MALE PARTICIPATION FACTORS IN ANTENATAL CARE FOR MATERNAL HEALTH IN RURAL AREAS: SYSTEMATIC REVIEW

By Yolanda Safitri

WORD COUNT 6353
TIME SUBMITTED 03-MAR-2025 11:57AM
PAPER ID 114936199

p-ISSN 2086-6380, e-ISSN 2548-7949

Jurnal Ilmu Kesehatan Masyarakat (JIKM)

MALE PARTICIPATION FACTORS IN ANTENATAL CARE FOR MATERNAL HEALTH IN RURAL AREAS: SYSTEMATIC REVIEW

Yolanda Safitri[1]*, Frima Elda[2]

[1]Program Magister Kesehatan Masyarakat, Fakultas Kesehatan Masyarakat, Universitas Indonesia, Depok, Indonesia

[2]Jurusan Gizi, Fakultas Kesehatan Masyarakat, Universitas Andalas, Padang, Indonesia

* Correspondence Author: yolandasafitri23@gmail.com

ARTICLE INFO

Article History:

Received : October 22, 2024

Accepted : February 3, 2025

Published: March 3, 2025

DOI:

https://doi.org/10.26553/jikm.2024.16.1.1-17

Available online at

http://ejournal.fkm.unsri.ac.id/index.php/jikm

ABSTRACT

Maternal health remains a critical global health priority, especially in rural areas where Antenatal Care (ANC) services often face significant challenges, including limited resources, low awareness, and cultural barriers. Male involvement plays a vital role in improving maternal health outcomes. This systematic review examines factors influencing male participation in ANC services in rural settings. A literature search was conducted using PubMed, ProQuest, and Scopus databases from 2019 to 2024. Keywords included "*pregnant woman,*" "*rural population,*" "*antenatal care,*" "*patriarchal culture,*" *and* "*men involvement*". After filtering, 45 relevant articles were selected based on CEBM study quality. The study included qualitative, quantitative, and mixed-method research on male participation in ANC at both community and facility levels. Only studies published in English within the specified timeframe were included, while duplicates, non-English articles, and studies outside the rural context were excluded. Among the selected studies, eight were quantitative, six qualitative, and three employed mixed methods. Findings reveal that education, social norms, economic factors, and policies significantly influence husbands' involvement in ANC, aligning with previous research. However, this review highlights key differences, particularly in the impact of social changes that promote greater male participation and the role of concrete policies in enhancing their access to ANC. To improve husband involvement, targeted interventions are necessary, including couple-based educational programs, enhanced accessibility and affordability of health services, and shifts in community attitudes toward men's roles during pregnancy. Addressing these factors is essential for improving maternal health outcomes in rural settings.

Keywords: antenatal care, male involvement, maternal health, rural.

Introduction

Maternal mortality remains very high, with an estimated 287,000 women dying during and after pregnancy and childbirth in 2020. Approximately 95% of these deaths occur in low and lower-middle-income countries, many of which are preventable. High maternal mortality rates in some parts of the world point to inequities in access to quality health services and expose disparities between the rich and poor. By 2020, the maternal mortality rate in low-income countries will be 430 per 100,000 live births, compared to 13 per 100,000 live births in high-income countries.[1,2]

In many cultures, men serve as the primary decision-makers within the household, which places them in a unique position to influence their partners' engagement with antenatal care. Research shows that active male involvement in Antenatal Care (ANC) leads to increased utilization of maternal healthcare services, better birth preparedness, and improved health outcomes for both mothers and infants. In rural areas, male involvement is often shaped by socio-cultural, economic and educational factors.[3] For instance, men's participation frequently depends on their understanding of maternal health issues and their roles within the family.[3–6]

Low husband involvement in Antenatal Care (ANC) can have significant negative impacts on maternal and child health outcomes. When husbands are disengaged, women often face barriers in accessing timely and adequate maternal healthcare services. These challenges include limited financial support, lack of emotional encouragement, and logistical difficulties in attending ANC appointments. Additionally, cultural norms and gender roles in many communities further restrict women's autonomy in making decisions about their health, compounding the risks of complications during pregnancy and childbirth. The absence of male support also diminishes opportunities for sharing responsibility in preparing for childbirth, including planning for emergencies or morbidity and mortality.[4–6]

Involving husbands in ANC has been recognized as having a great impact on women's utilization of maternal healthcare services. Recent studies highlight the significant role of husbands in ANC and their impact on maternal health outcomes. Male involvement in ANC encompasses actions such as discussing maternal health issues, making joint decisions about pregnancy, accompanying partners to ANC visits, and providing social and economic support. Such involvement has been associated with increased utilization of maternal health services, including institutional deliveries and postnatal check-ups and a reduction in maternal depression[7]. Study in Ethiopia found that male partner involvement in ANC was relatively high but still needed improvement to reach acceptable levels. Factors positively influencing involvement included higher education levels, awareness of pregnancy danger signs, and exposure to inform on male involvement in ANC.[7]

