



Managing Menstruation Among Adolescents and Young Women in the Municipality of Dangbo (Benin): From Reporting to Hygiene in School Settings



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Abstract

Menarche, which occurs in young girls, marks the onset of menstruation. This requires maintaining good personal hygiene. The objective of this study is to analyze menstrual hygiene management practices among adolescent girls. The methodology used is a quantitative approach. The random sampling technique was used to select 68 students based on the criteria of being enrolled in the 2020–2021 academic year and having already experienced menstruation. A questionnaire was used to collect data. The study's findings indicate that economic and structural constraints impact adolescent girls' menstrual hygiene practices. They exhibit low levels of hygiene practices regarding the use of sanitary products. However, there is a marked improvement in personal hygiene related to showering and intimate hygiene. However, a majority reported not having a private space for girls to change their sanitary products during menstruation. Furthermore, they have low levels of personal hygiene practices during menstruation. Schools must have adequate and appropriate facilities to enable adolescent girls to improve their menstrual hygiene.

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Contents

Abstract.....	7
1 Introduction.....	8
2 Materials and Methods.....	8
3 Results and Discussions.....	9

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3.1 Results	9
3.2 Discussions.....	11
4 Conclusion	12
Acknowledgments.....	12
References	13
Biography of Authors	15

1 Introduction

Adolescence is a stage of life during which a person transitions from childhood to adulthood, characterized by pubertal and sexual development. It is during this time that young girls begin menstruating. However, menstruation, a natural phenomenon, brings about various changes in a woman's life, leading to emotional and psychological instability (Lee et al., 2012; Hillard, 2014). Hence, Menstrual Hygiene Management (MHM). This involves the use of sanitary products to absorb menstrual flow throughout the menstrual period, which can be replaced discreetly and safely in a private and clean setting, as often as needed (Thomas 2018; Mishika 2024).

However, effective menstrual hygiene management requires an understanding of the menstrual cycle. Yet, this topic surrounding menstruation is marked by silence, myths, and taboos. Furthermore, in many low- and middle-income countries, menstruation is stigmatized, which limits access to information that influences the adoption of appropriate practices (Mishika, 2024; Muyisa, 2021; Komboigo, 2022; Oliveira et al. 2023; Chinyama, 2019; Panda, 2024).

Admittedly, menstruation is still considered taboo in some rural communities, such as Dangbo in Benin, but parental involvement is essential in educating girls about this biological phenomenon. As the UNESCO report highlights, there is a significant lack of information for young girls regarding the biological changes associated with menstruation and the various options available for safe and hygienic management (2014).

The objective of this study, which focuses on female students at the secondary school in the municipality of Dangbo, is to highlight menstrual hygiene management practices among adolescent girls. To report on the results of the study conducted among the students, the actor-system theory (Crozier & Friedberg, 1977) and Becker's Health Belief Model (HBM) (1975) were used as references. The first theory illustrates how adolescent girls adapt their menstrual hygiene practices based on social constraints, available resources, and interactions with their environment. The second theory explains the perceptions and barriers related to adolescent girls' hygiene management.

2 Materials and Methods

This analytical cross-sectional study employs a quantitative approach. The target population consists of female students enrolled in the 2020–2021 school year in the ninth grade at CEG 1 Dangbo and CEG Djigbé. The sample of adolescent students was selected using a non-random method with the convenience sampling technique, such that those present on the day of the survey were interviewed. The selection criteria focused on the following aspects:

- being a student regularly enrolled for the 2020-2021 academic year at one of the middle schools in the municipality of Dangbo;
- being present on the day of the survey;
- having already started menstruating;
- being between 14 and 17 years old;
- having given informed, written consent to participate in this research.

This resulted in a sample of 68 adolescent female students.

3 Results and Discussions

3.1 Results

This section presents an analysis of the survey data. This data led to the following findings Practices

➤ *Menstrual protection products*

The onset of menstruation requires the use of sanitary products. The selection and use of these products among adolescent students are illustrated in the table below.

Table 1
Sanitary products used by female students at CEG1 Dangbo and CEG Djigbé (n = 68) in 2021

Types of products used during menstruation	Respondents' answers	
	Yes Percentages	No Percentages
Fabrics	92,6	07,4
Disposable towels	30,9	69,1
Toilet paper	04,4	95,6

Table 1 shows that 92.6% of respondents use cloth as menstrual protection. Specifically, 30.9% use disposable pads and 4.4% use toilet paper.

