

Knowledge, Attitudes and Practices of Menstrual Hygiene Management of Female Students in Bokkos Local Government Area of Plateau State; Nigeria

KAJANG Y. GORAH, ELIZABETH A. HARUNA, JANDA J. UFWIL
University of Jos, Nigeria

Abstract. The study was carried out to help find the evaluation of the knowledge, attitudes and practices of female students towards menstrual hygiene management in Bokkos local Government area of plateau state. The survey research design was used for the study. It is estimated that the number of children in the area of the study that are females are close to 3,000 out of this total, a sample size of 325 was used for the study. A structured questionnaire of six sections was used to illicit information on their level of knowledge, attitudes of female students towards menstrual hygiene, menstrual hygiene practices among female students, beliefs female students have towards menstrual hygiene, management strategies among female students and the health problems experienced among female students. The instrument was given to three experts in research, who are from the department of Physical and Health Education and one from test and measurement department of the faculty of Education University of Jos, whose inputs on the instrument was very helpful. It was pretested using respondents with similar characteristics to those in the area of the main study and a reliability co-efficient index of 0.76 was obtained, which was seem as a reliable figure for the instrument to be used for the present study. The public health educator, social workers, school authorities and parents should note the above findings and organize seminars and campaigns on menstrual hygiene management for female students in the area of study. The government should also provide restroom for ladies and enough water for their convenience.

Knowledge, Attitudes, Menstrual Hygiene , and Management of Female Students

1. Introduction

Menstruation is a biological development that allows the sign that a female human being to be productive. This period marks a time when that individual will begin to experience womanhood, it is regardless of race, culture, tribe or any of those things that relates to human differences. As explained by World Health Organization (WHO), (1996) that a female aged 10-19 years is considered an adolescent. The transition period between the childhood and adulthood is called adolescence which is marked with growth and development of the child. During this period, physical, psychological and biological development of the child occurs. It is recognized as a special girl's life cycle which requires special attention. Menarche is an important biological milestone in a woman's life as it marks the onset of the reproductive phase of her life. Thakre (2011) expressed that the average age at menarche is mostly consistent across the populations, that is between 12 and 13 years of age. Nagar (2017) also said that due to the lack of knowledge on menstruation preparedness or management or due to the shyness and embarrassment in the situation becomes worst for girls. In addition Dasgupta (2008) pointed out that menstruation is a natural process but it is still a taboo in Indian society as it is considered unclean and dirty, which may not be the case with the present place of study.

In line with this, Murye (2017) defined menstruation as a cyclic event that occurs during the reproductive phase of a woman's life. It involves the discharge of mainly blood, mucous and endometrial shreds from the lining of the uterus. In addition that the nature and amount of monthly menstrual flow vary from woman to woman but an average flow can take four days. Menstruation can be managed in many ways across time and culture with some women having to let their

menses flow freely and others adopted the tradition of making internal and external menstrual wear from available product. This may depend on the knowledge and attitudes of the individual

Knowledge according to Comfort (1996), is the sum of our conceptions, views and preposition which have been established and tested as correct reflection as far as they are of objective reality. In this context, knowledge shall be referred to as all understanding based on the perceptions, the reality of which is in human practice of menstrual period by females. In line with this, a study by Speak Up Africa, a women led strategic communication and advocacy organization dedicated to catalyzing African leadership enabling policy changing and increasing awareness for sustainable development in Africa (of which Nigeria is part) UN WOMEN and WSSCC (2017) pointed out that girls and women had limited information about the biological changes involved in menstruation, the various options available to them for safe and hygienic management of menstruation. Mothers and female friends were their primary sources of information. However, in their environment, these informants were not always armed with knowledge about biological changes, the menstrual cycle, infection due to poor practices, the options available to girls in terms of choices of absorbent materials and how to dry and dispose of such materials. A study conducted in Niger (UN Women and WSSCC 2016) mentioned that the basic knowledge about menstruation was limited to the length of the period and the age at which the first period was experienced. Neither nomad or sedentary girls or women were able to explain why women have periods, nor did they have knowledge of the relationship between the menstrual cycle and reproductive health. The lack of information and knowledge was more often observed in rural environments. In addition, the study in Cameroon (UN Women and WSSCC 2015) noted that the majority (82%) of girls and women in the Kye-Ossi and Bamoungoum regions had low levels of knowledge about menstruation. It is possible that the same condition may exist in the present area of study which may equally depend on the attitudes.

