**Exploring the Factors Influencing Caesarean Section Acceptance: Experiences and Perceptions of Pregnant Women in the Tamale Metropolis.**

**Abstract**

Introduction: This qualitative study explores the factors influencing caesarean section acceptance among pregnant women in the Tamale Metropolis, Northern Ghana. The aim was to examine the socio-cultural and healthcare-related factors that shape women’s decisions regarding caesarean delivery.

Aims: This study aims to investigate the factors that influence caesarean section acceptance among pregnant women in the Tamale Metropolis.

Methods: A total of 13 pregnant women from five communities (Bagiliga, Bavim Dohini, Dabokpa, Garizegu, and Jakarayili) were selected using snowball sampling. Semi-structured interviews were conducted in local languages and analyzed using discourse analysis to examine the language used around caesarean section decisions. Reflexivity, member checking, and audit trails were employed to ensure rigor and trustworthiness.

Results: The study revealed that societal and cultural beliefs, past childbirth experiences, and the influence of healthcare professionals were key factors in shaping women’s decisions. Many women prioritized family approval and relied heavily on medical advice, while others held misconceptions about caesarean sections, associating them with stigma or a lack of natural childbirth.

Conclusion: This study examines the factors influencing caesarean section acceptance among pregnant women in the Tamale Metropolis, focusing on cultural beliefs, family influence, healthcare communication, and emotional responses. Women often see C-sections as a last resort, with decisions shaped by socio-cultural norms, and trust in healthcare providers is crucial for improving informed decision-making and maternal health outcomes.

**Keywords:** caesarean section, acceptance, cultural beliefs, emotional responses,informed decision-making, maternal health outcomes

**Introduction**

The increasing global rates of caesarean section (C-section) have sparked debates about its medical necessity, accessibility, and socio-cultural implications(1–3). While the World Health Organization (WHO) recommends that C-section rates should ideally be between 10-15% to ensure safe maternal and neonatal outcomes, many countries either exceed or fall short of this threshold (3). In high-income countries, C-sections are often performed due to patient preference or medical convenience, whereas in low- and middle-income countries (LMICs), limited healthcare access, cultural resistance, and misconceptions contribute to both underuse and misuse of the procedure ((4–7). Across Africa, the uptake of C-sections remains significantly lower than the recommended rate, with disparities influenced by socio-economic status, healthcare infrastructure, and deep-rooted cultural beliefs (8,9).

In many African countries, C-section rates are below the WHO recommendation, leading to preventable maternal and neonatal complications(6). The reluctance to accept C-sections is often attributed to socio-cultural and economic factors, including stigma, fear of surgical complications, and male dominance in healthcare decisions(10,11). Studies in Nigeria and Tanzania reveal that many women view C-sections as a last resort, reinforcing perceptions that vaginal delivery is the only acceptable form of childbirth (12–14). Additionally, misinformation about infertility, excessive pain, and long-term health consequences has further discouraged C-section acceptance among pregnant women (15). These challenges suggest a need for targeted interventions to improve C-section awareness and acceptance within African maternal healthcare systems.

In Ghana, despite improvements in maternal healthcare, C-section rates remain suboptimal, particularly in northern regions where cultural beliefs strongly influence birth choices(16,17). Studies indicate that Ghanaian women often associate C-sections with weakness, failure, or unnatural childbirth, leading to delays in decision-making even when the procedure is medically necessary (10,18,19). Family influence, particularly from husbands and elder women, plays a crucial role in determining whether a woman undergoes a C-section, often resulting in delayed access to emergency obstetric care (20,21). Furthermore, concerns about the financial burden of surgical birth further deter women from accepting the procedure, despite government initiatives to improve maternal healthcare accessibility(22–24).

In the Tamale Metropolis, these challenges are even more pronounced due to the interplay of socio-cultural norms, economic constraints, and healthcare accessibility issues. Research has shown that many pregnant women in the region strongly prefer vaginal delivery, perceiving C-sections as a sign of personal failure or divine punishment. Misinformation about post-surgical infertility, chronic pain, and limited postpartum mobility contributes to negative attitudes toward the procedure(25,26). Additionally, male-dominated decision-making structures mean that women often have limited autonomy over their childbirth choices(27). The role of healthcare providers is also critical, as inconsistent counseling and lack of clear communication can either build trust or reinforce skepticism regarding C-section recommendations.

