

**Location and Class Level as Determinants of Menstrual Hygiene Practice among Boarding Female Secondary School of Bauchi State, Nigeria.**

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**Abstract**

This study investigated the location and class level as determinants of menstrual hygiene practice of among female boarding secondary school in Bauchi State, Nigeria. Two hypotheses were tested. Descriptive survey was used for the study. The population of the study comprised all female students residing in boarding secondary schools of Bauchi State, which is estimated to be 9,224 as at 2016/2017 session. The sample of the study was 384 respondents Multistage sampling procedure was used in selecting respondents from various female boarding secondary schools. Researcher developed questionnaire on location and class level as determinants of menstrual hygiene practice (LDEMHP) was used as instrument for data collection. The questionnaire was validated and subjected to a pilot study that yielded a reliability index of 0.72. t-test was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that there is significant difference between urban and rural female students in boarding secondary schools in their practice of menstrual hygiene with  $t = 1.438$ ,  $df = 381$ ,  $P < 0.05$ . P- value of 0.004. The findings indicated that there is no significant difference between junior and senior female students in boarding secondary schools in their practice of menstrual hygiene with t-value of 1.549,  $df = 381$ ,  $P > 0.05$ . P- value of 0.122. Based on the findings of this study it was recommended among others that Bauchi State Ministry of Education in collaboration with Ministry of Health should organize seminar and workshop periodically on the importance of practice of menstrual hygiene for female students in boarding secondary schools in Bauchi State.

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**Introduction**

Menstruation is a normal biological process and a key sign of reproductive health, yet in many cultures it is treated as something negative, shameful or dirty. The continued silence around menstruation combined with limited access to information at home and in schools results in millions

of females and girls having very little knowledge about what is happening to their bodies when they menstruate and how to deal with it (Water Aid, 2013). Menstrual hygiene practices are essential. These include regular change of clothing and underwear, change of hygienic pads every three to four hours, daily showering, especially in instances of dysmenorrhea, adequate washing of genitalia after each urine and/or feces, continuing normal routine and daily activities and maintaining a balanced diet with plenty of fruits and vegetables rich in iron and calcium (United Nations Children Emergency Fund, 2008).

Recognizing the adoption of appropriate hygienic practices is crucial in the prevention of reproductive tract infections. The incidence of gynecological morbidity which is suffered by many females in hushed silence, bearing in mind that having a safe personal and cultural environment to manage menstruation hygienically and with dignity is the right of every woman and adolescent girl (Santina, Wehbe, Fouad & Mona, 2013). Shivalele, Tefalidat and Jalanee (2015), pointed out that every year approximately 10 % of females worldwide are exposed to genital infections including urinary tract infections and bacterial vaginosis and 75 % of females have a history of a genital infection. Specifically, the severity of vaginal infection is more common during pregnancy and poor menstrual hygiene practices. Unhygienic menstrual management practices raise concerns of reproductive tract infections and inflammatory disorders, use and insertion of unclean materials into the vaginal canal, use of highly absorbent tampons, frequent vaginal douching and lack of hand-washing have been suggested to increase the risk of infection. Yet in many communities, these potentially harmful practices are common amongst adolescent girls (Water Aid 2013).

Najwa (2015) stated that menstrual cycle in females is an indicator of changes occurring during the adolescent stage, it is further stressed that, the menstrual cycle is a component of natural changes that occur in the uterus and ovaries as an essential part of sexual reproduction and it is accompanied by a change in the physical, psychological and social aspects of a woman's life. Coping with menstruation can be an enormous task. Keeping clean and tidy (hygiene) during menstrual period is a problem to many young females, especially where information on menstruation and reproductive health are poorly discussed. Issues relating to the practical management of menstrual hygiene are very important because it has health implications in terms of vulnerability to infections (Mahon & Fernandes, 2010).

Female Secondary School students are adolescence who transit from girlhood to womanhood. This also constitutes an important milestone, which is marked by the onset of menarche from this stage onwards until menopause, reproductive health and menstrual hygiene are important aspects in the lives of these age group (Nagar & Aimol 2011). Globally, about 52% of the female population are of reproductive age, meaning that menstruation is part of their normal life (House, Mahon & Cavill, 2012). However, in most developing countries, including Nigeria, menstruation, though a natural process, has been, and still is dealt with in secrecy (Warenius, Pettersson, Nissen, Hojer, Chishima & Faxelid, 2007). Poor menstrual health Practices in schools have been shown to cause adolescent girls worry and humiliation, contribute to monthly absenteeism and lead to poor performance in schools (Patle & Kubde, 2014).

