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FACTORS INFLUENCING CHOICE OF PLACE OF DELIVERY AMONG PREGNANT WOMEN IN THE ASHANTI BEKWAI MUNICIPALITY

BY

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DECLARATION

I, Edward Kolugu, do hereby declare that this thesis titled: "Factors Influencing Choice of place of delivery among pregnant women in the Ashanti Bekwai Municipality" is my own work carried out at the Department of Maternal and Child Health, University of Ghana under the supervision of Dr Mary Ani-Amponsah and Dr. Caroline Dinam Badzi. With the exception of the cited references, this thesis, either in whole or part, has never been submitted to this University or elsewhere for consideration for a master's degree in nursing.

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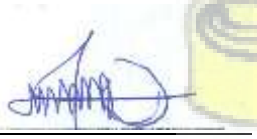

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DEDICATION

I dedicate this thesis to my immediate family, including my lovely wife, Miss Boadi Paulina, my daughter, Lenette Wepiah Kolugu and my son, Lesley Weseh Kolugu.

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First of all, I want to thank the Almighty God for granting me life, good health, strength, and the knowledge to be able to put this work together. I also appreciate my immediate and extended family for supporting me in diverse ways towards achieving this feat. Second in the pecking order is my supervisor, lecturer and dean of the School of Nursing and Midwifery, Dr. Mary Ani-Amponsah for her supervision, encouragement and advice towards putting this work together. May I also thank my second supervisor Dr. Caroline Dinam Badzi for her good heart and foresight towards my work, Dr, please thank you very much. May the Almighty God bless you in all your endeavours. A special appreciation is extended to the respondents who willingly consented to participate in the study. Their contributions were instrumental in the completion of this document. I also acknowledge and appreciate my senior colleague Meriam Seidu of the School of Nursing and Midwifery for her timely information about the amnesty programme, without which I could not have completed this work.

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ABSTRACT

Background: Despite global and national commitments to reducing maternal mortality, a substantial proportion of pregnant women in Ghana continue to deliver outside of health facilities. In the Ashanti Bekwai Municipality, while antenatal registrations have remained high, hospital-based deliveries have not shown commensurate increases. This study sought to investigate the behavioural beliefs, normative influences, attitudes, and subjective norms influencing pregnant women's choices regarding delivery locations.

Methods: A cross-sectional survey was conducted among pregnant women in the Bekwai Municipality. Data were collected through structured questionnaires and analysed using SPSS version 27. Principal Component Analysis was employed to generate composite scores for key theoretical constructs. Regression and causal mediation analysis were utilized to evaluate the relationships among beliefs, intentions, and delivery behaviour.

Results: A total of 415 pregnant women participated in the study. Behavioural beliefs were found to be significant predictors of the intention to deliver at a health facility (Adjusted Odds Ratio [AOR] = 1.70; 95% Confidence Interval [CI]: 1.14–2.52; $p = 0.009$), while outcome evaluations did not demonstrate a significant effect ($p = 0.890$). In the adjusted model, both normative beliefs ($\beta = 0.42$; $p < 0.001$) and motivation to comply ($\beta = 0.35$; $p < 0.001$) were identified as strong predictors of intention. Furthermore, positive attitudes toward delivery at health facilities were significantly correlated with intention ($\beta = 0.67$; $p < 0.001$). However, only intention (AOR = 1.93; 95% CI: 1.26–2.97; $p = 0.003$) emerged as a significant predictor of delivery behaviour, while attitude did not. Subjective norms (direct norms [$\beta = 0.26$] and normative beliefs [$\beta = 0.50$; $p < 0.001$]) exhibited a significant influence on intention. Mediation analysis indicated that behavioural intention significantly mediated the relationships between both attitude (80%) and subjective norms (88%) with the actual place of delivery.

Conclusion: The study concludes that maternal education, attendance at antenatal care, affordability of transportation, and spousal support significantly influence the choice of delivery location. Enhancing male involvement, improving community health education, and increasing access to health facilities may contribute to a rise in institutional deliveries within the Ashanti Bekwai Municipality.

CHAPTER ONE

INTRODUCTION

This chapter presents the background and significance of the study, underscoring the enduring maternal health challenges in Ghana despite advancements in antenatal care coverage. It delineates the research problem, articulates the study's objectives, and specifies the hypotheses to be tested. The chapter emphasizes the psychosocial, cultural, and structural factors that influence decisions regarding delivery locations and provides a rationale for the application of the Theory of Reasoned Action. Furthermore, it establishes the conceptual and contextual framework for the study.

1.1 Background to the study

Maternal mortality remains one of the most pressing public health challenges globally, particularly in low- and middle-income countries (LMICs). Each day, approximately 810 women die from preventable causes related to pregnancy and childbirth, with 94% of these fatalities occurring in LMICs (WHO, 2020). The majority of maternal deaths result from complications such as haemorrhage, sepsis, hypertensive disorders, and unsafe delivery practices; many of which can be averted through skilled birth attendance and facility-based delivery (Kawaguchi et al., 2021; Rahman et al., 2021). Efforts to mitigate maternal mortality were prominently featured in the Millennium Development Goals (MDGs), leading to global improvements. However, disparities across regions have persisted. As part of the Sustainable Development Goals (SDGs), the global community now aims to reduce maternal mortality to fewer than 70 deaths per 100,000 live births by 2030 (Rahman et al., 2021). Despite this objective, regions such as Sub-Saharan Africa, which accounted for approximately two-thirds of global maternal deaths in 2017, continue to encounter significant obstacles in achieving this target (Kabir, 2021).

One of the most effective strategies for decreasing maternal mortality is delivery in a health facility attended by skilled birth personnel. However, access to and utilisation of maternal healthcare services, including antenatal care (ANC), skilled birth attendance, and postnatal care, are inconsistent and influenced by a variety of interacting factors. These factors encompass maternal education, socioeconomic status, rural or urban residence, cultural beliefs, perceived risk of complications, and the availability and quality of services (Kabir, 2021; Kawaguchi et al., 2021; Rockliffe et al., 2021). Research conducted in South Asia and Sub-Saharan Africa indicates that maternal education, the educational level of husbands, household wealth, media exposure, the number of ANC visits, and proximity to health facilities are strong predictors of facility-based delivery (Kabir, 2021; Rahman et al., 2021). In Laos, Kawaguchi et al. (2021) found that family communication, birth preparedness, and cultural attitudes significantly influenced women's preferences for home versus institutional delivery. Similarly, health behaviour change during pregnancy is affected by self-identity, emotional readiness, and social norms, as demonstrated in a systematic review by Rockliffe et al. (2021).

In Ghana, the maternal mortality ratio (MMR) remains unacceptably high, with significant disparities between regions and districts. According to the Ghana Maternal Health Survey, while national facility-based delivery rates have improved, rural and peri-urban areas still report lower rates of institutional deliveries (GSS et al., 2018). The Ashanti Region, despite possessing relatively better infrastructure, exhibits variation at the district level. Specifically, the Bekwai Municipality has consistently recorded lower-than-average health facility delivery rates, with many women opting for traditional birth attendants or home delivery without skilled care.

Limited studies have been conducted to explore the specific contextual factors influencing women's choice of delivery location in the Bekwai Municipality. National-level studies provide

broad insights but fail to capture local socio-cultural dynamics, health system factors, and individual preferences that influence delivery decisions at the community level. This represents a critical gap in both research and policy formulation. The decision regarding where to deliver is complex and multidimensional. Drawing on Andersen's behavioural model of health service utilisation, factors influencing maternal healthcare can be classified as predisposing (e.g., age, education), enabling (e.g., income, health insurance), and need-based (e.g., perceived complications) (Kabir, 2021). Understanding these interacting components within the local context is essential for designing interventions that address both demand- and supply-side barriers to facility-based deliveries. Therefore, the current study examines the factors that influence pregnant women's choice of delivery location in the Ashanti Bekwai Municipality.

1.2 Problem Statement

Globally, maternal health remains a significant concern, particularly in low- and middle-income countries where facility-based deliveries are often inadequate. The World Health Organization (2019) estimates that 94% of all maternal deaths occur in these regions, frequently due to preventable complications such as haemorrhage, infection, and obstructed labour. Ensuring skilled attendance at birth and delivering in a healthcare facility are key strategies for preventing maternal and neonatal mortality (Kabir, 2021).

In Ghana, although antenatal care (ANC) coverage has significantly improved, with many women attending the recommended number of visits, this has not consistently resulted in an increase in facility-based deliveries. The Ashanti Region exemplifies this paradox. In the Bekwai Municipality, for instance, ANC registration figures have remained high, ranging from 4,281 to 5,015 between 2020 and 2024, yet the number of women delivering at health facilities consistently

lags behind (BMHD, 2024). This disconnect highlights a critical gap between service contact during pregnancy and the actual utilisation of skilled delivery services.

Existing literature identifies a range of individual and structural factors contributing to the low uptake of facility-based deliveries. These factors include educational level, socio-economic status, perception of service quality, cultural norms, spousal influence, and the accessibility of healthcare facilities (Alio et al., 2022; Rockliffe et al., 2021). For example, Kabir (2021) found that women in Bangladesh with higher education and income levels were significantly more likely to deliver at health facilities. Similarly, Kawaguchi et al. (2021) reported that cultural beliefs and limited male involvement influenced delivery choices in Laos.

Despite these global insights, there is limited context-specific evidence within Ghanaian districts such as the Bekwai Municipality, where local socio-cultural dynamics and health system challenges may uniquely shape maternal decision-making. Without localised data, interventions may overlook key influencers, thereby reducing their effectiveness. This study aims to investigate the specific factors influencing women's choice of place of delivery in the Ashanti Bekwai Municipality. It seeks to uncover how individual characteristics (such as education, income, and knowledge of risks), relational dynamics (such as spousal support), and systemic barriers (such as transportation and cost) interact to influence this critical decision. By addressing the knowledge gap at the local level, the findings can inform more targeted maternal health interventions and policies tailored to the community's realities.

Table 1.1: Number of pregnant women who delivered at the hospital against those who do not in the Bekwai Municipality

INDICATOR	2020	2021	2022	2023	2024
Total ANC registrants	4832	4904	5015	4448	4281
Total health Facilities deliveries	3228	3560	3673	3838	3681
Total TBA deliveries	78	22	22	52	128
Difference	1604	1344	1342	610	600

Source: (BMHD, 2024)

1.3 Purpose of the study

The purpose of the study was to investigate how behavioural beliefs, normative influences, self-motivation, attitudes, and socio-cultural factors affect the choice of place of delivery among pregnant women in the Bekwai Municipality.

1.4 Research Questions

The questions for the study included:

1. What are the beliefs and evaluations about choice of place of delivery among pregnant women in the Bekwai Municipality?
2. How do self-motivation and significant others influence choice of place of delivery?
3. What are the socio-cultural factors that influence choice of place of delivery among pregnant women?
4. What is the relationship between normative beliefs/self-motivation and choice of place of delivery?
5. How does attitude of pregnant women influence choice of place of delivery?

1.5 Specific objectives

The objectives of the study were to:

1. assess the behavioural beliefs and outcome evaluations of pregnant women regarding health facility versus non-facility delivery.
2. examine the influence of normative beliefs and motivation to comply with significant others on pregnant women's intention to choose a particular place of delivery.
3. analyse how attitudes toward institutional and non-institutional delivery predict intention and actual delivery behaviour.
4. explore the relationship between subjective norms and the intention to utilize health facility-based delivery services.
5. evaluate the mediating role of behavioural intention between attitudes/subjective norms and actual choice of place of delivery.

1.6 Hypothesis

The following hypotheses were tested.

1. Pregnant women who possess more positive behavioural beliefs, stronger normative support, and favourable attitudes toward health facility delivery are more likely to intend to deliver in a health facility.
2. Behavioural intention serves as a significant mediator in the relationship between attitudes or subjective norms and the actual choice of delivery location among pregnant women.

1.7 Significance of the study

The evidence indicating that normative beliefs and the motivation to comply with significant others predict intention, along with the role of intention as a mediator between attitudes and actual

delivery behaviour, will offer critical guidance for policy formulation and programming. The findings are expected to be beneficial to policymakers at the sub-district, district, regional, and national levels by informing the design of interventions that address sociocultural barriers and promote informed decision-making among pregnant women.

Additionally, the results will support the development of targeted, community-based education and behavioural change strategies to enhance trust in institutional delivery services and mitigate negative perceptions. Furthermore, this study will contribute to nursing research, administration, and practice by informing culturally sensitive maternal health care approaches. It will also serve as a significant academic resource, enriching the body of knowledge on maternal health and facilitating the development of future reproductive health interventions aimed at reducing maternal mortality and increasing the utilization of skilled delivery services in Ghana and similar contexts.

1.8 Operational definitions

- **Facility based deliveries:** Deliveries which take place in clinic, maternity home or a hospital
- **Out of facility delivery:** Deliveries by TBA's, home deliveries or self-deliveries
- **Place of delivery:** Refers to facility-based deliveries or out of facility deliveries
- **Pregnant women:** Women in their third trimester of pregnancy
- **Factors:** refer to the measurable variables or conditions; both individual and systemic that influence a pregnant woman's choice of place of delivery

1.9 Organization of study

This study is organized into five interrelated chapters, each purposefully designed to systematically build upon the preceding chapter and to provide a comprehensive understanding of the factors influencing the choice of delivery location among pregnant women in the Bekwai Municipality. The chapters are logically sequenced to reflect the research process, encompassing problem identification through to conclusions and recommendations.

Chapter One establishes the foundational context for the study, presenting an overview of maternal health and delivery care utilization on global, regional, and national levels. It articulates the research problem, substantiates the necessity for the study, and delineates both the general and specific objectives. Additionally, the chapter defines the research questions and hypotheses, elucidates the significance of the study, and concludes with an outline of the thesis organization.

Chapter Two offers an extensive review of the existing literature pertaining to maternal delivery choices, emphasizing themes such as behavioural beliefs, normative influences, attitudes, and behavioural intentions. This literature review synthesizes empirical evidence from both local and international contexts, identifies existing knowledge gaps, and introduces the Theory of Reasoned Action as the theoretical framework underpinning the study.

Chapter Three delineates the research methodology, encompassing the research design, study setting, population, sampling procedures, data collection instruments, and analytical techniques. It explicates the application of principal component analysis (PCA) for the derivation of composite indices and describes the utilization of multiple regression and mediation analyses to evaluate the study's hypotheses.

Chapter Four presents the results, systematically organized according to the study's objectives. This chapter includes descriptive statistics, inferential analyses, and mediation results, providing insights into the psychosocial and cultural determinants that influence delivery behaviour.

Finally, Chapter Five engages in a discussion of the findings in relation to the existing literature, emphasizing the contributions, limitations, and implications of the study. Chapter six concludes the study with actionable recommendations for policy, practice, and future research.

CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter presents on the theoretical underpinnings of the research, presenting the Theory of Reasoned Action as the guiding framework for examining maternal health-seeking behaviour. Subsequently, it reviews relevant empirical literature that informs the study's objectives, addressing themes such as behavioural beliefs, normative influences, attitudes, and subjective norms. Additionally, gaps in the literature are identified to justify the study's contribution to understanding delivery choices within semi-urban Ghanaian contexts.

2.1 Theoretical Background: The Theory of Reasoned Action

The Theory of Reasoned Action (TRA) was used as an organising framework of the study. This theory was used because it contained all the possible constructs (attitude, subjective norms, beliefs about the behaviour, evaluation, normative beliefs and motivation to comply) influencing behaviour. The theory is described below; the Theory of Reasoned Action (TRA) was developed in 1967 by Martin Fishbein and Icek Ajzen. The theory was developed from previous theory of attitude. The main objective of the theory was to help in the prediction of how humans will behave as a result of their attitudes and the intentions of their behaviour. It is believed that an individual behaves in a particular way based on the consequences of their behaviour. According to the Ajzen and Fishbein (1977), humans are rational and make use of available information so people do not just act but carefully consider the consequences and implications of the actions.

