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MENSTRUAL HEALTH LITERACY AND COMMUNICATION: A CASE STUDY OF BUILSA NORTH MUNICIPALITY

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DECLARATION

STUDENT'S DECLARATION

I, **Amanda Agbonglie Akum,** declare that this dissertation, except quotations and references contained in published works, which have all been identified and duly acknowledged, is entirely my original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE: ……...

DATE…….

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work were supervised in accordance with the guidelines for supervision of dissertations as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: PROFESSOR CHRISTIANA HAMMOND

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DATE: ……..…

DEDICATION

Dedicated to my family, who have been my source of motivation and support throughout this period.

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ABSTRACT

Menstrual health literacy is essential for women's empowerment, their well-being, and participation in healthcare communication. This study examined menstrual health literacy and communication in the Builsa North Municipality, Upper East Region, Ghana, focusing on how women access and use information, the factors that influence their understanding, and strategies to improve menstrual health communication. The study was guided by Sørensen et al. (2012) the Integrated Model of Health Literacy (IMHL). Using a qualitative case study design, the data were collected from 18 participants through focus group discussions and in-depth interviews. Purposive and snowball sampling techniques were used, and data were analysed using Braun and Clarke's framework of thematic analysis. The study found that women primarily rely on informal channels, such as peers, social media, and lived experiences, to access menstrual health information, even though these sources are sometimes incomplete or misleading. Additionally, the study found that women experienced challenges in accessing and using menstrual information at home, in school and at health centers. However, the study found that women's menstrual health communication improved through comprehensive education, peer education, and innovative communication tools, among other approaches. The study concludes that menstrual health literacy is multidimensional and depends not only on knowledge acquisition but also on supportive environments and enabling policies to thrive because knowledge alone is not enough to empower women to communicate. The study therefore recommended integrating comprehensive menstrual health education into school curricula, strengthening community-based and peer-led awareness campaigns, training healthcare providers in culturally sensitive communication, and implementing policies that promote menstrual health literacy.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Menstruation marks the beginning of a woman's reproductive life. Menstruation is a natural process that women experience. However, it is misunderstood and surrounded by cultural silence or stigma (Long et al., 2022). The United States Department of Health and Human Services and the Office on Women's Health define menstruation as the monthly shedding of the uterine lining, during which blood exits the body through the cervix and the vagina, typically lasting between three and five days (Walton, 2013). This biological cycle begins with menarche, a critical phase of puberty that signifies reproductive maturity and the capacity for childbearing (Walton, 2013).

Although menstruation is a natural occurrence, it is mainly subjected to cultural taboos and discriminatory practices. In some Ghanaian and Malawian communities, menstruation is always seen as a "women's matter," and men are discouraged from engaging in discussions about it (CARE, 2021). Girls in these kinds of settings have reported that they receive little or no support from their fathers, especially when they want to acquire menstrual hygiene products like sanitary pads. Additionally, some women and girls are excluded from communal and economic activities such as farming during menstruation. These practices reinforce menstrual exclusion and deepen gender inequality.

The silence and exclusion around menstruation are cultural, and they have significant health consequences. Menstruation is a symbol of reproduction as well as an essential indicator of women's overall health. The World Health Organization defines menstrual health as a state of complete physical, mental, and social well-being, not merely the

absence of disease (Keith, 2016). Yet, menstruation often disrupts women's daily routines and, in many cases, leads to the violation of health rights, especially when women do not have or have limited access to hygiene products, medical support, and social inclusion (Keith, 2016). Vishwakarma et al. (2021) further argue that to achieve menstrual equity for women, societies must confront and dismantle systemic forms of discrimination which are rooted in cultural norms. Menstrual health will continue to be neglected when the national level does not make efforts to ensure an effective menstrual education to destigmatise the phenomenon, because this can lead to a cycle of ignorance, shame, and health risks.

This knowledge gap is predominantly evident in countries like Nigeria, where a study by Iliyasu et al. (2012) found that many adolescent girls in northern Nigeria had heard about menstruation before menarche. Still, their understanding of the menstrual cycle was mainly inaccurate. The study revealed that discussions between mothers and daughters was more focused on menstruation (just the flow of blood) and puberty changes that the girls are likely to see, but it lacked depth regarding the physical aspects of the menstrual cycle. Most of the adolescent girls who participated in the study could not correctly identify the fertile period or understand the typical duration of a menstrual cycle. This reflects an essential gap in menstrual health literacy, which is reinforced by societal silence and cultural taboos surrounding menstruation.

Such ignorance can limit menstrual management and, consequently, delay the identification of menstrual disorders, such as dysmenorrhea, polycystic ovarian syndrome (PCOS), endometriosis, or anemia resulting from heavy bleeding (O'Flynn & Britten, 2004). When these conditions are not diagnosed or not treated, they can result in more serious health complications such as infertility, cardiovascular diseases, and reproductive system damage (Solomon et al., 2002). Early intervention is often

hindered by poor communication. Sometimes, young girls are not able to communicate with their parents, so them to be taken to the hospital to seek help. Women who also find their way to the hospital are not able to communicate effectively with their healthcare providers, partly due to a lack of confidence and partly due to unaccommodating clinical environments.

This underscores the critical need for effective and empathetic health communication, especially in reproductive health settings. Mosconi et al. (2021) aver that infertility is a widespread condition that usually causes emotional distress. They noted that good communication creates a supportive environment for decision-making and emotional resilience for women with menstrual health issues. In their view, the clinical consultation should be patient-centered, aligning with the patient's values, needs, and circumstances. Similarly, Borghi et al. (2021) argue that trust is established when the patient feels seen, heard, and cared for, especially during sensitive encounters like fertility diagnoses. This study situates itself within the Bulsa Municipal of the Upper East Region of Ghana, a community which is a predominantly rural area, a place where socio-cultural taboos persist.

1.1.1 Health Literacy and Menstrual Health Literacy

Health literacy is widely recognized as an important determinant of health outcomes. It refers to the extent to which individuals can access, understand, and use basic health information and services to make informed health decisions (Coughlin et al., 2020). This type of literacy goes beyond the ability to read and write; to include broader competence in understanding health-related information and in navigating the healthcare system. Yang (2022) asserts that health literacy enables individuals to acquire important health knowledge. They further claim that for healthcare delivery to

be effective, health providers must assess and respond to a patient's level of health literacy to engage them meaningfully in the care process.

Furthermore, Aboumatar et al. (2013) acknowledged that health literacy is the capacity of an individual to process and interpret basic health information and apply it in ways that promote appropriate decision-making. They indicated that low health literacy is associated chiefly with poor health outcomes, because individuals may struggle to follow medication prescriptions, or they may struggle to follow a recommended behavioural change. Importantly, limited health literacy can impede patient-centered communication; because patients may find it difficult to express their symptoms or understand medical advice. This can negatively affect the quality of interaction between patients and their healthcare providers.

Closely related to general health literacy is menstrual health literacy, which refers to individuals' ability to understand and make informed decisions about their physical, mental, and social well-being in relation to menstruation (Eschler et al., 2019). Hennegan et al. (2021) define menstrual health literacy as the knowledge about the menstrual cycle, the management of menstruation-related symptoms and disorders, the availability of health services, and the ability of an individual to access facilities that ensure hygiene, comfort, and dignity of menstruators. This literacy also includes the ability to navigate societal expectations and promote an environment that promotes psychological well-being during menstruation.

Additionally, Sánchez López et al. (2023) define menstrual literacy as the knowledge and ability to manage one's menstrual health effectively. They position menstrual literacy as an important means to achieve gender equality, fulfil human rights commitments, and advance the Sustainable Development Goals (SDGs), particularly

by dismantling menstrual stigma and misinformation. The United Nations Human Rights Council (UNGAHRC, 2016) also recognises menstrual literacy as key to safeguarding the dignity and agency of menstruating individuals, making it a subject of both public health and human rights concern (Tellier & Hyttel, 2018).

Even though menstrual health literacy is important, it remains worryingly low in many low- and middle-income countries (LMICs). Chandra-Mouli and Patel (2017) notes that many girls begin menstruation with little or no prior information or preparation. This lack of preparedness is a result of deep-rooted cultural taboos and the constant silence surrounding menstruation. Korir et al. (2018) added that even when girls are informed, their understanding is mostly clouded with inaccuracies and misconceptions, such as that menstruation is a curse or a punishment. The consequences of such misinformation are deep. For instance, a study conducted by Belayneh and Mekuriaw (2019), revealed that, 68% of adolescent girls in southern Ethiopia had limited knowledge about menstruation because more than half of them mistakenly believe that menstruation is a disease. These findings underscore the need to improve menstrual health literacy, to dispel myths and to prepare girls physically and emotionally for their first period (menarche) and beyond.

Additionally, Tucker et al. (2019) contended that addressing current attitudes toward menstruation on a global scale is very important for changing the menstrual experience of women. They claim that education is a powerful tool in shifting harmful perceptions and equipping girls with the knowledge and confidence they need to manage their menstrual health. Therefore, improving menstrual literacy is not just an educational or health-related goal, but it is also a strategy for empowerment, gender justice, and meaningful healthcare engagement.

1.1.2 Menstrual Health Education and Women's Empowerment

Millions of women and girls across the world have limited or no knowledge about the physical changes happening in their bodies. This is mostly because of the continued silence surrounding menstruation and the little information available at home and even in schools (Vishwakarma et al., 2021). The lack of comprehensive menstrual education places adolescent girls at risk of unplanned pregnancies, emotional distress, and mental instability. The absence of practical guidance on menstrual management, in addition to poor access to clean water, sanitation, and hygienic infrastructure in schools, makes it very difficult for girls to manage their menstruation with dignity (Long et al., 2022).

Furthermore, stigmatisation makes these challenges worse. Many women and girls who have menstrual irregularities or discomforts are unable to discuss their experiences due to societal taboos surrounding menstruation openly. Baird et al. (2022) observe that menarche, despite its biological and cultural significance, is mostly come with anxiety and feelings of shame, mostly because of misinformation and deeply rooted cultural taboos. In support of this perspective, Vishwakarma et al. (2021) argue that menstruation should be recognised as a positive indicator of good health and discussed openly to dismantle stigma. They stress that overcoming the stigma associated with menstruation is important for women and girls to reach their full potential.

In response to these challenges, global health advocates concur that structural support systems should be strengthened. According to Tellier and Hyttel (2018), for adolescent girls to successfully manage their periods, governments must invest in providing adequate sanitation infrastructure, ensure access to affordable menstrual products, and promote gender parity in schools and communities. However, infrastructural development alone is not sufficient. Comprehensive menstrual health education (MHE) must be integrated into broader health and education initiatives to empower women and

girls with accurate knowledge about their bodies. Sommer, et al. (2015) assert that Menstrual Health Education (MHE) programs are important tools for empowerment, because they have the potential to equip women and girls with the knowledge they need to make informed decisions about their menstrual hygiene. They posit that true empowerment begins when individuals understand their bodies and the biological processes that define their health experiences.

The role of psychological empowerment in menstrual health education is further entrenched by empowerment theory, as espoused by Perkins and Zimmerman (1995), which stresses the importance of fostering self-esteem, self-efficacy, and active participation. Studies conducted by Hennegan et al. (2019), prove that menstrual health education can enhance psychological empowerment by increasing a girl's self-confidence, consequently dismantling the feelings of shame, and normalising, menstruation as a healthy process. Women and girls who receive accurate and respectful menstrual education are more likely to internalize menstruation as a natural phenomenon rather than a source of embarrassment or stigma.

Moreover, gender norms remain noteworthy barriers to menstrual equity. Comprehensive MHE programs play an important role in challenging discriminatory gender norms by promoting open discussion about menstruation. Sommer, et al. (2015) argue that menstrual health education initiates broader conversations about gender equity, encouraging both men and women to challenge and dismantle stereotypes and biases associated with menstruation. By promoting open discussions, MHE will not only change individual attitudes but it will also reshape societal perceptions and behaviors toward the phenomenon.

In addition, Sommer et al. (2015) hypothesises that girls who engage in menstrual education normally develop stronger support systems, which enables them to share their experiences, challenges, and coping strategies related to menstruation. These social networks provide emotional support, reduce isolation, and act as a powerful catalyst for broader empowerment, enabling women and girls to navigate menstrual health challenges better and advocate for their rights.

1.1.3 Health Communication and Patient-Centered Communication

Health communication is a crucial and multifaceted field that encompasses the creation, dissemination, and exchange of health-related information among individuals, communities, and institutions with the primary aim of influencing health behaviors, promoting public health, and improving health outcomes (Schiavo, 2014). In this regard, health communication is not merely the transmission of medical facts but involves the interpersonal, cultural, and emotional dimensions of human interaction. It seeks to engage, persuade, empower, and support individuals, including healthcare professionals, patients, policymakers, organisation, and the general public, in the promotion of healthier behaviours and health-supportive policies. In the context of menstrual health, communication serves not only to inform but also to challenge stigma, foster openness, and empower women and girls to make informed decisions about their health (Dubey & Sivakami, 2024).

Schiavo (2014) underscores that health communication is people-centered, emphasising that it must begin with the perspectives, needs, and emotions of the people and ultimately return to them. It is rooted in the understanding that health information should not simply be delivered but should resonate with individuals' values, beliefs, and social contexts. For menstrual health literacy, this means that messages and dialogues should resonate with women’s lived experiences, beliefs, and social contexts. Thus,

communication becomes a two-way process characterized by empathy, respect, and active engagement.

Effective communication is particularly critical within healthcare settings. Bello (2017) argues that, communication is indispensable to human life, whether verbal or nonverbal, and is essential not only for the transmission of knowledge but for building meaningful relationships. In healthcare, communication plays a central role not only in treatment adherence but also in fostering patient trust and satisfaction. In relation to menstruation, this translates into healthcare providers creating an environment of trust where women feel comfortable discussing sensitive issues without fear of judgment.

Central to contemporary healthcare delivery is the concept of patient-centered communication. Yang (2022) describes patient-centered communication as the practice of respecting and addressing the physical, psychological, and spiritual needs of patients. It involves acknowledging patients as active partners in their healthcare, thereby fostering autonomy, dignity, and greater adherence to medical advice. Engaging patients in meaningful dialogue allows healthcare providers to better understand potential barriers to recommended behaviors or medications and to negotiate solutions that align with patients' individual preferences and life circumstances.

Empirical evidence supports the critical role of effective communication in enhancing patient outcomes. Crawford et al. (2017) found that effective communication between patients and healthcare providers significantly improves patient care, satisfaction, and recovery. Similarly, Joolaee et al. (2010), in a study conducted at an Iranian hospital, researchers discovered that patients valued effective nurse-patient communication as more significant than even the physical aspects of care. Their findings highlight that empathy, listening, and information-sharing are foundational to positive patient

experiences. Further evidence comes from maternal health research in Malawi. Madula et al. (2018) reported that patients expressed greater satisfaction when healthcare providers demonstrated warmth, empathy, and respect. Conversely, poor communication characterized by verbal abuse, disdain, and withholding of information negatively affected patients' trust and perception of the care they received. These findings correspond challenges faced in menstrual health, where dismissive or judgmental communication can reinforce stigma and discourage care-seeking.

Henly (2016) echoes these observations by emphasizing that communication is central to clinical relationships, particularly given the intimate and often overwhelming nature of health concerns, including those related to menstruation. He advocates that patient-centered communication is essential for ensuring optimal health outcomes and reaffirms the longstanding nursing principle that care must be tailored to each patient's individual needs and concerns. The importance of mutual communication is further emphasized by Boykins (2014), who posits that true healthcare communication is a mutual exchange where both the patient and provider actively listen, share views, and ask clarifying questions. This reciprocal dialogue ensures that both parties fully understand and appreciate each other's perspectives, strengthening the therapeutic relationship. For menstrual health, this reciprocity enables women to voice their concerns about pain, irregular cycles, or access to sanitary products, while providers share knowledge and supportive guidance.

Building on these assertions, Thompson and Harrington (2022) advocate for a dialogical approach to patient-centered care, where decision-making is based not solely on scientific evidence but also on patients' preferences, goals, and lived experiences. They introduce the concept of mutual persuasion, whereby the patient presents their views on their condition and treatment preferences, and the healthcare provider, in turn,

offers evidence-based advice to guide decision-making. This engagement fosters a sense of responsibility and ownership among patients, increasing the likelihood of treatment adherence and sustainable behavior change.

Taken together, these perspectives indicate that health communication, especially when it is patient-centered, is important for promoting menstrual health literacy. When trust, dialogue, and empathy are present, communication becomes a powerful tool for disseminating information and also reducing stigma, empowering women, and supporting healthier menstrual practices.

1.1.4 Overview of the study area

This study was conducted in the Builsa North Municipality in the Upper East Region of Ghana. The municipality is predominantly rural, with livelihoods largely centered on agriculture and small-scale trading. Access to healthcare services is provided through public health facilities, community-based health planning and services (CHPS) compounds, and private providers. Like many rural districts in northern Ghana, sociocultural norms strongly shape discussions around reproductive and menstrual health, often limiting open communication on such issues. These contextual characteristics make the municipality an appropriate setting for examining how women access, interpret, and communicate menstrual health information. A detailed justification for the selection of the study area is presented in Chapter Three.

1.2 Statement of the Problem

Menstrual health has increasingly been recognized as a hygiene concern and also a fundamental human rights and gender equality issue. Global advocates in education, human rights, and health equity have emphasized the importance of equipping girls and women with comprehensive menstrual health knowledge, ensuring safe spaces for open

discussions, and addressing menstrual health issues as part of broader empowerment efforts (WHO, 2022). Menstruation is no longer seen solely as a private biological process but as an issue linked to broader structural inequalities affecting women's well-being, agency, and opportunities.

Despite growing attention, literature reveals significant gaps in the understanding of how menstrual health literacy and communication together function as tools for empowerment, especially in challenging stigma, enabling dialogue across different social settings, and fostering informed decision-making. While numerous studies have explored women's menstruation experiences, stigmatization, hygiene management, and menstrual disorders (Dasgupta & Sarkar, 2008; Solomon et al., 2002), relatively limited research has examined how knowledge on menstruation is communicated and negotiated in families, schools, communities, and health spaces, and how this in turn strengthens women's confidence and participation.

For instance, Dasgupta and Sarkar (2008) reported that although 67.5% of adolescent girls in West Bengal knew about menstruation before menarche, the majority practiced harmful restrictions due to pervasive myths and limited literacy. Similarly, Solomon et al. (2002) demonstrated how irregular menstrual cycles, often undetected due to lack of awareness, are associated with long-term cardiovascular risks. Sánchez López et al. (2023) further emphasized that gaps in menstrual literacy led to misinterpretation of menstrual health symptoms, delaying diagnosis and treatment. These findings affirm that limited menstrual health literacy poses significant threats to women's health, autonomy, and access to care.

Moreover, while patient-centered communication has been widely acknowledged as crucial for improving health outcomes (Street et al., 2009), and health literacy is

recognized as foundational to active participation in healthcare (Coughlin et al., 2020), scant research connects menstrual health literacy specifically to women's ability to communicate about menstruation freely, even in clinical interactions. Studies such as Roodbeen et al. (2020) explored communication strategies for patients with low health literacy in palliative care, and Yang (2022) investigated health literacy competencies in Korean nurses to support patient-centered care. However, these studies do not directly address the empowerment of women through communication on menstrual health literacy.

In the Ghanaian context, existing research tends to focus on menstrual stigma, socio-cultural restrictions, and menstrual hygiene management challenges (Mohammed & Larsen-Reindorf, 2020; CARE, 2021; Sumankuuro et al., 2023). For example, Mohammed and Larsen-Reindorf (2020) highlighted how deep-rooted taboos and poor menstrual knowledge persist in Northern Ghana, affecting girls' educational participation and self-esteem. CARE's 2021 study similarly revealed entrenched gender norms where menstruating girls are excluded from farming and social activities, receiving little or no financial or emotional support from male family members. Sumankuuro et al. (2023) added that adolescent girls often face economic barriers, leading some into risky behaviors to afford menstrual products. However, research directly exploring how menstrual health literacy is communicated remains virtually absent.

Although studies exist on patient-centered communication in Ghana (Asah-Opoku et al., 2023; Adugbire et al., 2024; Nkrumah & Abekah-Nkrumah, 2019; Baah et al., 2023), such studies have primarily focused on broader healthcare interactions such as peri-operative care and maternal health, with minimal focus on reproductive health communication specifically, around menstrual issues; indicative that no study has

examined menstrual literacy communication for the purposes of empowerment in the Builsa North Municipal of the Upper East Region of Ghana, an area where cultural taboos, limited education, and access to healthcare intersect to impact menstrual experiences.

Furthermore, the urgency of addressing menstrual health literacy in Ghana becomes even clearer when considering regional challenges like Female Genital Mutilation (FGM), prevalent in parts of the Upper East Region (Ocran & Atiigah, 2022). Cultural practices that marginalize women's bodily autonomy highlight the need for empowering women to engage confidently with healthcare providers regarding menstrual and reproductive health.

Therefore, although studies exist on menstrual health literacy and women's empowerment from various perspectives, there is a significant gap in the literature concerning how menstrual health literacy is communicated and how this communication contributes to women's empowerment. Specifically, there is a lack of research exploring the role of menstrual health literacy in enhancing women's menstrual communication especially with healthcare providers. This gap in literature underscores the need to investigate this relationship, particularly in underserved and culturally sensitive regions such as the Builsa North Municipal.

This study seeks to fill this gap by examining how menstrual health literacy is communicated in the Builsa North Municipal of the Upper East Region of Ghana, and how these communication processes empower women to access information, share knowledge, and challenge stigma. As Yang (2022) recommends extending studies on health literacy's impact into different populations and health issues, this research underscores the relevance of focusing on menstrual health. Therefore, the study

contributes to literature by exploring how women in the Builsa North Municipal navigate conversations on menstruation within families, peer groups, communities, and healthcare settings, and how menstrual health knowledge shapes their confidence, decision-making, and empowerment.

1.3 Research objectives

1. a. To examine how women in the Builsa North Municipality access information on menstrual health.

   b. To examine how women in the Builsa North Municipality utilize information on menstrual health.
2. To explore the dominant factors that are influencing women's menstrual health literacy and communication in the Builsa North Municipality.
3. a. To identify communication strategies that are used to promote menstrual health literacy and communication in the Builsa North Municipality.

   b. To identify other approaches that are used to promote menstrual health literacy and communication in the Builsa North Municipality.

1.4 Research questions

1. a. How do women in the Builsa North Municipality access information on menstrual health?

   b. How do women in the Builsa North Municipality utilize information on menstrual health?
2. What are the dominant factors influencing women's menstrual health literacy and communication in the Builsa North Municipality?
3. a. What communication strategies are used to promote menstrual health literacy and communication in the Builsa North Municipality?

b. What other approaches are used to promote menstrual health literacy and communication in the Builsa North Municipality?

1.5 Significance of the study

The issue of menstrual health, women's well-being, and empowerment is a global priority, reflected in the Sustainable Development Goals (SDGs) five (5), which emphasize gender equality and women's empowerment. Strengthening menstrual health literacy and communication is essential for advancing these goals, as it enables women and girls to access accurate information, challenge stigma, and make informed health decisions.

Academically, this study contributes to the growing body of literature on health literacy and communication by situating menstrual health literacy within the Ghanaian context. The findings will provide a knowledge base for scholars to design curricula and educational programs aimed at improving menstrual health literacy among women and girls, thereby supporting empowerment and agency.

Practically, the study has the potential to improve women's health outcomes and reshape societal attitudes towards menstruation. By highlighting the role of communication in menstrual health literacy, it underscores the need for supportive and culturally sensitive approaches that foster openness and inclusion. This can guide healthcare providers in developing communication strategies that better address women's needs and realities.

At the policy level, the study offers valuable insights for government agencies and non-governmental organizations to design and implement policies and programs that promote menstrual health education and empowerment. Specifically, the findings can

inform community-based initiatives in the Builsa North Municipality and similar contexts, helping to create environments where women and girls are supported to thrive.

1.6 Scope

This study seeks to explore how menstrual health literacy empowers women to actively engage in patient-centred communication with healthcare providers, thereby promoting better healthcare experiences and outcomes. The research employs a qualitative case study design, focusing on the Bulsa North Municipal in the Upper East Region of Ghana. Using purposive non-probability sampling and snowballing, the study engaged a total of 18 participants comprising one specialized healthcare provider, seventeen women with lived experiences of menstrual health disorders. Five were engaged in individual interviews and twelve participants involved in two separate focus group discussions. The participants were selected based on their experiences with menstrual health challenges and their interactions with the healthcare system. Data was collected through in-depth interviews and focus group discussions to generate rich, context-specific insights into the relationship between menstrual health literacy and communication in the district.

1.7 Organisation of the study

This study is organized in five interrelated chapters. Chapter one is the introductory chapter, which contains the background of the study, statement of the problem, the objectives of the study, research questions, significance of the study and ends with the delimitation of the study. Chapter two discusses a review of relevant literature and the theoretical framework of the study. Chapter three delves into the methods of data collection and analysis. This chapter presents the research approach, research design, sample, sampling technique, data collection techniques and procedures, and method of data analysis. Chapter four presents the findings and discussion of the collected data,

while chapter five summarises the study's findings, presents conclusions, and offers recommendations for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews existing literature relevant to the study's focus on menstrual health literacy and patient-centered communication. It provides conceptual clarity on the study's core ideas and theoretical underpinnings, followed by a literature review organised around the three research objectives. The chapter draws from both global and Ghanaian sources to provide a balanced and contextual understanding of how communication strategies, access to information, and systemic factors influence women's menstrual health experiences and their ability to engage with healthcare providers.

2.1 Conceptual Framework: Menstrual Health Literacy and Patient-Centered Communication

Understanding the conceptual foundations of this study is important to appreciating how menstrual health knowledge and communication dynamics intersect to shape women's reproductive health outcomes.

This study draws on Sørensen et al.'s Integrated Model of Health Literacy, which identifies four key competencies: accessing, understanding, appraising, and applying health information. These dimensions provide a structured way of examining how women in Builsa North Municipality engage with menstrual health knowledge and translate it into practice. Within this framework, menstrual health literacy is not limited to awareness of menstruation but also includes the ability to critically evaluate information and apply it effectively in everyday life. For instance, being able to differentiate between cultural myths and medically accurate knowledge.

2.1.1 Menstrual Health and Menstrual Health Literacy

Menstrual health encompasses the complete physical, mental, and social well-being related to menstruation, going beyond the absence of illness or dysfunction (Hennegan et al., 2021). It integrates several dimensions, such as hygiene management, societal acceptance, access to resources, and comprehensive education. Menstrual health literacy, on the other hand, involves acquiring, understanding, and using knowledge about menstruation to make informed health decisions and improve overall well-being (UNICEF, 2019).

Together, these concepts are critical for fostering gender equality and improving women's health outcomes. Studies consistently highlight the interconnected nature of menstrual health and menstrual health literacy. Sommer et al. (2016) found that access to accurate information and hygienic resources for menstrual management significantly affects girls' school attendance and performance, emphasizing the need for targeted education and resource allocation. Similarly, Chandra-Mouli and Patel (2017) identified a direct correlation between menstrual education and improved health outcomes, advocating for comprehensive menstrual health curricula in schools. The stigma surrounding menstruation continues to hinder open dialogue and progress in menstrual health literacy. A study by Castro and Czura, (2024) revealed that cultural taboos surrounding menstruation worsen misinformation, leading to poor menstrual health management and adverse mental health outcomes. This reinforces the necessity of integrating menstrual health literacy into community-based programs to address socio cultural barriers effectively.

Baird et al. (2022) explored the impact of a gender transformative life-skills intervention on menstrual health literacy among very young adolescents in rural Ethiopia. The study found that participatory workshops addressing menstruation,

hygiene management, and self-advocacy significantly improved menstrual health literacy among participants, reducing stigma and enhancing resource utilization. These findings underscore the potential of grassroots initiatives in addressing menstrual health challenges in low-income communities. In India, Singh et al. (2022) an evaluation of menstrual health and hygiene management among adolescent girls in rural areas was conducted. Their research revealed that while a significant proportion of girls demonstrated basic knowledge about menstruation, a much smaller percentage practiced adequate menstrual hygiene. The study attributed this gap to limited access to menstrual products, inadequate supportive infrastructure, and cultural restrictions, and emphasised the urgent need for systemic interventions.

Menstrual health literacy has also been tied to broader societal implications. A study by Hennegan and Montgomery (2016) highlighted that inadequate menstrual health management contributes to gender disparities in education and employment, particularly in low-resource settings. The researchers recommended integrating menstrual health literacy into broader gender equality and public health frameworks to mitigate these disparities. Within the framework of Sørensen et al.'s Integrated Model of Health Literacy, menstrual health literacy can be conceptualised as four competencies: accessing reliable information about menstruation; understanding it within cultural and health contexts; appraising the credibility of sources; and applying knowledge to everyday practices such as hygiene management and health-seeking behaviour. This perspective highlights that literacy is not static but a process that evolves with social support, available resources, and personal confidence.

Further, recent advancements in digital tools have expanded opportunities for menstrual health education as mobile applications are increasingly recognized as valuable tools for enhancing menstrual health literacy, particularly among young

women in urban settings. Peng et al. (2023), examined the role of app-based interventions in improving menstrual knowledge and cycle tracking, finding that digital tools can lead to better health outcomes by reducing uncertainty and improving self-management. Similarly, Bucher et al. (2025) explored the functionality and inclusiveness of menstrual tracking apps, noting that while they improve symptom monitoring and menstrual education, they often lack validated health information and fail to account for cultural and socioeconomic diversity. This reinforces the IMHL emphasis on equitable access and contextual adaptation of health information, showing that digital tools must be tailored to local realities if they are to reduce rather than reinforce inequalities.

The global COVID-19 pandemic further highlighted the vulnerabilities in menstrual health systems. Crawford and Waldman (2021) observed a sharp rise in period poverty and reduced access to menstrual products, particularly in low-income communities. This underscored the need for policies ensuring sustainable access to menstrual resources and information during crises. Collectively, these studies provide a robust understanding of menstrual health and menstrual health literacy. They emphasize the multidimensional nature of the issue, which intersects education, health, policy, and cultural norms. By situating these insights within the Integrated Model of Health Literacy, this study underscores that menstrual health literacy is not simply knowledge acquisition but a functional skill set that enables women to navigate information, make informed choices, and communicate effectively about their health needs.

2.1.2 Conceptualizing Communication in Menstrual Health Literacy

Communication is a central component of health promotion and healthcare delivery, serving as the medium through which knowledge, beliefs, and practices are shared between individuals, communities, and providers (Corcoran, 2007). In menstrual

health, communication determines not only how women access and interpret information but also how they discuss menstruation within families, peer groups, schools, and health facilities (Casola et al., 2024). Effective communication thus becomes both a determinant of menstrual health literacy and a tool for reducing stigma.

Traditionally, health communication has evolved from top-down, paternalistic models to more participatory and dialogic approaches that emphasize collaboration, mutual respect, and shared decision-making (Kwame & Petrucka, 2021). Epstein and Street Jr. (2011) argue that communication in health settings is most effective when it prioritizes the patient's perspective, fosters therapeutic engagement, and enables active involvement in decision-making. This aligns with the Integrated Model of Health Literacy, which emphasizes individuals' ability to access, understand, appraise, and apply information, all of which are mediated through communication.

The biopsychosocial model further highlights that health outcomes are shaped not only by biological conditions but also by psychological and social dimensions, which are best addressed through open, respectful communication (Turabian, 2018). For menstrual health, this means that discussions should move beyond biomedical symptoms to include emotional well-being, cultural beliefs, and social barriers that affect how women experience and manage menstruation. Core dimensions of effective menstrual health communication include active listening and empathy, transparent, accessible information-sharing, dialogues that respect women's lived experiences, preferences, and autonomy in managing their menstrual health, and collaborative problem-solving between women, peers, families, and health providers.

While menstrual disorders such as dysmenorrhea, menorrhagia, oligomenorrhea, or amenorrhea are well documented in gynecological literature (Fritz & Speroff, 2012),

studies indicate that women experiencing these conditions may hesitate to seek care due to shame or fear of being dismissed (Ozder & Salduz, 2020). Hennegan et al. (2019) note that negative provider attitudes and cultural taboos often reinforce silence, leaving women without adequate support. Communication barriers are predominantly evident in Ghana, where hierarchical provider-patient relationships and time constraints have been shown to discourage open discussion of reproductive health issues, including menstruation (Adugbire et al., 2024; Nkrumah & Abekah-Nkrumah, 2019). This reflects the IMHL's assertion that health literacy is not merely an individual competency but also dependent on supportive environments and enabling communication systems.

To enhance menstrual health literacy, systemic and interpersonal challenges must be addressed. This involves equipping providers with culturally sensitive communication skills, strengthening peer and community dialogues, and empowering women with the literacy and confidence to articulate their needs. When these conditions are met, communication becomes both a pathway to menstrual health literacy and a tool for empowerment, ensuring that menstruation is treated as an essential component of women's overall health and well-being.

2.2 Access and Utilization of Menstrual Health Information for Empowerment

Understanding how women access and utilise menstrual health information is essential to appreciating how literacy translates into personal empowerment. Menstrual health literacy is not simply about the passive reception of knowledge; it encompasses the capacity to locate, understand, evaluate, and apply information in ways that improve health autonomy and informed decision-making (Nutbeam, 2000). For many women, especially in resource-limited settings, this process is shaped by complex social, economic, cultural, and institutional factors that influence both the availability of information and the capacity to act upon it.

