

Research Article

Journal of Gynecology & Reproductive Medicine

Awareness of Adolescent Girls in Senior High School on Menstrual Hygiene Practice: A Study in The Anum Presbyterian Senior High School, Easter Region-Ghana

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 $\textbf{Submitted}: 2024, Feb \ 25; \textbf{Accepted}: 2024, Mar \ 15; \textbf{Published}: 2024, Mar \ 29$

Citation: Quayson, E., Owusu, I., Afful-Mensah, E., Ametefe, W. A., Amoako-Mensah, D. N. (2024). Awareness of Adolescent Girls in Senior High School on Menstrual Hygiene Practice: A Study in The Anum Presbyterian Senior High School, Easter Region-Ghana. *J Gynecol Reprod Med*, 8(1), 01-08.

Abstract

In Ghana, the problem with menstrual hygiene among adolescent girls has been well documented. Whiles several reasons have been given for the menstrual hygiene issues in adolescent girls, knowing from the perspective of the adolescent girls could help better appreciate and provide lasting solution to the situation. Thus, the study was to assess from the perspective of Senior High School (SHS) adolescent girls in Ghana, their knowledge, practice, and factors that influences their menstrual hygiene practices.

A descriptive cross-sectional study design with quantitative approach and convenient sampling method was used in conducting the study. Standard closed ended questionnaire was used to elicit responses from registered respondents. The study revealed that 84.6% of the total respondents' responses depicted good knowledge on menstruation and 66.7% showed good practices on menstrual hygiene. Intensifying education on menstrual hygiene practices at the second cycle education could help solve the problem of menstrual hygiene among adolescent girls.

It was recommended that menstrual hygiene should be given more attention in the Adolescent Reproductive Health Curriculum at the second cycle education level in Ghana.

Keywords: Menstruation, Menstrual hygiene, Menstrual hygiene practice

1. Introduction

The age range of 10 to 19 years old is known as adolescence [1]. Girls' adolescence is seen as a unique time that marks the passage from girlhood to womanhood. Every female experiences the phenomenon of menstruation. This is due to common misconceptions, such as the idea that menstruation is dirty in some cultures [2].

This gap has been documented in several research studies and journals, which also indicate that when females first experienced menstruation, they knew very little about it [3]. Numerous researches has shown that many teenage females had erroneous and insufficient knowledge regarding menstrual physiology and cleanliness [3-5]. They also disclosed that the primary sources of information on menstruation that the teenage girls received were

their mothers, the media, friends, teachers, and relatives [4-5]. Although young people between the ages of 10 and 24 make up almost 35% of the world's population, Janssen et al. found that adolescents' health needs are either not met or are only partially met [6]. Dar state that menstruation may have physiological, emotional, and physical effects on girls [7]. This means that to help the adolescent girl deal with this stage of life, institutions and support must be put in place. Given this, it is important to explain menstrual hygiene to adolescent girls in a straightforward and concise manner. During menstruation, it is crucial to follow menstrual hygiene measures include using sanitary pads and thoroughly cleaning the vaginal area.

It has been noted that girls in Ghana experience difficulties related to menstruation, which prevents them from attending class during this time [8]. Most schoolgirls struggle to manage their menstruation in public, according to Akanzum and Pienaah [8]. However, it could also be argued that this factor, along with other socioeconomic factors, contribute to poor menstrual hygiene among adolescents in Ghana because they are largely absent from the real-life experiences and perspectives of these adolescents [9]. And as such, may contribute to the fact that teenage girls continue to have this issue. Pursuance to this, the study was to assess from the perspective of Senior High School (SHS) adolescent girls in Ghana, their knowledge, practice, and factors that influences their menstrual hygiene practices.

2. Research Methods

2.1. Study Design

The study was done using a descriptive cross-sectional survey with a quantitative data collection method.

2.2 Study Setting

The study area was limited to the Anum Presbyterian Senior High School. The Anum Presbyterian SHS is in Anum in the Asuogyaman District of the Eastern Region of Ghana. The Anum Presbyterian SHS provides opportunity for both males and females to continue their second cycle education after their basic education. The school offers programmes like Agricultural Science, Business, General Arts, Home Economics and Visual Arts.