Interventions aimed at increasing male involvement have shown promising results. Strategies such as couples counseling, providing educational materials to men, home visits to pregnant women and their partners, and mass media campaigns have been effective in enhancing male participation in ANC. These efforts contribute to improved maternal health outcomes by promoting shared-decision making and support during pregnancy.[8] Digital Education Platform for Couples in Canada, an online platform has been developed to educate expectant couples about pregnancy and the importance of fathers. The platform provides interactive modules that highlight the husband's role in supporting the mother's health during pregnancy. Research shows that this kind of educational intervention can increase men's participation in Antenatal Care (ANC).[8]

By consolidating existing findings, this review aims to identify patterns, highlight successful interventions, and propose actionable recommendations to enhance male participation in ANC. Beyond bridging the knowledge gap, it provides a foundation for developing culturally sensitive, context-specific strategies to improve maternal health in rural areas. This study explores unique aspects of male involvement, including emotional and psychological support, cultural barriers, and socio-economic influences. Additionally, it examines the impact of male participation on maternal mental health, birth preparedness, and postpartum outcomes—areas often overlooked. This review uncovers the socio-cultural norms, economic constraints, educational barriers, and healthcare system challenges that influence participation by synthesizing evidence on the factors shaping male involvement in ANC. Ultimately, it underscores the benefits of male engagement while addressing the structural obstacles that hinder their role in maternal healthcare.

Methods

This study utilized a systematic review design, employing a descriptive narrative synthesis for analysis. This systematic review was conducted to see the extent of the role of men or husbands in antenatal care services. A standardized systematic review flowchart that's Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist was used during the review process before searching. The primary author seeks support from the second author in identifying relevant keywords, which are then used to enhance and expand the search process. The objective is to optimize the search within the designated database.

The search was conducted from August 7-9, 2024. The search strategy was performed by combining keywords using AND/OR Boolean terms ("pregnant woman" OR "pregnancy") AND ("rural population" OR "rural health" OR "rural communities" OR "countryside") AND ("antenatal care" OR "maternal health services" OR "health service utilization") AND ("patriarchal culture" OR "men involvement" OR "gender norms" OR "men participation") both medical subject headings and free text terms. The authors searched and screened the studies based on the title and

abstract at the initial steps. In the next step, authors selected the full text based on eligibility criteria.

Inclusion criteria of this research were qualitative, quantitative and mix method studies about male participation for ANC. PICO framework from this study are Population ; pregnant women in rural population, male in rural area, Intervention; antenatal care visit, Outcome; improve maternal health. This just included studies at both a community and facility level. All other inclusion criteria included publication dates between 2019-2024 with English articles. Duplicate search results were removed, and any articles not written in English were excluded. While the exclusion criteria of this study are articles that do not fit the specified time frame, articles that cannot be accessed in full text, and articles that are not in rural areas. The article selection process was conducted from August 7 to 9, 2024. In the beginning, the authors found and screened papers by title and abstract. The authors checked the full text on qualifying criteria. To ensure that the selected article is feasible, the author uses Centre for Evidence-Based Medicine(CEBM) for article quality. CEBM provides critical appraisal tools to evaluate the quality of scientific evidence in quantitative, qualitative, and mixed methods research. For quantitative research, the tool assesses internal validity, bias, and statistical significance with 5-10 questions. In qualitative research, the focus is on methodological rigour and transferability of findings with 5-8 questions, while for mixed methods, the tool evaluates the integration of quantitative and qualitative data with 6-10 questions. The main focus of CEBM includes internal validity, clinical relevance, and methodological quality, helping researchers ensure valid and applicable evidence.

The following are the results of the quality assessment of the selected articles. A cutoff of 68% of the number of questions (8 yes/complete questions) was used, so the assessed articles became the selected articles. The quality assessment of the studies yielded the following scores: 10 articles received a score of 12, one article scored 11, another article scored 10, one article scored 9, and four articles received a score of 8.

Results

The number of articles obtained from PubMed, ProQuest and Scopus databases is 21,578. Furthermore, the articles were screened for duplication using Rayyan tools and 12.979 were duplicates; 3.316 ineligible, 5,283 screened, after reading the title abstract that matches the topic, there are 87 articles that match. After reading the full text with data obtained through electronic databases, only 17 articles met the inclusion criteria and were included in this review. For the search, stages can be seen in Figure 1. PRISMA Diagram Flow below:

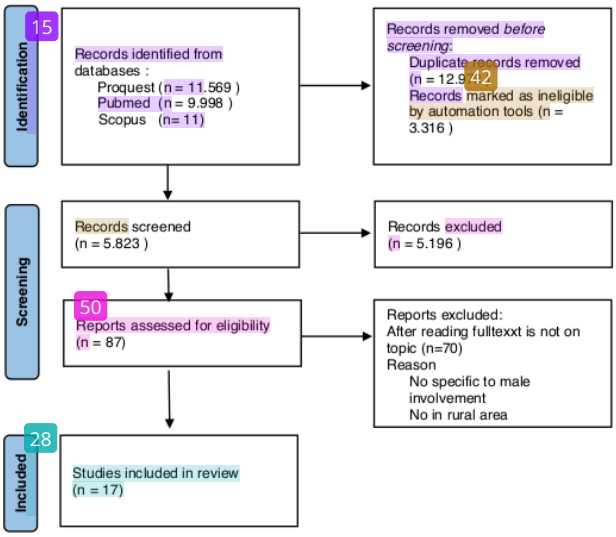

Figure 1. PRISMA Diagram Flow

Table 1. Article and Participant Characteristics

No	Articles	Country	n	Participant (Month)	Gender	Method/Design
Y1	Sitefane, et.al (2020)[9]	Mozambique	1422	1	Female	Quantitative, Cross-Sectional
Y2	Auma, et.al (2023)[10]	Uganda	423	3	Female	Quantitative, Cross-Sectional
Y3	Kalindi, et.al (2023)[11]	Zambia	36	1-2	Female=24 Male=12	Qualitative, Case Study
Y4	g dong, et.al (2020)[12]	China	169	2	Female	Mix Method
Y5	Osaki, et.al (2021)[13]	Tanzania	19	2	Female=13 Male=6	Qualitative
Y6	Yeates, et.al (2021)[14]	Tanzania	48	2	Female=30 Male=18	Qualitative
Y7	Chahalis, et.al (2021)[15]	Tanzania	10.000	60	-	Quantitative, Cross-Sectional
Y8	Maluka, et.al (2020)[16]	Tanzania	400	3	Female Male	Qualitative, Case Study
Y9	Batura, et.al (2022)[17]	India	2630	-	Female	Quantitative, Cross-Sectional
Y10	Kashaija, et.al (2020)[18]	Tanzania	9	-	Male=9	Qualitative
Y11	Paulos, et.al (2020)[19]	Ethiopia	233	4	Female	Quantitative, Cross-Sectional
Y12	Nesane, et.al (2024)[20]	South Africa	22	2	Female	Qualitative
Y13	Kabanga et.al (2019)[21]	Tanzania	174	2	Male	Quantitative

Y14	Fatila, et.al (2020)[22]	Nigeria	375	-	Male	Quantitative, Cross-Sectional
Y15	Gibore ,et.al (2020)[23]	Tanzania	966	2	Male	Quantitative, Cross-Sectional
Y16	Okafor ,et.al (2022)[24]	Nigeria	418	3	Male	Mix Method
Y17	Mapunda, et.al (2022)[25]	Tanzania	428	4	Female	Mix Method

Based on table 1 and table 2 summarizes studies conducted across various countries, including Mozambique, Uganda, Zambia, Tanzania, India, China, Ethiopia, South Africa, Congo, and Nigeria, Focusing on participation factors in specific contexts. Sample sizes vary widely, ranging from small-scale studies with as few as 9 participants to large-scale research with up to 10.000 participants. The studies employed diverse methodological approaches, including quantitative cross-sectional designs, qualitative case studies, and mixed-method approaches. Gender representation also differs across studies, focusing on females and males. The diversity in sample sizes, methodological approaches, and regional contexts illustrate these studies' varying scopes and objectives, offering valuable insights into participation factors across different cultural and geographical settings.

Table 2. Data Collection and Results

No	Articles	Data Collection	Result
Y1	Sitefane, et.al (2020)[9]	In-depth interview	The study participants stated that husbands' support plays an important role in women's utilization of services. However, in the study area, husbands are the main decision-makers in all family activities, and most do not support their wives in accessing health facilities. Many key informants and research participants did not have joint discussions with their wives. They emphasized that sometimes couples do not reach an agreement, even in decisions related to having children or not.
Y2	Auma, et.al (2023)[10]	Interview with questionnaire	The results showed that one in three men in the Palabek refugee settlement were involved in ANC. Two factors positively associated with men's level of engagement were access to information about ANC and frequency of communication with their partners.
Y3	Kalindi, et.al (2023)[11]	In-depth interview	Societal norms largely determine the disparities, as men and women have different gender role expectations in the facilitation or use of maternal health services. Household choices women in general vs men overall, the role of men as decision-makers: Men predominantly make household decisions, which applies to choices related to reproductive health, including the key-seeking behaviour for maternal services made by a man with limited knowledge. Such behaviour is not conducive to the effective leveraging of these services.
Y4	Dong dong, et.al (2020)[12]	Q-methodology and Interview	This study confirms that decision-making regarding antenatal screening results from collaboration between the mother and her partner or husband. This approach emphasizes the importance of relational autonomy, in which the husband has an important role. Although decisions are made jointly, the mother retains final authority.
Y5	Osaki, et.al (2021)[13]	In-depth interview	Some women delayed coming to the service because they were waiting for their partners, who seemed reluctant to accompany them to ANC. Sometimes, husbands forced their partners to go to the clinic alone, with no reason why he could not accompany her.

