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Exploring men's knowledge, barriers, and facilitators to male involvement in maternal health care in the Central Region of Ghana: a qualitative inquiry

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Abstract

Background Despite global reductions in maternal mortality, Sub-Saharan Africa bears 70% of deaths, with Ghana's maternal mortality ratio (234/100,000) exceeding the SDG target. Male involvement improves maternal outcomes, yet remains suboptimal in Ghana's Central Region due to sociocultural, economic, and systemic barriers. This study explored men's knowledge, barriers, and facilitators to involvement in maternal healthcare.

Methods A qualitative descriptive design was employed, involving semi-structured interviews with 25 adult males (mean age: 39.5 years) in Ghana's Central Region. Participants were purposively sampled for demographic diversity (education: 36% Junior High School; occupation: 36% informal sector). Thematic analysis followed Braun and Clarke's framework, with data managed in NVivo 12.

Results Five key themes emerged: (1) Self-Perceived Knowledge, where 48% reported moderate understanding tied to lived experience and 32% expressed high confidence despite clinical knowledge gaps; (2) Sources of Information, dominated by family/upbringing and religious institutions, with healthcare systems underutilized; (3) Knowledge Gaps, revealing critical deficits in labor/delivery, postnatal care, and emergencies; (4) Comfort in Discussion, where 60% felt comfortable discussing maternal health, but 40% cited cultural taboos; and (5) Educational Engagement, in which 80% lacked formal program exposure noted exclusion from postnatal sessions), yet 78% desired targeted education. Key barriers included socio-cultural norms prioritizing financial roles, economic constraints limiting clinic attendance, and systemic health service exclusion.

Conclusion Men's involvement is constrained by a knowledge-action gap, reinforced by structural barriers and gendered norms. Interventions must leverage interest in education through male-inclusive clinics, community programs, and policy reforms to transform intentions into partnership. Addressing these gaps is critical for advancing maternal health equity in Ghana.

Keywords Male involvement in maternal health, Maternal health services, Gender roles in healthcare, Health knowledge barriers

1 Introduction

Maternal health remains a major public health concern globally, with unacceptably high rates of maternal mortality, particularly in low- and middle-income countries (LMICs). In 2023, approximately 260,000 women died during and following pregnancy and childbirth, with about 92% of these deaths occurring in LMICs [1]. Sub-Saharan Africa (SSA) continues to bear a disproportionate burden, accounting for nearly 70% of global maternal deaths [1]. Although the global maternal mortality ratio (MMR) in 2023 was 197 per 100,000 live births, achieving the sustainable development goal (SDG) target of reducing MMR to below 70 by 2030 requires an annual reduction of almost 15%, a pace rarely achieved at the national level [1]. Within SSA, maternal health challenges are intensified by limited access to quality healthcare, poor infrastructure, socioeconomic inequities, and inadequate awareness and education regarding maternal health. Ghana has made progress, reducing its MMR from 943 in 2000 to 234 in 2023, yet this remains above the SDG target. Furthermore, significant regional disparities persist, with some areas experiencing poorer maternal health outcomes than others [2].

Increasingly, global health research recognizes that maternal health is not solely a women's responsibility; men play a crucial role in influencing maternal and child health outcomes [3–5]. Male involvement, financial, emotional, physical, and participatory decision-making support, has been linked to improved maternal service utilization, reduced postpartum depression, and better outcomes for mothers and infants [3, 6]. A systematic review further showed that male involvement is associated with higher use of skilled birth attendance and postnatal care [4].

Despite its importance, male involvement in maternal health remains low in many African contexts. Studies in Ethiopia and Kenya reported male involvement rates of only 38.2% and 18%, respectively [7]. Barriers such as sociocultural norms, economic constraints, limited knowledge, negative provider attitudes, fear of HIV testing, and rigid gender roles continue to hinder men's participation [8–10]. In many patriarchal settings, men may perceive maternity services as women's domain, and health systems may not be organized to accommodate or encourage their participation [9–11].

