UNIVERSITY OF GHANA

MIDWIVES' PERCEPTIONS OF THE BARRIERS AND FACILITATORS TO THE DELIVERY AND UPTAKE OF PRECONCEPTION CARE IN THE GOMOA EAST DISTRICT, GHANA

BY

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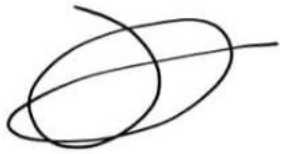
DECLARATION

I declare that this thesis is my own work produced from research undertaken under supervision. This thesis/dissertation has not been submitted in any form for any degree or diploma at any university or other institutions of tertiary education. Authors and Publishers whose works have been utilized in this study have been duly acknowledged in the text and list of reference.



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DEDICATION

This thesis is dedicated to God Almighty, my family and all the midwives in the Gomoa East district.

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ABSTRACT

Maternal mortality is a global issue, with 810 women dying daily from pregnancy complications in 2017. 94% of these deaths occur in low- and lower-middle-income countries, especially among young teenagers. Preconception care, or pre-pregnancy care, aims to improve health status and reduce behaviors contributing to poor maternal and child health outcomes. However, if preconception had been addressed, many pregnancy-related problems could have been avoided. This thesis explores midwives' perceptions regarding the delivery and uptake of preconception care (PCC) services in the Gomoa East District of Ghana. The study aims to identify barriers and facilitators to the provision and acceptance of PCC, focusing on midwives' perspectives. Using maximum variation purposive sampling technique and a qualitative case study approach, data was collected from 24 midwives in six selected health facilities. Date was analysed using the six-step content analysis approach to accurately depict translations. The findings reveal insights into midwives' knowledge levels, perceived barriers, and facilitators related to PCC. The study underscores the significance of addressing these factors to enhance the delivery and uptake of PCC services. The study concluded midwives' qualities such as knowledge levels, client-related factors, community level factors and health-related factors impacted the uptake and delivery within Gomoa East. Again, the realisation of the role of PCC in early detection can help reinforce its importance and uptake.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CINAHL—Cumulated Index for Nursing and Allied Health Literature

GSS----- Ghana Statistical Service

GHS----- Ghana Health Service

PCC----- Preconception care

WHO---- World Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Maternal mortality remains a significant problem in of physical, mental, and social health concerns worldwide (Aseidu et al., 2019; Khatri et al., 2019). Globally, maternal mortality is estimated to be unacceptably high with about 260, 000 women dying during and following pregnancy and childbirth in 2023. Accordingly, it was reported that over 700 women died every day in 2023 from what is termed as "preventable causes" related to pregnancy and childbirth as a maternal death occurred almost every minute (WHO, 2025). The WHO further opined that, approximately 92 percent of all maternal deaths occurred in low-and-lower-middle income countries in 2023, with Sub-Saharan Africa accounting for 70 percent (182,000) of maternal deaths globally.

According to data from the 2021 Thematic Brief on Maternal Mortality in Ghana, there are 301 maternal fatalities for every 100,000 live births and 14.4 percent of pregnancy related deaths for every 100,000 live births an increased from 8.8 percent in 2010 (GSS, 2021). Across the various age groups, it was observed that women aged 25-29 recorded the highest percentage (23.2) of maternal deaths, although, pregnancy related deaths have seen some increase across all age groups. The report further pointed out that maternal mortality rates was higher (374 per 100,000) births among women in rural communities.

If preconception (the time leading up to pregnancy) had received enough attention, the majority of these pregnancy-related problems may have been avoided (Nypaver et al., 2016). According to WHO (2013), preconception care (PCC), also known as pre-pregnancy care, is "the provision of biomedical, behavioural, and social health interventions to women and couples before

conception occurs, with the aim of improving their health status and reducing behaviours and individual and environmental factors that contribute to poor maternal and child health outcomes." WHO further outlined thirteen (13) packages of PCC, including “nutritional conditions, tobacco use, genetic conditions, environmental health, infertility/sub-fertility, interpersonal violence, too early, unwanted, and rapid successive pregnancies, sexually transmitted infections, HIV, mental health, psychoactive substance use, vaccine preventable diseases, and female genital mutilation." (WHO, 2013). To promote maternal and child health, women in their reproductive years are required to receive PCC counselling and interventions that are mutually supportive of these 13 packages while they prepare for conception.

The benefits of PCC are numerous and cannot be understated. For women in their reproductive years, PCC acts as a main means of health prevention. This is because many issues that arise before and after pregnancy may have their roots in lifestyle choices and life events made before conception. Integrating PCC into primary care will ensure that every woman of reproductive age considers her likelihood of being predisposed to one or more risk factors for adverse pregnancy outcomes. Further to that, contemporary evidence suggests that women with underlying chronic conditions require PCC more than anyone else (Admiraal et al., 2022; Woldeyohannes et al., 2023). In addition to focusing on women with chronic conditions, PCC also targets women with poor obstetric histories who are planning pregnancies (Batra et al., 2016; Nwolise et al., 2016).

The Sustainable Development Goals 3.1 and 3.2 targets are set to reduce the maternal mortality ratio below 70 per 100,000 live births and end preventable deaths of newborns and children under 5 years of age to at least 12 per 1,000 live births and under-5 mortality to at least 25 per 1,000 live births, respectively (United Nations, 2023). Ghana may not be able to achieve these targets if efforts are not mobilized to address issues surrounding PCC service delivery and uptake. Efforts

to achieve this goal in a low-resource setting like Ghana require a comprehensive approach, of which research on the topic of PCC is not exempt.

In the Ghanaian health system, midwives are rightfully designated to provide PCC services to women in their reproductive years. These services are mostly available in healthcare settings and on an out-patient basis. Thus, midwives are better positioned to share insightful perspectives on the topic of PCC use and the dynamic contextual issues surrounding it in Ghana. Therefore, this study was pivotal in unfolding midwives perceived barriers and facilitators to the delivery and uptake of PCC services. Findings of this study would be useful in informing service delivery and quality improvement interventions to help promote the provision and uptake of PCC services among women in their reproductive ages.

1.1 Problem statement

Globally, it is well-established that adequate PCC uptake improves overall maternal health before, during, and after conception, which reduces the risk of poor maternal and neonatal birth outcomes (Lassi et al., 2019; Say et al., 2014; WHO, 2019). Despite this realization, evidence from most parts of the world suggests that women in their reproductive ages under- or never use PCC services (Demisse et al., 2019; Fekene et al., 2020). Globally, data on the prevalence of PCC use was unavailable. However, the overall pooled prevalence of PCC use among women in Africa, according to a systematic review, was 18.72 percent (Tekalign et al., 2021). In Ghana, the prevalence of PCC use among women receiving antenatal care at the Korle-Bu Teaching Hospital in Accra was reported to be 15.8 percent (Beyuo et al., 2021).

A number of studies has been conducted both globally and regionally to investigate and explore the factors that are associated with the low patronage and uptake of preconception care services. Among the factors identified included shortage of health care professionals, low socio-

economic level, illiteracy, and inadequate understanding of PCC services, among other factors, to low patronage and utilisation of PCC services (Demisse et al., 2019; Mason et al., 2014; Tekalign et al., 2021; Woldeyohannes et al., 2023). As noted by Ayalew et al. (2017) and Kyilleh et al. (2018), if the current trends of inadequate use of PCC services persists, women will be consequently predisposed to several risks behaviours and exposures that may be detrimental on foetal development and subsequent maternal and child health.

From the literature, a clear disparity can be observed between the global south and north with majority of such studies conducted in developed countries with differing characteristics such as race and ethnic composition. Similarly, the bulk of these studies have concentrated on women's perspectives on the facilitators and barriers related to PCC use with limited information on the perspectives of healthcare professionals who give PCC in Ghana. Understanding general practitioners' perceptions of the barriers and enablers to implementing preconception care allows for more appropriate targeting of quality improvement in interventions. However, the implementation and integration of preconception care services in the health domain in Gomoa East District as well the knowledge levels, attitudes and skills of health care practitioners such as midwives remains unclear.

Using the Gomoa East District as a case study, this study explored the barriers and facilitators to the delivery and uptake of PCC from the perspectives of the midwives.

1.2 General objective

This study explored the barriers and facilitators to the delivery and uptake of PCC services from the perspectives of midwives in Gomoa East District.

1.3 Specific objectives

Specifically, the study sought to:

1. Assess midwives' level of knowledge on PCC in service delivery
2. Explore the perceptions of midwives on barriers to the delivery and uptake of PCC.
3. Explore the perceptions of midwives on factors that facilitates the delivery and uptake of PCC.
4. Make suggestions on how to improve the delivery and uptake of PCC from midwives' perspectives.

1.4 Research questions

The following study questions guided the study:

1. What is the level of knowledge of midwives on PCC in service delivery in Ghana?
2. What are the perceptions of midwives regarding the barriers to the delivery and uptake of PCC?
3. What are the perceptions of midwives regarding the facilitators of the delivery and uptake of PCC?
4. What are the suggestions to improve the delivery and uptake of PCC from the perspective of midwives?

1.5 Significance of the study

Within Ghana's health system, PCC has received inadequate patronage. This study sought to highlight the importance of PCC and its positive implications on the pregnancy outcomes of women, as well as the knowledge gaps of midwives and the barriers and enablers to the delivery

and uptake of PCC as perceived by midwives. Thus, the published findings of this study would inform the quality improvement in the uptake and delivery of PCC to women in their reproductive ages in the Gomoa East District and, at large, Ghana.

Findings of the study would inform service delivery and policy bodies like Ghana Health Services and the Ministry of Health respectively to outline comprehensive policies and protocols to guide the integration of PCC services into already existing maternal and child health services in all Ghanaian healthcare facilities. Although some facilities may be rendering PCC services, the findings of the study were intended to highlight any gaps in the provision of such services and inform decisions to handle these challenges.

Given the novel nature of the study within the Ghanaian context, it sought to fill the gap in the literature on the subject of PCC and inform further studies in areas of PCC left unexplored. Researchers who have an interest in the area of PCC would also use the findings of this study as a guide to inform their scope of future research on PCC in Ghana.

1.6 Limitations of the study

Most of the data collected consisted of anecdotal reports. Considering that, it would be inappropriate to completely extrapolate the conclusions of this research since the validity and reliability of it might be somewhat uncertain. Nevertheless, the author is of the view that doing comparable research in other regions and districts and comparing the conclusions with the current one would be beneficial. This will provide us with a comprehensive understanding and sufficient evidence to draw broad conclusions about the results of the investigations. Therefore, it might be said that this research could function as a benchmark for future investigation.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviewed existing literature relevant to the present study. Exploring the barriers and facilitators associated with the delivery and uptake of PCC services from the perspective of midwives required a strong theoretical and empirical background for the study. In order to place the study into the appropriate conceptual, theoretical, and empirical contexts, this section presents a succinct literature review on the pertinent concepts in the study. The search for literature was generated using keywords like "barriers," "facilitators," "preconception care," and "midwives." These phrases were either searched separately or along using Boolean operators like NOT, OR, and AND. Reputable journals and databases, including CINAHL, Science Direct, PubMed, Scopus, and Embase, were searched, and only publications that satisfied the study's objectives were chosen. The literature is organized in the section below:

A. Conceptual/Theoretical review

- Historical overview of preconception care
- Sword's socio-ecological model (Sword, 1999)
- Justification of the model for the study

B. Empirical review

- Level of knowledge on preconception care in service delivery
- Barriers to the delivery and uptake of preconception care

- Facilitators to the delivery and uptake of preconception care
- Strategies to improve the delivery and uptake of preconception care

2.1 Historical overview of preconception care

Since time immemorial, women have been counselled to improve their level of wellbeing and stay away from potentially harmful substances before becoming pregnant. For instance, evidence from the Old Testament of the Holy Bible as described in the paragraph follows: "And the angel of the Lord appeared unto the woman and said unto her, 'Behold now thou art barren, and bearest not; but thou shalt conceive and bear a son. Now, therefore, beware, I pray to you, and drink not wine and strong drinks, and eat not any unclean thing." (King James verson; Old Testament; Judges 13:3–4). Over the past two decades, the idea of preconception care has gained popularity, and health care professionals are being urged more and more to offer such care by their professional organizations (Freda, Moos, & Curtis, 2006).

The idea of preconception dates back to the late 1970s and early 1980s, where initially, the word "inter-conceptional" was widely used to refer to initiatives to address the intendedness of successive conceptions, birth spacing, and health status between pregnancies (Ogunwole et al., 2021). Earlier, the idea of pre-conceptional care and its potential benefits started to gain traction in 1985. In that year, the Institute of Medicine released a report titled "Preventing Low Birthweight" and stated that there are many possibilities before pregnancy to minimize the incidence of low birth weight, but that they are much too frequently disregarded in favour of procedures during pregnancy (Institute of Medicine Committee to Study the Prevention of Low Birthweight., 1985).

Later in 1989, the Expert Panel on the Content of Prenatal Care, another federally appointed committee, strongly endorsed preconceptional health when it suggested that the preconception visit may be the single most significant medical visit when considered in the context of its impact on pregnancy (Rosen, Merkatz, & Hill, 1991).

Fast forward to the 90s, preconception care became a regular expectation within the health care system when it was included as one of the "Healthy People 2000" service and protection goals of the United States, which was first published in 1990. This goal was to increase the percentage of primary care doctors who offer age-appropriate preconception care and counselling to at least 60% (Freda et al., 2006).

Since then, several major transitions in the operationalization of preconception care and its related services have occurred. As a result, there has been a significant shift away from conceptualizing preconception care as suitably oriented toward prospective parents who are thinking about having a baby toward an emphasis on integrating preconception health promotion into all medical contacts during a woman's reproductive years.

2.2 Sword's socio-ecological model

As part of efforts to address conceptual issues around 'barrier', as one of the determinants of utilisation behaviours, several theorists and researchers developed models in the 1950s and 1960s. Rosenstock (1966) conceptualized the term "perceived barriers" in terms of the perceived costs or potential drawbacks of a particular behaviour. Later, broad social-psychological theory was applied to provide the variables for a model, which became known as the Health Belief Model.

The Social Cognitive Theory by Bandura (1986) emphasizes the importance of observational learning, imitation, and modelling, suggesting that people learn within a social

context through dynamic and reciprocal interactions of behaviour, personal factors, and environmental influences. The Socio-Ecological Model by McLeroy et al. (1988) proposes that individual behaviour is influenced by multiple levels of influence, including intrapersonal factors, interpersonal processes, institutional factors, community factors, and public policy. The PRECEDE-PROCEED Model, developed by Green and Kreuter in 1991, is also a comprehensive framework for health program planning and evaluation, focusing on predisposing, reinforcing, and enabling constructs in educational and ecological diagnosis and evaluation.

Sword (1999) drew on the social cognitive theory by Bandura (1986), the socio-ecological model by McLeroy et al. (1988), and the precede-proceed model for health promotion planning developed by Green and Kreuter (1991). All three frameworks consider dynamic interactions between the individual and environment as the two main determinants of health-related behaviour. Sword consequently created a working model to analyse and explain usage behaviour with an emphasis on prenatal care. As a result, social networks, local circumstances, and public policies are probably influencing potential healthcare users. Similar to this, it is claimed that external factors shape and dictate the nature of available health services and programs.