No	Articles	Data Collection	Result
Y6	Yeates, et.al (2021)[14]	FGD	The study emphasizes that men, particularly husbands, are often the primary decision-makers regarding maternal health services. Women often lack autonomy and need permission from their husbands or family to access health services, which can hinder or delay access to needed maternal health care. Lack of male involvement is a significant barrier, with men rarely accompanying their wives to health facilities, resulting in women's lack of access to services. This is largely due to a need for more understanding of their responsibilities and the importance of antenatal care. In addition, cultural norms often require women to attend health facilities with their husbands.
Y7	Chahalis, et.al (2021)[15]	Survey	Traditionally, men's roles in culture, including in Tanzania, have limited their involvement in maternal health, but this is changing as women's financial contributions increase. Men's involvement in household tasks has been shown to improve maternal health outcomes, such as iron tablet consumption during pregnancy, and reduction in women's workload. Men in antenatal care (ANC) also contribute to better maternal and child health outcomes. Education and young age in urban areas encourage men's involvement in household tasks, while older men living in rural areas are less likely to help. Involvement in health decision-making with a partner encourages men to participate more in domestic tasks, which also benefits child development.
Y8	Maluka, et.al (2020)[16]	FGD, "Semi structured" interviews	Key individual and social factors leading to delayed ANC visits included a lack of knowledge about the importance of early ANC visits, the experience of previous births with favorable outcomes, traditional gender roles, fear of embarrassment and stigma, and cultural beliefs related to pregnancy. Key factors hindering early ANC visits in Kilolo and Mufindi districts included spousal chaperoning policies, abusive language from health workers, and health worker shortages.
Y9	Batura, et.al (2022)[17]	Questionnaire	Two-thirds of women make perinatal care decisions by themselves and with their husbands, whereas one-third do not participate. Older participants, those with some secondary and higher education levels, and employed staff were more likely to participate in the microcredit program, whereas being older at marriage and having a larger household size significantly reduced the probability of participating.
Y10	Kashaija, et.al (2020)[18]	In-depth interview	The interviews were conducted with husbands of women undergoing antenatal care and attending labor. Four themes emerged from these interviews: showing care, affection and love; adopting a modern lifestyle; respecting women's rights; and dealing with socioeconomic hardship. Husbands' support of their spouses during the marriage was considered positive behavior. Husbands who supported their partners during pregnancy and labor perceived themselves as modern men, as they took responsibility at home to give their wives adequate rest during pregnancy.
Y11	Paulos, et.al (2020)[19]	Pre-tested and structured questionnaire	The study concluded that husband involvement in birth preparation and management of complications was low in the study area. This emphasizes the importance of involving husbands in antenatal care to improve awareness and practices related to preparation and planning for possible complications.
Y12	Nesane, et.al (2024)[20]	"Semi structured" interviews, FGD	Some participants mentioned that Vhavenda culture inhibits husbands' involvement in ANC, with some cultural beliefs negatively affecting pregnant women and being a barrier to quality ANC services. Gender barriers influence men not to attend ANC, as they consider pregnancy to be a woman's business. Some participants stated that men should focus on working and providing for the family. The separation of responsibilities between men and women is one of the factors inhibiting husbands' involvement in ANC.

No	Articles	Data Collection	Result
Y13	Kabanga et.al (2019)[21]	Questionnaire	Approximately 174 pregnant women attended ANC during their second to fourth visits or beyond. Among them, 56.9% (99 women) were accompanied by their male partners, and 51% (52 women) stated that their partners attended ANC because they had specifically requested their presence. Male partner attendance at ANC was significantly linked to their awareness of ANC appointment dates, with an odds ratio (OR) of 24.1, a 95% confidence interval (CI) of 6.8–86.5, and a p-value of <0.0001.
Y14	Fatila, et.al (2020)[22]	Questionnaire	Overall, 63 % of the respondents had adequate knowledge regarding pregnancy care. Almost all males believed they provided support to their pregnant partner (89.9%) during labour and delivery (92.9%) and again in newborn care (97.5%). In sum, 56.9% were actively engaged in pregnancy-related care. 20 % of respondents had attended antenatal (19.6%) and postnatal clinics with their partners, as shown in Table 2(5). Respondents with correct knowledge were significantly more likely to undertake side support for antenatal visits (p = 0.008), postnatal follow-up visits (p = 0.014)K, participate in birth preparation(following the death of a child)(p < 00 as well assist with newborn care(feeding and nappy changing at p <.001).
Y15	Gibore,et.al (2020)[23]	Questionnaire	More than half of the men in this study reported that they accompanied their partners to ANC services, both for HIV testing and routine check-ups. This involvement is considered important for improving maternal health outcomes, such as reducing depression and increasing maternal confidence.
Y16	Okafor,et.al (2022)[24]	Questionnaire, FGD	The survey revealed that many men believed their involvement in maternal care was restricted to monetary and practical duties, such as supplying money and making sure spouses could get to prenatal care (ANC). Wives attending such services are frequently considered superfluous if they are unemployed. Cultural and traditional norms in Nigeria generally limit men's roles to fulfilling family needs, with little attention to their physical involvement in prenatal care. This reflects the patriarchal system, where men are seen as decision-makers and women as followers.
Y17	Mapunda, et.al (2022)[25]	Survey, FGD	Men who participated in prenatal care made up 69% of the population. 85% of nursing moms attended four or more prenatal appointments, and 76% reported receiving financial, emotional, and physical assistance from their husbands. Men's opinions on their participation in prenatal care revealed five main themes: institutional barriers, conflicts and interactions with partners, external factors beyond their control, lack of awareness of gender roles, cultural norms and gender roles, and limited knowledge of reproductive health services.