Despite the urgent need to improve maternal and neonatal health outcomes, limited research has explored the specific socio-cultural and emotional factors influencing C-section acceptance in Tamale. Understanding these factors is crucial for designing effective interventions that address myths, involve families in decision-making, and improve communication between healthcare providers and pregnant women. This study aims to fill this gap by exploring the experiences and perceptions of pregnant women in Tamale Metropolis regarding C-sections, contributing to policy and practice improvements in maternal healthcare.

**Methods**

**Study design**This study employs a qualitative research design, specifically adopting a narrative approach. Narrative inquiry focuses on the stories and lived experiences of individuals, making it suitable for exploring how pregnant women in Tamale Metropolis perceive and accept caesarean sections. Through storytelling, this approach allows participants to express their personal journeys, including their fears, motivations, and social influences regarding caesarean section delivery.

The philosophical stance underpinning this study is social constructivism. Social constructivism posits that knowledge and meaning are developed through social interactions and cultural contexts(28,29). Given that decisions about childbirth are shaped by societal norms, healthcare systems, and personal experiences, this perspective allows for a deeper understanding of how women construct their acceptance or rejection of caesarean sections. This paradigm recognizes that multiple realities exist, depending on an individual’s background, beliefs, and social environment.

**Study setting**

The Tamale Metropolitan Assembly (TMA) is one of the 261 MMDAs in Ghana and among the 16 in the Northern Region. It was elevated to a metropolis in 2004, with Tamale as its capital. Located centrally in the Northern Region, Tamale Metropolis lies at approximately 180m above sea level with a rolling topography, shallow valleys, and isolated hills. It shares boundaries with Savelugu Municipality (north), Yendi Municipal (east), Tolon District (west), Central Gonja District (southwest), and East Gonja Municipal (south). According to the 2021 Population and Housing Census, the metropolis has a population of 374,744, comprising 185,051 males and 189,693 females. The study participants were drawn from Bagiliga, Bavim Dohini, Dabokpa, Garizegu, and Jakarayili.

**Study Population**

The study included pregnant women residing in the Tamale Metropolis who had either considered or been advised to undergo a caesarean section. Participants were drawn from various communities, including Bagiliga, Bavim Dohini, Dabokpa, Garizegu, and Jakarayili.

**Eligibility Criteria**

**Inclusion Criteria**
Pregnant women in their second or third trimester were eligible to participate, as they would have had sufficient antenatal visits to discuss delivery options. Only those who had lived in Tamale for at least six months were included to ensure that community influences on caesarean section acceptance were adequately captured. Participants had to be willing to provide informed consent and take part in the study.

**Exclusion Criteria**
Women with medical conditions that could hinder their ability to participate in interviews, such as cognitive impairments or severe pregnancy-related complications, were excluded. Additionally, women who had undergone a previous caesarean section but had no decision-making role in that process, as well as those unwilling to provide informed consent, were not included in the study.

**Study Population and Sampling**

A total of 13 pregnant women were recruited from five communities in the Tamale Metropolis: Bagiliga, Bavim Dohini, Dabokpa, Garizegu, and Jakarayili. Participants were selected using snowball sampling, a non-probability sampling technique commonly used in qualitative research to access hard-to-reach populations. This approach involved identifying an initial participant who met the inclusion criteria, who then referred other eligible individuals until the required sample size was reached. Data collection continued until saturation was achieved, meaning no new themes or insights emerged from additional interviews(30). In qualitative research, saturation is a critical benchmark that ensures comprehensive exploration of the research topic(31). In this study, by the 11th and 12th interviews, no new perspectives or variations in responses were identified, confirming that saturation had been reached. Two additional interviews were conducted to validate this, strengthening the credibility of the findings.

**Data collection tools and procedures**

The primary data collection tool used in this study was semi-structured interviews. This tool was selected to allow flexibility in exploring participants' experiences and perspectives regarding caesarean section acceptance. The semi-structured format provided a balance between structured questioning and the opportunity to explore emerging topics. The interview guide consisted of open-ended questions focused on:

* Knowledge and attitudes toward caesarean section delivery.
* Personal, cultural, and social influences on decision-making regarding caesarean section.
* Perceptions of healthcare services and the role of medical professionals in the decision to undergo a caesarean section.
* Previous experiences with childbirth, if applicable.