Sword's socio-ecological model acknowledges a variety of behavioural influences that work across several domains and levels. The overlap of the circles demonstrates the level of service consumption. A high potential for usage exits when circumstances and procedures that directly affect the individual, such as the use of services, are possible and encouraged, and health care is appropriate and responsive to needs, on the other hand, there is correspondingly less possibility that usage of programs and services will occur when either set of circumstances is less than ideal. The interpersonal contact between the patient and the healthcare provider is highlighted as a factor in determining utilization by the bidirectional arrows between potential users and service

providers. The exchanges between the help-giver and the help-seeker elicit reactions that can either improve or weaken the relationship in a reciprocal manner.

The selection of this model or framework was based on the specific research objectives, the depth of analysis required, and the context of the study.

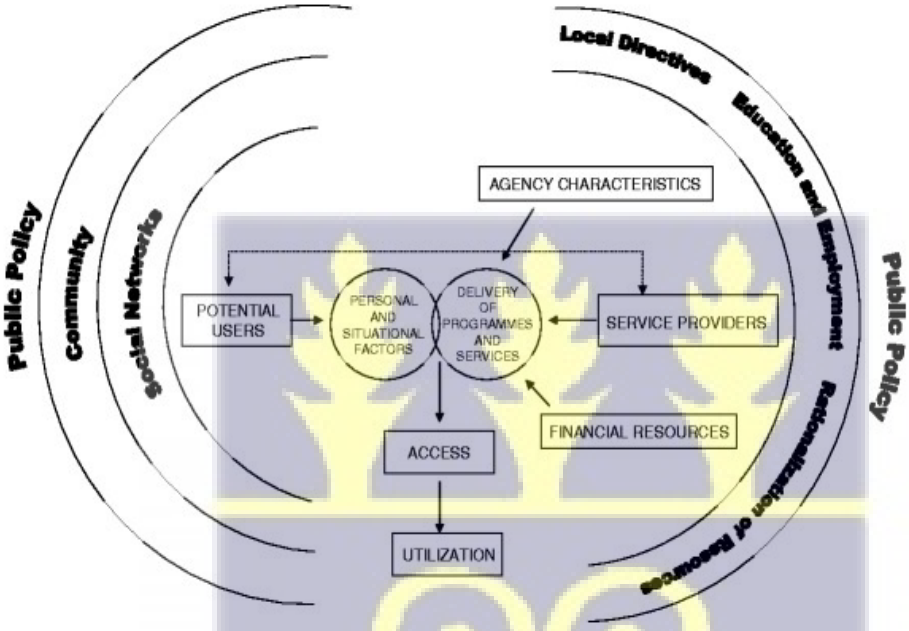

Figure1: A socio-ecological model of determinants of health services utilization

Source: Adopted from Sword (1999)

2.3 Justification of the model for the study

Sword's socio-ecological model provides the theoretical framework for this study on the premise that it is the only model that seeks to explain the barriers to prenatal care utilization. Given that PCC is an integral component of prenatal care, it could be reasoned that the barriers to prenatal care and other related factors, as explained by Sword's model, will likely apply to the constructs

of this study, which focused on PCC. Again, this model is widely used in understanding human development and behaviour within various contexts, including healthcare, education, and community settings. It helps in comprehending how multiple levels of influence interact and impact an individual's behaviour, decisions, and perceptions.

This study on midwives' knowledge of preconception care in service delivery will therefore be grounded in Sword's socio-ecological model, which provides a theoretical framework for understanding the barriers to prenatal care utilization. The model gives us a way to think about the bigger picture factors that affect midwives' knowledge, as well as the delivery and uptake of preconception care. This helps us better understand the level of knowledge about preconception care in service delivery from a socio-ecological point of view.

Although the model focuses primarily on barriers, it provides a clear basis for understanding potential facilitators as well, since all these occur at both the individual level and the environmental level. Also, barriers are antonymous to facilitators; hence, factors that determine health service utilisation, either by serving as barriers to its use or facilitating its use, may interact in a reciprocal manner.

Women who need PCC are situated within a socio-political context as potential users of the health care system, which defines their personal and situational features and, ultimately, determines utilization. It is important to recognize these challenges and viewpoints as the results of processes operating at successively embedded levels of influence identified in the model, even though it is acknowledged that socioeconomically disadvantaged women face numerous obstacles and might have attitudes and beliefs that prevent participation in programs such as those related to PCC.

At the same time, and on the side of service delivery, a wide range of circumstances have an impact on how PCC programs and services are delivered. Program elements and availability, as well as the manner in which service providers give treatment, are determined by the characteristics of health care agencies, including their priorities and practice philosophies.

In conclusion, it can be very helpful to understand the various levels influencing behaviours, attitudes, and perceptions related to healthcare practices like preconception care (PCC) using the socio-ecological model that Urie Bronfenbrenner developed and later expanded upon by Barbara A. Israel and others (often referred to as the Socio-Ecological Model by Sword). This model can help address the objectives of the study on midwives' perceptions of barriers and facilitators to the delivery and uptake of PCC by exploring:

2.3.1 Midwives' Level of Knowledge on PCC in Service Delivery:

- Individual Level (Intrapersonal): This level considers individual characteristics. Here, the researcher assesses the midwives' personal knowledge, beliefs, attitudes, and understanding of PCC through interviews. Again, understanding their educational backgrounds and experiences can help evaluate their knowledge base.

2.3.2 Midwives' Perception of Barriers to the Delivery of PCC:

- Interpersonal Level*:* This focuses on relationships and interactions between individuals. This involves examining how midwives perceive challenges in communicating PCC information to clients, discussing it with other healthcare professionals, or addressing cultural or language barriers in conveying PCC-related information.

- Organizational Level*:* Offers the opportunity to explores factors within the midwifery practice or healthcare institution. The study considers workload issues, lack of specific

protocols or guidelines for PCC, resource constraints, or organizational culture affecting the prioritization of PCC.

2.3.3 Midwives' Perception of Facilitators to the Delivery and Uptake of PCC:

- Community Level*:* This level takes into consideration community influences to understand how community resources, support networks, or community attitudes toward PCC might impact midwives' practices.

- Policy Level: We can examine policies and regulations. Analysing existing policies or guidelines related to PCC, identifying gaps, and understanding how these influence midwives' practices can reveal facilitators or areas needing improvement.

Using this model, researchers can collect data at various levels (individual, interpersonal, organizational, community, and policy) to gain a comprehensive understanding of the barriers and facilitators influencing midwives' delivery and uptake of PCC. Analysing findings across these levels can help develop targeted interventions or strategies to enhance PCC delivery, improve midwives' knowledge, and overcome barriers to its uptake. Therefore, the use of this model to inform this study helped to consider all potential factors to the delivery and uptake of PCC from the viewpoint of the midwife who is the service deliverer.

2.4 Midwives Level of knowledge on PCC in service delivery.

According to the WHO, PCC refers to care that provides biomedical, behavioural, and social health interventions to women and couples prior to conception. Given this definition, PCC explores key areas such as nutrition, genetics, mental health, environmental hazards, vaccine-preventable diseases, and substance abuse (Beyou & Lawrence, 2021). Several benefits have been associated with PCC services. However, the utilization of such services is undermined by some

barriers. According to Beyou and Lawrence (2021), the challenges associated with PCC uptake services are more prominent in low- and middle-income countries like Ghana. The canon of literature reports that knowledge is one of the key challenges that affects the delivery and uptake of preconception care services.

Beyou and Lawrence (2021) conducted a study in Ghana that explored the knowledge, perceived importance, utilization, and barriers to preconception care among pregnant women attending antenatal care at the Korle Bu Teaching Hospital. Using a descriptive cross-sectional survey design and a questionnaire, they sampled 120 pregnant women for the study. The study, as part of its findings, reported that the majority of participants (86) had no knowledge about preconception care. The remaining 34 respondents who responded had knowledge about preconception care; 13 indicated they had heard about preconception care from a health facility, 7 from family and friends, and 11 from the media. Regarding the definition of preconception care, 27.5 percent selected the appropriate definition. 33 of 34 participants, representing 97.1 percent of those who had heard of preconception care, selected the correct definition.

However, the majority of the participants (92, 76.7%) did not know any elements involved in preconception care. Similarly, the majority of respondents (88, 73.3%) did not have knowledge about the benefits of preconception care. The study concludes that a significant gap exists in knowledge and awareness of PCC among pregnant women. By implication, the gap in knowledge and awareness poses a health risk for women and pregnant women in particular, highlighting the need to embark on public education and healthcare provider counselling on the role, components, and benefits of preconception care in low-resource settings.

Further on the implication of knowledge on preconception care, Ukoha and Dube (2019) also conducted a study to describe primary healthcare nursing students' knowledge of and attitudes

towards the provision of preconception care in KwaZulu-Natal. Their study employed a non-experimental, descriptive study design and a questionnaire to conveniently sample 138 nursing students for the study. Ukoha and Dube's study measured nursing students' knowledge and attitudes using a 10 and 12 itemized Likert scale. Knowledge and attitude scores were further computed to generate a composite score where respondents who scored below the 75th percentile were considered not knowledgeable or had unfavourable attitudes, whereas students who scored above the 75th percentile were regarded as knowledgeable or had positive attitudes.

The study by Ukoha and Dube reported that factors such as number of years of practice, study centre, age, and area of employment were significant predictors of knowledge. Contrary to popular belief, there was no significant association between demographic factors and respondents' attitudes. Again, it was found that significant differences existed between respondents' knowledge and age, area of employment, and attitude. The study concluded that nursing students possessed adequate knowledge of preconception care and also had favourable or positive attitudes towards PCC. However, a lack of resources heavily constrained efforts to render PCC services. The study recommended that health care providers should be adequately and sufficiently resourced to help ensure effective and proper implementation of PCC services.

In another study, Kassa, Human, and Gemeda (2018) sought to determine the knowledge level of healthcare providers about PCC and identify predictors of effective knowledge of preconception care among providers working in public health institutions in Ethiopia. The study employed a multistage sampling technique to recruit respondents for the study. A self-administered survey tool was used to gather data for health care providers. Bivariate and multivariate logistic regression models were used to determine the predictors of healthcare providers knowledge of PCC.

The study reported that only a few health workers possessed a good level of knowledge about PCC care, with close to half of the sample (43%) having poor knowledge about PCC. On the predictors of good knowledge, the study found that the odds of a health provider demonstrating good knowledge were reported to be high among providers who worked in hospitals, those who used their smart phones to access clinical resources, among those who had read PCC guidelines prepared by institutions outside their home country, among those who were practicing, and among those who earned salaries. The study concludes that there is generally poor knowledge among most healthcare providers.

According to McCluskey (2003), the level of knowledge of healthcare providers is an integral component of preconception care delivery services. He stressed that it is the single most important determinant in the implementation of any healthcare intervention, indicating that healthcare providers are generally unwilling to practice anything they have little or no knowledge of. Consistent with the views expressed in the above literature, surveys conducted in Egypt by Fadia, Azza, and Emam (2012) reported high knowledge among 22 percent of healthcare providers.

Similarly, a study conducted in Iran by Sardasht, Shourab, Jafarnejad, and Esmaily (2013) reported moderate levels of knowledge among healthcare providers on PCC. In Canada, however, a study by the BSRC reported that physicians who provided preconception care services had poor knowledge of the concept and scope of preconception care (BSRC, 2009). It is essential to acknowledge that assessing healthcare providers level of knowledge on PCC is a vital input to programs targeting the improvement of providers' knowledge.

2.5 Barriers to the delivery and uptake of PCC

Exploring barriers to the delivery and uptake of PCC is pivotal in informing decisions on how to improve PCC service utilization among women in their reproductive ages. Despite this realization, a handful of studies have explored these barriers to offer a comprehensive understanding of the issues. In the views of Goossens, De Roose, Van Hecke, Goemaes, Verhaeghe, and Beeckman (2018), barriers to the delivery and uptake of PCC are more reported in the literature than facilitators. This suggests that health practitioners and providers recognize the effects of barriers to PCC service.

Chutke et al. (2018) conducted a study on the perceptions of and challenges faced by primary healthcare workers about preconception services in rural India: a qualitative study using focus group discussion. The goal of the study was to identify barriers and suggestions for framing appropriate strategies for implementing preconception care through primary health centres. The study recruited 45 participants, and using the socio-ecological model, the study analysed its results on four levels: individual, interpersonal, community, and institutional factors that served as barriers to the delivery and uptake of preconception care services.

The study reported that healthcare officials possessed some knowledge of PCC; however, their level of knowledge was limited to adolescent health and family planning services. Interpersonal factors that negatively affected the delivery of PCC services included heavy workloads, stress, a lack of support and cooperation, and a lack of motivation and appreciation. The study identified that community-related factors such as poverty, poor knowledge of PCC care, a lack of need for PCC services among women, low rates of male involvement, the influence of older women in household decision-making, and societal myths regarding PCC care impacted its

delivery. At the institutional level, it was reported that limiting factors included inadequate human resources, logistics, specialized services, and challenges in delivering adolescent family and health care services.

In another study, Mazza, Chapman, and Michie (2013) investigated the barriers to the implementation of preconception care guidelines as perceived by general practitioners. The study sought to examine the barriers and enablers to the delivery and uptake of preconception care guidelines from a general practitioner's perspective. 22 general practitioners were recruited for the study. Questions were based on 12 domains that explored behaviour change.

A deductive approach to thematic analysis was employed to analyse the data. The study identified beliefs about capabilities, motivations and goals, environmental context and resources, memory, attention, and decision-making as key domains identified in the barrier analysis. Perceived barriers identified by general practitioners were time constraints, a lack of women seeking PCC service at the preconception stage, numerous competing preventive priorities within the general practice setting, issues relating to cost and access to preconception care, and a lack of resources for assisting in the delivery of preconception care guidelines.

Confirming the above assertion, Goossens et al. (2018) found that barriers associated with the delivery and uptake of PCC were experienced both at the provider level, client-level, organizational, and societal levels. Provider-level barriers included factors like poor attitudes, a lack of knowledge of preconception care, not working in the field of obstetrics and gynaecology, and a lack of clarity on the responsibility for providing preconception care. Factors such as failure to contact healthcare providers in the preconception stage, a negative attitude, and a lack of knowledge of preconception care were associated with client-related barriers. The study also

identified lack of time, logistics, guidelines, and reimbursement as barriers identified at the organizational and societal levels.

In the Netherlands, M'hamdi et al. (2017) explored the perceptions of 20 healthcare providers regarding the barriers to the delivery and uptake of PCC by women in their reproductive ages. Through a face-to-face interview, semi-structured questions that were framed in line with the theoretical domain's framework were used. Findings revealed that PCC delivery and uptake are hampered by the following four factors: the absence of an all-inclusive PCC program; the lack of knowledge among most prospective parents regarding the advantages of PCC; the ineffective coordination and organization of PCC; the divergent viewpoints of healthcare professionals regarding pregnancy; patient autonomy regarding reproduction; and professional responsibility.

Also, Heaman et al. (2015) explored the perceptions of prenatal care service providers in inner-city Winnipeg, Canada, on the barriers to the provision of prenatal services. They employed a descriptive exploratory qualitative design and a semi-structured interview guide to explore the perceptions of 24 healthcare providers. The results of the thematic analysis identified a number of barriers that were categorized as caregiver qualities (lack of time and a negative personality), healthcare system barriers (a shortage of healthcare providers and a lack of public awareness), personal barriers (logistical challenges, financial issues, a lack of interest, a negative experience, a lack of social support), and program and service characteristics (distance, lengthy waits, hurried appointments, inflexibility in time). Although the study focused mainly on prenatal care, it is considered applicable to this current study since preconception care is an integral component of prenatal care.