Limited male involvement poses a significant public health problem. Men's restricted knowledge and engagement reduce opportunities for promoting safe motherhood practices, family planning, and timely healthcare-seeking [8, 12]. Given that men often serve as primary decision-makers in many African households, their lack of awareness or negative attitudes can contribute to delays in accessing maternal care, heightening the risk of complications and mortality [8, 12]. When men are uninvolved, women may experience inadequate support, increased stress, and limited resources during pregnancy and childbirth, which can adversely affect maternal outcomes [13]. Male participation is also vital in efforts to prevent mother-to-child HIV transmission, as joint education and testing significantly reduce transmission risks [14, 15]. Moreover, maternal morbidity and mortality carry substantial economic consequences for families and communities; increasing male involvement can improve health outcomes while reducing associated costs [13].

Despite the evidence, there is limited context-specific understanding of men's knowledge, attitudes, and involvement in maternal health within the Central Region of Ghana. This gap constrains the design of interventions that address the unique sociocultural and systemic factors shaping men's participation in this setting. Therefore, the problem this study addresses is the lack of empirical data on the barriers and facilitators influencing male involvement in maternal health care in the Central Region in Ghana. Addressing this issue requires a comprehensive approach that challenges restrictive gender norms, promotes male education and awareness, and fosters a supportive environment for meaningful male engagement in maternal health. This study contributes to that effort by exploring men's knowledge, attitudes, and experiences related to maternal health in the Central Region of Ghana. By identifying the barriers and facilitators to male involvement, the findings aim to inform targeted interventions that can improve maternal health outcomes and promote gender equity in healthcare.

2 Methods

2.1 Research design

This study employed a qualitative descriptive design as part of a broader initiative to advance maternal health equity in Ghana. This design was selected because it enables the collection of rich, straightforward, and contextually grounded accounts of participants lived experiences, perceptions, and social realities [16]. A qualitative descriptive approach is particularly well-suited for studies seeking to explore phenomena that are not yet well understood, as it allows researchers to remain close to participants' own words while providing a comprehensive summary of events and perspectives. This makes it an appropriate choice for examining the sociocultural dynamics that shape men's involvement in maternal health in the Central Region of Ghana.

2.2 Study area

This study was conducted in the Central Region of Ghana. The region was strategically selected due to its demi-urban character, blending urban centers, peri-urban settlements, and rural communities, which reflects diverse healthcare access patterns and socio-cultural contexts relevant to maternal health seeking [17]. Maternal health services in the region are delivered through a tiered system, ranging from Community-Based Health Planning and Services (CHPS) compounds to district hospitals and regional referral facilities [17, 18].

The Central Region presents a pertinent setting for investigating male involvement, as available data suggests lower-than-average male participation in antenatal care (ANC) and skilled birth attendance compared to national targets [19, 20]. Its population exhibits significant variability in healthcare-seeking behaviors, influenced by factors such as ethnicity (predominantly Fante, with other Akan groups), economic activity (fishing, farming, commerce), and educational attainment [16]. This heterogeneity, coupled with documented challenges in male engagement from regional health reports [8, 19, 21], provides a rich context to explore the complex barriers and facilitators to men's involvement in maternal healthcare.

2.3 Study population

The study population comprised adult males (≥ 18 years) in the Central Region of Ghana who were married, cohabiting, or in long-term partnerships with women who experienced pregnancy or childbirth within the last five years. Participants were purposively selected based on their role as primary decision-makers/supporters during maternal care. This timeframe ensured recent and relevant recollections of maternal health experiences.

2.4 Sampling procedure and sample size

Purposive sampling was employed to capture maximum variation across key demographics: age, occupation, education level, residential setting (urban/rural), and parity. Recruitment continued iteratively until thematic saturation was achieved, the point where no new insights emerged from sequential interviews [22]. A total of 25 participants were enrolled, consistent with established qualitative sample size norms [23] and sufficient to achieve data depth while accommodating heterogeneity.

2.5 Data collection instrument

A semi-structured interview guide was developed through an iterative process involving: (1) comprehensive review of literature on male involvement in maternal health, (2) consultation with two obstetricians and one gender studies specialist for domain relevance, and (3) pilot-testing with three community members (excluded from the main sample) to optimize cultural appropriateness. The finalized instrument explored five key domains: (1) Self-Perceived Knowledge (high/moderate/limited understanding of maternal health concepts), (2) Sources of Information (family, health systems, peers, religious institutions), (3) Knowledge Gaps (labor/delivery, postnatal care, emergencies), (4) Comfort in Discussion (contexts enabling or inhibiting dialogue), and (5) Educational Engagement (past participation and future program interest). Open-ended probes ("How would you rate your knowledge of childbirth complications?"; "Describe where you learned about postnatal care") elicited nuanced narratives aligned with these domains. Participant quotations (e.g., P6 on church-based learning; P20 on C-section decision-making) emerged directly from this instrument's scaffolding.