Empowerment in the context of menstrual health occurs when women are well informed and are confident to challenge stigma, advocate for their needs, and engage meaningfully with healthcare systems. According to Chandra-Mouli and Patel (2020), this empowerment is both a process and an outcome: it involves transforming silence into dialogue, dependence into decision-making, and misinformation into clarity. For this transformation to occur, however, women must first have access to accurate, timely, and culturally relevant menstrual health information.

This section explores the pathways through which women access menstrual health information, the barriers to this access, and how they use this information to improve their confidence, social participation, and health autonomy. It draws on both global and Ghanaian literature to highlight the intersections between knowledge, agency, and empowerment, particularly within the rural and socio-culturally complex context of the Builsa North Municipal.

2.2.1 Sources of Menstrual Health Information

A clear understanding of the menstrual process is the foundation of menstrual health literacy. Menstruation is a biological process that represents the absence of pregnancy in individuals with a functional reproductive system. It involves shedding the uterine lining specifically, the progesterone-primed endometrium and is regulated by hormonal changes in estrogen and progesterone (Critchley et al., 2020). This physiological process, while important to reproductive health, is often poorly understood due to limited access to formal information and the dominance of informal sources, which are sometimes inaccurate.

Globally, menstruation typically begins during puberty, with menarche occurring between the ages of 10 and 16, though the average is around 12 to 13 years (Leone &

Brown, 2020). Despite its ubiquity, approximately 1.8 billion menstruating individuals face significant gaps in menstrual education and support (UNICEF, 2019). In Ghana and other low- and middle-income countries, access to accurate information about menstruation is often shaped by socio-cultural norms, the availability of school-based health education, and the role of parents, particularly mothers, as primary sources of information.

In many cases, girls' first knowledge of menstruation comes from interpersonal sources, usually mothers, sisters, or female relatives, rather than formal educational systems (Dasgupta & Sarkar, 2008; Mohammed & Larsen-Reindorf, 2020). While this familial mode of information sharing is accessible and trusted, it is often limited by the informant's knowledge, beliefs, and cultural discomfort. In areas where menstruation is considered a taboo subject, mothers may pass down euphemistic or restrictive narratives, leaving girls unprepared for menarche and reinforcing stigma (Bulto, 2021).

Formal educational settings, especially schools, can provide structured, scientifically accurate information about menstruation. Comprehensive sexuality education (CSE) frameworks include menstruation as a core topic, aiming to inform both boys and girls about menstrual biology, hygiene, and emotional changes (UNESCO et al., 2018). However, in many parts of Ghana, menstrual health education within schools is either absent or inconsistently delivered. A study by Sumankuuro et al. (2023) revealed that although some girls in the Upper East Region received menstrual information from teachers, many noted the content was rushed or skipped altogether due to embarrassment or inadequate teacher training.

Health professionals, especially community health nurses and midwives, also play an essential role in disseminating menstrual health information. Through school outreach

programs, antenatal talks, or home visits, these professionals can offer accurate, respectful, and context-sensitive explanations of menstruation (WHO, 2008). Yet, in rural districts like the Builsa North Municipal, such interactions are often irregular or limited due to resource constraints and understaffing.

Mass media and digital platforms are increasingly supplementing these traditional sources. Television and radio programs, especially those aired in local languages, have served as channels for menstrual health education during health campaigns or special awareness days (Sultana & Kumar, 2024). They further mentioned that social media and mobile applications are becoming more relevant, especially among urban youth, offering on-demand access to menstrual cycle tracking, FAQs, and peer discussions. However, these sources are more accessible to educated, tech-savvy women, leaving a significant proportion of rural or less literate populations underserved (Behera & Samal, 2025).

Taken together, the sources of menstrual health information available to women in Ghana are diverse but fragmented. While some women benefit from accurate and empowering education through schools, peers, or digital tools, many rely on culturally shaped narratives that perpetuate silence and misinformation. This uneven access has implications not only for menstrual health management but also for women's confidence, health-seeking behaviour, and participation in public life. As such, improving the reach, accuracy, and cultural relevance of information sources remains essential for enhancing menstrual health literacy and, by extension, empowerment.

2.2.2 Barriers to Accessing Menstrual Health Information

Access to menstrual health information is shaped not only by structural factors such as education, healthcare systems, and infrastructure, but also by deeply rooted cultural

beliefs and societal norms. These cultural frameworks, often invisible yet powerful, determine what can be spoken, who is allowed to say, and how knowledge is shared or withheld, particularly around sensitive topics like menstruation. In many parts of the world, menstruation remains a subject cloaked in secrecy, myth, and social restriction, limiting the ability of women and girls to gain timely, accurate, and empowering information (Maulingin-Gumbaketi et al., 2022; Mohammed & Larsen-Reindorf, 2020).

Culture, as Hofstede (2011) defined, refers to "the collective programming of the mind distinguishing the members of one group from another." Within this framework, societal norms act as unwritten rules that dictate acceptable behaviours. These constructs significantly shape how menstruation is perceived and addressed. In many settings, menstruation is associated with impurity, sin, or uncleanliness, leading to a host of exclusionary practices. Boosey and Wilson-Smith (2014) document how in some societies, menstruating women are prohibited from participating in religious, domestic, or even social activities, contributing to feelings of shame and marginalisation.

In Ghana, especially in the Northern part, these cultural taboos persist and manifest in restrictive practices that hinder information sharing. Mohammed and Larsen-Reindorf (2020) found that in many communities, menstruation is considered a private or shameful matter, often leading mothers to avoid open discussions with their daughters. This silence, while intended to protect modesty or preserve cultural values, leaves many girls unprepared for menarche and confused about how to manage their periods, a finding echoed by Bulto (2021), who noted that inadequate preparation can lead to stress, poor hygiene, and misinformation.

Educational gaps further compound the issue. Ganguly et al. (2024) revealed that only 8.47% of adolescent girls in their study had any prior knowledge of menstruation before experiencing it, a reflection of both poor school-based education and culturally imposed silence. Similarly, Sahay (2020) emphasized the need for educational interventions to address the significant gaps in menstrual health knowledge, noting that societal embarrassment and cultural barriers often hinder effective communication about menstruation. Studies by Maulingin-Gumbaketi et al. (2022) have revealed that in Pacific Island and African contexts, socio-cultural norms often impede women's ability to manage their menstrual health with dignity. These findings echo Mohd. Tohit and Haque (2024), those who argue that the lack of education, combined with poor access to menstrual hygiene products and sanitation facilities, disproportionately affects women and girls in marginalised communities, perpetuating cycles of poverty and exclusion.

In Ghana, although community-based programs have been effective in some regions, access to consistent and culturally responsive information remains uneven. Kumbeni et al. (2021) linked this directly to school absenteeism, observing that nearly 27.5% of girls missed school in Northern Ghana due to inadequate menstrual health education, the use of improvised materials, and culturally rooted restrictions, such as not being allowed to cook, attend school, or interact freely while menstruating.

While some cultures do offer celebratory practices at menarche, framing it as a transition into womanhood, such rituals often coexist with contradictory norms that suppress open conversation and limit bodily autonomy (Perianes & Ndaferankhande, 2020). In these contexts, information may be delivered during initiation rites, but it is often limited, symbolic, or laced with taboo. Furthermore, Mohd. Tohit and Haque

(2024) argue that these rituals seldom equip girls with practical knowledge about menstrual hygiene, reproductive health, or how to seek care when facing disorders.

Religion also plays a significant role. In many settings, menstruating girls are barred from entering mosques or churches or handling sacred objects, reinforcing messages of impurity. These religiously reinforced norms contribute to internalized shame and discourage women from seeking medical help for menstrual-related health issues. As Maulingin-Gumbaketi et al. (2022) note, these socio-cultural norms create significant barriers to dignity and health, especially in communities where formal education and healthcare access are limited.

Nevertheless, some progress is being made. Kpodo et al. (2022) found that educational interventions grounded in cultural sensitivity, such as community outreach programs that include religious and traditional leaders, have had some success in dispelling myths and promoting healthy practices in Ghana. Similarly, Nawani and Masood (2023) advocate for school-based programs that combine menstrual education with access to products and culturally inclusive dialogue, noting improvements in awareness and self-esteem among adolescent girls.

Despite these gains, the persistence of stigma and silence continues to obstruct access to menstrual health information for many women and girls, particularly in rural and underserved areas. Addressing these barriers requires not only educational reform but also broader cultural and policy shifts that validate menstruation as a normal biological function and a public health issue. Until these barriers are dismantled, the potential of menstrual health literacy as a tool for empowerment will remain unrealized for a significant portion of the population.

2.2.3 Utilization of Menstrual Health Knowledge

While access to menstrual health information is essential, its value is only fully realised when such knowledge is actively utilised by women and girls to improve their health, confidence, decision-making, and engagement with healthcare services. Utilisation refers not only to the internalisation of facts but also to the translation of that knowledge into behaviour, such as maintaining proper hygiene, recognizing abnormal menstrual symptoms, seeking medical care, or confidently participating in public and interpersonal conversations about menstruation. In this sense, menstrual health literacy becomes meaningful not just as information possession, but as a functional tool for agency and empowerment (Nutbeam, 2008; Chandra-Mouli et al., 2018).

A growing body of research highlights that women who are well-informed about menstruation are better able to manage their cycles, reduce the stigma they internalize, and make healthier lifestyle choices. For instance, studies conducted by Sommer et al. (2015) found that adolescent girls who receive menstrual education through schools or peer support groups are more likely to use sanitary products correctly, maintain better hygiene practices, and feel less anxiety or shame about their periods. In Ghana, similar patterns have been observed. Kpodo et al. (2022) reported that girls who participated in menstrual education clubs demonstrated better product use and were more willing to discuss menstruation with peers and caregivers. This shift signals increased comfort and ownership of menstrual health.

Utilisation also manifests in women's ability to identify and respond to menstrual irregularities or disorders. For example, women with higher levels of menstrual health literacy are more likely to recognise when their cycles deviate from the norm, when their pain levels suggest a disorder like dysmenorrhea or endometriosis, or when excessive bleeding may indicate an underlying issue (Solomon et al., 2002; Sánchez

López et al. 2025). In such cases, menstrual knowledge directly influences clinical decision-making, enabling women to seek care, describe symptoms more effectively to providers, and participate in shared decisions about diagnosis and treatment.

However, not all menstrual knowledge is used in ways that promote empowerment. In some cases, cultural expectations, fear of stigma, or lack of institutional support may prevent women from applying what they know. For instance, a girl may understand that menstruation is natural and not dirty, but still refrain from attending school during her period due to fear of leaks, shame, or the lack of sanitary facilities (Mohammed & Larsen-Reindorf, 2020; Kumbeni et al., 2021). Similarly, women may be aware that menstrual pain can be treated but still avoid seeking help because of normalizing language like "every woman suffers" or due to unwelcoming attitudes from healthcare providers (Roodbeen et al., 2020). These examples show that knowledge does not always equal empowerment unless supported by enabling environments, such as safe schools, supportive families, or responsive healthcare systems.

Moreover, the ability to utilize menstrual knowledge often intersects with age, education level, geographic location, and social capital. Urban and educated women are more likely to engage with health content online, access a broader range of products, and negotiate healthcare with confidence. In contrast, rural or low-literacy women may be aware of specific facts but lack the resources or social permission to act on them (Chandra-Mouli & Patel, 2020). This gap between knowledge and action underscores the need for menstrual health interventions that not only inform but also remove barriers to application, including infrastructural, cultural, and systemic challenges.

2.2.4 Menstrual Health Literacy as a Pathway to Empowerment

Empowerment is a foundational pillar in the pursuit of gender equity and women's health, representing the ability to make informed decisions, exercise bodily autonomy, and advocate for one's needs. Within the context of menstrual health, empowerment refers to individuals' capacity. Particularly women and girls to understand, manage, and take control of their menstrual experiences without fear, shame, or discrimination (Walton, 2013). It encompasses both internal transformations, such as increased confidence and self-efficacy, and external outcomes, including improved hygiene practices, school attendance, healthcare access, and social participation.

At the center of menstrual empowerment lies menstrual health literacy, the ability to access, comprehend, and apply information about menstruation in ways that promote personal well-being and social agency. Chandra-Mouli and Patel (2017) stated that menstrual health literacy equips women with the tools to challenge myths, identify disorders, communicate confidently with healthcare providers, and make choices that reflect their needs and preferences. This literacy is potent in environments where menstruation is stigmatised, as it enables women to break cycles of silence and marginalisationby asserting control over their reproductive health.

However, existing literature suggests that knowledge alone is insufficient for empowerment if structural and material barriers remain in place. The availability of affordable sanitary products, private and hygienic restrooms, culturally sensitive education, and social support systems is essential for translating literacy into action. Without such resources, even the most informed individuals may struggle to manage menstruation with dignity. Vishwakarma et al. (2021), in a study on menstrual practices in India, found that financial autonomy, mobile connectivity, and decision-making power significantly increased women's use of sanitary products and their health-

seeking behaviour. Women with access to mobile phones or bank accounts were more likely to purchase quality menstrual products and access digital health content, demonstrating the critical link between broader empowerment dimensions and menstrual health outcomes.

Furthermore, empowerment in menstrual health is not just an individual concern but a societal issue. The stigmatization and silencing of menstruation continue to undermine emotional, psychological, and educational well-being. Tucker et al. (2019) demonstrated the importance of human-centered design and multimedia tools such as podcasts, websites, and interactive games in creating empowering narratives that are culturally relevant and emotionally resonant. By making menstruation visible and relatable through storytelling and digital platforms, these interventions normalize the topic and provide women with both knowledge and affirmation. The education sector also plays a central role in menstrual empowerment. Walton's (2013) research in South India found that cultural taboos, lack of sanitary products, and poor infrastructure contributed to school absenteeism among menstruating girls. This absenteeism translated into long-term disempowerment, as missed education reduces academic and economic opportunities. Integrating menstrual hygiene education into curricula, training teachers, and involving communities were found to enhance confidence and retention among adolescent girls, offering them a chance at equal participation in school and society.

Importantly, menstrual empowerment is relational and intersectional. Efforts that involve men, parents, teachers, and religious leaders in menstrual education help dismantle harmful stereotypes and foster supportive environments. Vishwakarma et al. (2021) advocate for gender-inclusive education and community-based programs that do

not treat menstruation as a women's issue alone but as a collective concern rooted in human rights and dignity.

2.2.5 Technology and Peer Support in Empowering Women

In recent years, technology and peer-based strategies have become increasingly prominent in promoting menstrual health literacy, especially in settings where formal health systems are weak or where socio-cultural taboos restrict open conversations about menstruation (Jiffry, 2025). These two approaches, though distinct, often overlap in their potential to amplify access to information, strengthen social support, and facilitate empowerment. While they do not replace traditional education or structural reforms, they serve as critical bridges between awareness and action, especially for younger and digitally connected populations.

Digital technologies, such as mobile applications, online forums, social media platforms, and messaging services, provide menstruating individuals with flexible, on-demand, and often anonymous access to health information. Menstrual tracking apps like *Flo*, *Clue*, and *My Calendar* have been widely adopted across various regions, enabling users to log symptoms, monitor cycle regularity, and receive medically reviewed educational content. Fialkov et al. (2021) describe these technologies as advancing "digital menstrual agency," whereby users are empowered to understand their own cycles, recognise symptoms that require medical attention and communicate more confidently with healthcare providers.

The relevance of digital tools is also emerging in Africa. A study by Msovela et al. (2025) demonstrated that mobile health (mHealth) interventions increased girls' knowledge of puberty and menstruation in Tanzania and Ethiopia. Similarly, UNFPA Ghana (2021) notes that social media and WhatsApp groups have been instrumental in

sustaining menstrual health education during school closures and during the COVID-19 pandemic. However, access to these technologies remains uneven. Chandra-Mouli and Patel (2020) argue that the digital divide, caused by factors such as poverty, literacy gaps, and gendered control of devices, limits the reach of such tools in rural or marginalised populations. This concern is echoed by Fialkov and Haddad (2021), who warn that while digital platforms can enhance access to information, they also risk reinforcing inequalities if not adapted for low-resource settings. For instance, digital menstrual education may not be accessible to women who lack smartphones, cannot read English, or live in areas with poor internet connectivity.

Peer-based strategies, whether delivered face-to-face or through digital media, serve as vital complements to formal health communication. Peer support allows menstruators to share experiences, clarify doubts, and challenge harmful beliefs in informal but trusted spaces. According to Sommer et al. (2016), adolescent girls often prefer peer discussions over instruction from adults, particularly when discussing sensitive topics such as menstruation. In their study across four sub-Saharan African countries, girls in school-based menstrual clubs reported feeling more confident managing their periods and speaking out against myths after participating in peer-to-peer learning. In Ghana, similar patterns have been observed. Kpodo et al. (2022) reported that peer-based menstrual health clubs in schools led to improved hygiene practices and reduced shame among adolescent girls. Girls noted that hearing from classmates or slightly older mentors created a safe space where menstruation could be discussed without fear of embarrassment. Moreover, peer groups often served as platforms for sharing information about menstrual products, natural remedies, and even accessing support for menstrual disorders.

Nevertheless, peer communication is not without challenges. Bulto (2021) noted that in the absence of proper training, peer networks may unintentionally spread misinformation, particularly when based on anecdotal knowledge. This underscores the importance of structured peer education programs that train peer educators using evidence-based curricula and support them with professional guidance. Msovela et al. (2025) emphasize that peer communication must be embedded within broader menstrual health literacy interventions to ensure that shared information is both relatable and accurate. Both technology and peer strategies are most effective when used in tandem with community engagement and institutional support. Tucker et al. (2019) advocate for hybrid models that combine peer education, mobile learning, and school-based sessions to reach diverse audiences. Their study on multimedia menstrual education tools found that storytelling through digital platforms could reduce stigma and increase self-efficacy, especially when the content reflected local cultural values.

2.3 Factors Influencing Menstrual Health Literacy and Patient-Centered Communication

Understanding the factors that influence menstrual health literacy and patient-centered communication is important for addressing the multidimensional barriers women face in managing menstruation and engaging with healthcare systems. Menstrual health is not simply a function of biological knowledge or hygiene management; it is deeply intertwined with broader socio-cultural, economic, psychological, and structural realities that shape how women interpret, internalize, and act on menstrual information. Similarly, patient-centered communication, the ability of individuals to engage meaningfully with healthcare providers, is contingent upon a range of factors, including literacy levels, power dynamics, provider attitudes, and systemic support structures (Street et al., 2009, Coughlin et al. 2020).

Menstrual health literacy refers to an individual's capacity to obtain, process, and understand information necessary for informed decision-making about menstruation (Nutbeam, 2000). It encompasses not only knowledge of the menstrual cycle and hygiene practices but also the ability to critically assess sources of information, recognize disorders, and seek appropriate care. Patient-centered communication, meanwhile, is grounded in mutual respect, shared decision-making, and responsiveness to the individual's needs and experiences (Epstein & Street, 2011). The intersection of these two concepts is particularly important in menstrual health, as women who are literate in menstrual matters are more likely to articulate symptoms clearly, ask relevant questions, and advocate for their well-being within clinical settings.

Yet, despite the clear benefits of menstrual health literacy and person-centered care, research suggests that many women remain constrained by a constellation of personal and external factors. Chandra-Mouli and Patel (2020) argue that menstrual education is often delivered in fragmented and non-inclusive ways, failing to accommodate the diverse needs of women across life stages, educational backgrounds, and cultural contexts. Furthermore, barriers such as poverty, stigma, lack of access to sanitary products, and discriminatory healthcare environments reduce the likelihood that even informed women will feel confident communicating about their menstrual concerns.

Ghanaian studies also reflect this trend. Mohammed and Larsen-Reindorf (2020) found that in the Upper East Region, deep-rooted taboos and shame surrounding menstruation inhibited women's ability to seek information or ask questions openly, both at home and in clinical spaces. Adugbire et al. (2024) similarly highlighted that even where health facilities exist, women often experience communication breakdowns with healthcare providers, stemming from fear of judgment, linguistic barriers, or dismissive attitudes from health staff. These realities suggest that menstrual health literacy and

patient-centered communication are not merely the products of individual effort but are heavily shaped by contextual and systemic variables.

This section therefore explores five key domains that influence both menstrual health literacy and patient-centered communication, individual-level determinants, socio-cultural and religious influences, health system and provider-related factors, communication competence and health literacy, and the role of menstrual disorders in driving or limiting engagement with care. By investigating these dimensions, this study seeks to offer a holistic understanding of the constraints and opportunities that shape how women in Ghana, particularly in the Builsa North Municipal learn about, manage, and communicate their menstrual health needs.

2.3.1 Individual-Level Determinants of Menstrual Health Literacy

Women's understanding of menstrual health is shaped by a complex interplay of individual-level factors including education, personal beliefs, socio-economic status, lived experience, and access to information. These determinants significantly influence not only how women perceive menstruation, but also how they act upon this knowledge, from maintaining hygiene to seeking medical attention when necessary. Within the broader framework of menstrual health literacy, these individual factors interact with structural and cultural forces to either promote or hinder informed decision-making and patient-centered engagement with healthcare systems.

Education remains the most consistent and well-documented determinant of menstrual health literacy. Formal education enhances a woman's ability to comprehend biological processes, interpret menstrual symptoms, and make informed decisions about self-care and healthcare seeking. UNICEF (2019) emphasizes that education equips women with the cognitive tools necessary to engage critically with health information, thereby

leading to improved menstrual practices and reduced stigma. In Ghana, Kpodo et al. (2022) observed significant disparities between rural and urban girls in terms of menstrual health knowledge, primarily due to unequal access to comprehensive health education. These findings support calls for school curricula to systematically incorporate menstrual health education at all levels.

Cultural norms and taboos, while often viewed as external pressures, are also internalized at the individual level and shape women's personal interpretations of menstruation. Fennie et al. (2022) noted that cultural stigmas surrounding menstruation frequently led to shame, secrecy, and misinformation. For example, Mudi et al. (2023), studying the Juang tribal community, found that beliefs requiring women to isolate during menstruation limited their access to support and information, thereby reducing their ability to make informed choices. These norms often manifest internally as psychological barriers, even in women who have access to information, illustrating the deep reach of social conditioning.

Access to healthcare services and provider interaction also influence individual literacy levels. Ekong (2015), in a comparative study of rural and urban Nigerian adolescents, showed that exposure to trained healthcare providers improved menstrual hygiene and self-efficacy. However, in many under-resourced settings, the lack of accessible and trustworthy health services limits opportunities for accurate diagnosis, guidance, and early intervention in menstrual disorders. Lahme et al. (2018) argue that even when women do seek care, poorly trained or dismissive providers may contribute to confusion rather than clarity. This shows how systemic gaps in provider education and healthcare delivery can directly affect women's personal understanding of their own menstrual health.

Social support systems, such as family, peers, and community leaders, further mediate women's experiences of menstruation. Evans et al. (2022), in a systematic review, highlighted that maternal influence was especially critical in shaping early knowledge and emotional responses to menstruation. However, the quality of this information often varies based on the caregiver's own education and cultural beliefs. While peer groups and traditional structures can offer reassurance and emotional support, they may also reinforce misinformation unless complemented with evidence-based education (Lahme et al., 2018). Strengthening these informal networks through public awareness campaigns and community dialogues could therefore boost menstrual health literacy at the grassroots level.

Economic conditions also shape individual menstrual health knowledge and practice. Kamira and Rizkalla (2023) found that financial insecurity in Indonesia limited women's ability to adopt safer menstrual products, such as menstrual cups, often due to a combination of cost and lack of information. In Ghana and other LMICs, the affordability and availability of sanitary products remain persistent barriers to dignity and informed menstrual care. Moreover, inadequate WASH (Water, Sanitation, and Hygiene) infrastructure in schools and homes further undermines women's ability to apply even basic menstrual knowledge in daily practice (Lahme et al., 2018).

Finally, technology and media exposure have increasingly emerged as both enablers and barriers to menstrual health literacy. Caliston, (2025) noted that mobile applications and social media platforms provide accessible and culturally responsive education to younger audiences, encouraging open discussion and awareness. However, as Chandra-Mouli and Patel (2020) argue, the benefits of digital platforms are unequally distributed. Women in rural areas or with limited digital literacy may remain excluded from these innovations, creating new gaps even as others are bridged.

In conclusion, individual-level determinants of menstrual health literacy are shaped by a blend of personal, educational, economic, and socio-cultural experiences. While education, healthcare access, and technology provide opportunities for enhancing knowledge, these must be accompanied by systemic efforts to address cultural stigma, financial barriers, and infrastructural deficits. A comprehensive approach that considers these individual-level realities is essential to fostering menstrual health literacy that is inclusive, actionable, and empowering.

2.3.2 Socio-Cultural and Religious Influences

Socio-cultural and religious beliefs are among the most pervasive factors influencing menstrual health literacy and women's capacity for patient-centered communication. These beliefs are deeply embedded in the societal structures that define womanhood, purity, privacy, and morality. They not only shape how menstruation is perceived within communities, but they also regulate what can be said, who can speak, and in what spaces menstruation can be discussed. For many women, especially in rural and conservative settings, these norms act as invisible gatekeepers, restricting knowledge acquisition, delaying diagnosis, and undermining communication with healthcare providers (Sommer et al., 2016; Maulingin-Gumbaketi et al., 2022).

Menstruation is often framed as a taboo topic, enveloped in silence and shame. Boosey and Wilson-Smith (2014) report that in many societies, menstruating women are excluded from religious, domestic, and social spaces, reinforcing the idea that menstruation is impure or polluting. Such stigmatization discourages open discussion, particularly in families and schools, where girls are often left to rely on whispers from peers or culturally skewed interpretations from mothers and aunts. Mohammed and Larsen-Reindorf (2020) observed that in Northern Ghana, menstruating girls are still barred from cooking, participating in communal farming, or even fetching water,

restrictions that convey inferiority and perpetuate feelings of embarrassment. The cultural framing of menstruation as private and "unmentionable" also hampers patient-centered communication. When women are socialized to view menstruation as shameful, they are less likely to describe their symptoms accurately during clinical visits. Some avoid seeking care altogether, believing that their pain or irregular cycles are normal or unworthy of medical attention. Lahme et al. (2018), working in Zambia, found that adolescent girls internalized pain and skipped school rather than report menstrual discomfort, mainly due to fear of stigma or being mocked.

However, not all cultural practices are wholly restrictive. Perianes and Ndaferankhande (2020) documented positive cultural rituals in some African and Indigenous communities where menarche is celebrated as a rite of passage. These ceremonies, though sometimes symbolic, can serve as platforms for imparting knowledge and building confidence when properly harnessed. Similarly, community-led initiatives that engage traditional leaders, queen mothers, and faith-based actors have shown promise in shifting norms. Kpodo et al. (2022) demonstrated that culturally sensitive school and community education programs led to increased acceptance of menstrual education and improved health-seeking behaviors.

Despite these advances, systemic change remains slow. The continued dominance of patriarchal norms and silence around menstruation reflects broader gender inequalities that inhibit women's autonomy. As Maulingin-Gumbaketi et al. (2022) argue that, menstrual stigma is not just a cultural issue, it is a manifestation of structural discrimination. Breaking these cycles requires more than individual empowerment; it calls for transformative community engagement that challenges entrenched beliefs and offers alternative, rights-based narratives.

2.3.3 Health System and Provider-Related Factors

While individual knowledge and cultural conditions play important roles in shaping women's menstrua health experiences, the healthcare system itself is a critical determinant of both menstrual health literacy and patient-centered communication. The attitudes of healthcare providers, the availability of menstrual health services, and the structure of health delivery systems all affect whether women feel safe, heard, and empowered to engage with care. For instance, Nyblade et al. (2019) highlight how stigma in healthcare settings can discourage individuals from seeking timely care, which in turn worsen health outcomes. It discusses how stigma manifests in denial of care, substandard treatment, and longer wait times, all of which create barriers to accessing necessary medical services. Their study also emphasises that stigma affects both patients and healthcare workers, reinforcing cycles of discrimination and reluctance to seek care.

Healthcare providers, including doctors, nurses, and community health workers, play a crucial role in disseminating accurate menstrual health information, addressing concerns, and offering guidance on menstrual hygiene practices (Dubey & Sivakami, 2024). A study by Hennegan et al. (2019) emphasised that healthcare providers who engage in clear, open, and non-judgmental communication are better equipped to promote menstrual hygiene practices and encourage help-seeking behaviours among individuals who may otherwise feel embarrassed or uncertain about discussing menstruation. Furthermore, research by Sommer et al. (2015) has shown that when healthcare providers openly discuss menstruation and menstrual health, they help dispel myths and misconceptions that often contribute to stigma and poor health outcomes.

Patient-centered communication, which emphasizes mutual respect, shared decision-making, and responsiveness to individual needs, is essential in improving health

outcomes. Yet, multiple studies indicate that in practice, this ideal is often undermined by health system constraints and provider behavior. Street et al. (2009) assert that effective patient-centered communication depends on the interactional skills of providers, their cultural competence, and the institutional environment in which care is delivered. In menstrual health specifically, where discussions may involve embarrassment or deeply personal concerns, the provider's approach can either build or break trust.

In many low- and middle-income countries (LMICs), menstrual health is not systematically addressed in primary care, leading to under-recognition of menstrual disorders and inadequate counselling. Roodbeen et al. (2020) argue that when patients with low health literacy encounter rushed, jargon-heavy, or dismissive consultations, their understanding and engagement decline, a finding highly relevant to menstrual health consultations. This dynamic is particularly problematic for women presenting with disorders such as menorrhagia or dysmenorrhea, where symptom descriptions are subjective and require empathetic listening. In Ghana, Adugbire et al. (2024) report that even though some health professionals are trained in communication skills, their interactions with female patients are often marked by power asymmetries, time constraints, and implicit biases. These issues are exacerbated in northern regions where language barriers and cultural taboos further complicate communication. Women may downplay or omit details about their menstrual problems out of fear of being judged, misunderstood, or dismissed.

Moreover, health system structures and social conditions also affect women's experiences. Gbogbo, et al. (2025) observed that inadequate facilities, limited menstrual health education, and persistent stigma reduce opportunities for open dialogue about menstrual health. These barriers discourage information-seeking and communication,

and when women perceive formal care as unresponsive to their needs, they often rely on informal advice or self-treatment, practices that may delay diagnosis or worsen health outcomes.

That said, progress is being made. Initiatives such as the Ghana Health Service's adolescent health programs are beginning to include menstrual health education and counselling, particularly in school outreach settings. However, these efforts remain fragmented and underfunded. Kaper et al. (2019) argue that for menstrual health to be fully integrated into healthcare delivery, training curricula must emphasize empathetic communication, gender-sensitive care, and the inclusion of menstrual literacy in health promotion activities.

2.3.4 Communication Competence and Health Literacy

Communication competence and health literacy are crucial determinants of how women interact with healthcare providers, particularly in the domain of menstrual health. While menstrual health literacy refers to the ability to obtain, understand, and apply information related to menstruation, communication competence involves the confidence, clarity, and skill with which individuals express health concerns, ask questions, and engage in dialogue with providers. When these two elements are weak, women may struggle to describe symptoms, understand diagnoses, or advocate for appropriate care, especially in areas where menstruation is stigmatized or poorly integrated into the healthcare agenda.

According to Nutbeam (2000), health literacy is more than just reading and writing; it involves functional, interactive, and critical dimensions that affect how individuals make health decisions. In the situation of menstrual health, functional literacy may enable a woman to understand basic cycle information. In contrast, interactive literacy

equips her to discuss symptoms with a healthcare provider, and critical literacy empowers her to evaluate health options and demand appropriate care. Chandra-Mouli and Patel (2020) emphasize that when menstrual literacy remains at a functional level, such as knowing when periods occur, but does not evolve to include understanding disorders or navigating health services, women remain disempowered in clinical spaces.

Furthermore, language and literacy barriers can compound these issues, especially in multi-ethnic, linguistically diverse regions like northern Ghana. Healthcare providers may not speak the local language fluently, or medical information may not be translated into accessible terms. Asah-Opoku et al. (2023) underscore the importance of culturally and linguistically tailored communication strategies to improve patient comprehension and engagement. Where such efforts are lacking, patients may disengage entirely or misinterpret instructions, resulting in suboptimal outcomes. On the other hand, when women have both menstrual health knowledge and communication competence, they are more likely to recognize abnormalities, ask for second opinions, and push for appropriate diagnostic tests. Yang (2022), studying Korean nurses, found that women with higher health literacy were better able to express concerns, understand provider explanations, and manage treatment plans, leading to more satisfactory clinical encounters. Similar patterns have been noted among educated urban women in Ghana, who often feel more empowered to negotiate healthcare decisions, even in settings where menstrual health is not prioritized.

In response to these challenges, scholars and practitioners have advocated for two-way health communication training, both for providers and patients. Roodbeen et al. (2020) recommend integrating communication support tools, such as visual aids, question prompt lists, and lay-language materials, into menstrual health consultations. At the

same time, community-based programs can empower women with role-playing, storytelling, and group discussion formats to build communication confidence and assertiveness (Evans et al., 2022).

2.3.5 Menstrual Disorders and Patient Engagement

Menstrual disorders are a common concern among women of reproductive age, with pain being one of the most prevalent manifestations (Osonuga & Ekor, 1970). While some women experience minor menstrual discomfort with minimal emotional distress, others endure significant physical and psychological trauma related to pain, missed periods, heavy bleeding, and mood fluctuations (Igbokwe & John-Akinola, 2021). Such disorders not only disrupt daily activities but can also impact mental health and social participation.