Figure 2 is the idea map gives an intriguing summary of the interconnected elements that affect the degree of husband participation in antenatal care (ANC). Husband participation in antenatal care (ANC) is influenced by a combination of educational, cultural, economic and health service factors, all of which have a significant impact on maternal health outcomes. Education plays an important role, with educated husbands more likely to support ANC, while educated wives have greater autonomy in health-related decision-making, creating a mutually supportive dynamic. Cultural norms and traditional gender roles can encourage or discourage husbands' involvement, so community engagement is important to overcome cultural barriers. Economic stability increases access to ANC and supports positive marital relationships, whereas economic hardship often reduces participation. In addition, gender-sensitive policies, accessible health services and

community-based campaigns can effectively encourage husband engagement. By addressing these interrelated factors, targeted strategies can improve maternal health and better outcomes for families.

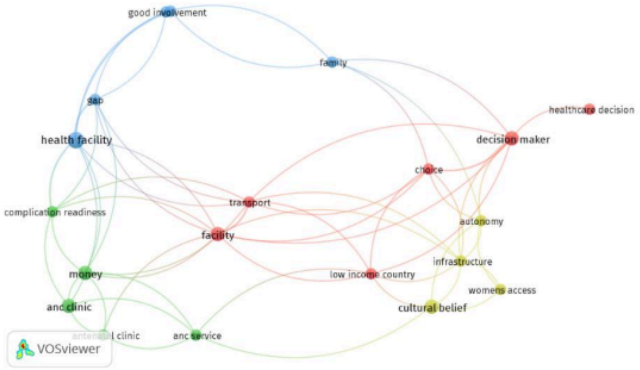

Figure 2. Clustering factors that contribute to husband's participation in antenatal care

Discussion

Husbands' knowledge of Antenatal Care (ANC) is crucial in their involvement. Research indicates that men who understand the importance of ANC are more likely to accompany their partners to medical appointments and take an active role in the care process. For instance, a study in Ethiopia revealed that husbands with higher education levels were more aware of the benefits of ANC, which positively influenced their support during their wives' pregnancies. In line with this, recent studies have found that husbands with higher levels of education tend to be more involved in prenatal care, suggesting that educational programmes aimed at men may increase their participation.[26]This finding is consistent with a comprehensive review emphasising the importance of husbands' knowledge in improving maternal health service utilisation. Studies have also shown that more educated husbands are more active in antenatal care, indicating that educational interventions targeted at men may encourage their.[27] This supports an in-depth review highlighting the role of husband awareness in improving maternal health service utilization. Moreover, husbands' attitudes toward ANC strongly influence their level of participation. Many men view ANC as solely a woman's responsibility, leading to minimal or no involvement in the process.[28]

Research explained that women's decision autonomy is critical to family well-being, especially in improving maternal and newborn health in resource-limited countries such as Ethiopia. This study assessed household decision-making autonomy and utilisation of maternal and newborn health services among married women with infants under one year of age in Debretabor,

Northwest Ethiopia. It found that three-quarters of women had higher autonomy in household decision-making and utilisation of maternal and newborn health services. In addition, the study found that the proportion of women with four or more autonomous mothers had 52.1%, 56.1%, 71.4%, 32%, and 80% of ANC visits, a health facility birth, at least one postnatal checkup, adequate understanding of Neonatal Danger Signs, and acceptable healthcare-seeking practices for unwell babies, respectively.[29]

Based on other research, perceptions of gender roles in the family may influence the level of involvement of the husband. Social and cultural norms that place the husband as the head of the family and the main decision-maker can be a barrier. Taking care of the house (cooking) and ensuring the health of expectant mothers (escorting them to the mother's waiting room) are among the duties assigned to men. The participants stated that these male roles are complex and cover a variety of mother and child health concerns. The couples discussed with the pregnant women how to build trust in seeking ANC services after confirming the pregnancy and before starting the ANC visit to reach a mutual agreement on utilizing maternal health services.[30]

Expectant women's Antenatal Care (ANC) is heavily impacted by socio-cultural factors, specifically family support, culture, and beliefs. Community culture has an impact on prenatal care practices and decisions. Effective health treatments require an understanding of the cultural context, as certain taboos or conventions may prevent pregnant women from getting the care they require. Family support is another key element in successful ANC. Family support, both emotionally and practically, encouraging attending regular appointments and offering support to navigate pregnancy challenges, can aid pregnant women in following their ANC schedule.