The Theory of Reasoned Action (TRA) tries to establish influence between beliefs, attitudes, intentions and behaviour. The theory suggests that the most important and immediate predictor of

human behaviour is behavioural intention. This is further influenced by attitudes towards the behaviour as well as subjective norms (Ajzen & Fishbein, 1980; Fishbein & Middlestadt, 1989).

According to Fishbein and Middlestadt, (1989), measuring behaviour must necessarily involve its four elements namely, action, target, context and time. It was proposed that all actions have to take place at a target in a particular context at a particular point in time. The following is an illustration. A woman leaves her home in the morning (time) to attend an antenatal care (ANC) service (action) at the ANC unit of the Bekwai Municipal Hospital (context) to ensure safe gestation and delivery (target). According to the diagram, the predictors of behaviour are beliefs about the behaviour, evaluation of the behaviour, normative beliefs, motivation, attitude about the behaviour, subjective norms and intention.

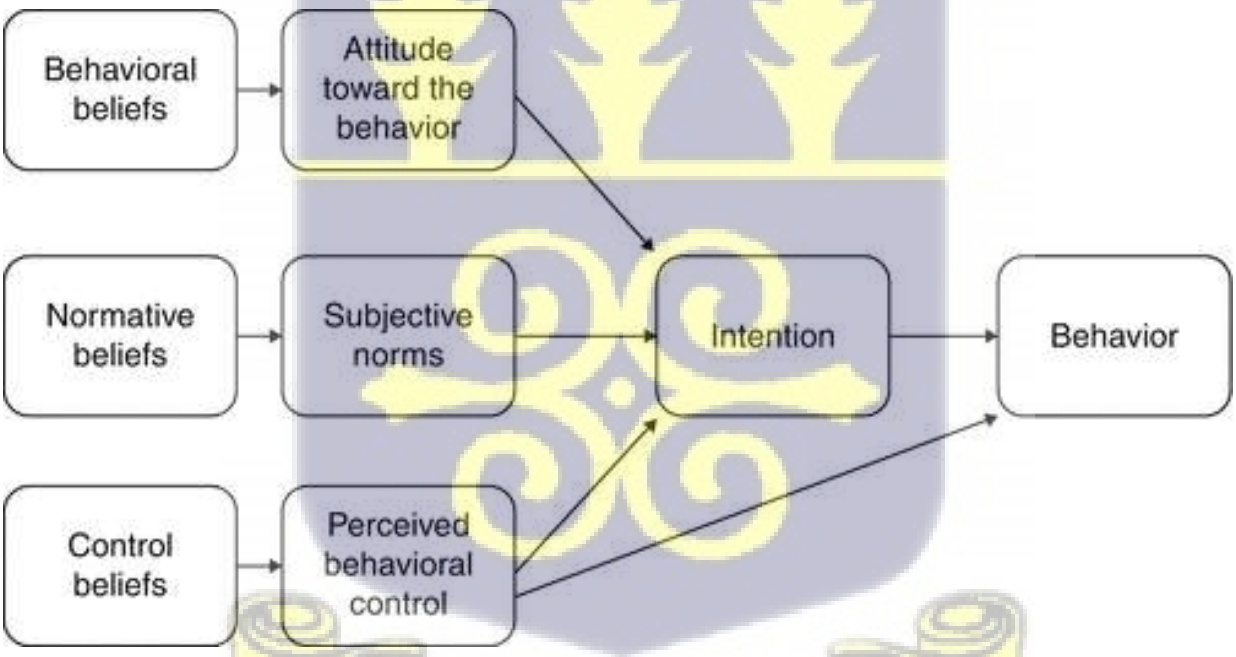

Figure 2.1: The Reasoned Action Theory
Source: (Ajzen & Fishbein, 1977)

2.1.1 Beliefs about the behaviour

Behavioural beliefs link the behaviour of interest to expected outcomes. A behavioural belief is the subjective probability that the behaviour will produce a given outcome. Although a person may hold many behavioural beliefs with respect to any behaviour, only a relatively small number are readily accessible at a given moment (Ajzen & Fishbein, 1980). It is assumed that these accessible beliefs in combination with the subjective values of the expected outcomes determine the prevailing attitude toward the behaviour. Specifically, the evaluation of each outcome contributes to the attitude in direct proportion to the person's subjective probability that the behaviour produces the outcome in question (see attitude toward the behaviour).

2.1.2 Evaluation of the behaviour

An individual's decision to engage in a particular behaviour is based on the outcomes the individual expects will come because of performing the behaviour.

2.1.3 Normative beliefs

Normative beliefs are individuals' beliefs about the extent to which other people who are important to them think they should or should not perform behaviours. According to Ajzen and Fishbein (1980), the difference between normative beliefs and subjective norms is in the fact that subjective norms involve individual or groups rather than generalized significant other.

2.1.4 Motivation to comply

According to the theory, motivation to comply is how much individuals involve have consistently with the prescriptions of important others.

2.1.5 Attitude

The attitudinal component of the diagram refers to how a person reacts to a particular behaviour according to the theorists. Ajzen and Fishbein (1980) proposed that the probability that a person undertakes behaviour depends on how favourable their attitude towards the behaviour is. There is a difference between attitude towards an object, and that towards a behaviour. According to Chan and Fishbein (1993), attitude towards a behaviour tends to predict behaviour more accurately than attitude towards an object.

2.1.6 Subjective Norm

This, as a predictor of behaviour refers to the perceptions of the person about the influence of significant others towards behaving in a particular way or not. It deals with whether social relations and significant others agree with the person or not as the person undertakes some new behaviour. This is affected by the person's motivation to agree or not with these social pressures (Ajzen & Fishbein, 1980). The person's beliefs concerning the pressures of the referent others is known as normative beliefs. This means that when a person believes that his/her significant others will approve of behaviour and motivated to comply with their views, the person will subsequently cultivate a positive subjective norm towards the behaviour and vice versa. This theory suggests a chain of causality linking behavioural and normative beliefs to behavioural intentions and the behaviour itself through attitude and subjective norms. This implies that a person will likely undertake a particular behaviour when he or she has positive evaluation of the behaviour and believes that his or her significant others will approve of it (Ajzen & Fishbein, 1980).

2.1.7 Behavioural intention

Behavioural intention (BI) is defined as a person's perceived likelihood or "subjective probability that he or she will engage in a given behaviour. The Theory of Reasoned Action suggests that

behaviour can easily be predicted when intention which is most important and immediate determinant of behaviour is measured. Ajzen (1991) stated that, the most proximate predictor of behaviour is behavioural intention and argued that behavioural intention reflects how hard a person is willing to try, and how motivated he or she is, to perform the behaviour. The relationship between behaviour and behavioural intention is further strengthened by how intention corresponds with behaviour and how stable intention remains over time (Ajzen & Fishbein, 1980).

2.2 Literature review

Under this section, a comprehensive literature review will be done according to the specific objectives of the study. Databases such as Google Scholar, Science Direct, PubMed, and MEDLINE will be the primary sources of relevant literature to the study. Literature review will then be organised under the following headings: beliefs and evaluation of pregnant women about choice of place of delivery, influence of significant others and self-motivation on choice of place of delivery, socio-cultural factors that influence choice of place of delivery, relationship between socio-cultural factors and choice of place of deliveries, and relationship between attitude and choice of place of delivery.

2.2.1 Behavioural beliefs and outcome evaluations of pregnant women regarding health facility delivery

Pregnant women's behavioural beliefs and evaluations of anticipated outcomes serve as fundamental determinants in the decision-making process regarding the location of delivery. These cognitive determinants, grounded in the Theory of Reasoned Action (Ajzen, 1991), influence whether women perceive facility-based childbirth as desirable, necessary, or beneficial. Across diverse contexts, these beliefs are shaped by prior experiences, social norms, cultural expectations, and perceived quality of care. Numerous studies have indicated that positive behavioural beliefs,

such as expectations of safety, skilled care, access to emergency interventions, and hygiene, facilitate health facility delivery (Atukunda et al., 2020; Ayana et al., 2021). Conversely, negative beliefs often revolve around distrust in the healthcare system, anticipated mistreatment by providers, unnecessary medical interventions, and cultural or spiritual incompatibility with hospital settings (Boah et al., 2020; El Shiekh & van der Kwaak, 2015). These evaluations frequently determine whether women associate facility delivery with favourable or unfavourable childbirth experiences.

A qualitative study conducted in Malawi by Kumbani et al. (2013) revealed that while women recognized the preventive and diagnostic benefits of antenatal care (ANC), their evaluations of facility delivery were often ambivalent. Although they acknowledged the importance of skilled birth attendance, fears of disrespectful care and lack of confidentiality deterred many from choosing health facilities for delivery. Women prioritized emotional support and social connectedness during labour, qualities that were perceived to be more readily provided by traditional birth attendants than by professional health workers. These findings are further corroborated by Mahiti et al. (2015), who reported that although pregnant women in rural Tanzania recognized the advantages of hospital deliveries (such as ultrasound services and professional monitoring), long wait times, informal fees, poor staff attitudes, and lack of privacy diminished their overall evaluations of the experience.

A comparable pattern emerged in Akwa Ibom State, Nigeria, where Mboho (2013) investigated perceptions of caesarean sections. Many respondents regarded the procedure, frequently performed in hospitals, as a curse or a failure of womanhood. These negative cultural beliefs contributed to an overall unfavourable evaluation of institutional delivery, despite the recognition that the procedure could be lifesaving. The prevailing perception that complications necessitating

surgical intervention reflected personal weakness or spiritual punishment diminished the appeal of skilled facility care. Beyond West Africa, Grigg et al. (2014) conducted a mixed-methods study in New Zealand, revealing that although most women were the primary decision-makers regarding their place of birth, their beliefs were significantly shaped by past experiences, peer influence, and the perceived atmosphere of different delivery settings. Women who viewed hospitals as overly clinical or depersonalized were less likely to select them unless they felt medically at risk. This finding aligns with the work of Gillian Houghton et al. (2008), who reported that women in the United Kingdom preferred hospital births for perceived safety; however, personal beliefs and the nature of the provider-patient interaction had a substantial impact on outcome evaluations.

Studies from Asia further corroborate the influence of behavioural beliefs. In rural Tamil Nadu, India, Ravi and Kulasekaran (2014) noted that while institutional delivery was predominant (95.2%), women who delivered at home expressed feeling better cared for by traditional birth attendants and found the hospital environment unwelcoming. Financial barriers, distance, and concerns about the inability to have family members present during delivery significantly contributed to their negative assessment of institutional delivery outcomes. Notably, educational attainment and birth order influenced these beliefs; women with secondary or higher education and those delivering for the first time held more favourable views of facility-based care.

In Sudan, El Shiekh and van der Kwaak (2015) examined maternal care among nomadic populations and found that behavioural beliefs were largely informed by traditional cosmologies. Health facilities were associated with complications, and delivery in such settings was interpreted as indicative of abnormal pregnancy. Trained TBAs were preferred due to their cultural embeddedness and accessibility, despite the acknowledged risks. Similarly, in Ethiopia, Gebregziabher et al. (2019) and Ayana et al. (2021) found that women's evaluations of facility-

based care were largely contingent upon how well services aligned with their expectations regarding respectful treatment and cultural appropriateness.

Atukunda et al. (2020) documented in Uganda that, despite near-universal attendance at antenatal care, a significant proportion of women opted for home deliveries due to entrenched beliefs regarding the normalcy of childbirth, the reliability of traditional birth attendants, and adverse expectations concerning public facility deliveries. Women perceived hospital births as necessary only in cases of complications, while routine deliveries were anticipated to be managed within the community utilizing traditional practices.

Outcome evaluations have also been shown to be associated with emotional and social experiences. For instance, Sychareun et al. (2012) reported in rural Laos that women's preferences for home delivery were not rooted in a lack of awareness regarding the advantages of hospital care but rather emerged from positive evaluations of home environments where they felt emotionally supported. This sense of emotional security, coupled with apprehensions about institutional staff attitudes led to the rejection of skilled care even in medically advisable circumstances. A significant cross-cultural insight is provided by Boah et al. (2020), who found in Ghana that women's beliefs regarding facility delivery were influenced not only by personal perceptions but also by the availability of essential delivery items. Women reported avoiding health facilities due to an inability to afford necessary items required at admission (e.g., sanitary pads, disinfectants). Such material prerequisites adversely impacted the perceived accessibility and desirability of hospital deliveries.

Importantly, a study conducted by Shifraw et al. (2016) indicate that women's negative beliefs are not merely based on myths or hearsay but often reflect genuine gaps in service delivery. Experiences or anticipations of verbal abuse, unattended labours, or being denied services due to

a lack of supplies or identification documents contributed to widespread unfavourable evaluations that transcended individual communities. Despite these challenges, a substantial body of research demonstrates that behavioural beliefs can be modified. Interventions designed to promote positive narratives regarding facility delivery, showcase role models, and engage communities in health promotion initiatives have shown considerable promise. For example, programs that incorporate culturally sensitive education, birth preparedness plans, and enhancements to facility environments have effectively transformed negative evaluations into positive perceptions (Tebekaw et al., 2015).

In summary, the literature consistently indicates that pregnant women's behavioural beliefs and outcome evaluations significantly influence their delivery choices. Positive beliefs regarding safety, hygiene, and skilled attendance serve as motivators for institutional delivery, while fears of mistreatment, inadequate reception, and cultural dissonance encourage home births. These findings underscore the necessity for respectful maternity care and demand-side interventions that aim to reshape perceptions through experiential learning and trust-building. Nevertheless, significant gaps persist. Many of the studies reviewed are qualitative, which limits their generalizability. Furthermore, few studies explicitly operationalize behavioural belief constructs utilizing theoretical frameworks such as the Theory of Reasoned Action. There is also a dearth of longitudinal or intervention studies that monitor changes in beliefs over time or assess the sustainability of belief change following exposure to health education or facility enhancements. Future research should investigate the mediating role of behavioural intention in translating beliefs into action and evaluate how these beliefs interact with structural determinants such as transportation, cost, and health system capacity.

2.2.2 Influence of normative beliefs and motivation to comply with significant others on pregnant women's intention to choose a particular place of delivery.

The Theory of Reasoned Action asserts that behavioural intention is shaped not only by individual attitudes but also by subjective norms, which encompass individuals' perceptions of social expectations and their motivation to adhere to those expectations (Ajzen, 1991). In the realm of maternal health, normative beliefs particularly those related to the perceived expectations of spouses, family members, religious leaders, and community figures significantly influence a woman's intention to utilize health facility-based delivery services. Research has highlighted the critical role of husbands and other influential referents in determining women's delivery decisions. Shamaki and Buang (2015) identified a strong correlation between spousal approval and the likelihood of institutional delivery in northern Nigeria. Their findings indicated that women were less likely to utilize health facilities when confronted with spousal disapproval, thereby illustrating how normative expectations can constrain women's autonomy. Similar results were reported by Upadhyay et al. (2014) in Nepal, where young and adolescent women particularly relied on spousal consent to access antenatal and delivery care.

In Tanzania, Danforth et al. (2009) demonstrated that male partners' perceptions of institutional delivery directly influenced women's decisions to opt for health facility births. Men who acknowledged the importance of hospital delivery were more likely to have partners who utilized facility-based childbirth services. This underscores how the motivation to conform to male partners' preferences often guides maternal health behaviour. Likewise, Sychareun et al. (2012) reported in rural Laos that decisions regarding the place of delivery were predominantly made by male household heads or older relatives, rather than by the pregnant women themselves, reflecting deeply rooted patriarchal norms. Further supporting this trend, studies from Bangladesh, Burkina Faso, and Mali confirm that husbands frequently serve as the principal decision-makers in maternal

care choices (Somé et al., 2013; White et al., 2013). These findings emphasize the necessity of involving men and influential family members in maternal health education and outreach initiatives to promote institutional delivery.