2.3. Study Population

The study included all female adolescent SHS students who attended Anum Presbyterian SHS.

2.4. Sample and Sampling Plan

This study was limited to all female adolescent SHS students who attend Anum Presbyterian SHS in the Eastern Region of Ghana. The total population of female SHS students who attend Anum Presbyterian SHS was 1400. Therefore, the sample size for this study was 311. Convenience sampling method was used for sampling the 311 female students.

2.5. Research Instrument

Data collection was done in one week using an anonymous self-administered questionnaire. The questionnaire consisted of close-ended multiple-choice questions. The questionnaire was developed from the information gathered during literature review and it was based on the research objectives. The questionnaire consisted of four sections (A-D). Section 'A' was about the demographic data of the respondents. Section 'B' sought to determine the knowledge about menstrual hygiene, Section 'C' the menstrual hygiene practices, Section 'D', the barriers to menstrual hygiene practices.

2.6. Data Collection Procedure

The purpose of the study was explained to the participants. Consent was obtained from them by allowing them to sign or thumb print at a space provided on the questionnaire before the questionnaires were administered to them.

Instant collection of answered questionnaire was done if participants can complete it at the point of consenting to participate in the study. However, the questionnaire was left with respondents for later collection should the participant not be able to provide responses at the time of heeding to participate in the study.

2.7. Validity and Reliability of the Research Instrument

The supervisor evaluated and offered suggestions for improvement after receiving the work on a regular basis, ensuring the validity of the data collection instrument. Furthermore, the questions were formulated using research questions and a survey of relevant literature.

A pretest of the questionnaire was conducted with people who were not part of the study's target population. Analysis was done on the pretested data to determine the Cronbach's Alpha Reliability of 0.7.

2.8. Data Processing and Analysis

The information elicited from participants were saved on a computer and other accessories such as storage devices. Confidentiality was ensured by securing the information with a password. The hard copies were kept in a file and in turn placed in a rarely used bag for future reference, should the need arise. The data elicited from participants were processed and analyzed by the use of IBM statistical package for social sciences (SPSS) version 25 software. The data were entered into IBM SPSS Statistics 25. The entered data were descriptively summarized by using frequency tables and charts.

3. Results

3.1. Demographic Background of Respondents

From table 1, respondents of 249 were conveniently sampled at the Anum Presbyterian Senior High School to answer the questionnaire. From these respondents, 18 (7.2%) were from the age of 12 to 14years, 157 (63.1%) were from 15 to 17 years, and 74 (29.7%) were 18 years and above. All the respondents (100%) were in SHS 1. In terms of religion, 220 (88.4%) out of the 249 respondents were Christians whiles the rest were Muslims.

In terms of ethnicity, 74 (29.7%) were from Akan, 45 (18.1%) were from Ewe, 9 (3.6%) were from Twi, and 19 (7.6%) were from Hausa, 28 (11.2%) were from Fanti, and 74 (29.7%) were from Ga.

Demographic features	n=249	Frequency (Percentage)
Age (years)		·
12 -14		18 (7.2%)
15 -17		157 (63.1%)
18 and above		74 (29.7%)
Class		
SHS1		249 (100%)
SHS2		-
SHS3		-
Religion		
Christianity		220 (88.4%)
Islamic		29 (11%)
Ethnicity		
Akan		74 (29.7%)
Ewe		45 (18.1%)
Twi		9 (3.6%)
Hausa		19 (7.6%))
Fanti		28 (11.2%)
Ga		74 (29.7%)

Table 1: Data on participants' demographic features

3.2. Respondents Knowledge on Menstruation

From table 2, it could be identified that out of the 249 respondents, 249 (100%) said that girls should take their bath frequently when menstruating. One hundred and ninety-three (77.5%) out of the 249 respondents said menstrual blood is unhygienic but 56 (22.5%) respondents said that menstrual blood is hygienic. 239 (96%) out of the 249 respondents said menstruation is as a result of hormonal changes but 10 (4%) respondents said menstruation is not as a result of hormonal changes. 221 (88.8%) out of the 249 respondents revealed that menstrual blood comes from womb but 28 (11.2%) said menstrual blood does not come from womb. Concerning whether menstruation comes every month after a girl

starts her period, 231 (92.8%) said yes whiles 18 (7.2%) said no. Two hundred and two (81.1%) of the 249 respondents indicated that girls may get pimple (acne) during their period but 47 (18.9%) said girls may not get pimple (acne) during their period. Out of the 249 respondents, 130 (52.2%) revealed that starting menstruation means you are ready to get pregnant and 119 (47.8%) revealed that starting menstruation does not mean you are ready to get pregnant. Two hundred and twenty-one (88.8%) of the 249 responses identified that they has learnt health or hygiene practices in school whereas 28 (11.2%) identified that they have not learnt health or hygiene practices in school.