2.6 Data collection procedure

Face-to-face interviews, averaging 45 min, were conducted in participants' preferred locations (80% in homes, 20% in private community settings) to optimize comfort and privacy. Trained bilingual researchers administered interviews in Twi, Fante, or English, with native speakers handling local language sessions. Prior to recording, *dual consent protocols* were implemented: literate participants provided written consent, while illiterate participants gave witnessed verbal consent documented via an impartial witness's signature. All sessions were audio-recorded following consent, with verbatim transcriptions later augmented by field notes capturing nonverbal cues. Confidentiality was upheld through anonymized identifiers (e.g., P01-Rural-Farmer), and data storage complied with institutional security protocols.

2.7 Data processing

All interviews were audio-recorded, transcribed verbatim, and translated from local languages (Fante/Twi) into English by bilingual research assistants, with translations cross-verified for semantic accuracy by the research team. Transcripts underwent rigorous quality checks before being imported into NVivo 12 (QSR International) for systematic coding and thematic organization. Thematic analysis followed Braun and Clarke's [24] six-phase reflexive approach: (1) familiarization through repeated reading of transcripts; (2) initial coding of data segments relevant to men's knowledge, barriers, facilitators, and sociocultural context; (3) searching for themes by collating codes into preliminary patterns; (4) reviewing themes through iterative peer debriefing with two qualitative experts to ensure coherence; (5) defining/naming themes with explicit definitions; and (6) producing the report with illustrative quotes [24].

2.8 Data analysis

Analysis was both deductive and inductive: data were manually organized into three a priori core themes, knowledge, barriers, and facilitators of male involvement, while allowing emergent sub-themes (e.g., healthcare provider attitudes, economic constraints) to arise organically from the data. A thematic matrix (Table 2) was developed to map sub-themes and their relationships. Divergent perspectives (e.g., men contesting cultural barriers) were documented, reflexively analyzed for contextual nuance, and integrated into findings (Nowell et al., 2017). Theme frequency was quantified to identify prevalence patterns, but salience was prioritized over mere recurrence. Participant quotations anchor results to lived experiences, with community member responses analyzed separately to triangulate individual narratives against collective norms (Creswell and Poth, 2018). Analytic rigor was ensured through regular team discussions resolving coding discrepancies, member checking with five participants, and maintaining an audit trail of theme evolution.

2.9 Ethical considerations

Ethical approval was obtained from the Ghana Health Service Ethical Review Committee (GHS-ERC:012/02/25) and University of Cape Coast Institutional Review Board (UCCIRB/EXT/2024/046). Written informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were maintained by assigning pseudonyms and removing identifying information from transcripts. Participants were informed of their right to withdraw at any stage without any consequences. All data were securely stored in password-protected files accessible only to the research team.

3 Results

3.1 Demographic information of participants

Most men work in informal sectors—36% reported 'Other' occupations (like artisans or daily laborers). Businessmen (20%) and civil servants (16%) were the next largest groups. This suggests that men come from mixed economic backgrounds, which may shape their time availability and priorities for maternal health involvement.

A large portion (36%) completed Junior High School (JHS), while 28% had SHS and 16% only primary education. Few had tertiary (8%) or higher. Notably, 8% had no formal

education. This range shows potential differences in health literacy, which could affect their understanding of maternal care needs.

Most men (68%) had 3–4 children; 24% had 1–2. This indicates that participants generally have considerable experience with pregnancy and childcare, which may influence their perceived role and engagement in maternal health.

The majority were married (64%) or cohabiting (16%). 80% lived with their spouse alone. This highlights that most respondents are co-resident partners, which may enable or constrain how they participate in supporting antenatal care, delivery, or postnatal visits.