In a qualitative study conducted by Shifraw et al. (2016), Ethiopian women consistently underscored the significance of family consensus particularly the support or disapproval of mothers-in-law, parents, and husbands in their delivery decisions. The presence of a supportive family network and culturally sanctioned behaviours enhanced the likelihood of selecting facility delivery. Conversely, in contexts where families regarded hospital births as unnecessary or taboo, women encountered discouragement in utilizing such services. Boah et al. (2020) observed that in Ghana, even when women were aware of the benefits of health facility delivery, social obligations and the desire to avoid familial disapproval led many to deliver at home. This observation illustrates how normative pressures may override personal preferences or medical advice. A recurrent theme across these studies is that the intention to deliver in a health facility does not always reflect individual agency; rather, it is a manifestation of collective household and community values. This dynamic is reinforced by the fear of social sanctions, the desire to conform to gender expectations, and the value placed on obedience to elders or husbands.

In the study conducted by Grigg et al. (2014) in New Zealand, it is noteworthy that while women identified themselves as the principal decision-makers, their choices were nonetheless influenced by the attitudes of their partners and social networks. This finding suggests that even in high-income contexts characterized by stronger norms of autonomy, normative beliefs can subtly shape maternal decision-making. The literature further indicates that the extent of motivation to comply with significant others varies according to factors such as age, educational attainment, and parity. Specifically, younger women and those with lower levels of education exhibited greater

compliance with normative pressures (Kumbani et al., 2013; Shamaki & Buang, 2015), whereas mothers with higher educational qualifications or greater experience exhibited enhanced autonomy in selecting their place of delivery.

Furthermore, research by Mahiti et al. (2015) in Tanzania demonstrated that the prevailing community attitudes toward hospital deliveries, referred to as communal norms, could significantly influence individual intentions. When health facility deliveries were perceived as normative and desirable within a community, women were more inclined to pursue such options. This observation aligns with the findings of Speizer et al. (2014), who reported that community-level norms regarding institutional delivery substantially affected women's choices in Ghana, even after controlling for individual attitudes. Collectively, these studies underscore that normative beliefs and motivation to comply are not only pervasive influences but also critical factors in shaping the behavioural intentions of pregnant women.

However, a notable gap in the literature is the limited examination of how these normative pressures intersect with structural constraints, such as distance, cost, and provider attitudes, to influence final delivery decisions. While numerous studies document the existence of social pressure, fewer have quantitatively assessed its relative impact compared to other barriers. Additionally, although some interventions have sought to enhance male involvement in maternal health, there remains insufficient evidence on how shifts in normative beliefs translate into sustained behavioural change. The majority of the existing literature is descriptive or qualitative, indicating a need for more robust longitudinal or experimental studies to evaluate causal pathways.

In conclusion, normative beliefs grounded in familial, cultural, and communal expectations, as well as the motivation to adhere to these expectations, significantly shape pregnant women's intentions regarding their place of delivery. These influences are deeply entrenched in patriarchal

structures and social norms, often limiting individual autonomy. Addressing these factors necessitates the implementation of culturally sensitive, community-based strategies that actively involve men, elders, and religious leaders in maternal health promotion initiatives.

2.2.3 How attitudes toward institutional and non-institutional delivery predict intention and actual delivery behaviour.

Attitudes are fundamental in influencing health-seeking behaviour, particularly regarding the utilization of maternal health services. The Theory of Reasoned Action (Ajzen, 1991) posits that a woman's intention to engage in specific behaviours such as delivering in a health facility is significantly shaped by her overall assessment of that behaviour. This assessment, referred to as attitude, is derived from her beliefs concerning the anticipated outcomes of the behaviour and the value she assigns to those outcomes.

Empirical research has consistently demonstrated that pregnant women who exhibit positive attitudes toward institutional delivery are markedly more likely to plan for and ultimately give birth in health facilities. These favourable attitudes are generally influenced by perceptions related to safety, the availability of skilled birth attendants, environmental cleanliness, and the capacity to manage complications during labour (Ayana et al., 2021; Mahiti et al., 2015). For instance, in the study conducted by Gillian Houghton et al. (2008), a majority of women regarded hospital delivery as the benchmark for safe childbirth, while home delivery was perceived as an undesirable alternative. Similarly, respondents in Grigg et al. (2014) research highlighted the significance of medical backup and access to emergency services as pivotal factors influencing their preference for health facilities over home births.

In contrast, women with negative attitudes toward institutional delivery frequently associate it with fears of medical intervention, perceived disrespect or mistreatment by healthcare providers, lack

of privacy, and negative experiences of care. Such attitudes have been documented in various studies, where respondents recounted unwelcoming or even hostile conditions within health facilities, leading to a preference for home or traditional birthing environments (Atukunda et al., 2020; Mahiti et al., 2015). For example, Mahiti et al. (2015) reported that while women recognized the advantages of hospital delivery, they cited challenges such as long waiting times, provider absenteeism, and the imposition of illegal fees as contributors to their negative evaluations. Similarly, Atukunda et al. (2020) found that experiences of disrespect and abuse within health facilities deterred institutional delivery, even among women who initially intended to deliver in such settings.

Attitudes have been recognized as critical determinants that influence actual delivery behaviour through their effects on intention. Women who possess positive attitudes are more likely to establish intentions aligned with health facility delivery, thereby enhancing the probability of acting upon those intentions. Research conducted by Gillian Houghton et al. (2008) and Speizer et al. (2014) suggests that attitudes not only forecast intention but also function as mediators of delivery behaviour. However, the strength of the association between intention and behaviour may be moderated by contextual barriers, such as transportation issues, distance to health facilities, financial constraints, and sociocultural norms.

Contrasting findings arise when favourable attitudes fail to manifest in behaviour due to external constraints. For instance, Kumbani et al. (2013) identified that despite positive evaluations of antenatal care and intentions to deliver in health facilities, numerous women ultimately chose home deliveries owing to transportation difficulties or the unanticipated onset of labour. Similarly, Boah et al. (2020) found that financial limitations, a lack of essential delivery items, and

unpredictable labour onset frequently hindered facility-based deliveries, even among women with positive attitudes.

Furthermore, attitudes are influenced by factors such as parity, education, and previous birth experiences. Women with higher educational attainment and past experiences with health facility delivery tend to cultivate more favourable attitudes, thereby increasing the likelihood of returning for subsequent institutional births (Gebregziabher et al., 2019; Tebekaw et al., 2015). First-time mothers generally exhibit behaviour more closely aligned with their intentions, as they often depend more heavily on formal health advice compared to multiparous women, who may rely on their prior experiences, whether positive or negative.

It is essential to emphasize that it is not merely the presence of positive or negative attitudes that shapes intention and behaviour; the intensity of these attitudes and the context in which delivery decisions are made also play crucial roles. A qualitative study conducted in Laos by Sychareun et al. (2012) revealed that attitudes favouring traditional delivery often carry significant emotional and cultural weight, thereby influencing behaviour despite an understanding of the risks associated with non-facility births.

In conclusion, the literature consistently demonstrates that attitudes toward institutional and non-institutional delivery are vital determinants of both intention and actual delivery behaviour. Positive attitudes toward institutional delivery are reinforced by perceptions of safety and quality of care, while negative attitudes often stem from systemic failures within the health system and cultural beliefs that favour home births. Although the intention-behaviour link is robust, it remains susceptible to disruption by structural barriers and entrenched cultural norms. This body of evidence underscores the necessity of addressing not only perceptions but also enhancing the quality of care and the health system environment to align intentions with safe delivery behaviours.

2.2.4 Relationship between subjective norms and the intention to utilize health facility-based delivery services.

Subjective norms, defined as the perceived social pressure to engage in or refrain from specific behaviours, have emerged as a significant factor influencing maternal health decision-making, particularly regarding the choice of delivery location. The Theory of Reasoned Action (Ajzen, 1991) posits that subjective norms are shaped by normative beliefs concerning the expectations of key individuals (e.g., husbands, mothers-in-law, religious leaders, health workers) and the individual's motivation to comply with these referents. Collectively, these social influences play a crucial role in shaping women's intentions to deliver in health facilities.

A substantial body of literature underscores the impact of social networks and familial structures on women's childbirth decisions. Numerous studies have demonstrated that pregnant women are more inclined to express intentions to utilize health facilities when they perceive approval or encouragement from significant others. For instance, Danforth et al. (2009) found that in Tanzania, men's approval of institutional delivery was strongly correlated with actual facility delivery. Similarly, Upadhyay et al. (2014) in Nepal and Sarker et al. (2016) in Bangladesh identified that husbands and mothers-in-law frequently serve as the final decision-makers regarding maternal healthcare utilization, particularly among younger or less-educated women.

This phenomenon is also evident in African contexts. Shamaki and Buang (2015), in a study conducted in northern Nigeria, revealed that women's autonomy in making delivery decisions was significantly constrained by their husbands' preferences. In patriarchal household structures, women often require permission or financial support from their spouses to access delivery care. In such instances, the intention to utilize health facilities is less a manifestation of individual volition and more a response to familial or community expectations. Crissman et al. (2013) and Somé et

al. (2013) similarly documented that women residing in communities where facility delivery was socially endorsed were more likely to intend to and ultimately deliver in health facilities.

The influence of subjective norms extends significantly beyond the family unit, encompassing community leaders, religious authorities, and health professionals as pivotal influencers. Mahiti et al. (2015) noted that women exposed to positive messaging regarding institutional delivery from community health workers or local leaders exhibited a greater inclination to consider such services. Conversely, negative messaging from traditional or spiritual leaders, such as characterizing hospital delivery as unnecessary for normal births, can deter the utilization of health facilities, even in the presence of medical risks (El Shiekh & van der Kwaak, 2015). The motivation to adhere to these normative pressures varies across contexts and individual backgrounds. For instance, in conservative or rural settings, women are more likely to conform to traditional norms that favour home delivery, particularly when the use of health facilities is perceived to challenge familial roles or spiritual beliefs (Atukunda et al., 2020; Shifraw et al., 2016). In such contexts, women often prioritize social acceptance and familial harmony over personal health preferences, especially when confronted with economic or logistical obstacles.

In contrast, in contexts where health facility delivery has been institutionalized as the norm through education, policy, or health promotion campaigns, women are more likely to align with pro-facility social expectations. Research conducted by Speizer et al. (2014) and Gebregziabher et al. (2019) demonstrated that community-level acceptance and discourse surrounding facility-based deliveries were positively associated with an increased intention to utilize such services. This underscores the notion that subjective norms operate not only on an interpersonal level but also as phenomena that permeate the community. However, not all studies concur regarding the primacy of subjective norms. Some evidence indicates that, even when social support for institutional delivery exists,

women may fail to act on their intentions due to systemic constraints, such as long distances to health facilities, inadequate transportation, or previous negative interactions with health workers (Boah et al., 2020; Mbutu, 2018). These findings emphasize that while subjective norms may influence intentions, they do not invariably translate into behaviour unless structural barriers are addressed.

Moreover, the strength of subjective norms as predictors of intention is moderated by individual factors such as education, parity, and marital status. For instance, women with higher education levels or those in egalitarian relationships may experience greater empowerment to diverge from traditional expectations (Ravi et al., 2014). Conversely, younger women, first-time mothers, or those in polygamous marriages may encounter heightened pressure to conform to prevailing social expectations, thereby limiting their autonomy in delivery choices (Ayana et al., 2021; Tebekaw et al., 2015).

In conclusion, the literature presents compelling evidence that subjective norms serve as significant determinants of women's intentions to utilize health facility-based delivery services. These norms are influenced by familial dynamics, community factors, and broader cultural values, with their effects being particularly pronounced when women are motivated to heed the opinions of influential referents. While supportive subjective norms can bolster intentions to seek facility-based care, their effectiveness is contingent upon individual agency and the elimination of logistical and systemic barriers. Addressing these challenges through community engagement, male involvement, and sociocultural sensitive interventions may help to reconcile social expectations with safe delivery practices.

2.2.5 Mediating role of behavioural intention between attitudes/subjective norms and actual choice of place of delivery

The decision-making process regarding a woman's place of delivery is multifaceted and influenced by both cognitive and social factors. The Theory of Reasoned Action (Ajzen, 1991) posits that behaviour is primarily predicted by behavioural intention, which is shaped by individual attitudes toward the behaviour and by subjective norms. Within this theoretical framework, behavioural intention serves as a crucial mediator that connects an individual's beliefs and perceived social expectations to actual behaviour. Numerous studies in maternal health have examined this relationship within the context of childbirth decisions, particularly concerning the choice between institutional and non-institutional delivery.

A central argument in the existing literature is that attitudes, defined as an individual's favourable or unfavourable evaluations of delivering in a health facility can predict intentions but do not necessarily translate directly into behaviour. For instance, Gillian Houghton et al. (2008) found that while women in North-West England generally perceived hospital delivery as safer, their actual delivery behaviours were more significantly influenced by the formation of a definitive intention to deliver at a facility during pregnancy. Similarly, Mahiti et al. (2015) observed that women in rural Tanzania expressed positive attitudes toward health facility delivery, emphasizing the availability of skilled birth attendants and emergency care. However, only those who had established clear intentions often fortified by community norms and logistical considerations acted on these attitudes.

Subjective norms also play a significant role in shaping behavioural intention. Research conducted in South Asia and sub-Saharan Africa has consistently demonstrated that women's intentions to deliver in health facilities are heavily influenced by the perspectives of husbands, mothers-in-law,

community elders, and health professionals (Danforth et al., 2009; Sarker et al., 2016; Upadhyay et al., 2014). Nonetheless, these norms manifest in actual behaviour only when they sufficiently influence a woman's intention to act. For example, El Shiekh and van der Kwaak (2015) found that among nomadic populations in Sudan, despite community norms often discouraging hospital delivery, women who internalized positive normative cues and developed strong intentions were more likely to pursue skilled birth services.

The role of behavioural intention as a mediating factor has been substantiated by empirical research employing path analysis and structural equation modelling. In a study conducted by Speizer et al. (2014) in Ghana, both attitudes and community norms were significantly correlated with the intention to deliver at a healthcare facility, with this intention serving as a strong predictor of actual facility utilization. Notably, the indirect pathway from attitude to behaviour through intention was found to be more robust than the direct pathway, indicating a mediating effect. This finding aligns with results from Gebregziabher et al. (2019), who reported that the intention to utilize skilled delivery services mediated the impact of health knowledge and social approval on actual behaviours in Ethiopia. Additional studies aimed at isolating the effect of intention have revealed similar trends. For instance, Grigg et al. (2014) examined women in New Zealand and found that, while there was a general appreciation for institutional delivery, only those who made a deliberate decision early in their pregnancies often influenced by normative expectations and personal attitudes ultimately delivered in healthcare facilities. Conversely, women who hesitated or delayed in forming intentions were more susceptible to barriers such as distance, cost, or lack of transportation, frequently opting for home births despite possessing positive attitudes.

Interestingly, several studies have underscored the gap between intention and behaviour, particularly in resource-constrained settings. Boah et al. (2020) and Mbutu (2018) reported

instances wherein women expressed strong intentions to deliver at a healthcare facility yet ultimately delivered at home due to logistical challenges, abrupt onset of labour, or apprehension regarding mistreatment at health centres. These findings emphasize that while intention serves as a significant mediator, it is not invariably sufficient to ensure behaviour unless enabling conditions are established. Moreover, interventions designed to enhance intention have demonstrated efficacy in increasing rates of facility-based deliveries. For instance, Ayana et al. (2021) provided evidence that antenatal counselling, which reinforced positive attitudes and addressed normative concerns, significantly enhanced women's intentions and, consequently, their likelihood of delivering in healthcare facilities. Such findings suggest that public health initiatives can improve behavioural outcomes by targeting the mediating pathway, shaping both attitudes and norms to strengthen intention.

In conclusion, the literature affirms that behavioural intention occupies a crucial mediating role in the relationship between attitudes, subjective norms, and actual delivery location. While favourable attitudes and supportive social norms establish the cognitive and social foundation for facility delivery, it is the cultivation of a strong, actionable intention that most directly influences whether a woman ultimately delivers at a healthcare facility. However, this pathway is also influenced by external factors such as access to services, costs, and quality of care. Therefore, interventions aimed at increasing skilled birth attendance must not only promote favourable attitudes and norms but also ensure that intention is effectively translated into action by addressing practical barriers.