Attitudes (behavior) as described by Lorimer (2001), is the manner or ways in which a person's morals are conducted or portrayed. Also Wagman and Forguson (1987) described attitude (behavior) as moral conduct or treatment shown towards others. In this work, attitude (behavior) is used to mean the outward observable moral conduct of females towards menstruation

There are numerous myths and beliefs associated with menstruation. The UNICEF study on Burkina Faso and Niger (2013) reveals that menstruating women are often considered 'dirty'. During their period, their mobility is reduced and they are isolated. According to the study by UN Women and WSSCC in Niger, menstruation is a taboo subject, deeply marked by beliefs and myths. Because it is considered unclean, menstrual blood is managed discretely, cloth are washed and dried without direct contact with sunlight. Sanitary pads are washed before they are thrown away. All of the studies mentioned the negative impact of beliefs on girls and women's behaviors and attitudes which may be dependent upon the practices used by them during menstruation, these factors are considered in the work.

Practice may be looked as to mean repetition of an activity to improve skill in a particular phenomenon. In this case, the management skills adopted by women and girls in menstrual hygiene practices. Beliefs associated with menstruation influence girls and women so that they follow food, sexual, cultural and religious restrictions, thereby slowing down their activities. All of the studies mentioned that girls and women gave up praying, having sexual relations, consuming certain food (lemon, bissaps, coffee) or participating in income generating activities and cultural events.

Also observations conducted by the different studies clearly stated those sanitary facilities in home, schools, markets and other public places failed to take account of the specific needs of menstruating women. This situation has an impact on women's daily lives. The UNICEF study in Niger (2015) noted that nearly 40% of the girls interviewed said that they missed school at least once a month during their period. The UN Women and WSSCC study in Kedougou (2015) confirmed this, with a rate of 40% working women cut back their activities by 56% in the Kedougou region (UN Women and WSSCC, Kedougou). These factors are considered in this work. Generally, there are different challenges surrounding menstrual hygiene management as pointed out by Mahon, Singh and Tripathy (2012) who expressed that menstruation is not something to be proud of, it is surrounded by silence, shame and social taboos that are further manifested in social practices that in many cultures restrict mobility, freedom and access to normal activities and services. Menstruating women and girls are considered impure, unclean and unfit for the public sphere. This perception is exacerbated by the lack of washing and bathing facilities, materials, spaces, water and washing agents that cater for menstruation. By ignoring disposal

facilities and mechanisms for contaminated materials, they reinforce the stigma and shame surrounding menstruation. By talking about gender and user friendly design but remaining silent about menstruation, programmatic discourse reinforces stereotypes and refrains from breaking taboos and a view of the world that systematically ignores female users. WASH projects across the world focus on women because they are the de facto managers and ensure proper use, maintenance and sustainability. Very few of these address the menstrual water, sanitation and hygiene needs of women.

The practical dimensions are well recognized. Poor menstrual hygiene is linked to high reproduction tract infections, urinary tract infections, bacterial vaginosis, vulvovaginal candidiasis and dysmenorrhea-indicating linkages with higher anaemia and infertility. Boys and fellow girls find menstruating colleagues smelly and objectionable. This makes the girls to simply stay at home from school in order to deal with menstruation and to avoid staining their clothes and embarrassment. This results in the girls falling behind in their studies and renders them unable to learn due to abdominal pain and menstrual hygiene management related stress and they eventually drop out or do not continue with their education as the onset of puberty and changes in their bodies are unmatched with the available facilities and a conducive environment at the schools. The management of menstruation is on women and girls, they are asked to do this silently and in a way in which the society at large can deny the phenomenon itself. Talking about it is shameful and indecent. Research doesn't reveal any direct or substantive health impact from poor or good menstrual practices. So practitioners and policy makers remain skeptical, the question is why bothered changing taboos, perceptions and practices that are as old as the earth itself?