The mean age was nearly 40 years (Mean = 39.5, SD = 12.1). Ages ranged from 28 to 81 years, indicating the study included both younger fathers and older men who might influence household decisions (Table 1).

3.2 Themes identified through interviews with study participants

The results are organized into five major themes: (1) self-perceived knowledge, (2) sources of information, (3) knowledge gaps, (4) comfort in discussion, and (5) educational engagement. At least three subthemes were generated from each identified theme (Table 2).

Table 1 Demographic information of participants

Variable	Frequency (N)	Percent (%)
Occupation		
Businessman/Entrepreneur	5	20
Farmer	2	8
Mason	2	8
Taxi Driver	3	12
Civil Servant	4	16
Other	9	36
Education level		
No formal Education	2	8
Primary Education	4	16
Junior High School	9	36
Senior High School	7	28
Tertiary Education	2	8
Above Tertiary Education	1	4
Number of children		
1–2	6	24
3–4	17	68
5 or more	2	8
Marital status		
Married	16	64
Single	3	12
Cohabiting	4	16
Widowed	1	4
Divorced	1	4
Living arrangement		
With spouse alone	20	80
Lives with child alone	2	8
Lives alone	3	12

Table 2 Themes identified through interviews with study participants

Theme	Subtheme
1. Self-perceived knowledge	1. High knowledge
	2. Moderate knowledge
	3. Limited knowledge
2. Sources of information	1. Family/upbringing
	2. Healthcare systems
	3. Peer/community
	4. Religious institutions
3. Knowledge gaps	1. Labor/delivery
	2. Postnatal/newborn care
	3. Complications/emergencies
4. Comfort in discussion	1. Comfortable
	2. Uncomfortable/reserved

3.3 Theme 1: self-perceived knowledge

Participants reported varying levels of confidence in their understanding of pregnancy, childbirth, and postnatal care, categorized into three subthemes:

3.3.1 High knowledge

Several men described themselves as highly knowledgeable, often attributing this to direct experience or proactive learning. For instance, P6 connected his knowledge to lived experience, stating, *"my wife… gives birth, and I see the pain that she goes through… I have a lot of knowledge."* This suggests that witnessing the physical reality of childbirth was a significant source of confidence. Similarly, P16 and P23 framed their knowledge as a critical responsibility; P23 noted, *"Taking care of a child involves regular checkups… and being prepared for emergencies,"* indicating a proactive and comprehensive understanding of their role.

3.3.2 Moderate knowledge

Most participants acknowledged a partial understanding, emphasizing reliance on incremental learning. P1's statement, *"I'll say yes, I have some knowledge about it. And I also learned from the Bible,"* illustrates how knowledge was often pieced together from diverse, non-medical sources. Others, like P13, highlighted a deliberate but ongoing learning process: *"I used to go online to learn about pregnancy… postnatal care and everything,"* pointing to the use of modern resources to fill knowledge gaps.

3.3.3 Limited knowledge

A minority expressed minimal confidence, frequently citing emotional or physical detachment from their partners' experiences. P11's blunt admission, *"I don't have any knowledge because normally I'm not close to her when she gave birth,"* directly links a lack of knowledge to absence. P3 offered a more nuanced perspective, explaining that *"if you don't get closer to them, it's a challenge,"* implying that knowledge is contingent upon active involvement in the pregnancy journey.

3.4 Theme 2: sources of information

Four subthemes emerged regarding how men acquired maternal health knowledge:

3.4.1 Family/upbringing

Family narratives and childhood observations were a foundational source of knowledge. P4 credited his mother, *"I got some experience from my mom… I learned from her,"* demonstrating the influence of parental figures in shaping early understanding. P24's account of learning from his uncle highlighted the importance of observational learning, noting how his uncle treated his pregnant wife with *"special tender love and care."*

3.4.2 Healthcare systems

Formal healthcare interactions and digital research were critical. Participants combined these sources for verification, as P12 explained: *"You can just google… or you may ask from… a nurse or a midwife."* P14 emphasized a proactive approach to information-seeking from health professionals, stating he asked *"a lot of midwives… and friends who are in the health working sector… to make sure that I had adequate information."*

3.4.3 Peer/community

Peer discussions and communal learning supplemented formal knowledge. P2 described a self-policing male community where *"as we keep discussing it, we also advise… ourselves,"* showing how shared experiences become a learning tool. P16's experience learning from a nurse friend *"even before I got married"* underscores how pre-marital peer networks can provide foundational knowledge.