➤ *Frequency of replacement of sanitary products*

The frequency of replacement of sanitary products is important because it allows adolescent girls to maintain good hygiene and prevent the risk of infection.

Table 2
Daily frequency of changing sanitary products among surveyed students at CEG1 Dangbo and CEG Djigbé (n = 68) in 2021

Frequency of replacement of protective equipment at School and at home	Percentages
Daily frequency at school	
- Once	64,7
- Twice	13,2
- Three times or more	22,1
Daily frequency at home	
- Twice	50,0
- Three times or more	50,0

Table 2 shows that 64.7% of the students surveyed change their protective gear once a day while at school. Half of the respondents reported changing their protective gear at home an average of twice a day. The other half reported changing their protective gear at least three times a day.

➤ *Level of use of protective equipment*

The use of menstrual protection products illustrates the behaviors adopted by adolescent girls that influence their daily hygiene and health.

Table 3
Practices of surveyed students at CEG1 Dangbo and CEG Djigbé regarding the use of menstrual protection products (n = 68) in 2021

Level of compliance with protective equipment usage Guidelines high	Percentages
High	22,1
Moderate	13,2
Low	64,7

Table 3 shows that 22.1% of the students surveyed demonstrated a high level of compliance with protective equipment use practices, 13.2% a moderate level, and 64.7% a low level.

➤ *Personal hygiene during menstruation*

Overall, personal hygiene contributes to physical well-being. For adolescents, maintaining personal hygiene during menstruation is essential to preserving their health and comfort. The table below shows the frequency of bathing among adolescent girls during menstruation.

Table 4
Personal hygiene practices among surveyed students at CEG1 Dangbo and CEG Djigbé regarding showering and intimate hygiene (n = 68) in 2021

Personal hygiene related to showering and intimate hygiene	Percentages
Frequency of showering	
- Twice	55,9
- Three times or more	44,1
Frequency of personal hygiene	
- Once	23,5
- Twice	47,1
- Three times or more	29,4

Table 4 shows that 55.9% and 44.1% of the students surveyed, respectively, wash themselves an average of two and three times a day during their menstrual periods. Of all respondents, 23.5% reported washing their intimate areas once a day. During this period, others did so twice (47.1%) and at least three times (29.4%).

➤ *Personal hygiene regarding handwashing and intimate areas*

Preventing infections during menstruation relies on strict personal hygiene, particularly handwashing and intimate hygiene; this is particularly evident among adolescent girls in school settings.

Table 5
Personal hygiene practices among surveyed students at CEG1 Dangbo and CEG Djigbé regarding handwashing and intimate hygiene in middle school (n = 68) in 2021

Personal hygiene related to handwashing and Intimate areas	Percentages
Handwashing	
- Never	11,8
- Often	35,3
- Always	52,9
Intimate areas for changing supplies	
- Yes	41,2
- No	58,8

The table shows that 52.9% of the students surveyed always wash their hands with soap and water after changing their sanitary products. Across the entire study sample, 58.8% responded that there is no designated area exclusively for girls to change their sanitary products during their periods.

➤ *Personal hygiene practices during menstruation*

Hygiene standards are universally accepted today. However, their implementation varies according to socioeconomic and cultural contexts. The data below aims to illustrate the extent to which students practice personal hygiene during menstruation.

Table 6
Practices of students surveyed at CEG1 Dangbo and CEG Djigbé regarding personal hygiene during menstruation (n = 68) in 2021

Level of personal hygiene practices during menstruation	Percentages
High	00
Moderate	16,2
Low	83,8

Table 6 shows that 83.8% of the students surveyed reported poor personal hygiene practices during menstruation.

3.2 Discussion

The study on menstrual hygiene practices among adolescent girls indicates that menstrual hygiene management among adolescent girls depends on socioeconomic and cultural contexts. Furthermore, the use of inadequate materials can significantly increase the risk of genital infections among adolescent students.

➤ *Management and use of menstrual protection products*

The study data revealed a concerning prevalence of poor menstrual hygiene practices among female students in the ninth grade at CEG 1 Dangbo and CEG Djigbé. Indeed, hygiene conditions are inadequate, as 92.6% of students use cloth as a form of protection and 64.7% do not replace their supplies until.

times a day at school. In short, the majority of the adolescent girls surveyed reported a low level of menstrual protection use. Referring to Crozier's theory, the student is a strategic actor within a restrictive system where she adapts to the school's areas of uncertainty (unsanitary latrines, lack of water), limiting her personal hygiene to preserve her modesty and avoid the constraints of the school system in which she finds herself.