Data collection took place over the course of one week in the selected communities: Bagiliga, Bavim Dohini, Dabokpa, Garizegu, and Jakarayili. The interviews were conducted in the local languages (Dagbani, Gonja, or English, based on the participants' preference) to ensure clarity and comfort. Each interview was audio-recorded with the participants' consent, and additional notes were taken to complement the recordings.

Prior to conducting the interviews, participants were given an informed consent form, which explained the purpose of the study, their rights, and the confidentiality of their responses. Interviews were carried out in private settings to ensure confidentiality and create a safe environment for open discussion. Each interview lasted between 30 to 45 minutes, depending on the participant’s responses.

After the interviews, the audio recordings were transcribed verbatim. The transcripts were then reviewed and analyzed thematically using qualitative data analysis software, ensuring systematic coding and categorization of responses. This process facilitated the identification of key themes and patterns related to caesarean section acceptance among the participants.

**Data analysis**

Data analysis was conducted using discourse analysis, which focuses on how language constructs meaning and influences perceptions. This approach allowed for an exploration of how participants discussed their experiences and made sense of caesarean section delivery within their social and cultural contexts. The analysis focused on identifying patterns in language and how terms and phrases were used to construct meanings about caesarean section delivery, influenced by societal, cultural, and medical factors.

The transcripts were reviewed to examine the roles of healthcare professionals and family members in shaping decisions, as well as the influence of societal norms and personal beliefs about childbirth. Throughout the analysis, reflexivity was maintained. The researchers acknowledged their backgrounds and biases, documenting thoughts in reflexive journals to ensure their perspectives were critically examined and did not overshadow participants’ experiences.

To ensure rigor, strategies such as member checking, peer debriefing, and maintaining audit trails were used. Member checking involved asking a subset of participants to verify that the findings accurately reflected their experiences. Peer debriefing allowed the researchers to discuss findings with colleagues to ensure a balanced analysis. Audit trails documented each step in the analysis process, providing transparency. These strategies strengthened the trustworthiness of the study, ensuring a thorough and transparent analysis.

**Ethical clearance**

The study adhered to ethical principles outlined in the Declaration of Helsinki, which provides guidelines for research involving human participants. Although ethical clearance was not obtained from a specific institutional review board, the study followed ethical standards to ensure the protection and rights of participants. Informed consent was obtained from all participants, who were fully informed about the study's purpose, their voluntary participation, and their right to withdraw at any time without consequences. Confidentiality of participants' responses was maintained, and all identifying information was anonymized to protect privacy. Participants were given the opportunity to ask questions and ensured they understood the terms of participation before agreeing to take part. This approach aligned with ethical guidelines, ensuring the study's integrity and participants' safety.

**Results**

**Socio-Demographic Characteristics of Participants**

The table 1 shows characteristics of 13 participants, highlighting that 46.2% are aged 26-35 years. Most are married (69.2%), and educationally, 46.2% have completed secondary education or higher. Regarding pregnancy history, 46.2% have experienced 2-3 pregnancies.

**Table 1: Socio -demographic characteristics of the respondents**

| **Characteristic** | **Frequency (n=13)** | **Percentage (%)** |
| --- | --- | --- |
| **Age Group** |  |  |
| 18-25 years | 4 | 30.8% |
| 26-35 years | 6 | 46.2% |
| 36+ years | 3 | 23.1% |
| **Marital Status** |  |  |
| Married | 9 | 69.2% |
| Single | 3 | 23.1% |
| Divorced/Widowed | 1 | 7.7% |
| **Educational Level** |  |  |
| No formal education | 2 | 15.4% |
| Primary/JHS | 5 | 38.5% |
| Secondary+ | 6 | 46.2% |
| **Number of Previous Pregnancies** |  |  |
| First pregnancy | 5 | 38.5% |
| 2-3 pregnancies | 6 | 46.2% |
| 4+ pregnancies | 2 | 15.4% |

**Summary of Themes and Sub-Themes**

Table 2 outlines key themes and sub-themes related to perceptions and experiences of Caesarean sections. Under "Cultural Perceptions of Caesarean Sections," sub-themes include viewing C-sections as a last resort and fears about potential long-term health consequences. The theme "Influence of Family and Social Networks" is further broken down into decision-making by husbands and mothers, alongside the pressure from community expectations. "Experience with Healthcare Providers" addresses both trust in medical advice and issues of poor communication and misinformation. Lastly, "Emotional and Psychological Responses" explores the anxiety and fear experienced before surgery and the relief and gratitude felt after a successful procedure.