Abnormal menstruation encompasses a wide range of patterns, including excessive or prolonged uterine bleeding at irregular intervals, cycle lengths extending beyond 35 days or less than 21 days, and bleeding that may be regular but reduced in volume or unpredictable in occurrence (Sommer, et al., 2015). These irregularities often go unrecognised or are normalised, contributing to delayed diagnoses and untreated reproductive health problems. These conditions not only affect physical well-being but also serve as a critical point of intersection between menstrual health literacy and patient-centered communication. How women perceive and respond to menstrual irregularities depends significantly on their ability to recognize symptoms as abnormal, understand potential causes, and seek medical attention. In this regard, menstrual disorders are not only health concerns but also tests of agency, awareness, and communication capacity.

Many women grow up internalizing the belief that menstrual pain or irregularity is normal a perception often reinforced by cultural narratives, maternal advice, or dismissive attitudes from healthcare providers. Bulto (2021) and Mohammed & Larsen-Reindorf (2020) found that in Ghana and other low-resource settings, severe pain or irregular bleeding is frequently normalized, leading women to tolerate distress without seeking care. This normalisation is particularly dangerous in the case of conditions like endometriosis or polycystic ovarian syndrome (PCOS), where early detection and management are essential to prevent complications such as infertility or chronic pelvic pain and other health conditions, such as cardiovascular disease, due to underlying metabolic abnormalities (Solomon et al., 2002).

Additionally, lack of menstrual health literacy is a key contributor to this trend. Sánchez López et al. (2023) highlight that when women cannot differentiate between normal and abnormal cycles, or when they lack the language to describe their symptoms, they are less likely to access appropriate care. Women may use vague terms like “bad period” or “too much blood” without knowing how to articulate severity, frequency, or duration, aspects that are critical for clinical diagnosis. In such situations, even when healthcare services are available, poor patient-provider communication can result in misdiagnosis or ineffective treatment. Moreover, healthcare systems are not always equipped to support women dealing with menstrual disorders. Time constraints, inadequate diagnostic tools, and systemic undervaluing of women’s pain contribute to the cycle of silence. This aligns with international findings by Roodbeen et al. (2020), who noted that women with menstrual disorders often leave consultations feeling unheard or misunderstood, even in systems that emphasise patient-centered care.

Despite these challenges, menstrual disorders can also serve as entry points for empowerment. When women are able to identify unusual patterns in their cycles, such

as skipped periods, excessive bleeding, or debilitating cramps, and feel confident to communicate those experiences to a provider, they engage in what Nutbeam (2008) would describe as "interactive and critical health literacy." Such literacy not only supports symptom recognition but also enables women to demand better care, reject dismissive responses, and explore treatment options. In digital spaces, apps like *Flo* and *Clue* help women track symptoms over time, generating data they can present to providers, thereby strengthening the clinical encounter.

Community-level support is also important. Programs that include menstrual disorder awareness, particularly those delivered through schools, women's groups, or faith-based organizations, can create safe spaces where women learn to distinguish between common discomfort and clinical warning signs. Evans et al. (2022) argue that interventions combining education with dialogue and storytelling are particularly effective in enhancing recognition and response to menstrual disorders.

2.4 Communication Strategies in Promoting Menstrual Health Literacy

The ability of women and girls to understand, process, and apply menstrual health information is not merely a function of their individual capacity. Still, it is shaped significantly by the communication strategies used to deliver that information. Menstrual health literacy, situated within broader health literacy and rights-based frameworks, is most effectively achieved when appropriate, context-sensitive, and inclusive communication strategies are employed (Chandra-Mouli & Patel, 2017). In recent years, global and local advocacy has moved beyond hygiene-based messaging to adopt more holistic approaches that recognize menstruation as a public health, gender equity, and empowerment issue (WHO, 2022; Sommer et al., 2015). Within this paradigm, effective communication becomes central to fostering awareness, reducing stigma, and empowering women to make informed decisions regarding their bodies.

Health communication scholars have long argued that the choice and framing of communication strategies determine not only what is learned, but also how it is received, interpreted, and acted upon by target populations (Nutbeam, 2000; McKee et al., 2004). This is particularly true in the case of menstrual health, where layers of sociocultural taboos, misinformation, and silence complicate communication. In many African contexts, including Ghana, menstruation is still perceived as a secretive and sometimes shameful subject (Mohammed & Larsen-Reindorf, 2020). As a result, traditional one-way communication models that rely solely on instruction or pamphlets are often ineffective. Instead, participatory, culturally embedded, and multi-level communication strategies are increasingly advocated to reach women and girls across diverse backgrounds (Chandra-Mouli et al., 2017; UNICEF, 2019; Nutbeam, 2000; Airhihenbuwa, 1995).

In Ghana, communication around menstrual health often takes place through informal, interpersonal channels such as mothers, peers, or female teachers, and increasingly through organized platforms like school clubs, NGO-led sensitization programs, radio broadcasts, and social media initiatives. However, despite these efforts, access to accurate and empowering information remains inconsistent, especially in rural and underserved areas. The UNFPA WCARO (2021) noted that many menstrual health campaigns, though well-intentioned, fail to address the social power dynamics that shape communication, such as who is allowed to speak, who listens, and whose knowledge is validated. Thus, the effectiveness of menstrual health communication is not only about the message, but also about the messenger, the medium, and the socio-political context in which the communication occurs.

In the Builsa North Municipal of Ghana, where this study is situated, the interplay of gender norms, literacy levels, and limited healthcare infrastructure further complicates

the communication landscape. Studies have shown that in such settings, women are more likely to rely on informal communication sources and may have fewer opportunities to engage with trained professionals or structured health messages (Sumankuuro et al., 2023). This underscores the need for a critical examination of the communication strategies used to promote menstrual health literacy, to determine not only their content but also their mode of delivery, level of inclusiveness, and capacity to foster dialogue and empowerment.

Moreover, contemporary perspectives on menstrual health communication advocate for integrating health promotion with rights-based and participatory approaches (Chandra-Mouli & Patel, 2020). These models emphasize the co-creation of knowledge with communities rather than the mere dissemination of information. Participatory communication approaches, grounded in the Freirean model of dialogue and empowerment, are especially relevant for sensitive topics like menstruation. They encourage two-way communication, community ownership, and contextual adaptation, all of which are essential for improving menstrual health literacy and breaking entrenched silence.

Therefore, exploring the range and effectiveness of communication strategies used to promote menstrual health literacy is not only timely but important for informing future interventions. By analyzing these strategies in the specific socio-cultural context of Builsa North Municipal, this study contributes to the broader discourse on reproductive health communication, while highlighting gaps and opportunities for enhancing women's agency through better-informed communication systems.

2.4.1 Interpersonal and Peer-Based Communication Strategies

Interpersonal communication remains one of the most effective and contextually appropriate strategies for promoting menstrual health literacy, especially in low- and middle-income countries where menstruation is still heavily stigmatized (Sommer et al., 2016; Chandra-Mouli et al., 2018). In many African societies, including Ghana, interpersonal channels, such as conversations with mothers, older siblings, teachers, peers, and community health workers, serve as primary conduits through which girls and women first learn about menstruation (Van Eijk et al., 2016; Mohammed & Larsen-Reindorf, 2020). These interpersonal interactions offer safe, familiar spaces where menstruation can be discussed more openly, especially in settings where formal avenues of education may be limited or gender-biased.

Mothers are often cited as the most influential figures in shaping their daughters' understanding of menstruation. However, studies have shown that the quality and completeness of the information provided by mothers can be significantly influenced by their own literacy levels, cultural norms, and personal discomfort discussing the subject (Bharadwaj & Patkar, 2004; Dasgupta & Sarkar, 2008). For example, in a study of adolescent girls in India, Dasgupta and Sarkar (2008) found that although over 37.5% of girls received information from their mothers, much of it was incomplete, inconsistent, or infused with culturally rooted taboos. Similar findings have been reported in Ghana, where mothers often avoid direct conversations about menstruation due to the perception of it as a "private" or "shameful" topic (Mohammed & Larsen-Reindorf, 2020; CARE, 2021).

In addition to mother daughter interactions, peer-to-peer communication is another vital channel for promoting menstrual health literacy. Peer-to-peer communication allows individuals to share personal experiences, advice, and strategies for managing

menstruation in an informal and supportive setting. This form of communication can help individuals feel less isolated and more confident in discussing menstrual health, particularly among adolescents and young people. Hennegan and Montgomery (2016) consent to this statement when they argued that, peer education programs, such as those conducted in schools and community settings, can be instrumental in creating supportive environments where individuals feel comfortable asking questions, sharing concerns, and accessing resources related to menstrual health.

Moreover, peers and female teachers also serve as critical nodes in the communication chain. Peer-led communication strategies, including adolescent girls' clubs, mentorship programs, and classroom-based discussions, are particularly effective in breaking the silence around menstruation and in promoting confidence among girls (Sommer et al., 2015; WaterAid, 2019). According to VanLeeuwen and Torondel, (2018), peer-based interventions not only create solidarity among girls but also normalize menstruation as a shared experience, reducing internalized shame and isolation. In Ghanaian schools, initiatives like the "Girls Iron-Folate Supplementation Programme" have incorporated menstrual education alongside nutrition, with peer educators serving as key facilitators (United Nations Children's Fund (UNICEF), 2019).

Recent research has also highlighted the emergence of digital peer support systems, particularly among urban youth. With the rise of mobile phone access and internet penetration, young women are increasingly turning to WhatsApp groups, Instagram pages, and menstrual tracking apps to share experiences and seek advice (Andalibi & Flood, 2021; United Nations Children's Fund (UNICEF), 2022). These platforms offer anonymity, immediacy, and interactive engagement, which are particularly important for discussing sensitive topics. While these tools are often limited to literate, digitally

connected populations, their growing influence signals a shift in how interpersonal peer communication is evolving in the digital age.

Another crucial group within interpersonal communication strategies are community health nurses and outreach workers, who often serve as the first point of formal engagement with health information, especially in rural Ghana. Their interactions, often through home visits, school health programs, and antenatal talks, provide personalized, culturally sensitive information that can significantly influence menstrual health literacy (CARE, 2021). When trained effectively in patient-centered communication, these professionals can build trust and respond to individual concerns in a manner that printed materials or mass messaging cannot achieve.

Nevertheless, the effectiveness of interpersonal and peer-based strategies is heavily dependent on the accuracy of the information conveyed and the cultural openness of the communicators involved. Without targeted training, key figures such as mothers, teachers, and even health workers may inadvertently reinforce stigma and myths. As Chandra-Mouli et al. (2018) argue, interventions must go beyond simply encouraging dialogue; they must also equip communicators with factual knowledge, sensitivity, and communication skills to challenge harmful norms and promote empowerment.

2.4.2 Media and Technology in Menstrual Health Education

Technology has increasingly shaped the landscape of health communication. Digital platforms, such as telemedicine services, patient portals, and mobile health applications, have revolutionized how patients access and interact with healthcare providers. These tools have proven particularly beneficial during the COVID-19 pandemic, facilitating continuity of care while minimising in-person contact (Ohannessian et al., 2020). However, the digital divide remains a challenge, with

disparities in access to technology and digital literacy limiting the benefits for certain populations. Addressing these gaps is essential to ensure equitable access to digital health solutions.

The use of media and digital technology has increasingly been recognized as a powerful strategy for promoting menstrual health literacy, particularly among younger and digitally connected populations. Mass media, social media, mobile health (mHealth) platforms, and digital applications have not only widened access to menstrual information but have also helped normalise discussions that were once considered taboo (Chandra-Mouli & Patel, 2020; Andalibi & Flood, 2021). These platforms allow for the dissemination of accurate, timely, and relatable content while creating opportunities for user engagement, storytelling, and behavioral change.

Traditional mass media such as radio, television, and newspapers have long played a role in public health messaging in Ghana. Radio, in particular, remains one of the most accessible channels for rural populations due to its affordability and use of local languages (GSS et al., 2015). Radio programs, especially those hosted by nurses, midwives, or public health officers, often include segments that touch on menstrual hygiene, myths, and reproductive health (United Nations Children's Fund (UNICEF), 2022). However, the depth of menstrual health education in such programs is often limited, with content focused on hygiene rather than broader issues like menstrual disorders, menstrual rights, or patient-provider communication (Sumankuuro et al., 2023). Moreover, these media often target a general audience, limiting their ability to tailor content to the specific needs of adolescent girls or women of reproductive age.

Social media platforms have become increasingly important tools for spreading menstrual health awareness and information. Platforms like Facebook, Twitter, Instagram, and YouTube have enabled a global conversation about menstruation,

helping to challenge long-standing taboos and normalize discussions around menstrual health. Social media allows individuals to access information from trusted sources, connect with experts, and share personal stories, creating a sense of community and solidarity among menstruators worldwide (Tomlinson, 2025). For example, the #PadManChallenge campaign in India, which raised awareness about menstrual hygiene, and the #MenstruationMatters movement, which advocates for menstrual equity and policy changes, demonstrate how social media can be leveraged to empower individuals and spark important conversations about menstrual health (Hennegan et al., 2019).

Despite the promise of digital media, its effectiveness in promoting menstrual health literacy varies across populations. Digital tools are often limited to those with internet access, smartphone ownership, and a certain level of literacy. This digital divide means that rural, older, or less-educated women may remain excluded from these benefits. Studies by Fialkov and Haddad (2021) and WaterAid (2020) highlight that while digital campaigns are effective in urban settings, they are rarely accessible or culturally adapted for more conservative or less-connected communities. Moreover, concerns have been raised about the quality and accuracy of menstrual health content available online. Without regulatory oversight, some social media pages or apps may circulate misleading information, commercial bias, or unverified claims. For instance, menstrual "detox" teas, chemical-free pads, or cycle-synching diets promoted online may lack scientific support and confuse rather than inform users (Chandra-Mouli & Patel, 2020). Therefore, digital menstrual health communication must balance accessibility with credibility, ensuring that platforms are not only engaging but also evidence-based.

Scholars advocate integrating digital strategies into broader health promotion efforts rather than treating them as standalone tools (Msovela et al., 2025). Hybrid approaches

combining school-based education, community outreach, and digital messaging have been found to reinforce learning, address multiple barriers, and improve retention of menstrual health information (UNFPA WCARO, 2021).

2.4.3 Community-Based and Participatory Approaches

Community-based and participatory communication approaches have gained increasing attention as culturally relevant and sustainable strategies for promoting menstrual health literacy, especially in low-resource settings. Unlike top-down, information-dumping models, participatory communication is grounded in the principle of dialogue, valuing the voices, experiences, and knowledge of local people in shaping the content and delivery of health information (Freire, 1970; Waisbord, 2008). This model is particularly effective for menstruation, a topic heavily influenced by social norms, taboos, and power relations within communities. In contexts like Ghana's Builsa North Municipal, where patriarchal systems, traditional beliefs, and limited access to formal health education intersect, participatory communication offers a context-sensitive pathway for enhancing menstrual health literacy.

Participatory approaches prioritise engagement with community members, especially women and girls, as co-creators of knowledge. These strategies include focus group discussions, storytelling circles, drama and theatre for development, and community radio, all of which offer platforms for women to reflect on their menstrual experiences and challenge existing taboos (Jewkes & Morrell, 2010); Chandra-Mouli et al., 2017). In Uganda and Kenya, for example, the use of community theatre and peer dialogue groups has led to significant improvements in adolescent girls' understanding of menstruation, body changes, and hygiene management (Sommer et al., 2015). In Ghana, similar participatory methods have been used by NGOs such as the Ghana Education Service in collaboration with UNICEF, which has supported menstrual

health dialogue sessions during community durbars and school sensitisation campaigns (UNICEF Ghana, 2021).

Importantly, these approaches do not merely transfer knowledge but create safe spaces for emotional validation, peer learning, and collective problem-solving. For example, engaging religious leaders and traditional authorities in menstrual education initiatives has proven effective in shifting community attitudes. In parts of Northern Ghana, including the Upper East Region, chiefs and queen mothers have been involved in menstrual health promotion, helping to dismantle harmful beliefs that exclude girls from farming or religious spaces during their period (Mohammed & Larsen-Reindorf, 2020). By legitimising menstrual discussions in public spaces, these community-based interventions help reduce stigma and increase the visibility of menstrual health as a shared concern rather than a private issue. In many rural or underserved communities, access to formal healthcare services may be limited, making community-based education a critical resource for disseminating menstrual health information. Hennegan and Montgomery (2016) highlighted that community workshops and support groups can play an essential role in empowering individuals by providing accurate information, creating safe spaces for discussion, and fostering collective action to break the silence around menstruation.

While participatory communication has numerous advantages, it also faces challenges, particularly in conservative communities where menstruation is considered inappropriate for public discussion. Resistance from male family members, elders, or religious leaders can limit participation or result in superficial engagement. Additionally, time constraints, logistical barriers, and low literacy levels may hinder the implementation of participatory methods on a larger scale (Waisbord, 2008; Gonsalves et al., 2019). As such, participatory strategies must be thoughtfully designed, culturally

adapted, and supported by broader policy frameworks that legitimize menstruation as a topic of public health and development.

Furthermore, it is important to link participatory communication with actionable outcomes. Chandra-Mouli and Patel (2020) argue that participatory models are most effective when they yield tangible benefits, such as improved access to menstrual products, changes in school policies, or increased investment in sanitation infrastructure. In this regard, menstrual health literacy is not just about information-sharing but about enabling agency and transforming lived experiences through collective engagement.

2.4.4 Advocacy and Campaign-Based Communication

Advocacy and campaign-based communication have emerged as another strategy for advancing menstrual health literacy, especially for challenging long-standing taboos, influencing policy change, and raising public consciousness. Unlike interpersonal or community-level strategies that often operate within existing social networks, advocacy campaigns seek a broader impact, targeting policymakers, institutions, and the public to recognise menstruation as a public health and human rights issue. These efforts combine strategic messaging, mass mobilisation, media engagement, and coalition-building to push menstrual health from the margins into mainstream discourse (Sommer et al., 2015; Bobel, 2019).

Another dimension of advocacy-based communication involves integrating menstrual health education into formal school curricula. According to UNESCO (2023), the integration of menstrual health education into school curricula represents a critical opportunity for early intervention and prevention. This approach reflects not only a public health priority but also an institutional commitment to normalize menstruation

and equip young people with accurate knowledge from an early age. Schools offer a captive audience and a structured platform for reaching young girls, and increasingly, boys, with accurate, age-appropriate information about menstruation. According to Chandra-Mouli and Patel (2017), embedding menstrual health into life skills or biology curricula enhances long-term knowledge retention, challenges myths. It normalises menstruation as a topic of public concern.

In Ghana, while some components of menstrual hygiene are included in Reproductive Health and Science curricula, implementation remains uneven, with many teachers avoiding or minimizing discussion due to cultural sensitivities or lack of training (CARE, 2021). Nevertheless, when combined with peer education, extracurricular girls' clubs, and teacher training, curriculum-based communication has shown promise in improving girls' confidence, school attendance, and menstrual self-efficacy (United Nations Children's Fund (UNICEF), 2022). Integrating menstrual education into schools, therefore, serves as both a communication channel and an institutional commitment to gender-sensitive health promotion.

However, critics argue that not all advocacy efforts lead to lasting behavioural or structural change. Bobel (2019) warns against the "NGO-ization" of menstrual advocacy, where well-funded but externally designed campaigns may fail to engage local realities or sustain community participation. Campaigns that focus solely on product distribution or shock-value messaging may raise awareness but fall short in deepening understanding or changing attitudes. Additionally, short-term campaigns without integration into ongoing educational or health systems may create awareness gaps, particularly in rural or under-resourced communities.

Another vital critique concerns representation and inclusivity. Many advocacy materials, especially those originating from the Global North, often portray a narrow image of menstruating individuals, typically cisgender girls in school uniforms, thereby excluding other marginalized groups such as women with disabilities, trans men, or older women who still menstruate (Bobel et al., 2020). A rights-based approach to menstrual health advocacy demands intersectionality, recognizing the diverse experiences of menstruators and addressing the different barriers they face in accessing information and care.

To maximize their effectiveness, advocacy efforts must be embedded within multi-level communication frameworks that link awareness to action. Campaigns should complement, not replace, interpersonal, school-based, and digital education strategies. They must also be culturally adapted, sustained over time, and evaluated for impact. When these conditions are met, advocacy becomes a powerful force not only for disseminating information but also for transforming the social and institutional landscapes in which menstrual health literacy is situated.

2.4.5 Culturally-Sensitive Communication Strategies

Culturally-sensitive communication strategies are important for promoting menstrual health literacy, mostly in settings where traditional norms, religious beliefs, and gender expectations shape how menstruation is perceived and discussed. In many societies, including Ghana, menstruation is still considered a taboo subject, often associated with impurity, shame, and silence (Mohammed & Larsen-Reindorf, 2020; CARE, 2021). These cultural perceptions significantly influence both the content and mode of communication, necessitating strategies that are respectful of local customs yet capable of challenging harmful norms.

Culturally sensitive communication recognises that effective messaging must go beyond the provision of factual information. It involves adapting language, metaphors, channels, and messengers to align with local values and realities, as some cultures view menstruation as impure and discussing it openly may be considered inappropriate or shameful (Gbogbo, Wuresah, Gbogbo, et al., 2025). For example, using local dialects, traditional proverbs, or culturally accepted symbols in menstrual health education can make messages more relatable and digestible (Chandra-Mouli et al., 2018). In parts of Northern Ghana, including the Builsa North Municipal, girls often describe menstruation using coded language such as "visitors" or "the red days," reflecting a cultural environment where direct references to menstruation are discouraged (Gbogbo, Wuresah, Gbogbo, et al., 2025). Communication strategies that disregard these norms may fail to resonate or may provoke resistance, especially from gatekeepers such as elders or religious leaders.

A key aspect of culturally-sensitive communication is engaging trusted community figures in message delivery. Studies have shown that involving traditional authorities, religious leaders, and respected women (e.g., queen mothers or women's group leaders) can lend legitimacy to menstrual health discussions and foster wider acceptance (UNFPA, 2021; Ocran & Atiigah, 2022). Sommer et al. (2015) suggest that engaging local communities, including religious and traditional leaders, in menstrual health education initiatives can help legitimize the conversation and promote a more inclusive and supportive approach to menstruation. In Northern Ghana, for instance, outreach programs that include imams or chiefs in sensitisation activities have been more successful in breaking resistance to menstrual education than those that rely solely on external facilitators (Sumankuuro et al., 2023).

Moreover, cultural sensitivity should not equate to cultural relativism, that is, accepting all practices as valid simply because they are traditional. Certain cultural norms, such as isolating menstruating girls, barring them from school or farming activities, or attributing illness to menstrual impurity, are not only discriminatory but harmful to girls' health and development. Culturally-sensitive communication must therefore balance respect for tradition with a commitment to transformative dialogue that questions restrictive beliefs while offering alternatives rooted in both science and empathy (Sommer et al., 2015).

However, some scholars caution against romanticising cultural adaptation at the expense of critical engagement. For instance, Waisbord, (2008) argues that too much emphasis on cultural accommodation can dilute health messages or delay behaviour change, especially if communicators avoid challenging harmful norms for fear of backlash. Instead, culturally sensitive approaches should aim for co-creation, where communities actively participate in designing and delivering messages that reflect their values and aspirations for change.

Finally, gender considerations are also crucial in menstrual health communication. While menstruation is a biological process experienced by individuals assigned female at birth, the social constructs of gender and power dynamics often influence how menstruation is perceived and discussed. In many societies, menstruation is still largely considered a "women's issue," which can exclude men and boys from the conversation and perpetuate gender inequality (Sommer et al., 2015). Involving men and boys in menstrual health education is essential for breaking the stigma and fostering an environment of empathy and understanding. Programs that educate both men and women about menstruation can help create more supportive communities and ensure that menstruators feel understood and empowered to manage their health.

2.5 Theoretical framework

A theory is a cohesive or coherent set of claims that offer a philosophically sound representation of a topic, (Littlejohn & Foss, 2011). They contend that theories simplify complex experiences into a cohesive set of ideas and claims for easy comprehension. According to Kerlinger (2000) theory and research, it is a transaction in which the theory defines what data should be gathered on the one hand, and the research findings or data either confirm or refute the theory on the other. Consequently, theories offer a structure or model for interpreting and explaining gathered evidence.

Stewart and Klein (2016) are of the view that a researcher needs to know the theoretical bases for their research before they set out to conduct the research. They explained that theories are used in almost every aspect of the study, as they help the researcher state the reason for conducting the research, identify and define the research objectives, answer research questions, and provide a foundation for developing data collection and analysis tools. Theories are used in qualitative research to explain behaviour and attitudes; they also help the researcher identify essential issues for examination, how to position themselves in the study and how to write the final research report (Creswell & Creswell, 2013).

This study explores how menstrual health literacy empowers women to engage in patient-centered communication with healthcare providers in the Bulsa North Municipality of Ghana. It specifically focuses on the communicative experiences of women living with menstrual health issues and how their literacy levels influence their confidence, decision-making, and ability to articulate their concerns during clinical encounters. To investigate this, the study adopts the Integrated Model of Health Literacy as its guiding framework. The IMHL is appropriate for this research because it emphasizes the interrelated processes of accessing, understanding, appraising, and

applying health information, all of which are critical to exploring how women in the Builsa North Municipality navigate menstrual health literacy and communication within their social and clinical contexts.

2.5.1 The Integrated Model of Health Literacy

The Integrated Model of Health Literacy (IMHL) was developed by Sørensen et al. (2012) as part of the European Health Literacy Project (HLS-EU) in response to the growing fragmentation in definitions and conceptual approaches to health literacy across disciplines. Prior to its development, health literacy had been conceptualized variously as functional literacy, patient education, risk communication, or health promotion capacity, often with limited integration across fields such as medicine, public health, and education. Through a systematic review of 17 definitions and 12 conceptual models, Sørensen and colleagues proposed the IMHL as a comprehensive framework capable of integrating these diverse perspectives into a unified model suitable for research, policy, and intervention design.

Earlier work by Parker et al. (1995) and Williams et al. (1995) focused largely on functional health literacy, emphasizing patients' ability to read prescription labels, appointment slips, and basic medical instructions. This narrow focus often framed health literacy as an individual deficit, particularly among populations with low educational attainment.

A major conceptual shift occurred with Nutbeam (2000), who proposed a three-level model of health literacy: functional, interactive, and critical literacy. Functional literacy referred to basic reading and writing skills; interactive literacy involved more advanced cognitive and social skills that enable active participation in health communication; and critical literacy emphasized the ability to critically analyze information and exert greater control over life events. Nutbeam's model expanded health literacy beyond

clinical comprehension toward empowerment and social participation, influencing later multidimensional frameworks, including the IMHL.

Similarly, Ratzan et al. (2000) defined health literacy as the degree to which individuals can obtain, process, and understand basic health information needed to make appropriate health decisions. This definition reinforced the decision-making dimension of health literacy but still centered primarily on individual capabilities. Over time, scholars increasingly recognized that health literacy is shaped not only by individual skills but also by the complexity of health systems and communication environments. The IMHL builds on these earlier contributions by synthesizing them into a more comprehensive, systems-oriented framework. It incorporates functional, interactive, and critical dimensions while explicitly embedding them within broader social and structural determinants.

The IMHL conceptualizes health literacy as both an individual capacity and a socially embedded process. It defines health literacy as people's knowledge, motivation, and competencies to access, understand, appraise, and apply health information in ways that enable them to make informed decisions regarding healthcare, disease prevention, and health promotion (Sørensen et al., 2012). This definition expands earlier functional notions of literacy by emphasizing cognitive, social, and communicative competencies. In doing so, the IMHL shifts the focus from basic reading ability to a broader set of skills required to navigate increasingly complex health systems.

Central to the model are four interrelated competencies: access, understand, appraise, and apply. These competencies are not linear but interactive and mutually reinforcing. Access involves the ability to seek, locate, and obtain relevant health information. This may include navigating healthcare institutions, consulting media sources, or engaging in interpersonal communication with peers and professionals.

Understand refers to the comprehension of that information once obtained. It includes not only literal understanding but also the ability to interpret explanations within one's cultural and social context.

Appraise entails critically evaluating the credibility, accuracy, and relevance of information. In contemporary health environments characterized by misinformation, this competency is particularly significant. It aligns closely with Nutbeam's notion of critical literacy.

Apply reflects the capacity to use information to make judgments and translate knowledge into health-related action. Application connects information to behavior, linking health literacy directly to health outcomes.

These four competencies operate across three domains of health: healthcare, disease prevention, and health promotion. The healthcare domain concerns interactions with providers, understanding treatment options, and adherence to medical advice. Disease prevention involves behaviors such as screening, immunization, and early detection practices. Health promotion extends to broader lifestyle choices and participation in activities that enhance long-term wellbeing. By integrating competencies with domains, the IMHL provides a matrix structure that captures both processes and contexts of health decision-making.

The IMHL's primary strength lies in its integrative and multidimensional design. It synthesizes earlier theories, incorporates social determinants, and offers a practical structure for measurement and intervention. Its matrix approach allows researchers to analyze both competencies and domains simultaneously, enhancing analytical depth.

However, some critiques have emerged. Scholars have noted that while the model acknowledges structural determinants, many applications still emphasize individual competencies over systemic reform. Others argue that self-reported measures may not

fully capture actual health literacy skills. Additionally, cultural interpretations of "appraisal" and "application" may vary across contexts, requiring careful contextual adaptation in non-European settings. Despite these critiques, the IMHL remains one of the most comprehensive and widely cited frameworks in health literacy research.

2.5.2 Relevance of the theory to this study

The Integrated Model of Health Literacy helped me to understand, answer, and analyze Research Question One, which seeks to examine how women in the Builsa North Municipality access and utilize information on menstrual health. The model's dimensions of accessing and applying information provide a basis for exploring the communication channels available to women and the ways in which they use menstrual health information in their daily lives.

The model also guided the analysis of Research Question Two, which explores the factors that influence women's menstrual health literacy and communication. The dimensions of understanding and appraising information explain how cultural norms, education, and healthcare structures shape women's ability to interpret and evaluate menstrual health knowledge.

Finally, the Integrated Model of Health Literacy was useful for addressing Research Question Three, which identifies communication strategies and other approaches to promote menstrual health literacy and communication. The model emphasizes the application of information, showing how improved literacy can translate into effective communication, decision-making, and empowerment.

2.6 Chapter Summary

This chapter reviewed related work on menstrual health literacy, communication, and women's empowerment, drawing primarily from global contexts, while relatively little exists in Ghana, particularly in the Builsa North Municipality. From the available

literature, it appears that women continue to face significant challenges in accessing, understanding, and utilizing menstrual health information, largely due to stigma, cultural taboos, and limited educational opportunities. The review also showed that while patient-centered communication and health literacy are widely recognized as crucial to improving health outcomes, their intersection with menstrual health remains underexplored.

Additionally, this study is grounded on the Integrated Model of Health Literacy, which provides a framework for analyzing how women access, understand, appraise, and apply information on menstrual health. The theory helps to explain how communication functions as both a barrier and an enabler in women's health-seeking behavior and empowerment.

The next chapter discusses the research methodology and data analysis procedures employed in this study.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the methodological procedures employed in collecting and analysing the data for the study, including the research's approach, research design, sampling methods, data-gathering methods, and data analysis procedures.

3.1 Research Approach

A qualitative research approach was employed to gather and analyze the study's data. Qualitative research is particularly suited to exploring complex social phenomena in their natural contexts and understanding the meanings individuals assign to experiences (Creswell & Creswell, 2013; Teherani et al., 2015). In this study, the focus was on women's menstrual health literacy and how it shapes their ability to communicate about menstrual issues particularly with healthcare providers, a process embedded in social, cultural, and interpersonal contexts.

The qualitative approach allows for an in-depth exploration of participants' experiences, perceptions, and interactions, which cannot be fully captured through quantitative measures. By studying women in their natural settings, the researcher could investigate not only what women know about menstruation but also how that knowledge influences their confidence, behavior, and engagement with healthcare providers. This aligns with Lindlof and Taylor (2002) view that qualitative research preserves the situated form and content of social actions and provides insight into norms, values, and attitudes of a particular population.

Furthermore, the study sought to understand the processes through which women access, interpret, and apply menstrual health information, phenomena that are

subjective, context-dependent, and shaped by cultural and systemic factors. A qualitative approach is uniquely capable of capturing these nuances, allowing participants to express their experiences in their own words and enabling the researcher to explore underlying motivations, barriers, and facilitators (Creswell, 2017).

Thus, the qualitative approach was selected because it provides the depth and flexibility required to explore menstrual health literacy in the Builsa North Municipality comprehensively, uncovering both individual and environmental influences on women's communication behaviors. No alternative approach could capture these complex social and cultural dynamics as effectively as qualitative methods.

3.2 Research Design

The case study design was chosen to study females in the Bulsa North Municipality who have and are still visiting the hospital with menstrual problems to know whether they know about menstrual health and how that knowledge is empowering them to communicate well with their doctors to get the best treatment at the hospital, and how it also helps their general well-being. A research design is a detailed plan or method for obtaining data scientifically (Schaefer, 2004). The selection of an appropriate design depends on the nature of the research, the research problem and questions, the researcher's personal experiences, and the type of audience for the study (Creswell, 2014). A research design focuses on the definition of the unit of analysis and the cases to be studied, and it logically links the research questions to the research findings and conclusions through the steps undertaken to collect and analyse data, hence, it is seen as the outline of a research project (Baškarada, 2014). A case study design was used for this study. A case study studies a case in a bounded system, thus by place and time, which studies real-life events that are current or in progress; it can also be a single case or multiple cases for comparison (Creswell, 2007).