2.6 Facilitators to the delivery and uptake of PCC

Some studies have categorically, explored the facilitators of PCC cares services from the perspectives of care-givers; client-levels; organisational and community levels.

From the perspective of care-givers studies such as (Poels et al., 2017; M'Hamdi et al., 2017; Archibald et al., 2016; Coll et al., 2016; Parker et al., 2010; Stephenson et al., 2014) have reported that having good knowledge on PCC is a significant facilitator to provide PCC services. Again, personal attitudes of healthcare providers have also been reported to facilitate PCC provision. Practitioners who regarded PCC as a priority were eager to offer such service to clients than healthcare practitioners who considered it as a low priority (Heyes et al., 2004; Morgan et al., 2006; Chuang et al., 2012; Mazza et al., 2013; Poels et al., 2017).

Some articles have also reported that workplace conditions facilitate the provision of PCC. It is regarded that healthcare providers who work in a university setting, teaching, or residency training environment and those coming from areas with high levels of mortality (Bonham et al., 2010; Parker et al., 2010) tend to engage more in PCC delivery services. Urban providers often discussed folic acid more often than providers in rural areas (Tough et al., 2008). Another facilitating factor was having clients of high-risk groups; healthcare providers seeing lower income clients, and those whose practice consisted of at least 10% minorities appeared to be more inclined to provide PCC (Williams et al., 2006).

2.6.1 Client-level factors

A few studies have reported on factors that facilitate the adoption of preconception care services among clients or women of reproductive age. Buris et al. (2011) reported that client insurance coverage served as a motivating factor to access PCC services. Similarly, Bonham et al. (2010) also reported that gender was a motivating factor, i.e., females were more likely to seek

and access preconception care services than males. Age was also reported by both studies to influence the uptake of PCC services.

Admiraal, Rosman, Dolhain, West, and Mulders (2022), on the other hand, reported that most of the women sampled for the study indicated that visiting a PCC consultation was a good preparation for pregnancy. On a medical level, the course of a previous pregnancy and the healthcare professional referring for PCC were seen as facilitators for PCC. A patient's previous pregnancy, which coincided with an adverse pregnancy outcome, corresponded with a positive attitude toward receiving PCC. Poels et al. (2016) also report that having a supportive partner, belief in the benefits of PCC, and availability of PCC services, as well as not having children, were identified as facilitators in their study.

2.6.2 Organisational factors as facilitators to uptake and delivery of PCC

Generally, Mazza, Chapman, and Michie (2013) reported in their study that perceived enablers to the delivery and uptake of preconception care services included the availability of preconception care checklists, patient brochures, handouts, and waiting room posters outlining the benefits and availability of preconception care consultations.

According to Poels, almost all identified barriers and facilitators relate to the same topic and themes in literature; thus, the dichotomous categorization of barriers and facilitators in reality is more of a continuum given that time and context played a role in defining them. Similarly, deciding on the use of PCC services depended largely on preconditions, beliefs, perceptions, and experiences, given the availability and context in which PCC is provided. Thus, it is concrete to allude to the fact that factors such as the availability of healthcare personnel, logistics, funds, and programs will serve as facilitators to the delivery of PCC.

2.6.3 Societal factors as facilitators

According to Chutke (2022), empowering younger women, promoting health education for older women, and male involvement are significant facilitators of the uptake of PCC services.

An exploratory study in the Netherlands by Sijpkens, Steegers, and Rosman (2016) sought to explore the facilitators in implementing interconception care in preventive child health care services. Using a semi-structured interview guide, four focus group discussions were conducted among healthcare providers and policymakers. All four groups concurred on several facilitators, including the distinct ability to reach women and the knowledge of preventative healthcare. Other facilitators identified include, but are not limited to, the availability of guidelines for interconception care, the functionality of health insurance, people's awareness about perinatal health, and good cooperation on responsibilities among healthcare providers.

2.7 Strategies to improve the delivery and uptake of PCC

Given that healthcare personnel are at the forefront of providing PCC services to women of reproductive age, exploring their opinions on strategies or suggestions to improve PCC delivery is instrumental in the promotion of PCC services. Also, the views of women at the receiving end may be considered to deliver comprehensive and culturally sensitive PCC care to them. In the exploratory study by Heaman et al. (2015), the opinions of 24 healthcare providers were sought regarding their suggestions to improve the provision of prenatal care services to women in Canada.

The findings revealed three key suggestions with multiple meaning units: making prenatal care accessible and convenient (delivering prenatal care at more community clinics and ensuring close proximity, flexible hours, drop-in access, and transportation support), motivating women to attend prenatal clinics (increasing public awareness, providing client-focused care, explaining rationale for prenatal care, offering tangible rewards), and making prenatal care more responsive

to complex needs (prioritizing baby and family programs, specifying prenatal care for teens, helping women to overcome substance abuse, expanding midwifery services, taking into account a multidisciplinary environment). These were considered pivotal by healthcare practitioners in a bid to improve the delivery and uptake of PCC services.

Similarly, Goossens et al. (2018) sought to present consolidated evidence on the many facilitators and obstacles that impact healthcare practitioners' ability to deliver PCC in a mixed-methods systematic review. Based on their observations of a number of facilitators and obstacles at the organizational, individual, and healthcare provider levels, they recommended the need to enhance PCC through the creation and use of multilevel interventions.

Based on the findings of a study by M'hamdi et al. (2017), which examined the opinions of 20 healthcare professionals regarding the obstacles to the provision of PCC services to women in their reproductive ages and their use of those services, recommendations were made to enhance the provision of PCC services to women in those ages. They further suggested the need for advocacy for the prompt adoption of a thorough PCC program as well as the promotion of understanding and awareness among potential parents and caregivers. They also stressed the need for more study into the ways that organizational obstacles might result in substandard PCC service delivery and uptake and the ways that multidisciplinary collaboration and referral can result in intervention strategies that are ideally catered to the patient.

Mazza and Chapman (2010) conducted a focus-group discussion to find out the opinions of 17 Australian women of reproductive age who sought and used PCC services about how to increase the uptake of PCC services. Participants agreed that general practitioners (GPs) should be more aggressive in promoting preconception care accessibility, but they also recognized that in order to be open to it, they themselves had to be considering getting pregnant or already be

pregnant. In addition, the researchers recommended that patient perspectives be considered when using evidence-based clinical practice recommendations and when planning a systematic intervention to enhance preconception care delivery.

2.8 Chapter Summary

This section provides a comprehensive overview of the current understanding of preconception care (PCC), providing a brief historical overview. It highlights how PCC has evolved from being a specialized service to a vital part of reproductive health, emphasizing its role in improving pregnancy outcomes. A significant focus is placed on the barriers that hinder effective delivery and uptake of PCC. These barriers exist at multiple levels; individual, interpersonal, organisational, and societal or cultural. On the other hand, the chapter discusses facilitators that can enhance PCC delivery. These include increasing awareness through health education, involving partners, improving healthcare infrastructure, and creating clear guidelines for practitioners. Strategies like making services more accessible and culturally sensitive are essential in encouraging women to seek PCC.

Central to this analysis is the application of Sword's socio-ecological model, which offers a layered understanding of how personal, interpersonal, organisational, and societal factors interact to influence health behaviours. The model underscores that barriers and facilitators are interconnected, and addressing them requires a holistic, multilevel approach. Overall, the chapter emphasizes that to improve PCC services, efforts must focus not only on healthcare providers' knowledge and attitudes but also on broader societal and systemic influences. Recognizing these complexities and promoting collaboration among stakeholders are key steps toward ensuring women receive the care they need before pregnancy.

CHAPTER THREE

METHODOLOGY

Most of the data collected consists of anecdotal reports. Considering this, it would be inappropriate to completely rely on the conclusions of this research. This implies that its validity and reliability might be somewhat uncertain. However, I have reason to think that doing comparable research in other regions and districts and comparing the conclusions of these studies with the current one would be beneficial. This will provide us with a comprehensive understanding and sufficient evidence to draw broad conclusions about the results of the investigations. Therefore, it might be said that this research could function as a benchmark for future investigations, so to speak.

3.1 Research design

This qualitative study adopted a case study approach, focusing on the Gomoa East District, and explores the phenomenon of preconception care (PCC) delivery and uptake, which is a practice of national interest in Ghana. By concentrating on this specific district, the research provides a detailed examination of midwives' knowledge as well as their perspectives on the challenges and

opportunities in the delivery and uptake of PCC. This case study approach is particularly suitable for this research as it allows for an in-depth investigation of a particular 'case' in this instance, the experiences and viewpoints of midwives in the Gomoa East District. The findings from this study would be instrumental in gathering comprehensive information necessary to develop programs and interventions aimed at supporting women of reproductive age to utilize PCC services. By using the case study method, the research yielded detailed insights that can inform a broader understanding and strategies in the context of PCC in Ghana.

A case study in research is an in-depth and detailed examination of a specific instance, situation, or phenomenon within its real-life context. Researchers use case studies to gain a deep understanding of a particular subject and to explore its complexities, dynamics, and nuances. Case studies are commonly employed in various fields, such as psychology, sociology, business, medicine, and education. The case study approach is particularly useful to employ when there is a need to obtain an in-depth appreciation of an issue, event, or phenomenon of interest in its natural real-life context (Crowe et al., 2011).

3.2 Study setting

This study was conducted in six selected Ghana Health Service facilities within the Gomoa East District. The Gomoa East District Assembly is one of the 22 MMDAs in the Central Region. The district is enriched with 18 health facilities, among which are polyclinics, clinics, health centres, and community-based health systems. The six selected facilities were Gomoa Ojobi Health Centre, Gomoa Postin Polyclinic, Gomoa Okyereko Health Centre, Gomoa Buduatta Health Centre, Dasum Health Centre, and Nyanyano Health Centre. These facilities have been purposefully and strategically selected on the premise that they render several maternal and child health services, including but not limited to reproductive and child health services, pre- and post-

natal services, comprehensive abortion care, counselling and community mobilization empowerment, home visits, health education and promotion, and treatment of minor illnesses.

3.3 Study population

The study's target population was all midwives who work at any of the six selected facilities within the Gomoa East District. The total population of midwives in the selected facilities is 44 and distributed across the 6 facilities in the following proportions: Gomoa Ojobi health center (7), Gomoa Postin polyclinic (10), Gomoa Okyereko health center (4), Gomoa Buduatta health center (7), Dasum health center (2), and Nyanyano health center (14).

3.2.1 Inclusion criteria

The following are the characteristics of the qualified participants who partake in the study:

1. A qualified midwife working at any of the selected facilities.
2. Working as a midwife for at least 1 year at any of the selected facilities.
3. participant availability at the time of data collection.
4. A participant actively involved in providing maternal and child health services

3.2.2 Exclusive criteria

1. Midwifery students and rotation midwives were excluded from the study.
2. Midwives who declined consent to partake in the study were excluded.

3.3 Sampling method and sample size

This study employed a maximum variation purposive sampling technique to recruit midwives of different ranks. To attain and illuminate patterns in the perspective of nurse's, the study employed some measures to sample participants to be included in the study. This approach was strategically chosen to capture a broad spectrum of perspectives within the profession. To ensure a comprehensive representation, First, the type of health facility where the midwives were

employed was a significant consideration. By including a variety of facilities, we aimed to reflect different operational contexts and resource availabilities.

Next, the locational characteristics of the facilities were assessed, specifically distinguishing between peri-urban and rural settings. This differentiation was crucial to uncover how cultural and environmental factors might influence the midwives' experiences and perspectives on maternal and child healthcare as well as client's uptake of PCC. Additionally, the study considered the years of experience of midwives, as this factor is likely to affect their insights and practices. Midwives with varying levels of experience were intentionally included to capture a range of viewpoints from both seasoned professionals and those newer to the field for at least a year.

Qualifications of the midwives were also taken into account, as higher educational attainment might correlate with different approaches to PCC delivery. Moreover, practical aspects such as the availability of participants at the time of the interviews were a significant factor in the sampling process. Midwives who were actively involved in providing maternal and child healthcare services were prioritised to ensure that the perspectives shared were relevant and grounded in current practice. By incorporating these diverse criteria, the research aimed to illuminate patterns in midwives' perspectives related to preconception care, fostering a richer understanding of the challenges and insights they encounter in their roles.

This design enabled the researcher to capture a wide range of perspectives of the midwives regarding knowledge, barriers, and facilitators to PCC from the various facilities to ensure maximum variations in the views expressed (Sarfo et al., 2021). The sample size was determined at the point of data saturation, where no new information is being received during data collection. However, Sarfo et al. (2021) argued the need to determine sample size prior based on expert

findings from previous qualitative studies. Therefore, 24 in-depth interviews were conducted among midwives from the selected facilities. Thus, the sample size stands at 24.

3.4 Data collection tool

Data was collected using a semi-structured interview guide. The interview guide was developed based on the socio-ecological model proposed by Sword (1999), which sought to understand the barriers to prenatal care among women of low income. The interview guide was structured into two main sections. Section A solicited information regarding the socio-demographic characteristics of the midwives. Section B solicited information on the knowledge, barriers, facilitators, and suggestions for improving PCC. The questions were structured to reflect the study objectives and be in line with the socio-ecological model. Knowledge level, barriers, facilitators, and suggestions to improve PCC were explored using the following key questions and several probes: "What do you know about PCC?"; "What are some of the challenges, barriers, and difficulties you face in providing PCC services to women of reproductive age?"; "Can you share with me some of the factors or anything that makes it easier for you to provide PCC services?"; "Can you tell me some of the suggestions to improve the provision of PCC for women of reproductive age?". Items in the interview guide were structured in the English language, which was comprehensible to all study participants.

3.5 Data collection procedure

Data collection took a face-to-face approach, where participants were interviewed based on the items in the interview guide. Prior to the interview, a suitable time and date were agreed upon between the principal investigator and the study participants. Participants, after reading the information sheet and seeking clarifications regarding the study, were given an informed consent form to sign before the interview commenced.

Participants were recruited from public health facilities within the study district, including, health centers, and CHPS compounds. Selection was guided by facility registers and district health directorate referrals, ensuring inclusion of midwives with varying exposure to PCC services. Initial contact was made through facility heads or unit supervisors, who facilitated introductions and provided institutional clearance for interviews. All interviews were conducted on-site at the respective health facilities, in private consultation rooms or designated staff areas to ensure confidentiality and minimise disruption to clinical duties. This setting was chosen to foster participant comfort and contextual relevance, allowing midwives to reflect on their experiences within their actual work environment. Conducting interviews at the facility also enabled real-time observation of PCC-related materials, workflows, and infrastructure, enriching the data with embedded contextual cues.

The principal investigator facilitated interviews during which qualified participants responded to open-ended questions and gave firsthand information on their knowledge and about their opinions about the barriers, facilitators, and suggestions for enhancing PCC services. Interview sessions lasted 30 to 60 minutes, and with the participants' consent, each interview was audio-recorded in order to provide participants the chance to express themselves and provide rich information on the subject.