Menstrual hygiene practices we're affected by cultural, norms, parental influence, personal preferences, economic status and socio economic pressures. Menstrual beliefs refer to misconceptions and attitudes towards menstruation within a given culture or religion. Menstrual beliefs, knowledge and practices we're all interrelated to the menstrual hygiene management. According to Aniebue and Nwankwo(2008) expressed that reviewing literature and articles published in journals and reports available on the internet we found many cultural and religious beliefs followed by people regarding menstruation. These norms were the barriers in the path of good menstrual hygiene practices. Many women experiencing restrictions on cooking work

activities, sexual intercourse, bathing, worshipping and eating certain foods.

In the school setting literature provides that school girls from low-middle- income families often struggle to manage their monthly periods. They are constrained by practical, social, economic and cultural factors. The main problem faced are: The expense of commercial sanitary pads, the lack of water for bathing and washing of menstrual materials, dirty latrines-the hygiene hazards and unpleasantness, the lack of hygienic and cleansing materials, leakage from poor -quality protection materials, unsuitable places to dry menstrual materials, the lack of access to pain relief (analgesic drugs), inadequate waste disposal facilities, the lack of privacy for changing menstrual materials, the lack of materials for washing such as soap and basins, limited education about the facts of menstruation, limited access to guidance and counseling, fear caused by cultural myths, embarrassment and low self-esteem and the unsupportive attitudes of some men.

Absenteeism is another problem faced by school girls where by girls stay at home rather than attending school, sometimes occurs when school girls are menstruating. There is debate about the reasons for menstrual-related absenteeism, there are three major arguments:

In reality, menstrual-related is likely to be a combination of all the factors above. School girls also miss school, for other non-menstrual related reasons, such as caring for sick relatives, helping with the harvest or being ill with diseases such as malaria or diarrhea, when a school girl misses a significant number of lessons, her academic performance suffers which may mean she drops out of school altogether. Girls dropping out of school early are known to affect the health, size and education well-being of the next generation.

However, the question that is needed to be answered is "What is the knowledge, attitudes and practice of menstrual hygiene management among secondary school girls in Bokkos Plateau State?"

2. Research questions

To give direction to the present study, the following research questions were asked:

- What is the level of menstrual hygiene knowledge among female students in Bokkos?

- What are the attitudes female students have towards menstrual hygiene management in Bokkos?
- What are the menstrual hygiene practices among female students in Bokkos?
- What are the beliefs female students have towards menstrual hygiene practice in Bokkos?
- What are the management strategies among female students in Bokkos?
- What are the health problems experienced among female student

3. Research Methodology

The survey research design was used for the study. According to Trochim (2006) survey research is one of the most important areas of measurement in applied social research. The broad area of survey research encompasses any measurement procedures that involve asking questions of respondents. 'A survey' can be anything that forms a short paper and pencil feedback form an intensive one-on-one in depth interview on the evaluation of the knowledge, attitudes and practices of menstrual hygiene management in Bokkos Local Government Area of Plateau State. The population for the study composed of female students estimated to be about 3,000 in area of the study. Out of this total sample size of 305 girls were used

The instrument used for this study is the observation ire. The observation was constructed based on the research questions of the study and intensive literature of the evaluation of knowledge, attitudes

4. Results

The investigator distributed 325 copies of questionnaire forms and not all were collected back and used, giving rise to 93.85% return rate of instrument. This was considered adequate for reaching valid conclusion. The indigenes are hereby presented in the tables below according to the research questions posted in the study.

Key to Knowledge

Below	40%	Very low level of knowledge (VLLK)
40-45	Low level knowledge	(LLK)
46-50	Average knowledge	(AK)
51-55	Above average knowledge	(AAK)
56-60	Good average knowledge	(GAK)
61-69	Very good knowledge	(VGK)
70 & above	Excellent knowledge	(EXC)

and practices of menstrual hygiene management amongst female students. The instrument of the study are under (6) sections. Section A, the level of knowledge of menstrual hygiene which has two columns yes/no to be ticked, section B, the attitudes of female students towards menstrual hygiene which has 5 columns SA,A,UD,SD and D, section C, the menstrual hygiene practices among female students which has two columns yes/no, section D, the beliefs female students have towards menstrual hygiene which also has 5 columns to be ticked SA, A, UD, SD, and D, section E, the management strategies among female students which has two columns to be ticked yes/no and then section F, health problems experienced among female students which also has 2 columns to be ticked yes/no.