**Table 2: Themes and Sub-themes**

|  |  |
| --- | --- |
| Themes | Sub-Themes |
| Cultural Perceptions of Caesarean Sections | C-Section as a Last Resort |
|  | Fear of Long-Term Health Consequences |
| Influence of Family and Social Networks | Decision-Making by Husbands and Mothers |
|  | Pressure from Community Expectations |
| Experience with Healthcare Providers | Trust in Medical Advice |
|  | Poor Communication and Misinformation |
| Emotional and Psychological Responses | Anxiety and Fear Before Surgery |
|  | Relief and Gratitude After a Successful Procedure |

**Cultural Perceptions of Caesarean Sections**

**1.1 C-Section as a Last Resort**

Many women viewed C-sections as a procedure that should only be considered when all other options fail. There was a strong preference for vaginal delivery, often associated with strength and natural childbirth. Women expressed concerns that opting for a C-section without an absolute medical necessity might be perceived negatively by their families and communities.

*"For us, a woman must try and push unless the doctors say there is no way. If you do C-section too easily, people will think you are lazy or weak."* (Participant 5)

*"My mother told me that in her time, women gave birth naturally, and we should also try. It is only when things are really bad that you should allow them to cut you."* (Participant 9)

**1.2 Fear of Long-Term Health Consequences**

Some participants expressed concerns about potential complications following a C-section, including prolonged pain, infertility, or difficulties in future pregnancies. These fears were often influenced by stories from older women in the community or personal experiences of others.

*"My sister did a C-section, and up till now, she still complains of pain in her stomach. I don’t want to go through the same thing and suffer later."* (Participant 3)

*"They say once you do a C-section, you will always have to do it again. I want to give birth many times, and I don’t want this to stop me."* (Participant 11)

**Influence of Family and Social Networks**

**2.1 Decision-Making by Husbands and Mothers**

In many cases, women reported that their husbands or mothers played a crucial role in deciding whether to accept a C-section. Women often had to seek approval from family members before making a final decision.

*"When the doctor told me I might need a C-section, the first thing I did was call my husband. I could not decide alone because he is the one who will pay the bills and explain to the family."* (Participant 7)

*"My mother told me to refuse the operation because she gave birth to all of us naturally, and she believes I can also do the same."* (Participant 2)

**2.2 Pressure from Community Expectations**

Women also faced indirect pressure from their communities, where natural childbirth was regarded as a mark of womanhood. Some feared being judged for choosing a C-section over vaginal delivery.

*"People in my neighborhood will say I am not a real woman if I do a C-section. They will think I was weak and could not push."* (Participant 10)

*"A friend of mine told me that if you do C-section, your husband might not respect you the same way. That scared me a lot."* (Participant 8)

**Experiences with Healthcare Providers**

**3.1 Trust in Medical Advice**

Some women accepted C-sections based on the trust they had in their healthcare providers. They believed that doctors knew what was best for them and their babies.

*"The doctor explained everything to me and told me that the baby’s life was at risk. That is why I agreed. I believe they know better."* (Participant 1)

*"The midwife told me that I should not be afraid and that I will heal well after the operation. That made me feel more comfortable accepting it."* (Participant 6)

**3.2 Poor Communication and Misinformation**

Conversely, some women felt that healthcare providers did not explain the need for a C-section properly, leading to fear and reluctance. In some cases, participants had misconceptions about why they were being recommended for surgery.

*"The doctor just said I had to do it but didn’t really explain why. I was confused and scared."* (Participant 4)

*"At first, I thought they just wanted to operate on me because they were in a hurry. I didn’t know it was really necessary until later."* (Participant 12)

**Emotional and Psychological Responses**

**4.1 Anxiety and Fear Before Surgery**

Women who eventually accepted a C-section described feelings of fear and anxiety before the procedure. They were worried about the pain, the surgical process, and possible complications.

*"I was shaking the whole time before they took me to the theater. I kept thinking, what if something goes wrong?"* (Participant 13)

*"My heart was beating fast because I didn’t know how I would feel after the surgery. I was very nervous."* (Participant 9)

**4.2 Relief and Gratitude After a Successful Procedure**

Despite initial fears, some women expressed relief and gratitude after the C-section, particularly when they realized it had saved their baby’s life or their own.