3.6 Methodological rigor

These four criteria – credibility, dependability, confirmability, and transferability were used to assess the reliability of this study (Colorafi & Evans, 2016). By member-checking and enabling each participant to confirm the audio recording and transcripts of their interview session, credibility was ensured. Dependability was guaranteed by offering thorough justifications for the research design and data gathering techniques. Additionally, the audit trail was used to record

information on the triangulation of interviews and field notes, confirming confirmability. Finally, transferability was maintained by providing thorough information on the theoretical and methodological approaches used in the study so that other researchers could use it as a guide to develop methods that were similar to those used in this study.

3.7 Data management

Prior to being deleted from any electronic devices, audio-recorded data shall be preserved with a password on an audio-recorder device and kept in the care of the lead investigator for at least five years. Only the principal researcher and a second independent transcriber have access to the audio-recorded data, together with the study supervisor, in order to prevent the data from being shared with other parties. Data was only utilized for academic reasons, and its continued accessibility following publication in a journal will be supported by consent and in line with the ethical considerations of publication.

3.8 Data analysis

In order to accurately depict a direct translation of the recorded voice notes into written forms, audio-recorded data was transcribed verbatim. Transcription was conducted shortly after each interview to maintain contextual accuracy and researcher familiarity with the data. This approach ensured that the richness of participants' expressions was preserved. Following transcription, data was analysed using the six-step thematic analysis approach recommended by Braun and Clarke (2006). Braun and Clarke's approach offered a flexible and a systematic method for identifying patterns of meaning. The process began with data familiarisation, where transcripts were repeatedly read noting initial impressions and recurring ideas. This phase was critical for developing a deep understanding of midwives' perspectives and the contextual factors influencing PCC uptake in Gomoa East. This was followed by generating unit or initial codes from the data.

through manual coding. These codes looked at specific barriers and facilitators that aligned with the objectives of the study.

The next step after generating unit codes involved searching for sub-themes. The process of identifying sub-themes required grouping codes based on similarities such as conceptual similarity to form sub-themes and included evaluating how different codes related to one another and what overarching ideas they conveyed. The fourth step involved reviewing and improving the generated sub-themes and their overlapping concepts. Where necessary, sub-themes were merged, split, and redefined to ensure clarity and analytical depth. This iterative process helped sharpen the conceptual boundaries between themes.

From reviewing the sub-themes, more significant theme was developed. This was achieved through defining themes to develop broader and more significant themes. Each theme was described in detail, capturing its essence and relevance to the research question. This stage involved articulating the scope and content of each theme across five descriptive layers: context, meaning, variation, implication, and illustrative quotes.

In the final phase, the themes and sub-themes were organised into a coherent narrative, presented in a logical sequence that reflected the perception of midwives. The report included direct quotations to ground the analysis in participants' voices and to enhance credibility.

3.9 Ethical considerations

The Ethics Review Committee Board of the Ghana Health Service was approached for ethical clearance before the commencement of the study. Permission was obtained from the District Health Directorate of Gomoa East and the various heads of health facilities that were involved in the study before data collection was carried out. The study followed the ethical

guidelines outlined in the Helsinki Declaration of Scientific Research, and informed consent forms were signed by respondents prior to interviews (World Medical Association, 2013). The following ethical principles were used to ensure the study is ethically compliant: non-maleficence, autonomy, confidentiality, justice, and beneficence.

Non-maleficence: The researchers prioritized the well-being of participants, ensuring a non-judgmental and prejudice-free environment during data collection. Participants were protected from any physical or mental harm, and they were informed of their right to withdraw from the study without consequences or impact on their service delivery.

Autonomy: Participants were fully informed of their autonomy and right to withdraw from the study at any time, even after providing consent, without facing any negative consequences.

Confidentiality: Participants received assurance that all data, consent forms, transcripts, and audio recordings would be securely stored for a maximum of five years following the study. The data will not be used for any purposes other than the approved research unless additional ethical clearance is obtained. Access to the collected data was limited to the researcher and her supervisor, ensuring confidentiality. During publication, the confidentiality of participants will be maintained, and debriefing sessions will be conducted to discuss the study findings.

Justice: All participants were treated equitably and fairly, without any form of discrimination or bias.

Beneficence: The researchers strived to ensure that the study benefits participants by providing valuable insights and contributing to the advancement of knowledge in the fields of midwifery and preconception care.

3.10 Chapter Summary

This study adopted the case study approach. The target population consisted of midwives found within Gomoa East District. A sample was drawn from the target population using a maximum variation purposive technique. Primary data were collected using an interview guide developed based on the socio-economic model. The interview guide consisted of two main sections. Section A solicited information on respondents' demography while section B solicited information on knowledge, barriers and facilitators as well as providing suggestions to improve the uptake and delivery of PCC. All ethical issues were observed in the data collection and analysis. Data was transcribed verbatim and analysed using the six-step thematic analysis.

CHAPTER FOUR

FINDINGS

This chapter presents the findings generated from the qualitative analysis of the field data. The background characteristics of the participants are first presented. Guided by the Braun & Clarke (2006) approach to the analysis of qualitative data, thematic analysis was used to code the transcribed interviews in line with the broad categories (knowledge, barriers, facilitators, suggestions). The emergent themes and subthemes have been presented along with selected verbatim quotes. The findings of 24 midwives have been presented, at which point data saturation was attained.

4.1 Background characteristics of the participants

A total of 24 midwives from selected health facilities within the Gomoa East District were interviewed in the study. Their age ranged from 27 to 43 years, with the mean age being 33.79. All the midwives were full-time staff and have been working for an average of 6.13 years in various positions including staff midwife (n = 8), senior staff midwife (n = 9), midwifery officer (n = 4), and senior midwifery officer (n = 3). Tables 1 below provide background characteristics of the study participants and a summary of the findings, respectively.

4.1.1 1: Background characteristics of study participants (n=24)

Pseudonym	Age (years)	Professional rank	Educational qualification	Years of experience as a midwife (years)
P1	27	Staff midwife	Diploma	2
P2	32	Senior staff midwife	Diploma	3
P3	30	Senior staff midwife	Diploma	5
P4	35	Staff midwife	Diploma	2
P5	41	Midwifery officer	Diploma	7
P6	32	Senior staff midwife	Diploma	7
P7	43	Senior staff midwife	Diploma	5
P8	35	Senior midwifery officer	Masters	12
P9	32	Senior staff midwife	Degree	7
P10	35	Senior midwifery officer	Degree	12
P11	36	Senior staff midwife	Diploma	6
P12	31	Staff midwife	Diploma	3
P13	29	Staff midwife	Diploma	2
P14	42	Midwifery officer	Degree	9
P15	33	Senior staff midwife	Diploma	5
P16	37	Senior staff midwife	Diploma	7
P17	32	Staff midwife	Diploma	2
P18	28	Staff midwife	Diploma	2
P19	34	Senior midwifery officer	Masters	11
P20	32	Senior staff midwife	Diploma	7
P21	30	Staff midwife	Diploma	4
P22	38	Midwifery officer	Degree	12
P23	33	Midwifery officer	Degree	11
P24	34	Staff midwife	Diploma	4

Source: Field data, 2023

4.1.2 Table 2: Summary of Background Characteristics of Study participants.

Professional Rank	**Frequency**	**Percent**
Midwifery officer	4	16.7
Senior midwifery officer	3	12.5
Senior staff midwife	9	37.5
Staff midwife	8	33.3
Total	24	100.0
Educational qualification	**Frequency**	**Percent**
Degree	5	20.8
Diploma	17	70.8
Masters	2	8.3
Total	24	100.0
Age	**Frequency**	**Percent**
27-31	6	25
32-36	13	54.1
37-41	3	12.5
42 and above	2	8.3
Minimum	27	
Maximum	43	
Mean	33.79	
Years of experience	**Frequency**	**Percent**
2-5	10	
6-9	9	
10 and above	5	
Minimum	2	
Maximum	12	
Mean	6.13	

Field data 2023

4.2 Organisation of themes and subthemes from the analysed data

Following a thorough reading of the transcripts, the data was coded into four categories. Thirteen themes were then generated, and further subthemes were generated, after which all the data was accounted for. Table 3 provides an overview of the themes, subthemes and codes.

4.2.1Table 3: Summary of the themes, sub-themes and codes

Themes	Subthemes
Knowledge about PCC	• Description of PCC • Source of information about PCC • Essential packages of PCC • Importance of PCC
Barriers to PCC	• Midwife/nurse qualities • Client-related barriers • Community-level barriers • Health-system characteristics
Facilitators of PCC	• Midwife/nurse qualities • Client-motivated factors • Social support systems • Health-system characteristics
Suggestions	• Suggestions for midwife/nurse • Suggestions for clients • Suggestions for communities • Suggestions for health systems

Source: Field data, 2023

4.3 KNOWLEDGE ABOUT PCC

Knowledge about PCC and its related services was examined from the perspective of the midwives. Knowledge about PCC was reflective of participants' ability to describe PCC and its related components, and these were grouped into four themes: description of meaning of PCC, sources of information about PCC, essential packages of PCC, and importance of PCC.

4.3.1 Description of PCC

Participants provided several but similar descriptions of PCC. Most of them recounted PCC as comprising any care that is sought by couples or given to them by healthcare providers in an attempt to achieve the goals of pregnancy. In that regard, some of the midwives had this to say:

> *PCC is about the care given to an expectant mother who wishes to get pregnant any moment soon. It involves the preparation toward achieving the goals and being pregnant at the end of the day. P1*

> *PCC is the care that the couple seek before they become pregnant. P5*

> *PCC is the form of healthcare given to either an individual or couples who want to embark on reproduction. P11*

Further to the above description of the meaning of PCC, some of the midwives also perceived it to include a process of enlightening the women about essential education about things relating to their health and pregnancy in order to prepare them for pregnancy; also described as the phenomenon of PCC. This was how some shared their opinion:

> *It involves education on some of the things they need to know before pregnancy such as their personal hygiene, their sexual education, foods to take and the nutritional values, medications, drinks and foods to avoid, STIs and their preventions and the positive outcomes they want to achieve after pregnancy. P6*

> *so, it is about getting to educate them on the tests they have to do to achieve a successful pregnancy… P7*

> *It is the care given to women in any facility, say the hospital to enlighten them about what to do before pregnancy. P11*

4.3.2 Sources of information about PCC

As part of the assessment of midwives' knowledge about PCC, they were asked about some of the sources from which they obtained information about PCC. These sources may be reflective of how they heard about the term PCC and from where. Most of them revealed that they first heard about PCC in school during their nursing training years. Some of them indicated that:

I first heard it in school at the 2nd years of midwifery. P1

I heard it in the nursing training school. P3

I learnt it from midwifery training school. P5

At school and I read it from books names, preparing to get pregnant. P7

Some participants also indicated that they heard about PCC from their colleagues at work and through attending workshops. Thus, they got to know about PCC while on the job as midwives. This was how two participants described it:

from my senior colleagues at work. Also, I attended workshops where they gave talks on PCC. P4

We learn about several things from other colleagues as work…as I kept on practicing, I heard about PCC. P11

Aside from nursing training school and from co-workers, some midwives indicated that they had heard about PCC from other sources, such as the internet, social media, and churches, among others as typified below:

my source of information include internet and reading of articles. P1

I first heard about it at church. Someone came to educate us on it, even before I got to the midwifery school before learning about it. P2

sometimes I read online so that is where I learnt about it. P13

4.3.3 Essential packages of PCC

These are collections of interventions categorized into 4 main components: maternal assessment, immunization, screening, and counselling. As part of the probing of participants' knowledge about PCC, they were made to identify some of the essential packages of PCC. Most of the midwives believed that adequate nutrition and the intake of some supplements constituted an integral component of care required in PCC services for women in their reproductive ages. They shared their opinions as represented below:

[Women] taking their folic acids during pregnancy, good eating habit. P3

Also, nutrition with regards to the intake of folic acid in order to help the uterus to be ready for conception. P6

One of the midwives in her account mentioned what specific nutrients are needed as follows:

Through PCC, we build up the women's Hb [hemoglobin] by giving vitamins and hematinic and help with nutritional deficiencies before she gets pregnant. P8

PCC counselling and education on vital topics were also mentioned by the participants as one of the key essential packages of PCC services. According to the midwives, through counselling, they emphasize issues of concern to the couple during the preconception stages and

how helpful these counselling sessions can be in the attainment of conception with ease. This is how some of them described the packages on PCC counselling and education:

> *[Providing] information and advice on health promotion. [Thus], you give the client education on things she should do before the pregnancy comes …. [Also], specific counselling: so, if you detect any abnormalities, you counsel the client on the condition and what to do. P4.*

> *We are supposed to take the women through counselling during which we assess the women for high risk factors of poor pregnancy and prepare them for pregnancy before they get pregnant. P8*

In their contribution, some participants also emphasized that PCC counselling needs to take into account some essential dimensions such as alcohol and smoking cessation and the maintenance of good personal hygiene behaviours:

> *Education about avoiding smoking, alcohol … and also reporting any complications that will occur to the midwife so that they can be helped. P3*

> *Advising them on the need for personal hygiene in order to avoid infections and premature delivery. P6*

The midwives also added that taking women through a series of laboratory investigations and scans is one of the most integral components of the PCC package for women who are preparing for conception. They explained that these tests are helpful in identifying any health risks and getting them addressed accordingly in order to prevent any complications in pregnancy. The following contribution from two participants was how they typically described such packages:

There are setting lab you have to undergo to know whether everything is alright to ensure there are no hindrances before the next step is taken. Before that, it is not only the woman that will be screened, her spouse too. P1

Risk assessment for the early detection of the client for any complains that will prevent or cause a barrier to conception. For example, before conception, you encourage the client to take a pelvic scan to detect if there is any abnormality with the pelvis. P4

4.3.4 Importance of PCC

To further examine the knowledge of midwives regarding PCC, they were asked about their perceived importance of PCC. They described several benefits of PCC for both the conceiving mother and the unborn child. To them, these benefits span the perinatal life course. Most importantly, they acknowledged the role of PCC in the early detection and treatment of abnormalities such as sickling status as well as blood group and rhesus status. These were their expressions:

It helps prevent congenital abnormalities because when they come for PCC, they will end up doing tests and examinations that will help them know their blood groups, rhesus status, which will help couples to know about their compatibility to help them make decision whether to still engage themselves or not. …. Also, PCC helps to prevent anaemia, growth retardation and maternal morbidities and mortalities. P7

The reason why we give PCC is for early detection. It helps us to detect any abnormalities or any bad circumstances that will happen in the course of the pregnancy. P4

I believe that majority of the problems or complications we encounter in pregnancy could have been prevented earlier but it doesn't happen so but it is very important that PCC is done before a woman gets pregnant. P8

I believe when couples go through PCC, we eliminate babies born with sickling. We know when then man and woman are carriers, and they conceive, there is high possibility they will give birth to a baby with SS so we counsel them about that. P15

Participants also acknowledged the importance of PCC in the early detection and treatment of sexually transmitted diseases (STIs) so as not to have these conditions impact negatively on pregnancy outcomes. They explained that screening for STI infections were mostly done during the time of PCC, and treatments were given accordingly. The following is a representation of how they explained the importance of PCC in early detection of STIs:

[Screening during PCC]…helps to [detect] rule out STDs from mother to child … P2

Also, it helps to detect STIs and treatments given in order to help the couple. P7

Also, [through PCC screening] we prevent mothers from syphilis to prevent the baby from being affected. P15

Apart from enabling the prevention and treatment of PCC, the midwives further described the importance of PCC in terms of its ability to help women plan their pregnancies and space their births and thereby avoid unplanned pregnancies and their related complications. This is how they described its importance:

It [PCC] helps the couple to decide on when to have children. P5

PCC also helps them [women] to know about the timing of childbirth and help them to decide pregnancies by choice and not by chance. P7

It can help in spacing of pregnancy so that the woman can prepare for the next pregnancy. P10

One of the midwives added that, PCC provides opportunity to offer psychological, physical and emotional preparations that women require in order to influence decisions on planning pregnancies:

It [PCC] helps the women to be prepared to give birth to healthy and sound babies. It prepares them psychologically, physically, emotionally and to get you financially stable before getting pregnant. P9

4.4 BARRIERS TO PCC

A number of midwives explained that, although they strongly desired to render PCC services to women in order to inform their pregnancy decisions, there are some huddles that hinder the successful delivery and uptake of these services. These huddles have been categorized as 'barriers' and exist in four levels and presented in this section under the following themes: midwife/nurse qualities, client-related barriers, community-level barriers, and health system factors.