### Statement of the Problem

Menstrual hygiene practices depend upon awareness and knowledge about the subject. The manner in which a female learns about menstruation and its associated changes may have an impact on her response to the event of menarche. Hygiene-related practices of females during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections. In the area of study, annual health report produced by Bauchi State Ministry of Education indicated the burden of vaginal related diseases or infection, each year as many as 400 to 500 hundred or 3 out of 6 female students in boarding secondary school experienced vaginal related diseases such as yeast infection, urogenital infections, bacterial vaginosis and fungal infections among others. It was also reported that there are series of cases of reproductive tract infection among students in boarding secondary schools such as vaginal rashes and odour, which are associated with poor hygiene practice and skills to prevent diseases associated with menstrual hygiene. These diseases are associated with inadequate or lack of personal hygiene.

However, the researcher observed frequent reports that are found in the boarding secondary school's clinics from the area of study, were mostly of menstrual problems. A number of female students take excuses to go home as a result of menstrual problems such as genital odour, vaginal infections, lower abdominal pain and social stigma, the number of such cases are increasing by the day. It was also observed in the area of study that menstrual hygiene practices by female students in boarding secondary schools seem to be poor, perhaps it is either due to lack of hygiene practices or inappropriate use of sanitary products and individual culture/norms. Certain practices are also likely to increase the risk of infection among females at the age of menarche such as using unclean rags, sharing toilet facilities, poor maintenance culture of sanitary conveniences among others which may support the growth of unwanted bacteria that could lead to vaginal infection. It is against the stated problem that the researcher investigated the knowledge and practice of menstrual hygiene among female students in boarding secondary schools in Bauchi State.

### Hypotheses

There is no significant difference in the practice of menstrual hygiene between urban and rural female students in boarding secondary Schools in t in Bauchi State.

There is no significant difference in the practice of menstrual hygiene between junior and senior female students in boarding secondary schools in Bauchi State.

### Methods

Descriptive survey research design was used for this study. The population of this study comprised all female students residing in boarding facilities of secondary schools in Bauchi State. The population was estimated to be 9,224 as at 2016/2017 session (Bauchi State Ministry of Education, 2017). The sample for this study was 400 female students selected from total female residing in boarding facilities of Secondary Schools in Bauchi State. The total number of schools with boarding facilities with female students was eight (8) in Bauchi State. Two schools were selected from each senatorial district in Bauchi State. These are Government Girls Special School, Nabordo, Government Girls College Bauchi, Government Girls secondary School Hardawa, Government Girls Secondary School Yana, Government Girls secondary School Azare and Government Girls special

School Sakwa. Multistage sampling technique was used to select 400 female students across the 6 schools selected to their various sizes.

The instrument for data collection was researcher developed questionnaire named Location and class level as determinants of menstrual hygiene practice (LDEMHP). The questionnaire consisted of 2 sections with 8 items: section A, and B. Section A required information on demographic characteristics of the respondents consisting of three (3) items; section B, sought answers on Practice of menstrual hygiene consisting of five (5) items.

Multistage sampling procedure was used to select the participants for the study. The first stage involved the employment of simple random sampling technique to select two classes from each of the female boarding secondary schools in Bauchi State, one from the junior and one from the senior sections. Piece of paper; the pieces of paper were folded carrying "Y" for selected and "N" for not selected. The folded pieces of papers were mixed vigorously in a container. Students were asked to each pick a piece of paper from the container. Those who picked "Y" were part of the study while those who picked "N" were not part of the study.

In the second stage, proportional sampling technique was used to select the participants from each school; Junior and Senior. Sample selection formula by Krejce and Morgan (1970), was used to determine sample size in each section. Hence the population of female students from each school was divided by the total number of students and multiplied by 400 as indicated on table below:

**Table 3.3.1 Population and Sample Size**

S/N	Names of Schools	Population	Sample
1	G.G. C AZARE	1467	64
2	G.G.A.C ALKALERI	866	38
3	G.G. HARDAWA	531	23
4	G.G YANA	1057	46
5	G.G.S.S SAKWA	790	34
6	G.G.S.S KAFIN MADAKI	1086	47
7	G.G.C BAUCHI	2160	94
8	G.G.S.S NABORDO	1267	54
	Total	<b>9224</b>	400

Stage three involved the use of systematic sampling technique was used in selecting respondents from each class. The list of all students were collected from each form master/ mistress who was used to select the respondents who's her serial numbers fall within the multiples of 3.