2.3 Summary of literature review

Chapter Two delineated the theoretical and empirical foundation of the study, employing the Theory of Reasoned Action (TRA) as its guiding framework. This theory asserts that behaviour is

most accurately predicted by behavioural intention, which is influenced by attitudes toward the behaviour and subjective norms. The chapter defined essential constructs such as behavioural beliefs, outcome evaluations, normative beliefs, motivation to comply, attitude, and subjective norms within the context of maternal health. The literature review was systematically aligned with the study's objectives. It initially examined how pregnant women's behavioural beliefs and outcome evaluations impacted their perceptions of institutional versus non-institutional delivery. Positive beliefs regarding safety, skilled care, and hygiene promoted facility-based delivery, whereas concerns surrounding mistreatment, cultural misalignment, and inadequate service quality deterred it.

Subsequently, the review investigated how normative beliefs and motivation to comply, particularly the influence of husbands, mothers-in-law, and community leaders, shaped women's delivery choices. These social expectations frequently superseded personal preferences in patriarchal settings. The analysis further explored how attitudes toward delivery settings predicted intentions and behaviours. Women exhibiting favourable attitudes toward facility delivery were more likely to intend to utilize and attempt facility births; however, this was occasionally impeded by barriers such as cost or distance. Moreover, the chapter discussed how subjective norms, mediated by perceived social approval or disapproval, influenced delivery intentions.

Finally, it addressed behavioural intention as a mediator between attitudes, norms, and actual delivery behaviour. Although intention strongly predicted behaviour, its influence could be obstructed by external factors. In conclusion, Chapter Two illustrated that maternal delivery choices are the result of a complex interplay of cognitive, social, and contextual influences. It also identified gaps in the literature, particularly the limited application of behavioural theory in semi-urban Ghana, thereby substantiating the study's focus on the Bekwai Municipality.

CHAPTER THREE

METHODOLOGY

This section outlined methods employed in the study. Thus, this chapter described the research methodology, the research design, study setting, target population, inclusion and exclusion criterion, sampling technique and sample size, data collection procedure, data management analysis, validity and reliability, study variables, ethical considerations and limitations of the study.

3.1 Philosophical Underpinning of this Study

This study is grounded in the positivist research paradigm, which posits that reality is objective, observable, and measurable. Positivism advocates for the use of empirical data and statistical analysis to elucidate relationships between variables and test hypotheses (Creswell & Creswell, 2017). In accordance with this philosophical orientation, the study employed a quantitative approach to investigate how various socio-demographic, economic, and systemic factors influence the choice of place of delivery among pregnant women in the Ashanti Bekwai Municipality. The researcher maintained a position of detachment from the subjects during data collection to minimise bias and ensure objectivity. By adhering to the principles of positivism, the study aimed to yield generalisable findings through the utilisation of structured instruments, measurable variables, and rigorous statistical procedures. This philosophical foundation underpins the use of standardised questionnaires and inferential analysis methods, such as logistic regression and mediation analysis, to assess cause-and-effect relationships within the population studied.

3.2 Research Design

This study employed a quantitative cross-sectional design to investigate the psychosocial and cultural factors that influence the choice of place of delivery among pregnant women in the Bekwai Municipality. A cross-sectional design is a non-experimental methodology that entails the collection of data at a singular point in time from a specified population (Creswell & Creswell, 2017). This approach is particularly effective for assessing the prevalence of outcomes and for examining associations between independent variables such as behavioural beliefs, attitudes, and subjective norms and a dependent variable (place of delivery). The design was deemed appropriate for this study as it allowed the researcher to capture a snapshot of pregnant women's intentions, beliefs, and actual delivery behaviours, along with the socio-demographic and contextual factors affecting those choices.

As noted by Goodman et al. (2013), cross-sectional studies are cost-effective, relatively quick to implement, and facilitate the simultaneous assessment of multiple variables. These attributes rendered the design particularly suitable for exploring complex behavioural constructs within a resource-constrained environment. The cross-sectional design enabled the study to evaluate how theoretical constructs from the Theory of Reasoned Action such as attitudes, behavioural intentions, and normative beliefs correlate with delivery decisions, without necessitating manipulation of the study environment or requiring extended follow-up. This enabled a thorough analysis of the factors influencing maternal delivery choices in the study area.

3.3 Study setting

The study was conducted in the Ashanti Bekwai Municipality, situated in the southern region of Ashanti, Ghana. Geographically, the municipality is bordered to the west by the Amansie West

and Central Districts, to the north by the Bosomtwe–Atwima–Kwanwoma District, and to the east by the Adansi East, Adansi North, and Asante Akim South Districts. It is located between latitudes 6°00′W to 1°35′W and longitudes 0°30′N to 6°00′N. The municipal capital, Bekwai, is approximately 28 kilometres from Kumasi, the regional capital. According to the 2021 Population and Housing Census, the Bekwai Municipality had a total population of 118,024, with 47.1% identified as male and 52.9% as female (BMHD, 2024). A substantial proportion of the population (approximately 82.4%) resided in rural areas. The general fertility rate within the municipality was recorded at 101.7 births per 1,000 women aged 15 to 49 years. The total household population was reported to be 115,445 (BMHD, 2024).

Health services in the municipality are primarily provided by the Bekwai Municipal Hospital, which is complemented by other public and private facilities, including Ahwene Memorial Hospital, Abenkyiman Hospital, Benito Clinic, and Amansie Clinic. These facilities offer a comprehensive range of services, including clinical care, preventive health, health promotion, and rehabilitation. The most prevalent health conditions in the area include malaria, skin infections and ulcers, respiratory tract infections, urinary tract infections, rheumatic and joint pains, diarrheal diseases, hypertension, intestinal worms, and pregnancy-related complications. The leading causes of hospital admissions are malaria, pregnancy-related complications, hernia, diarrheal diseases, and hypertension. The Bekwai Municipal Hospital encompasses several specialized units, including maternity, emergency, surgical, medical, paediatric, ultrasound, pharmaceutical, blood bank, ambulance, and mortuary services (BMHD, 2024). The hospital is staffed by two medical officers, two medical assistants, 117 nurses of various cadres, and 26 paramedical personnel. Additionally, 354 trained Community-Based Surveillance Volunteers are engaged in providing health support at the community level. The municipality exhibits socioeconomic diversity, with its

residents comprising government employees, farmers, and traders. The principal market day occurs on Wednesday, attracting sellers and buyers from various regions (BMHD, 2024).

Table 3.1: List of Health facilities in Bekwai Municipality

Sub Municipal	Name of Facility	Type of Facility	Ownership
BEKWAI	Bekwai Municipal Hospital	Hospital	Government
	Ahwene Memorial Clinic	Clinic	Private
Essumeja	Amansie Clinic	Clinic	Private
Dominase	Dominase SDA Hospital	Hospital	CHAG
	Abenkyiman Hospital	Hospital	Private
	Anidaso Clinic	Clinic	Private
Kortwia	Akomaa SDA Hospital	Hospital	CHAG
	Gyasikrom H/Centre	Health Centre	Government
	Kensere CHPS Compound	CHPS Compound	Government
	Saviour Community Clinic	Clinic	Private
	Tenkwaamah M/Home	Maternity Home	Private
Kokofu	Kokofu General Hospital	Hospital	Government
	Ahmadiyya Moslem Hosp.	Hospital	Private

3.4 Target population

The target population for this study included pregnant women residing in the Ashanti Bekwai Municipality, with a particular focus on those in the final semester of pregnancy, as this group is more likely to have formed intentions regarding their preferred delivery location.

3.4.1 Inclusion criteria

- Pregnant women who were in their third trimester (28 weeks of gestation or more) at the time of data collection.

- Women who were permanent residents of the Ashanti Bekwai Municipality and had utilized antenatal care services at any health facility within the municipality.
- Individuals who voluntarily consented to participate in the study and possessed proficiency in English or a local language (Twi).

3.4.2 Exclusion criteria

The following categories of women were excluded from the study:

- Pregnant women who had severe physical or cognitive impairments that could impede their ability to engage meaningfully in the survey.
- Visitors or non-residents of the municipality who were temporarily accessing antenatal care within the area.

3.5 Sampling technique

This study employed a purposive sampling technique, a non-probability sampling method in which respondents are selected based on specific characteristics or criteria pertinent to the research objectives. This approach was deemed appropriate due to the focus on women of reproductive age who had delivered within the past 12 months in the Ashanti Bekwai Municipality. Purposive sampling allows the researcher to intentionally target individuals who possess the most relevant knowledge and are capable of providing data pertinent to the research questions (Nurhidayati et al., 2025). In this study, the inclusion criteria comprised women aged 15–49 years, residents of the municipality, and those who had attended antenatal care and completed a delivery within the specified reference period. Respondents who did not meet these criteria were excluded from the sample.

The rationale for employing purposive sampling is twofold. First, the research sought to explore delivery choices among women with recent childbirth experiences, thereby ensuring that responses

were based on recent and reliable recall. Second, the study aimed to assess specific factors such as antenatal care attendance, spousal involvement, and accessibility of health facilities, which necessitate respondents who have directly interacted with the maternal healthcare system. Although purposive sampling does not facilitate statistical generalisation to the entire population, it enables the researcher to gain in-depth insights from a defined and relevant subgroup, which aligns with the study's objectives and cross-sectional design.

3.6 Sample size

The sample size for the study was calculated using Yamane (1967) formula for sample size determination. According to Yamane (1967), the sample size can be calculated if the population size of the target group is known by using the formula below.

$$n = \frac{N}{1 + N(e)2}$$

Where n= required sample size

N= population size

e= alpha level

The projected number of registrants (pregnant women) in the Ashanti Bekwai Municipality for 2024 was 5394. With an alpha level of 0.05, the sample size (n) can be calculated as shown below

$$n = \frac{5394}{1 + 5394(0.05)2}$$

$$n = \frac{5394}{14.48}$$

$$\mathbf{n = 372}$$

Allowing a non-response rate of 10% (37), the sample size for the study was estimated at 409. However, a total of 415 pregnant women were sampled for the study.

3.7 Study Instrument

Data for the study were collected utilizing a standardized questionnaire based on the Theory of Reasoned Action. The original instrument was meticulously adopted and modified to align with the local context and effectively address the specific objectives and research questions of the study. The final iteration of the questionnaire was organized into six thematic sections. The first section documented the sociodemographic characteristics of respondents, encompassing age, marital status, educational attainment, parity, and occupation. The second section concentrated on behavioural beliefs and outcome evaluations, assessing respondents' perceptions of the advantages and disadvantages associated with delivering in a health facility. The third section investigated the opinions of referent others including spouses, family members, and community elders alongside the respondents' motivation to comply with these referents. The fourth section evaluated attitudes toward institutional and non-institutional delivery, while the fifth section addressed subjective norms, capturing perceived social pressure regarding the choice of delivery setting. The sixth and final section assessed behavioural intention, measuring the likelihood that respondents would choose a facility-based delivery.

3.8 Study Variables

The study utilized the Theory of Reasoned Action as its theoretical framework. Within this model, the dependent variable was the behaviour under investigation, specifically the selection of place of delivery, categorized as either institutional or non-institutional. The independent variables

encompassed behavioural beliefs, outcome evaluations, normative beliefs, motivation to comply, attitudes toward health facility delivery, subjective norms, and behavioural intentions. These constructs were operationalized using standardized scale items and subsequently analysed to evaluate their individual and collective impact on delivery decisions.

3.9 Data collection procedure

Data were collected through interviewer-administered questionnaires following the acquisition of informed consent from each participant. The data collection process encompassed both oral interviews and self-administration of questionnaires, contingent upon the literacy levels of the respondents. Each day of data collection, the questionnaires were read, interpreted, and elucidated to respondents in a language they comprehended primarily Twi or English. For literate respondents who opted to complete the questionnaire independently, the forms were distributed for self-completion. In instances where respondents were unable to read or write, trained research assistants administered the interviews and documented the appropriate responses based on the respondents' verbal answers. The data collection exercise was conducted with the support of trained research assistants who were well-versed in the questionnaire and the local context. The process was systematically continued until the targeted sample size was attained. Throughout the exercise, ethical considerations, including privacy, confidentiality, and voluntary participation, were rigorously maintained.

3.10 Validity and Reliability

A pre-test of the standardized study instrument (structured questionnaire) was conducted in the Formena district hospital, involving a sample of twenty (20) women who met the established inclusion criteria. Formena was chosen because it shared similar socio-demographic and economic characteristics with the study setting. This procedure aimed to validate the questionnaire by

assessing its length, clarity, and linguistic appropriateness, as well as identifying any culturally sensitive or ambiguous items. Feedback from respondents was utilized to revise items that were unclear or potentially inappropriate. The reliability of the instrument was evaluated through the calculation of Cronbach's alpha (≥ 0.70) to ensure the internal consistency of the various subscales (**Supplementary sheet: factor analysis**). Several prior studies employing the Theory of Reasoned Action questionnaire have reported satisfactory levels of reliability, thereby further substantiating the robustness of the instrument.

3.11 Data management and Analysis

Completed questionnaires were securely stored in locked facilities. Subsequently, they were evaluated for completeness, coded, and entered into the Statistical Package for Social Sciences (SPSS) software, version 27, for analysis. Data cleaning was performed post-entry by executing frequency distributions to identify and correct any inconsistencies. Descriptive statistics, including frequencies, percentage distributions, means, and standard deviations, were utilized to summarize the data, which were presented through tables, pie charts, and bar charts. Cross-tabulation analyses were conducted to investigate the relationship between independent variables and the outcome variable, specifically the choice of delivery location. Chi-square tests were applied within the cross-tabulation analyses to identify significant differences in delivery choices, employing a significance level of $p \leq 0.05$.

Principal Component Analysis (PCA) was conducted to compute composite scores for key theoretical constructs, including behavioural beliefs, outcome evaluations, attitudes, normative beliefs, and motivation to comply. Standardized variables were employed to ensure comparability across different measurement scales. The first principal component was retained for each index, explaining between 52.7% (outcome evaluations) and 60.2% (normative beliefs) of the variance.

Internal consistency was assessed using Cronbach's alpha, with values ranging from 0.78 (outcome evaluations) to 0.85 (attitude toward health facility delivery), indicating acceptable to high reliability.

Binary logistic regression was employed to examine associations between behavioural beliefs, outcome evaluations, and the location of delivery. Multiple linear regression was utilized to assess the influence of normative beliefs and motivation to comply on the intention to deliver at a health facility. Attitudes were analysed using linear regression to predict intention and binary logistic regression to predict actual delivery behaviour. The relationship between subjective norms and intention was explored using simple linear regression. Finally, causal mediation analysis, following the methodology proposed by Baron and Kenny, was employed to determine whether behavioural intention mediated the relationship between attitudes or subjective norms and the actual place of delivery. This analytical strategy ensured the application of appropriate statistical models aligned with the specific research objectives. The summary of the analysis approach is presented in Table 3.1.

Table 3.2 statistical analysis approach for each specific objective

SN	Objective	Type of Variables	Test Statistic(s)
1	To assess the behavioural beliefs and outcome evaluations of pregnant women regarding health facility versus non-facility delivery.	**Independent:** Belief scores, evaluation scores (continuous) **Dependent:** Place of delivery (binary: facility vs. non-facility)	Logistic regression
2	To examine the influence of normative beliefs and motivation to comply with significant others on pregnant women's intention to choose a particular place of delivery.	**Independent:** Normative beliefs, motivation to comply (continuous) **Dependent:** Intention to deliver at facility (continuous)	Multiple Linear Regression
3	To analyse how attitudes toward institutional and non-institutional delivery predict intention and actual delivery behaviour.	**Independent:** Attitude scores (continuous) **Dependent:** Intention (continuous) and behaviour (binary)	Simple/Multiple Linear Regression (for predicting intention)
4	To explore the relationship between subjective norms and the intention to utilize health facility-based delivery services.	**Independent:** Subjective norm score **Dependent:** Intention score	Linear Regression
5	To evaluate the mediating role of behavioural intention between attitudes/subjective norms and actual choice of place of delivery.	**Mediator:** Intention **Independent Variables**: Attitude, Subjective norms **Dependent Variable**: Place of delivery (binary)	Mediation Analysis using Logistic Regression with Baron & Kenny's method

3.12 Ethical Considerations

Ethical approval was secured from the Institutional Review Board (IRB) of the Noguchi Memorial Institute for Medical Research prior to the initiation of data collection (NMIMR-IRB/17/10/16). An official introductory letter from the School of Nursing at the University of Ghana was submitted to the Bekwai Municipal Health Directorate and local community leaders to obtain permission for the conduct of the study. Participation was entirely voluntary, and all respondents were apprised of their right to refuse or withdraw from the study at any stage without facing any repercussions. The anonymity of respondents was strictly maintained, and all responses were handled with the utmost confidentiality throughout the research process.