4.4.1 Midwife/Nurse qualities

Midwives acknowledged that, one of the set of barriers to the delivery and uptake of PCC could be attributed to themselves. These barriers were mostly due to the situational demands of their work, their professional qualities deployed to work, and lack of adequate staff knowledge on PCC service delivery.

Situational demands of work

Notably, some of them recounted that too busy work schedules They explained this barrier below:

Mostly, the midwives recounted that, the high workload resulting from inadequate staffing and busy work schedule mostly affected their delivery of PCC services to clients who seek such services. They explained that, they do not have the staff strength sufficient enough to render PCC services to clients who seek these services. These are what some of them had to say:

> *I think it is due to work load on the healthcare providers, because we have a lot to do and due to that, we are not able to provide the necessary PCC to the patient. P3*

> *Sometimes, the same midwife has to render ANC services and PCC to clients seeking care; so, with the high workload, midwives end up not fulfilling their duties. P7*

> *Insufficient staff; looking at the total number of staff in the facility is not enough to provide that service. P14*

Professional qualities

Another barrier cited at the level of the midwives that impeded their delivery of PCC services to clients who seek such care was poor individual professional qualities. Midwives described that, some of their colleagues lack some necessary professional qualities that could enabled them to render such services in a friendly manner to clients. These manifest in the form of negative staff attitudes that include lack of empathy, poor communication and lack of respect for the clients. Some of the participants expressed some of the poor professional qualities as follows:

Poor attitudes of midwives and lack of empathy: some people don't show them a good sense of understanding. Poor communication to the client about PCC also makes most of us not to tell them exactly what PCC is about and what it entails. P6

Also, being judgmental also prevents the clients from voicing their concerns for us to know how to help them. P7

Sometimes, the attitudes of the healthcare providers and how we relate to the clients does not encourage them to also patronize such services. Sometimes, the staff don't give them respect in the course of rendering such services. P11

One of the poor professional qualities that was stressed by most of the midwives had to do with how some of their colleagues could not be trusted enough with patients' information. They indicated that some of their colleagues lack the virtue of being confidential with patients' information which was a reason most of the clients do not share information with them about PCC service. This was how some of them described this:

Lack of confidentiality. When the health professional lacks confidentiality, clients do not trust them and patronize such services from them. P7

There is lack of confidentiality on the side of the staff. Sometimes, patients tell you about themselves and we end up exposing their clinical information which is a major problem on the side of the midwives. P9

I think there is lack of confidentiality [on the side of the midwives] so [clients] they don't want to come and give us that information. P15

Lack of adequate staff knowledge for PCC service delivery

Some midwives further lamented that they did not have adequate knowledge regarding PCC and its related services which was a reason they were not able to render such services to the best of quality standards as required. The following typified some of the remarks:

Inadequate knowledge about PCC makes us to lack the confidence as health professionals in rendering such services. P6

Also, sometimes because we lack adequate knowledge about PCC we might end up not asking what were supposed to ask and the client does not get what the deserve to get. P7

To some of the midwives, the low level of knowledge of midwives about PCC could be due to insufficient in-service training. They felt that, although they did not learn much about PCC during their nursing training periods, their knowledge about PCC could have improved in the course of work through regular in-service training but such in-service trainings on PCC are not provided or inadequate.

Lack of in-service training. We the midwives are not updated on or we don't get enough education on the topic for us to also impact on the clients. P4

Also, midwives lack current knowledge about PCC due to insufficient in-service training for them. P 10

Inadequate training; mostly we have been trained on many topics but for PCC, midwives are not trained on that. P14

4.4.2 Client-related barriers

From the perspectives of the midwives, the challenges in providing PCC to clients and their uptake of the services may partly also be due to some problems emanating from the client. They expressed the view that, the most important barrier to client's access and patronage of PCC services

was due to their lack of awareness and knowledge about PCC. They believed most of the client did not even know there was any such service called PCC lest for them to seek such services. This is how they described this barrier:

...they not knowing about the importance of preconception care. P1

I think the first issue is lack of knowledge. A lot of women lack the knowledge or are not aware of any service called PCC. They don't know they have to undergo any care before the pregnancy comes so they are just there and the pregnancy comes unaware. P4

I think [clients] lack education on the importance of PCC. P5

Most clients lack knowledge about PCC; they don't event understanding what it is about. P6

Aside the inadequate level of knowledge of clients regarding PCC and its related services, the midwives further observed that access to such services was hindered by financial constraints faced by clients. They expressed the view that, most of their clients do not have the financial capability to seek such services.

I think its lack of financial support. P3

Also, because of financial constraints, they have the mentality that, the moment they get to the hospital, it is always going to be about money hence they do not seek PCC services. P6

Also, due to poverty, they end up not coming to the facility because they may not be able to access some of the services. P7

Some think going to the hospital costs and involves much money. P14

Two of the midwives also related the financial constraints to clients not being able to even afford the cost of their transportation to the facility to seek PCC services:

Cost of transport, and cost of PCC services also deters them from coming and so they tend to stay home and not patronize such services. P8

"Even for them to get to the facility is a problem due to poverty." P9

Another client-related barrier to the patronage of PCC services by clients, as perceived by the midwives in this study was in relation to the widespread misperceptions of clients about PCC. The midwives opined that, most of the clients' held myths and wrong conceptions rooted in their beliefs about PCC which is a reason they do not even seek for such services. This was how they described this barrier:

It is due to their superstitious beliefs and some taboos that doesn't allow them to seek medical advice. P3

Some of them have the misperception about being stigmatized or seen as 'bad girls' when they seek such services. P6

The clients have a lot of misconception. They have so many myths and misconceptions before coming so sometimes the good things that you will even tell them, they don't end up getting it due to the bad things that they have already heard. P7

One of the midwives shared an interesting story about the nature of misperceptions carried by some clients and how it affected the delivery and uptake of PCC services:

Clients carry some misperceptions about the use of PCC packages such as family planning due to what their parents and grandparents have told them. We have a case here

where someone did family planning and the person was rushed into the unit and the villagers came to the conclusion that it was because of the FP that the person was bleeding and so they never seek such services. P10

4.4.3 Community-level barriers

Midwives acknowledged that, the community context has a major role to play on the delivery and uptake of PCC services. They noted that, there are certain cultures in the community that impact negatively on the perceptions of the clients, thus serving as a barrier to the delivery and uptake of PCC services. Almost all the midwives mentioned that there are societal taboos, norms and myths that influence clients' general perception about health and PCC as shared by some of them below:

There is a taboo in some communities that does not allow them to seek care P3

Misconception in the sense that, sometimes, when a person is going through family planning, especially, IUD [intrauterine device], some people think the child will be holding the IUD hook upon delivery hence they do not patronize such services. Also, when a young lady is going in for family planning, they might think the person will not be able to give birth later when married and they may think the person is promiscuous. P5

There are misconceptions about PCC especially with the family planning services. Some communities believe that once you do family planning it means you are promiscuous. Some families believe that such services are not the best because children are given by God and as and when they come, you will have to give birth to them. P9

One midwife shared an instance where some clients who wished to seek such services were hindered by the stigma they experienced from some community members hindered them from seeking such services. This was how she said it:

Also, stigma. People think pregnancy has to happen naturally and so there is no need for PCC so most people feel shy thinking when people see them coming to the hospital, it means they have lived terrible lives which prevents them from being pregnant. P14

Lack of awareness and knowledge about PCC was another barrier identified at the community level. This barrier was linked directly to client's wrong perceptions about PCC, which consequently influenced their health information seeking behaviour and their acceptance of educational activities that sought to promote PCC at the community level. This was how some midwives described this barrier:

Inadequate knowledge is also a barrier because some of the community members are illiterates. Even the few literates are being influenced by the illiterates and so they don't know why they need to go to the facility for PCC before getting pregnant. P7

Also, the public lacks awareness. I think we have not been sensitized enough as a people to know about such services. In our societies, PCC is not one of the common things we know of so I believe it is a barrier to seeking such services. P8

Sometimes, it is about what they think. Mostly, they are not knowledgeable about it so do not even seek such services. P12

4.4.4 Health-system characteristics

Midwives further described the role of the health system in the delivery and uptake of PCC services. They were of the view that, there were certain factors at the facility level that hindered the effective delivery of PCC by midwives, and the uptake of such services by clients who needed such services. They mostly stressed that, there were insufficient resources of various forms available in the facility for the designated tasks of PCC delivery. These were their views shared:

I think inadequate resources. The facility doesn't have adequate resources to provide for the clients that will come. P2

Sometimes, a client may come wanting a certain method of family planning but due to insufficiency of resources in the facility for rendering such services, they don't get the services provided. P5

On the part of the health facility, I think it is about infrastructure they need to be able to run such services. Most of the facilities are congested and we don't have enough wards and units and so the small we have been used for ANC and PNC. P8

The facility doesn't really get the supplies with items such as items needed for FP and other PCC services and so access becomes a problem. P10

The midwives further identified that the priority attached to PCC services by the facility was generally low. This low priority is reflected in the nature of services available to clients with regards to PCC. These were their opinions on this barrier:

The problem with the facility is that, other healthcare services are prioritized over PCC. P4

Also, some facilities do not know the importance of PCC hence do not attach any importance to it. P8

Some midwives acknowledged that the low priority for PCC was evidenced by no specific unit for PCC. They were unhappy about the fact that, there were no specifically designated units for PCC services alone which served as a barrier to its service delivery and uptake. There were what they said with regard to that:

We don't have a separate unit for the PCC hence there is interference with regard to rendering such services. P5

The facility does not even have a major set-up for PCC unit and render such services. P6

We don't usually have a specific unit for PCC. P15

Another important barrier described by the midwives at the facility-level was with regard to the unavailability of sufficient skilled persons who have been specifically equipped to render PCC services. They felt that, the available staff strength was not enough to champion the course of PCC service delivery in the facilities as expressed below:

Limited number of staff: as you know, nowadays, the nurses are all travelling outside and so few remaining do not have enough time to render such PCC services compared to other services like ANC that the midwife could render. P5

Staffing is a major issue so we rush the clients since we are limited so we don't even have the time to truly take care of them. P6

We also don't have enough staff especially in the era where midwives and nurses are running out of the country. P8

One of the midwives attributed the inadequate number of personnel to the fact that in-service trainings were not given to the few available staff to render PCC services. They felt although their number was limited, the few available could have been trained on-the-job but this was not done by the facility management. These were what they said in relation to that:

Sometime when you have the personnel, but they lack knowledge and the skills in training people on PCC, it may not really help. P7

The facility does not also champion the organization of in-service training. Also, we don't have a specific unit for PCC and so when clients come, they don't know where exactly to go to for such services P10.

4.5 FACILITATORS OF PCC

In spite of the numerous barriers to the effective delivery and uptake of PCC services, midwives shared some of the things that made it easier for them to deliver some of these services which contributed to their success story. They acknowledged that, though they found themselves in a setting which makes PCC services difficult to practice, there were some other factors that facilitate the delivery of PCC services. These factors were grouped into five main themes namely: midwife/nurse qualities, client-motivated factors, social support systems, community-motivated factors, and health-system characteristics.

4.5.1 Midwife/nurse qualities

Some midwives took pride in the fact that, they demonstrated some level of positive work ethics such as good communication skills such as active listening, communicating in the local languages that were understood by clients, and providing feedback to clients in the course of their interaction with clients. To them, they believed these qualities fostered the ease of PCC service delivery and uptake of such services by client. These were their success stories shared:

Being able to communicate to them in their language for them to understand the concept and buy into it. P1

Me being a midwife, I have listening ears. What I mean is that whatever the client tells me, I am able to listen attentively… P3

"Our ability to use clear and simple terms rather than making use of 'jargons' which may not be understood by patients. When we explain things about PCC to them in simple language, they will also be able to go and explain to others about PCC." P6

I have good communication skills, use simple languages and not jargons that clients will not understand. P7

I take advantage of my good communication skills as a midwife which helps me to provide them detailed information. P10

Midwives also stressed that, their ability to demonstrate understanding of client problems, come down to their levels and share in their concerns was a facilitator to their provision of PCC and its uptake by clients. They described these acts of empathy as below:

Being able to understand the client, coming down to their level to be able to explain to them. P1

I am empathetic and put myself in the client's situation to make the client feel at ease. P7

One of the midwives shared an experience where due to her empathy, she had to even help the clients with some money as and when necessary to facilitate their patronage of some PCC services.