*"When I heard my baby cry, I knew I had made the right choice. I was scared at first, but now I am just happy."* (Participant 3)

*"I was worried before the surgery, but now I feel fine. I can say it was the best decision to protect my baby."* (Participant 6)

Discussion

This study explored the factors influencing caesarean section (C-section) acceptance among pregnant women in the Tamale Metropolis using a qualitative approach. The findings revealed that cultural beliefs, family influence, healthcare provider interactions, and emotional responses played significant roles in decision-making. Women often viewed C-sections as a last resort and expressed fears about long-term health consequences. Family members, especially husbands and mothers, heavily influenced the decision, while healthcare provider communication shaped women’s trust or skepticism toward the procedure. Emotional reactions ranged from anxiety and fear before the surgery to relief and gratitude afterward. These findings align with and diverge from existing literature, highlighting both universal and context-specific determinants of C-section acceptance.

The study found that many women perceived C-sections as an option only when all other methods had failed. This aligns with research in Ghana and other African countries, where vaginal delivery is often seen as a test of womanhood and C-sections are associated with weakness (13,17). Similarly, a study in Nigeria found that women resisted C-sections due to fears of being stigmatized by their communities (14). The preference for vaginal delivery over C-section is largely driven by deep-rooted cultural beliefs that glorify natural childbirth. The fear of long-term health complications was another major concern. Many women believed that undergoing a C-section could lead to chronic pain, infertility, or complications in future pregnancies. While some studies support concerns about post-surgical pain (15,23), the belief that C-sections always lead to infertility is largely a misconception. Research in Ethiopia suggests that misinformation and a lack of proper counseling contribute to exaggerated fears surrounding C-sections (32). These findings emphasize the need for healthcare providers to proactively address myths and misconceptions about the procedure.

The study revealed that husbands and mothers played a central role in C-section decision-making, often determining whether a woman would accept or reject the procedure. In many cases, women had limited autonomy, as they had to seek approval before proceeding with surgery. This aligns with findings from Tanzania, where women reported delayed decision-making due to the need for spousal or family consent (13). In Ghana, patriarchal structures often place reproductive health decisions in the hands of male partners, which can lead to delays in accessing timely emergency care(27,33–35). Additionally, community perceptions exerted indirect pressure on women, discouraging them from opting for a C-section. In rural settings, where traditional childbirth practices are emphasized, women who undergo surgical births may be seen as weak or less capable of motherhood (22–24). This study supports previous findings that community narratives significantly shape maternal health choices, underscoring the need for targeted interventions that involve not only pregnant women but also their families and broader social networks (36).

The study found that trust in medical advice was a critical factor influencing C-section acceptance. Women who received clear explanations from their healthcare providers felt more confident in their decision, reinforcing findings from a systematic review showing that effective communication improves maternal health outcomes (1). However, some women reported poor communication and lack of explanation, leading to skepticism about the necessity of a C-section. In some cases, participants suspected that C-sections were recommended for financial or convenience reasons rather than medical necessity. This perception aligns with studies in other low-resource settings, where health system factors, including provider incentives and facility workloads, shape patient mistrust (37). The inconsistency in provider-patient communication suggests that training healthcare workers in culturally sensitive and transparent counseling is essential to improving C-section acceptance.

Women expressed high levels of fear and anxiety before surgery, particularly regarding the pain, surgical risks, and post-operative recovery process. This echoes findings from across the globe where fear of surgery was a key barrier to C-section acceptance (38,39). The lack of preoperative psychological counseling exacerbated these fears, suggesting a need for mental health support within antenatal care services. Despite initial apprehension, many women reported feeling relieved and grateful after a successful C-section, especially when they realized that the procedure had saved their baby’s life. This aligns with findings from Brazil, where women who initially resisted C-sections later expressed gratitude after positive birth outcomes (40,41). However, some women continued to express post-operative concerns, reinforcing the importance of comprehensive postnatal care that includes emotional and psychological support (42,43).