3.2.1 Case study

A case study is a type of research design in which the researcher conducts a general analysis of a case, typically a programme, event, activity, or process, involving one or more people (Yin, 2009). A case study also explores the real-world in a bounded system (a case) or several bounded systems (cases) over time through in-depth data collection from several sources (observations, interviews, audio-visual materials, documents, and reports), and provides a case description and case themes (Creswell & Creswell, 2013). According to Yin (2009), the case study method is particularly useful when the context of the events being investigated is essential and the researcher has no control over how they unfold. Therefore, this study examines how females' menstrual health literacy helps them communicate, especially with their health care providers, whenever they visit the hospital with menstrual problems an activity that occurs in the real lives of some females in the Builsa North Municipal, which the researcher has no control over.

According to Yin (2009), different types of cases can be studied; single cases with embedded units and multiple case studies. For this research, a single case study was used. Yin (2009) defines a single case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, particularly when the boundaries between the phenomenon and context are not clearly evident. Yin emphasizes that a single case study is appropriate under certain conditions, such as: critical case, unique case, revelatory case and longitudinal case. The single case will help the researcher investigate a contemporary, context-specific phenomenon by focusing on a particular population or geographical area women in the Bulsa North Municipal. Thus, this study naturally aligns with Yin's emphasis on studying phenomena within their real-life contexts.

3.3 Sampling and Sample Size

The sampling technique of a study refers to the procedures a researcher uses to select participants of a study (McCombes, 2019). To ensure data are collected correctly, the sampling technique is critical in every study. There are two different sorts of sampling methods: probability and non-probability. Probability sampling uses mathematical procedures to ensure that each unit has an equal chance of being chosen. According to Kabir (2016) non-probability sampling, on the other hand, does not rely on random selection.

The sampling strategy adopted for this study was non-probability, specifically purposive and snowball sampling. This strategy was appropriate because the study targeted a specific group woman with menstrual health issues who could provide in-depth, context-rich insights. As Merriam and Tisdell (2016) argue, purposive sampling is ideal for qualitative research aimed at understanding phenomena from the perspectives of information-rich participants. Snowball sampling was additionally used to reach participants who might otherwise be difficult to identify due to the sensitive nature of the subject, as supported by Goodman (1961), who first introduced the technique for studying hidden populations.

Purposive sampling is where the researcher decides who should take part in the study and the sample size to use (Creswell & Creswell, 2013). This means that the researcher chooses participants based on their willingness and availability to take part in the study. The researcher may also select based on if the researcher thinks that a participant is knowledgeable enough to take part in the study. The study therefore purposively selected females who are accessible to the researcher, females who have menstrual health problems and have been visiting the hospital, to study whether or not they have

menstrual health literacy and how they communicate with health care providers because of their knowledge.

Snowball sampling is a non-probability sampling technique where existing participants recruit future subjects from among their acquaintances, creating a chain referral process (Goodman, 1961). By recruiting people who share a specific research interest with the target population, researchers can utilise the snowball sampling technique to build a pool of participants for a study. It is also known as chain referral sampling or chain sampling. In snowball sampling, a participant from the original sample group is invited to suggest others to serve as future participants by the researchers. Who are your best friends, for example, may be the query used to solicit recommendations. The initial wave of participants consists of those suggested as research subjects by these people and who accept the study's terms (Naderifar, et al., 2017). This technique was mainly used to identify students at the Senior High Schools for the Focus group discussion.

According to Creswell and Creswell (2013), qualitative research collects data in large volumes and does not focus on generalizing findings to a population but rather on identifying patterns and analyzing emerging themes within specific cases. They further note that in case study research, although smaller sample sizes are common, researchers must ensure that they collect rich, relevant, and context-specific data. While Creswell and Creswell recommend four to five participants for single case studies, other scholars Patton (2014) emphasise that sample size in qualitative research should be guided by the concept of information-rich cases, not numerical adequacy.

This study therefore adopted a sample size of eighteen (18) participants, selected through purposive sampling and snowball sampling, to ensure depth and diversity in responses. The sample included twelve (12) participants for focus group discussions

(FGDs) and six (6) individual interviewees, including one healthcare provider (HCP). This size was deemed appropriate because it allowed the researcher to gain sufficient insight into the research questions without compromising data manageability, especially given the sensitive nature of menstrual health issues and the depth of the qualitative interviews.

Two FGDs were conducted, each comprising six participants. Participants were adolescent girls and young women from the community who had experienced menstrual health challenges and could reflect on their experiences with menstrual literacy and patient-centered communication. Criterion purposive sampling was used to select participants based on specific inclusion criteria: Female individuals aged 16 to 24 years, residents of Builsa North Municipality, prior experience with menstrual health challenges or engagement with healthcare systems for related concerns, willingness and availability to participate in a group discussion.

Six (6) individual interviews were conducted with women selected based on their availability, willingness, and relevance to the study focus. This group included: Four (4) young adult women from within the community, One (1) adult woman, and One (1) healthcare provider. This number is consistent with Creswell and Poth (2017) the assertion that in-depth qualitative interviews can be sufficiently informative with as few as five to six participants if they are carefully chosen and able to provide thick, descriptive narratives.

The combined use of purposive and snowball sampling ensured that participants were not only relevant to the research questions but also capable of offering rich, detailed insights into the topic.

3.4 Bulsa North Municipal

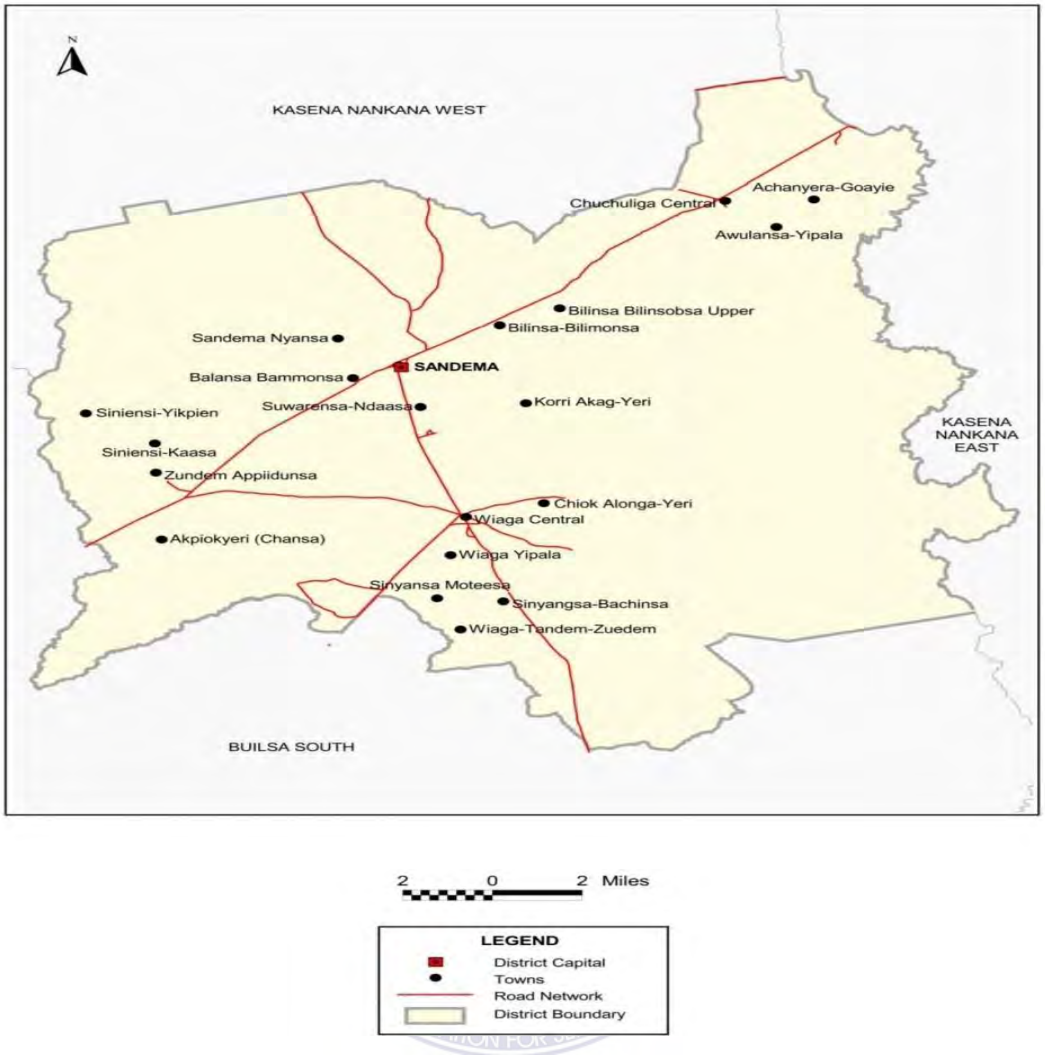

Figure 1: District Map of Builsa North

(Source: Ghana Statistical Service)

The Bulsa North Municipality is situated in the northern section of the Upper East Region, with Sandema serving as the district's capital. There are five major towns in the municipality; Kadema, Wiaga, Siniensi, Chuchuliga and Sandema. Roads, schools, and health facilities are just a few of the district's developmental challenges (Ghana Statistical Service (GSS), 2024). The district is also grounded culturally and practices such as widowhood rites which undermine the rights of women is rampant (Djanie, 2023). Menstruation is rarely discussed in this part of the nation, as is the case with most societies. It remains a topic shrouded in silence in many parts of Ghana, reflecting

societal taboos and cultural stigmas that prevent open discussions. Studies indicate that young girls often begin menstruating without adequate preparation or parental guidance, particularly from mothers. This lack of support stems from cultural norms that regard menstruation as a private or even shameful subject (Kpodo et al., 2022).

Again, the district's demographic characteristics make it a suitable site for investigation. Firstly, because of harmful sexual norms which put women at a disadvantage due to their sexuality (Djanie, 2023). Secondly, the district is demographically rural with only 5% (5 729) of the population living in an urban area, while the rest of the 95% (50 842) live in rural communities (Ghana Statistical Service (GSS), 2021). Rural communities often lag in development due to limited access to basic amenities such as quality education, healthcare facilities, clean drinking water, good roads, and reliable electricity. These challenges are compounded by factors such as limited funding, geographical isolation, and systemic neglect. For example, rural areas frequently lack adequate healthcare infrastructure, leading to higher barriers to accessing essential services (Kapur, 2024), as is the case in the Bulsa North Municipality. This suggests a threat to women's health, especially in terms of menstruation. This site is very suitable, as it will help us uncover some of the challenges women in rural communities face regarding menstruation, especially in communicating with their healthcare providers about menstrual health disorders.

As of December 2016, the Upper East and Upper West regions have been indicated to have the lowest human resource (staffing) compared to the other areas, with Greater Accra and Ashanti regions having the highest of 19% and 18% respectively, followed by the Eastern Region with 9.8% (Ghana Health Service (GHS), 2017). With the region falling below 9% of human resources, the Bulsa North Municipal Health Directorate has a total of 398 healthcare providers as of August 2020, with nineteen health facilities

in the municipality (Builsa North Municipal Assembly, 2022). The tables below show a breakdown of health personnel and health facilities in the district

Table 1: Breakdown of Health Personnel in Builsa North Municipal

Staff category	Year (2021)
Doctors	2
Physicians/Assistants (medicals, dentals, anesthesia)	4
Pharmacists/Pharmacy technician	2
General nurses	80
Midwives	22
Enrolled nurses	74
Community health nurses	42
Community health assistants	32
Paramedical/support staff	50
Casual staff	30
Orientation staff (midwives, general and enrolled nurses)	60
Total	398

(Source: Builsa North Municipal Assembly, 2022)

Table 2: Breakdown of Health Facilities in Builsa North Municipal

Type of Facility	Number
Hospitals	1
Health Centers	2
Clinics	1
CHPS Compounds	15
Total	19

(Source: Builsa North Municipal Assembly, 2022)

Table 3: Distribution table of health facilities in Bulsa North Municipal

Sub-district	Health Facilities
Chuchuliga	Chuchuliga Health Center, Namonsa CHPS, Achanyeri-Goayie CHPS, Yipaala CHPS, Nanjiupiong CHPS
Kadema	Mutiensa CHPS, Kadema CHPS
Sandema West	Sandema Hospital, Sanwaasa CHPS, Kandema CHPS
Sandema East	Kalijisa CHPS, Kori CHPS,
Siniensi	Siniensi Presby Clinic, Zundema CHPS, Yikpieng CHPS
Wiaga	Wiaga Health Center, Chiok CHPS, Farinsa CHPS, Kom CHPS

(Source: Builsa North Municipal Assembly, 2022)

3.5 Data Collection Method

According to Kabir (2016) data collection is the process of systematically obtaining and measuring data on variables of interest to enable researchers to answer research questions, test hypotheses, and evaluate outcomes. Qualitative researchers usually use four data collection techniques, and they are; in-depth interviews, focus groups,

observational techniques, and document and material culture analysis (Patton, 2002). In this study, interviews and focus group discussions were employed to gather the data.

3.5.1 Interview

To collect qualitative data for this study, two complementary methods were employed: face-to-face interviews and a qualitative questionnaire. These approaches were selected to ensure an in-depth understanding of menstrual health literacy and patient-centered communication within the context of Bulsa North Municipal.

According to Creswell (2014), an interview is a face-to-face or telephone conversation that is mediated between a participant and a researcher. In the words of interviews, they are a key technique for qualitative researchers to gather data and provide a way to learn more about participants' opinions and perceptions. Daymon and Holloway (2011) again argue that, interviews are a collaborative technique to gather information about people's thoughts, feelings, intentions, experiences, and ideas. Interviews are a way to elicit people's interests and experiences voluntarily. This method was particularly suited to exploring sensitive topics such as menstrual health, as the personal interaction helped build rapport and trust, thereby reducing the likelihood of social desirability bias (Bryman, 2016). It also enabled the researcher to observe non-verbal cues, which added depth to the analysis.

The three main categories of qualitative interviews are semi-structured, unstructured, and structured (Daymon & Holloway, 2011). I employed semi-structured interviews in this study because, according to Braun and Clarke (2013), this kind of interview entails the use of pre-written, sequential questions. It is, however, essential to note that the researcher does not strictly adhere to it. Other questions were incorporated when it became important. As a result, I decided on a semi-structured interview since I wanted

to get a range of viewpoints throughout the discussion and to give myself a chance to follow up on noteworthy events and go into further detail about different topics.

Additionally, the interview produced narrative data that enabled me to gain insight into the participants' perspectives. This was done to validate Daymon and Holloway's (2011) claim that interviews are dialogues between two people to gather detailed information on a specific topic or issue so that it can be subjected to a variety of interpretations and meanings. In light of these claims, I learned firsthand from the interview how and why participants can discuss their menstrual health with healthcare practitioners in Bulsa North Municipal, either effectively or ineffectively.

A qualitative questionnaire was used to supplement the face-to-face interviews, especially for participants who were willing to participate but could not be reached in person due to time or geographical constraints. This approach ensured consistency in the data collected while enabling the researcher to capture broader perspectives without compromising the study's qualitative nature. According to Brinkmann and Kvale (2014), qualitative questionnaires, when composed of open-ended questions, align with qualitative research principles as they allow participants to respond in their own words, offering rich, contextual insights. In this study, the questionnaire served a complementary role within the interview method rather than being treated as a distinct third data-collection method. This flexible data collection strategy also enabled methodological triangulation, helping to validate emerging themes and enhancing the credibility and trustworthiness of the findings (Yin, 2009; Patton, 2015). By supplementing the interview process with written responses where necessary, the study maintained methodological coherence without expanding the sample size or deviating from its core qualitative approach.

3.5.2 Focus Group Discussion

According to Braun and Clarke (2013), the focus group discussion is a technique that involves gathering information from several participants simultaneously. Focus groups are guided conversations about a certain topic of interest that are comparatively unstructured. Despite being a type of interview, Lindlof and Taylor (2017) assent that focus group discussions have evolved into a stand-alone data-collection technique. As a result, information was gathered from participant responses on subjects drawn from the study's goals. Furthermore, focus group discussions were conducted in a group setting where one another's thoughts and experiences inspired members; as a result, a sort of "chaining" or "cascading effect" took place, which enabled the researcher to obtain more "naturalistic" accounts, i.e., conversations, than those produced through individual interviews (Lindlof & Taylor, 2002).

The literature offers different recommendations for the ideal focus group size, depending on the complexity of the subject, participants' characteristics, and the moderator's abilities. According to the majority of researchers, groups of four to twelve people are the ideal size (Barbour, 2008; Stalmeijer et al., 2014). Focus groups are in-depth discussions in which a small group of people from the target community (often 8–12) discuss issues related to the subject under study (Khan et al., 1991). Additionally, the number of participants in the focus group may depend on the nature of the shared experiences, as some events may require more time to examine. The group should therefore be small (Barbour, 2008), although its size can vary depending on the study's purpose (Muijeen et al., 2020). In support of the claims above and in accordance with the study's goals, I led two focus groups, each with six participants.

3.6 Data collection procedure

The data collection procedure discusses the various measures, processes, and means by which the researcher gathered data for the research analysis using various data collection instruments.

3.6.1 Interviews

The interview was conducted in two formats, face-to-face and a qualitative questionnaire. After participants were recruited, dates, venues and times were fixed with each participant according to their convenience. Some of the participants, due to the nature of their work and their location, opted for an online interview. On the day of the face-to-face interview with each participant, I met them in their homes, a place of convenience and at their own time, which we scheduled, although I had to reschedule some of the interviews until I was finally able to meet them. On the day of the interview, I reintroduced myself to the participants and briefed them on the objectives and the format of the interview. All this was to build a rapport with them to ensure effective engagement as posited by Braun et al (2017), to create a good rapport through self-introduction.

I started each interview with permission from participants to audio-record them. I audio-recorded each interview with a Samsung Z Flip and a Techno as a backup. I also took field notes to capture non-verbal cues. I also took into account the socio-demographic data of interviewees, such as age, educational attainment and profession, as this could influence their interactions in health settings. I used a semi-interview guide that helped me to moderate the flow of the questions with the subject, with emphasis on the participant's perspectives and impressions on the phenomenon under investigation. However, new concepts that were not included in the guide were permitted. For clarity and flexibility, the interviews were conducted in two languages,

English and Buli. These languages were used because they are the languages spoken in the area, and they also allow participants to express themselves well. This was also because some of the participants themselves requested to use one language or another to express their actual feelings. Each interview lasted twenty-five (25) to thirty (30) minutes.

According to Braun et al. (2017), virtual interviews are no longer regarded as poor substitutes for face-to-face interviews but as different types of interview methods. This study therefore utilised online interviews via Google Forms. The questionnaire consisted of open-ended questions which aligned with the interview guide to ensure consistency. The form was distributed electronically to participants via social media platforms like WhatsApp. Since the questionnaire was conducted entirely online, participants could respond at their convenience. The Google Form allowed detailed responses to open-ended questions, and participants could submit it once all questions were answered. After submission, I followed up with participants who had any incomplete answers or needed clarification on their responses. The follow-up was conducted by phone, ensuring that all necessary information was obtained. Reactions from the Google Form was automatically compiled into a spreadsheet for analysis.

3.6.2 Focus Group Discussions

I conducted a Focus Group Discussion (FGD) with 12 senior high school students aged 16 to 24 on the topic. Due to the delicate nature of the subject, the participants in the focus group discussion were all senior high school students aged 16 to 24. This was necessary to ensure that participants do not feel intimidated by older participants or by those with higher education than they have. I first discovered that young girls with menstrual problems were hesitant when I contacted them individually at random, but in

a group setting, they were forthcoming, hence I grouped them according to age and educational attainment.

With the assistance of teachers and my prior experience as a CAMFED Learner Facilitator in the municipality's senior high schools, I successfully recruited senior high school students for the study. The girls were given an explanation of the objectives and purpose of the study, and they were invited to meet me after lunch. I had to identify eligible participants to reduce the unexpectedly large number of girls who showed up. The majority of the females were not allowed to participate because they had never gone to the hospital for their menstrual problems. I made sure that everyone who participated in the discussion received an invitation that included information about the session's goal, confidentiality, and consent. To help participants feel ready, I gave them the information about the session beforehand.

I began the discussion by introducing myself, stating the purpose of the debate, and sharing some background on the importance of menstrual health literacy in empowering women and fostering patient-centered communication. Then, we laid out ground rules together around respect, confidentiality, and the importance of listening to each other's experiences. I also sought participants' permission to audio-record them. I audio-recorded each focus group discussion with a Samsung Z Flip and a Techno as a backup. Throughout the discussion, I listened actively and took detailed notes, paying attention to both verbal contributions and nonverbal cues. When we started, participants were not forthcoming about their experiences. It took the confidence of a few to inspire the rest, and they were empowered by the opportunity to discuss menstrual health openly. At the end of the session, I thanked the participants for their contributions and acknowledged the sensitivity of the topic. I reassured them that their insights would

play a vital role in shaping a more inclusive approach to menstrual health literacy and patient-centered communication in our community.

3.7 Data analysis plan

Qualitative data analysis, according to Creswell (2013), involves reducing data into themes through coding, summarising codes, graphically representing them, or discussing the themes. Again, Creswell (2013) indicated that in analysing case studies, descriptions are the best option. In addition, (Patton, 1999) suggests three general approaches to data analysis: data organization, data reduction (by summarization and categorization), and pattern and theme identification and linkage. These assertions are further supported by Fraenkel et al. (2011) claim that data analysis is the process of combining all the information a researcher acquires during fieldwork and drawing logical, parallel lines from the data in accordance with the researcher's hypotheses.

Thematic data analysis was employed in this study. Thematic analysis is an interpretive process in which data are methodically examined to uncover patterns, producing an illuminating account of the phenomena (Smith & Firth, 2011). This shows that the investigator used thematic analysis to find repeated patterns, codes, or themes and provided a detailed explanation of each code. Additionally, a thematic analysis of the interviews was conducted to understand how women in the Bulsa North District perceive menstruation and how that perception influences their communication with healthcare providers. This was done in accordance with Braun et al. (2017) six steps of thematic analysis. The six steps include: 1) familiarization with data; 2) initial coding; 3) searching for themes; 4) reviewing themes; 5) defining and naming themes; and 6) writing up the research report.

The researcher collected and organised all the data from interviews and FGDs in order to respond to the research questions, which examined whether menstrual health literacy empowers women to communicate effectively with their healthcare providers in the Bulsa North Municipal. The interviews and FGDs were recorded on my phone using speech-to-text. While the audio was being recorded, it was transcribing the audio simultaneously. I then listened to the interview and discussion alongside the text to ensure consistency and accuracy of the recorded speech and text. Necessary corrections were made to text to get an accurate transcription. Also, I downloaded the responses from the Google Forms questionnaire into a spreadsheet and converted it to a Word document for easier use. I utilised the inductive type of thematic data analysis, where the researcher does not try to fit data into any form of preconceived or pre-existing coding frame (Braun et al., 2017).

Furthermore, data were analysed using Braun and Clarke (2006) a six-step framework for thematic analysis. First, I familiarised myself with the data by repeatedly listening to audio recordings and reading through transcripts to immerse myself in the content. Second, I generated initial codes by identifying key features of the data relevant to the research questions. Third, I searched for themes by examining the codes and grouping them into potential overarching patterns. In the fourth step, I reviewed these themes to ensure they accurately reflected both the coded data and the dataset as a whole. Fifth, I defined and named the themes by refining their scope and ensuring they clearly captured the essence of the participants' experiences. Finally, I produced the report by selecting vivid, compelling extracts, linking them to the research questions, and contextualising them within the broader scholarly discourse on menstrual health literacy and patient-centered communication. Thematic saturation was achieved when

no new themes emerged during analysis, indicating adequacy of data (Vaismoradi et al., 2013).

3.8 Ethical Considerations

This study adhered to ethical research principles, as outlined by Creswell and Poth, (2023), to ensure the protection, dignity, and autonomy of all participants. According to Creswell and Creswell (2013), gaining access to participants through appropriate gatekeepers is essential in research. For this study, access was sought from two groups of senior high school students for focus group discussion. Participants from the first school initial access was facilitated by an assistant housemistress who consented to support the study. While permission was not sought directly from the headmaster, the assistant housemistress acted as an internal gatekeeper, helping to recruit participants and ensuring that the process was conducted respectfully and with sensitivity.

The second group of participants were students residing in a dormitory near the researcher's home. While formal permission was not obtained from the school's headmaster, participants were approached directly due to the close proximity and established trust between the researcher and the students and their age (these students were between 18 to 24 years). Care was taken to ensure that participation was entirely voluntary. Participants were informed of the study's purpose and assured of their right to decline or withdraw at any time. Although the approach does not sit well with Cresswell and Creswell (2013) assertion of approval from gatekeepers, these approaches still align with the ethical research principle of participant protection, dignity and autonomy (Cresswell and Poth, 2018). However, the absence of formal institutional consent is acknowledged as a limitation, and the researcher recognizes the need for stricter adherence to gatekeeping protocols in future research endeavors.

According to Kumar (2011), the individual's decisions to take part in a study is influenced by the caliber of information they are given regarding the type of information being sought. The participants were therefore given a detailed explanation of the purpose of the study, the time frame, the type of data needed, and how the data would be used and reported accordingly.

The right to privacy is essential and significant in this context. As stated by (Cohen-Almagor, 2007), "the right to privacy" means that everyone has the liberty to participate in the study or not, to respond to questions or not, to be interviewed or not, to have their home invaded or not, to answer calls or emails or not, and to use their private space without worrying about being watched. Additionally, participants were made aware that their involvement in the study was entirely voluntary and that they could withdraw at any time if they so desired. According to (Halai, 2006), conducting quality research is a morally righteous effort, and the researcher should possess extensive expertise to ensure that the study participants' interests are never taken for granted. This is because participant protection is crucial in any study (Cohen-Almagor, 2007).

All information, including tape recordings of conversations, was kept out of reach of unauthorized parties to maintain confidentiality and anonymity. The researcher must make sure that no unauthorized individuals get access to them, asserts Kumar (2011). Participants' names, birth year, and other identifiers that would reveal their identities to the public were removed from the report (Creswell, 2014). To maintain anonymity, the report substituted codes for participant names and addresses, as recommended by (Cohen-Almagor, 2007).

3.9 Trustworthiness of Data

According to Lincoln and Guba, trustworthiness criteria are among the most widely used standards for evaluating a study's quality within the interpretive-qualitative framework (Alexander, 2019). Cresswell (2014) also posits that it is a way to assess if the methodology used to conclude is accurate from the perspective of the participant, the researcher, or the reader. Furthermore, Alexander (2019) argues that a research study's credibility is greatly influenced by its reliability; hence, qualitative researchers use the credibility, transferability, dependability, and confirmability criteria offered by Lincoln and Guba (1985) in their study methodology.

Triangulation was employed in this study to enhance the validity and reliability of the findings. According to Denzin (1978, as cited in Nielsen et al., 2020), triangulation involves the use of multiple methods, data sources, or perspectives to examine a research problem comprehensively. In this study, two qualitative data collection methods were triangulated: *interviews and focus group discussions.* This methodological approach provided a multidimensional understanding of menstrual health literacy and patient-centered communication in Builsa North Municipal.

The use of the data collection methods, interviews, and focus group discussions ensured methodological triangulation. Each method contributed unique strengths to the study. While interviews provided depth, enabling the researcher to delve into personal experiences and clarify responses through probing questions (Creswell & Poth, 2023), and standardized data collection across participants, reducing potential biases introduced by interviewer interactions, and focus group discussions, on the other hand, revealed group dynamics and cultural contexts that might not emerge in individual interviews or written responses. This triangulation reduced the likelihood of methodological biases and allowed for cross-validation of findings. For example,

themes identified in focus group discussions were corroborated through the responses from the individual interviews to ensure consistency and credibility.

3.10 Chapter Summary

This chapter outlined the research methodology used to examine menstrual health literacy in the Builsa North Municipal. A qualitative case study design was adopted to capture participants' experiences and perspectives. Data were collected through interviews, focus group discussions, and a qualitative questionnaire, with purposive and snowball sampling guiding participant selection. Thematic analysis was employed to identify and interpret emerging patterns, while ethical considerations such as informed consent, confidentiality, and voluntary participation were strictly observed. The next chapter presents the analysis and discussion of the findings.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.0 Introduction

This chapter presents detailed discussions of findings from data collected, in line with the study's objectives and research questions. The discussion is anchored in Sørensen et al.'s Integrated Model of Health Literacy, which states that access to, understanding, appraisal, and application of health information shape individuals' health decisions and interactions (Sørensen et al., 2012). The analysis is drawn from participants' perspectives and supported by relevant literature to show both enabling and limiting influences.

For clarity, the data derived was simplified into several thematic units, which were thoroughly described and critically analysed. Below are the research questions that guided the data collection and analysis.

1. a. How do women in the Builsa North Municipality access information on menstrual health?

   b. How do women in the Builsa North Municipality utilize information on menstrual health?
2. What are the dominant factors influencing women's menstrual health literacy and communication in the Builsa North Municipality?
3. a. What communication strategies are used to promote menstrual health literacy and communication in the Builsa North Municipality?

   b. What other approaches are used to promote menstrual health literacy and communication in the Builsa North Municipality?

For the purposes of anonymity and confidentiality, participants were represented with alphanumeric codes. The table below shows generated codes for each participant.

Table 4: Respondents Codes and Description

Participant Code	Participant Description
HCP1	Healthcare Provider 1
P1 FG1	Participant 1 Focus Group 1
P2 FG1	Participant 2 Focus Group 1
P3 FG1	Participant 3 Focus Group 1
P4 FG1	Participant 4 Focus Group 1
P5 FG1	Participant 5 Focus Group 1
P6 FG1	Participant 6 Focus Group 1
P1 FG2	Participant 1 Focus Group 2
P2 FG2	Participant 2 Focus Group 2
P3 FG2	Participant 3 Focus Group 2
P4 FG2	Participant 4 Focus Group 2
P5 FG2	Participant 5 Focus Group 2
P6 FG2	Participant 6 Focus Group 2
P1	Participant 1
P2	Participant 2
P3	Participant 3
P4	Participant 4
P5	Participant 5

(Source: Researcher's Field Notes, 2024)

4.1 Demography of respondents

A total of 18 participants were engaged in this study. 17 female participants, and 1 male specialized doctor. Participants who were engaged in the focus group discussion were Senior High School students whose ages ranged between 16 years and 24 years. Respondents who were engaged in the individual interviews fell within the age bracket of 25 years to 45 years. Again, 4 of these participants are either at the tertiary level of

their education or graduates and working, and 1 participant is the oldest among them; she did not go far in her education but is also working. This put all participants in the formal education sector who can read and write.

4.2 RQ1. a. How do women in the Builsa North Municipality access information on menstrual health?

Access to menstrual health information is a core element of menstrual health literacy, as it determines whether women can obtain relevant, timely, and culturally appropriate knowledge to support their reproductive health. Within the Integrated Model of Health Literacy, access represents the initial stage through which individuals encounter information from both formal and informal sources (Sørensen et al., 2012). In the Builsa North Municipality, women's access to menstrual health information is shaped by social relationships, institutional structures, and cultural norms. Findings from the study show that women primarily rely on informal sources such as family members, peers, and everyday social interactions, while access to formal education and healthcare-based information remains limited. The themes under this section therefore examine the main sources through which women obtain menstrual health information and the challenges that influence their ability to reach accurate and supportive information channels, and they are; reliance on informal and diverse information sources and reliance on formal channels of menstrual health information.

4.2.1 Reliance on Informal and Diverse Information Sources

There are many pathways through which women and girls get access to information about menstrual health, and some of these ways are informal. This study has revealed that in addition to structured health education in schools and clinics, participants mainly depend on their peers, mothers, older women, and even social media for menstrual health information. These informal sources represent essential entry points in the

"access" dimension of Sørensen et al.'s Integrated Model of Health Literacy (IMHL), especially in settings where institutional channels remain weak, fragmented, or culturally constrained. The IMHL stresses that health literacy is not only about the availability of information but also about the ability of individuals to access, understand, appraise, and apply health information. In this case, informal networks provide a foundation for access but may weaken the latter parts of the model if the information accessed is inaccurate or incomplete.

Participants have mentioned that their mothers and female relatives are their primary sources of information. For example: *"My mother told me about menstruation when I first saw it. I was scared, but she explained to me what to do"* (P6, FG1). This finding echo earlier research showing that family transmission of menstrual knowledge is common in many developing countries. Sommer et al. (2015) argue that mothers are often the primary gatekeepers of menstrual education, even when they lack accurate or sufficient information themselves. Similarly, Chandra-Mouli and Patel (2017) point out that this intergenerational knowledge-sharing is sometimes restricted by cultural taboos, leading to incomplete or misleading information. This reflects the IMHL's concern with "understanding" and "appraisal," since the trust placed in family sources may override critical evaluation of whether the knowledge is accurate or health-promoting.

Some participants also mentioned their peers as trusted sources. *"We talk among ourselves about our periods. So, when my colleagues got to know that I don't get my period every month, our GP advised me to go and see a doctor because she doesn't think it is normal"* (P3, FG2). Peer-driven sharing in this case promoted openness and timely health-seeking behavior. This is supported by Sommer et al. (2016) that peer networks mostly serve as safe and relatable platforms for young women to exchange

sensitive health information, especially where formal education is limited. Within the IMHL framework, such interactions reflect how women "access" and "apply" information through their social networks, demonstrating the empowering potential of collective knowledge-sharing when it guides individuals toward appropriate healthcare.

However, not all peer advice was reliable. For instance, one participant shared, *"A friend of mine said because she does not want to experience pain, she always take four tablets of para before her menses start. that way when it comes it doesnt pain her very much again. I was even surprised"* (P6, FG2). This highlights how weak "appraisal" skills within peer networks can also perpetuate unsafe practices. Hennegan et al. (2019) caution that, while peer discussions can normalize menstruation, they also have the potential of spreading misinformation in the absence of accurate, structured sources. This double role of peer networks underscores the need for complementary education to strengthen appraisal skills and ensure that women can distinguish between safe and unsafe practices.