3.4.4 Religious institutions

Churches provided structured education and moral framing. P6 stated, *"church helps me learn these things more than friends,"* and participated when *"we call a doctor who may come and teach us."* This indicates that religious institutions served as a trusted conduit for expert information, blending spiritual and practical guidance.

3.5 Theme 3: knowledge gaps

Participants identified key areas where they lacked information:

3.5.1 Labor/delivery

Uncertainty prevailed around the practicalities of childbirth. P1's response was typical: *"when she's about to give birth, I think that part I do not have a lot of knowledge. All I do is… quickly get her a car and then send her to the hospital."* This reveals a perception of their role as logistical rather than medical or supportive during active labor. P5 explicitly identified the gap: *"I don't have knowledge on how to help someone deliver,"* highlighting a desire for practical skills.

3.5.2 Postnatal/newborn care

Post-delivery care was a common blind spot. P2 expressed a common fear, *"I am unable to hold the child because she's too tiny,"* pointing to a lack of confidence in handling newborns. P21 specifically desired to *"learn more about postpartum mental health,"* indicating an awareness of more nuanced postnatal challenges beyond basic physical care.

3.5.3 Complications/emergencies

Men felt particularly unequipped to manage crises. P18's experience was telling: *"all the two were born through surgery… that I didn't know much about,"* highlighting a gap even when married to a healthcare professional. P23's comment on the need to be *"prepared for emergencies"* framed this not just as a personal gap, but as a universal aspect of responsible parenthood.

3.6 Theme 4: comfort in discussion

Men's willingness to discuss maternal health varied:

3.6.1 Comfortable

Many were open, valuing transparency and normalization. P16 rejected cultural taboos, stating, *"I don't think it's anything that you should shy off… I feel very comfortable discussing it."* P20 viewed it as integral to marriage, saying, *"I feel it's part of… the marriage system… so I'm really comfortable sharing it."*

3.6.2 Uncomfortable/reserved

Others cited privacy concerns and time constraints. P4 directly connected his discomfort to a lack of time: *"I am not comfortable talking about these… I don't have time."* P12 established a strong boundary, clarifying, *"Apart from my wife, I'm not comfortable,"* indicating that spousal communication was the acceptable limit of discourse.

3.7 Theme 5: educational engagement

Involvement in formal programs revealed three subthemes:

3.7.1 Participation in programs

Few had attended structured sessions, and those who did often experienced them passively. P14 described being *"the recipient"* in pre-marital counseling, while P18 gained exposure by accompanying his nurse wife on *"home visits."*

3.7.2 Non-participation

Most lacked access to targeted education, with many, like P9, simply stating, *"I've not been to any counselling before."* P20's experience was particularly insightful, as he noted being explicitly excluded from a postnatal session, which he thought was a missed opportunity: *"they didn't include the men."*

3.7.3 Interest in future programs

Overwhelmingly, men desired learning opportunities. P2 captured the general enthusiasm: *"Yes, I would love it… you get more knowledge."* Many, like P3, recognized the broader relational benefit, arguing that education *"would be very helpful because a lot of men, they don't understand maternal health,"* and this lack of understanding can lead to conflict.

4 Discussion

4.1 General perceptions of male involvement

The study's finding that men in Ghana's Central Region predominantly define their involvement in maternal health through financial provision, encapsulated by the concept of "chop money," underscores the persistent centrality of breadwinning in constructions of responsible masculinity. This perception aligns strongly with a robust body of literature from low- and middle-income countries (LMICs), where economic support is consistently identified as the primary, and often sole, expected contribution from men during pregnancy and childbirth [25, 26]. The profound social pressure associated with this role is further evidenced by research from Malawi, where a man's perceived failure to provide was a significant source of stress and stigma, entrenching providerhood as a non-negotiable masculine duty [25, 27]. However, this narrow definition contrasts with qualitative research in Tanzania and South Africa, where women desired emotional support and shared decision-making, and some men expressed a desire for involvement beyond provision, suggesting potential for role expansion even within settings dominated by provider norms [28, 29].