Frequency, percentages and mean were used in analyzing the data, results of which were used in answering the research questions raised for the study. The instruments were given to the female students in public secondary schools. They were expected to look at the instruction in relation with the instrument of study and to make inputs which were used in time turning the instrument that was used in collecting data that emanate for the study. The reliability of the instrument was done using female students, sixty copies were used on 60 female students in Christ Apostolic College Kuba of Bokkos Local Government Area which was split half method of Richard E son was used in analyzing the instrument that gave a real reliability of 0.76 co-efficient indexes. This index is adjudged to have met the instrument reliable for the present study.

Table 1: Beliefs female students have towards menstrual hygiene
N=305

S/N	Item	YES		NO		Level of knowledge
		f	%	f	%	
1	Menstruation is a biological phenomenon between individuals of 8-10	70	22.95	235	77.05	EXC
2	Menarche (first period) comes with embarrassment and fear.	230	75.40	75	24.59	EXC
3	Information of menstruation travels from grandmothers to mothers and to girls.	260	85.25	45	14.75	EXC
4	Menarche (first period) doesn't come with fear and embarrassment	235	77.05	160	52.45	EXC
5	Girls experience their first period with equanimity (calmness).	145	47.54			AAK
6	Don't need dust bin to dispose my menstrual waste.	200	65.57	105	34.42	VLAK
7	I have choice of absorbent materials.					
8	Menstruation is a biological phenomenon between individuals of 12-13.	225	73.77	80	26.22	EXC
9	I prefer to get my information on menstrual hygiene through internet.	100	32.78	205	67.21	VGK
10	I bury my menstrual waste.	210	68.85	95	31.14	VGK

The results in table 1 shows that the respondents have excellent knowledge on information of menstruation travels from grandmothers to mothers and to girls 260(85.24%), menarche doesn't come with embarrassment and fear 235(77.05%), menstruation is a biological phenomenon between individuals of 8-10 235(77.05%), menarche comes with fear and embarrassment 230(75.40%), menstruation is a biological phenomenon between individuals of 12-13 225(73.77%). Again the table indicates that the respondents have very good knowledge on I bury my waste 210(68.85%),i prefer to get my information on menstrual hygiene through internet 205(67.21%). Furthermore the table shows that the respondents have good knowledge on i have choice of absorbent materials 180(59.01%).The table also indicates that respondents have above average knowledge on girls experience their first period with equanimity160(52.45%). And have very low knowledge on don't need dustbin to dispose my menstrual waste 105(34.42%).These were the level of knowledge of the respondents on menstrual hygiene.

Table 2: Attitude of female students towards menstrual hygiene.
N=305

S/N	ITEM	Me an	Verdict
1.	I consider menstruation unclean.	4.2	Negative
2.	I manage menstrual blood discretely.	4.2	Negative
3.	I like to dry my cloth in shadow.	4.0	Negative
4.	I wash my sanitary pad before throwing.	4.2	Negative
5.	I don't pray during menstrual period.	3.7	Negative
6.	I don't consume certain food during menstruation.	4.3	Negative
7.	I don't like doing my laundry during menstruation.	3.3	Negative
8.	I like to use soap and water to wash my hand	2.8	Positive
9.	I don't like cooking during menstruation.	3.6	Negative
10.	I like using sanitary pad during my menstruation.	3.93	Negative

The results in table 2 indicates that the respondents have negative attitudes in all items except in I like to use soap and water to wash my hand during menstruation (2.8). These are the attitudes of the female respondents towards menstrual hygiene management.

Table 3: Menstrual hygiene practice among female students
N=305

S/N	ITEM	YES		NO	
		f	%	f	%
1.	I use sanitary pad.	205	67.21	85	27.8
2.	I use soft pant/underpants.	200	65.5	80	26.2
3.	I don't use sanitary pad during menstruation.	75	24.5	210	68.8
4.	I take analgesic drugs to ease my menstrual pain.	18	5.90	165	54.09
5.	I don't take analgesic drugs to ease my menstrual pain.	140	45.9	110	6.06
6.	I don't use soft materials/underpants.	80	26.22	190	2.29
7.	I change my feminine protection at least three times a day.	175	57.37	65	1.31
8.	I don't change my feminine protection at least three times a day.	75	24.59	185	60.65
9.	I wash my genitals during menstruation.	150	49.18	70	22.95
10.	I consult my healthcare personnel whenever i have mensorrhagia	170	55.73	75	24.59

