

Knowledge of Menstrual Hygiene among Adolescent Girls in Public Senior Secondary Schools in Rivers State

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Abstract

The study investigated Knowledge of Menstrual Hygiene among Adolescent Girls in Public Senior Secondary Schools in Rivers State. The study adopted cross-sectional survey design. The study population consisted of 57,974 students in public secondary schools. The Taro Yamene's formula was used to determine a sample size of 400 using the multi-stage sampling procedures. The study also utilized structured questionnaire. Data were analyzed using percentages, mean, standard deviation; z-test and analysis of variance (ANOVA). The study reveals that majority of the respondents were knowledgeable about menstrual hygiene. 350(87.5%) knew that menstrual hygiene refers to personal cleanliness during menstruation; 370(92.5%) knew that during menstruation, a girl is supposed to bath at least twice a day; and 390(97.5%) knew that it is good to change under wears each time you change your pad during menses. The result showed that there was a significant difference in the knowledge of menstrual hygiene based on age ($z\text{-cal} = 5,162, df = 350, p < 0.05$), level of study ($z\text{-cal} = 370, df = 390, p < 0.05$) and religion $F(3,604) = 4.564, p < 0.05$. It was concluded that, adolescent girls in Public Secondary Schools in Rivers State had good knowledge of menstrual hygiene. However, it was recommended that the school authority should from time to time organize health talk aimed at enlightening adolescent females on menstrual hygiene practices; this will help to sustain the good knowledge of menstrual hygiene found among them irrespective of their age differences or level of study

Keywords: knowledge, public secondary school, adolescent girls, menstruation, hygiene, Rivers State.

Introduction

Menstruation and menstrual hygiene is critical to the dignity and well-being of girls and women in general (UNICEF, 2018). Regardless of culture, age, and marital status, adolescents need basic, accurate and complete information with regard their body structure and functions, as well as other sexual and reproductive health issues. Poorly informed choices and practices have potential for long-term negative effects on their reproductive health (Swedish, International Development Co-operation Agency 2016). Conversely, accurate knowledge and hygienic practices during menstruation has impact on multiple areas across the sustainable development goals including health, education, gender equality and water and sanitation (Garba et al., 2018). Evidence showed that poor personal hygiene and unsafe sanitary conditions have primarily resulted in gynecological problems among the adolescent girls (Shanbhag et al., 2015). A preponderance of cases of infections due to lack of hygiene during menstruation has been reported (Paul et al., 2017). Micro-Organisms and vaginal infections have been reported to be caused by frequent use of unclean napkins or the improperly dried cloth napkins before its reuse (Shanbhag, et al, 2015). Furthermore, the growing urban waste problem in developing

countries was reported to be partly due to inappropriate disposal of absorbents used during menstruation (Fernandes & Mahon, 2018).

Adolescence is a transitional stage of physical and psychological development that generally occurs during the period from puberty to adulthood (typically corresponding to the age of majority). Adolescence is usually associated with the teenage years, but its physical, psychological or cultural expressions may begin earlier and end later. Puberty now typically begins during preadolescence, particularly in females. Physical growth (particularly in males) and cognitive development can extend past the teens. Age provides only a rough marker of adolescence, and scholars have not agreed upon a precise definition. Some definitions start as early as 10 and end as late as 25 or 26. The World Health Organization definition officially designates an adolescent as someone between the ages of 10 and 19.

Menstrual hygiene refers to personal cleanliness during menstruation. This includes bathing at least twice a day, regularly wearing and changing clean under wears, adequately washing of the genital area and using proper absorbent materials like sanitary pads, menstrual cup and tampons which should also be changed regularly at least three to four times daily. Sahin (2019) defined menstrual hygiene as women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials. In the view of Harvey (2019), adolescent females of reproductive age need access to clean and soft absorbent sanitary pads, which in the long run protect their health. Furthermore, menstrual hygiene practice among adolescent female students as noted by Omidvar and Begum (2014) include: good personal hygiene such as bathing and washing of genital tract, changing of pads regularly, and at night before going to bed; and use of sanitary pad and other absorbent materials. In the same vein, Sebastian et al (2018) noted that, the materials used as adsorbents during menstruation in developing countries vary from reusable towels (cloth torn from dresses of women and cotton fabric) to commercially available disposable sanitary pads.