Also, I have empathy so when they share with me their problems, I sometimes give them money, to solve some of the problems. I don't have money but I have to do it for God to bless me. P3

Mutual rapport, respect and confidentiality on the side of the midwife were also considered as some of the facilitators of PCC delivery and uptake. Midwives indicated that, building a good relationship with the client, and demonstrating same through mutual respect and being confidential

with clients' information was a good ground on which PCC services were provided. These were some of their narratives:

I have cordial relationship with the client. P5

A good midwife-client relationship facilitates the delivery and uptake of PCC. If the relationship is good, the client feels free to ask any questions and that will give the midwife the opportunity to provide more education. P13

We respect our clients. P11

Also, I exhibit confidentiality when handling them and so that makes it easy for them to tell me about everything regarding their sexual activities. P10

4.5.2 Client-motivated factors

Some midwives were of the view that certain client qualities facilitate good PCC service delivery. Being cooperative on the side of the client was one of such facilitators as described by some of midwives:

When the client is ready to learn, anything that you tell them, they are able to accept it. P2

So far, there is one client that I got in touch with, whatever I tell her she does it and she listen to whatever I tell her and she adheres and also influence her colleagues. P3

One of the midwives indicated that some clients cooperated by sometimes bringing their partners when the need be for them to be included in the PCC. This was her view:

Some of them come with their spouse and they get them involved in whatever they are doing. P3

Midwives also expressed the view that when client's willingness and readiness avail themselves to patronize PCC services it paves way for such services to be provided and thereby facilitates the service. They expressed it this way

The clients' willingness, and sometimes P1

Being readily available to receive the services makes it easy to provide such services. Also, some of them willingly seek for the services. Some also come with their male partners which also helps a lot. P9

When clients are able to avail themselves and do according to what we tell them. P15

4.5.3 Good feedback

Midwives acknowledged the role of good feedback from clients as one of the facilitators of PCC service delivery and uptake. They believed that, for every education or PCC services rendered to clients, there was the need for them to revert with feedback they demonstrate that clients understood such concepts, and also to show that they have utilized such services. These were their views on good feedback:

For the clients, one wonderful thing I like about them is that, when they listen to you educate them on PCC services, they are able to provide you with answers that shows they have understood and some of them too, ask questions that reveal that they understand the education given to them. P6

Good feedback from the clients helps to know if the education given to them has been well understood. P7

4.5.4 Social support systems

As part of the facilitators of PCC delivery and uptake, the role of social support has been outlined. Most of the midwives indicated that there were no social supports available with respect to PCC care delivery and uptake. Nonetheless, the few who indicated that there were supports identified NGOs as the main source of support for the delivery of PCC services. Mostly, these NGOs support through logistics, funds, and education to facilitate the delivery of PCC services:

> *Luckily for us, we get some NGOs who come to support us with some of the things we need in rendering care to the clients such as the instruments, medications. Some of them also come to give us education on new trends in service delivery and how we can better our services. P6*
>
> *I only know about an NGO group who came to help us with instruments and gave us some education and training on how to provide such PCC services. P9*

Midwives also acknowledged that various members of the family including parents, spouses/partners and friends were instrumental as supports for clients regarding the uptake of PCC. These were their narratives:

> *Some of the couples have family support. They are being assisted by their families and that helps them to seek such services. P12*
>
> *From what I have noticed, if the husband is not with them, they have their mothers coming to take them through the process so that one too helps. P15*

Lastly, support from religious groups and leaders was another facilitator identified by the midwives with regard to the uptake of PCC services by clients. Also, they noticed that some churches facilitated PCC service delivery by providing the platform for education in that regards. They had this to say:

The only social support I can think about is the support from churches and media by giving us the platform to share educational programs about PCC. P8

Some also have religious leaders who encourage them as well. P12

The religious leaders can facilitate the delivery and uptake of PCC if they talk about them with their congregations. P13

4.5.5 Health system characteristics

The midwives explained some important characteristics of the health facility which serve as facilitators for the provision and uptake of PCC services. They were of the view that the facility's ability to provide affordable and accessible services that are well integrated and linked to several PCC services facilitated their provision of such services

The facility renders subsidized services to clients and integrates some services into others to make things affordable for clients. Some facilities also collaborate with other insurance companies to help render affordable services to the clients. P7

... ensuring that it is not costly will also improve its patronage. So, ... affordability and accessibility. P8

Some midwives recounted that, although all comprehensive PCC services may not be readily available at the facility, there are some important services that are available which directly facilitate the provision of such PCC care to clients. These following typified their expressions on that:

The availability of family planning services in the facility helps us to provide PCC services. We already have family planning services available so couples who want to through PCC can be taken through that. We also have HIV drugs and vaccinations for hepatitis B and all those vaccine preventable diseases are taken care of and treated

before they get pregnant. Also, we have counselling services which improve PCC services delivery through provision of counselling to the clients. P8

For now, I think we have laboratories available for them to go though. We also have the Obstetrician and gynaecology specialist who provides such care. P15

One of the midwives indicated that, there was even a designated clinic day for rendering PCC services to clients who seek such services. She narrated.

At the public health unit there is a designated day for PCC services and that makes it easy for such services to be provided. P11

4.6 SUGGESTIONS FOR IMPROVED PCC SERVICES

Midwives shared quit some insightful recommendations on the strategies they consider to be effective in improving the delivery and uptake of PCC services. These suggestions were systematically and specifically organized into four themes including: suggestions for nurses/midwives, clients, the community and the health systems.

4.6.1 Suggestions for midwives/nurses

Emphasis was made on the need for midwives/nurses to improve their level of knowledge regarding PCC. The suggestion was strong on the point for midwives/nurses to engage more in educational programs and trainings to equip themselves about current trends in the delivery of PCC s services. These were the suggestions made to the benefit of midwives/nurses:

Attending workshops should be patronized by midwives in order to gain qualities required to render PCC. P7

Refresher or updated training to midwives will help them to deliver such services.

Because, we were trained in school way back but after training, we have not received any

other training on it and so when done, we will improve our service delivery. Retraining midwives on PCC will help improve the delivery of such services. P8

Receiving more education, and training about PCC and its importance and what it entails I think it will help us to provide more of such services. So, midwives can also do in-service training among ourselves. P9

The need for positive attitude of nurses/midwives has also been suggested by the midwives. They felt that there were aspects of the professional life of nurses/midwives that had to be worked on in order to arrive at providing comprehensive PCC services to clients. These suggestions regarding the need for positive attitudes were described as below:

Midwives need to work on their attitudes toward work because when we achieve PCC care, we will definitely achieve a good ANC, and PNC services so that morbidity and mortalities will be at the minimum levels. P6

We must be empathetic and show them love while rendering such services to them. P12

4.6.2 Suggestions for clients

Midwives extended their suggestions to include clients. They were of the view that, clients who were mostly at the receiving end of the PCC services needed to make some efforts to ensure that they enjoyed the full benefits of PCC. Therefore, the need for involvement of spouse and significant others when seeking PCC services was suggested by the midwives as stated below:

Spouses should also help their wives by coming to the facility to them to listen to the education so that they can serve as reminders to the wives at home. P3

Partners of clients need to be involved during PCC. P4

They need to involve their partners and other significant people. They also need to give us feedbacks regarding such PCC services to help improve services for others clients. P6

The need to correct misconceptions about PCC through awareness creation programs and the acceptance of educations received from midwives was also suggested as a way to improve the uptake of PCC services by clients. These were the suggestions made:

The clients need to be educated to clear their misconceptions so that they will have enough knowledge on PCC in order to avoid misconceptions about PCC. P4

Clients should be ready to listen to us the midwives and not the misconceived information from their grandmother so that they can have the benefits of PCC. P10

Clients were also advised to avail themselves voluntarily for PCC services and be ready to comply with the guidelines and recommendations given to them by midwives. Through this, midwives believe PCC service uptake by clients will improve significantly. These were their suggestions:

The clients need to comply with whatever we tell them. P3

Clients should be ready and avail themselves for PCC services. P11

4.6.3 Suggestions for community

The community were not left out with regards to the suggestions to improve the delivery and uptake of PCC services. Midwives were of the view that, every client belongs to a community and efforts to improve the community uptake of PCC will diffuse to benefit the clients as well. They were of the view that, a good collaboration should be maintained between midwives and community leaders to foster the progress of PCC programs in the community. These were some views shared by them:

Establish rapport with the community stakeholders so that they can influence the community women so that they can encourage the women to seek PCC services. P1

Community leaders should help us to educate members of their community more on PCC. Also, the facility and midwives should get to collaborate with the community to help spread the education to the women in the community. P3

The community's opinion leaders need to help in organizing durbar for education on PCC to be organized. P5

Involving the chiefs and elders in the community definitely will yield a good outcome. They can help us organize durbar, beat the 'gongon' so that programs can be done to increase their awareness about PCC. P6

Further to that, midwives were of the view that, some taboos, myths and social norms as well as misconceptions will have to be corrected in order to improve upon the delivery and uptake of PCC services. They acknowledge that, these myths and taboos were contributing to poor health seeking behaviours and getting them addressed accordingly will help improve upon care delivery in the community. These were their opinions shared:

Communities should abolish all forms of taboos and misconceptions about PCC and community leaders should help us to educate members of their community more on PCC. P3

Communities should stop the misconceptions, the stigma and rather acknowledge that PCC has several benefits that they should patronize. P9

4.6.4 Suggestions for the health system

The health system was not left out with regards to suggestions to improve PCC service delivery. The midwives were specific on their suggestions, indicating that, the health system is the most important unit to permit the provision of PCC service hence the need to designate specific units to cater for PCC needs of clients. These were their suggestions:

The health facility needs to have a separate unit sorely for PCC services. P5

The facility should designate special room or space specifically for PCC in order for people to seek such services from that unit. P10

Two midwives suggested further that location of the PCC unit matters in the provision of such services. Hence, they suggested an integrated system that will ensure smooth delivery of such service at the PCC unit. Their suggestions have been stated below:

The HIV clinic is distal from the counselling unit. So, I am suggesting that all these can be in one building so that when HIV clients are coming for their drugs, the PCC services can also be assessed without stigma. P2

The PCC unit of the facility should be at a vantage point where people can walk in at any time but when it is not well allocated, access becomes a problem. P7

There were also suggestions regarding the need for health systems to provide adolescent-friendly services to the clients. By so doing, adolescent clients will not be intimated and stigmatized in their attempts to seeking PCC services. These were their suggestions:

My facility should provide adolescent clinic for teenagers to lay out any stigma. Sometimes, they feel shy to come but when this service is introduced, it will encourage them to come more. P3

They should make the services friendly for clients to have the trust in us. P11

Organizing in-service training for midwives was another suggestion of priority to the midwives. They believed that, the health system should make conscious efforts to organize workshops, seminars and training programs that will equip them with the skills and knowledge required for the provision of PCC services. They explained these suggestions as below:

The facility should hold in-service trainings to refreshen the health professionals on PCC. P7

The facility should designate a unit with trained health workers and equip them with skills and knowledge for them to delivery PCC services. P13

4.7 Summary

This chapter presents a comprehensive examination of preconception care (PCC) from the perspective of midwives. It addresses the essential components of PCC and emphasizes psychological, physical and emotional preparation as critical aspects that influence pregnancy decisions. The chapter also highlights barriers to the provision and uptake of PCC services, including midwife/nurse workload and client-related challenges. In addition, the importance of PCC counselling and education is discussed and important topics such as health promotion, alcohol and smoking cessation, and personal hygiene are addressed. Midwives' suggestions for improved PCC services focus on ongoing education and training programs to improve their knowledge and skills. Additionally, the chapter addresses the role of community leaders, social support, and health system characteristics in facilitating the provision and uptake of PCC services. Overall, it provides valuable insights into the challenges, facilitators and recommendations for improving PCC services from the perspective of midwives.

CHAPTER FIVE

DISCUSSION OF FINDINGS

This section presents the discussion of the empirical data of the study and situates it within existing literature. The discussion examines the key findings that emerged from the study objectives on the level of midwives' knowledge on PCC, perceived barriers and facilitators to the uptake and delivery of PCC services and midwives' views on how to improve the delivery and uptake of PCC from the midwives' perspective.

This was a qualitative exploratory study of the barriers and facilitators to the delivery and practice of PCC services from the perspectives of midwives in the Gomoa East District. This study, which was also an exploration of the perceptions of midwives is the first of its kind in the Goma East district of the Central region on the presented issues of preconception care. Nevertheless, the findings give indicative empirical understanding of the situation of similar districts in the country because the context of health care delivery and the issues about workload, curriculum and quality of raining of nurses and midwives and the systemic barriers and facilitators that determine and affect health care delivery are similar across the country.

Midwives' knowledge of PCC

Preconception Care (PCC) prioritizes the individual needs, preferences, and values of patients, placing them at the centre of their care. It involves collaborative decision-making between healthcare providers and patients or couples to enhance the quality of care and overall patient satisfaction. Scientific evidence posits that the health of women prior to conception impacts the maternal and infant outcomes of pregnancy. On the same continuum, there is evidence to support the idea that the health of women of reproductive age may improve through the uptake and access to preconception care (Atrash & Jack, 2020). Preconception care seeks to assess, identify, address,

and modify a woman's health conditions and risks to ensure that such health conditions and risks do not affect the outcome of her pregnancy (Atrash & Jack, 2020).

5.1 Midwives Knowledge about PCC

Hillemeier et al. (2008) have noted that midwives play a significant role in the uptake and delivery of PCC, as they are often the primary resource persons for women preparing for a pregnancy. Therefore, it was essential to assess midwives' knowledge of PCC and identify their training needs and preferences. Participants in this study demonstrated adequate knowledge about PCC and highlighted the importance of women's health before conception.

The midwives understanding of PCC was evident in their capacity to articulate the concept and its associated elements such as the description of PCC, sources of obtaining information or gaining knowledge regarding PCC, fundamental components of PCC, and the significance of PCC. Midwives in the study also recognized the significance of PCC in promptly identifying and managing anomalies such as anaemia and obesity, depression and treating sexually transmitted infections (STIs) to prevent any adverse effects on pregnancy outcomes.

Several authors (Archibald et al., 2016; Coll et al., 2016; M'Hamdi et al., 2017; Poels et al., 2017; Stephenson et al., 2014) have noted that, having adequate knowledge on PCC is one of the main facilitators of PCC uptake and delivery in healthcare. The knowledge of healthcare providers which in this study were midwives about PCC is thus one of the most important determinants of the implementation of such a healthcare intervention because as McCluskey (2003) has also noted, healthcare providers do not usually practice what they do not know. Assessing the level of knowledge of health care providers is therefore vital input to programs targeting enhancement of providers' knowledge (Kassa, Human, & Gemeda, 2018).

According to a study by Gebremichael et al. (2019), midwife knowledge of PCC is usually associated with level of educational attainment, years of working experience, and in-service training on PCC. By contrast, lack of awareness of PCC and unfamiliarity with PCC (e.g., not knowing what PCC involves and what the benefits of PC interventions are) have been identified as barriers to the provision of PCC (Archibald et al., 2016; Fieldwick et al., 2017; M'Hamdi et al., 2017; Poels et al., 2017). From the present study midwives demonstrated adequate knowledge about PCC and this is an indication that they are knowledgeable enough to practice PCC.

5.2 Barriers to Preconception Care Uptake and Delivery

Despite the presumed demonstrated adequate knowledge of midwives in the study about PCC and its importance of women's health before conception, the uptake and delivery of preconception care are not without its challenges. The midwives in the study expressed their strong desire to provide preconception care (PCC) services to women to help them make informed decisions throughout pregnancy. However, they enumerated several obstacles that hindered the successful implementation and adoption of PCC services at four different levels: traits of midwives and nurses, barriers connected to clients, barriers at the community level, and features of the health system.

According to the midwives, one of the barriers that significantly impacted the delivery and uptake of PCC was attributed to the nature of their work, their professional qualities towards work, and other circumstances surrounding their delivery of such services. Notably, these included heavy workload schedules due to the inadequate number of personnel which affected their delivery of PCC services to clients.

Beach et al. (2005) have noted that provider time constraints and communication skills were significant barriers to PCC. Again, participants highlighted other negative attitudes on the

part of midwives that had to do with a lack of empathy towards clients, poor communication that reflected in their inability to speak the language of the community, disrespect towards clients, the lack of confidentiality with patients' data, and to some extent some aspects of knowledge deficit of some midwives on PCC and its related services. Instructively, although midwives demonstrated adequate knowledge of PCC, their levels of knowledge were not comprehensive. The latter situation has also been reported elsewhere.

Mazza, Chapman and Michie (2013), reported that "lack of a comprehensive PCC program, limited awareness of the benefits of PCC among future parents and care providers, poor coordination and organization of PCC, and conflicting views of health care professionals on pregnancy, reproductive autonomy, and professional responsibility" are just a few of the obstacles that prevent PCC from being delivered.

The study findings also revealed that another major obstacle that hindered the successful implementation and adoption of PCC services was client-related barriers. In the first-place clients' access and patronage of PCC services emanated from their lack of awareness and knowledge about PCC. Midwives perceived that most of the clients did not have enough information on where to access PCC service. In addition, the uptake of preconception care was inhibited by financial constraints faced by clients which constrained their ability to pay for their transport to access healthcare and its related services.