4.2 Financial provision as core to male identity and involvement

This conceptualization of involvement is not merely a preference but is core to male identity. It aligns with local quantitative evidence from Anomabo, where economic support constituted men's primary contribution, with direct clinical participation being a secondary priority [19]. This pattern is reinforced cross-culturally in settings like Kenya and Malawi, where men's inability to meet financial obligations incurred significant social stigma [27]. The divergence from desires for a broader involvement seen in other contexts likely stems from Ghana's stronger patriarchal norms, which position men as household resource controllers while simultaneously framing clinical spaces as feminine domains, thereby legitimizing financial support as the primary form of male engagement [30].

4.3 Socio-cultural and religious reinforcement of traditional roles

The financial provider role is powerfully reinforced by socio-cultural and religious institutions. Participants explicitly linked their sense of duty to Christian teachings, a pattern consistent with studies on Pentecostal churches in Ghana that equate responsible masculinity with economic headship and control over household resources [30, 31]. Similarly, cultural traditions in Malawi position men as external supporters rather than active participants in clinical care [32, 33]. This creates a double-edged sword: while promoting a crucial sense of financial duty, it can simultaneously discourage more participatory forms of involvement [17]. Nevertheless, emerging evidence demonstrates the malleability of these norms. Interventions in South Africa have successfully repurposed religious influence to broaden male roles, demonstrating that these barriers are not immutable [34].

4.4 Self-perceived knowledge versus actual clinical gaps

A critical finding is the disconnect between men's high-to-moderate confidence and their actual clinical understanding. While men cited experiential learning, they lacked actionable knowledge of obstetric danger signs, delivery protocols, or postnatal care,

particularly regarding emergencies [19, 31]. This mirrors quantitative data from Ghana's Upper West Region, where men endorsed skilled birth attendance but could not identify specific complications. The disconnect stems from reliance on non-clinical information networks rather than structured health education [27, 30].

4.5 Informal knowledge networks and their limitations

Men in Central Ghana predominantly acquired information through informal channels (family, religious institutions, peers), which cultivated positive attitudes but rarely delivered essential clinical knowledge. This reliance starkly contrasts with the success of Nepal's male-friendly antenatal care programs, where culturally tailored, structured health education significantly improved men's knowledge [35]. Ghana's dependence on non-clinical sources reflects a systemic failure to deliberately engage men, a gap exacerbated by resource limitations in rural clinics [27]. Consequently, these informal pathways perpetuate critical knowledge deficits, leaving men ill-equipped to respond to emergencies [19, 31].

4.6 Variable comfort levels in discussing maternal health

Comfort discussing maternal health varied considerably among participants, with higher levels of education and active religious engagement correlating with greater confidence, while those lacking formal education or religious affiliations more frequently avoided discourse due to cultural taboos or perceived irrelevance. Contextual factors significantly moderated openness: anonymized platforms like radio call-ins or problem-focused interactions facilitated dialogue by reducing social scrutiny, whereas public or group settings inhibited engagement, particularly regarding childbirth, a pattern aligning with patriarchal norms in East African communities where maternal health remains feminized [29]. However, men with even minimal antenatal care (ANC) exposure reported progressive normalization of discussions, suggesting that structured health system contact gradually dismantles inhibitions. This contrasts sharply with matrilineal Akan communities in southern Ghana, where lineage structures inherently validate male participation in reproductive health dialogues without stigma, highlighting how intra-national cultural heterogeneity shapes comfort levels. Crucially, discomfort often stemmed from fear of social judgment rather than disinterest, as evidenced by participant's reluctance despite acknowledging knowledge gaps, underscoring that normative shifts must precede behavioral change.

4.7 Systemic exclusion from health education programs

The pervasive systemic exclusion of men is underscored by institutional barriers. The majority of participants reported no participation in maternal health education initiatives [19]. Even where programs exist, their content typically prioritizes financial responsibilities over actionable clinical knowledge, thereby failing to address critical gaps [19, 30]. This exclusion is further institutionalized through gender-segregated service delivery and health worker attitudes that alienate men, a finding corroborated by quantitative data from Kenya [19]. This contrasts sharply with evidence-based models like Rwanda's community health worker system, which improved male antenatal care participation through inclusive counseling [19]. While Ghana's CHPS program holds theoretical potential, its efficacy is hampered by critical operational constraints [36, 37].