Having, prior knowledge about menstruation before menarche is very important in the practice of menstrual hygiene. Keziah and Ajoku (2017) stated that, knowledge is the ability to remember previously learned material. Information about menstrual hygiene can be acquired through different sources ranging from the mass media, parent(s), healthcare personnel and friends among others.

Research Questions

5. What is the level of knowledge of menstrual hygiene among adolescent girls in Public Senior Secondary Schools in Rivers State?
6. What is the level of knowledge of menstrual hygiene among adolescent girls in Public Senior Secondary Schools in Rivers State based on age?
7. What is the level of knowledge of menstrual hygiene among adolescent girls in Public Senior Secondary Schools in Rivers State based on level of study?

Methodology

The cross-sectional survey design was adopted as the research design for this study. This research design was considered to be appropriate for this study because, the study generated data on the knowledge of menstrual hygiene from a selected population which is adolescent girls. This design was used by several scholars on related study

The population for this study consisted of all adolescent girls (students) in Public Senior Secondary Schools in Rivers East Senatorial District of Rivers State selected from 15

secondary schools with a projected population of 57,974 (Rivers State School Census Report, Rivers State Ministry of Education, 2019).

The sample size of 400 Adolescent girls from selected Secondary Schools in Rivers East Senatorial District was used for the study using the Taro Yamane’s (1967). A sample size of 400 comprised of adolescent girls was used for this study. To arrive at this sample size, a multi-stage sampling procedure was adopted to select 38 respondents from each of the selected senior secondary schools making in total of 400 respondents.

The instrument for data collection in this study was a structured questionnaire, which was validated using face and content validity, with a reliability coefficient of value of 0.82 was obtained.

The data collected were analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0 through descriptive statistics, z-test and analysis of variance (ANOVA), and presented as percentage, Mean, Standard Deviation.

Results

Research Question 1: What is the knowledge of menstrual hygiene among adolescents Girls in Public Secondary School in Rivers East Senatorial District, Rivers State?

Table 1: Knowledge of menstrual hygiene among adolescents

S/N	Items	True T(%)	False F(%)	Remark
1	Menstrual hygiene refers to personal cleanliness during menstruation	350 (87.5)	50 (12.5)	* *
2	During menstruation, a girl is supposed to bath at least twice a day	390 (97.5)	10 (2.5)	* *
3	Sanitary pad is the right absorbent material to be used during menstruation	364 (91)	36(9)	* *
4	Toilet roll or pieces of cloth is the best absorbent material during menstruation	80 (20)	320 (80)	* *
5	The sanitary pad is used during menstruation to manage the blood flow	360 (90)	40 (10)	* *
6	Sanitary pad is the best absorbent material to maintain hygiene during menstruation	390 (97.5)	10 (2.5)	* *
7	Absorbent material (pad) used should be changed only once a day	30 (7.5)	370(92.5)	* *
8	A girl is supposed to wash her hands with clean water and soap before changing her sanitary pad	380 (95)	20 (5)	* *
9	it is hygienic for a girl not to wash with clean water and soap after she changes her pad	10 (25)	390 (75)	* *
10	Poor menstrual hygiene can predispose a girl to vaginal infection	340 (85)	60 (15)	* *
11	Washing hands with clean water and soap after cleaning the vagina area can prevent reproductive infection	333 (83.3)	17 (4.3)	* *
12	Panties made of cotton is the best material for girls to absorb sweat during menses	210 (52.5)	190 (47.5)	* *
13	A girl is supposed to wash her panties with clean water and soap during menstruation	390 (97.5)	10 (2.5)	* *

14	Washing panties with clean water and soap is only during menstruation	100 (25)	300 (75)	* *
15	Regularly wearing clean under wears s good to maintain good health	385 (96.3)	15 (3.8)	* *
16	it is good to change under wears each time you change your pad during menses	395 (98.8)	5 (1.3)	* *

****Good knowledge, *Poor Knowledge**

Table 1 showed the knowledge of menstrual hygiene among adolescents. The results showed that majority of the respondents were knowledgeable about menstrual hygiene. 350 (87.5%) knew that menstrual hygiene refers to personal cleanliness during menstruation; 390 (97.5%) knew that during menstruation, a girl is supposed to bath at least twice a day, 320 (91%) knew that sanitary pad is the right absorbent material to be used during menstruation; 360 (90%) knew that toilet roll or pieces of cloth is not the best absorbent material during menstruation; 390 (97.5%) knew that the sanitary pad is used during menstruation to manage the blood flow; 385 (92.6%) knew that sanitary pad is the best absorbent material to maintain hygiene during menstruation; 385 (96.3%) knew that regularly wearing clean under wears is good to maintain good health and 395 (98.8%) knew that it is good to change under wears each time you change your pad during menses.