Furthermore, the low use of disposable pads (30.9%) and the reduced frequency of changes can be explained by a low perception of infection risks. According to the Health Belief Model, engaging in healthy behavior depends on the perceived benefits compared to the perceived barriers. Thus, barriers (the cost of pads, lack of privacy at school) influence the assessment of health benefits. This reality keeps adolescent students in risky habits (the use of cloth pads and infrequent changes).

These findings are consistent with research by the United Nations Population Fund (UNFPA, 2022, cited by Mérienne, Bernard, and Charlier, p. 10). These authors note that in 2022, 65% of Kenya's female population faced the financial inability to purchase the sanitary products necessary to manage menstrual flow. The report on menstrual insecurity in Flanders (2022, cited by Mérienne, Bernard, and Charlier, p. 10) indicates that in 2019, a survey of 2,608 Flemish girls and young women aged 12 to 25 in Belgium revealed that more than one in ten was unable to purchase menstrual products. This research highlights the financial inability of a significant portion of the female population to purchase industrial menstrual products. In the face of these barriers, some authors emphasize women's resilience through the use of "Kodjo," a reusable menstrual product. The report by EQUIPOP, UNFPA, and the French Muskoka Fund (2022, p. 37) specifies that the "Kodjo" is a type of protection that is washable and reusable. It is widely used in Sub-Saharan Africa by some

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women and girls. In line with this, the [Council on the Status of Women \(2021\)](#) notes that the “Kodjo” has been abandoned in favor of other disposable and more modern alternatives, even though it is an eco-friendly reusable product.

➤ *Menstrual and environmental hygiene*

The study highlights a discrepancy in the data collected: while most students maintain good personal hygiene (55.9%) and shower twice a day, specific behaviors related to sanitation remain a cause for concern. The study's results indicate that 83.8% of adolescent girls exhibit poor overall hygiene practices, characterized by incomplete handwashing, with only 52.9% always using water and soap, and the lack of specific infrastructure for 58.8% of them. Referring to Becker's Health Belief Model (HBM), the study's data show that awareness campaigns are not sufficient to overcome the barriers perceived by students; furthermore, the difficulty in accessing soap and water makes the adoption of preventive behavior secondary. As for Crozier's Actor-System Theory, it reveals that the school is an organization where the absence of spaces reserved for adolescent girls (58%) constitutes a structural constraint. Consequently, these girls develop coping strategies to manage their modesty. Furthermore, maintaining personal hygiene at home compensates for the uncertainties associated with a lack of control over their school environment. The study's findings align with the reasoning of the authors ([Sommer et al., 2013](#)). They point out that in schools, girls in low-income countries face inadequate hygiene conditions, water unsuitable for cleaning, a lack of soap, a lack of privacy, toilets that are out of order or unclean, and a lack of resources for hygienic menstrual management in educational settings. These findings differ from those of [Maina et al. \(2024\)](#), in whose study 92.9% of respondents reported washing their hands after each use of production equipment, which corresponds to an average of three times a day. Furthermore, studies conducted in Burkina Faso ([Komboigo, 2022](#)) and the DRC ([Mishika, 2024](#); [Muyisa, 2021](#); [Parent et al., 2022](#)) have also revealed comparable results.

4 Conclusion

This study highlights personal hygiene practices among ninth-grade students at CEG 1 Dangbo and CEG Djigbé. Analysis of the results reveals a general lack of adequate menstrual hygiene management practices among adolescent students. The predominant use of cloth as a protective measure, combined with a sometimes insufficient frequency of changing, indicates economic and structural constraints. Furthermore, despite some good personal hygiene practices regarding bathing and handwashing, the overall level remains low, as evidenced by the high percentages of poor practices regarding both the use of materials and personal hygiene. In addition to these aspects, the lack of adequate infrastructure within their schools limits the conditions for effective menstrual management. These results highlight the need to strengthen advocacy efforts to educate and improve material conditions to promote better menstrual hygiene among adolescent girls. However, our study has limitations related to its non-representative sample size and a purely quantitative approach. Future directions include a longitudinal approach combining qualitative and quantitative methods to assess changes in knowledge.

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Declaration of Conflict of Interest

The authors declare no conflict of interest.

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