4.8 Economic and structural barriers to participation

Economic constraints and structural inefficiencies significantly hindered participation. Inflexible work schedules, particularly in farming, precluded attendance at antenatal care sessions aligned with fixed clinic hours [19, 27]. Despite Ghana's official abolition of user fees, informal "under-the-table payments" persisted, disproportionately deterring low-income men [8]. These economic pressures were reinforced by structural shortcomings, including ANC scheduling that conflicted with agricultural work cycles, a pattern confirmed by systematic reviews from East Africa [29, 38].

4.9 Interest in education as a pathway to engagement

Despite these challenges, our findings counter assumptions of male apathy. Men demonstrated robust enthusiasm for targeted maternal health education, with a strong preference for flexible modalities like radio programs and community workshops [20, 39]. Their articulated demand for contextually relevant content reflects the critical gaps in their practical knowledge and presents a strategic opportunity for health systems [29, 40]. Realist reviews substantiate that such demand-driven education activates men's sense of responsibility, transforming interest into sustained engagement [40].

4.10 Contrasting regional and educational disparities

Engagement is moderated by stark regional and educational disparities. Higher-educated men and urban residents demonstrate substantially broader knowledge and participation, a trend reflecting national data that links tertiary education and urban residence to significantly higher facility birth attendance [20, 38]. These inequities are exacerbated by the Central Region's weaker health infrastructure and more entrenched traditional gender roles [38, 41]. Educational attainment mitigates these barriers by fostering greater health literacy and financial stability [37].

4.11 Health system failures and facilitators

Clinic environments in Central Region systematically deter male involvement through structural and attitudinal barriers, including disrespectful staff and a lack of male-focused services [19, 38]. Conversely, positive encounters where providers directly engaged men significantly fostered participation, highlighting the transformative potential of respectful, inclusive care [38]. The relationship of socio-cultural norms, critical knowledge gaps, and systemic health system barriers significantly constrains male involvement. However, as demonstrated by successful models in Rwanda and Ethiopia, structural reforms that create welcoming environments, provide targeted education, and adapt to men's realities can effectively transform expressed interest into sustained, meaningful engagement in maternal care.

4.12 Knowledge and gaps: the limits of good intentions

The reliance on informal knowledge sources, including fathers, uncles, pastors, and media, leaves critical gaps in men's understanding of maternal health, despite fostering positive attitudes toward involvement. Studies in Ghana consistently reveal that men lack practical knowledge about obstetric danger signs, hospital protocols, and tangible support mechanisms during labor and delivery. For instance, in Ghana's Upper West Region, men acknowledged the importance of skilled care but could not identify specific

pregnancy complications or clinical procedures, limiting their ability to respond effectively during emergencies [35]. Similarly, qualitative work in Bosomtwe District found that husbands viewed pregnancy as a "female domain," resulting in minimal awareness of antenatal care content or birth preparedness planning [31]. This contrasts with Nepal's male-friendly antenatal programs, where culturally tailored education significantly improved men's knowledge of danger signs and birth planning [35]. The persistence of these gaps in Ghana underscores a systemic failure: informal networks disseminate encouragement but not actionable, clinical information. As Ganle et al. [25] emphasize, without structured education, men's supportive intentions remain "limited to financial provision," hindering active participation in medical decision-making or emergency response.

The expressed desire for male-targeted education aligns with global evidence but highlights unmet needs in existing health systems. Men in Accra articulated frustration at being relegated to "escorts" during antenatal visits, with no dedicated spaces or information sessions for them, which reinforced their exclusion from clinical processes [17, 35]. This mirrors findings from East Africa, where community-based initiatives providing male-inclusive counseling saw increased engagement in birth planning and complication readiness [28]. Conversely, urban Ghanaian clinics often lack resources to implement recommended "couple-friendly" services, such as extended hours or male-focused health talks, perpetuating low involvement [19]. For example, a survey in inner-city Accra revealed that 98% of men understood the importance of skilled delivery, yet only 44.5% accompanied partners, citing health workers' attitudes and clinic environments as barriers [42]. This disparity between awareness and action underlines the limitations of knowledge alone without structural facilitation. As demonstrated in Malawi, where male accompaniment policies were integrated with staff training, respectful inclusion transformed men's knowledge into practical support, reducing maternal delays [43]. Thus, bridging Ghana's intention-action gap requires dismantling systemic barriers through gender-sensitive reforms.