Research Question 2: What the knowledge of menstrual hygiene among adolescents Girls based-on age?

Table 2: Knowledge of menstrual hygiene practice among adolescents based on Age

S/N	Items	10-14 years (N=190)		15-19 years (N=210)	
		True	False	True	False
1	Menstrual hygiene refers to personal cleanliness during menstruation	110 (27.8)	4(1)	280 (70)	5 (1.3)
2	During menstruation, a girl is supposed to bath at least twice a day	120 (30)	10 (2.5)	250 (62.5)	20 (5)
3	Sanitary pad is the right absorbent material to be used during menstruation	140 (35)	5 (1.3)	250 (62.5)	5 (1.3)
4	Toilet roll or pieces of cloth is the best absorbent material during menstruation	10 (2.5)	180 (45)	200 (50)	10 (2.5)
5	The sanitary pad is used during menstruation to manage the blood flow	200 (50)	5 (1.3)	190 (47.5)	5 (1.5)
6	Sanitary pad is the best absorbent material to maintain hygiene during menstruation	110 (27.5)	20 (5)	90 (22.5)	180 (45)
7	Absorbent material (pad) used should be changed only once a day	15 (3.8)	135 (33.8)	20 (4)	230 (57.5)
8	A girl is supposed to wash her hands with clean water and soap before changing her sanitary pad	133 (33.3)	12 (3)	250 (62.5)	5 (1.3)
9	It is hygienic for a girl not to wash hands with clean water and soap after she changes her pad	112 (28)	93 (23.6)	80 (20)	115 (28.8)
10	Poor menstrual hygiene can predispose a girl to vaginal infection	200 (50)	10 (2.5)	150 (37.5)	40 (10)
11	Washing hands with clean water and soap after cleaning the vagina area can prevent reproductive infection	120 (30)	20 (5)	180 (45)	80 (20)
12	Panties made of cotton is the best material for girls to absorb sweat during menses	160 (40)	10 (2.5)	200 (50)	30 (7.5)
13	A girl is supposed to wash her panties with clean water and soap during menstruation	160(40)	10 (2.5)	200 (50)	30 (7.5)
14	Washing panties with clean water and soap is only during menstruation	15 (3.8)	180 (45)	5 (1.3)	200 (50)
15	Regularly wearing clean under wears is good to maintain good health	190 (47.5)	6(1.5)	200 (50)	4 (1)
16	It is good to change under wears each time you change your pad during menses	200 (50)	2(0.5)	190 (47.5)	8 (2)
	Overall	160(84.2)	30(15.8)	175(83.3)	35(16.7)

Table 2 showed the knowledge of menstrual hygiene practice among adolescents based on Age. The highest proportion in each of the items showed that 110 (27.8) of those aged 15-19 years knew that menstrual hygiene refers to personal cleanliness during menstruation, 190 (47.5) of those aged 15-19 years knew that during menstruation, a girl is supposed to bath at least twice a day, 250 (62.5) of those aged 15-19 years knew that sanitary pad is the right absorbent material to be used during menstruation, 160(40) knew that toilet roll or pieces of cloth is not

the best absorbent material during menstruation 200 (50) of those aged 10-14 years knew that the sanitary pad is used during menstruation to manage the blood flow, 133 (33.3) of those aged 10-14 years knew that a girl is supposed to wash her hands with clean water and soap before changing her sanitary pad, 200 (50) of those aged 10-14 years knew that poor menstrual hygiene can predispose a girl to vaginal infection, 180 (17.8) knew that washing hands with clean water soap after cleaning the vagina area can prevent reproductive infection, 200 (40) of those aged 15-19 years knew that a girl is supposed to wash her panties with clean water and soap during menstruation, 200 (50.0%) of those aged 15-19 years knew that regularly wearing clean under wears is good to maintain good health while 150 (%) knew that it is good to change under wears each time you change your pad during menses. Overall, the result shows that 74.8% of the respondent who were in their early adolescence 10-14 years were knowledgeable while 73 0% of those who were aged 15-19 years were knowledgeable about menstrual hygiene Thus based on age, those in their early adolescence were more knowledgeable about menstrual hygiene than their older counterparts.