Knowledge on menstruation	n=249	Frequency (Percentage)	
		Yes	No
Should girls take their bath frequently when menstruating?		249 (100%)	
Menstrual blood is unhygienic?		193 (77.5%)	56 (22.5%)
Menstruation is as a result of Hormonal changes?		239 (96%)	10 (4%)
Menstrual blood comes from womb?		221 (88.8%)	28 (11.2%)
Menstruation comes every month after a girl starts her period?		231 (92.8%)	18 (7.2%)
Girls may get pimple (acne) during their period?		202 (81.1%)	47 (18.9%)
Starting menstruation means you are ready to get pregnant?		130% (52.2%)	119 (47.8%)
Do you learn health/hygiene practices in school in any of your study subjects?		221 (88.8%)	28 (11.2%)

Table 2: Participants' responses on their knowledge on menstruation

3.3. Respondents Practice of Menstrual Hygiene

From table 3, it could be identified that out of the 249 respondents, 101 (40.6%) said that they bleed for 1-4 days in a month, 130 (52.2%) said they bleed for 5-7 days in a month, and 18 (7.2%) said they bleed for days above 7 in a month. 240 (96.4%) out of the 249 respondents said they take their bath when menstruating but 9 (3.6%) respondents said they do not take their bath when menstruating. Eighteen (7.2%) out of the 249 respondents said they do not take their bath daily when menstruating, 184 (73.9%) said they take their bath once daily when menstruating, and 47 (18.9%) respondents said they take their bath twice daily when menstruating. Nineteen (7.6%) out of the 249 respondents revealed that they do not change their sanitary pad daily when menstruating, 137 (55%) said they change their sanitary pad once daily when menstruating but 93 (37.3%) said they change their sanitary pad twice daily when menstruating. Concerning whether they change

their sanitary products when in school, 195 (78.3%) said yes whiles 54 (21.7%) said no. Two hundred and three (81.5%) of the 249 respondents indicated that they dispose their pads by burning them, 9 (3.6%) said they wash their pads, 28 (11.2%) said they wrap their pads and place them in a dustbin, and 9 (3.6%) said they flush their sanitary pads. Two hundred and three (81.5%) of the 249 responses identified that they get a place to change their sanitary products in school when menstruating whereas 46 (18.5%) identified that they do not get a place to change their sanitary products in school when menstruating. Two hundred and two (88.8%) of the 249 responses identified that they wash their genital when menstruating whereas 28 (11.2%) identified that they do not wash their genital when menstruating. Out of the 249 respondents, 212 (85.1%) revealed that they use only water to wash their genital during menstruation and 37 (14.9%) revealed that they use soap water to wash their genital during menstruation.

Menstrual hygiene practices	n=249	Frequency (Percentage)
How many days do you bleed in a month?		
1 – 4		101 (40.6%)
5 – 7		130 (52.2%)
Above 7 days		18 (7.2%)
Do you take your bath when menstruating?		
Yes		240 (96.4%)
No		9 (3.6%)
How many times do you take your bath daily when you are menstruating?		
None		18 (7.2%)
Once		184 (73.9%)
Twice		47 (18.9%)
Three times or more		-
How many times do you change your sanitary products daily when menstruating?		
None		19 (7.6%)
Once		137 (55.1%)
Twice		93 (37.3%)
Three times or more		-
Where do you dispose the used pads?		
Burn		203 (81.5%)
Wash		9 (3.6%)
Wrap and put in a dustbin		28 (11.2%)
Flush		9 (3.6%)
Do you change your sanitary products when in school?		
Yes		195 (78.3%)
No		54 (21.7%)
Do you get a private place to change your sanitary products if in school?		
Yes		203 (81.5%)