Pregnant women who have family support are more likely to attend prenatal appointments on time and to be open to receiving health information, according to research. Health education is essential in improving pregnant women's understanding of the benefits of ANC. Health programs that consider socio-cultural factors and involve families will be more effective. Training of health workers on cultural competence is also necessary so that the care provided is appropriate to the patient's cultural context.[31]

In the modern era, social and cultural changes have significantly affected men's attitudes towards pregnancy and Antenatal Care (ANC). Growing awareness of gender equality and women's rights has encouraged men to be more actively involved in accompanying their partners during pregnancy. The traditional view that pregnancy is a woman's responsibility is slowly shifting.[32] Today, men are seen as providers of financial needs and caring and involved partners in the pregnancy process. This change is driven by increased education, gender equality campaigns, and the recognition that men's roles can positively impact maternal and child health[33].

However, despite these positive changes, cultural and social barriers still prevent men from fully engaging in ANC. In some communities, social stigma and traditional gender norms still view

pregnancy as the exclusive domain of women, making men feel awkward or even unwelcome in healthcare settings. Therefore, concerted efforts, including public education and policy reform, are needed to remove these barriers and create an enabling environment for men's involvement in pregnancy. This will not only support gender equality but also improve overall family health.[34]

Husbands' participation in prenatal care and the ease of access to health services are significantly influenced by economic factors, such as income level and kind of job. More affluent families are more likely to have access to high-quality healthcare services, including regular prenatal check-ups and crucial pregnancy diagnostic testing. Higher-income families have the financial capacity to access supplementary services, such as transportation to medical facilities, which may be logistically challenging to reach from their current location.[35]

Meanwhile, husbands' involvement in antenatal care is influenced by their job type. Jobs that require a lot of time and energy, such as those in the field or with long working hours, can make it difficult for husbands to be present when their wives go to antenatal check-ups or provide the emotional support needed. This limited time and energy can reduce the husband's involvement in communicating and understanding health needs during pregnancy, affecting the quality of care pregnant women receive. Economics, then, impacts the opportunity to access physical health services and family involvement and support in antenatal care.[36]

The research explained that medical center accessibility is a central limitation that husbands encounter when participating in prenatal treatment. Husbands face a heavy workload restraining visitation to the clinic due to constraints such as short hours during which clinics are open, exorbitant transportation fees and long distances from health facilities. This can be made worse by work commitments and long working hours. Moreover, husbands' participation in antenatal consultations was higher if they had a clear idea about when and what would happen. The quality of medical services provided also determines husband engagement. A courteous, well-informed and respectful health worker provides the conditions for husbands to feel respected as they cooperate with and support their wives. The full participation of male partners is also more likely to be achieved if health providers stress that men, and not only women alone, have a significant place regarding antenatal care. Moreover, interventions targeting husbands that included participatory antenatal classes were feasible ways to enhance their knowledge and awareness of the processes involved in pregnancies/ childbirths.[37]

Various policies can encourage husbands' involvement in Antenatal Care (ANC), regardless of background factors such as education and socioeconomic status. One important policy is to improve men's access to health information through educational programs. For example, educational institutions and religious platforms can convey information about the importance of men's role in ANC. Community-based health promotion strategies, such as awareness campaigns and peer education programs, are also effective in improving men's knowledge and attitudes toward

ANC. In addition, paternity leave policies in the workplace are an important step in enabling husbands to accompany their wives to ANC visits without worrying about losing their income or jobs.[6]

Other measures include addressing barriers such as long waiting times at health facilities and creating a male-friendly environment. Policies to speed up ANC services can make it easier for men to attend appointments with their partners. In addition, training health workers to be more inclusive of men and providing separate waiting rooms can help change the cultural perception that ANC is a woman's responsibility. Incentives for participation, such as special facilities for couples attending ANC together or small financial incentives, can motivate men to be more involved. With the implementation of these policies, men's involvement in ANC may increase, resulting in a positive impact on maternal and child health.[38]

Conclusion

In rural areas, cultural norms and gender roles often place women as solely responsible for pregnancy and childbirth, with husbands serving as secondary caregivers during antenatal care (ANC). This cultural view excludes men from ANC and delivery services, creating significant barriers to their engagement. Additional challenges include unfriendly attitudes from health workers, provider indifference, limited access to health information, long waiting times for services, and a less male-friendly healthcare environment, all of which hinder partner education and counseling. These issues are further exacerbated by work demands that limit husbands' time with their partners.

Addressing these challenges requires culturally-based approaches, such as engaging community leaders and incentivizing male participation. Policies such as paternity leave, community-based health education campaigns, and health system reforms to reduce waiting times and create male-friendly service environments can effectively increase husbands' involvement in ANC, improving maternal and child health. Governments and health policymakers should integrate couple education sessions as a mandatory part of ANC programs and implement financial incentives or workplace policies that support men's participation.