Research Question 3: What is the knowledge of menstrual hygiene practice among adolescents based on level of study?

Table 3: Knowledge of menstrual hygiene practice among adolescents based on level of study

S/N	Items	Level 1-3 (N=190)		Level 4 & above (N=210)	
		True	False	True	False
1	Menstrual hygiene refers to personal cleanliness during menstruation	150 (37.5)	10 (2.5)	200 (50)	40 (10)
2	During menstruation, a girl is supposed to bath at least twice a day	120(30)	12 (3)	230 (57.5)	38 (9.5)
3	Sanitary pad is the right absorbent material to be used during menstruation	170 (42.5)	10 (2.5)	200 (50)	20(5)
4	Toilet roll or pieces of cloth is the best absorbent material during menstruation.	60 (15)	155 (38.8)	5 (1.3)	180 (45)
5	The sanitary pad is used during menstruation to manage the blood flow	200 (50)	8 (2)	190 (47.5)	2 (0.5)
6	Sanitary pad is the best absorbent material to maintain hygiene during menstruation	160(40)	100 (25)	120 (30)	20 (5)
7	Absorbent material (pad) used should be changed only once a day	8 (2)	162 (40.5)	6 (1.5)	224 (56)
8	A girl is supposed to wash her hands with clean water and soap before changing her sanitary pad	180 (45)	20 (5)	190 (47.5)	10 (2.5)
9	It is hygienic for a girl not to wash hands with clean water and soap after she changes her pad	118 (230)	110 (21.4)	100 (19.5)	184 (36.1)
10	Poor menstrual hygiene can predispose a girl to virginal infection	80 (20)	75 (18.8)	105 (26.3)	30 (7.5)
11	Washing hands with clean water and soap after cleaning the vagina area can prevent reproductive infection	110 (27.5)	15 (3.8)	200 (50)	75 (18.8)
12	Panties made of cotton is the best material for girls to absorb sweat during menses	170 (42.5)	5 (1.3)	200 (50)	25 (6.3)
13	A girl is supposed to wash her panties with clean water and soap during menstruation	140 (35)	3 (0.8)	250 (62.5)	7 (1.8)
14	Washing panties with clean water and soap is only during menstruation	3 (0.8)	207 (5.8)	2 (0.5)	188 (47)
15	Regularly wearing clean under wears is good to maintain good health	110 (27.5)	30 (7.5)	240 (60)	20 (5)
16	It is good to change under wears each time you change your pad during menses	165 (41.3)	5 (1.3)	220 (55)	10 (2.5)
	Overall	160(84.2)	30(15.8)	175(83.3)	35(16.7)

Table 3 showed the knowledge of menstrual hygiene practice among adolescent based on level of study. The highest proportion in each of the items showed that 206(40.2%) of those in 100 - 300 knew that menstrual hygiene refers to personal cleanliness during menstruation, 158 (30.8%) of those in 100-300 knew, that during menstruation, a girl is supposed to bath at least twice a day, 290 (57.0%) of those in 400 & above knew that sanitary pad is the right absorbent material to be used during menstruation, 224 (43.9%) of those in 400 & above knew that toilet roll or, pieces of cloth is not the best absorbent material during menstruation, 218 (42.5%) of those in 100 - 300 knew that the sanitary pad is used during menstruation to manage the blood flow, 200 (39.0%) of those in 100 - 300 knew that a girl is supposed to wash her hands with clean water and soap before changing her sanitary pad, 182 (35.5%) of those in 400 & above knew that poor menstrual hygiene can predispose a girl to virginal infection,, 180 (55%) in 400 & above knew that washing hands with clean water and soap after cleaning the vagina area can prevent reproductive infection, 250 (62.5%) of those in 400 & above knew that a girl is supposed to wash her panties with clean water and soap during menstruation, 218 (42.6%) of

those in 400 & above knew that regularly wearing clean under wears is good to maintain good health while 200 (39.0%) of those in 100 – 300) knew that it is good to change under wears each time you change your pad during menses. The overall result shows that 95.1% of the respondents who were in were knowledgeable while 77.4% of those who were in 400 & above were knowledgeable about menstrual hygiene. Thus based on class of study, those in junior level were more knowledgeable about menstrual hygiene than those in the senior level.