Potential Benefits: It must be stated that there are no immediate direct benefits to the respondents but findings to the study will be used to improve maternal health care which will finally serve as benefits to the respondents and the nation at large.

Confidentiality: The researcher wants to assure the respondents that all information provided will be treated confidentially and names provided replaced with special codes. Names of respondents will not be mentioned in the research report. Before coding names, the principal researcher will keep all information under lock and key. Questionnaires will be destroyed five years after the study.

Compensation: The researcher intends to refresh respondents with a bottle each of Malta and a pack of cream cracker biscuit at a cost of GH¢ 5.00.

Voluntary participation: Respondents are informed that they have the right to decide to take part in the study or not and in case of agreement to participate, respondent can at any time in the study opt out with without being held responsible for his or her decision.

Termination of participation: The respondent's participation in the study will be ceased if he or she fails to sign the consent form.

CHAPTER FOUR

RESULTS

This chapter presents the findings derived from the data analysis. It commences with an overview of the demographic and socioeconomic profiles of the respondents, followed by a thematic presentation of results aligned with the study's objectives. The analysis includes regression and mediation models that examine the influence of psychosocial constructs: specifically, beliefs, attitudes, and normative pressures, on delivery intentions and behaviours.

4.1 Background Characteristics of Respondents

4.1.1 Demographics and socioeconomic characteristics of respondents

The table 4.1 presents the demographic and socioeconomic characteristics of the study respondents. A total of 415 individuals participated in the research. Among them, 57 women (13.7%) were under 20 years of age, while the most substantial age group comprised individuals aged 21–25 years, accounting for 32.3% of the overall sample. The majority of respondents (85.1%) were either married or cohabiting, whereas 12.8% identified as single, and 2.2% reported being separated or divorced. When further categorized by marital arrangement, monogamous unions were the most prevalent (77.2%), followed by cohabitation (11.6%) and polygamous relationships (11.1%). Concerning religious affiliation, approximately two-thirds of respondents identified as Christians (66.7%), followed by Muslims (23.4%) and adherents of African Traditional Religion (ATR) (9.9%). Ethnically, the sample was predominantly Asante (70.5%), with smaller proportions from Dagomba (4.8%) and other minority groups (24.6%), reflecting the geographic predominance of Asante respondents in the study.

Regarding educational attainment, the majority of respondents possessed some degree of formal education, with 39.4% having completed Junior High School (JHS), followed by 30.7% who were Senior High School (SHS) graduates, and 10.4% who had attained tertiary education. Notably, 8.7% of respondents had no formal education, while 10.9% had only completed primary education. In terms of occupational status, the largest segment of respondents was self-employed (48.2%), indicative of a significant level of informal economic activity. Farming constituted 15.4% of the sample, while housewives represented 14.9%. A smaller proportion of respondents were employed in the public sector (11.8%) or the private sector (9.6%). These findings suggest diverse socioeconomic contexts, which may influence both access to and preferences for maternal health services.

Table 4.1 Demographics and socioeconomic characteristics of respondents

Variables	Categories	Frequency	Percent
Age of respondents	< 20 years	57	13.7
	21-25 years	134	32.3
	26-30 years	94	22.7
	31-35 years	83	20.0
	31-35 years	47	11.3
Marital status of respondents	married/cohabitation	353	85.1
	Single	53	12.8
	separated/divorced	9	2.2
Type of participant's marriage	Monogamous	319	77.2
	Polygamous	46	11.1
	Cohabitation	48	11.6
Religious affiliation of respondents	ATR	41	9.9
	Christian	276	66.7
	Islam	97	23.4
Ethnicity of respondents	Asante	292	70.5
	Dagomba	20	4.8
	Others	102	24.6
Educational levels of respondents	Primary	45	10.9
	JHS	163	39.4
	SHS	127	30.7
	Tertiary	43	10.4
	No education	36	8.7
Occupational levels of respondents	Housewife	62	14.9
	Public sector	49	11.8
	Farming	64	15.4
	Private sector	40	9.6
	Self-employed	200	48.2

4.1.2 Gynaecological history of respondents

The table 4.2 presents the distribution of respondents based on key gynaecological history variables, including the number of pregnancies, deliveries, and living children. These background reproductive characteristics provide critical context for understanding the sample's obstetric profile and associated healthcare behaviours. Among the total sample of 415, many of respondents (45.3%) had experienced between two and four pregnancies, closely followed by those in their first pregnancy (42.7%). A smaller proportion (12.0%) reported having experienced more than four pregnancies, indicating a relatively balanced distribution between primigravida and multigravida women. The results further revealed that nearly half of the respondents (48.0%) reported having had between one and three deliveries, while 18.6% had experienced more than three deliveries. Notably, 33.5% of respondents had no prior deliveries, which may reflect a significant proportion of first-time mothers within the sample. Lastly, nearly half (45.4%) of the women had one to three children, 33.3% had four to five, and 21.3% had more than five children. This suggests that while the majority of respondents exhibit moderate parity, a considerable segment possesses high parity, which may have implications for their delivery preferences and intentions.

Table 4.2: Gynaecological history of respondents

Variable	Categories	Frequency	Percent
Number of pregnancies	first pregnancy	177	42.7
	2-4 pregnancies	188	45.3
	> 4 pregnancies	50	12.0
Number of deliveries	1-3 deliveries	199	48.0
	> 3 deliveries	77	18.6
	No deliveries	139	33.5
Number of children	1- 3 children	188	45.4
	4 - 5 children	138	33.3
	> 5 children	88	21.3

4.1.3 Cross tabulation of pregnant women background characteristics with place of delivery

The table 4.3 presents the findings of a cross-tabulation analysis examining the association between sociodemographic and obstetric characteristics of pregnant women and their actual place of delivery, utilizing Pearson's chi-square tests. The analysis revealed significant relationships between age, type of marriage, religious affiliation, ethnicity, educational attainment, occupational status, place of residence, parity, and the number of children with the selection of delivery location ($p < 0.001$). Younger women exhibited a markedly higher propensity to deliver in health facilities compared to their older counterparts. Specifically, 88.3% of women aged 26–30 years and 88.1% of those aged 21–25 years opted for facility delivery, in contrast to only 27.7% of women aged 36–40 years ($p < 0.001$). Marital structure also influenced delivery choices, with 77.1% of women in monogamous marriages delivering in facilities, compare to 47.8% of those in polygamous unions ($p < 0.001$).

Religious affiliation was another significant factor; women identifying as Christian had the highest facility delivery rate at 82.2%, compared to 67.0% among Muslims and 31.7% for followers of African Traditional Religions ($p < 0.001$). A comparable pattern was observed concerning ethnicity, with Asante women demonstrating a greater likelihood of facility delivery (77.1%) than Dagomba women (40.0%) ($p < 0.001$).A discernible gradient in facility delivery was evident based on educational attainment: 100% of women with Senior High School (SHS) and tertiary education delivered at a facility, while none of the women with only primary education did so ($p < 0.001$). Occupational status emerged as another critical determinant, as 86.0% of self-employed women and 87.5% of those employed in the private sector delivered in health facilities, in contrast to merely 26.6% of farmers ($p < 0.001$).

Place of residence significantly affected delivery behaviour, with 84.6% of women residing in peri-urban areas delivering in facilities, compared to 58.1% in rural locales ($p < 0.001$). Obstetric history also played a significant role; 91.5% of first-time pregnant women delivered at a facility, whereas only 32.0% of women with more than four pregnancies did so ($p < 0.001$). Additionally, only 46.6% of women with more than five children utilized health facilities for delivery, indicating a decreased likelihood of facility delivery associated with increasing parity.

Table 4.3: Cross tabulation of pregnant women background characteristics with place of delivery

Variables	Categories	Choice of Delivery place		P-values
		Non-facility delivery	Facility delivery	
Age of respondents	< 20 years	14 (24.6)	43 (75.4)	<0.001
	21-25 years	16 (11.9)	118 (88.1)	
	26-30 years	11 (11.7)	83 (88.3)	
	31-35 years	35 (42.2)	48 (57.8)	
	36-40 years	34 (72.3)	13 (27.7)	
Marital status of respondents	Married/Cohabitation	91 (25.8)	262 (74.2)	0.163
	Single	14 (26.4)	39 (73.6)	
	Separated/Divorced	5 (55.6)	4 (44.4)	
Type of participant's marriage	Monogamous	73 (22.9)	246 (77.1)	<0.001
	Polygamous	24 (52.2)	22 (47.8)	
	Cohabitation	13 (27.1)	35 (72.9)	
Religious affiliation of respondents	African Tradition	28 (68.3)	13 (31.7)	<0.001
	Christian	49 (17.8)	227 (82.2)	
	Islam	32 (33.0)	65 (67.0)	
Ethnicity of respondents	Asante	67 (22.9)	225 (77.1)	<0.001
	Dagomba	12 (60.0)	8 (40.0)	
	Others	30 (29.4)	72 (70.6)	
Educational levels of respondents	Primary	45 (100)		<0.001
	JHS	28 (17.2)	135 (82.8)	
	SHS		127 (100)	
	Tertiary		43 (100)	
Occupational levels of respondents	No education	36 (100)		<0.001
	Housewife	25 (40.3)	37 (59.7)	
	Public sector	5 (40.3)	44 (89.8)	
	Farming	47 (73.4)	17 (26.6)	
	Private sector	5 (12.5)	35 (87.5)	
	Self-employed	28 (14.0)	172 (86.0)	
Place of residence	Urban	3 (25.0)	9 (75.0)	<0.001
	Peri-urban	36 (15.4)	198 (84.6	
	Rural	70 (41.9)	97 (58.1)	
Number of pregnancies	First pregnancy	15 (8.5)	162 (91.5)	<0.001
	2-4 pregnancies	61 (32.4)	127 (67.6)	
	> 4 pregnancies	34 (68.0)	16 (32.0)	
Number of deliveries	1-3 deliveries	61 (30.7)	138 (69.3)	<0.001
	> 3 deliveries	39 (50.6)	38 (49.4)	
	No deliveries	10 (7.2)	129 (92.8)	
Number of children	1-3 children	27 (14.4)	161 (85.6)	<0.001
	4-5 children	36 (26.1)	102 (73.9)	
	> 5 children	47 (53.4)	41 (46.6)	

4.2 Behavioural Beliefs and Outcome Evaluations of Pregnant Women Regarding Health Facility Versus Non-Facility Delivery

The table 4.4 shows the results of a binary logistic regression analysis that investigates the relationship between pregnant women's behavioural beliefs and their evaluations of health facility delivery outcomes, while accounting for important demographic and obstetric factors. The analysis showed that the Behavioural Beliefs Index was a statistically significant predictor of the intention to deliver at a health facility (AOR = 1.70; 95% CI: 1.14–2.52; p = 0.009). This indicates that women with more positive beliefs about facility delivery were significantly more likely to choose this option. Conversely, the Outcome Evaluation Index was not found to be statistically significant (AOR = 0.97; 95% CI: 0.62–1.52; p = 0.890), suggesting that women's evaluations of the consequences associated with delivering at a facility did not significantly influence their behavioural intention.

Among the demographic variables, age group exhibited a strong association with delivery preference. Compared to women aged 36–40 years (reference category), those aged 21–25 years (AOR = 5.74; 95% CI: 1.95–16.83; p = 0.001) and 26–30 years (AOR = 11.52; 95% CI: 3.82–34.71; p < 0.001) were significantly more likely to intend to deliver at a health facility. On ethnicity, Asante women demonstrated a higher likelihood of intending to pursue facility-based delivery compared to women from other minority groups (AOR = 3.14, 95% CI: 1.46–6.75, p = 0.003), while Dagomba ethnicity was not significantly associated (p = 0.134).

Place of residence also exhibited partial significance. Women residing in peri-urban areas were more likely to prefer facility delivery than those in rural areas (AOR = 2.12; 95% CI: 1.12–4.02; p = 0.022). However, urban residence did not yield a statistically significant result (p = 0.297). Regarding pregnancy history, women experiencing their first pregnancy were substantially more

likely to intend to deliver at a facility compared to those with more than four pregnancies (AOR = 8.07; 95% CI: 2.24–29.10; p = 0.001). No significant effects were observed for parity or number of children.

Table 4.4: Behavioural Beliefs and Outcome Evaluations of Pregnant Women Regarding Health Facility Versus Non-Facility Delivery

Variables	AOR	95% C.I.	P-value
Single behavioural beliefs index toward hospital delivery	1.70	(1.14, 2.52)	0.009
Single evaluation index toward hospital delivery	0.97	(0.62, 1.52)	0.890
Age of respondents (Ref= 36-40 years)			
< 20 years	1.88	(0.51, 6.94)	0.342
21-25 years	5.74	(1.95, 16.83)	0.001
26-30 years	11.52	(3.82, 34.71)	0.000
31-35 years	2.27	(0.86, 5.96)	0.096
Type of marriage (Ref=Cohabitation)			
Monogamous	2.54	(0.93, 6.96)	0.070
Polygamous	2.36	(0.64, 8.68)	0.196
Ethnicity of respondents (Ref= Other minority groups)			
Ashante	3.14	(1.46, 6.75)	0.003
Dagomba	0.41	(0.13, 1.32)	0.134
Place of residence (Ref= Rural)			
Urban	2.65	(0.43, 16.47)	0.297
Peri-urban	2.12	(1.12, 4.02)	0.022
Number of pregnancies (Ref = >4 pregnancies)			
First pregnancy	8.07	(2.24, 29.10)	0.001
2-4 pregnancies	1.73	(0.68, 4.41)	0.249
Number of children (Ref = >5 children)			
1-3 children	1.79	(0.73, 4.42)	0.204
4-5 children	1.95	(0.82, 4.61)	0.129

4.3 Influence of Normative Beliefs and Motivation to Comply with Significant Others on Pregnant Women's Intention to Choose a Particular Place of Delivery

The table 4.5 presents the results of a multiple linear regression analysis investigating the influence of normative beliefs and motivation to comply with significant others on pregnant women's intention to deliver in a health facility. The model was estimated first without covariates (unadjusted) and subsequently with covariates (adjusted), controlling for age group, marital status, religion, educational level, place of residence, number of pregnancies, number of deliveries, and number of children, all of which were identified as significantly associated with intention at the bivariate level.

In the unadjusted model, both the Normative Beliefs Index ($\beta = 0.67$; 95% CI: 0.60–0.74; $p < 0.001$) and the Motivation to Comply Index ($\beta = 0.63$; 95% CI: 0.56–0.71; $p < 0.001$) exhibited strong and statistically significant associations with the intention to deliver in a health facility. These findings imply that respondents who perceived support from significant others (e.g., spouses, family members, community leaders) for health facility delivery, and who were motivated to conform to these perspectives, were more likely to express an intention to deliver at such a facility.

In the adjusted model, both variables continued to serve as statistically significant predictors. The effect size of the Normative Beliefs Index decreased slightly to $\beta = 0.42$; 95% CI: 0.32–0.49; $p < 0.001$), while the effect size of the Motivation to Comply Index decreased to $\beta = 0.35$; 95% CI: 0.25–0.43; $p < 0.001$). This suggests that, even after accounting for demographic and reproductive factors, normative influences maintain a substantial impact on behavioural intention.