In addition to face-to-face interactions, several participants acknowledged relying on radio, TV, and social media for information. *"I listen to radio Builsa a lot, and so sometimes when they are doing their health programs, I listen a lot. They talk about different topics, and some time ago, I heard them discussing menstruation. It was quite interesting, just that they didn't talk much about it. Sometimes, too, when you open your Facebook, people will be posting about how to use some herbs to help wash you clean after your menses"* (P5). The reliance on media, especially local language-speaking radio stations, aligns with literature showing that mass media can be powerful tools for health promotion in low-resource settings (Essel, 2022). In Ghana, community radio is an important channel for disseminating health information in local languages, making it both accessible and culturally resonant (Akrofi-Quarcoo & Gadzekpo, 2020). Here,

IMHL's "understand" component is evident because local language programming bridges linguistic and cultural gaps, although the depth and consistency of the content may be limited.

Some participants explicitly stated that they did not receive comprehensive information in school or health centres: *"In school, they didn't really teach us much. It was just small talk. We didn't even understand some of it."* (P2, FG1). This reinforces evidence from studies, such as Mason et al. (2013) those that found that school-based menstrual education often fails to reach all students or deliver content in a way that is contextually meaningful or empowering. In the IMHL, this highlights how formal channels often underperform in fostering "understanding" and "application," compelling women to revert to informal, sometimes unreliable systems of learning. The insufficiency of formal education widens the reliance on informal networks, which may reinforce existing cultural silences and perpetuate stigma.

To conclude, while informal channels provide essential access to menstrual health information, they also point to broader systemic failures in formal health education. These channels function as alternative but partial strategies, supporting "access" but sometimes weakening "appraisal" and "application" of information. Identifying ways to strengthen informal systems and integrate them into formal health communication could be a powerful step toward improving menstrual health literacy across socio-economic backgrounds. Bridging these spaces would not only improve women's ability to navigate menstrual health information but also strengthen their agency in decision-making, aligning with the IMHL's vision of health literacy as both an individual asset and a population-level goal.

4.2.2 Reliance on Formal Channels of Menstrual Health Information

Formal health communication channels such as schools, clinics, and health campaigns are expected to provide women with accurate and consistent information on menstruation. Participants in this study confirmed that they mostly see these institutions as credible and legitimate sources of information. A number of respondents recalled positive experiences where teachers and health professionals went beyond abstract explanations to provide them with practical demonstrations. For example, P2 shared: *"when we were in JHS 3 about to complete, one of our madams came to demonstrate how to use the pad for us to see… it was helpful for our mates who hadn't had their menses yet, and I'm sure they learnt from that demonstration."*

Similarly, P1 FG1 explained that nurses sometimes visited their schools: *"some nurses always come to our school to teach us about menstruation and even how to wear the pad. They always bring the pad to demonstrate and even allow some of our colleagues especially those who have never menstruated before to lay the pad on the pant. This made us understand better."*These examples show that when formal channels provide interactive learning, they improve understanding and confidence. Sørensen et al.'s (2012) Integrated Model of Health Literacy emphasizes that "understanding" is strengthened when learners engage actively with information, rather than receiving it passively.

Despite these positive examples, the majority of participants emphasized that beneficial encounters were rare or fragmented. For instance, some participants shared that, *"We didn't really talk about menstruation in school meanwhile we were only girls at my primary school. If I remember very well, our teacher just wrote the topic on the board and said some few things about it. He just said you people are not menstruating yet so this topic you will not even understand at this level. You will learn about it when you*

get to JHS. And that was the end of story for us. (P3, FG2). P5 also indicated that, *"The nurse only mentioned it when I was sick, and even that, it was brief and not helpful."* These experiences reflect the first stage of Sørensen et al.'s Integrated Model of Health Literacy, access. While schools and clinics are intended to be channels for menstrual health information, the accounts show that many girls cannot truly access relevant, timely, or adequate information within these settings. The barrier is not just physical availability of information but also the ability to receive it in a meaningful way. Their views also reflect broader evidence in literature that school-based and clinic-based menstrual education sometimes lack depth, cultural importance, or follow-up.

According to Sommer et al. (2016), menstruation is not treated as a standalone topic in many school curricula, instead it is treated briefly under general hygiene or reproductive health. Moreover, teachers often feel unprepared or uncomfortable discussing it, particularly in mixed-gender classrooms or conservative communities (Chandra-Mouli & Patel, 2017). This results in partial or withheld information, leaving girls with limited opportunities to move from access to deeper stages of understanding and appraisal.

In Ghana, Gbogbo et al. (2025)found that while some schools have incorporated menstrual hygiene into their lessons, their approach is often shallow and limited by a lack of resources such as educational materials, trained personnel, and time. Health workers, too, may not have dedicated time or space to offer menstrual health counseling, and when they do, the engagement is usually clinical and reactive rather than preventive and empowering. Participants also reported that when they did encounter formal education on menstruation, it was frequently delivered in technical language, or worse, laced with shame or discomfort: *"They said it was dirty and we should hide it, but they didn't explain how to really take care of yourself or what to expect."* (P5, FG1). P6 (FG1) added that, *"The nurse who gave me the injection the*

first time I was experiencing pain and they took me to the hospital told me that as for menses it always come with pain ooo. So if I am doing this because of my period then will I ever give birth because labor pains are worse." These statements undermine the second stage of health literacy, understanding. Information presented in stigmatizing manner is not easily absorbed, especially when it lacks emotional sensitivity. Instead of equipping girls with clarity to boost their confidence, such communication reinforces silence and shame. This aligns with Hennegan et al. (2021), who stated that poorly delivered menstrual education can unintentionally perpetuate stigma rather than reduce it.

Moreover, some participants reported that, health communication was not continuous or consistent. P5 FG2 lamented that *"sometimes when you go to the hospital with an issue and they ask you to come back for review, the way they will even attend to you nu will not make you happy. So sometimes when I feel that I am feeling better I don't go. Because if you go it will be a waste of time. They will not ask you how the medicine is working for you especially if you don't meet the person who treated you the last time. They will just say how are you feeling today and when you say better, they will just ask you to go, no follow-up questions*. Here, the stages of appraisal and application are compromised. Without opportunities for ongoing dialogue, reflection, or tailored advice, women cannot critically evaluate information or apply it effectively in their daily menstrual practices. The absence of reinforcement weakens confidence and prevents the integration of knowledge into behavior.

Participants also pointed to the inadequacy of health communication in clinics: *"I've been to the clinic many times, but nobody has ever talked to me about menstruation unless I bring it up. So, if it is not a menstrual problem, they never cease the opportunity to educate me. I have never seen them organize something like that at the clinic"* (P5).

This reactive and fragmented approach indicates systemic shortcomings in integrating menstrual health into reproductive health communication. According to UNESCO (2014), menstrual health must be mainstreamed into educational curricula, national health systems, and community health services to ensure equity and dignity. Yet in practice, the study shows a disconnection between policy intentions and ground realities.

The barriers in formal health communication reveal a disconnect between policy intentions and ground realities. Although structures exist in theory, in practice, they are often inaccessible, underutilised and poorly executed. These gaps push many women to seek alternative, often informal, sources of information, perpetuating cycles of misinformation and stigma.

Overall, while women in Builsa North do rely on schools, clinics, and health campaigns as formal sources of menstrual health information, their access is shaped by some limitations. These limitations sometimes push many women to seek information from informal sources, risking misinformation. The findings affirm UNESCO's (2014) call for menstrual health to be integrated into school curricula and health systems in comprehensive, inclusive, and culturally sensitive ways. Without such reforms, formal channels remain symbolic rather than functional in strengthening menstrual health literacy.

4.2 RQ1. b. How do women in the Builsa North Municipality utilize information on menstrual health?

Utilization of menstrual health information goes beyond access and reflects women's ability to interpret, evaluate, and apply knowledge in ways that influence health practices and healthcare engagement. According to the Integrated Model of Health

Literacy, effective utilization depends on personal confidence, social support, and enabling environments that allow individuals to act on available information (Sørensen et al., 2012). The study found that women's use of menstrual health information in the Builsa North Municipality is shaped by peer relationships, self-efficacy, and perceived attitudes of healthcare providers. While some women actively apply information gained from both formal and informal sources, others are unable to translate knowledge into action due to fear of judgment, dismissive clinical encounters among others. The themes discussed under this section include; applying knowledge on menstrual health for empowerment and applying knowledge on menstrual health to support others.

4.2.3 Applying Knowledge on Menstrual Health for Empowerment

Menstrual health literacy is the ability to acquire, understand, and use knowledge about menstruation to make informed health decisions and improve overall well-being (UNICEF, 2019). Menstrual health literacy is an important part of women's empowerment and their ability to participate confidently in healthcare discussions. According to Sørensen et al.'s (2012) Integrated Model of Health Literacy, knowledge alone is not sufficient; individuals must also be able to access, appraise, and apply this information to achieve empowerment. In menstrual health, this means that literacy empowers women to interpret their bodies, identify abnormalities, and actively engage healthcare systems. Chandra-Mouli et al. (2014) affirm that health literacy equips individuals with the knowledge and skills to make informed decisions about their health, an important element of empowerment.

In menstrual health, literacy empowers women to understand their bodies, recognize abnormalities, and seek appropriate care. A respondent confirmed this statement when he stated that "*menstrual health literacy is essential for women's overall health as it helps them manage their cycles, recognize health issues early, and make informed*

decisions. It promotes better hygiene, reduces stigma, and leads to improved physical, mental, and reproductive well-being" (HCP1).

Participants in this study exhibited some level of knowledge about menstruation, as they indicated the ability to identify abnormalities in their menstrual cycles. Participants described how menstruation occurs and at what age a girl is likely to start menstruating. They also described a normal menstrual cycle and the abnormal one that calls for a physician's attention. They indicated that menstruation occurs in some girls at an age as early as 11 or as late as 15 or 16 years. They described the phenomenon as occurring monthly, with a normal period lasting 4 to 7 days. For example, P1 indicated that menstruation is *"the shedding off of the uterus that was prepared for implantation. It is a cycle that occurs every month and comes out through the vagina as blood. If a monthly flow does not happen, a girl has a reason to be worried. My own menstruation started as early as 12 years and it lasts between 28 to 35 days which I have come to realize as normal. I however experience severe pain when menstruating so I had to move from one hospital to another seeking for help."*

Another participant stated that "*the normal one when you get it, it will be like from day 1 to day 6 but some will get to 7 days and we consider that as normal. But the abnormal one, you will get it from day 1 and getting to 9 days it's still there, we can take that one as the abnormal one. They say like is sickness or ahaa so you're supposed to go to the hospital but some take it as normal and they don't……. so my own like this is normal but because at first from day 1 to day 3, the 4th day it will not come as much, it will just be coming small small and on the 7th day it will go away. But now the 4th day it will be there, the 5th day it will be there, but on the 6th day it will go, so I see it as normal. Because they normally say it is up to 7, so as mine is 1-6, it is normal"* (P2 FG1). These narratives demonstrate how women are not passive recipients of information but

actively interpret and appraise menstrual health knowledge, aligning with the "appraisal" dimension of the Integrated Model. Their ability to distinguish between normal and abnormal cycles reflects how knowledge can be transformed into practical health awareness.

The participants' perceptions in this study underline how menstrual health literacy directly relates to confidence and active participation in healthcare interactions. P4 indicated that *"I was able to ask questions for clarification, especially on stuff I came across on the internet about my condition. I have a better understanding and proper adherence to medication and lifestyle. I was also able to describe every little change I experienced, and it made it easier for the doctors to know the next steps to take.* Another added that: "*because I was having the knowledge, I had the chance to ask more questions about it*" (P1).

The healthcare provider confirmed their statements when he stated that *"Menstrual health literacy greatly influences women's confidence in discussing their health concerns with me in several ways: 1. Informed women feel equipped to ask questions and express concerns effectively. 2. Comfort with the topic helps normalize discussions, reducing fear of judgment. 3. Understanding menstrual health encourages women to seek advice and report irregularities. 4. Knowledgeable women are more likely to trust providers, leading to better communication and care. Overall, higher menstrual health literacy boosts confidence and improves health outcomes"* (HCP1). This highlights how literacy moves beyond personal awareness to foster empowerment in clinical encounters. In terms of the Integrated Model, women are able to apply information by interacting with health providers, seeking clarification, and negotiating care. This shifts them from traditionally passive patient roles to active participants in decision-making.

Although Chandra-Mouli and Patel (2017) assert that knowledge empowers women to make decisions about their menstrual health, some participants still exhibit low self-esteem in discussing menstruation, even though they have menstrual knowledge. In response to whether or not participants could confidently discuss their menstrual issues with health care providers or openly discuss it with anyone, they had this to say *"hmmmmmmm, the confidence is not there"* (P2 FG1). Another participant retorted, *"Because it does not occur in both male and female, that is why we always feel shy to talk about it. They will be doing like its odd it's not something they should hear; they think it concerns only about the women it does not concern them. But if it's about health, I will just close my eyes and say it"* (P3 FG1). This sentiment reflects the tension between knowledge and cultural barriers, which, if unaddressed, can limit the impact of menstrual health literacy on empowerment. Sommer, Sutherland, et al. (2015) espoused this when they highlighted that cultural taboos surrounding menstruation often prevent women from fully utilizing their knowledge to advocate for themselves in healthcare settings. These barriers underscore the need for a supportive, stigma-free environment to translate knowledge into action.

Some participants, however, are not perturbed by cultural stigma; one participant even said that the stigma makes her talk about it. She said, *"The fact that society sees it as a secret makes me want to talk about it more"* (P1). Another added, *"I wasn't taught well about menstruation by my mother so when I started having menstrual issues, I couldn't open up to anyone on it. I went through the problem silently until I had the courage to talk to some colleagues when I went to the tertiary institution, and they advised me to seek help. I did, and since then, I don't have issues discussing it with anyone"* (P4). These contrasting accounts reveal that while knowledge is a powerful resource for empowerment, its utility depends on whether supportive environments exist to enable

women to act on what they know. The Integrated Model underscores this interaction between individual competencies and environmental enablers without stigma-free, culturally sensitive communication spaces, literacy may not translate into empowerment.

Furthermore, participants noted that menstrual health literacy promotes assertiveness in decision-making. P3 remarked, *"When I learned that pain during my periods wasn't normal, I was able to ask my doctor for help and finally got treatment."* This demonstrates the transformative potential of knowledge in challenging misconceptions and seeking timely interventions. Jewkes et al. (2015) argue that such informed engagement is a hallmark of empowerment, and in the context of menstrual health, it allows individuals to exercise and have control over their health outcomes and reject societal norms that trivialise menstrual health issues.

In summary, knowledge plays a pivotal role in menstrual health empowerment. Women who understand and appraise their menstrual cycles are better positioned to advocate for themselves, engage confidently with healthcare providers, and make informed decisions about their menstrual health. However, the empowering potential of knowledge is mediated by cultural stigma, systemic barriers, and the availability of supportive communication environments. The Integrated Model of Health Literacy emphasizes that true empowerment requires not just knowledge acquisition but also the ability to evaluate and apply information within enabling contexts critically.

4.2.4 Applying Knowledge on Menstrual Health to Support Others

This theme discusses how women use knowledge about menstrual health to educate, assist, or positively influence others, creating a ripple effect of empowerment. One participant shared that *"when I got to know more about menstrual pain and hygiene, I*

started talking to my friends about it. Sometimes I even tell them what to do if they are not feeling well. I don't joke with my menstrual health again because I don't want to have problems with my future in-laws because I can't have a child" (P1, FG1). P6 FG1 added that *"these days I don't take medicine anyhow unless it is prescribed and I have been telling some of the girls who come to me to collect some of my medicine that they need to go to the hospital for the doctors to know and tell them what exactly is wrong with them instead of always buying drugs to ease the pain. Because I know that most of the menstrual problem symptoms are similar, I usually don't give my drugs because their problem may not be the same as mine. It's better they visit the hospital."*

P5 FG1 affirmed that *"yeah I remember that day you came to my corner and Cynthia also came to me to beg for some medicine for her junior because she has menstrual pain and you said I shouldn't give her, she should go and take the girl to the sick bay so that if the nurses there cannot handle, they will send her to the hospital".* These examples reflect how women sometimes operate as knowledge multipliers, using what they have learned to support their peers who may lack access to the same information. This process aligns with Sørensen et al.'s (2012) interactive health literacy domain, which emphasizes applying information through social interaction.

Peer support was not limited to advice-giving. Some participants also mentioned joining discussions in school clubs, church groups, or informal gatherings: *"I am part of the CAMFED girls' club in the school, and sometimes when we meet, we talk about these things. We have even planned to visit some of the junior high schools in the area to discuss menstruation with them. As for that outreach, we have written letters to some nurses to help us talk because they have the knowledge, so that we will not only share our experiences with one another, but we will also learn from them."* (P3, FG1). This illustrates an important shift from passive reception of health messages to active social

participation. According to Kuhlmann et al. (2017), creating peer-led menstrual health spaces enhances emotional well-being and challenges dominant silences and stigmas. These safe spaces become sites of affirmation, solidarity, and practical learning.

P2 noted that the lack of openness in the home motivated her to become a peer educator: *"At home, they don't talk about it. So, I decided to be there for my nieces, female cousins, and any relatives who need help. Because nobody was there for me, I have made myself available to all the young ones in the family because I know how it feels not to be guided. As a result, I am their favourite aunt, they talk to me about almost everything, not just menstruation"*. P5 also stated that *"when my daughter turned nine, I started talking to her about menstruation. I told her to come to me once she sees blood coming from her vagina. I explained some things to her to the best of my capacity and I believe that she will not be shy to tell me when she sees her first blood. What I didn't get from my mother, I will give her."*

These statements indicate that where there is a lack of communication at home, women can be inspired to fill the gaps for others, an act of empathy born from personal neglect. It also aligns with Sommer et al. (2016) who argues that peer-to-peer menstrual education is especially effective in communities where adult conversations around menstruation are limited or stigmatized. Critical health literacy domain in Sørensen's model also affirm these assertions that knowledge can be used to challenge barriers and support structural change, in this case, breaking family silence and stigma by initiating open conversations.

HCP1 also confirmed the value of peer networks by stating that *"sometimes the girls say, 'My friend told me to come.' That means the friend has some information, and she's helping the others to come early."* (HCP1). This testimony indicates that menstrual

health knowledge circulates informally but impactfully. Women who have internalized accurate information often become gateways to care, early detection of disorders, and emotional support, contributing to broader community well-being. Studies have confirmed that peer-based approaches are important for sustainable menstrual health promotion. For instance, Chandra-Mouli et al. (2014) advocate for participatory strategies where youth themselves become agents of change, not just beneficiaries of knowledge. Similarly, UNESCO (2014) emphasizes that adolescent peer educators are among the most trusted sources of sexual and reproductive health information in many global South contexts.

That said, not all peer experiences are empowering. Some respondents mentioned incomplete or misleading advice: *"My friend told me to drink Coke to stop the pain, but it didn't help. I think sometimes people just guess."* (P4, FG2). Another added, *"I was also told by my school mother that if I want the flow not to be there for long, I should take a lot of milk when it starts and like that it will flow heavy but not for many days as I have been experiencing. We wanted to go for a party over the next weekend and my period is always long so we were looking for a solution so that I wouldn't have to miss the party"* (P2 FG2). This cautionary note suggests that while peer support is important, it also requires accurate and culturally appropriate information. Otherwise, misinformation can circulate and undermine women's well-being, a risk also noted by Van Eijk et al. (2016). Therefore, integrating trained peer leaders or ensuring peer circles have access to reliable resources is important.

In summary, this theme demonstrates that women in Builsa North utilize menstrual health knowledge not only for personal benefit but also as a tool for peer education and community-level action. This utilisation process reflects the interactive and critical domains of Sørensen et al.'s Integrated Model of Health Literacy, where knowledge is

mobilised through social participation and collective empowerment. While misinformation poses risks, the overall pattern shows that women act as agents of change, translating literacy into shared practices that normalize menstruation and expand access to accurate information within their communities.

4.3 What are the dominant factors influencing women's menstrual health literacy and communication in Builsa North Municipality?

How women understand menstrual health and communicate about it is mostly shaped by their cultural beliefs, societal norms, and access to formal education (Sommer et al., 2015). Sørensen et al. (2012)'s Integrated Model of Health Literacy stated that health literacy is not only an individual skill but the product of broader determinants such as personal characteristics, social contexts, and systemic structures that either enable or constrain people's ability to access, understand, and use health information. In the context of menstruation, this means that while some women may acquire accurate knowledge, others are hindered by cultural taboos, stigma, and inadequate institutional support.

In many traditional societies, the subject of menstruation is mainly viewed as taboo, and discussions are restricted, leading to misinformation (Hennegan et al., 2021). Such socio-cultural barriers represent key "situational determinants" of health literacy, as outlined in the IMHL, since they shape how women interpret information and whether they feel confident enough to share or seek clarification. This lack of open conversations about the phenomenon contributes to knowledge gaps, which affect menstrual health management and hinder the ability of women to seek care when needed. According to Jewkes et al. (2015), social conditioning and gender norms play an important role in defining what women and girls know about menstruation and how they perceive their menstrual experiences.

Additionally, the IMHL recognizes the role of personal and community networks such as caregivers, peers, and local institutions in shaping how health information is transmitted and interpreted. This means that misinformation or silence can be passed down across generations, reinforcing stigma and misconceptions, unless interventions deliberately engage families, peers, and community leaders in open and supportive dialogue. the following are themes that emerged from the data: cultural taboos and stigma, access to education, gendered perceptions of menstruation, practical challenges hindering women's participation in menstrual health.

4.3.1 Cultural Taboos and Stigma

Cultural taboos and stigma surrounding menstruation greatly influence how women understand and communicate menstrual health in the Builsa North Municipality. These cultural barriers often perpetuate misinformation and limit access to accurate knowledge, and suppress open discussion, thereby constraining the ability of women to seek care or use health information effectively. In many societies, the subject of menstruation is viewed as private or even shameful, which reinforces restrictions on open discussions and, in turn, prolongs the silence around it. This view of society affects how women internalise knowledge about menstrual health and their willingness to seek information or care.

Within Sørensen et al.'s (2012) Integrated Model of Health Literacy, cultural stigma operates as a contextual factor that restricts women's ability to access, understand, appraise, and apply menstrual health information. Respondents mentioned the pervasive influence of cultural taboos, as HCP1 noted*, "In some cultures, menstruation is considered unclean, leading women to avoid discussing it openly. This limits their ability to seek accurate information and proper care."* Similarly, P3 FG2 stated, *"My own when it comes this month the next month it doesn't come. It has been like that since*

JHS till now. I flow for 6 days. ……. none of my family members are aware of my problem, not my mother, father or siblings, because growing up nobody talked about it, and it's like everybody is always hiding it, so even asking for pads felt like a big issue." Such accounts demonstrate how cultural norms can suppress open conversations about menstruation, leaving women and girls dependent on fragmented or inaccurate sources of information. These narratives also echo findings by Mason et al. (2013) those who argue that cultural taboos contribute to secrecy and inadequate menstrual health education. They also reflect the IMHL's claim that literacy cannot be separated from its social and cultural environment; women may have partial knowledge but lack the enabling environment to apply it.

In addition, Sommer (2010) argue that in many low- and middle-income countries, menstruation is shrouded in secrecy, leading to massive gaps in knowledge. Myths and misconceptions often shape women's understanding of menstrual health passed down through generations, which can result in harmful practices. For instance, beliefs that menstruating women are impure may lead to restrictions on their movement and participation in daily activities, further isolating them from educational opportunities about menstrual health. The stigma associated with menstruation also discourages women from seeking medical help for menstrual health issues.

P3 FG2 shared*, "when I started having menstrual pains, I didn't want to go to the hospital because I thought it was normal, and I didn't want people to think I was weak, so I used to endure the pain and work because I don't even want to show that I'm in my period."* P2 FG2 added, *Hmmmmm, you are right. Sometimes they have the perception that you are dodging work when you say your abdomen is aching, so you can't do this, you can't do that, they will start insulting you that you are lazy.* This aligns with findings by (Hennegan et al., 2019), who reported that societal shame often normalises

menstrual disorders, preventing women from realising when it is necessary to seek medical intervention. Such stigma not only affects individual health outcomes but also reinforces a cycle of silence and ignorance about menstruation.

The Integrated Model of Health Literacy (IMHL) offers a valuable lens for understanding these experiences. Within the domain of access, stigma makes it difficult for women to seek formal health information, forcing them to depend on informal and sometimes unreliable sources such as peers or drug peddlers. Understand, taboos reduce the likelihood that women will receive or interpret accurate knowledge from schools, families, or communities. With appraise, cultural silence makes it hard for women to critically evaluate the reliability of information, leaving them vulnerable to misinformation. Finally, in terms of application, stigma limits women's confidence to act on information, such as visiting a clinic or openly discussing menstrual challenges. This theoretical framing is evident in respondents' accounts. For example, girls narrated how they resorted to self-medication due to stigma and silence at home, and ended up falling into the hands of drug peddlers.

P6 FG2 stated *"when we went to the market, we met this lady who sold this medicine to us that, it cures menstrual pain"* P3 FG2 added *"She even said if the menses are delayed or it is always heavy, we can use it to cure it"*. ***They brought the medication they bought from a drug peddler and my observation of the drug showed nothing about menstruation on it. It was a so-called flat stomach drug with no FDA approval*** (Field Notes). This underscores how stigma, by limiting access to credible sources, pushes women towards risky informal practices, an example of poor appraisal and application in the IMHL framework.

The four core dimensions of health literacy, access, understand, appraise, and apply, help us to understand how cultural beliefs shape women's understanding of menstrual health. In environments where menstruation is stigmatised, women face challenges at each of these levels. For example, stigma limits their ability to *access* accurate information, as P4 FG2 remarked: *"If everyone around you behaves as if menstruation is a shameful thing, you start to believe that it is something you should hide, and so that is what we do."* In terms of *understanding*, cultural taboos deepen knowledge gaps by preventing open discussions in schools, families, or communities.

HCP1 observed, *"In various cultural and societal contexts, factors like taboos, stigma, and lack of education often hinder women's understanding of menstrual health. For instance: 1. In some cultures, menstruation is considered unclean, leading women to avoid discussing it openly. This limits their ability to seek accurate information and proper care. Example: In certain communities, women are restricted from participating in religious activities during their periods, reinforcing the idea that menstruation is something to hide. 2. In regions with poor access to sexual and reproductive health education, many girls grow up unaware of basic menstrual hygiene practices."*

This lack of education also undermines women's ability to *assess* the reliability of information, leaving them dependent on informal, sometimes inaccurate sources. As P2 FG2 shared, *"We didn't learn much about periods in school, and my mother, too, didn't teach me, so most of what I know, I heard from friends."* Another participant explained how even when menstruation was taught in school, the topic was rushed through: *"Because it was the first time, how the master even came and wrote the topic on the board they were just there huuhuuuheeyyheeyy (shouting and mocking)……because it was a mixed class, because boys were always with us and the boys just took it on their own on and the teacher just run over it, we didn't go deep"* (P2 FG1 and P3 FG1).

Therefore, when women cannot fully access, understand, or appraise information, they also struggle to *apply* it in managing their health. These gaps in formal education and supportive environments leave women and girls not well-equipped to understand or manage their menstrual health effectively.

On the other hand, some participants noted that cultural practices can also foster support and understanding. P1 stated*, "My knowledge of menstrual health makes it easy for me to educate people on some myths around menstruation*." "*……. but my community has some rites to perform to usher the girl into adulthood"*. (Hennegan et al., 2019) argue that leveraging cultural practices positively can enhance menstrual health literacy, especially in resource-limited settings. However, deeply rooted myths and misconceptions often overshadow these benefits.

To address cultural taboos and stigma around menstruation, community-wide engagement and culturally sensitive interventions must be involved. Hennegan et al. (2019) and Bobel (2019) are of the view that integrating menstrual health education into broader community health programs will help normalise discussions about menstruation and also challenge harmful cultural norms around it. Respondents echoed this by emphasizing the need for inclusive education that involves men and boys. P4 stated *"Menstrual health education will help break the silence, making available health facilities to cater for that need too, especially in this district."* Another participant added that *"If boys also learn about periods, it will not be a big deal again, and we can talk about it freely*" (P6 FG1). Such inclusive approaches can help dismantle stigma and create supportive environments where women feel empowered to seek information and care. Healthcare providers also play an important role in breaking down cultural barriers. HCP1 emphasized the importance of making conversations about menstruation in clinical settings normal, stating, *"To encourage patients to actively*

participate in discussions about their menstrual health, I employ the following strategies: ……By treating menstrual health as a normal part of women's health, we can reduce stigma and encourage patients to speak openly……."

This aligns with (Betancourt et al., 2002) recommendation that healthcare providers should receive training in cultural competence to address the specific needs of diverse populations. Participants also highlighted strategies to address the negative impacts of cultural beliefs. HCP1 suggested, *"……Implementing educational initiatives in schools and communities that cover menstrual health, hygiene, and reproductive health to build a strong foundation of knowledge by organizing community events or support groups where women can share experiences, discuss concerns, and learn from healthcare professionals in a safe and supportive environment. Launching campaigns to reduce stigma around menstruation and raise awareness about menstrual health, emphasizing its importance in overall well-being."* This aligns with Chandra-Mouli et al. (2014) advocacy for culturally sensitive interventions that involve local influencers to promote accurate information and challenge misconceptions.

In conclusion, cultural stigma and limited education restrict women's ability to access, understand, and apply menstrual health information. The Integrated Model of Health Literacy shows how these barriers undermine informed decision-making, leaving women dependent on informal, often inaccurate sources. Addressing menstrual health in the Builsa North Municipality, therefore, requires reducing stigma and strengthening formal education to improve literacy and communication.

4.3.2 Access to Education

Education is central to shaping how women understand menstrual health and to equipping them with the knowledge and skills to manage their menstruation effectively.

Both formal and informal education influence how women see menstruation, address health concerns, and adopt positive practices. Within the Integrated Model of Health Literacy, access to education strengthens the competencies of accessing, understanding, appraising, and applying health information (Sørensen et al., 2012). Participants mentioned the importance of early education on menstrual health. P1 FG1 stated that, *"if we were taught about menstruation early in school, like by now some of us, especially me in particular, I wouldn't have grown up believing the lies about menstruation that I heard at home."*

Similarly, HCP1 remarked that, *"schools are the best place to start teaching about menstrual health because they can provide accurate and consistent information to both boys and girls. To support better menstrual health literacy and patient-centred communication, several policy changes could be beneficial: 1. Mandating the inclusion of comprehensive menstrual health education in school curricula can ensure that young people receive accurate and timely information, fostering lifelong understanding*." These align with findings by Sommer et al. (2015), who argue that integrating menstrual health education into school curricula promotes informed decision-making and reduces stigma.

The minimal presence of formal education on menstrual health increases the chances of misconceptions and limits the ability of women and girls to manage their menstrual health effectively. This lack of access is very severe in rural and underserved communities, where systemic challenges further worsen the situation. HCP1 noted that, *"In regions with poor access to sexual and reproductive health education, many girls grow up unaware of basic menstrual hygiene practices."* Similarly, P4 FG2 stated, *"We didn't learn much about periods in school. Most of what I know, I heard from friends. And that was even after my first period."* These quotes indicate that women depend on

informal and often inaccurate sources of information due to the absence of structured education on menstrual health. Sommer et al. (2015) support these claims by arguing that comprehensive sexual and reproductive health education is important for equipping young people with the knowledge and skills to manage their menstrual health.

However, in many low- and middle-income countries, such education is either absent or limited to biological explanations, neglecting the practical and emotional aspects of menstruation. This gap leaves many girls unprepared for their first period (menarche); hence, they are unable to address any menstrual health challenge effectively, and the consequences of inadequate education are far-reaching. P3 shared that, *"I didn't know what was happening to me when I first saw my period. I thought I was sick but I didn't know the type of sickness because I wasn't feeling any pain or fever. I was actually scared."* This lack of understanding at menarche often leads to fear, confusion, and embarrassment, setting the stage for lifelong discomfort with discussing or managing menstrual health. Additionally, P1 FG2 remarked that, *"If they were teaching us more about menstruation in schools, anka maybe some of our mates who don't come to class when they are in their periods will not absent themselves from school because some of them don't have problems with their menses, but they are just shy or afraid that it may disgrace them."* This showcases the relationship between menstrual health education and broader issues such as school attendance and academic performance, as supported by (Mason et al., 2013).

Additionally, education gaps are obvious in rural areas, where systemic challenges such as under-resourced schools and a lack of trained teachers further limit access to menstrual health information. HCP1 observed, *"Girls in rural areas often miss school during their periods due to a lack of menstrual products or understanding of how to manage menstruation."* This is in line with findings by Chandra-Mouli et al. (2014),

that rural and marginalized communities are unreasonably affected by inadequate menstrual health education, reinforcing the cycles of poverty and gender inequality. In order to address these disparities, efforts must prioritize integrating menstrual education into school curricula. Respondents suggested that comprehensive programs covering the biological, practical, and emotional aspects of menstruation would go a long way to improve an understanding of the phenomenon. P4 FG1 stated, *"If teachers explain menses well for us, like we won't do something to represent something or rely on what our friends say or the misconception from our mothers."* Such interventions can demystify menstruation and empower young people to make informed decisions about their health.