No	46 (18.5%)
Do you wash your genitals when menstruating?	
Yes	221 (88.8%)
No	28 (11.2%)
What do you use to wash your genitals during menstruation?	
Water only	212 (85.1%)
Soap and water	37 (14.9%)
Nothing	-

Table 3: Participants' responses on their menstrual hygiene practices

3.4. Factors Influencing Respondents Practice of Menstrual Hygiene

From table 4, it could be identified that 240 (96.4%) of the respondents said enough water to wash when menstruating was a factor that influences their menstrual hygiene practices but the remaining 9 (3.6%) said enough water to wash when menstruating was not a factor that influences their menstrual hygiene practices. One hundred and eighty-four (73.9%) of 249 respondents said access to soap was a factor that influences their menstrual hygiene practices but 65 (26.1%) said access to soap was not a factor that influences their menstrual hygiene practices. Two hundred and thirty-nine (96%) of 249 participants indicated that adequate food was a problem but 10 (4%) said adequate food was not a problem. Again, 121 (48.6%) out of the 249 respondents revealed that

their family ever needed medicine or medical treatment but could not afford it whiles 128 (51.4%) said their family never needed medicine or medical treatment but could not afford it. On whether bought disposal sanitary pads from a shop in the last six months was a factor that influences their menstrual hygiene practices, 65 (26.1%) of the 249 respondents said yes but the remaining 184 (73.9%) said no. Also, 213 (85.5%) of the 249 participants said given money for school was a factor that influences their menstrual hygiene practices but 36 (14.5%) said given money for school was not a factor that influences their menstrual hygiene practices. 101 (40.6%) out of 249 respondents indicated that they have ever missed school because of menstruation but 148 (59.4%) said they have never missed school because of menstruation.

Factors that influence menstrual hygiene practices	n=249	Frequency (Percentage)	
		Yes	No
Do you have enough water to wash when menstruating?		240 (96.4%)	9 (3.6%)
Do you have access to soap at all times?		184 (73.9%)	65 (26.1%)
Have you or your family always had enough food to eat?		239 (96%)	10 (4%)
Have you or your family ever needed medicine or medical treatment but couldn't afford it?		121 (48.6%)	128 (51.4%)
Have you bought disposal sanitary pads from a shop in the last six months?		65 (26.1%)	184 (73.9%)
Are you given money to school?		213 (85.5%)	36 (14.5%)
Have you ever missed school because of menstruation?		101 (40.6%)	148 (59.4%)

Table 4: Participants' responses on factors influencing their menstrual hygiene practices

Table 5 shows the cumulative responses of respondents to the items under each objective. Out of the 1992 responses obtained on knowledge concerning menstruation, 1686 (84.6%) were appropriate whereas 306 (15.4%) of the responses were inconsistent with knowledge on menstruation. Also, out of the 1743

responses on factors influencing menstrual hygiene practices, 1163 (66.7%) were responses indicating that the factors identified were challenges to them in their menstrual hygiene practices whiles the remaining 580 (33.3%) indicated that the identified factors did not influence their menstrual hygiene practices.

Objective		Frequency (Percentage)		
		Yes	No	
Knowledge on menstruation	N=1992	1686 (84.6%)	306 (15.4%)	
Menstrual hygiene practices	N=1743	1163 (66.7%)	580 (33.3%)	

Table 5: Cumulative Responses of Respondents on the Objectives

4. Discussion

4.1. Knowledge on Menstruation

Menstruation has been a key component of the Adolescent Reproductive Health Curriculum of Senior High School. Its relevance has become more critical owing to the associated health related issues, influence on school attendance, and impact on formal sector employment of Ghana. When the concept of menstruation is well understood by the adolescents, they could be able to stay hygienic, improve their health status, and even prevent teenage pregnancies which would in turn, enable them the freedom to pursue their academic dreams and add to the formal employment sector of Ghana.