Data were analyzed using frequency counts and percentage on the demographic characteristics of the respondents, while independent t- test was used to test the hypotheses at 0.05 level of significance.

## Results

**Hypothesis 1:** There is no significant difference in the practice of menstrual hygiene between urban and rural female students in boarding secondary Schools in t in Bauchi State.

**Table 1: Summary of independent t-test analysis on differences between Urban and Rural females' students in boarding secondary schools in their practice of menstrual hygiene in Bauchi State, Nigeria**

Practice of Menstrual Hygiene	N	Mean	Std. Deviation	Std. error mean	t	df	p
Urban	179	1.7765	.41774	.03122	1.438	383	0.004
Rural	205	1.7122	.45385				
<b>Total</b>	<b>384</b>						

$t_{\text{tab}}=1.96$ , df: 383;  $P<0.05$

Table 1 revealed the mean scores of 1.7765 for urban while for rural is 1.7122, the standard deviation (SD) for urban was .41774 and that of rural was .45385. The statistical computation indicated that there is significant difference between urban and rural female students in boarding secondary schools in their practice of menstrual hygiene with P- value of 0.004 is statistically lower than 0.05 level of significance. Therefore the null hypothesis which stated that, there is no significant difference between Urban and Rural female students in boarding secondary schools in their practice of menstrual hygiene in Bauchi State was rejected. Hence, there was significant difference in the practice of menstrual hygiene between the female students in urban and rural boarding secondary schools in Bauchi State.

**Hypothesis 2:** There is no significant difference in the practice of menstrual hygiene between junior and senior female students in boarding secondary schools in Bauchi State.

**Table 2: Summary of independent t-test analysis on differences between junior and senior females' students in boarding secondary schools in the practice of menstrual hygiene in Bauchi State, Nigeria**

Practice of Menstrual Hygiene	N	Mean	Std. Deviation	Std. error mean	t	df	p
J.SS	162	15.09	3.117	.249	1.549	383	0.122
S.S.S	222	14.59	3.135				
<b>Total</b>	<b>384</b>						

$t_{\text{tab}}=1.96$ , df: 383;  $P>0.05$

Table 2 revealed the mean scores of 15.09 for J.S.S while S.S.S was 14.59, the standard deviation (SD) for J.S.S was 3.117 and that of S.S.S was 3.135. The statistical computation indicated that there is no significant difference between junior and senior female students in boarding secondary schools in their practice of menstrual hygiene with t-value of 1.549. P-value of 0.122 is statistically higher than 0.05 level of significance. Therefore the null hypothesis which stated that,

there is no significant difference between junior and senior female students in boarding secondary schools in their practice of menstrual hygiene in Bauchi State is here by accepted. Hence, there is no significant difference between J.S.S female students and S.S.S boarding secondary schools in their practice of menstrual hygiene in Bauchi State Nigeria.

### **Discussion**

The study investigated the practice of menstrual hygiene among female students residing in boarding secondary school of Bauchi State. The finding of the study revealed that there was significant difference between female students in urban and rural boarding secondary schools in their practices of menstrual hygiene This is in agreement with the study of Teketo and Mitike (2014) who conducted a study on menstrual hygiene management and school absenteeism among female students in urban and rural boarding secondary schools and reported that urban and rural female students differ in practice of menstrual hygiene.

The result of this study revealed that there was no significant difference between junior and senior female students in boarding secondary schools on their menstrual hygiene practice. The finding is contrary with the study of Sanlier, and Konaklioglu, (2012) who conducted a study on knowledge, attitude and practices of menstrual hygiene among female students in secondary schools and reported that, statistically significant difference was found between junior and senior female students in secondary schools on knowledge, attitude and practice score. The result is also inconsistent with the report of Nebil and San (2011), which indicated significant difference between junior and senior female students in secondary schools.

### **Conclusions**

Based on the findings of this study, the following conclusions were drawn:

1. Female students from urban differ from female students from rural boarding secondary schools' on practice of menstrual hygiene in Bauchi State.
2. J.S.S female students did not differ from S.S.S female students in boarding secondary schools' on practice of menstrual hygiene in Bauchi State

### **5.3 Recommendations**

Based on the findings of this study, the following recommendations were made:

1. Bauchi State Ministry of Education in collaboration with Ministry of Health should organize seminar and workshop periodically to maintain the existing practice of menstrual hygiene to female students in urban and rural boarding secondary schools in Bauchi State.
2. The practice of menstrual hygiene should be improved by female students from J.S.S and S.S.S of boarding secondary schools in Bauchi State.

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