Table 4.5: Influence of Normative Beliefs and Motivation to Comply with Significant Others on Pregnant Women's Intention to Choose a Particular Place of Delivery

Variables	Unadjusted Model			Adjusted Model		
	Estimate	95% C.I . of B	P-value	Estimate	95% C.I . of B	P-value
Single Normative Beliefs index toward hospital delivery	0.67	(0.60, 0.74)	0.000	0.42	(0.32, 0.49)	0.000
Single Motivation Index toward hospital delivery	0.63	(0.56, 0.71)	0.000	0.35	(0.25, 0.43)	0.000

The final model was adjusted for age groups, type of marriage, religion, education, residence, pregnancies, deliveries and children, that were significantly associated with intention toward facility delivery at the bivariate level.

4.4 How Attitudes Toward Facility and Non- Facility Delivery Predict Intention and Actual Delivery Behaviour

4.4.1 How Attitudes Toward Facility and Non- Facility Delivery Predict Intention

A multiple linear regression analysis was conducted to assess the relationship between attitudes toward facility delivery, as well as the intention to utilize health facility-based delivery services. The findings are summarized in Table 4.6. The Attitude Index toward facility delivery emerged as a robust and statistically significant predictor of intention ($\beta = 0.67$; 95% CI:0.59, 0.76; $p < 0.001$), indicating that women with more favourable attitudes toward delivering in a health facility were significantly more likely to express an intention to do so. The Behavioural Beliefs Index exhibited a positive yet non-significant association with intention ($\beta = 0.07$; 95% CI: –0.01, 0.16; $p = 0.097$), suggesting a weak or inconsistent role in predicting intention when controlling for overall attitude. Among the demographic variables, religious affiliation ($\beta = 0.26$; 95% CI: 0.15, 0.37; $p < 0.001$) and type of marriage ($\beta = –0.09$; 95% CI: –0.18, 0.00; $p = 0.044$) emerged as significant predictors. Respondents with specific religious affiliations or marital types exhibited differing likelihoods of intending to utilize facility-based services. Other covariates, including age, education, occupation, place of residence, number of pregnancies, deliveries, and children did not demonstrate statistical significance ($p > 0.05$), indicating that they did not exert an independent influence on the intention to deliver in a facility.

Table 4.6 How Attitudes Toward Facility and Non- Facility Delivery Predict Intention

Variables	Estimate	95.0% C.I. of B	Sig.
Attitude index toward facility delivery	0.67	(0.59, 0.76)	0.000
Behavioural Beliefs index toward facility delivery	0.07	(-0.01, 0.16)	0.097
Age of respondents	0.01	(-0.04, 0.07)	0.680
Type of participant's marriage	-0.09	(-0.18, 0.00)	0.044
Religious affiliation of respondents	0.26	(0.15, 0.37)	0.000
Educational levels of respondents	-0.04	(-0.09, 0.02)	0.200
Occupational levels of respondents	0.01	(-0.03, 0.05)	0.674
Place of residence	-0.03	(-0.15, 0.09)	0.597
Number of pregnancies	0.00	(-0.14, 0.13)	0.964
Number of deliveries	0.01	(-0.07, 0.08)	0.871
Number of children	-0.08	(-0.18, 0.02)	0.109

4.4.2 How intentions and attitude predict facility and non-facility delivery behaviour

Table 4.7 presents both the crude and adjusted odds ratios that estimate the likelihood of delivering at a health facility as influenced by intention, attitude, and behavioural beliefs. The adjusted model accounted for several covariates, including age group, marital status, ethnicity, place of residence, number of deliveries, and number of children. In the crude model, both the Intention Index (COR = 2.36; 95% CI: 1.82, 3.07; $p < 0.001$) and the Attitude Index (COR = 1.96; 95% CI: 1.55, 2.47; $p < 0.001$) were found to be significantly associated with increased odds of delivering at a health facility. This indicates that, prior to controlling for additional variables, women exhibiting stronger behavioural intentions or more positive attitudes were more likely to give birth at a health facility.

However, subsequent to adjusting for background characteristics, only the Intention Index remained a statistically significant predictor (AOR = 1.93, 95% CI [1.26, 2.97], p = 0.003). This finding suggests that women with stronger intentions were approximately twice as likely to deliver at a health facility, even after accounting for demographic and contextual factors. In contrast, the Attitude Index did not retain statistical significance in the adjusted model (AOR = 0.83, 95% CI [0.52, 1.34], p = 0.45), implying that the effect of attitude on behaviour is mediated through intention. Similarly, the Behavioural Beliefs Index, while significant in the crude model (COR = 1.96, 95% CI [1.56, 2.46], p < 0.001), lost its significance after adjustment (AOR = 1.24, 95% CI [0.85, 1.80], p = 0.266).

Table 4.7: How intention and attitude predict facility and non-facility delivery behaviour

Variable	Crude model			Adjusted model		
	COR	95% C.I. for B	P-value	AOR	95% C.I. for B	P-value
Single Intention index toward facility delivery	2.36	(1.82, 3.07)	<0.001	1.93	(1.26, 2.97)	0.003
single attitude index toward facility delivery	1.96	(1.55, 2.47)	<0.001	0.83	(0.52, 1.34)	0.450
Single Behavioural Beliefs index toward facility delivery	1.96	(1.56, 2.46)	<0.001	1.24	(0.85, 1.80)	0.266

The final model was adjusted for age groups, type of marriage, ethnicity, place of residence, number of deliveries and children.

4.5 Relationship between subjective norms and the intention to utilize health facility-based delivery services

The results presented in Table 4.8 indicates that both the Direct Subjective Norm Index (β = 0.26; 95% CI: 0.18, 0.33; p < 0.001) and the Normative Beliefs Index (β = 0.50; 95% CI: 0.41, 0.56; p < 0.001) are robust and statistically significant predictors of the intention to utilize health facility-based delivery services. These findings suggest that women who perceive increased social pressure or approval from significant referents, such as spouses, community leaders, or health workers, are more likely to express an intention to deliver in health facilities.

Among the sociodemographic covariates, the type of marriage (β = –0.10; 95% CI: –0.24, –0.04; p = 0.006) and the number of children (β = –0.09; 95% CI: –0.22, –0.01; p = 0.038) were also statistically significant. Specifically, respondents in certain marital arrangements and those with a higher number of children exhibited lower intentions to utilize health facility delivery services. Conversely, other variables, including age, religion, education, occupation, place of residence, number of pregnancies, and number of deliveries, did not emerge as statistically significant predictors (p > 0.05), indicating that they did not independently influence the intention to utilize facility-based delivery services within this model.

Table 4.8: relationship between subjective norms and the intention to utilize health facility-based delivery services

Variables	Estimate	95% C. I. for B	P-value
Direct Subjective Norm index toward facility delivery	0.26	(0.18, 0.33)	0.000
Normative Beliefs index toward facility delivery	0.50	(0.41, 0.56)	0.000
Age of respondents	0.01	(-0.05, 0.07)	0.746
Type of participant's marriage	-0.10	(-0.24, -0.04)	0.006
Religious affiliation of respondents	0.05	(-0.03, 0.21)	0.128
Educational levels of respondents	0.01	(-0.05, 0.07)	0.733
Occupational levels of respondents	0.06	(-0.01, 0.09)	0.095
Place of residence	-0.02	(-0.16, 0.10)	0.663
Number of pregnancies	-0.03	(-0.02, 0.10)	0.509
Number of deliveries	0.03	(-0.05, 0.12)	0.427
Number of children	-0.09	(-0.22, -0.01)	0.038

4.6 Mediating role of behavioural intention between attitudes/subjective norms and actual choice of place of delivery

4.6.1 Mediation Analysis: Attitude, Intention, and Place of Delivery

To ascertain whether behavioural intention mediates the relationship between pregnant women's attitudes and their actual place of delivery, a causal mediation analysis was performed utilizing nonparametric bootstrapping (Table 4.9). The results demonstrate that attitude exerts a significant indirect effect on the place of delivery via behavioural intention, with an average causal mediation effect (ACME) (Estimate=0.09; 95% CI:0.04, 0.14; $p < 0.001$). Conversely, the average direct effect (ADE) of attitude on place of delivery, while controlling for intention, was not statistically significant (Estimate = 0.02; 95% CI: –0.04, 0.08; p = 0.416). The total effect of attitude on the place of delivery was statistically significant (Estimate = 0.11; 95% CI:0.07, 0.16], $p < 0.001$), with approximately 80% of this effect being mediated by intention (Proportion Mediated = 0.80,

95% CI:0.39, 1.41; $p < 0.001$). These findings substantiate the Theory of Reasoned Action, suggesting that attitude influences behaviour primarily through its impact on intention, rather than exerting a direct effect on behaviour itself.

Table 4.9: Mediation Analysis of the Effect of Attitude on Place of Delivery via Intention

Effect Type	Estimate	95% CI Lower, Upper	p-value
Average Causal Mediation Effect (ACME)	0.09	0.04, 0.140	< 0.001
Average Direct Effect (ADE)	0.02	–0.04, 0.08	0.416
Total Effect	0.11	0.07, 0.16	< 0.001
Proportion Mediated	0.80	0.39, 1.41	< 0.001

Note. Mediation effects estimated using nonparametric bootstrapping with 5,000 resamples.
ACME refers to the indirect effect via behavioural intention; ADE is the direct effect of attitude on delivery place; CI = Confidence Interval.

4.6.2 Mediation Analysis: Subjective Norms, Intention, and Place of Delivery

A second mediation analysis was performed to evaluate whether behavioural intention mediates the effect of subjective norms on the actual place of delivery (Table 4.10). Utilizing nonparametric bootstrapping, the analysis indicated that the average causal mediation effect (ACME) was significant (Estimate = 0.08; 95% CI: 0.04, 0.12; $p < 0.001$). Conversely, the average direct effect (ADE) of subjective norms on the place of delivery was not significant (Estimate = 0.01; 95% CI: –0.04, 0.05; $p = 0.66$), suggesting that the influence of subjective norms operates indirectly through behavioural intention. The total effect of subjective norms was found to be significant (Estimate = 0.09; 95% CI: 0.04, 0.14; $p < 0.001$). Notably, approximately 88% of this effect was mediated by intention (Proportion Mediated = 0.88; 95% CI: 0.53, 1.78; $p < 0.001$), thereby supporting a full mediation model.

Table 4.10: Mediation Analysis of the Effect of Subjective Norm on Place of Delivery via Intention

Effect Type	Estimate	95% CI Lower, Upper	p-value
Average Causal Mediation Effect (ACME)	0.08	0.04, 0.12	< 0.001
Average Direct Effect (ADE)	0.01	–0.04, 0.05	0.660
Total Effect	0.09	0.04, 0.14	< 0.001
Proportion Mediated	0.80	0.53, 1.78	< 0.001

Note. Based on 5,000 nonparametric bootstrap simulations.
ACME is the indirect effect via intention; ADE is the direct effect of subjective norms on place of delivery.

CHAPTER FIVE

DISCUSSION

This chapter discusses the research findings in relation to existing literature and the theoretical framework. Key insights regarding the interplay of behavioural beliefs, social norms, and attitudes in influencing delivery choices are examined. The chapter discusses how the study's findings corroborate, expand upon, or diverge from previous evidence, emphasizing the implications for maternal health interventions and policy.

5.1 Behavioural Beliefs and Outcome Evaluations of Pregnant Women Regarding Health Facility Delivery

Framed within the Theory of Reasoned Action (TRA), this study explored the extent to which behavioural beliefs and outcome evaluations shape pregnant women's intention to deliver at a health facility. The findings affirm the central role of behavioural beliefs defined as a woman's perception of the likelihood that facility delivery will produce desired outcomes in forming intention. Women who held favourable views about the safety, reliability, and competence of health facility care were more inclined to opt for institutional delivery. These findings align with existing literature across diverse contexts, where beliefs about susceptibility to complications and the perceived superiority of skilled care emerged as consistent facilitators of facility use (Bayu et al., 2015; Kahsay et al., 2019).

In contrast, outcome evaluations such as the personal valuation of potential consequences associated with facility births did not significantly influence intention. This divergence suggests that in certain settings, rational appraisal of outcomes may be overshadowed by structural realities and socio-cultural dynamics. For example, studies from Ghana and Ethiopia indicate that while

women may acknowledge the clinical benefits of health facility delivery, concerns about mistreatment, hidden costs, and the impersonal nature of facility environments often temper their willingness to act on those evaluations (Boah et al., 2020; Shifraw et al., 2016). Thus, outcome evaluations may be muted by a perceived lack of agency or the anticipation of negative interpersonal experiences at health facilities.

These findings speak to a broader phenomenon where intention is shaped more by belief in the probability of safety and survival than by personal valuation of potential outcomes. In this light, behavioural beliefs may serve as cognitive anchors that ground intention in perceived necessity, even when emotional or experiential evaluations are ambivalent or negative. The implications for intervention design are profound: while improving health infrastructure and access remains critical, cultivating positive belief systems through tailored antenatal education and culturally sensitive messaging may be more impactful in driving behavioural change.

Moreover, the influence of demographic and socio-cultural factors add complexity to the behavioural landscape. Younger women, particularly those experiencing their first pregnancy, were more receptive to facility delivery, possibly due to heightened health consciousness and less entrenched exposure to traditional birthing norms. Ethnic background also emerged as an important modifier, reflecting how community norms and trust in biomedical systems shape health behaviours. These findings resonate with broader literature highlighting the interplay between individual cognition and community-level determinants, including studies from India (Bhattacharyya et al., 2016), Kenya (Mbutu, 2018), and Ethiopia (Taye et al., 2022).

Importantly, these results point to the limitations of relying solely on information-based strategies to shift maternal health behaviours. While raising awareness is necessary, it is insufficient in isolation. Behavioural intentions are deeply embedded within a matrix of beliefs, norms, past

experiences, and social pressures. As such, interventions should move beyond merely disseminating information to actively reshaping belief structures through interpersonal communication, community engagement, and respectful care practices. Strategies that enhance provider–client relationships, demystify facility procedures, and involve male partners and elders could strengthen the alignment between behavioural beliefs and intention.

In sum, this study contributes to a nuanced understanding of how behavioural beliefs function as a motivational lever in maternal health decision-making. It underscores the need for holistic interventions that both cultivate enabling beliefs and dismantle the barriers structural, emotional, and normative, that constrain women's ability to act on those beliefs.

5.2 Influence of Normative Beliefs and Motivation to Comply with Significant Others on Pregnant Women's Intention to Choose a Particular Place of Delivery

Normative beliefs, defined as the perceived expectations of significant referents and the motivation to comply with these referents are integral components of the Theory of Reasoned Action (TRA). This study provides robust empirical confirmation that both constructs significantly influence pregnant women's intention to deliver in a health facility. The positive associations observed indicate that women who perceive endorsement of facility delivery from key figures such as spouses, parents, or religious and community leaders and who are motivated to conform to these expectations, are more likely to express intent to pursue institutional delivery. This aligns with the literature across diverse contexts. For example, Shifraw et al. (2016) reported that women in Ethiopia frequently chose their place of delivery based on input from their husbands or elders, and that the decision-making process often involved negotiation and external validation. Similarly, in Uganda, Atukunda et al. (2020) highlighted the role of family especially male partners as pivotal

in determining whether women delivered at a facility or at home, regardless of the woman's personal preference .

The persistence of normative effects even after controlling for socio-demographic variables points to the structural power of social norms. This is consistent with findings from a study by , which identified positive subjective norms as one of the most significant determinants of health facility delivery intentions among rural women in Ethiopia (Taye et al., 2022). The authors concluded that social approval not only fosters intention but can override negative outcome evaluations and logistical constraints. Moreover, the motivation to comply reflects deeper socio-cultural dynamics within collectivist communities, where childbirth is not merely a personal event but a communal experience. In Ghana, Boah et al. (2020) noted that women often conformed to familial preferences even when those contradicted their own beliefs because of the social implications of appearing disobedient or non-conforming . Similarly, Gebregziabher et al. (2019) found that community endorsement and family history of facility delivery increased the likelihood of women choosing a facility birth.