Despite these challenges, several interventions have proven effective, including couple-based education programs, gender equality-oriented health policies, and strategies to improve the accessibility of health services, such as mobile clinics and service subsidies. These approaches show potential in overcoming barriers and encouraging shared responsibility between partners. Future research should explore the long-term impact of male involvement on maternal and newborn health and evaluate the effectiveness of policy interventions in different social and cultural contexts. A multidisciplinary approach integrating health, education, and labor policies is needed to ensure that men's engagement in ANC is sustainable.

Acknowledgement

This research work was supported by Librarian Faculty of Public Health University of Indonesia. I would also like to thank my colleagues for helping to review the article.

Funding

No funding for the research.

Conflict of Interest

This research has no conflict of interest.

Reference

1. WHO. Maternal mortality [Internet]. 2024. Available from: https://www.who.int/news-room/fact-sheets/detail/maternal-mortality
2. UNFPA. Maternal Health [Internet]. 2024. Available from: https://www.unfpa.org/maternal-health#readmore-expand
3. Gnanaselvam NA, Dore A, Beaty S, Y. J V., A. TR, Mary A, et al. How involved are husbands in antenatal care? The perspective of women availing antenatal services at a maternity hospital in rural South Karnataka-India. Int J Reprod Contraception, Obstet Gynecol [Internet]. 2019;8(10):3879. Available from: http://dx.doi.org/10.18203/2320-1770.ijrcog20194346
4. Muia PK, Mbuthia GW, Mugambi RK. Determinants of male partner involvement in antenatal care services at Kangundo Sub-County Hospital in Kenya. Afr Health Sci [Internet]. 2022;22(3):93–9. Available from: https://doi.org/10.4314/ahs.v22i3.11
5. Mamo ZB, Kebede SS, Agidew SD, Belay MM. Determinants of male partner involvement during antenatal care among pregnant women in gedeo zone, South Ethiopia: A case-control study. Ann Glob Heal [Internet]. 2021;87(1):1–12. Available from: https://doi.org/10.5334/aogh.3003
6. Beraki GG, Ahmed H, Michael A, Ghide B, Meles BT, Tesfatsion BT, et al. Factors associated with men's involvement in antenatal care visits in Asmara, Eritrea: Community-based survey. PLoS One [Internet]. 2023;18(10).1-16. Available from: https://doi.org/10.1371/journal.pone.0287643
7. Mamo BG, Novotný J, Ficek F. Barriers for upgrading of latrines in rural Ethiopia: disentangling a sanitation socio-technical lock-in. Local Environ [Internet]. 2023;28(8):1026–44. Available from: https://doi.org/10.1080/13549839.2023.2184781

8. Natai CC, Gervas N, Sikira FM, Leyaro BJ, Mfanga J, Yussuf MH, et al. Association between male involvement during antenatal care and use of maternal health services in Mwanza City, Northwestern Tanzania: A cross-sectional study. BMJ Open [Internet]. 2020;10(9). 1-8. Available from: https://doi.org/10.1136/bmjopen-2019-036211
9. Annoon Y, Hormenu T, Ahinkorah BO, Seidu AA, Ameyaw EK, Sambah F. Perception of pregnant women on barriers to male involvement in antenatal care in Sekondi, Ghana. Heliyon [Internet]. 2020;6(7):e04434. Available from: https://doi.org/10.1016/j.heliyon.2020.e04434
10. Sitefane GG, Banerjee J, Mohan D, Lee CS, Ricca J, Betron ML, et al. Do male engagement and couples' communication influence maternal health care-seeking? Findings from a household survey in Mozambique. BMC Pregnancy Childbirth [Internet]. 2020;20(1):1–13. Available from: https://doi.org/10.1186/s12884-020-02984-y
11. Auma I, Nabaweesi D, Orech S, Alege JB, Komakech A. Determinants of male involvement in antenatal care at Palabek Refugee Settlement, Lamwo district, Northern Uganda. BMC Pregnancy Childbirth [Internet]. 2023;23:325. 1–10. Available from: https://doi.org/10.1186/s12884-023-05617-2
12. Kalindi AM, Houle B, Smyth BM, Chisumpa VH. Gender inequities in women's access to maternal health care utilisation in Zambia: a qualitative analysis. BMC Pregnancy Childbirth [Internet]. 2023;23(1). 1-11. Available from: https://doi.org/10.1186/s12884-023-06078-3
13. Dong D, Ahmed S, Nichini E, Yi H, Jafri H, Rashid Y, et al. Decision making on antenatal screening results: A comparative Q-method study of women from two Chinese cities. Heal Expect. 2021;24(2):363–76. Available from: https://doi.org/10.1111/hex.13178
14. Osaki H, Sao SS, Kisigo GA, Coleman JN, Mwamba RN, Renju J, et al. Male engagement guidelines in antenatal care: unintended consequences for pregnant women in Tanzania. BMC Pregnancy Childbirth [Internet]. 2021;(21)1. 1–10. Available from: https://doi.org/10.1186/s12884-021-04141-5
15. Yeates K, Chard S, Eberle A, Lucchese A, West N, Chelva M, et al. "She needs permission": A qualitative study to examine barriers and enablers to accessing maternal and reproductive health services among women and their communities in rural Tanzania. African J Reprod Heal suppl Innov Matern Child Heal Africa Spec Ed [Internet]. 2021 Jun;25:139–52. Available from: 10.29063/ajrh2021/v25i3s.12
16. Chahalis E, McGhie J, Mulokozi G, Barham S, Chappell C, Schenk C, et al. Tanzanian men's engagement in household chores is associated with improved antenatal care seeking and maternal health. BMC Pregnancy Childbirth [Internet]. 2021;21:1–8. Available from: https://doi.org/10.1186/s12884-021-04147-z
17. Maluka S, Japhet P, Fitzgerald S, Begum K, May A, Kamuzora P. Leaving no one behind: using action research to promote male involvement in maternal and child health in Iringa