The results in table 3 indicates that I don't use sanitary pad during menstruation 210(68.8%),i use sanitary pad 205(67.21%),i use soft materials/underpant 200(65.5%),I don't use soft materials/underpants 190(62.29%),I don't change my feminine protection at least three times a day 185(60.65%),I change my feminine protection at least three times a day 175(57.37%),I consult my healthcare personnel whenever I have mensorrhagia 170(55.73%) and I take analgesic drugs to ease my menstrual pain 165(54.09%). These are the practices among female respondents towards menstrual hygiene management.

Table 4: Beliefs female students have towards menstrual hygiene
N=305

S/N	ITEM	Mean	Verdict
1.	I believe in burial of cloth.	4.0	Negative
2.	Washing and drying should be done discretely.	4.1	Negative
3.	I believe I should not eat certain food like pickle during menstruation	4.3	Negative
4.	I believe in not engaging in religious activities during menstruation.	4.4	Negative
5.	I don't cook food during menstruation.	3.4	Negative
6.	I cook food during menstruation.	3.8	Negative
7.	I believe in not sharing toilet with boys during my menstruation.	3.9	Negative
8.	I believe in sharing toilet with boys during menstruation.	3.6	Negative

The results in Table 4 indicate that the respondents have negative beliefs in all the items. These are the beliefs female students have towards menstrual hygiene management which means they don't have any of these beliefs.

Table 5: The management strategies among female students
N=305

S/N	ITEM	YES		NO	
		f	%	f	%
1.	I use cloth fabric to manage my menstruation.	170	55.73	95	31.14
2.	I use sanitary pad to manage my menstruation.	165	54.09	85	27.86
3.	I use cotton wool to manage my menstruation.	60	19.67	200	65.57
4.	I often change my pad twice a day.	185	60.65	120	39.34
5.	I often change my pad thrice a day.	170	55.73	110	36.06
6.	I don't change my pad at all.	40	13.11	250	81.96
7.	I discard my menstrual waste in an abandoned well.	85	27.86	165	54.09
8.	I discard my menstrual waste inside the toilet.	120	39.34	165	54.09
9.	I bury my menstrual waste.	120	39.34	110	36.06
10.	I throw my menstrual waste inside dustbin.	170	55.73	75	24.59

The results in table 5 indicates that I don't change my pad at all 250(81.96%),I use cotton wool to manage my menstruation 200(65.57%),I throw my menstrual waste inside dustbin 195(62.29%),I often change my pad twice a day 185(60.65%),I often change my pad thrice a day 170(55.73%),I use cloth fabric to manage my menstruation 170(55.73%),I use sanitary pad to manage my menstruation 165(54.09%),I discard my menstrual waste inside the toilet 165(54.09)/% and I discard my menstrual waste in an abandoned well 165(54.09%). These are the management strategies among the female respondents towards menstrual hygiene management.

Table 6: The health problems experienced among female students
N=305

S/N ITEM	YES		NO	
	f	%	f	%
1. High cost of sanitary pad.	195	63.93	105	34.42
2. Lack of water for washing and bathing.	75	24.59	190	62.29
3. Dirty latrines.	60	19.67	140	45.90
4. The lack of hygienic and cleaning mater	75	24.59	145	47.54
5. Unsuitable places to dry materials.	85	27.86	145	47.54
6. Lack of access to pain relief drugs.	90	29.50	125	40.98
7. Inadequate waste disposal facilities.	85	27.86	140	45.90
8. The lack of privacy for changing.	105	34.42	130	42.62
9. Absenteeism.	75	24.59	155	50.81
10. Embarrassment and low self esteem.	90	29.50	125	40.98
11. Limited access to guidance and counseling.	190	62.29	95	31.14
12.The lack of resources for washing such as basin, water.	80	26.22	195	63.93

The results in *table 6* indicates that high cost of sanitary pad 195(63.93%),the lack of resources for washing such as water,basin195(63.93%),limited access to guidance and counseling 190(62.29%),the lack of water for washing and bathing 190(62.29%) and absenteeism 155(50.81%).These are the health problems experienced among the female respondents.