Evidence from Kenya also supports these findings. In Mbutu (2018)), expectant mothers reported that the influence of spouses and in-laws especially those providing financial support strongly shaped their delivery preferences, often superseding personal choice. This underscores the salience of not only perceived expectations but also the willingness or pressure to adhere to them. The implications for policy and intervention are clear. Efforts to increase facility-based delivery must go beyond targeting individual women and instead engage the broader social network. Strategies such as community sensitization, male involvement in antenatal care, and peer-based education programs have demonstrated promise in aligning social norms with safe maternal health behaviours. Interventions that reframe facility delivery as a socially endorsed standard supported

by religious leaders, elder women, and husbands, may generate the normative pressure needed to convert intention into practice.

In sum, this study confirms that subjective norms comprised of both normative beliefs and motivation to comply, are powerful predictors of delivery intentions. Consistent with findings across multiple low-resource settings, socially driven influences are as decisive as individual cognition in shaping maternal health behaviours. Thus, future interventions must be relationally grounded, community-informed, and norm-sensitive to yield sustainable improvements in institutional delivery uptake.

5.3 How Attitudes Toward Facility and Non- Facility Delivery Predict Intention and Actual Delivery Behaviour

This study, grounded in the Theory of Reasoned Action (TRA), demonstrates that attitudes toward facility delivery significantly shape pregnant women's intention to utilize institutional delivery services. As shown in the current study women who held more favourable evaluations of health facility births were more likely to express intent to deliver at such facilities, supporting the core TRA proposition that attitudinal orientation toward a behaviour is a strong determinant of behavioural intention. This finding is consistent with previous literature from diverse low- and middle-income contexts. For instance, Taye et al. (2022) found that favourable attitudes toward skilled delivery care strongly predicted intention in Ethiopian communities, particularly when underpinned by behavioural beliefs related to safety and trust in formal health providers. Similarly, observed that attitude was significantly associated with institutional delivery intention among women in rural Ethiopia, though the effect was largely mediated by intention.

However, the current study also found that, although attitude predicted intention, it did not independently predict actual delivery behaviour after adjusting for key demographic variables. This attenuation of effect implies that attitude alone, without a corresponding volitional commitment (intention), may not be sufficient to drive behavioural action. This dynamic is echoed in Rahman et al. (2014), who reported that in rural Bangladesh, positive attitudes toward facility delivery did not directly translate into utilization without strong behavioural intention. This underscores TRA's assumption that intention functions as the immediate antecedent of behaviour, serving as the key mediator between cognition and action.

Furthermore, this study observed that the predictive effect of the Behavioural Beliefs Index was nonsignificant when attitude was included in the model. This suggests that behavioural beliefs may shape intention indirectly through their influence on attitude a finding supported by Kabir (2021) and Taye et al. (2022), who noted that perceived susceptibility to birth complications and beliefs in skilled care efficacy contributed to attitude formation, but did not directly drive delivery behaviour. Another important contribution of this study lies in the identification of religious affiliation and marital status as significant predictors of delivery intention. Religious values can shape perceptions of facility care, particularly in contexts where moral teachings align with or contradict biomedical health practices. Mbutu (2018) similarly found that polygamous marital arrangements and patriarchal decision-making structures were associated with lower autonomy in delivery site decisions, often limiting institutional delivery even when attitudes were favourable from a behavioural science perspective, these results reinforce the understanding that attitudes, while critical, operate within broader sociocultural ecosystems. Attitude formation alone does not guarantee action unless it is translated into clear intention, and intention itself must be supported by contextual enablers. The attenuation of attitude's effect on behaviour in the adjusted model

highlights the potential intervening role of structural barriers, such as cost, transport, or perceived disrespect from providers barriers that have been widely documented in Ghana (Boah et al., 2020).

In sum, this study adds empirical weight to the TRA framework in maternal health by validating the pathway from attitude to intention to behaviour, while also exposing its practical boundaries in real-world settings. Behavioural interventions should therefore not only seek to cultivate favourable attitudes, but must also strengthen intention through goal setting, planning, and normative reinforcement, while addressing structural impediments that disconnect intention from action.

5.4 Relationship between subjective norms and the intention to utilize health facility-based delivery services

Subjective norms, individuals' perceptions of whether significant others approve or disapprove of a given behaviour are foundational in the Theory of Reasoned Action (TRA) as drivers of intention. In this current study, both the Direct Subjective Norm Index and the Normative Beliefs Index emerged as strong predictors of pregnant women's intention to utilize health facility delivery services. These findings affirm that women who perceive social endorsement from influential referents including spouses, family members, community leaders, and healthcare providers are more likely to plan to deliver at a health facility. This outcome is supported by multiple studies across sub-Saharan Africa. For instance, Shifraw et al. (2016) found that normative pressure from male partners and mothers-in-law significantly influenced Ethiopian women's intentions regarding place of delivery. Similarly, Alio et al. (2022) demonstrated that both injunctive norms (perceptions of what others think should be done) and descriptive norms (perceptions of what others do) shaped intentions for facility use.

The significance of both direct subjective norms and normative beliefs in this study underscores a dual pathway of influence: perceived social approval (direct norms) and the individual's belief about those expectations (normative beliefs) independently contribute to intention formation. This reinforces TRA's premise that social context, particularly expectations from influential others, plays a decisive role in determining maternal health behaviours. Moreover, the current study revealed that marital type and number of children were significant demographic covariates. Women in certain marital arrangements, particularly non-monogamous unions, exhibited lower intention to deliver in health facilities. This aligns with findings by Mbutu (2018), who reported that women in polygamous or informal unions faced greater constraints in decision-making and resource access, thus undermining intention for institutional delivery.

A similar relationship was documented by Atukunda et al. (2020), who emphasized the importance of male partner support in shaping maternal decisions in Uganda. The inverse relationship between number of children and delivery intention suggests that multiparous women may be less influenced by subjective norms or perceive facility delivery as unnecessary based on experience. Rahman et al. (2014) also reported that women with higher parity were more likely to prefer home births, often due to familiarity and perceived competence from previous deliveries. This highlights the potential for complacency or a decline in perceived risk among high-parity women.

Conversely, other covariates such as age, religion, education, occupation, and place of residence did not show significant associations in this study. This pattern suggests that social approval and perceived normative expectations may override demographic predictors in shaping intention, particularly in settings where health behaviours are deeply embedded in social relationships and communal norms. As Boah et al. (2020) observed in Ghana, even highly educated women deferred to the preferences of spouses or elders when making delivery-related decisions. These findings

have profound implications for public health programming. Behaviour change strategies should target not only individual women but also the social networks that influence them. Community-based interventions such as engaging male partners in antenatal care, training community birth advocates, and leveraging religious or traditional leaders can cultivate positive subjective norms that normalize facility-based delivery. Programs must also explicitly address the barriers and normative narratives that discourage older or high-parity women from seeking institutional care.

This study advances the literature by empirically demonstrating that both perceived and internalized social expectations are crucial in shaping pregnant women's delivery intentions. The dual significance of direct and indirect normative constructs reflects the centrality of relational and cultural dynamics in maternal health decision-making. Future interventions must therefore be socially situated, relationally driven, and contextually nuanced to ensure widespread uptake of institutional delivery services.

5.5 Mediating role of behavioural intention between attitudes/subjective norms and actual choice of place of delivery

The mediation analysis conducted in this current study provides compelling empirical validation for a central tenet of the Theory of Reasoned Action (TRA) that behavioural intention is the key mechanism through which attitudes and subjective norms influence actual behaviour. Specifically, the analysis demonstrated that the effect of both attitudes and subjective norms on the actual place of delivery is fully mediated by intention. These findings reinforce the conceptual framework that individuals are unlikely to engage in a behaviour (health facility delivery) unless they have first formed a concrete intention to do so, regardless of their attitudes or perceived social pressures. The significant indirect effect of attitude on facility-based delivery through intention, coupled with a nonsignificant direct effect, indicates that positive evaluations of institutional delivery are not

sufficient in themselves to drive action unless they coalesce into a strong volitional commitment. This is supported by findings from Ayana et al. (2021), who observed that while many women held positive views about institutional care, only those who had made firm delivery plans followed through with facility use. Similarly, Rahman et al. (2014) concluded that attitude alone did not lead to facility delivery without a mediating behavioural intention.

A parallel pattern emerged for subjective norms, where the influence of perceived social pressure, whether from spouses, family, or community figures was exerted primarily through intention. The absence of a significant direct effect suggests that women may internalize these social cues and translate them into intention, which then becomes the behavioural driver. This pathway is consistent with Shifraw et al. (2016) and Rockliffe et al. (2021), who emphasized that normative influence, particularly from male partners, guided maternal behaviour only when it was internalized as a personal commitment. Kabir (2021) also found that subjective norms predicted intention more strongly than behaviour itself.

The high proportion of mediation for attitude (80%) and subjective norms (88%) further highlights the pivotal mediating role of intention. This magnitude implies that interventions aiming to improve maternal health behaviours must prioritize strengthening behavioural intention. Changing attitudes and social norms, while important, will not yield optimal outcomes unless women form clear, actionable plans to deliver in a facility. As the current study demonstrates, intention is not merely an intermediate step, but the critical linchpin linking belief-based constructs to concrete health behaviour. These findings offer key insights for programmatic design. Behaviour change interventions should not only target cognitive factors (e.g., awareness of danger signs) and normative pressures (e.g., spousal endorsement), but also incorporate intention-forming mechanisms, such as birth preparedness planning, commitment contracts, and goal setting during

antenatal care. Programs that fail to move women from general approval of institutional delivery to a clear plan of action may inadvertently fall short of producing real behavioural change.

Furthermore, these results underscore the need to differentiate between influencing beliefs and translating them into action. While health promotion campaigns often focus on improving knowledge and shifting attitudes, the evidence presented in this study suggests that this is only the first step (Rockliffe et al., 2021). Without facilitating behavioural intention through emotional reinforcement, environmental enablement, and normative alignment positive attitudes and social approval are unlikely to result in increased uptake of facility delivery services. In conclusion, the mediation findings from the current study robustly affirm the TRA's behavioural pathway, showing that intention is the principal conduit through which attitudes and norms influence maternal health behaviour. Interventions that strengthen intention formation while maintaining attitudinal and normative support are likely to be the most effective in increasing institutional delivery rates in contexts like Ghana and other low- and middle-income countries.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

The final chapter synthesizes the principal findings and articulates conclusions derived from the theoretical and empirical analyses presented in the preceding chapters. It provides practical recommendations for health practitioners, policymakers, and researchers aimed at enhancing institutional delivery rates. The chapter concludes by identifying areas for future research and delineating the potential applications of the study's insights in broader contexts.

6.1 Summary of key findings

This study examined the psychosocial and demographic determinants influencing the intentions and actual choices of pregnant women regarding delivery locations, with a particular focus on the utilization of health facilities. Grounded in the Theory of Reasoned Action (TRA), the research sought to elucidate the interactions among behavioural beliefs, attitudes, subjective norms, and behavioural intentions in shaping delivery decisions. The research was conducted in Ghana, where maternal health outcomes remain a significant concern despite increased antenatal coverage, and where the decision to deliver in a health facility is influenced by complex socio-cultural dynamics.

Employing a cross-sectional quantitative methodology, data were collected from pregnant women attending antenatal care clinics at selected health facilities. Validated measurement scales were utilized to assess TRA constructs, including behavioural beliefs, outcome evaluations, normative beliefs, motivation to comply, attitudes, subjective norms, intentions, and actual delivery locations. Statistical analyses, including binary logistic regression, multiple linear regression, and nonparametric causal mediation analyses, were conducted to evaluate both direct and indirect effects of these variables on intentions and behaviours. Covariates such as age, marital status,

ethnicity, religion, education, place of residence, number of pregnancies, deliveries, and children were controlled for in the adjusted models.

The findings indicated that behavioural beliefs were significantly associated with the intention to deliver in a health facility. Women who acknowledged the health benefits and safety of facility-based deliveries exhibited a higher likelihood of expressing such an intention. Conversely, outcome evaluations, which reflect the subjective importance assigned to these beliefs, did not significantly predict intention, suggesting that the mere belief in the benefits is more influential than the extent of value attributed to those benefits. Among the sociodemographic factors examined, younger women, particularly those aged 21–30 years (p=0.001), women of Asante ethnicity (p=0.003), residents of peri-urban areas (p=0.022), and first-time pregnant women (p=0.001) demonstrated a greater propensity to intend to deliver in a health facility.

Normative beliefs and the motivation to comply with significant others emerged as strong predictors of intention. Women who perceived support for facility-based delivery from their spouses, parents, or community leaders, and who were motivated to align with these referents, exhibited a greater likelihood of forming a definitive intention to deliver in a health facility. These effects remained significant even after controlling for demographic and obstetric characteristics, highlighting the pivotal role of social norms in maternal health decision-making. Attitudes toward facility delivery were positively correlated with intention (p=0.001). Women who viewed institutional delivery as favourable or beneficial were significantly more likely to intend to utilize such services. However, attitude (p=0.450) alone did not predict actual delivery behaviour once intention was accounted for, indicating that the influence of attitude primarily operates through its effect on intention (p=0.003). Furthermore, religious affiliation and marital arrangement

contributed to shaping intention, with specific religious groups and women in monogamous unions demonstrating a stronger preference for health facility delivery.

The study further illustrated that subjective norms (p=0.000) encompassing both direct perceptions of social approval and underlying normative beliefs (p=0.000) significantly influenced the intention to deliver in a facility. Women in polygamous or informal marital unions, as well as those with a higher number of children, exhibited weaker intentions, suggesting that parity and household dynamics may affect risk perception and the perceived necessity for skilled delivery care. Other sociodemographic variables, including age, education, and occupation, did not show independent associations with intention once subjective norms were incorporated into the models.

Importantly, the mediation analysis confirmed that behavioural intention serves as the primary pathway through which both attitude and subjective norms influence actual delivery behaviour. The effect of attitude on behaviour was nearly entirely mediated by intention, with approximately 80% of the total effect occurring through this mechanism. Similarly, 88% of the effect of subjective norms on delivery behaviour was mediated by intention, and neither construct retained a significant direct effect after controlling for intention. These findings provide substantial empirical support for the theoretical proposition that intention acts as the immediate precursor of behaviour, and that cognitive and social factors influence behaviour only to the extent that they shape this intention. The findings substantiate the Theory of Reasoned Action within the context of maternal delivery decisions in Ghana. The results indicate that favourable beliefs and supportive social norms must be translated into clear behavioural intentions to effectively lead to the actual utilization of health facility-based delivery services.

6.2 Limitations of the Study

This study encountered several limitations that may have influenced its scope and execution. Firstly, the constrained timeframe of one academic year imposed significant restrictions on the depth and breadth of the research. The process of navigating administrative and institutional bureaucracies to gain access to health facilities and respondents delayed certain phases of the study, thereby limiting the researcher's capacity to collect data over an extended period or across broader geographical areas. Secondly, the study was self-funded, relying entirely on the personal resources of the researcher. The absence of external funding constrained logistical aspects, particularly concerning transportation, printing, and the recruitment of additional data collectors, which could have enhanced the study's efficiency and reach. Lastly, language presented another challenge. While the questionnaire was originally developed in English, it required translation into Akan, the widely spoken local language in the Ashanti Bekwai Municipality. Although efforts were made to ensure accurate translation, there remained a potential for loss of meaning or misinterpretation of questions, particularly with respect to technical or abstract terms associated with behavioural theories. Despite these limitations, every effort was made to maintain the quality, reliability, and validity of the study's findings.

6.3 Conclusion

This study investigated TRA as a conceptual framework. The findings indicated that both behavioural and normative beliefs significantly shape women's intentions to deliver in healthcare facilities, with intention identified as the strongest predictor of actual delivery behaviour. Although attitudes and subjective norms initially correlated with the selection of delivery locations, their effects were fully mediated by behavioural intention, thereby validating the theoretical pathway proposed by the TRA. Demographic characteristics such as age, ethnicity, marital status, and parity also impacted intentions, albeit to a lesser extent than psychosocial variables. The results emphasized the importance of addressing not only individual cognition but also social expectations and decision-making dynamics in the context of antenatal care. In conclusion, enhancing women's behavioural intentions is critical for improving institutional delivery rates. Interventions should extend beyond increasing awareness or modifying attitudes; they should prioritize strategies that empower women to establish clear, actionable intentions. Such strategies may include personalized birth planning, the involvement of male partners, and community norm-shifting campaigns. By aligning individual, relational, and community-level influences, these approaches have the potential to improve maternal health outcomes in Ghana and similar contexts.