Thus, testing the knowledge of the selected population on menstruation was well justified. From table 2, it could be deduced that all (100%) the respondents had an appreciation of the fact that girls should take their bath frequently when menstruating. This is in line with the assertion of Nabiryo, et al. who indicated that menstruation required the menstruating lady to bath frequently to prevent bad odour [10]. Though all respondents had appropriate knowledge regarding frequent bathing during menstruation, 22.5% disagreed that menstrual blood is unhygienic. This creates disparity in their knowledge which could be attributed to their lack of awareness on the constituent of the menstrual blood. It could also be that since regular bathing (at least once a day) has already been culturally transferred to them, they only understand that one needs to bath regularly and not necessarily during menstruation. According to Zehravi, et al., menstruation occurs because of hormonal changes that happen in ladies [11]. This concept seems to be well comprehended by majority (96%) of the respondents and it is very pertinent in preventing teenage pregnancies. Once teenagers know why they feel sexually aroused within their cycle, they are able to be conscious of themselves and control themselves per the education provided them in Adolescent Reproductive Health [10].

It therefore translates that for the remaining 4% of the respondents who did not know that menstruation is a resultant product of hormonal changes, they are more likely to get pregnant than those with appropriate knowledge on the phenomenon. The fascinating observation from this study, however, could refute the assertion that the better a girl's knowledge on hormonal changes and menstruation, the likelihood is it for that girl to prevent teenage pregnancy. This is evidenced from table 2 as 47.8% of the respondents did not believe that initiation of menstruation signals one's readiness to be pregnant. It has been asserted that pregnancy is more probable to occur during ovulation, but it is also possible when menstruation starts or few days after menstruation

[11-12]. This indicates that there exists a knowledge gap regarding menstruation among the respondents which are likely to mislead them, resulting in teenage pregnancies, if not addressed. The main reason could be as identified by Kalio that adolescent girls have difficulty in understanding hygiene knowledge associated with menstruation as a result of the unhealthy and false practices associated with it, some considering it a taboo and secret matter [4].

From table 5, it could be identified that majority (84.6%) of the cumulative responses were appropriate to items that sought to assess respondents' knowledge on menstruation. This finding contradicts with the studies of Rani which found that out of a total of 791 adolescent girls, 68.3% had poor knowledge of menstruation [13]. The difference in findings could be attributed to the huge sample size (791) used by Rani as compared to 249 used in this study [13]. Notwithstanding, the study of Khatoon et al. and Gebre et al. was consistent in findings as this study [5,14]. In the study of Khatoon et al., they revealed that 50.8% girls were well informed concerning menstruation, though the percentage of respondents with appropriate knowledge on menstruation were far less as compared to that of this study (84.6%) [5].

4.2. Menstrual Hygiene Practices

The results identified from table 3 reveals that majority (96.4%) of the respondents indicated that they take their bath during menstruation. From the same table 3, only 18.9% of the respondents indicated that they bath twice a day during menstruation whiles majority (73.9%) indicated they bath once during menstruation. It was shocking to notice that as many as 7.2% of the respondents said they do not bath during menstruation. This may not be surprising, considering a reason revealed by Alshurafa that 89.5% of adolescent girls adopt cultural beliefs of not bathing during first three days of menstruation or even as long as the period last, rather than following prescribed menstrual hygiene practices [15]. These results could be seen as an affirmation of the earlier assertion that respondents understanding of bathing may not have been conceptualized to menstruation but an appreciation of tradition (bath regularly, at least once daily). According to Prince one of the most dangerous practices that could put the health and the confidence of ladies into jeopardy is failure to change sanitary products frequently in a day during menstruation [16]. Prince asserts that failing to change sanitary pads as and when they get soaked could lead to genital infections including urinary tract infection, bad odour, staining of dresses which could be a disgrace when noticed by others [16]. These effects enlisted by Prince may not be known to the respondents since the results reveal that the majority (55.1%) of the respondents change their sanitary products once a day [16].