5. Discussions

Table 1 shows that information travels from grandmothers to mothers and to girls 260(85.24%), menarche doesn't come with fear and embarrassment 235(77.05%), menstruation is a biological phenomenon between individuals of 8-10 235(77.05%), menstruation is a biological phenomenon between individuals of 12-13 225(73.77%). These results were expected because there are common things that every female grown up individual is expected to know.

This is in line with what UN WOMEN and WSSCC (2014) who stressed that the model of transmission of information or knowledge travels from grandmothers to mothers and to girls. In addition, they emphasized that the majority of girls and women experience their first period with embarrassment (55.81%) and fear (40.34%). In addition, they pointed out that the biological phenomenon of menstruation was a complete mystery to both genders.9 out of 10 of the people surveyed were unaware of the source of menstruation they reasons why it occurred.

The results in *table 2* indicates that the respondents have negative attitudes in all the items except in I like to use soap and water to wash my hands during menstruation (2.8). This was not surprising because majority of females consider menstruation unclean and hence the negative attitudes. However, they equally use soap and water to wash hands during menstruation. This still in line what the UNICEF study in Burkina Faso and Niger (2013) expresses that minimum rules of hygiene such as changing

sanitary protection, washing hands with soap and water and washing the genitals were generally followed during menstruation. However, none of the respondents mentioned how they washed their genital area or with what. In addition, they also pointed out that female respondents reported that they washed their hands with soap and water before and after using feminine protection.

Table 3 shows that I don't use sanitary pad 210(68.8%),I use sanitary pad 205(67.27%),I use soft materials/underpants200(65.8%), I change my feminine protection at least three times a day 185(60.65%). These results were expected because these seems to be the common practices among girls and women in the area. This in line with the study by WSSCC and WOMEN Study (2015) who pointed out those sanitary pads were the main form of feminine protection used by the female respondents, making up a proportion up a proportion of 86.95%. Their comfort, simplicity, cost and ease of use where the reasons of protection. Sanitary pads are sold in neighborhood shops, markets, bus stations and pharmacies. It should be recalled that 31.55% of the female respondents we're not involved in any income generating activities and girls sanitary pads were paid by their husbands. In addition, UN WOMEN and WSSCC stressed that the minority of the girls and women interviewed simply doubled up their sanitary pad or baby diapers , which were more absorbent than sanitary pads. Discussing about cloth and underpants by UN WOMEN and WSSCC Niger(2015) found out that underpants were used by girls in circumstances where they did not have access to sanitary pad. Women who methods of contraception that could cause a heavy flow also preferred cloths to sanitary pads. Furthermore, due to beliefs and myths about cloth ,some women had to stick to cloth as their method of protection ever since menarche. In addition, discussing on I change my feminine protection at least three times a day a study by the UNICEF study in Burkina Faso (2013) found

out that more than 80% of the female respondents stated that they changed their feminine protection at least three times a day. Washing the genitals during menstruation was a common practice among female respondents.

The results in table 4 indicates that the respondents have negative beliefs in all the items. These results were not expected because they don't believe in all those things because of modern trends that are based on scientific facts rather than beliefs. Sooner, Kjellen and Pensub(2013) expressed that menstrual flow was seen dirty, polluting and shameful, so women hide menstrual cloths for fear of being cursed. In similar findings, it was believed that menstrual waste was linked to witchcraft and danger, so it must be buried unless witches go after human blood and find the menstrual wrapper/cloth and destroy the women by causing infertility. In addition the study by Speak Up Africa (2016) pointed out that beliefs and taboos surrounding menstruation have harmful consequences for the female respondents in their daily lives and are often an obstacle to their fulfillment. All of these restrictions combined to limit girls and women's activities during menstruation, they were not allowed to go to the mosque or church, pray fast or attend religious ceremonies (thiant, dahira)or cultural events (baptism, marriage etc). They were also subject to dietary restriction and couldn't carry out certain activities. Indeed, according to female respondents, drinks such as lemonade and bissaps were not consumed, and they were not allowed to cook food or do laundry during their periods. Kaur (2018) by reviewing literature and articles published in journals and reports available on the internet we found many cultural and religious beliefs followed by people regarding menstruation. These norms were the barriers in the path of good menstrual hygiene practices, many women experiencing restrictions on cooking, work activities, sexual intercourse, bathing, worshipping and eating certain foods.