Another client-related barrier to the patronage of PCC services by clients, as perceived by the midwives in this study, was in relation to the widespread misconceptions of clients about PCC. The midwives opined that most of the clients held myths and wrong views or interpretations rooted in their beliefs about PCC, which was why they do not even seek such services. In consistent with the findings here on client related barriers, Chutke et al. (2022), reported in their study in Nashik

district Maharashtra that perceived barriers that affected the uptake of PCC in the public healthcare system in rural and tribal India included poverty.

According to Chutket et al due to poverty, most newly married couples travel outside of their home region to seek greener pastures before returning home with most of the women being heavily pregnant. Usually, the time of return was too late to offer effective PCC services to them. Again, other studies have reported that the lack of awareness of PCC and unfamiliarity with PCC (e.g., not knowing what PCC involves and what the benefits of PC interventions are) were barriers to the provision of PCC (Archibald et al., 2016; Fieldwick et al., 2017; M'Hamdi et al., 2017; Poels et al., 2017).

Another finding on barrier to PCC in this study was Community level barriers. Midwives opined that community perception and views had a major role to play regarding the delivery and uptake of PCC services. They noted that there were certain cultural norms and long-standing values in the community that impact negatively on the perceptions of the clients and serve as a barrier to the uptake of PCC services. These comprise societal taboos, norms, and myths that influence clients' general perceptions about health and PCC. It was further reported that some clients were willing to access preconception care services; however, they were adamant due to fear of stigma and being labelled as "bad girls". Other studies have also reported how available cultural norms and beliefs negatively affect the uptake of PCC among women, with some beliefs forbearing to stay away from certain kinds of foods and practices (Onasoga, Osaji, Alade, & Egbuniwe, 2014; Idris, Sambo, & Ibrahim, 2013; cited by Beyou, Tandoh, & Lawrence, 2021).

Similarly, Chutke et al. (2022) reported that perceived community barriers that affected the uptake of PCC included factors such as poverty, poor knowledge, myths, low male involvement, and a lack of the need to access preconception care, among others. Chutke further maintains that

community barriers and myths held by society most often deterred women from eating certain kinds of foods which may be beneficial to them.

Furthermore, another obstacle that affects PCC uptake that emerged from this study was related to the institutional factors or characteristics of the health system. Midwives described the role of the health system in the delivery and uptake of PCC services. They were of the view that there were certain factors at the facility level that hindered the effective delivery of PCC by midwives and the uptake of such services by clients. They stressed the insufficient resources in various forms in the facility for the designated tasks of PCC delivery. The midwives also pointed out that the priority attached to PCC services by healthcare institutions was generally low. This low priority is reflected in services available to clients with regards to PCC.

Confirming the above findings, Chutke et al. (2022) reported that institutional factors such as lack of or inadequate human resources and logistics impacted the delivery and consequently the uptake of preconception care. Similarly, Zoe et al. (2023) also reported that the lack of prioritization in service planning and budgeting, lack of prioritization by healthcare professionals, staffing, and time constraints, among other factors, negatively affected the delivery and uptake of preconception care. Ukoha and Dube (2019) also reported that, although nurses possessed adequate knowledge in the delivery PCC services, the absence of resources in many practices hindered them to a greater extent in the implementation and delivery of PCC services.

5.3 Facilitators of PCC

Notwithstanding the findings on barriers to the delivery and uptake of PCC the midwives in the study also identified several factors that facilitated the delivery of these services and contributed to their practice. They recognized that, despite the client, community systemic barriers that hindered PCC services, there were some factors that facilitated the provision of PCC services.

These included positive midwife/nurse qualities, client-motivated factors, social support systems, and supportive health-system characteristics.

Studies by Hudon et al. (2011) and Mead and Bower (2000) have highlighted the importance of healthcare providers' interpersonal skills and the availability of social support in promoting PCC. This finding of this study also complements that of Heaman et al. (2015), who explored the perceptions of prenatal care service providers in inner-city Winnipeg, Canada, on the facilitators to the provision of prenatal services. The results showed that there were four major facilitators, each with a specific meaning unit: caregiver qualities, caregiver approaches to prenatal care provision, a multidisciplinary approach to prenatal care, and program and service characteristics.

Similarly, an exploratory study in the Netherlands by Sijpkens, Steegers, and Rosman (2016) reported that facilitating variables in implementing preconception and inter-conception care in preventive child health care services included the distinct ability to reach women and the knowledge of preventative healthcare; the availability of guidelines for inter-conception care; the functionality of health insurance; people's awareness about perinatal health; and good cooperation on responsibilities among healthcare providers.

In consistent with other studies, this present study identified qualities like good communication skills, active listening ability, and the ability to provide timely feedback as positive factors that promoted and enhanced the delivery of preconception care services. Further, participants reported that client cooperation activities such as involving their partners in accessing PCC services, voluntary participation by clients, and the availability of social support systems such as NGO and religious support all facilitated the successful promotion, delivery, and uptake of preconception care services.

5.4 Summary

This chapter analysed, presented and discussed respondent's socio-demographic characteristics of the data used in this study. Findings from the study reveal that midwifes possessed adequate knowledge on preconception care. Major sources of information on PCC include obtaining information from co-workers, nursing education, attending workshops and internet sources. In addition, it was found that midwifes perceptions, lack of empathy, poor communication skills, lack of support from male partners, myths and misconceptions about PCC were major barriers to the uptake and delivery of PCC services.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary of the entire study and the conclusions drawn based on the study findings. The chapter also elaborates the implications of the study for Education and Training for Midwives, Community/Clients Engagement and Awareness as well Policy Changes and Guidelines. The limitations of the study are also stated, and the chapter ends with some suggestions/recommendations based on the key findings.

6.1 Summary

Maternal mortality remains a significant problem of physical, mental, and social health concerns worldwide (Aseidu et al., 2019; Khatri et al., 2019). According to data from the 2017 Ghana Maternal Health Survey, there are 310 maternal fatalities for every 100,000 live births and 343 pregnancy-related deaths for every 100,000 live births (GSS, GHS, & ICF, 2018). Preconception care, or pre-pregnancy care, aims to improve health status and reduce behaviours contributing to poor maternal and child health outcomes.

To promote maternal and child health, women in their reproductive years are required to receive PCC counselling and interventions that are mutually supportive of these 13 packages while they prepare for conception. In the Ghanaian health system, midwives are rightfully designated to provide PCC services to women in their reproductive years. These services are mostly available in healthcare settings and on an out-patient basis. While majority of studies have focused on reproductive women's perspectives on the facilitators and barriers related to PCC use there hasn't been any engagement with the healthcare professionals who give PCC to Ghanaian women to find out perspectives on the facilitators and barriers related to PCC use. This study therefore sought to

explore the barriers and facilitators to the delivery and uptake of PCC services from the perspective of midwives in the Gomoa East District using case study approach.

The socio-ecological model (refer to chapter two), developed by Sword (1999) served as the theoretical framework in the conduct of this study. Sword (1999) draws on the social cognitive theory by Bandura (1986), the socio-ecological model by McLeroy et al. (1988), and the Precede-Proceed Model for health promotion planning developed by Green and Kreuter (1991). These three frameworks consider the dynamic interactions between the individual and environment as the two main determinants of health-related behaviour. Sword consequently created a working model to analyse and explain usage behaviour with emphasis on prenatal care.

Thus, potential users of healthcare are likely influenced by their social networks, local circumstances, and public policies. Similar to this, it is claimed that external factors shape and dictate the nature of available health services and programs. The framework is valuable in understanding the multiple levels influencing behaviors, attitudes, and perceptions related to healthcare practices such as preconception care (PCC) by helping to address the objectives of the study on midwives' perceptions of barriers and facilitators to the delivery and uptake of PCC.

The search for literature for the study was generated using keywords such as ‘barriers’, ‘facilitators’, ‘preconception care’, and ‘midwives. These were searched in isolation or together using Boolean operators like NOT, OR, and AND. The review of literature in chapter two was done along two strands, conceptual or theoretical review which explored the historical overview of preconception care, swords socio-ecological model; and an empirical review of the study objectives i.e. the influence of the knowledge of healthcare providers on the delivery and uptake of PCC, barriers and facilitating factors to the uptake and delivery of PCC.

The knowledge of midwives in the six health facilities within the Gomoa East District were explored as well as their views on the barriers and facilitators of PCC uptake and delivery in the conduct of this study. The four main objectives assessed were;

1. Midwives' level of knowledge on PCC in service delivery
2. Midwives' perceptions of the barriers to the delivery and uptake of PCC.
3. Midwives' perceptions of the facilitator's role in the delivery and uptake of PCC.
4. Suggestions to improve the delivery and uptake of PCC from midwives' perspectives.

Adhering to the data saturation point methodology, a sample size of 24 midwives was drawn from the six selected health facilities, with a total midwife's population of 44 within the Gomoa East District. With the consent of participants, face-to-face audio recorded interviews were carried out using a semi-structured interview guide developed based on the socio-ecological model proposed by Sword (1999). The guide consisting of two main sections was employed to solicit information from research participants. The recorded interviews were transcribed verbatim and analysed using the six-step thematic analysis approach of Braun and Clarke (2006). The Socio-ecological model by Sword (1999) guided the study. The data obtained was analysed and categorized into themes using the six-step thematic analysis approach proposed by Braun and Clarke (2006). The data was coded into four categories being knowledge, barriers, facilitators and suggestions. In all thirteen sub-themes were generated.

The main findings of the study indicate that participants knowledge about preconception care in this study was assessed based on the descriptions offered by midwives, sources of information about PCC, essential packages of PCC, and importance of PCC. It was found that midwives had and demonstrated sufficient knowledge of PCC evident in their capacity to articulate the concept and its associated elements, which were categorized into four overarching themes: the

description of PCC, sources of knowledge regarding PCC, fundamental components of PCC, and the significance of PCC. Regarding the sources of information regarding PCC, it was discovered that nursing education, obtaining information from co-workers, attending workshops.

In addition to receiving information about PCC from training schools and co-workers, others reported other sources or alternative channels such as the internet, social media, and churches, among others, as platforms for learning and accessing new information and methodologies on the delivery of preconception care. Similarly, the majority of midwives intimated that ensuring sufficient nutrition and consumption of certain supplements, such as folic acids, were essential aspects of providing care in PCC services for women of reproductive age.

The participants further highlighted the need for PCC counseling, therapy, adopting positive lifestyle habits like alcohol and smoking cessation, maintaining proper personal hygiene behaviors and education on crucial subjects as one of the fundamental components of PCC services. Finally, midwives stressed on the importance of PCC.

They recognized the significance of PCC in promptly identifying and managing anomalies; treating sexually transmitted infections (STIs) to prevent any adverse effects on pregnancy outcomes. In addition to PCC helping in the early detection, prevention, and treatment of STIs, the midwives emphasized the significance of PCC in terms of its capacity to assist women in strategizing their pregnancies and spacing their births to prevent unintended pregnancies and associated difficulties. Furthermore, others emphasized the psychological, physical, and emotional components of PCC that significantly impact decisions regarding pregnancy planning.

Again, the study confirmed the extant literature on the barriers that affected the uptake and delivery of PCC. The barriers affecting PCC broadly were categorized into midwife qualities, client-related factors, and community and health-related factors. Specifically, the barriers that

affected effective PCC delivery included factors such as busy work schedules of midwifes, inadequate staff number, poor attitudes, low levels of comprehensive understanding of PCC. Similarly, factors such as limited awareness on PCC, financial constraints, misperception about PCC, taboos, myths and community misconceptions low priority for PCC, inadequate logistics, and a shortage of trained personnel were equally identified as barriers.

Thirdly, midwives' perceptions of the factors that facilitated preconception care delivery and uptake included factors such as good nurse communication skills—the ability to communicate in the local languages of clients, the provision of timely feedback, empathy, mutual rapport, respect and confidentiality between clients and midwifes; the client's willingness to access PCC, spousal support and involvement, NGOs and family support, and the provision of affordable healthcare services—facilitated PCC delivery and uptake.

Finally, the following suggestions were provided by midwives in a bid to improve the delivery and uptake of PCC from the perspective of midwives. Some midwives reported that the location of the PCC unit mattered in the provision of such services. Hence, the adoption of an integrated system will ensure smooth delivery of such services at the PCC unit. Similarly, suggestions were made on the need for health systems to provide adolescent-friendly services to reduce the associated stigma of seeking PCC services. Again, organizing in-service training for midwives was another suggestion of priority for the midwives.

6.2 Implication

Based on the outcome of the study, the study identified useful implications such as education and training for midwives, community engagement and awareness, and finally policy changes and guidelines.

6.2.1 Implication for Education and Training for Midwives.

The study highlights the importance of equipping midwives with comprehensive knowledge and skills related to preconception care as well as the need to develop positive attitudes towards clients and service delivery. This implies the need to develop targeted educational programs and training initiatives that focus on preconception care. These programs should cover various aspects such as the components of preparedness, effective communication techniques and strategies to address barriers to service delivery. In addition, the study suggests the inclusion of in-service training programs to continuously improve midwives' skills and inform them about new practices in preconception care.

6.2.2 Implication for Community/Clients Engagement and Awareness.

The study highlights the importance of community-level factors in the provision and utilization of preconception care. Therefore, there is a need for community engagement strategies to raise awareness of the importance of preparedness. This may include working with community leaders, local media and social media platforms to disseminate information about preventative care, its benefits and the services available. Additionally, developing youth-friendly preconception care services can help combat the stigma associated with young people seeking such care.

6.2.3 Implication for Policy Changes and Guidelines.

The study suggests that policy changes and the development of standardized protocols are needed to support the provision and uptake of preconception care services. This implies the importance of advocating for policy reforms that prioritize basic care in the health care system. Collaborating with health authorities, policymakers, and community leaders to design and implement an integrative system of preventive care and develop standardized protocols for care

can help streamline operations and improve the accessibility and quality of preconception care services.

In summary, the implications of this study require a multifaceted approach that includes midwife education initiatives, community engagement strategies, and advocacy efforts for policy changes to improve the provision and utilization of preconception care services. These implications can guide the development of targeted interventions and programs to improve preparedness in Ghana and other similar settings.

6.3 Limitation of the study

The study acknowledges some limitations that may affect the generalizability and reliability of its findings. One of the main limitations is the small sample size, which may not be representative of the entire midwife population in Ghana. Additionally, the study relied on self-reported data, which may be subject to social desirability bias and may not accurately reflect midwives' actual practices and experiences. Another limitation is the use of a case study approach. The case study approach used in the study provides detailed insights into the specific context of the provision and utilization of pre-conception care in Gomoa East District. However, this approach has limitations in terms of generalizability as the results may not be readily applicable to other districts or regions in Ghana or to other health systems. Focusing on a single case study may not capture the full diversity and variation across different healthcare settings, highlighting the need for complementary research in different settings to validate and expand findings.