Beyond schools, community-based education initiatives can play an important role in reaching women and girls who are not attending school. Hennegan et al. (2019) highlight the importance of leveraging community networks and peer educators to disseminate accurate information about menstrual health. Respondents echoed this sentiment, with P2 FG2 noting that, *"workshops in our community won't be bad for our parents who did not go to school or our brothers and sisters who have decided that they cannot go to school again."* Healthcare providers also have a critical role in filling the education gaps, as HCP1 stressed the importance of using patient consultations as opportunities to educate, *"We can use clinic visits to teach women about menstrual health and address any misconceptions they have."* This aligns with Chandra-Mouli and Patel (2017) who advocate for integrating educational components into routine healthcare services to ensure that all women, regardless of their educational background, have access to accurate menstrual health information.

The IMHL provides a strong perspective on how education influences menstrual health behaviours. Demonstrations and role-modelling, such as those offered in schools or

clinics, enhance both understanding and application of menstrual health knowledge. For instance, P2 FG2 shared, *"when we were in JHS 3 about to complete, one of our madams came to demonstrate how to use the pad for us to see. I'm sure she was thinking we were now about to start menstruating since we were young. She didn't know that most of us started menstruating like a year ago. It was helpful for our mates who hadn't had their menses yet, and I'm sure they learnt from that demonstration."* Similarly, P1 FG1 noted, *"some nurses always come to our school to teach us about menstruation and even how to wear the pad. They always bring the pad to demonstrate and even allow some of our colleagues, especially those who have never menstruated before, to lay the pad on the pants. This made us understand better."* These examples reflect how structured demonstrations strengthen the understanding and application domains of menstrual health literacy by equipping learners with practical skills.

Informal education also plays a significant role. P3 FG1 explained, *"I learned most of what I know about periods from my friends, not from school or home."* HCP1 added, *"Mothers are often the first source of information for girls, but they sometimes pass down myths instead of facts."* Chandra-Mouli and Patel (2017) This emphasises the need to engage families and communities in menstrual health education to address knowledge gaps and counter misinformation. Despite its importance, access to menstrual health education remains uneven. HCP1 suggested, *"Community outreach programs can help bridge the gap for those who lack access to formal education."* This aligns with the findings of Jewkes et al. (2015), who advocate combining formal education with community-based initiatives to ensure broader reach and impact.

Interactive and participatory approaches were identified as effective methods for enhancing menstrual health education. P1 suggested, *"Workshops where we can ask questions and practice using pads or cups would help a lot."* HCP1 added, *"Using*

visual aids and hands-on activities makes the information more relatable and easier to remember." Sommer et al. (2015) highlight that participatory approaches engage learners and address their specific concerns, fostering a deeper understanding of menstrual health. By creating multiple entry points, such as formal schooling, peer networks, family, and community programs, women's opportunities to access and apply menstrual health information expand, making health literacy more equitable and sustainable

4.3.3 Gendered Perceptions of Menstruation

Gendered perceptions of menstruation significantly shape women's menstrual health literacy and communication in the Builsa North Municipality. Socially constructed gender roles often perpetuate the idea that menstruation is a "women's issue," thereby reinforcing silence, exclusion, and stigma among men and boys. This gendered understanding limits men's involvement in menstrual health discussions and women's access to support, hindering the development of a supportive communication environment as emphasized in the Integrated Model of Health Literacy.

Participants have indicated that men and boys are excluded from discussions about menstruation, leading to misunderstandings and negative attitudes. P1 shared that, *"when we were in JHS and even SHS, the boys used to laugh and tease us when they heard about menstruation, so we had to keep quiet about it. When CAMFED comes with their pads to give their selected students, the boys will be telling us that CAMFED has brought our big biscuit."*. This demonstrates how social norms create barriers to open dialogue, which, in IMHL terms, reflect the societal and cultural determinants that constrain individuals' ability to access, understand, and communicate health information.

Another important matter is the lack of male role models who advocate for menstrual health literacy. Participants mentioned that the men in their communities hardly discuss or support menstrual health openly. For example, P3 stated, *"I don't think my father or brothers know anything about menstruation. It's not something they ever talk about. But now that I'm a bit enlightened, I try my best to talk to the young girls in the house about it and anytime the male gender is approaching and hears what we're talking about, they turn back and leave"* P3 FG2 also indicated *that "None of my family members are aware of my problem, not my mother, father or siblings. Even if I will tell anyone, it should be my mother or sisters. Guys don't menstruate, so they will not understand"* The absence of male involvement in menstrual health perpetuates the idea that it is irrelevant to them as postulated by P3 FG2. The IMHL highlights the importance of interaction and communication for health literacy development, yet the exclusion of men shows how gender norms suppress these processes.

Excluding men and boys from menstrual health education reinforces stigma and misinformation, and strengthens the societal barriers to open discussions about menstruation. Gendered perceptions of menstruation usually make it a women-only issue, ignoring the role of men and boys in creating supportive environments and fostering menstrual health literacy. Addressing this imbalance helps break the silence around menstruation and promote equitable understanding. P6 FG2 lamented that, *"Most men don't even know what we go through because nobody teaches them about periods. They just think it's a woman's thing."* Another participant also complained that even though some men are educated, their utterances and actions perpetuate the stigma, P4 said *"my science teacher in JSS was male, and the way he even treated the reproductive topic especially menstruation, his biases were obvious. When he wrote the topic, he just said, "This is a woman's issue." Will the girls in the class want to talk*

about it? At that level, we were all shy because we were still children, so there was no response. He just defined it and said when we, the girls, begin to experience it, our mothers will teach us what to do. As for the boys, it is not their business. Some of the boys started laughing at us, making jokes by even pointing and bullying some of the girls that they believed were of menstruation age. As a result, when a girl is absent, they will just say she is having her menses and giggle."

Similarly, P3 FG2 stated that, *"if men understood menstruation, they wouldn't make jokes or treat us badly during our periods."* These experiences show how limited communication perpetuates stigma and undermines functional and interactive health literacy. These perspectives demonstrate the social consequences of excluding men and boys from menstrual health discussions. Sommer et al. (2015) affirm these findings when they argued that the marginalisation of men and boys in menstrual health education reinforces taboos and limits collective action to address menstrual health challenges. When menstruation is framed as a private issue for only women, society creates an environment where misinformation thrives and support systems remain underdeveloped.

Ha and Alam (2022) are of the view that inclusive education can challenge harmful gender norms and promote shared responsibility for menstrual health, because excluding men and boys affect the practical management of menstruation. P2 FG1 shared, *"In my house, we have to hide our pads because the boys will laugh at us if they see them."* P1 FG1 added *"sometimes too we have to hide the pad from our male friends, especially when we go to buy it. If you don't hide it and they realize it is pad they will be making fun of you that, did you go and buy the big biscuit?"*

To advance the concerns further, HCP1 also observed that, *"educating men and boys about menstruation can create a more supportive environment for women and girls, helping to dismantle stigma and encourage open conversations."* This aligns with Chandra-Mouli and Patel (2017) who advocate for the inclusion of men and boys in menstrual health programs to foster understanding and reduce stigma. It also aligns with the IMHL principle that building health-literate societies requires addressing the social determinants of health literacy, including gendered exclusion.

In conclusion, involving men and boys in discussions about menstrual health, communities can create environments where women feel supported and empowered. Healthcare providers can also play a role in addressing gendered understanding. HCP1 recommended engaging male caregivers in discussions about menstrual health during clinic visits, stating that, *"when fathers and brothers are part of the conversation, it helps normalize menstruation and reduces the stigma within families."* Such efforts can promote a more inclusive approach to menstrual health, ensuring that all household members understand and support women's needs.

4.3.4 Practical Challenges Hindering Women's Participation in Menstrual Health

Menstrual health literacy can empower women and foster active participation in healthcare discussions. However, women in the Builsa North Municipality encounter practical barriers that hinder this engagement. Beyond cultural and societal influences, participants pointed to financial constraints, infrastructural challenges, especially within the health system, as major obstacles. These barriers reduce women's ability to seek timely care, access accurate information, and fully participate in healthcare decision-making. Within the IMHL framework, such limitations restrict not only the "access" dimension of health literacy but also women's capacity to "apply" and "use" information in ways that improve their menstrual wellbeing.

One major barrier that was identified in the responses is the persistent cultural stigma surrounding menstruation, as observed by HCP1: *"The societal shame around menstruation can lead to embarrassment, preventing women from seeking medical help for menstrual disorders. For example, many women with severe menstrual pain or irregular cycles avoid discussing their symptoms, considering them a "normal" part of being a woman due to societal expectations."* This stigma shows in several ways, such as the reluctance to discuss menstrual issues openly, even with healthcare providers. P3 FG2 shared that she does not like to discuss her period, and this may also replicate in a hospital setting, where she is expected to discuss it freely for quality medical help. She stated, *"I don't like talking about my menses because I'm afraid people will think I'm dirty."*

Such views show how cultural perceptions of menstruation as unclean or shameful restrict women's interactive health literacy, silencing them and limiting their ability to participate in healthcare. Studies have shown that stigma serves as a significant barrier to women's participation in healthcare. In the words of Sommer et al. (2015), societal norms perpetuate silence around menstruation, making it difficult for women to seek help or advocate for their needs. Within the IMHL, this reflects how low levels of communicative and critical health literacy weaken women's capacity to engage in patient-centered communication.

Another barrier that influences women's menstrual health literacy and communication is financial. Respondents pointed to financial barriers as one of the barriers that not only limit their access to menstrual products, but also influence their healthcare seeking behavior. P4 FG2 stated, *"……. If you don't go to Navrongo or Bolga you can't get those doctors to attend to you. But these days see how lorry fare is expensive, how much will the hospital collect when things are hard so if I don't have money for the hospital,*

I just manage the pain at home……." Another added that *"…. The cost of sanitary pad too is an issue so I think government has a lot to do regarding women health in this country"* (P1). Although menstrual health literacy can empower women with knowledge, financial barriers undermine the "application" dimension of the IMHL, preventing women from translating knowledge into meaningful participation and healthcare action.

Aside societal and financial barriers, participants also mentioned fear of judgement from healthcare providers as a barrier. P4 from the study noted that, *"Sometimes the way a nurse looks at you when you ask a question makes you feel like you're stupid. Some women can feel intimidated about such gestures and won't open up but me I don't care I will still say what I feel just that a conversation with such a person is usually not interesting."* Another participant added *that "……Some of them it's like they don't know anything about menstruation so when you go to complain nooorrr then they will start passing comments that are painful"* (P5 FG2). The IMHL stresses that healthcare interactions play a key role in shaping health literacy. Provider attitudes that are dismissive or judgmental reduce women's willingness to ask questions or seek clarification, thereby weakening their engagement and limiting the quality of care they receive. This fear or anger can discourage women from asking questions or seeking clarification during consultations. (Epstein & Street Jr., 2011) affirm this when they stated that healthcare providers' attitudes influence patient behavior. When a healthcare provider shows a dismissive or judgmental behavior, it can create a hostile environment that discourages patients from engaging fully in their care.

Additionally, healthcare system inadequacies make these barriers worse. HCP1 remarked, *"In regions with poor access to sexual and reproductive health education, many girls grow up unaware of basic menstrual hygiene practices. Example: In rural*

areas, girls often miss school during their periods due to a lack of menstrual products or understanding of how to manage menstruation." This lack of access extends to clinical care, where limited infrastructure and resources can make it difficult for women to receive the support they need. For example, P1 FG1 noted, "*In our area, there is no gynecologist, so we just go to the chemist for medicine.*" Another individual indicated that *"It is bad that a whole municipality doesn't have a gynae unit to take care of these issues and that's the reason all these other nurses who are not specialist will tell you your menstrual pain is normal*" (P4).

Such systemic gaps call for the need for broader structural reforms to support menstrual health literacy and patient participation. The interaction of these barriers shows how complex it is to promote menstrual health literacy in for better communication and care. Even when women possess the knowledge and confidence to participate in healthcare discussions, other factors such as stigma, provider attitudes, economic constraints, and systemic inadequacies can undermine their ability to engage proactively.

In conclusion, barriers to participation in menstrual health literacy and communication are shaped by stigma, provider attitudes, economic constraints, and systemic inadequacies. These factors, when viewed through the IMHL, reveal how individual, cultural, and structural determinants intersect to limit women's engagement in healthcare. Addressing these barriers through culturally sensitive interventions, improved access to healthcare, and systemic reforms can strengthen menstrual health literacy and promote meaningful participation.

4.4 RQ3. a. What communication strategies are used to promote menstrual health literacy and communication in the Builsa North Municipality?

Promoting menstrual health literacy in the Builsa North Municipality requires deliberate and context-sensitive communication strategies that address both knowledge gaps and stigma. Within the Integrated Model of Health Literacy, effective communication supports individuals' ability to access, understand, appraise, and apply health information in meaningful ways. Findings from the study identified four key communication-oriented themes: comprehensive education programs, community engagement and advocacy, innovative approaches to communication, and building trust through supportive environments. Together, these strategies highlight the importance of structured learning, community dialogue, creative messaging, and respectful provider interactions in strengthening menstrual health communication and fostering confidence in healthcare engagement.

4.4.1 Comprehensive Education Programs

To promote menstrual health literacy and communication in Builsa North Municipal, comprehensive education programs are essential for empowering girls and women to make informed decisions about their reproductive health. By integrating menstrual health into formal curricula and community education initiatives, these programs can address knowledge gaps, dismantle myths, and promote positive attitudes toward menstruation. Respondents' views indicated that formal education is important for improving menstrual health literacy. HCP1 suggested, *"Implementing educational initiatives in schools and communities that cover menstrual health, hygiene, and reproductive health builds a strong foundation of knowledge."*

Similarly, P1 FG1 stated that, *"learning about menstruation in school or even in the house before your period is very, very important because if you don't know anything*

about it and you suddenly see blood coming out from your private part, you will be scared. For example, when mine started, I was surprised and afraid. These viewpoints indicate the transformative potential of normalizing menstruation through structured education to equip young girls with vital information and skills before their first period. (Sommer, Sutherland, et al., 2015) argue that comprehensive sexual and reproductive health education is a foundation of menstrual health literacy.

Such programs not only provide individuals with biological information about menstruation but also address its practical and emotional aspects, ensuring that students are well-prepared to manage their menstrual health. Mason et al. (2013) advance this argument, arguing that these education initiatives must be age-appropriate, culturally sensitive, and inclusive, and should involve both boys and girls to promote understanding and reduce stigma. These also reflect the understanding and application dimensions of Sørensen et al.'s IMHL, which emphasise the importance of helping individuals interpret and use information in real-life contexts.

In addition to formal education, respondents pointed to the value of community-based programs. P4 remarked, *"Workshops in the community would help women who didn't learn about periods in school."* P1 FG2 added "*when our parents who are not going to school can learn from these programs, it will help us paaaa because they would have known some of the menstrual problems and when we feel pain and want to go to the hospital, they will understand us*." P4 FG2 also indicated *"it is true. Because they didn't know that menstruation had problems and they were enduring the pain, they thought it was normal to feel pain, so they expected us to be very active even during our period. Today, the story is different. We are really suffering, so if they are able to educate them, at least it will help us."* These align with findings by Hennegan et al. (2019), who stated

that leveraging community networks to reach individuals who may lack access to formal education is very important.

Inclusive education that involves men and boys is important for addressing gendered misconceptions about menstruation. P4 FG2 suggested, *"If boys also learned about periods, they would stop teasing us and understand it's normal."* Respondents' observations align with Kato-Wallace et al. (2016) who advocate for the integration of menstrual health education into broader gender equality initiatives. They believe that educating men and boys will foster empathy and also create allies in the effort to challenge stigma and promote menstrual equity. Sommer et al. (2015) assent to Jewkes' statement as he argues that educating boys about menstruation is good for reducing stigma and promoting gender equity, which resonates with the appraising dimension of IMHL, as individuals must critically evaluate and reshape harmful gendered misconceptions to foster more inclusive environments.

By normalizing menstruation as a natural biological process, such initiatives can dismantle misconceptions and promote healthier interactions between men and women. Inclusive education will also address the social pressures and isolation often experienced by girls during menstruation. P2 remarked, *"When boys are educated, girls feel less ashamed because it's no longer seen as a secret."* This aligns with findings by Chandra-Mouli and Patel (2017), who highlight that stigma often isolates girls, limiting their participation in school and other activities.

Furthermore, educating boys can foster more inclusive environments where girls feel comfortable managing their menstrual health openly. There is, however, a concern about implementing inclusive education initiatives, particularly in culturally conservative areas, as they are likely to face setbacks. HCP1 observed that, *"In some*

communities, discussing menstruation with boys is considered inappropriate, so there may be resistance from parents or teachers." Addressing these barriers require collaboration with community leaders and parents to build trust and demonstrate the value of inclusive education. Sommer et al. (2015) emphasize that involving stakeholders in the design and implementation of education programs can enhance their cultural acceptability and effectiveness.

Another strategy is the use of digital platforms, which provide a way to deliver comprehensive education programs. HCP1 noted that, *"Utilizing WhatsApp groups for ongoing discussions and sharing information can enhance accessibility and engagement."* P2 also stated *"I belong to a WhatsApp group that does menstrual health education for people. A lot of questions are asked, and answers are provided. It is on this platform that you're likely to feel that even your own problems are small. What the doctor does is that, sometimes, he organises classes on Telegram for us. He would schedule the class and post the link on the WhatsApp page and then we join. Utilising such platforms by specialists helps a lot."* This innovative approach leverages technology to overcome geographical and logistical barriers, ensuring that menstrual health education reaches a wider audience.

Evans et al. (2022) highlight the potential of digital tools to disseminate accurate information and facilitate peer-to-peer learning. However, the effectiveness of education programs depends on how they are designed and implemented. Respondents stressed the need for interactive, engaging methods to ensure participants retain and apply the knowledge they have gained. P2 FG1 shared, *"Teachers should use videos and demonstrations because just talking about it doesn't help much; when we see the pictures, it will remain in our heads."* P2 also indicated *"sometimes videos and pictures are shared on the platform for us to have a visual or pictorial understanding of a*

condition or a particular thing." This aligns with findings by (Evans et al., 2022), who reported that interactive approaches, such as role-playing and hands-on activities, are more effective than didactic methods in improving menstrual health literacy.

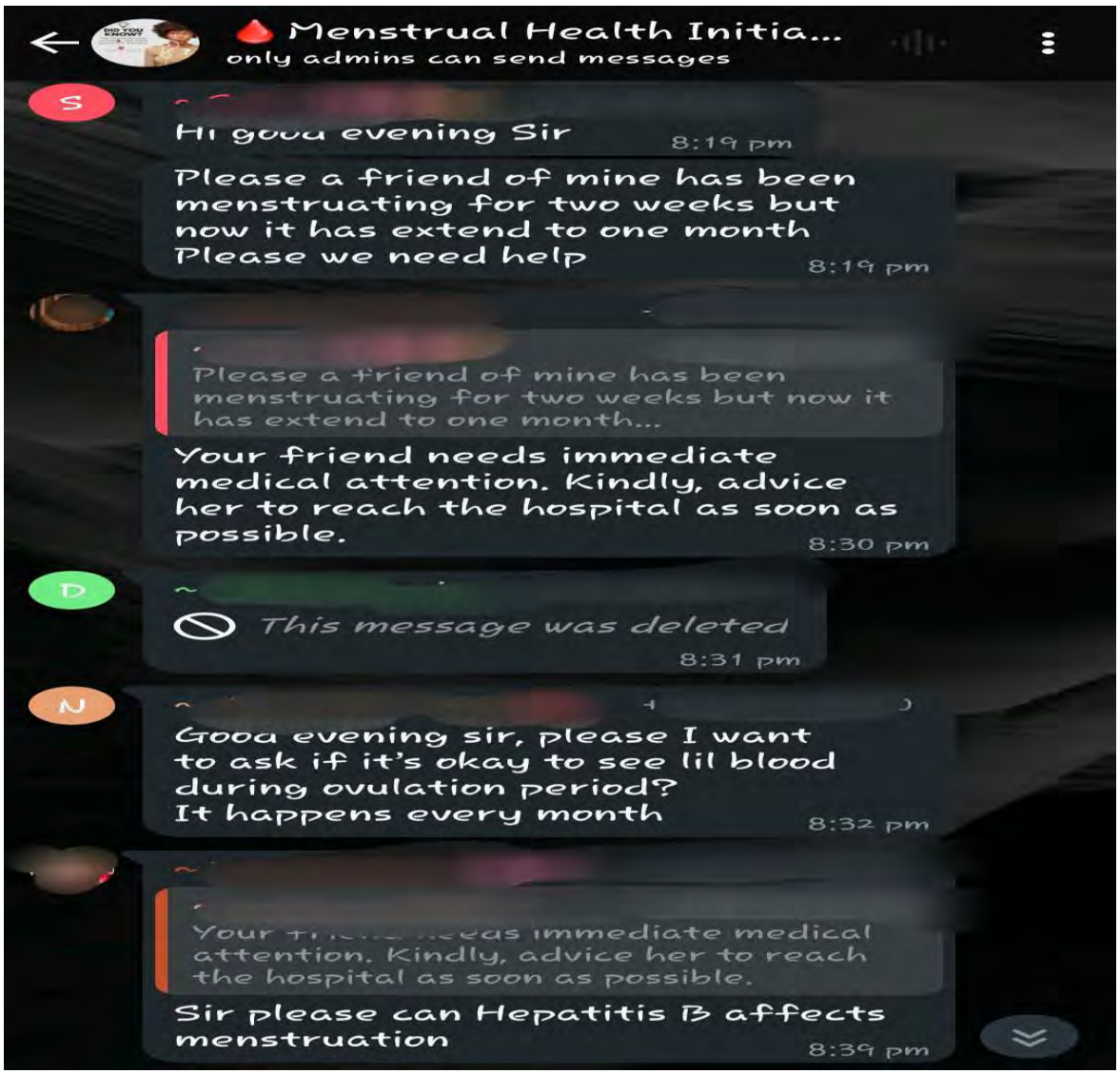

Figure 2: Menstrual Health WhatsApp group platform for ladies

(Source: Researcher's Field notes, 2024)

To conclude, comprehensive education programs are important for promoting menstrual health literacy in the Builsa North Municipality. By integrating menstrual health into school curricula, community workshops, and digital platforms, women and girls can access, understand, appraise, and apply accurate information about

menstruation, as outlined in the Integrated Model of Health Literacy. Inclusive approaches involving men, parents, and community leaders further dismantle stigma and ensure that knowledge is critically evaluated and put into practice.

4.4.2 Community Engagement and Advocacy

Community engagement and advocacy are tools that can promote menstrual health literacy and foster supportive environments for open discussion. Addressing cultural taboos, increasing access to resources, and empowering individuals, community-based initiatives can bridge gaps in education and healthcare, ensuring that menstrual health becomes a collective priority in the Builsa North Municipality. Respondents' perspectives showed the value they place on community-led initiatives in breaking down barriers to menstrual health literacy. HCP1 stated that, *"organizing community events or support groups where women can share experiences, discuss concerns, and learn from healthcare professionals creates safe spaces for dialogue."* Similarly, P2 FG2 remarked that, *"workshops in our community would help because not everyone can go to school or has access to information about periods."*

These views showcase the ability of community-driven approaches to reach diverse populations and address knowledge gaps. Literature supports the effectiveness of community engagement in promoting menstrual health. Watch (2023) argue that involving local leaders, peer educators, and healthcare providers in menstrual health initiatives promotes trust and ensures cultural relevance. Hennegan et al. (2019) also indicated that community-based programs are especially effective in low-resource settings, where formal education and healthcare systems may be limited. By using existing community structures, these programs can create sustainable and scalable solutions that improve individuals' capacity to find, understand, and use menstrual health information, as espoused by Sørensen et al.'s (2012) model.

Advocacy campaigns are another important component of community engagement. Participants mentioned the need for awareness-raising initiatives to challenge stigma and normalize conversations about menstruation. P1 FG1 stated that, *"organizing campaigns to educate people about menstruation can help reduce the stigma and help girls feel less ashamed and more confident to talk about their periods. CAMFED is doing well with the way they are supporting girls with pad in our school, and the talk they give us on how to practice menstrual hygiene during our period."* Such campaigns can use various mediums, including radio, social media, and community theater, to reach a broad audience and spark dialogue as P3 indicated that *"there's this program called you and your health on radio Builsa. They used to do it Saturday evenings, but now that I've been away for a while, I don't know whether they are still doing it or not. The program had a lot of listenership, and people participated in the program. I think this is one of the platforms that could be used for discussing menstruation. I believe if health workers pay attention to menstruation and discuss it like they do with other health issues, people will listen and learn."*.

These examples reflect the communication dimension of Sørensen et al.'s model, which emphasizes the role of accessible information channels and social interaction in building health literacy competencies. Sommer et al. (2015) assert these claims, noting that advocacy efforts should focus on changing societal attitudes and promoting menstrual health as a fundamental human right. Inclusive advocacy that involves men and boys is very important if we want to dismantle the gendered misconceptions about menstruation. P5 FG2 suggested that, *"if men were involved in these programs, they would understand what we go through and stop treating it as a taboo."* This aligns with findings by Chandra-Mouli and Patel (2017) who advocate for inclusive advocacy

campaigns that challenge harmful gender norms and promote shared responsibility for menstrual health.

The use of participatory approaches in community engagement also emerged as a means to enhance the effectiveness of menstrual health initiatives. HCP1 noted that, *"encouraging women to share their experiences and actively participate in designing programs ensures that interventions address their real needs."* This participatory model aligns with Jewkes and Morrell (2010) assertion that it is important to involve the beneficiaries of a health campaign in the planning and implementation of the health program to ensure relevance and impact. This also reflects the "interactive" and "critical" domains of Sørensen et al.'s model, in which individuals move beyond a basic understanding to co-create knowledge and advocate for systemic improvements.

Participants, however, indicated that, although community engagement and advocacy have the potential to promote menstrual health literacy and instill confidence in women for patient-centred communication, they still face several challenges. Participants identified cultural resistance and resource constraints as significant barriers. P1 remarked, *"Some people in the community think talking about periods is shameful, so they won't attend workshops or events. I have an uncle who looks down on women. He thinks that women should shut up in all aspects. Such a person will not attend this type of gathering because it is about the "rights of women", and I'm sure he is not the only one with such a mentality."* Addressing these challenges requires persistent efforts to build trust and demonstrate the value of menstrual health education. Hennegan et al. (2019) recommend collaborating with community leaders and influencers to gain buy-in and ensure the success of advocacy initiatives.

The integration of technology into community engagement efforts can further improve their reach and effectiveness. HCP1 suggested that, *"utilizing WhatsApp groups and other digital platforms for ongoing discussions and sharing information makes it easier to engage more people."* Digital tools can complement traditional methods, enabling real-time interaction and access to educational resources, even in remote areas. This resonates with Sørensen et al.'s emphasis on "access" and "understanding" as key dimensions of health literacy, since digital platforms widen opportunities for continuous communication and informed decision-making. Chandra-Mouli and Patel (2017) highlight the ability of technology to democratise access to information and foster virtual support communities.

To conclude, community engagement and advocacy are not just supportive strategies but foundational mechanisms for enhancing menstrual health literacy and communication. By leveraging local structures, promoting inclusivity, and using participatory approaches, these initiatives directly strengthen women's ability to access, understand, appraise, and apply menstrual health information as conceptualised in the Integrated Model of Health Literacy.

4.4.3 Innovative Approaches to Communication

Promoting menstrual health literacy and communication requires innovative approaches, especially in underserved, resource-constrained areas such as Builsa North Municipality. These strategies leverage technology, creative media, and community-driven approaches to disseminate information, foster dialogue, and address cultural taboos surrounding menstruation (Jiffry, 2025). Respondents' perspectives indicated how it is possible for technology to transform menstrual health communication. HCP1 noted*, "Utilizing WhatsApp groups and other digital platforms for ongoing discussions and sharing information makes it easier to engage more people."*

This shows a growing recognition of digital tools as powerful enablers of health education, especially in remote or underserved areas. P1 FG1 added, *"If there was an app that could teach us about periods and track our cycles, it would help a lot of women who don't have access to clinics."* P3 FG1 retorted, *"Oh, there are apps like that ooo. I'm even using one mpo. When you go home, go to your app store and type menstruation tracker, you will get them. It's even because phones are not allowed in school, as I will show you the one I'm using, and you will see how it works. It is easy to use and it is very helpful. I'm using the Pink Diary app."*

P1 also indicated, *"I use the flo app to track my cycle. The app has a lot to offer and it is easy to use. The interesting thing, too, is that when you sign up and you even change a phone, you won't lose your information. Once you sign in with the same account, all your information will pop up again."* Such perceptions underscore the importance of integrating digital solutions into menstrual health initiatives. Chandra-Mouli and Patel (2017) affirm their views when he argued that digital platforms have the possibility of democratizing access to information, providing users with accurate, personalized, and real-time support. (Mancone et al., 2024) also posit that interactive and user-friendly applications are great for improving health literacy, particularly among younger populations who are already digitally connected.

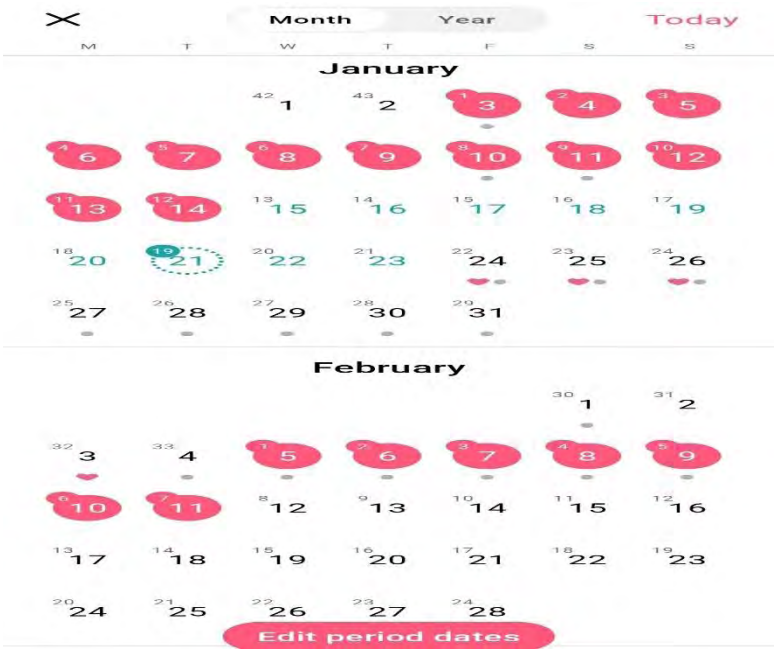

Figure 3: Flo Menstrual Tracker of a participant

(Source: Researcher's Field Notes, 2024)

Another innovative approach to communication indicated by participants is creative media and storytelling. HCP1 remarked, *"Drama and plays about periods can teach people while also making it less awkward to talk about."* Community theatre, radio dramas, and storytelling resonate with channels of communication that are already culturally acceptable in most of these remote and semi-remote areas, and can be used to address stigma and promote open conversations about menstruation. Sommer et al. (2015) argue that such methods are predominantly effective in areas where formal education and digital tools may have limited reach, as they engage audiences emotionally and make complex information accessible. Participants identified cinematography as an effective means of communication that could be used to promote menstrual health literacy.

P5 stated, *"when we were young, they used to do sinii in town. This was mostly done by churches when they want to show us Jesus film. I think when they use that we will still gather to watch and learn. We still have many communities in this district that don't have light so they will still come out to watch. So, if indeed they want to educate people on it, they can make a film and come and show us"*. HCP1 also noted that, *"Using diagrams and hands-on demonstrations during consultations helps patients understand their menstrual health better."* These align with findings by Jewkes et al. (2015), who advocate for interactive approaches that actively involve participants in the learning process, fostering deeper understanding and retention of information.

Community-driven communication strategies, such as community theatre, further intensify the impact of innovative approaches. P2 FG2 shared, *"Peer educators in the community can explain things better because they understand our challenges."* Another participant added, *"Do you know how they were able to fast-track the abolishing of female genital mutilation in Buluk? They acted it out as a play in the town for the people to see the consequences. I was very small at the time, and I am sure it was that intervention that saved me and some of the girls my age. They used our own people to practice the play and dramatise it for us, so I am certain that if they make use of this, they will speak to our old people about the need to give menstruation some audience"* (P4). These sentiments reflect the importance of using local knowledge and trust to deliver life-changing health messages. Hennegan et al. (2019) pinpointed that peer-led initiatives are mainly effective in promoting behavioural change and addressing cultural sensitivities.

Despite their ability, innovative communication approaches face challenges related to accessibility and inclusivity. HCP1 observed, *"Not everyone has access to smartphones or the internet, so we need multiple methods to reach different groups."* Addressing

these disparities requires a multi-modal approach that combines digital tools, creative media, and face-to-face interactions to ensure that no one is left behind. Respondents also emphasized the importance of tailoring communication strategies to diverse audiences. P1 stated, *"Young girls, married women, older women and our dear men all have different needs, so the way we talk to them about periods should be different. A woman who is already menstruating has an idea of what it is, but a girl who hasn't had her first flow doesn't even know what it is. The least to say about men, especially the older generation, because the younger guys are trying. So, I think that if we put all these people in the same bracket, it is likely not going to work but if they are grouped according to their mates, then it is achievable"* This aligns with Chandra-Mouli et al. (2014), who advocate for audience segmentation to ensure that communication strategies are relevant and impactful for specific groups.

In conclusion, from Sørensen et al.'s Integrated Model of Health Literacy, these innovative approaches strengthen all four core competencies of health literacy: access, understanding, appraisal, and application. Digital tools expand access to information, creative media and participatory storytelling enhance understanding, peer-led and community-driven strategies build trust and encourage critical appraisal, while tailored and interactive methods empower women and communities to apply knowledge in daily practice.

