% take them home for proper

disposal. The findings revealed that majority of the respondents take their absorbents home for proper disposal.

**Table 13: Distribution of respondents by their opinion on whether there are menstrual hygiene counseling arrangements in the school**

Responses	Frequency	Percent
<b>Yes</b>	139	52.5
<b>No</b>	126	47.5
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table 13 dealt with counseling sessions for menstrual hygiene management. 52.5% said yes that there is counseling session while 47.5% said there are no counseling sessions in the schools. Reacting to this an FGD respondent from the government school that the school does not have counseling provision for menstrual hygiene management, however producers and marketers of menstrual absorbents do come around in their school to educate them on proper menstrual hygiene management.

**Table 14: Distribution of respondents by their opinion on the effectiveness of the counseling sessions**

Responses	Frequency	Percent
<b>Strongly agree</b>	143	54.0
<b>Agree</b>	74	27.9
<b>Disagree</b>	30	11.3
<b>Strongly disagree</b>	18	6.8
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table 14 54.0%strongly agree that counseling sessions have been effective, 27.9% agree while 11.3% and 6.8% disagree and strongly disagree respectively.

Findings from the table above revealed that majority of the respondents strongly agreed that the counseling giving to them has been effective.

**Table 15: Distribution of respondents by provision of sanitary towels in school.**



Responses	Frequency	Percent
<b>Yes</b>	62	23.4
<b>No</b>	203	76.6
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors’ compilation from field survey, 2017**

Table 15, 23% said that school provides sanitary pads for the girls while 76.6% said no that school does not provide pads for the menstruating girls. Confirming this point, the principal of the private school during key informant interview said the school provides toilet and water but their parents see to their welfare like pad and other things during menstruation.

**Table 16: Distribution of respondents by their opinion on whether they attend school during menstruation**

Responses	Frequency	Percent
<b>Never</b>	26	9.8
<b>Sometime</b>	46	17.4
<b>Always</b>	193	72.8
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors’ compilation from field survey, 2017**

From Table 16 above, 9.8% does not attend school during menstruation, 17.45 attends sometimes, 72.8% attend school always during their menstruation. An FGD participant in the government secondary school noted that it is possible for girls to miss school when menstruating; some of them that cannot afford menstrual pad tend to stay in their homes because they are afraid of being disgraced as a result of the absorbent they are using, and the discomfort associated with using rags and they are afraid of staining their uniforms when having heavy flow. Another FGD participant from the school also said that painful menstruation can also make someone miss school. She said a lot of them miss school when having their heavy flow.



**Table 17: Distribution of respondents by their assessment of provisions of material and facilities for menstrual hygiene**

Responses	Frequency	Percent
<b>Adequate</b>	128	48.3
<b>Fairly adequate</b>	64	24.2
<b>Inadequate</b>	58	21.9
<b>Grossly inadequate</b>	15	5.7
<b>Total</b>	<b>265</b>	<b>100.0</b>

**Source: Authors' compilation from field survey, 2017**

Table 17 captured the students' assessment of facilities and material for menstrual hygiene management. 48.3% said the facilities are adequate, 24.2% said fairly adequate, 21.9% said inadequate and 15 5.7% said grossly inadequate. Findings from the above table revealed that majority of the respondents assessed the available facilities as adequate.

## **CONCLUSION AND RECOMMENDATION**

The study apparently shows that a good number of students have knowledge of menstrual hygiene in the study area. This is evident from the high percentages recorded in the results. However, some of the students have poor knowledge of menstrual hygiene. Based on the findings, the study proposes the following recommendations:

1. There is a need for education on menstrual hygiene at an early age before girls reach puberty or menarche, and this should continue throughout their adolescent age.
2. Mothers of adolescent girls should be an integral part of all programs on menstrual hygiene.
3. More sensitization programs about menstrual hygiene are needed by the government and non-governmental organizations.
4. Schools should ensure that the female students are always educated and properly guided about menstrual hygiene.





5. Facilities and materials needed for menstrual hygiene management should be provided in schools.

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