4.13 Implications for research, practice and policy

4.13.1 Implications for practice and policy synergy

The findings necessitate a collective, multi-level approach for translating knowledge into impactful practice and policy. At the practice level, health facilities must urgently implement concrete reforms to become genuinely male-friendly. This involves dedicated training for healthcare providers to ensure respectful, non-judgmental communication with men, alongside practical adjustments like flexible clinic hours accommodating work schedules, clearly designated and welcoming male partner spaces within antenatal and postnatal care areas, and streamlined processes minimizing lengthy waits that deter working men. Concurrently, policy initiatives must mandate and resource these facility-level changes within national maternal health guidelines and accreditation standards. Furthermore, policy must actively support large-scale, sustained community engagement programs. This requires partnering strategically with influential traditional authorities, religious leaders, and community-based organizations to co-design and disseminate culturally vibrant messaging that reframes male involvement as a positive social norm and essential component of family well-being, actively countering restrictive gender stereotypes. Crucially, policy must also address the fundamental economic

barrier by integrating or strengthening linkages with existing livelihood support and social protection programs, recognizing that financial security is a prerequisite for enabling men to participate meaningfully in maternal health without sacrificing essential income generation.

4.13.2 Implications for research, deeper implementation and future directions

These implications also highlight critical research priorities and the need for meticulous implementation strategies. Future research should rigorously evaluate the effectiveness and cost-efficiency of bundled interventions combining, for example, targeted male education delivered through trusted community channels *alongside* specific health system modifications and livelihood support components. Investigating the differential impact of these integrated approaches across diverse socioeconomic and cultural subgroups within the Central Region and beyond is essential. For practice, moving beyond generic awareness, targeted education programs for men require context-specific development, focusing explicitly on recognizing danger signs, mastering practical caregiving skills (e.g., newborn bathing, supporting breastfeeding), and understanding the critical importance of the postnatal period. Implementing household-level counseling necessitates equipping community health workers and nurses with robust skills in facilitating constructive couple communication, shared decision-making, and non-violent conflict resolution techniques. Policy development must prioritize creating sustainable funding mechanisms for these community-based counseling initiatives and ensure they are embedded within existing primary healthcare structures like the Community-based Health Planning and Services (CHPS). Long-term success hinges on policies that foster collaboration between the Ghana Health Service, Ministry of Gender, Children and Social Protection, local government authorities, and NGOs to ensure interventions are coordinated, culturally coherent, and address the interconnected social, economic, and health system determinants of male involvement identified in this study. This integrated, evidence-based approach holds the transformative potential to significantly improve maternal and newborn health outcomes through empowered partnership.

5 Conclusion

This study reveals that men in Central Ghana primarily conceptualize maternal health involvement through financial provision ("chop money"), reflecting deeply embedded sociocultural and religious norms that equate masculinity with economic responsibility. Despite expressed willingness to engage, critical gaps persist in clinical knowledge, particularly regarding labor, emergencies, and postnatal care, exacerbated by reliance on informal information networks and systemic barriers like exclusionary clinic environments, inflexible schedules, and unaddressed costs. Successful interventions must integrate *structural reforms* (male-friendly health services, provider training), *targeted education* (leveraging radio/churches for danger-sign recognition), and *policy action* (economic support, cross-sector coordination) to transform men's intentions into meaningful partnership. Addressing these interconnected factors is essential to harness male involvement as a catalyst for improved maternal and neonatal outcomes in the region.

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Author contributions
CA, and EFOA conceptualized the study, CA provided study supervision, and all the authors were involved in data collection, analysis, and manuscript writing.

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Data availability
The data that support the findings of this study are available from the corresponding authors, but restrictions apply to the availability of these data, and so are not publicly available. The data are, however, available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate
The study was conducted in accordance with the Declaration of Helsinki. Ethical clearance was obtained from the University of Cape Coast Institutional Review Board and the Ghana Health Service Ethics Committee. Written informed consent was obtained from all participants.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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