Table 5 shows that I don't change my pad at all 250(81.96%),I use cotton wool to manage my menstruation 200(65.57%),I throw my menstrual waste inside dustbin 195(65.29%). These are expected because these practices were common among girls in the area studied. The study by UN WOMEN and WSSCC Niger (2014) pointed out that according to the data collected; women and girls wash their sanitary pad or protection at least twice a day. These suggest on the one hand that the material used is not sufficiently absorbent and on the other hand women change at least twice a day. In addition, they said that it is clear that the fabric used in the

region of the management of menstruation (an old loin cloth cut down) is not sufficiently absorbent. Respondents we're not able to say what sort of fabric was used(cotton, synthetic, wool, polyester etc) usually made of cotton or a cotton/ synthetic mix. However the use of any fabric other than cotton can cause infections. In addition, they also mention that the absence of waste management system in the region has an impact on the disposal of menstruation related waste. Thus, toilets are the most used places for the disposal of this waste. Almost 10% of respondents throw waste into dustbins while some get rid of their sanitary protection in the river.

Table 6 shows that high cost of pad 195(63.93%), the lack of resources of washing such as basin and water 195(63.93%), absenteeism. These results were expected because these are the common problems experienced by the girls in the area of study. Crofts (2012) expressed that problems faced by menstruating school girls from low middle income families often struggle to manage their monthly periods. They are constrained by practical, social, economic and cultural factors; the main problems faced are the expense of commercial sanitary pads. In addition, limited access to guidance and counseling and absenteeism. Absenteeism where girls stay at home rather than attending school sometimes occurs when school girls are menstruating.

6. Conclusion

Based on the findings of the study, the following conclusion was drawn:

- Information travels from grandmothers to mothers and to girls, menarche (first period) comes with fear and embarrassment, menstruation is a biological phenomenon between individuals of 8-10 and menarche (first period) comes with fear and embarrassment were the level of knowledge of menstrual hygiene management in Bokkos Local Government Area of Plateau State.
- The attitudes of female students towards menstrual hygiene in Bokkos Local Government Area of Plateau State indicates that the respondents have negative attitudes in all the items except in I like to use water and soap to wash my hands during menstruation.
- I don't use sanitary pad during menstruation, I use sanitary pad, I use soft materials/ underpants and I change my feminine protection at least three times a day are the

menstrual hygiene practices among female students in Bokkos Local Government Area of Plateau State.

- The beliefs female students have towards menstrual hygiene management in Bokkos Local Government Area of Plateau State indicates that the respondents negative attitudes in all the items, which means they don't have any of these beliefs.
- I don't change my pad at all, I use cotton wool to manage my menstruation, I throw my menstrual waste inside dustbin and I often change my pad twice a day were management strategies among female students in Bokkos Local Government Area of Plateau State.
- High cost of sanitary pad, the lack of resources for washing such as water and basin, limited access to guidance and counseling and lack of water for bathing and washing were the health problems experienced by female students in Bokkos Local Government Area of Plateau State.

7. Recommendations

Based on the summary and conclusion of the study the following were made:

- Problems such as high cost of sanitary pad, the lack of resources for washing such as water and basin, limited access to guidance and counseling and lack of water for washing and bathing were the problems experienced by female students in Bokkos Local Government Area of Plateau State. The public health Educator, school authorities, social workers and parents should note the above findings and organize seminars and campaigns on menstrual hygiene management for female students in the area of study. And also Government should integrate menstrual hygiene in WASH programmes in schools and also provide rest rooms. This will address the issue of privacy and menstrual hygiene amongst the girls and the challenge of menstrual waste.
- The negative attitudes in all items are a sign that the respondents in the area of study did not understand the item very well. Further researchers should enlighten the young girls and women on the importance of menstrual hygiene.
- The results of the respondents showed that girls in the area of study had very low level

of knowledge on don't need dustbin to dispose my menstrual waste. The schools should put programs in place to sensitize and empower the students (girls and boys) about menstruation and the challenges of practices and management of menstrual hygiene such as waste collection, segregation, storage disposal, taboos surrounding menstruation and blockages of toilets due to disposal of used napkins.

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