4.4.4 Building Trust Through Supportive Environments

Building trust in a clinical setting ensures patient-centered communication and care. According to (Bahari et al., 2024) clients, they open up to their healthcare providers when they trust them. Trust is therefore important in encouraging women to engage actively in healthcare discussions about their menstrual health. When providers create an environment rooted in respect, empathy, and openness, women are more willing to

communicate their concerns and apply health information to their daily lives. This way is significant for menstrual health, where cultural taboos and stigma often hinder open discussions.

Respondents emphasized that trust is built through the creation of a welcoming and respectful environment. HCP1 explained, "*To encourage patients to actively participate in discussions about their menstrual health, I employ the following strategies: 1. I create a comfortable environment to ensure a welcoming and private setting where patients feel safe to discuss sensitive topics without judgment. 2. I use clear and simple language. I avoid medical jargon and use straightforward language to explain concepts, making it easier for patients to understand and engage.*" These practices go beyond comfort; they function as trust-building mechanisms. By ensuring privacy and explicitly removing judgment, the provider reduces patients' sense of vulnerability and anticipated stigma, which are major barriers to disclosure in menstrual health conversations. When women perceive the clinical space as safe and confidential, they are more likely to speak openly about sensitive concerns. Similarly, the use of clear and simple language signals respect and competence, reinforcing patients' confidence in the provider. Within the Integrated Model of Health Literacy, such interaction enhances the competency of understanding, while relational trust strengthens engagement and supports women's ability to access, interpret, and apply menstrual health information effectively.

The role of trust in patient-provider relationships is well documented in the literature as Epstein and Street Jr. (2011) argue that patient-centered communication, characterized by active listening and empathy, fosters trust and promotes shared decision-making, both of which are critical to effective healthcare outcomes. Many participants echoed this sentiment, stressing that supportive environments are

associated with active participation in healthcare. P5 FG2 noted, *"When the doctor listens to you without rushing you, you will feel more confident to talk about your problem. I always fumble when I am not comfortable so when the doctor rush me, I end up not expressing myself well."* This highlights how provider behavior directly influences a patient's willingness to engage. Similarly, P4 FG2 remarked that*, "some nurses that I have met seemed and acted like they don't care, and it discouraged me from asking questions about my condition. It is not only about menstruation that they don't have patience to talk ooo, they generally don't care, they don't show sympathy."*

Another indicated that, *"Passing certain comments on menstrual problems like 'it's normal, every woman goes through it'. When in actual fact, the severity of everyone's case may be different. If care providers put aside their prejudice and listen to patients, ask questions in a friendly manner, it makes the person feel like they care and so will open up and give every detail that will help the healthcare provider give a proper diagnosis and treatment"* (P3). Some participants reported that not going to the hospital has to do with the unnecessary delays at the facility, which sometimes do not yield good results. For instance, P2 FG1 complained*, "You even go to the hospital the way you will even …you move from here to here by the end of the day you will not even get anything, you just come and maybe they will direct you to go and buy some drug so you will just say if you had gone to the pharmacy aaa it would have been better than you going to the hospital so sometimes if youre going to the hospital they will not even allow you to go to the hospital. They will rather advise you to go the pharmacy and if you go to the pharmacy too, they may be telling you that it is normal."*

Building trust is very important especially when discussing menstrual health because of the societal stigma associated with menstruation. Sommer et al. (2015) assert that societal norms often discourage women from discussing menstruation openly, even in

clinical settings, hence it is important for healthcare providers to actively address stigma by normalizing conversations about menstruation. HCP1's strategy of *"using simple language and avoiding medical jargon"* aligns with this approach, ensuring that patients feel understood and included in the conversation. Through the lens of Sørensen et al.'s Integrated Model of Health Literacy, supportive environments enhance women's ability to access, understand, appraise, and apply health information. A trusted and empathetic provider creates access by making services approachable, supports understanding through clear explanations, encourages appraisal by inviting questions and dialogue, and strengthens application by equipping patients with confidence to act on advice.

In conclusion, building trust through supportive environments is fundamental to advancing menstrual health literacy and patient-centered communication in the Builsa North Municipality. By fostering empathy, listening actively, and removing judgment, healthcare providers empower women to discuss sensitive menstrual issues openly, enhancing both the quality of care and women's confidence in managing their health.

4.4 RQ3. b. What other approaches are used to promote menstrual health literacy and communication in the Builsa North Municipality?

Beyond direct communication efforts, broader structural and institutional measures are essential for sustaining menstrual health literacy and enabling women to act on the information they receive. The study identified policy and systemic interventions as critical complementary approaches. These include measures such as integrating menstrual health into school curricula, subsidizing menstrual products, and strengthening institutional support systems. Within the Integrated Model of Health Literacy, such interventions create enabling environments that support the practical application of knowledge and reduce structural barriers to menstrual wellbeing.

4.4.5 Policy and Systemic Interventions

Menstrual health literacy and effective communication may not be easily promoted without deliberate policy interventions to ensure equitable access to resources and education. Within the framework of Sørensen et al.'s Integrated Model of Health Literacy, policy and systemic changes address the societal and organizational levels of health literacy, helping individuals access, understand, and apply health information. Policy and systemic interventions can create sustainable, scalable solutions that benefit diverse populations by addressing structural barriers and institutionalizing menstrual health within public health frameworks.

Participants stated that policy changes in advancing menstrual health literacy are important. HCP1 stated, *"Mandating the inclusion of comprehensive menstrual health education in school curricula ensures that young people receive accurate and timely information."* This approach not only standardises education but also normalises menstruation as a critical aspect of health education. Similarly, P5 FG1 remarked, *"If there were laws that made it compulsory for schools to teach about menses, we wouldn't grow up thinking it's a secret or something to be ashamed of. It doesn't mean that we will let it soil us or throw our pads away anyhow ooo, but at least we will be able to talk to our parents about the problems we face. When we go to the hospital, too, we will not feel shy to tell the doctor how we feel, whether it is a man or woman that is consulting"* P1 FG1 added *"I think if they set questions on menstruation in our exams, it will force the teachers to teach us because they want us to pass. But because they don't teach us, they don't set questions on it themselves, neither does WAEC set such questions."*

Another participant agreed with her by indicating that *"It's true. If the teachers realize that every year questions come from that area, they will take their time to teach the*

topic paaaa and we ourselves too especially the boys will also try to learn about it because of the exams" (P2 FG1). These perspectives hinge on the transformative potential of policy interventions in addressing knowledge gaps and stigma. Studies have shown that policy plays an important role in institutionalizing menstrual health education and resources. Sommer et al. (2015) argue that integrating menstrual health into national education and healthcare policies ensures that it receives the attention and funding it deserves. Similarly, Holmes et al. (2021) indicate that policies that are meant to promote menstrual health literacy are particularly impactful in low-resource areas, where systemic barriers often limit access to education and healthcare services, such as those in Builsa North.

Participants also identified systemic reforms within healthcare systems as critical for improving menstrual health literacy. HCP1 noted, *"Implementing mandatory training programs for healthcare providers on menstrual health literacy, cultural sensitivity, and effective communication can improve the quality of care and patient interactions."* This directly reflects Sørensen et al.'s emphasis on the health system's responsibility in ensuring individuals are supported in accessing and processing health information. It also aligns with Mann and Byrne (2023) who advocate for capacity-building programs that train healthcare providers with the skills they need to address menstrual health effectively.

Another concern raised by participants was the use of economic policies to subsidise menstrual products. They argue that addressing these financial barriers is a strategy to improve menstrual health literacy. P6 FG2 stated, *"If pads were cheaper or free, some of our friends would use them and come to school instead of staying at home because they are using rugs and are afraid it might leak and touch their uniforms."* This reflects (Hennegan & Montgomery, 2016) findings that affordability is a noteworthy factor in

menstrual hygiene management, with subsidised products leading to improved health and educational outcomes. From a health literacy perspective, affordability enhances the ability to apply knowledge in daily practice. Policies that ensure the availability of low-cost or free menstrual products in schools, healthcare facilities, and community centers can significantly improve menstrual health literacy and management.

Participants also advocated for workplace policies that support menstrual health. P2 remarked, *"Workplaces should have policies that allow women to take time off if they have severe period pain."* P4 also added that *"Sometimes it is because of our menstrual issues that some organisations don't like to employ women, or when they do employ them, they relegate them to certain positions, positions that do not bring much income. This is unfair for us. Sometimes I don't blame them, I blame the fact that we don't have working regulations in this country that support women in this regard……"* Such policies can reduce stigma and ensure that menstrual health is recognized as a legitimate aspect of women's overall well-being. Karin (2022) endorse their sentiment by positing that workplace accommodations for menstrual health can foster inclusivity and support women's participation in the labor force.

Despite their potential, policy and systemic interventions face challenges related to implementation and enforcement. HCP1 observed, *"Policies are only effective if they are backed by adequate funding and political will."* This sentiment underlines the need for sustained advocacy and resource allocation to ensure that menstrual health initiatives are not only enacted but also effectively operationalized. Sommer et al. (2015) espoused that for the impact of policy reforms to be felt, they must be accompanied by monitoring and evaluation to ensure accountability. Collaborating with stakeholders is important for the success of policy and systemic interventions. HCP1 recommended, *"Promoting partnerships among healthcare providers, educators,*

policymakers, and community organizations can create a comprehensive approach to menstrual health education and support." This statement aligns itself with Chandra-Mouli and Patel (2017) argument that multi-sectoral collaboration is key to addressing the complex and multifaceted challenges of menstrual health.

In conclusion, policy and systemic interventions are central to promoting menstrual health literacy and communication in Builsa North. By embedding menstrual health into curricula, training healthcare providers, subsidizing products, and fostering workplace accommodations, policies directly enhance individuals' capacity to access, understand, appraise, and apply information as outlined by Sørensen et al (2012). The challenge, however, lies in ensuring that these reforms are adequately resourced, enforced, and monitored to achieve sustainable change.

4.5 Chapter Summary

This chapter presents the study's findings in response to the three research questions. To answer the first research question on women's access to and use of menstrual health information, the study identified themes including reliance on diverse and informal sources, barriers and limitations in formal health communication, the role of knowledge in empowerment, and peer support and self-initiated action. The second research question, which examined the factors influencing menstrual health literacy and communication, highlighted cultural taboos and stigma, gendered understanding, access to education, and barriers to participation. The final research question focused on communication strategies and other approaches to promote menstrual health literacy, revealing themes such as comprehensive education programs, community engagement and advocacy, innovative tools, building trust through supportive environments, and policy and systemic interventions. Together, these findings underscore the need for a

more inclusive, responsive, and supportive approach to menstrual health communication.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter concludes the study by summarizing its key components. It began by summarising each chapter before discussing the main findings. The chapter also outlines the limitations encountered during the research process and provides recommendations for future research and practical interventions. The chapter is structured to reflect on the insights gained across all four chapters and to provide a clear end to the thesis on menstrual health literacy and patient-centered communication.

5.1 Summary of the Study

This study examined menstrual health literacy and patient-centered communication using a qualitative case study approach. It focused on how communication strategies shape women's understanding of menstrual health, how they access and use this information to empower themselves, and the factors that influence their interactions with healthcare systems and broader community structures. The study used Sørensen et al.'s Integrated Model of Health Literacy (IMHL) to showcase the interplay between individual behavior, environmental factors, and social influences.

Chapter One introduced the background, problem statement, objectives, and significance of the study. It highlighted the need for more context-specific communication efforts that address the cultural, structural, and informational gaps in menstrual health literacy in Ghana and similar settings.

Chapter Two reviewed relevant literature, discussing global and local perspectives on menstrual health education, communication gaps, and the importance of participatory and culturally appropriate health strategies. The chapter also presented the Integrated

Model of Health Literacy as a guiding framework for understanding how women access, understand, appraise, and apply menstrual health information.

Chapter Three outlined the research methodology. The study adopted a qualitative case study design to explore the experiences of women and healthcare providers in a selected Ghanaian community. Data was collected through focus group discussions and interviews. When in-person interviews were not possible, a qualitative questionnaire was administered to gather rich narrative data from participants. Braun and Clarke's thematic analysis approach guided the data analysis, allowing for the identification and interpretation of recurring patterns and themes across the dataset.

Chapter Four presented the thematic findings organized according to the three research questions of the study. For RQ1, themes included reliance on diverse and informal sources, challenges in accessing formal menstrual health information, the role of knowledge in empowerment, and peer support and self-initiated action. RQ2 yielded themes including cultural taboos and stigma, gendered understandings, access to education, and barriers to participation. For RQ3, themes included comprehensive education programs, community engagement and advocacy, innovative communication approaches, building trust through supportive environments, and policy and systemic interventions. Each theme was supported by participant voices and interpreted through the lens of the Integrated Model of Health Literacy and relevant scholarly literature.

5.2 Main Findings and Conclusions

This study revealed that menstrual health literacy in the Builsa North Municipality is shaped by how women access, understand, appraise, and apply information within cultural, structural, and interpersonal contexts.

Findings showed that women often rely on diverse and informal sources, such as peers, social media, and lived experiences, as their most accessible entry points to menstrual health information. These channels provide relatable and culturally relevant knowledge but are sometimes incomplete or inaccurate. Formal health communication was reported as challenging, with barriers such as limited consultation time, stigma, and provider attitudes discouraging open discussion. This underscores the importance of equitable access to reliable information, the first step of IMHL.

Once information is accessed, women's ability to understand and interpret it was influenced by the clarity of delivery and the context in which it was received. Comprehensive education programs and innovative communication approaches, such as storytelling, digital tools, and peer education, enhanced understanding by breaking down stigma and using familiar, accessible formats. Yet, participants also emphasized that when providers used jargon or dismissed concerns, comprehension was undermined, reinforcing the need for user-friendly, empathetic communication.

The study also highlighted women's struggle to appraise the credibility and relevance of the information they encountered. Many trusted peers or digital applications more than healthcare professionals, partly due to negative experiences in clinical settings. Community-driven approaches, including plays, dramas, and peer educators, were described as particularly effective because they combined trust with locally grounded knowledge, making appraisal easier and more meaningful.

Finally, the ability to apply information in daily life was constrained by financial, cultural, and systemic barriers. Participants noted that even with adequate knowledge, challenges such as high costs of sanitary products, entrenched stigma, and lack of supportive policies limited their ability to act on what they learned. Calls for subsidized

pads, mandatory menstrual education in schools, and workplace accommodations reflected the need for systemic interventions that enable women to put knowledge into practice.

In conclusion, menstrual health literacy in this context is multidimensional and requires more than just knowledge provision. It depends on women's ability to access, understand, evaluate, and act on information within supportive environments. The Integrated Model of Health Literacy provides a valuable framework to show how these competencies are interdependent: access and understanding are meaningless without appraisal, and knowledge cannot translate into empowerment unless women are supported to apply it. Sustainable progress, therefore, lies in combining effective communication strategies with structural and policy reforms that create enabling conditions for women to exercise agency over their menstrual health.

5.3 Limitations of the Study

While this study offers valuable insights into the dynamics of menstrual health literacy and communication among women, several limitations must be acknowledged. First, the study was confined to a specific geographical and socio-cultural context, which may limit the generalizability of its findings. As a case study, it focused on a defined community and explored experiences within a particular setting. Although the findings provide depth and contextual relevance, they may not fully reflect the broader experiences of women in other regions of Ghana or in different cultural backgrounds.

Secondly, the study employed only qualitative data collection methods, namely focus group discussions and interviews. While these methods allowed for rich, in-depth exploration of participants' views, they did not permit statistical generalization. The reliance on participants' self-reports also means that the data may be subject to biases

such as social desirability or memory lapses. Additionally, while qualitative questionnaires were a practical alternative for participants who could not be interviewed in person, they lacked the interactive element of a live interview. As such, opportunities to probe or clarify responses were limited, potentially affecting the depth of some responses.

Furthermore, the sensitive nature of menstruation as a topic, combined with enduring stigma and cultural taboos, may have inhibited some participants from fully expressing their views. Although efforts were made to create a safe, non-judgmental environment, some participants may have withheld information or given restrained responses.

Lastly, this study relied solely on Sørensen et al.'s Integrated Model of Health Literacy to explore how women access, understand, and use menstrual health information. While the model effectively highlights the interplay between individual competencies, contextual factors, and health outcomes, incorporating additional frameworks, such as the Health Belief Model or Feminist Communication Theory, could have provided more profound insights into power dynamics, gender norms, and decision-making processes in reproductive health communication. Despite this limitation, the study offers a strong foundation for future research and practical interventions, providing valuable guidance for policymakers, educators, and health communicators seeking to improve menstrual health literacy and women's empowerment.

5.4 Suggestions for Further Research

Based on the findings and limitations of this study, several areas are recommended for future research to deepen understanding and expand knowledge on menstrual health literacy and women's empowerment. For future studies, the study suggests involving larger and more diverse populations across different regions, socio-economic

backgrounds, and cultural contexts. This would enhance the generalizability of findings and provide comparative insights into how menstrual health literacy varies across demographics. It could also investigate multiple cases or use a different research design investigate.

Also, incorporating quantitative approaches or mixed-methods research could provide statistical validation of the relationships identified in this study. For instance, quantitative studies could measure the direct impact of menstrual health literacy on healthcare outcomes and confidence levels among women.:

Longitudinal research could also be conducted to examine how menstrual health literacy evolves over time and how it influences women's health behaviors, confidence in healthcare interactions, and overall well-being. Such studies would provide insights into the long-term effects of educational interventions and policy changes.

Additionally, since the involvement of men and boys is critical in dismantling menstrual stigma, future studies could explore male perspectives on menstruation and menstrual health literacy. Understanding these views could inform more inclusive interventions that address gender-based barriers.

Furthermore, as digital platforms continue to grow, future research could examine how mobile applications, social media campaigns, and online educational resources influence menstrual health literacy, particularly among young women and girls.

Future research could also explore additional theories alongside IMHL such as the Social Cognitive Theory (SCT), Health Belief Model (HBM) or Feminist Theory, to provide a more nuanced understanding of the socio-cultural factors influencing menstrual health literacy and empowerment.

5.5 Recommendations

Based on the study's findings and guided by the insights from the Integrated Model of Health Literacy, the following recommendations are proposed to enhance menstrual health literacy, empower women, and promote menstrual health communication in Builsa North Municipality and Ghana as a whole.

Firstly, the study recommends the integration of a comprehensive menstrual health education into school curricula where age-appropriate menstrual health education is introduced at the basic and secondary levels to ensure young girls and boys gain accurate knowledge early. The curriculum should cover menstrual hygiene management, biological processes, and debunk common myths and misconceptions. In addition to integrating menstrual education into school curricula, teachers should also receive specialized training to deliver this content sensitively and effectively, thereby creating supportive learning environments. Government and health authorities should also develop and enforce policies that integrate menstrual health education into broader sexual and reproductive health programs.

Secondly, the promotion of community-based awareness campaigns that engage community leaders, religious institutions, and local organisations in awareness programs aimed at reducing menstrual stigma is highly recommended. During these campaigns, culturally sensitive communication strategies should be employed to foster open discussions about menstruation, especially in rural areas such as the Builsa North Municipality. Community-based peer education programs can also serve as platforms for women to share experiences and learn from one another. Additionally, these educational programs should include boys and men because involving men in these dialogue sessions can help normalize discussions about menstruation and encourage shared responsibility in addressing menstrual health challenges.

Thirdly, healthcare providers should be trained in patient-centered communication strategies that create safe, non-judgmental environments for women to discuss menstrual health concerns. Also, continuous professional development programs should incorporate cultural sensitivity and gender-responsive communication techniques. Health authorities should also leverage digital platforms for menstrual health education by utilizing social media, mobile applications, and online educational content to reach broader audiences, especially young women. Digital platforms can serve as anonymous spaces where individuals can seek information, ask questions, and share experiences without fear of stigma, and the health authorities providing such services will dispel misinformation on the internet. Healthcare facilities should as well adopt inclusive policies that encourage regular discussions on menstrual health during routine check-ups. Menstrual health counselling services should be made available, especially in reproductive health centres.

Fourthly, policymakers should consider subsidising or providing menstrual products free of charge in schools, healthcare centres, and public institutions, especially in underserved communities. They could also support local production of affordable menstrual products to reduce costs and enhance accessibility. Policies should also prioritize the promotion of menstrual equity, such as tax exemptions on menstrual products and mandatory menstrual health education.

In conclusion, regular assessment of menstrual health literacy programs could be conducted to evaluate their effectiveness and inform necessary adjustments. Feedback from women and girls could therefore be incorporated into the design and delivery of menstrual health interventions to ensure relevance and effectiveness.

REFERENCES

Aboumatar, H. J., Carson, K. A., Beach, M. C., Roter, D. L., & Cooper, L. A. (2013). The Impact of Health Literacy on Desire for Participation in Healthcare, Medical Visit Communication, and Patient Reported Outcomes among Patients with Hypertension. *Journal of General Internal Medicine*, *28*(11), 1469–1476. https://doi.org/10.1007/s11606-013-2466-5

Adugbire, B. A., Jordan, P. J., & Cornelle, Y. (2024). Nurses' views of patient- and family-centered care and its practices in peri-operative contexts in hospitals in Northern Ghana. *BMC Nursing*, *23*(1), 97. https://doi.org/10.1186/s12912-024-01747-w

Airhihenbuwa, C. O. (with Internet Archive). (1995). *Health and culture: Beyond the Western paradigm*. Thousand Oaks, Calif. : Sage Publishers. http://archive.org/details/healthculturebey0000airh

Akrofi-Quarcoo, S., & Gadzekpo, A. (2020). Indigenizing radio in Ghana. *Radio Journal:International Studies in Broadcast & Audio Media*, *18*(1), 95–112. https://doi.org/10.1386/rjao_00018_1

Alexander, D. A. P. (2019). *LINCOLN AND GUBA'S QUALITY CRITERIA FOR TRUSTWORTHINESS*. *6*(4).

Andalibi, N., & Flood, M. K. (2021). Considerations in Designing Digital Peer Support for Mental Health: Interview Study Among Users of a Digital Support System (Buddy Project). *JMIR Mental Health*, *8*(1), e21819. https://doi.org/10.2196/21819

Asah-Opoku, K., Onisarotu, A. N., Nuamah, M. A., Syurina, E., Bloemenkamp, K., Browne, J. L., & Rijken, M. J. (2023). Exploring the shared decision making process of caesarean sections at a teaching hospital in Ghana: A mixed methods study. *BMC Pregnancy and Childbirth*, *23*(1), 426. https://doi.org/10.1186/s12884-023-05739-7

Baah, J. K., Fiase, D., Kyereboah, F., Kyei, G., & Dsane, N. A. K. (2023). Short-term evaluation of the AIDET communication framework at a tertiary teaching hospital in Ghana. *Journal of Healthcare Administration*, *2*(2), 204–217. https://doi.org/10.33546/joha.2934

Bahari, Z., Vosoghi, N., Ramazanzadeh, N., Moshfeghi, S., & Aghamohammadi, M. (2024). Patient trust in nurses: Exploring the relationship with care quality and communication skills in emergency departments. *BMC Nursing*, *23*(1), 595. https://doi.org/10.1186/s12912-024-02241-z

Baird, S., Hamory, J., Gezahegne, K., Pincock, K., Woldehanna, T., Yadete, W., & Jones, N. (2022). Improving Menstrual Health Literacy Through Life-Skills Programming in Rural Ethiopia. *Frontiers in Global Women's Health*, *3*. https://www.frontiersin.org/articles/10.3389/fgwh.2022.838961

Barbour, R. (with Internet Archive). (2008). *Doing Focus Groups*. London : Sage Publications. http://archive.org/details/doingfocusgroups0000barb

Baškarada, S. (2014). Qualitative Case Study Guidelines. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2014.1008

Behera, B., & Samal, S. (2025). *Bridging the Digital Divide in Underserved Community*. *6*, 240–243.

Belayneh, Z., & Mekuriaw, B. (2019). Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: A cross-sectional study. *BMC Public Health*, *19*(1), 1595. https://doi.org/10.1186/s12889-019-7973-9

Bello, O. (2017). *Effective Communication in Nursing Practice: A literature review*.

Betancourt, J., Green, A., & Carrillo, J. (2002). Cultural Competence in Health Care: Emerging Frameworks and Practical Approaches. *Field Report*.

Bharadwaj, S., & Patkar, A. (2004). *MENSTRUAL HYGIENE AND MANAGEMENT IN DEVELOPING COUNTRIES: TAKING STOCK Sowmyaa Bharadwaj Archana Patkar 1. THE CONTEXT*. https://www.academia.edu/27453154/MENSTRUAL_HYGIENE_AND_MANAGEMENT_IN_DEVELOPING_COUNTRIES_TAKING_STOCK_Sowmyaa_Bharadwaj_Archana_Patkar_1_THE_CONTEXT

Bobel, C. (2019). *The Managed Body: Developing Girls and Menstrual Health in the Global South*. Springer International Publishing. https://doi.org/10.1007/978-3-319-89414-0

Bobel, C., Winkler, I. T., Fahs, B., Hasson, K. A., Kissling, E. A., & Roberts, T.-A. (Eds.). (2020). *The Palgrave Handbook of Critical Menstruation Studies*. Palgrave Macmillan. http://www.ncbi.nlm.nih.gov/books/NBK565605/

Boosey, R., & Wilson-Smith, E. (2014). *A Vicious Cycle of Silence: What are the implications of the menstruation taboo for the fulfilment of women and girls' human rights and, to what extent is the menstruation taboo addressed by international human rights law and human rights bodies?*

Borghi, L., Menichetti, J., & Vegni, E. (2021). Editorial: Patient-Centered Infertility Care: Current Research and Future Perspectives on Psychosocial, Relational, and Communication Aspects. *Frontiers in Psychology*, *12*, 712485. https://doi.org/10.3389/fpsyg.2021.712485

Boykins, A., D. (2014). *Core communication competencies in patient-centered care.* https://reference.medscape.com/medline/abstract/24855804

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., Clarke, V., & Gray, D. (2017). Innovations in Qualitative Methods. In B. Gough (Ed.), *The Palgrave Handbook of Critical Social Psychology* (pp. 243–266). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-51018-1_13

Bryman, A. (2016). *Social research methods* (Fifth Edition). Oxford University Press.

Bucher, E., Sharkey, C., Henderson, A., Basaran, B., Meyer, S., & Chen, C. X. (2025). An evaluation of menstrual health apps' functionality, inclusiveness, and health education information. *Springer Nature.* https://doi.org/10.1186/s12905-025-03812-1

Builsa North Municipal Assembly. (2022). *Composite Budget for 2022-2025: Programme-Based Budget Estimates*. Republic of Ghana.

Bulto, G. A. (2021). Knowledge on Menstruation and Practice of Menstrual Hygiene Management Among School Adolescent Girls in Central Ethiopia: A Cross-Sectional Study. *Risk Management and Healthcare Policy*, *Volume 14*, 911–923. https://doi.org/10.2147/RMHP.S296670

Caliston, N. P. (2025). Evaluating the Effectiveness of Mobile Game-Based Learning for Raising Adolescent Health Awareness: The Case of "AHlam Na 2.0." *IJOEM Indonesian Journal of E-Learning and Multimedia*, *4*(1), 11–20. https://doi.org/10.58723/ijoem.v4i1.349

CARE. (2021). *Menstruation in Adult Women: Experiences and attitudes towards menstruation in farming communities in rural Ghana and Malawi*. CARE. https://www.care.org/wp-content/uploads/2021/05/CARE-Menstrual-brief_farmers_GhanaMalawi-2021.pdf?utm_source=chatgpt.com

Casola, A. R., Renaud, A., & Mulki, A. K. (2024). Discussing menstrual health in family medicine. *Family Medicine and Community Health*, *12*(2). https://doi.org/10.1136/fmch-2023-002149

Castro, S., & Czura, K. (2024). Cultural taboos and misinformation about menstrual health management in rural Bangladesh. *World Development*, *188*, 106871. https://doi.org/10.1016/j.worlddev.2024.106871

Chandra-Mouli, V., McCarraher, D. R., Phillips, S. J., Williamson, N. E., & Hainsworth, G. (2014). Contraception for adolescents in low and middle income countries: Needs, barriers, and access. *Reproductive Health*, *11*(1), 1. https://doi.org/10.1186/1742-4755-11-1

Chandra-Mouli, V., & Patel, S. V. (2017). Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries. *Reproductive Health*, *14*(1), 30. https://doi.org/10.1186/s12978-017-0293-6

Chandra-Mouli, V., & Patel, S. V. (2020). Mapping the Knowledge and Understanding of Menarche, Menstrual Hygiene and Menstrual Health Among Adolescent Girls in Low- and Middle-Income Countries. In C. Bobel, I. T. Winkler, B. Fahs, K. A. Hasson, E. A. Kissling, & T.-A. Roberts (Eds.), *The Palgrave Handbook*

of Critical Menstruation Studies (pp. 609–636). Springer Singapore. https://doi.org/10.1007/978-981-15-0614-7_46

Cohen-Almagor, R. (2007). *The Right to Privacy: Part I* (SSRN Scholarly Paper No. 1683618). Social Science Research Network. https://papers.ssrn.com/abstract=1683618

Corcoran, N. (2007). Theories and models in communicating health messages. In *Communicating Health: Strategies for Health Promotion*. SAGE Publications Ltd. https://us.sagepub.com/sites/default/files/upm-binaries/13975_Corcoran___Chapter_1.pdf

Coughlin, S. S., Vernon, M., Hatzigeorgiou, C., & George, V. (2020). Health Literacy, Social Determinants of Health, and Disease Prevention and Control. *Journal of Environment and Health Sciences*, *6*(1), 3061.

Crawford, B. J., & Waldman, E. G. (2021). *Period Poverty in a Pandemic: Harnessing Law to Achieve Menstrual Equity*. *98*.

Crawford, T., Candlin, S., & Roger, P. (2017). New perspectives on understanding cultural diversity in nurse–patient communication. *Collegian*, *24*(1), 63–69. https://doi.org/10.1016/j.colegn.2015.09.001

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches, 2nd ed* (2nd ed., pp. xvii, 395). Sage Publications, Inc.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE.

Creswell, J. W., & Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed). SAGE Publications.

Creswell, J. W., & Poth, C. N. (2017). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.

Creswell, J. W., & Poth, C. N. (2023). *Qualitative Inquiry and Research Design Choosing Among Five Approaches* (Fifth Edition). SAGE Publications, Inc. https://uk.sagepub.com/en-gb/eur/qualitative-inquiry-and-research-design/book266033

Critchley, H. O. D., Maybin, J. A., Armstrong, G. M., & Williams, A. R. W. (2020). Physiology of the Endometrium and Regulation of Menstruation. *Physiological Reviews*, *100*(3), 1149–1179. https://doi.org/10.1152/physrev.00031.2019

Dasgupta, A., & Sarkar, M. (2008). Menstrual Hygiene: How Hygienic is the Adolescent Girl? *Indian Journal of Community Medicine : Official Publication of Indian Association of Preventive & Social Medicine*, *33*(2), 77–80. https://doi.org/10.4103/0970-0218.40872

Daymon, C., & Holloway, I. (2010). *Qualitative Research Methods in Public Relations and Marketing Communications* (2nd ed.). Routledge. https://doi.org/10.4324/9780203846544

Djanie, S. A. (2023, February 17). Rites infringing on rights: How widowhood rites harm women. *The Ghana Report*. https://www.theghanareport.com/rites-infringing-on-rights-how-widowhood-rites-harm-women/

Dubey, P., & Sivakami, M. (2024). Open and inclusive communication is key to managing menstrual health. *Nature Human Behaviour*, *8*(11), 2077–2078. https://doi.org/10.1038/s41562-024-02054-9

Ekong, I. (2015). *URBAN ADOLESCENTS Sci. Journal Impact Factor 4.016*. *7*(14).

Epstein, R. M., & Street Jr., R. L. (2011). The values and value of patient-centered care. *Annals of Family Medicine*, *9*(2), 100–103. https://doi.org/10.1370/afm.1239

Eschler, J., Menking, A., Fox, S., & Backonja, U. (2019). Defining Menstrual Literacy With the Aim of Evaluating Mobile Menstrual Tracking Applications. *Computers, Informatics, Nursing: CIN*, *37*(12), 638–646. https://doi.org/10.1097/CIN.0000000000000559

Essel, E. (2022). *An exploration of community radio, culture and health communication among rural and semi-urban dwellers in the central region of Ghana: A case study of Covid-19 and Radio Peace.* https://researchspace.ukzn.ac.za/handle/10413/22247

Evans, R. L., Harris, B., Onuegbu, C., & Griffiths, F. (2022). Systematic review of educational interventions to improve the menstrual health of young adolescent girls. *BMJ Open*, *12*(6), e057204. https://doi.org/10.1136/bmjopen-2021-057204

Fennie, T., Moletsane, M., & Padmanabhanunni, A. (2022). Adolescent girls' perceptions and cultural beliefs about menstruation and menstrual practices: A scoping review. *African Journal of Reproductive Health / La Revue Africaine de La Santé Reproductive*, *26*(2), 88–105.

Fialkov, C., Haddad, D., Ajibose, A., Le Flufy, C., Ndungu, M., & Kibuga, R. (2021). The impact of Menstrual Hygiene Management and gender on psychosocial outcomes for adolescent girls in Kenya. *International Journal of Adolescence and Youth*, *26*(1), 172–184. https://doi.org/10.1080/02673843.2021.1898424

Fraenkel, J., Wallen, N. E., & Hyun, H. H. (2011). *How to Design and Evaluate Research in Education* (Eigth edition). McGraw-Hill.

Fritz, M. A., & Speroff, L. (2012). *Clinical Gynecologic Endocrinology and Infertility*. Lippincott Williams & Wilkins.