This study provides valuable insights into the socio-cultural and emotional factors shaping C-section acceptance in a low-resource setting. The use of a qualitative, social constructivist approach allowed for an in-depth exploration of women’s narratives, capturing the complexity of their decision-making processes. Additionally, member checking and reflexivity enhanced the credibility of the findings. However, the study had some limitations. The sample size was relatively small and limited to women within the Tamale Metropolis, meaning the findings may not be fully generalizable to rural areas or other regions of Ghana. Additionally, the study focused only on pregnant women, excluding healthcare providers and family members, whose perspectives could provide a more holistic understanding of decision-making dynamics. Future research should adopt a broader scope to include multiple stakeholders involved in C-section decision-making.

**Conclusion**

This study highlights the key factors influencing C-section acceptance among pregnant women in the Tamale Metropolis, including cultural beliefs, family influence, healthcare provider communication, and emotional responses. Women often perceive C-sections as a last resort, with decisions shaped by deep-rooted socio-cultural norms and external pressures. Trust in healthcare providers and proper counseling play a critical role in acceptance. Addressing these factors is essential for improving maternal health outcomes and ensuring informed decision-making.

**Recommendations**

1. Ministry of Health & Ghana Health Service should implement nationwide education campaigns to dispel myths and misconceptions about C-sections, targeting both urban and rural communities.
2. Hospitals & Maternity Clinics should ensure mandatory involvement of husbands and key family members in antenatal counseling sessions to address social and familial influences on C-section decisions.
3. Medical Training Institutions should integrate culturally sensitive and transparent communication training into the curriculum for obstetricians, midwives, and nurses to improve patient trust and acceptance of C-sections.
4. Mental Health Units in Hospitals should establish psychological counseling services within antenatal care to help pregnant women manage fear and anxiety related to C-sections.
5. Healthcare Regulatory Bodies should enforce postnatal follow-up protocols to provide emotional support and ensure women receive accurate information about C-section recovery and long-term health outcomes.

**Consent for publication**

Not applicable

**Data Availability**

Data used to support this study are available from the corresponding author upon request.

**Conflicts of Interest**

The authors declared that they have no competing interests.

**Disclaimer (Artificial intelligence)**

Authors at this moment declare that generative AI (ChatGPT) has been used during the editing of manuscripts.

**References**

1. Bohren MA, Opiyo N, Kingdon C, Downe S, Betrán AP. Optimising the use of caesarean section: a generic formative research protocol for implementation preparation. Reprod Health. 2019 Nov 19;16(1):170.

2. Schantz C, Aboubakar M, Traoré AB, Ravit M, De Loenzien M, Dumont A. Caesarean section in Benin and Mali: increased recourse to technology due to suffering and under-resourced facilities. Reprod Biomed Soc Online. 2020 Jun;10:10–8.

3. World Health Organisation. Caesarean section rates continue to rise, amid growing inequalities in access [Internet]. 2015 [cited 2025 Feb 23]. Available from: https://www.who.int/news/item/16-06-2021-caesarean-section-rates-continue-to-rise-amid-growing-inequalities-in-access

4. Albarqouni L, Abukmail E, MohammedAli M, Elejla S, Abuelazm M, Shaikhkhalil H, et al. Low-Value Surgical Procedures in Low- and Middle-Income Countries: A Systematic Scoping Review. JAMA Netw Open. 2023 Nov 7;6(11):e2342215.

5. Angolile CM, Max BL, Mushemba J, Mashauri HL. Global increased cesarean section rates and public health implications: A call to action. Health Sci Rep. 2023 May 18;6(5):e1274.

6. Boatin AA, Ngonzi J, Ganyaglo G, Mbaye M, Wylie BJ, Diouf K. Cesarean Delivery in Low- and Middle-Income Countries: A Review of Quality of Care Metrics and Targets for Improvement. Semin Fetal Neonatal Med. 2021 Feb;26(1):101199.

7. Harrison MS, Goldenberg RL. Cesarean section in sub-Saharan Africa. Matern Health Neonatol Perinatol. 2016 Jul 8;2(1):6.

8. Manyeh AK, Amu A, Akpakli DE, Williams JE, Gyapong M. Estimating the rate and determinants of exclusive breastfeeding practices among rural mothers in Southern Ghana. Int Breastfeed J. 2020;15(1):1–9.

9. Yaya S, Uthman OA, Amouzou A, Bishwajit G. Disparities in caesarean section prevalence and determinants across sub-Saharan Africa countries. Glob Health Res Policy. 2018 Jul 2;3:19.