Discussion

The finding of this study in Table 1 showed that majority of the respondents was knowledgeable about menstrual hygiene. 350(87.5%) knew that menstrual hygiene refers to personal cleanliness during menstruation; 390(97.5%) knew that during menstruation, a girl is supposed to bath at least twice a day; 364(91%) knew that sanitary pad is the right absorbent material to be used during menstruation; 320(80%) knew that toilet roll or piece of cloth is not the best absorbent material during menstruation; 360(90) knew that sanitary pad is used during menstruation to manage the blood flow; 390(97.5%) knew that sanitary pad is the best absorbent material to maintain hygiene during menstruation; 385(96.3%) knew that regularly wearing clean under wears is good to maintain good health and 395(98.8%) knew that it is good to change under wears each time you change your pad during menses. The finding of this study is in consonance with that of Sharma et al. (2013) where the knowledge of menstrual hygiene was reported to be high among the respondents. The finding of this study corroborates that of Upashe et al. (2015) which showed that, majority of the girls had good knowledge. The findings of the study are in tone with that of Baiqis et al. (2016) which showed that the respondents had good knowledge of menstrual hygiene. The finding of this study is also in tandem with that of Yadav et al. (2017) which showed that majority of the respondents had good knowledge of menstrual hygiene management. Although menstruation is a natural process, it is linked with several misconceptions and hygienic practices which sometimes results into adverse health outcomes. Reaction to menstruation depends upon awareness and knowledge about the subject therefore, understanding how to manage hygiene during menstruation is essential for adolescent females because poor maintenance of hygiene during menstruation results in several diseases. The findings of this study is at variance with that of Montgomery et al. (2012) who reported that, girls had little knowledge on how to keep personal hygiene during menstruation and they used unhygienic rags during menstrual period. This variation might be due to the variations in the study location and methodology.

The Findings of this study showed that 74.8% of the respondents who were in their early adolescence 10-14 years were knowledgeable while 73 0% of those who were aged 15-19 years were knowledgeable about menstrual hygiene Thus based on age, those in their early adolescence were more knowledgeable about menstrual hygiene than their older counterparts. The result shows that based on the grand mean, menstrual hygiene practice was found more among those who were aged 15-19 years ($\bar{X} = 3.66 \pm 0.67$) than those aged 10-14 years ($\bar{X} = 3.59 \pm 0.71$) The findings of this study is similar to that of Sharma et al. (2013) which showed that, more of the respondents who practiced menstrual hygiene were in their late adolescence. The finding of this study is in line with that of Seenivasan et al. (2016) which showed that the mean age of the respondents was 14.5 ± 1.9 years and mean age at menarche was 12.1 ± 1.5 years with a satisfactory menstrual hygiene practices. The finding of this study is also in line with that of Balqis et al. (2016) which showed that, 16.81% were aged 13-14 years, while more than 80% were aged 15-19 years among which 88.24% had good menstrual hygiene practices. The similarity found between the present study and previous ones might be attributed to the fact that they were all conducted among students. The findings of this study showed that there was a significant difference between study level and both knowledge and practice of menstrual

hygiene ($p < 0.05$). The result shows that 95.1% of the respondents who were level 100 - 300 were knowledgeable while 77.4% of those who were in level 400 & above were knowledgeable about menstrual hygiene.

Conclusion

Based on the findings of the study, it was concluded that female adolescents in Public Senior Secondary School in Rivers State had good knowledge of menstrual hygiene. Furthermore, the study concluded that there is a significant difference in the knowledge menstrual hygiene based on age, level of study, and socio-economic status.

Recommendations

6. The school authority should from time to time organize health talk aimed at enlightening adolescent females on menstrual hygiene practices; this will help to sustain the good knowledge of menstrual hygiene found among them irrespective of their age differences or level of study.
7. Government should organize health education programme on the importance of menstrual hygiene of the Adolescent girls, which will improve the level of awareness of the adolescents and also improve their practices of menstrual hygiene giving no regards to their age or socioeconomic status.

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