Ganguly, M., Jana, S., Ganguly, A., & Midya, D. (2024). Menstruation in Adolescent Girls: Myths & Taboos. *Acta Biologica Slovenica*, *67*, 67. https://doi.org/10.14720/abs.67.2.18725

Gbogbo, S., Wuresah, I., Gbogbo, E., Axame, W. K., Klutse, P., Dowou, R. K., Mantey, S. O., Ayitey, S. A. Y., Boateng, I., Nelson, P. E., Kugbey, N., Doku, V. C. K., Hennegan, J., Baiden, F., & Binka, F. N. (2025). The Socio-Cultural Construction of Menstruation in the Ghanaian Context: A Qualitative Study of

the Perspectives of Parents, Teachers, and Adolescent Girls. *International Journal of Environmental Research and Public Health*, *22*(3), Article 3. https://doi.org/10.3390/ijerph22030349

Gbogbo, S., Wuresah, I., Klutse, P., Mantey, S. O., Boateng, I., Nelson, P. E., Charles-Unadike, V., ElReda, D., & Currier, C. (2025). *The Red Thread: Stakeholder Perspectives on Menstrual Health and Hygiene in Ghana*. Public and Global Health. https://doi.org/10.1101/2025.01.22.25320983

Ghana Health Service (GHS). (2017). *Ghana Health Service 2016 Annual Report*. Ghana Health Service (GHS).

Ghana Statistical Service (GSS). (2021). *2021 Population and Housing Census General Report (Vol. 3A): Population of Regions and Districts*. Ghana Statistical Service (GSS). https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/2021%20PHC%20General%20Report%20Vol%203A_Population%20of%20Regions%20and%20Districts_181121.pdf

Ghana Statistical Service (GSS). (2024). *Multidimensional Poverty Report: Builsa North Municipal*. Ghana Statistical Service (GSS).

GSS, G. S. S.-, GHS, G. H. S.-, & International, I. C. F. (2015). *Ghana Demographic and Health Survey 2014* [Survey report]. GSS. https://dhsprogram.com/publications/publication-fr307-dhs-final-reports.cfm

Ha, Md. A. T., & Alam, Md. Z. (2022). Menstrual hygiene management practice among adolescent girls: An urban–rural comparative study in Rajshahi division, Bangladesh. *BMC Women's Health*, *22*(1), 86. https://doi.org/10.1186/s12905-022-01665-6

Halai, A. (2006). *Ethics in Qualitative Research: Issues and Challenges*.

Henly, S. J. (2016). Health Communication Research for Nursing Science and Practice. *Nursing Research*, *65*(4), 257–258. https://doi.org/10.1097/NNR.0000000000000171

Hennegan, J., & Montgomery, P. (2016). Do Menstrual Hygiene Management Interventions Improve Education and Psychosocial Outcomes for Women and Girls in Low and Middle Income Countries? A Systematic Review. *PloS One*, *11*(2), e0146985. https://doi.org/10.1371/journal.pone.0146985

Hennegan, J., Shannon, A. K., Rubli, J., Schwab, K. J., & Melendez-Torres, G. J. (2019). Women's and girls' experiences of menstruation in low- and middle-income countries: A systematic review and qualitative metasynthesis. *PLOS Medicine*, *16*(5), e1002803. https://doi.org/10.1371/journal.pmed.1002803

Hennegan, J., Winkler, I. T., Bobel, C., Keiser, D., Hampton, J., Larsson, G., Chandra-Mouli, V., Plesons, M., & Mahon, T. (2021). Menstrual health: A definition for policy, practice, and research. *Sexual and Reproductive Health Matters*, *29*(1), 1911618. https://doi.org/10.1080/26410397.2021.1911618

Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. *Online Readings in Psychology and Culture*, *2*(1). https://doi.org/10.9707/2307-0919.1014

Holmes, K., Curry, C., Sherry, Ferfolja, T., Parry, K., Smith, C., Hyman, M., & Armour, M. (2021). Adolescent Menstrual Health Literacy in Low, Middle and High-Income Countries: A Narrative Review. *International Journal of Environmental Research and Public Health*, *18*(5), Article 5. https://doi.org/10.3390/ijerph18052260

Igbokwe And, U. C., & John-Akinola, Y. O. (2021). KNOWLEDGE OF MENSTRUAL DISORDERS AND HEALTH SEEKING BEHAVIOUR AMONG FEMALE UNDERGRADUATE STUDENTS OF UNIVERSITY OF IBADAN, NIGERIA. *Annals of Ibadan Postgraduate Medicine*, *19*(1), 40–48.

Iliyasu, Z., Aliyu, M., Abubakar, I., & Galadanci, H. (2012). Sexual and Reproductive Health Communication Between Mothers and Their Adolescent Daughters in Northern Nigeria. *Health Care for Women International*, *33*, 138–152. https://doi.org/10.1080/07399332.2011.562996

Jewkes, R., Flood, M., & Lang, J. (2015). From work with men and boys to changes of social norms and reduction of inequities in gender relations: A conceptual shift in prevention of violence against women and girls. *The Lancet*, *385*(9977), 1580–1589. https://doi.org/10.1016/S0140-6736(14)61683-4

Jewkes, R., & Morrell, R. (2010). Gender and sexuality: Emerging perspectives from the heterosexual epidemic in South Africa and implications for HIV risk and prevention. *Journal of the International AIDS Society*, *13*, 6. https://doi.org/10.1186/1758-2652-13-6

Jiffry, M. (2025, April 23). Breaking Menstrual Taboos with Deepfake Technology. *Artslab Creatives*. https://artslabcreatives.com/breaking-menstrual-taboos-with-deepfake-technology/

Joolaee, S., Joolaei, A., Tschudin, V., Bahrani, N., & Nikbakht Nasrabadi, A. (2010). Caring relationship: The core component of patients' rights practice as experienced by patients and their companions. *Journal of Medical Ethics and History of Medicine*, *3*, 4.

Kabir, S. M. (2016). *METHODS OF DATA COLLECTION* (pp. 201–275).

Kamira, O., & Rizkalla, N. (2023). Indonesian Women Perspective: The Exploration of Factors Influencing the Adoption of Menstrual Cup. *Journal of Business and Management Review*, *4*(2), Article 2. https://doi.org/10.47153/jbmr42.6192023

Kaper, M. S., Reijneveld, S. A., van Es, F. D., de Zeeuw, J., Almansa, J., Koot, J. A. R., & de Winter, A. F. (2019). Effectiveness of a Comprehensive Health Literacy Consultation Skills Training for Undergraduate Medical Students: A Randomized Controlled Trial. *International Journal of Environmental Research and Public Health*, *17*(1), 81. https://doi.org/10.3390/ijerph17010081

Kapur, D. R. (2024). Lack of Infrastructure, Amenities and Facilities: Impediment in Progression of Rural Communities. *International Journal of Management and Humanities (IJMH)*, *10*(10), Article 10. https://doi.org/10.35940/ijmh.K1725.10100624

Karin, M. L. (2022). Addressing Periods at Work. *Policy Review*, *16*.

Kato-Wallace, J., Barker, G., Sharafi, L., Mora, L., & lauro, G. (2016). *Adolescent Boys and Young Men: Engaging them as supporters of gender equality and health and understanding their vulnerabilities*. Save the Children's Resource Centre. https://resourcecentre.savethechildren.nethttps://resourcecentre.savethechildren.net/document/adolescent-boys-and-young-men-engaging-them-supporters-gender-equality-and-health-and/

Keith, B. (2016). *Girls' and Women's Right to Menstrual Health: Evidence and Opportunities*.

Kerlinger, F. N. (2000). *Foundations of behavioral research* (4th ed.). Harcourt College Publishers.

Khan, M. E., Anker, M., Patel, B. C., Barge, S., Sadhwani, H., & Kohle, R. (1991). The Use of focus groups in social and behavioural research: Some methodological issues. *World Health Statistics Quarterly 1991 ; 44(3) : 145-149*. https://iris.who.int/handle/10665/47600

Korir, E., Okwara, F., & Okumbe, G. (2018). Menstrual hygiene management practices among primary school girls from a pastoralist community in Kenya: A cross-sectional survey. *Pan African Medical Journal*, *31*. https://doi.org/10.11604/pamj.2018.31.222.13521

Kpodo, L., Aberese-Ako, M., Axame, W. K., Adjuik, M., & Gyapong, M. (2022). Socio-cultural factors associated with knowledge, attitudes and menstrual hygiene practices among Junior High School adolescent girls in the Kpando district of Ghana: A mixed method study. *PloS One*, *17*(10), e0275583. https://doi.org/10.1371/journal.pone.0275583

Kuhlmann, A. S., Henry, K., & Wall, L. L. (2017). Menstrual Hygiene Management in Resource-Poor Countries. *Obstetrical & Gynecological Survey*, *72*(6), 356–376. https://doi.org/10.1097/OGX.0000000000000443

Kumar, D. R. (2011). *Research Methodology a step-by-step guide for beginners* (Third edition). SAGE Publications Ltd.

Kumbeni, M., Ziba, F., Apenkwa, J., & Otupiri, E. (2021). Prevalence and factors associated with menstruation-related school absenteeism among adolescent girls in rural northern Ghana. *BMC Women's Health*, *21*. https://doi.org/10.1186/s12905-021-01418-x

Kwame, A., & Petrucka, P. M. (2021). A literature-based study of patient-centered care and communication in nurse-patient interactions: Barriers, facilitators, and the way forward. *BMC Nursing*, *20*(1), 158. https://doi.org/10.1186/s12912-021-00684-2

Lahme, A. M., Stern, R., & Cooper, D. (2018). Factors impacting on menstrual hygiene and their implications for health promotion. *Global Health Promotion*, *25*(1), 54–62. https://doi.org/10.1177/1757975916648301

Leone, T., & Brown, L. J. (2020). Timing and determinants of age at menarche in low-income and middle-income countries. *BMJ Global Health*, *5*(12). https://doi.org/10.1136/bmjgh-2020-003689

Lindlof, T. R., & Taylor, B. C. (2002). *Qualitative Communication Research Methods*. SAGE.

Lindlof, T. R., & Taylor, B. C. (2017). *Qualitative Communication Research Methods*. SAGE Publications.

Littlejohn, S. W., & Foss, K. A. (2011). *Theories of Human Communication* (Tenth). Waveland Press, Inc.

Long, J. L., Haver, J., Mendoza, P., & Vargas Kotasek, S. M. (2022). The More You Know, the Less You Stress: Menstrual Health Literacy in Schools Reduces Menstruation-Related Stress and Increases Self-Efficacy for Very Young Adolescent Girls in Mexico. *Frontiers in Global Women's Health*, *3*. https://www.frontiersin.org/articles/10.3389/fgwh.2022.859797

Madula, P., Kalembo, F. W., Yu, H., & Kaminga, A. C. (2018). Healthcare provider-patient communication: A qualitative study of women's perceptions during childbirth. *Reproductive Health*, *15*(1), Article 1. https://doi.org/10.1186/s12978-018-0580-x

Mancone, S., Corrado, S., Tosti, B., Spica, G., & Diotaiuti, P. (2024). Integrating digital and interactive approaches in adolescent health literacy: A comprehensive review. *Frontiers in Public Health*, *12*. https://doi.org/10.3389/fpubh.2024.1387874

Mann, S., & Byrne, S. K. (2023). Period Poverty from a Public Health and Legislative Perspective. *International Journal of Environmental Research and Public Health*, *20*(23), Article 23. https://doi.org/10.3390/ijerph20237118

Mason, L., Nyothach, E., Alexander, K., Odhiambo, F. O., Eleveld, A., Vulule, J., Rheingans, R., Laserson, K. F., Mohammed, A., & Phillips-Howard, P. A. (2013). 'We keep it secret so no one should know'—A qualitative study to explore young schoolgirls attitudes and experiences with menstruation in rural western Kenya. *PloS One*, *8*(11), e79132. https://doi.org/10.1371/journal.pone.0079132

Maulingin-Gumbaketi, E., Larkins, S., Whittaker, M., Rembeck, G., Gunnarsson, R., & Redman-MacLaren, M. (2022). Socio-cultural implications for women's menstrual health in the Pacific Island Countries and Territories (PICTs): A scoping review. *Reproductive Health*, *19*(1), 128. https://doi.org/10.1186/s12978-022-01398-7

McCombes, S. (2019, May 15). *Descriptive Research | Definition, Types, Methods & Examples*. Scribbr. https://www.scribbr.com/methodology/descriptive-research/

McKee, N., Becker-Benton, A., & Becker, B. L. (2004). *Strategic Communication in the HIV/AIDS Epidemic*. SAGE Publications.

Mohammed, S., & Larsen-Reindorf, R. E. (2020). Menstrual knowledge, sociocultural restrictions, and barriers to menstrual hygiene management in Ghana: Evidence from a multi-method survey among adolescent schoolgirls and schoolboys. *PLoS ONE*, *15*(10), e0241106. https://doi.org/10.1371/journal.pone.0241106

Mohd. Tohit, N. F., & Haque, M. (2024). Breaking the Cycle: Addressing Period Poverty as a Critical Public Health Challenge and Its Relation to Sustainable Development Goals. *Cureus*, *16*(6), e62499. https://doi.org/10.7759/cureus.62499

Mosconi, L., Crescioli, G., Vannacci, A., & Ravaldi, C. (2021). Communication of Diagnosis of Infertility: A Systematic Review. *Frontiers in Psychology*, *12*, 615699. https://doi.org/10.3389/fpsyg.2021.615699

Msovela, J., Shija, A. E., Ntuyeko, H., Imeda, C., Mugula, A., Mgina, E., & Egidio, A. A. (2025). Puberty and Menstruation Knowledge, Information Sources and Needs among Secondary School Adolescent Girls and Boys in Kibaha, Tanzania. *PLOS Global Public Health*, *5*(3), e0004176. https://doi.org/10.1371/journal.pgph.0004176

Mudi, P. K., Pradhan, M. R., & Meher, T. (2023). Menstrual health and hygiene among Juang women: A particularly vulnerable tribal group in Odisha, India. *Reproductive Health*, *20*(1), 55. https://doi.org/10.1186/s12978-023-01603-1

Muijeen, K., Kongvattananon, P., & Somprasert, C. (2020). The key success factors in focus group discussions with the elderly for novice researchers: A review. *Journal of Health Research*, *34*(4), 359–371. (world). https://doi.org/10.1108/JHR-05-2019-0114

Naderifar, M., Goli, H., & Ghaljaie, F. (2017). *Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research*. https://doi.org/10.5812/SDME.67670

Nawani, & Masood. (2023). *Menstrual health and hygiene management: A module for teachers and educators | Health and Education Resource Centre*. https://healtheducationresources.unesco.org/library/documents/menstrual-health-and-hygiene-management-module-teachers-and-educators

Nielsen, B. B., Welch, C., Chidlow, A., Miller, S. R., Aguzzoli, R., Gardner, E., Karafyllia, M., & Pegoraro, D. (2020). Fifty years of methodological trends in JIBS: Why future IB research needs more triangulation. *Journal of International Business Studies*, *51*(9), 1478–1499. https://doi.org/10.1057/s41267-020-00372-4

Nkrumah, J., & Abekah-Nkrumah, G. (2019). Facilitators and barriers of patient-centered care at the organizational-level: A study of three district hospitals in the central region of Ghana. *BMC Health Services Research*, *19*(1), 900. https://doi.org/10.1186/s12913-019-4748-z

Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Oxford University Press 2000*, *Volume 15*(issue 3). https://doi.org/doi.org/10.1093/heapro/15.3.259

Nyblade, L., Stockton, M. A., Giger, K., Bond, V., Ekstrand, M. L., Lean, R. M., Mitchell, E. M. H., Nelson, L. R. E., Sapag, J. C., Siraprapasiri, T., Turan, J., & Wouters, E. (2019). Stigma in health facilities: Why it matters and how we can change it. *BMC Medicine*, *17*(1), 25. https://doi.org/10.1186/s12916-019-1256-2

Ocran, B. E., & Atiigah, G. A. (2022). An Insider–Outsider Approach to Understanding the Prevalence of Female Genital Mutilation in Pusiga in the Upper East Region of Ghana. *Social Sciences*, *11*(11), 1–17.

O'Flynn, N., & Britten, N. (2004). Diagnosing menstrual disorders: A qualitative study of the approach of primary care professionals. *The British Journal of General Practice: The Journal of the Royal College of General Practitioners*, *54*(502), 353–358.

Ohannessian, R., Duong, T. A., & Odone, A. (2020). Global Telemedicine Implementation and Integration Within Health Systems to Fight the COVID-19 Pandemic: A Call to Action. *JMIR Public Health and Surveillance*, *6*, 18810. https://doi.org/10.2196/18810

Osonuga, A., & Ekor, M. (1970). Risk factors for dysmenorrhea among Ghanaian undergraduate students. *African Health Sciences*, *19*(4), 2993–3000. https://doi.org/10.4314/ahs.v19i4.20

Ozder, A., & Salduz, Z. (2020). *The prevalence of dysmenorrhea and its effects on female university students' quality of life: What can we do in primary care?*

Parker, R. M., Baker, D. W., Williams, M. V., & Nurss, J. R. (1995). The test of functional health literacy in adults: A new instrument for measuring patients' literacy skills. *Journal of General Internal Medicine*, *10*(10), 537–541. https://doi.org/10.1007/BF02640361

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5 Pt 2), 1189–1208.

Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods*. SAGE.

Patton, M. Q. (2014). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. SAGE Publications.

Peng, S., Yang, Y., & Haselton, M. (2023). Menstrual Symptoms: Insights from Mobile Menstrual Tracking Applications for English and Chinese Teenagers. *Adolescents*, *3*, 394–403. https://doi.org/10.3390/adolescents3030027

Perianes, M. B., & Ndaferankhande, D. (2020). Becoming Female: The Role of Menarche Rituals in "Making Women" in Malawi. In C. Bobel, I. T. Winkler, B. Fahs, K. A. Hasson, E. A. Kissling, & T.-A. Roberts (Eds.), *The Palgrave Handbook of Critical Menstruation Studies*. Palgrave Macmillan. http://www.ncbi.nlm.nih.gov/books/NBK565641/

Perkins, D. D., & Zimmerman, M. A. (1995). Empowerment theory, research, and application. *American Journal of Community Psychology*, *23*(5), 569–579. https://doi.org/10.1007/BF02506982

Ratzan, S., Parker, R., Selden, C., & Zorn, M. (2000). National Library of Medicine Current Bibliographies in Medicine: Health Literacy. *Bethesda, MD: National Institutes of Health*.

Roodbeen, R., Vreke, A., Boland, G., Rademakers, J., van den Muijsenbergh, M., Noordman, J., & van Dulmen, S. (2020). Communication and shared decision-making with patients with limited health literacy; helpful strategies, barriers and suggestions for improvement reported by hospital-based palliative care providers. *PloS One*, *15*(6), e0234926. https://doi.org/10.1371/journal .pone.0234926

Sahay, D. (2020). Myths and Misconceptions about Menstruation: A Study of Adolescent School Girls of Delhi. *Journal of Women's Health and Development*, *03*. https://doi.org/10.26502/fjwhd.2644-28840027

Sánchez López, S., Barrington, D. J., Poveda Bautista, R., & Moll López, S. (2023a). Spanish menstrual literacy and experiences of menstruation. *BMC Women's Health*, *23*(1), 161. https://doi.org/10.1186/s12905-023-02293-4

Sánchez López, S., Barrington, D. J., Poveda Bautista, R., & Moll López, S. (2023b). Spanish menstrual literacy and experiences of menstruation. *BMC Women's Health*, *23*(1), 161. https://doi.org/10.1186/s12905-023-02293-4

Sánchez López, S., Barrington, D., Poveda-Bautista, R., & Moll-López, S. (2025). A mixed method study of menstrual health in Spain: Pain, disorders, and the journey for health. *Frontiers in Public Health*, *13*. https://doi.org/10.3389/fpubh.2025.1517302

Schaefer, W. S. (2004). One on One: An Interview With. *Journal of Supply Chain Management*, *40*(1), 2–3. https://doi.org/10.1111/j.1745-493X.2004.tb00164.x

Schiavo, R. (2014). *Health communication: From theory to practice* (Second edition). Jossey-Bass, a Wiley Brand.

Singh, Aditya, Chakrabarty, M., Singh, S., Chandra, R., Chowdhury, S., & Singh, Anshika. (2022). Menstrual hygiene practices among adolescent women in rural India: A cross-sectional study. *BMC Public Health*, *22*(1), 2126. https://doi.org/10.1186/s12889-022-14622-7

Smith, J., & Firth, J. (2011). Qualitative data analysis: The framework approach. *Nurse Researcher*, *18*(2), 52–62. https://doi.org/10.7748/nr2011.01.18.2.52.c8284

Solomon, C. G., Hu, F. B., Dunaif, A., Rich-Edwards, J. E., Stampfer, M. J., Willett, W. C., Speizer, F. E., & Manson, J. E. (2002). *Menstrual Cycle Irregularity and Risk for Future Cardiovascular Disease*.

Sommer, M. (2010). Where the education system and women's bodies collide: The social and health impact of girls' experiences of menstruation and schooling in Tanzania. *Journal of Adolescence*. https://doi.org/10.1016/J.ADOLESCENCE.2009.03.008

Sommer, M., Caruso, B. A., Sahin, M., Calderon, T., Cavill, S., Mahon, T., & Phillips-Howard, P. A. (2016). A Time for Global Action: Addressing Girls' Menstrual Hygiene Management Needs in Schools. *PLOS Medicine*, *13*(2), e1001962. https://doi.org/10.1371/journal.pmed.1001962

Sommer, M., Hirsch, J. S., Nathanson, C., & Parker, R. G. (2015). Comfortably, Safely, and Without Shame: Defining Menstrual Hygiene Management as a Public Health Issue. *American Journal of Public Health*, *105*(7), 1302–1311. https://doi.org/10.2105/AJPH.2014.302525

Sommer, M., Sutherland, C., & Chandra-Mouli, V. (2015). Putting menarche and girls into the global population health agenda. *Reproductive Health*, *12*(1), 24. https://doi.org/10.1186/s12978-015-0009-8

Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., Brand, H., & (HLS-EU) Consortium Health Literacy Project European. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, *12*(1), 80. https://doi.org/10.1186/1471-2458-12-80

Stalmeijer, R. E., McNaughton, N., & Van Mook, W. N. K. A. (2014). Using focus groups in medical education research: AMEE Guide No. 91. *Medical Teacher*, *36*(11), 923–939. https://doi.org/10.3109/0142159X.2014.917165

Stewart, D., & Klein, S. (2016). The use of theory in research. *International Journal of Clinical Pharmacy*, *38*(3), 615–619. https://doi.org/10.1007/s11096-015-0216-y

Street, R., Makoul, G., Arora, N., & Epstein, R. (2009). How Does Communication Heal? Pathways Linking Clinician-Patient Communication to Health Outcomes. *Patient Education and Counseling*, *74*, 295–301. https://doi.org/10.1016/j.pec.2008.11.015

Sultana, T., & Kumar, A. (2024). Role of Media in Menstrual Hygiene Awareness among Girls: A Literature Review. *Mass Communicator: International Journal of Communication Studies*, *18*, 35–40. https://doi.org/10.5958/0973-967X.2024.00012.X

Sumankuuro, J., Molle, M., & Domapielle, M. (2023). Adolescent girls' menstrual hygiene management: Evidence from rural northern Ghana. *Journal of Planning and Land Management*, *2*, 50–59. https://doi.org/10.36005/jplm.v2i2.53

Teherani, A., Martimianakis, T., Stenfors-Hayes, T., Wadhwa, A., & Varpio, L. (2015). Choosing a Qualitative Research Approach. *Journal of Graduate Medical Education*, *7*(4), 669–670. https://doi.org/10.4300/JGME-D-15-00414.1

Tellier, S., & Hyttel, M. (2018). *MENSTRUAL HEALTH MANAGEMENT IN EAST AND SOUTHERN AFRICA: A REVIEW PAPER*. https://www.readkong.com/page/menstrual-health-management-in-east-and-southern-africa-a-7939769

Thompson, T. L., & Harrington, N. G. (2022). *The Routledge Handbook of Health Communication*. Routledge & CRC Press. https://www.routledge.com/The-Routledge-Handbook-of-Health-Communication/Thompson-Harrington/p/book/9780367487447

Tomlinson, M. K. (2025). *The Menstrual Movement in the Media: Reducing stigma and tackling social inequalities*. Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-72195-3

Tucker, K., Ragar, S., Haynes, M., Graham, L., & Paul, M. (2019). *The Flow: Educate. Empower. Change*.

Turabian, J. L. (2018). Patient-centered care and biopsychosocial model. *Trends in General Practice*, *1*(3). https://doi.org/10.15761/tgp.1000114

UNESCO. (2014). *Puberty education & menstrual hygiene management—UNESCO Digital Library*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000226792

UNESCO. (2023). *Menstrual health and hygiene management: A module for children and young adults | Health and Education Resource Centre*. https://healtheducationresources.unesco.org/library/documents/menstrual-health-and-hygiene-management-module-children-and-young-adults

UNESCO, Joint United Nations Programme on HIV/AIDS, United Nations Children's Fund, United Nations Entity for Gender Equality and the Empowerment of Women, & World Health Organization. (2018). *International technical guidance on sexuality education: An evidence-informed approach*. UNESCO. https://doi.org/10.54675/UQRM6395

UNFPA Ghana. (2020). *The COVID Chronicles: Documenting UNFPA Ghana's Response to the COVID-19 Pandemic*. United Nations Population Fund (UNFPA) Ghana. https://ghana.unfpa.org/sites/default/files/pub-pdf/unfpa_ghana_covid-19_report_final_web_1.pdf

UNFPA WCARO, U. W. (West and C. A. R. O. (2021). *Symposium on Menstrual Health and Hygiene in West and Central Africa: Summary Report* [Summary Report]. United Nations Population Fund (UNFPA). https://wcaro.unfpa.org/sites/default/files/pub-pdf/mhh_symposium_summary_report-english_web_0.pdf

UNICEF. (2019). *Guidance on Menstrual Health and Hygiene | UNICEF*. https://www.unicef.org/documents/guidance-menstrual-health-and-hygiene

United Nations Children's Fund (UNICEF). (2019). *Iron & Folic Acid (IFA) Supplementation for Adolescent Girls and Women: Participants Manual for Health Workers* [Training manual]. UNICEF Ghana. https://www.unicef .org/ghana/media/3241 /file/The%20Girls%27%20Iron%20Folate% 20Tablet % 20Supplementation.pdf

United Nations Children's Fund (UNICEF). (2022). *UNICEF Ghana Newsletter: April to June 2022*. UNICEF Ghana. https://www.unicef.org/ghana/media/445 6/file/UNICEF%20Ghana%20Newsletter:%20April%20to%20June%202022. pdf

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, *15*(3), 398–405. https://doi.org/10.1111/nhs.12048

Van Eijk, A. M., Sivakami, M., Thakkar, M. B., Bauman, A., Laserson, K. F., Coates, S., & Phillips-Howard, P. A. (2016). Menstrual hygiene management among adolescent girls in India: A systematic review and meta-analysis. *BMJ Open*, *6*(3), e010290. https://doi.org/10.1136/bmjopen-2015-010290

VanLeeuwen, C., & Torondel, B. (2018). Improving menstrual hygiene management in emergency contexts: Literature review of current perspectives. *International Journal of Women's Health*, *10*, 169–186. https://doi.org/10.2147/IJ WH.S135587

Vishwakarma, D., Puri, P., & Sharma, S. K. (2021). Interlinking menstrual hygiene with Women's empowerment and reproductive tract infections: Evidence from India. *Clinical Epidemiology and Global Health*, *10*, 100668. https://doi.org/10. 1016/j.c egh.2020.11.001

Waisbord, S. (2008). The institutional challenges of participatory communication in international aid. *Social Identities*, *14*(4), 505–522. https://doi.org/10.1 080/13504630802212009

Walton, S. (2013). *Does Menstruation Hinder Women's Empowerment? Working Toward Social Change In South India*.

Watch, N. H. (2023, March 27). How an Innovative Communications Model is Enhancing Menstrual Health Management in Bauchi, Nigeria. *Nigeria Health Watch*. https://articles.nigeriahealthwatch.com/how-an-innovative-communications-model-is-enhancing-menstrual-hygiene-management-in-bauchi-nigeria/

WaterAid. (2019, May 27). *Drop the euphemisms, challenge the stigma and end the taboos around periods*. WaterAid Australia. https://www.wateraid.org/au/articles/drop-the-euphemisms-challenge-the-stigma-and-end-the-taboos-around-periods

WHO. (2008). Education material for teachers of midwifery: Midwifery education modules. *Midwifery Education Modules*. https://iris.who.int/handle/10665/44145

WHO. (2022). *WHO statement on menstrual health and rights*. https://www.who.int/news/item/22-06-2022-who-statement-on-menstrual-health-and-rights

Williams, M. V., Parker, R. M., Baker, D. W., Parikh, N. S., Pitkin, K., Coates, W. C., & Nurss, J. R. (1995). Inadequate functional health literacy among patients at two public hospitals. *JAMA*, *274*(21), 1677–1682.

Yang, Y. (2022). Effects of health literacy competencies on patient-centered care among nurses. *BMC Health Services Research*, *22*(1), 1172. https://doi.org/10.1186/s12913-022-08550-w

Yin, R. K. (2009). *Case Study Research: Design and Methods*. SAGE.

APPENDICES

APPENDIX A: INTRODUCTORY LETTER TO PARTICIPANTS

Dear Participant,

My name is Amanda Agonglie Akum, and I am a postgraduate student at the University of Education, Winneba (UEW), specializing in Development Communication. I come from Wiaga and am currently working on my thesis titled:

"Menstrual Health Literacy and Communication: A Case Study of Builsa North Municipality."

I am inviting you to participate in this study, which forms a significant part of my thesis. The research is driven by both academic curiosity and personal experiences. As someone who has faced menstrual health issues, I understand the profound impact that menstrual health literacy can have on a woman's life. My aim is to explore how improving menstrual health knowledge can empower women and foster better communication with healthcare providers, ultimately leading to improved care.

Your participation is invaluable. By sharing your insights and experiences, you will contribute to a deeper understanding of the challenges and opportunities in menstrual health literacy and women's empowerment. Together, we can help create a more informed and supportive environment for women.

Attached is a consent form for your review. Should you wish to participate or need clarification, kindly call me on 0247985415.

Thank you.

Best regards,

Amanda Agonglie Akum

APPENDIX B: RECRUITMENT AND CONSENT FORM

UNIVERSITY OF EDUCATION WINNEBA

School of Communication and Media Studies- Department of Development Communication

Recruitment Form for Research Participants

You are being asked to participate in a research study that aims to explore the relationship between menstrual health literacy and women's empowerment, and how this relationship influence menstrual health communication especially in healthcare settings. If you agree to participate, you will be involved in an individual interview or a focus group discussion which will be audio-recorded for accuracy. You will be asked questions about your experiences and perspectives regarding menstrual health literacy, confidence in healthcare discussions, and suggestions for improving menstrual health literacy and communication. Your participation in this study is entirely voluntary. You may choose to withdraw from the study at any time without any penalty or skip questions you are uncomfortable answering. All information collected in this study will be kept confidential. Your identity will be protected and your responses will be anonymous and non-identifiable. The school of Research and Graduate studies, University of Education Winneba, and my supervisor have consented to this.

Consent

Please read the following statements and sign below if you agree to participate:

I have read and understood the information provided above.

I have had the opportunity to ask questions and have received satisfactory answers.

I understand that my participation is voluntary and that I can withdraw at any time without penalty.

I agree to participate in this study and to have my interview or focus group discussion audio-recorded.

Please sign……

Thank you

APPENDIX C: INTERVIEW & FOCUS GROUP DISCUSSION GUIDE

Section A: Women Participants (Focus Groups & Interviews)

Demographic Information

1. Age, marital status, educational level, occupation.

Exploration of Menstrual Health Literacy

2. How would you describe menstruation, and how is it generally described in your community?
3. In what ways do cultural or societal norms affect how you understand or talk about menstruation?
4. How do you usually obtain information about menstrual health (family, friends, media, school, healthcare providers)? Which of these do you trust most, and why?
5. What personal experiences or challenges have you faced in trying to understand or manage menstrual health?

Impact on Confidence and Healthcare Participation

6. How has your knowledge of menstrual health affected your confidence in talking with healthcare providers?
7. Can you share a time when you felt supported or discouraged when seeking help for menstrual health? What made the difference?
8. What factors make women feel empowered or disempowered when discussing menstrual health in healthcare or community settings?

Strategies for Improvement

9. What do you think are the best ways to promote menstrual health literacy among women in your community?
10. How can communication between women and healthcare providers about menstruation be improved?
11. What resources, programs, or support systems would help women manage menstrual health better?
12. Any additional thoughts you would like to share?

Section B: Healthcare Providers (Interviews)

Professional Background Information

1. Role, years of practice, experience working with women on reproductive health issues.

Understanding of Menstrual Health Literacy

2. How do you define menstrual health literacy, and why is it important for women's health?
3. What cultural or societal factors have you observed that shape women's understanding of menstrual health?

Observations on Women's Participation

4. How does women's level of menstrual health literacy affect their confidence in discussing health concerns with you?
5. Have you noticed differences in patient engagement based on how much women know about menstruation? Please share examples.

Strategies for Improvement

6. What approaches or strategies have you found effective in encouraging women to openly discuss menstrual health with providers?
7. What do you think are the most effective ways to promote menstrual health literacy more broadly?
8. How can communication between healthcare providers and women be improved to support menstrual health?
9. What resources, training, or support systems would help providers address menstrual health literacy more effectively?
10. What policy or systemic changes do you believe could improve menstrual health literacy and communication in your community?