6.4 Conclusion

This study set out to explore the perceptions of midwives regarding the delivery and uptake of preconception care (PCC) services in the Gomoa East District of Ghana. The study findings

showed that midwives possessed adequate and reliable knowledge on the meaning, components, and importance of preconception care delivery and uptake. Their understanding, acquired through diverse sources like formal education, workshops, peers, and online resources, underscores their preparedness for delivering PCC. Regarding the components of PCC, the study also revealed that the ability of midwives to identify the essential elements of PCC which includes personal hygiene, a balanced diet, counselling, among others, validates midwives' comprehensive grasp of what constitutes effective PCC. This awareness signifies their capability to impart holistic guidance to clients. Again, preconception care is both limited and facilitated by four key variables: midwives' qualities, client-related factors, community-level factors, and health-related factors. In terms of health outcomes, the recognition by midwives that PCC aids in the early detection of health anomalies highlights its significant contribution to improving overall health outcomes. This realization can reinforce the importance of PCC among midwives and in healthcare systems.

6.6 Recommendations

The following recommendations are made in light of the key findings and conclusions:

The study provides evidence that preconception care is critical to improving maternal and child health. However, the delivery and uptake of PCC services are heavily constrained within the study area. It is therefore recommended that an integrated system for PCC units be developed by Ghana Health Service across its service centres. Creating an integrated system for PCC units can streamline service delivery, ensuring consistent and standardized care across different locations. This approach can enhance the accessibility and quality of PCC services. This calls for a collaboration between health authorities, policymakers, and community representatives to design and implement an integrative system and develop standardized protocols for PCC delivery across units to include unified training programs, consistent information dissemination, shared best

practices, and the adoption and usage of digital platforms for data sharing, appointment scheduling, and resource allocation to streamline operations.

Secondly, the Ghana Health Service through the Ministry of Health with support from donor institutions should strive to develop adolescent-friendly services. The development of adolescent-friendly PCC services will help to address the stigma surrounding seeking such care. By creating a welcoming environment, healthcare systems can encourage young individuals to prioritize their reproductive health.

Finally, in-service training for midwives should be prioritised. Prioritising in-service training acknowledges the need to continuously upgrade midwives' skills. In that effect, the Ministry of Health should develop a comprehensive policy that will afford healthcare professionals the leave to upgrade academically and as well as receive in-service training. This ongoing education can cover emerging PCC practices, effective communication techniques, and strategies to navigate barriers, ultimately enhancing service delivery.

6.7 Suggestions for Future Research

The study has brought out new gaps in research that could be explored to enhance understanding of PCC delivery and uptake:

1. Understanding Local Myths and Taboos: Exploring community-specific myths and taboos surrounding PCC could provide insights into deeply ingrained beliefs impacting its uptake. Addressing and debunking these misconceptions could significantly influence PCC acceptance.
2. Impact of Improved Communication: Studying the influence of enhanced communication strategies on PCC uptake can offer empirical evidence on the correlation between effective communication and increased utilization of PCC services.

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APPENDICES

Appendix A: Letters of Introduction

UNIVERSITY OF GHANA

SCHOOL OF NURSING AND MIDWIFERY
COLLEGE OF HEALTH SCIENCES

June 13, 2023

The Chairperson
Ethics review Committee
Ghana Health Service
Accra.

Dear Sir/Madam,

LETTER OF INTRODUCTION-HILDA BRAKOH

I write to introduce to you Hilda Brakoh, an MPhil Midwifery student in the Department of Public Health Nursing at the School of Nursing and Midwifrey, University of Ghana.

The Scientific Review Committee of the School has approved the thesis topic: ***'Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana'.***

As part of the School's requirement, the student needs to obtain ethical clearance before embarking on the data collection.

I hope the committee will consider the approval and grant her ethical clearance to enable her undertake her study.

Thank you.

Yours faithfully,

Mr. Charles A. Klutse
School Administrator

INTEGRI PROCEDAMUS

P. O. Box LG 43, Legon, Accra, Ghana | Tel: +233 (0) 303 970 801
Email: nursing@ug.edu.gh | Website: www.nursing.ug.edu.gh

UG

UNIVERSITY OF GHANA

SCHOOL OF NURSING AND MIDWIFERY
COLLEGE OF HEALTH SCIENCES

June 13, 2023

The Chairperson
Ethics review Committee
Ghana Health Service
Accra.

Dear Sir/Madam,

SUPPORT LETTER- HILDA BRAKOH

I am privileged to write in support of Hilda Brakoh's application. Hilda is a student at the University of Ghana School of Nursing and Midwifrey, pursuing MPhil in midwifery in the Department of Public Health Nursing. I have known Hilda for about a year now and I am currently her **Principal Supervisor** for her masters' research title: '***Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana***'.

Hilda is humbly seeking for ethical approval for her research, and I highly recommend her proposal for your consideration and approval.

Thank you.

Yours faithfully,

Daniel Arhinful (PhD)
Principal Supervisor

INTEGRI PROCEDAMUS

P. O. Box LG 43, Legon, Accra, Ghana | Tel: +233 (0) 303 970 801
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UG

UNIVERSITY OF GHANA

SCHOOL OF NURSING AND MIDWIFERY
COLLEGE OF HEALTH SCIENCES

June 13, 2023

The Chairperson
Ethics review Committee
Ghana Health Service
Accra.

Dear Sir/Madam,

SUPPORT LETTER- HILDA BRAKOH

I am privileged to write in support of Hilda Brakoh's application. Hilda is a student at the University of Ghana School of Nursing and Midwifrey, pursuing MPhil in midwifery in the Department of Public Health Nursing. I have known Hilda for about a year now and I am currently her **co-Supervisor** for her masters' research title: '***Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana***'.

Hilda is humbly seeking for ethical approval for her research, and I highly recommend her proposal for your consideration and approval.

Thank you.

Yours faithfully,

Lillian Akorfa Ohene (PhD, RN)
Co-Research Supervisor

INTEGRI PROCEDAMUS

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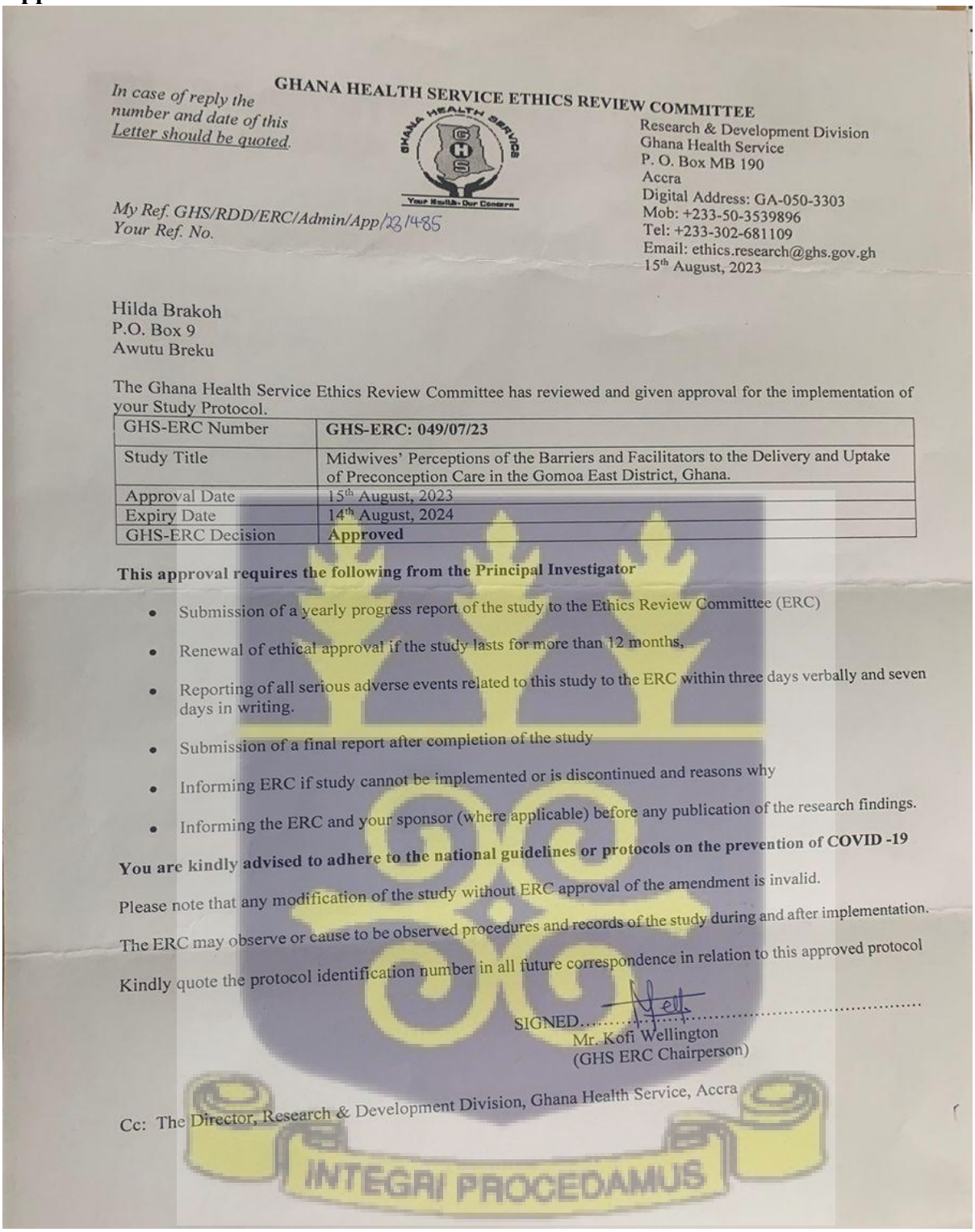
UG

Appendix B: Ethical Clearance



GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Digital Address: GA-050-3303
Mob: +233-50-3539896
Tel: +233-302-681109
Email: ethics.research@ghs.gov.gh
15th August, 2023

My Ref. GHS/RDD/ERC/Admin/App/23/1485
Your Ref. No.

Hilda Brakoh
P.O. Box 9
Awutu Breku

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC: 049/07/23**
Study Title	Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana.
Approval Date	15th August, 2023
Expiry Date	14th August, 2024
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
Mr. Kofi Wellington
(GHS ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

INFORMATION SHEET

Title: Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana.

Principal Investigator: Hilda Brakoh

Address: Department of Research, Education and Administration, School of Nursing

University of Ghana

Email: hbrakoh83.hb@gmail.com

Telephone number: 0244544754

School: College of Health science, school of nursing and midwifery, University of Ghana.

Background and Purpose of research

This study explores midwives' perceptions of barriers and facilitators to preconception care delivery and uptake in selected health facilities in the Gomoa East District of Ghana. Preconception care services are crucial for reducing maternal mortality and preventing preventable deaths in low-resource countries like Ghana. It involves providing essential services and advise to women and couples before conception, and addressing various factors that contribute to poor maternal and child health outcomes. Incorporating preconception care into primary care ensures that women of reproductive age are considered for risk factors for adverse pregnancy outcomes. Midwives play a vital role in providing these services so understanding their perceptions of the barriers and facilitators is essential for effective service delivery and quality improvement interventions.

Nature of the research

The study will use qualitative interviews to assess midwives' knowledge, perceptions of barriers, and facilitators for effective preconception care delivery**.** Findings of this study will be useful in informing the provision and uptake of preconception care services among women in their reproductive ages

Duration

If you agree to participate in this study, the interview will take approximately 30 minutes to complete.

Potential Risks

The study does not anticipate any potential risk. However, if any of the questions makes you uncomfortable, you do not have to respond.

Benefits

You will not benefit personally from being part of this study. Your response and responses of other participants will be analysed to inform service delivery and quality improvement interventions to help promote the provision and uptake of PCC services among women in their reproductive ages

Compensation

There will be no monetary compensation for participation. However, participants who were on leave yet had to report to the facility to be interviewed will be given a token for transportation.

Confidentiality

Names or traceable identity codes will not be required of you in participating in the study. All information provided about your socio-demographic details as well as responses to the questions will be kept confidential, and only accessible to the researcher and the supervisor for academic purposes only. You will not be identified in any report or publication about this study.

Voluntary participation/withdrawal

The decision to participate in this study is voluntary. You are not under any obligation to respond to any question(s) or participate in the study if you do not want to do so. You are at liberty to withdraw from the study at any point in time even after giving your initial consent. However, your opinions are very essential to this study so your responses may still be used together with other data in the event of voluntary withdrawal.

Contacts for Additional Information

If you have any additional questions or complaints please call, Hilda Brakoh on 0244544754 or my supervisor Dr. Daniel Kojo Arhinful at 020 8127999.

Your rights as a Participant

This research has been reviewed and approved by the Ghana Health Ethical Review Board. If you have any additional questions for clarifications such as your rights as a research participant you can also contact the Ghana Health Service Ethics Review Committee Administrator by phone number +233 030 268 1109/ 0503539896, email: ethics.research@ghs.gov.gh

Appendix C: Consent Form
CONSENT FORM

STUDY TITLE: Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and all questions satisfactorily explained to me in a language I understand (English). I fully understand the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form.

I understand that I will be given a copy of the information sheet and consent form to keep.

I voluntarily agree to be part of this research.

Name of Participant…….

Participants' Signature ……...OR Thumb Print……

Date:……

Appendix D: Interview Guide

INTERVIEW GUIDE

Topic: Midwives' Perceptions of the Barriers and Facilitators to the Delivery and Uptake of Preconception Care in the Gomoa East District, Ghana

Dear participant, you are humbly invited to take part in this study that seeks to explore the barriers and facilitators to the delivery and uptake of preconception care. Your responses are relevant in achieving the purpose of the study. Participation is voluntary and you have the right to withdraw at any point of the interview. Your voice will be recorded during the interview which will last for 30 to 60 minutes, and no other identifiable information of yours will be shared with a third party without your permission. I will require of you to fill in the items in section A.

Participant Code_____ Date of Interview _____

Interview Number (#) _____Participant signature _____

Name of facility: _____

Section A: Demographic Data

1. Your age (in years): _____
2. Professional rank: a. Staff midwife [ ]
   b. Senior staff midwife [ ]
   c. Midwifery officer [ ]
   d. Senior Midwifery officer [ ]
   e. Principal Midwifery officer [ ]
   f. Others (please specify): _____
3. Education qualification: a. Certificate [ ]

b. Diploma [ ]

c. Degree [ ]

d. Masters [ ]

4. Years of experience as a midwife: _____

Section B: level of knowledge, Barriers, Facilitators and Suggestions for Improving PCC

Level of Knowledge

Can you share with me your level of knowledge on preconception care in service delivery?

Probes:

a. Sources of Informed knowledge regarding Preconception care
b. Guideline and principles of preconception care in service delivery
c. Importance of preconception care in improving maternal and child health outcomes

Barriers

Can you share with me some of the barriers in the delivery and uptake of PCC services by women in their reproductive ages in your community?

Probes:

a. Barriers relating to you as a midwife and other care providers.
b. Some of the barriers at the client level
c. Facility's influence on the provision of PCC services
d. Other barriers from the community or public domain

Facilitators

Can you share with me some of the factors or anything that makes it easier for you to provide PCC and for women to utilize such services?

Probes

a. Qualities of the midwife that facilitate delivery and uptake of PCC.
b. Things about the client that makes it easy for the delivery and uptake of PCC
c. Social supports available for the delivery and uptake of PCC and how do they facilitate PCC
d. Facility's contribution to the delivery and uptake of PCC
e. Any other facilitators?

Suggestions

1. How could current PCC services and programs be improved to better meet the needs of women in your community?

   Probes

   a. Improvements at your level as a midwife?
   b. How about the client?
   c. Tell me about the health facility too.
   d. How about the community/society or public domain?

2. Are there relevant PCC services or programs for reproductive aged women that you wish were available in your community but aren't?