6.4 Recommendations

The following recommendations are derived directly from the findings of this study and are structured thematically for effective implementation by relevant stakeholders: Midwives, Health Facility Managers, Policy Makers, Community Leaders, and Development Partners.

Midwives and Frontline Health Workers

1. Should recognise and engage male partners and key influencers in counselling sessions, assisting in the translation of external social norms into women's internal commitment.
2. Should provide training to help midwives identify personal beliefs, misconceptions, or ambivalence in clients and employ motivational interviewing techniques.
3. Should focus not solely on educating women, but also on fostering personal goal setting, commitment, and behavioural planning towards facility delivery.
4. Should include training modules on empathy and respectful care to alleviate anxiety and resistance associated with prior negative experiences in healthcare facilities.

Health Facility Management and Administrative Staff

1. Should implement regular Respectful Maternity Care (RMC) audits, ensure that complaints are addressed, and reward staff demonstrating excellence in client interaction.
2. Should provide physical spaces and policies that encourage and permit male involvement during antenatal care (ANC) visits and childbirth.
3. Should ensure the presence of curtains/screens, reduce overcrowding, and enhance staff-client communication to combat the perception of impersonal care.

Policy Makers and Government Agencies

1. Should reflect psychological insights, including how attitudes and norms shape intentions and behaviours.
2. Should allocate funding for behaviourally informed social campaigns that extend beyond mere awareness to encompass emotional and normative messaging.
3. Should institutionalise professional ethics and accountability systems across facilities, including anonymous feedback mechanisms.

Community Leaders and Opinion Influencers

1. Should engage local chiefs, faith leaders, and influencers to promote skilled delivery positively at community events.
2. Should utilise storytelling and local role models (e.g., mothers who have benefited from skilled care) in community outreach to activate descriptive norms.
3. Should encourage dialogue between partners on maternal health, aiding in the conversion of injunctive norms into mutual intentions.

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APPENDICES

A. Participant Information Sheet and Consent Form

TITLE OF RESEARCH: FACTORS INFLUENCING CHOICE OF PLACE OF DELIVERY AMONG PREGNANT WOMEN IN THE ASHANTI BEKWAI MUNICIPALITY

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GENERAL INFORMATION ABOUT THE RESEARCH WORK

The main purpose of this study is to investigate the factors influencing the intention of pregnant women to use maternal health services. The setting for the researcher is the Ashanti Bekwai Municipality. Respondents must have been at least 24 hours into their postnatal period and between the ages of 18 and 49 and willing to take part in the study. The questions of the study are asked in English Language but could be translated to Twi and Hausa. Estimated time that will be spent on each questionnaire is about 40 minutes.

ANTICIPATED RISK IN TAKING PART IN THE STUDY

Taking part in this study is almost risk free since the study does not make use of drugs and chemicals. The only discomfort will be the participant time that will be spent in responding to the questions.

POTENTIAL BENEFITS

It must be stated that there are no immediate direct benefits to the respondents but findings to the study will be used to improve maternal health care which will finally serve as benefits to the respondents and the nation at large.

CONFIDENTIALITY

The researcher wants to assure the respondents that all information provided will be treated confidentially and names provided replaced with special codes. Names of respondents will not be mentioned in the research report. Before coding names the principal researcher will keep all information under lock and key. Questionnaires will be destroyed five years after the study.

COMPENSATION

The researcher intends to refresh respondents with a bottle each of Malta and a pack of cream cracker biscuit at a cost of GH¢ 5.00

VOLUNTARY PARTICIPATION

Respondents are informed that they have the right to decide to take part in the study or not and in case of agreement to participate, respondent can at any time in the study opt out with without being held responsible for his or her decision.

TERMINATION OF PARTICIPATION

The respondent's participation in the study will be ceased if he or she fails to sign the consent form.

NOTIFICATION OF FINDINGS

The researcher will duly inform the respondents about the findings of the study.

PARTICIPANT'S RIGHTS

Respondents are assured of the research and researcher not violating their rights as the researcher was reviewed approved by the Institutional Review Board (IRB) of the Noguchi Memorial Institute of Medical Research. The IRB can be contacted on 0302916438

VOLUNTEER AGREEMENT

The document above having explained into detail the benefits, possible risks and procedures in the research titled 'Factors Influencing the Intention to Use Maternal Health Services Among Postnatal Women in Ashanti Bekwai Municipality been read by me or read and explained to me. I have been given opportunity to ask any questions to my satisfaction. I voluntarily agree to take part in the study.

Name of participant: ..... .

Signature of volunteer: ..... Date: .....

Name of witness: .....

Signature of witness: ..... Date: .....

B. Questionnaire

Section A: Socio-Demographic

1. Age group
a) 15 and below
b) 16 - 20
c) 21 - 25
d) 26 - 30
e) 31 - 35
f) 35 and above

2. Marital status
a) Married / cohabitation
b) Single
c) Separated/ divorced
d) Others (Specify)

3. Marriage type
a) Monogamous
b) Polygamous
c) Others (Specify)

4. Religion
a) African traditional religion
b) Christianity
c) Islam
d) Others (Specify)

5. Ethnicity
a) Asante
b) Dagomba
c) Ewe
d) Others (Specify)

6. Educational level
a) Primary
b) JHS
c) SHS
d) Tertiary
e) Others (Specify)

7. Occupation
a) Housewife
b) Public sector
c) Farming
d) Private sector
e) Others (Specify)

8. Place of residence/ location
a) Urban
b) Peri- urban
c) Rural

9. Number of pregnancies
a) First pregnancy
b) 2 – 4
c) 5 – 7
d) 8 and above

10. Number of deliveries
a) 1 – 3
b) 4 – 5
c) 6 – 8
d) 9 and above
e) None

11. Number of children/ household members
a) 1 – 3
b) 4 – 5
c) 6 – 8
d) 9 and above

SECTION B

Instructions

Many questions in this survey make use of rating scales with 7 places; please select the one number that best describes your opinion. Some of the questions and statements may seem similar, but there are actually subtle differences in what is being asked.

Measurement of behavioural intention

I intend to deliver at the hospital:

Extremely Likely :__1__:___2__:__3__:__4__:__5__:__6__:__7__: Extremely Unlikely

I have decided to deliver at the hospital:

Strongly Agree :___1__:__2__:__3__:__4__:__5__:__6__:__7__: Strongly Disagree

I am determined to deliver at the hospital:

Strongly Agree :___1__:__2__:__3__:__4__:__5__:__6__:__7__: Strongly Disagree

I plan to deliver at the hospital:

Strongly Agree :___1__:__2__:__3__:__4__:__5__:__6__:__7__: Strongly Disagree

SECTION C

Direct Measure of Attitude

"For me, delivering at the hospital would be…."

Good :___1__:___2__:___3__:__4__:___5__:___6__:___7__: Bad

Pleasant :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Unpleasant

Harmful :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Beneficial

Useful :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Useless

Foolish :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Wise

Rewarding :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Punishing

Unenjoyable :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Enjoyable

Desirable :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Undesirable

Important :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Unimportant

Valuable :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Worthless

SECTION D

Indirect Measure of Attitude (Behavioral Beliefs, Evaluation)

(BELIEF 1) My delivery at the hospital would allow more flexibility with my time:

Extremely unlikely:___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely likely

(EVALUATON of BELIEF 1) More flexibility with my time is:

Extremely Good:___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely Bad

(BELIEF 2) My delivery at the hospital would be appropriate for the delivery style I want:

Extremely unlikely:___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely likely

(EVALUATON of BELIEF 2) The delivery style at the hospital is good.

Extremely Bad :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely Good

(BELIEF 3) Delivering at the hospital could enhance my chance of more future deliveries:

Extremely unlikely:___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely likely

(EVALUATON of BELIEF 3) To me, more future deliveries would be

Extremely Bad :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely Good

(BELIEF 4) It would be cheaper to deliver at the hospital.

Extremely unlikely:___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely likely

(EVALUATON of BELIEF 4) Delivery at the hospital being cheaper is

Extremely Bad :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Extremely Good

SECTION E

Direct Measure of Subjective Norm

(INJUNCTIVE) Most people who are important to me think that _____deliver at the hospital

I should :___1__:___2__:___3__:___4__:___5__:___6__:___7__: I should not

(INJUNCTIVE) It is expected of me to deliver at the hospital

Extremely Unlikely:_1__:_ _2__:_ _3__:_ _4__:_ _5__:_ _6__:_ 7_ Extremely Likely

(INJUNCTIVE) The people in my life whose opinions I value would _____ of me delivering at the hospital:

Approve :___1__:___2__:___3__:___4__:___5__:___6__:___7__: Disapprove

(DESCRIPTIVE) Most of my friends and realities would deliver at the hospital.

Completely False : _1__:__2__:__3__:__4__:__5__:__6__:__7__: Completely True

SECTION F

Indirect Subjective Norms: Normative Beliefs

My parents think that

I should :___1__:___2__:___3__:___4__:___5__:___6__:___7__: I should not deliver at the hospital.

My **co-workers** think that

I should :___1__:___2__:___3__:___4__:___5__:___6__:___7__: I should not deliver at the hospital

My siblings think that

I should :___1__:___2__:___3__:___4__:___5__:___6__:___7__: I should not deliver at the hospital

My landlord thinks that

I should :___1__:___2__:___3__:___4__:___5__:___6__:___7__: I should not deliver at the hospital

SECTION G

Motivation to Comply

When it comes to delivering at the hospital, how much do you want to do what your siblings thinks you should do?

Not at all 1__:___2__:___3__:___4__:___5__:___6__:___7__: Very much

When it comes to delivering at the hospital, how much do you want to do what your parents thinks you should do?

Not at all 1__:___2__:___3__:___4__:___5__:___6__:___7__: Very much

When it comes to delivering at the hospital, how much do you want to do what your coworkers think you should do?

Not at all 1__:___2__:___3__:___4__:___5__:___6__:___7__: Very much

When it comes to delivery at the hospital, how much do you want to do what your midwife think you should do?

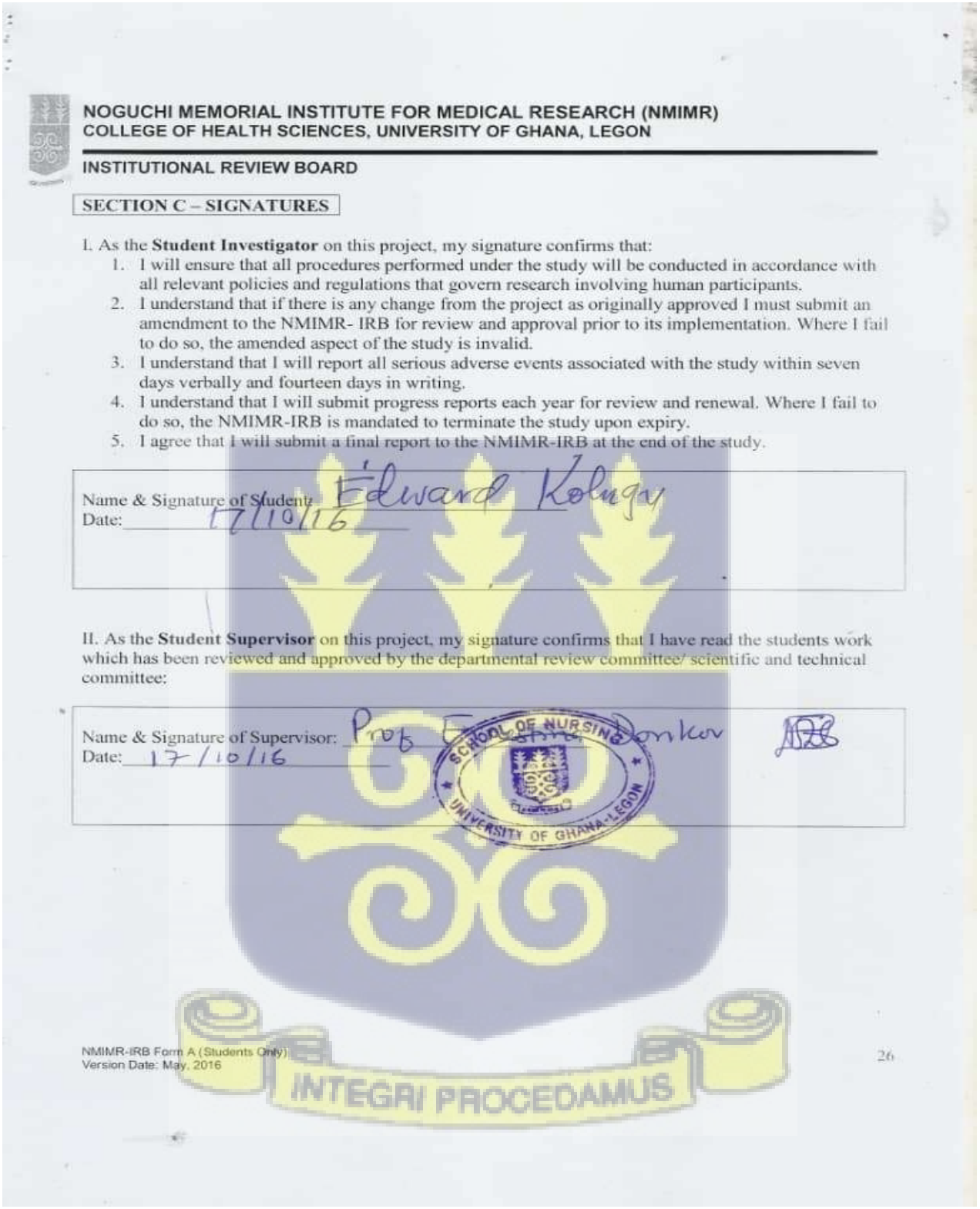
Not at all 1__:___2__:___3__:___4__:___5__:___6__:___7__: Very much

SECTION H

Where did you plan (or where do you plan) to deliver your most current pregnancy?" *Response Options (Single Choice):*

☐ At home (without assistance)
☐ At home (with Traditional Birth Attendant)
☐ Public health facility (e.g., district hospital, health centre)
☐ Private health facility (e.g., private hospital, clinic, maternity home)
☐ Mission/faith-based health facility
☐ Other (please specify): _____

C. Ethical Clearance



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COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF GHANA, LEGON

INSTITUTIONAL REVIEW BOARD

SECTION C – SIGNATURES

I. As the **Student Investigator** on this project, my signature confirms that:

1. I will ensure that all procedures performed under the study will be conducted in accordance with all relevant policies and regulations that govern research involving human participants.
2. I understand that if there is any change from the project as originally approved I must submit an amendment to the NMIMR- IRB for review and approval prior to its implementation. Where I fail to do so, the amended aspect of the study is invalid.
3. I understand that I will report all serious adverse events associated with the study within seven days verbally and fourteen days in writing.
4. I understand that I will submit progress reports each year for review and renewal. Where I fail to do so, the NMIMR-IRB is mandated to terminate the study upon expiry.
5. I agree that I will submit a final report to the NMIMR-IRB at the end of the study.

Name & Signature of Student: Edward Kolugu
Date: 17/10/16

II. As the **Student Supervisor** on this project, my signature confirms that I have read the students work which has been reviewed and approved by the departmental review committee/ scientific and technical committee:

Name & Signature of Supervisor: Prof E. [illegible] Donkor
Date: 17/10/16

SCHOOL OF NURSING
UNIVERSITY OF GHANA-LEGON

NMIMR-IRB Form A (Students Only)
Version Date: May, 2016

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D. Supplementary Sheet: factor analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.868
Bartlett's Test of Sphericity	Approx. Chi-Square	2208.207
	df	6
	Sig.	.000