10. Bam V, Lomotey AY, Kusi-Amponsah Diji A, Budu HI, Bamfo-Ennin D, Mireku G. Factors influencing decision-making to accept elective caesarean section: A descriptive cross-sectional study. Heliyon. 2021 Aug 11;7(8):e07755.

11. Shirzad M, Shakibazadeh E, Hajimiri K, Betran AP, Jahanfar S, Bohren MA, et al. Prevalence of and reasons for women’s, family members’, and health professionals’ preferences for cesarean section in Iran: a mixed-methods systematic review. Reprod Health. 2021 Jan 2;18(1):3.

12. Akinlusi FM, Rabiu KA, Durojaiye IA, Adewunmi AA, Ottun TA, Oshodi YA. Caesarean delivery-related blood transfusion: correlates in a tertiary hospital in Southwest Nigeria. BMC Pregnancy Childbirth. 2018;18(1):1–9.

13. Habteyes AT, Mekuria MD, Negeri HA, Kassa RT, Deribe LK, Sendo EG. Prevalence and associated factors of caesarean section among mothers who gave birth across Eastern Africa countries: Systematic review and meta-analysis study. Heliyon [Internet]. 2024 Jun 30 [cited 2025 Feb 23];10(12). Available from: https://www.cell.com/heliyon/abstract/S2405-8440(24)08542-6

14. Michael TO, Agbana RD, Naidoo K. Exploring Perceptions of Cesarean Sections among Postpartum Women in Nigeria: A Qualitative Study. Women. 2024 Mar;4(1):73–85.

15. Keag OE, Norman JE, Stock SJ. Long-term risks and benefits associated with cesarean delivery for mother, baby, and subsequent pregnancies: Systematic review and meta-analysis. PLoS Med. 2018 Jan 23;15(1):e1002494.

16. Bosson-Amedenu S, Anafo A, Ouerfelli A, Ouerfelli N, Ouerfelli N. Examining Cesarean Section Rates in Ghana’s 10 Regions Over a Decade a Comprehensive National Investigation. BioMed Res Int. 2024 Nov 9;2024:3774435.

17. Okyere J, Duah HO, Seidu AA, Ahinkorah BO, Budu E. Inequalities in prevalence of birth by caesarean section in Ghana from 1998-2014. BMC Pregnancy Childbirth. 2022 Jan 22;22:64.

18. Asah-Opoku K, Onisarotu AN, Nuamah MA, Syurina E, Bloemenkamp K, Browne JL, et al. Exploring the shared decision making process of caesarean sections at a teaching hospital in Ghana: a mixed methods study. BMC Pregnancy Childbirth. 2023 Jun 8;23(1):426.

19. Dankwah E, Zeng W, Feng C, Kirychuk S, Farag M. The social determinants of health facility delivery in Ghana. Reprod Health. 2019;16(1):1–10.

20. Ganle JK. Why Muslim women in Northern Ghana do not use skilled maternal healthcare services at health facilities: a qualitative study. BMC Int Health Hum Rights. 2015;15(1):1–16.

21. Kanmiki EW, Bawah AA, Phillips JF, Awoonor-Williams JK, Kachur SP, Asuming PO, et al. Out-of-pocket payment for primary healthcare in the era of national health insurance: evidence from northern Ghana. PloS One. 2019;14(8):e0221146.

22. Adawudu EA, Aidam K, Oduro E, Miezah D, Vorderstrasse A. The Effects of Ghana’s Free Maternal and Healthcare Policy on Maternal and Infant Healthcare: A Scoping Review. Health Serv Insights. 2024 Sep 3;17:11786329241274481.

23. Alatinga KA, Affah J, Abiiro GA. Why do women attend antenatal care but give birth at home? A qualitative study in a rural Ghanaian District. Plos One. 2021;16(12):e0261316.

24. Azaare J, Akweongo P, Aryeteey GC, Dwomoh D. Evaluating the impact of maternal health care policy on stillbirth and perinatal mortality in Ghana; a mixed method approach using two rounds of Ghana demographic and health survey data sets and qualitative design technique. PLoS ONE. 2022 Sep 29;17(9):e0274573.

25. Naa Gandau BB, Nuertey BD, Seneadza NAH, Akaateba D, Azusong E, Yirifere JY, et al. Maternal perceptions about caesarean section deliveries and their role in reducing perinatal and neonatal mortality in the Upper West Region of Ghana; a cross-sectional study. BMC Pregnancy Childbirth. 2019 Oct 11;19(1):350.