This finding in very shocking since the use of sanitary products is stressed by the Adolescent Reproductive Health Curriculum. Perhaps, teachers do not take time to emphasize the importance of proper sanitary products practices during menstruation. It could also be that teachers do ensure students understand the concept of sanitary products use and regular change during menstruation, but the students misconstrue, or the students do not get the applicability of the lesson on sanitary products in their life. Another factor which could be a deciding influence is financial problems, such that respondents do not have enough money for their upkeep, let alone will they get some amount of money for regular sanitary products change during menstruation. The results also identified that 7.6% of the respondents do not change their sanitary products in a day during menstruation, a practice which could be deleterious to their health as aforementioned. Concerning how to dispose used pads, majority (81.5%) indicated that they burn their used pads, an ideal way of disposing used pads [17]. It was also revealed during the study that 78.3% of the respondents change their sanitary products when in school and surprisingly, 18.5% of the respondents indicated that they do not have a place in school where they could change their sanitary products. This could lead to staining of their uniform with menstrual blood resulting in reducing their confidence through embarrassing and subsequently, probable absenteeism. Another worrying finding from the study was that as many as 11.2% of the respondents do not wash their genitals. According to Girigoswami, et al., prior to change of sanitary products, it is ideal to wash the genitalia with soap and water as this helps to keep the individual health and free from bad odour [18]. However, the study revealed that only 14.9% of the respondents use soap and water for cleaning their genital menstruation.

From table 5, it could be realized that majority (66.7%) of all the cumulated responses on items that sought to assess the menstrual hygiene practices of the respondents were in appropriation with menstrual hygiene practices. In a similar study conducted by Esan, 50.8% of the respondents had good practices of menstrual hygiene [19]. However, Esan further identified that significant differences were found among the girls in their menstrual hygiene practices and sources of menstrual hygiene information [19]. Esan inferred that, menstrual hygiene should be linked to the hygiene education program in schools with active involvement of teachers and caring environment for menstrual hygiene should be provided both at home and in school [19].

4.3. Factors that Influence Menstrual Hygiene Practices

Several factors influence adolescent girls' ability to adhere to the hygienic healthy lifestyle required during menstruation. Some of these factors could be social, economic, and most importantly, cultural. From table 4, it could be identified that majority 96.4% of the respondents indicated that access to water is not a problem and that they get adequate water for their cleanliness during menstruation. According to Kalio et al., having access to adequate water could be the turning point for helping adolescents keep themselves clean during menstruation because they are able to

use enough amount of water to clean themselves as possible [5]. However, cleaning during menstruation becomes tidier when soap is included [5]. The results from table 4 showed that as many as 26.1% of the respondents have no access to soap that they could use for their cleaning during menstruation. This means that some of the respondents who have access to adequate water have no access to soap and in turn translate that, such respondents could clean themselves but may not be tidier since there was no application of soap (an antiseptic agent). The lack of soap accessibility could be attributed to financial constraints on the family of the menstruating adolescent and lack of social support. Some families have very little to leave on and as such, spend their meagre earnings on food at the detriment of other things like sanitation. From the results, however, only 4% of the respondents indicated that their family do not always have enough food to eat. Though the result means majority (96%) of the respondents' families have enough food to eat most times, their savings after their expenses on meals may be small to warrant them spending adequately on hygiene maintenance.

This assertion could be said to be evidential from the results on table 4 which revealed that majority (51.4%) of the respondents sometimes are unable to afford medications prescribed for their medical treatment. The economic reasons could be said to be very paramount influencing factors among the respondents because as many as 14.5% of them revealed that they are not given money for school. Thus, interpreting that they go to school, having no money on them to even afford foods. Surprisingly, as many as 73.9% of the respondents revealed that they have not bought sanitary pads from a shop in the last six months. A result which could be attributed to not only economic reasons but also culture. According to Gebre et al., cultural practices have stigmatized against menstruation and make menstruation seem like and unclean period where the menstruating lady could not go close to others [14]. This may have instilled shyness and fear in adolescent girls who find it abominable to go close to others, let alone will they approach public space like shops to purchase sanitary products for their menstrual upkeep. As reported by Kalio and Gebre et al., poor menstrual hygiene is one of the numerous reasons why adolescent girls absent themselves from school and to the extreme, become school dropouts [5,14]. The results from this study indicate that majority (59.4%) have ever missed school due to menstruation. A striking finding which when not given attention, could reduce female enrolment in the second cycle education.

5. Conclusion

The study found that adolescent girls in Anum Presbyterian Senior High School have good knowledge and menstrual hygiene practices on menstruation. However, financial challenges were the major factors influencing their menstrual hygiene practice.

Acknowledgement

We are grateful to the encouragement of our friends, study respondents, and administration of Anum Presbyterian Senior High School.

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