26. Rishworth A, Bisung E, Luginaah I. “It’s Like a Disease”: Women’s perceptions of caesarean sections in Ghana’s Upper West Region. Women Birth J Aust Coll Midwives. 2016 Dec;29(6):e119–25.

27. Story WT, Barrington C, Fordham C, Sodzi-Tettey S, Barker PM, Singh K. Male Involvement and Accommodation During Obstetric Emergencies in Rural Ghana: A Qualitative Analysis. Int Perspect Sex Reprod Health. 2016 Dec 1;42(4):211–9.

28. Boyland JR. A social constructivist approach to the gathering of empirical data. Aust Couns Res J. 2019;13(2):30–4.

29. Thomas A, Menon A, Boruff J, Rodriguez AM, Ahmed S. Applications of social constructivist learning theories in knowledge translation for healthcare professionals: a scoping review. Implement Sci IS. 2014 May 6;9:54.

30. Saunders B, Sim J, Kingstone T, Baker S, Waterfield J, Bartlam B, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. Qual Quant. 2018;52(4):1893–907.

31. Rahimi S, khatooni M. Saturation in qualitative research: An evolutionary concept analysis. Int J Nurs Stud Adv. 2024 Jun 1;6:100174.

32. Tsegaye H, Desalegne B, Wassihun B, Bante A, fikadu kassahun, Debalkie M, et al. Prevalence and associated factors of caesarean section in Addis Ababa hospitals, Ethiopia. Pan Afr Med J. 2019 Nov 7;34:136.

33. Aborigo RA, Reidpath DD, Oduro AR, Allotey P. Male involvement in maternal health: perspectives of opinion leaders. BMC Pregnancy Childbirth. 2018 Jan 2;18:3.

34. Atuahene MD, Arde-Acquah S, Atuahene NF, Adjuik M, Ganle JK. Inclusion of men in maternal and safe motherhood services in inner-city communities in Ghana: evidence from a descriptive cross-sectional survey. BMC Pregnancy Childbirth. 2017 Dec 14;17(1):419.

35. Ganle JK, Dery I. ‘What men don’t know can hurt women’s health’: a qualitative study of the barriers to and opportunities for men’s involvement in maternal healthcare in Ghana. Reprod Health. 2015 Oct 10;12:93.

36. Souza JP, Day LT, Rezende-Gomes AC, Zhang J, Mori R, Baguiya A, et al. A global analysis of the determinants of maternal health and transitions in maternal mortality. Lancet Glob Health. 2024 Feb 1;12(2):e306–16.

37. Griffith DM, Bergner EM, Fair A, Wilkins CH. Using Mistrust, Distrust, and Low Trust Precisely in Medical Care and Medical Research Advances Health Equity. Am J Prev Med. 2021 Mar;60(3):442–5.

38. Shawahna R, Jaber M, Maqboul I, Hijaz H, Arjan E, Karaki M, et al. Fear of anesthesia for cesarean section among pregnant women: a multicenter cross-sectional study. Perioper Med. 2023 Nov 24;12:63.

39. Valenzuela Millán J, Barrera Serrano JR, Ornelas Aguirre JM. Anxiety in preoperative anesthetic procedures. Cir Cir. 2010;78(2):147–51.

40. Fabbro MRC, Wernet M, Baraldi NG, de Castro Bussadori JC, Salim NR, Souto BGA, et al. Antenatal care as a risk factor for caesarean section: a case study in Brazil. BMC Pregnancy Childbirth. 2022 Sep 25;22:731.

41. Torres JA, Leite TH, Fonseca TCO, Domingues RMSM, Figueiró AC, Pereira APE, et al. An implementation analysis of a quality improvement project to reduce cesarean section in Brazilian private hospitals. Reprod Health. 2024 Apr 26;20(Suppl 2):190.

42. Miovech SM, Knapp H, Borucki L, Roncoli M, Arnold L, Brooten D. Major Concerns of Women After Cesarean Delivery. J Obstet Gynecol Neonatal Nurs JOGNN NAACOG. 1994 Jan;23(1):53–9.

43. Saharoy R, Potdukhe A, Wanjari M, Taksande AB. Postpartum Depression and Maternal Care: Exploring the Complex Effects on Mothers and Infants. Cureus. 15(7):e41381.