region, Tanzania. BMJ Open [Internet]. 2020;10(11). Available from: https://doi.org/10.1136/bmjopen-2020-038823

18. Batura N, Poupakis S, Das S, Bapat U, Alcock G, Skordis J, et al. Factors associated with women's healthcare decision-making during and after pregnancy in urban slums in Mumbai, India: a cross-sectional analysis. BMC Public Health [Internet]. 2022;22:1–7. Available from: https://doi.org/10.1186/s12889-022-13216-7
19. Kashija DK, Mselle LT, Mkoka DA. Husbands' experience and perception of supporting their wives during childbirth in Tanzania. BMC Pregnancy Childbirth [Internet]. 2020;(20)85. 1-9. Available from: https://doi.org/10.1186/s12884-019-2715-7
20. Paulos K, Awoke N, Mekonnen B, Arba A. Male involvement in birth preparedness and complication readiness for emergency referral at Sodo town of Wolaita zone, South Ethiopia: A cross sectional study. BMC Pregnancy Childbirth. 2020;20(1):1–7. Available from: https://doi.org/10.1186/s12884-020-2758-9
21. Nesane K V, Mulaudzi FM. Cultural barriers to male partners' involvement in antenatal care in Limpopo province. Heal S A [Internet]. 2024;29(1). 1-9. Available from: https://doi.org/10.4102/hsag.v29i0.2322
22. Schmitz K, Jimenez ME, Corman H, Noonan K, Reichman NE. Paternal depression in the postpartum year and children's behaviors at age 5 in an urban U.S. birth cohort. PLoS One [Internet]. 2024;19(4). 1-16 Available from: https://doi.org/10.1371/journal.pone.0300018
23. Fatila OF, Adebayo OM. Male partners' involvement in pregnancy related care among married men in Ibadan, Nigeria. Reprod Health [Internet]. 2020;(17)1. 1-12. Available from: https://doi.org/10.1186/s12978-020-0850-2
24. Gibore NS, Gesase AP. Men in maternal health: An analysis of men's views and knowledge on, and challenges to, involvement in antenatal care services in a Tanzanian community in Dodoma Region. J Biosoc Sci. 2020;1–14. Available from: https://doi.org/10.1017/s0021932020000541
25. Okafor IP, Chukwudi CL, Igwilo. "Men are the head of the family, the dominant head": A mixed method study of male involvement in maternal and child health in a patriarchal setting, Western Nigeria. PLoS One [Internet]. 2022 Oct;17(10). 1-23. Available from: https://doi.org/10.1371/journal.pone.0276059
26. Mapunda B, August F, Mwakawanga D, Mhando I, Mgaya A. Prevalence and barriers to male involvement in antenatal care in Dar es Salaam, Tanzania: A facility-based mixed-methods study. PLoS One [Internet]. 2022;17(8 August):1–17. Available from: http://dx.doi.org/10.1371/journal.pone.0273316

27. Tekelab T, Chojenta C, Smith R, Loxton D. Factors affecting utilization of antenatal care in Ethiopia: A systematic review and metaanalysis. PLoS One. 2019;14(4):1–24. Available from: https://doi.org/10.1371/journal.pone.0214848
28. Qadri MSK, Abbas H, Hussain W, Badar S, Manzoor T, Imran M. Educational Empowerment and Use of Antenatal Services. J Univ Med Dent Coll. 2019;10(4):11–5. Available from: https://doi.org/10.37723/jumdc.v10i4.71
29. Akinyemi AO, Ibrahim EA. Prevalence and predictors of men's involvement in pregnancy care in Modakeke, Southwest Nigeria. Front Glob Women's Heal [Internet]. 2024;5(March):1–12. Available from: https://doi.org/10.3389/fgwh.2024.1337094
30. Kinoti FK, Fava S. Knowledge and Perceptions on Antenatal Care among Men in Embakasi South Sub County, Nairobi, Kenya. J Matern Child Heal [Internet]. 2022;7(2):171–82. Available from: https://doi.org/10.26911/thejmch.2022.07.02.06
31. Kebede AA, Cherkos EA, Taye EB, Eriku GA, Taye BT, Chanie WF. Married women's decision-making autonomy in the household and maternal and neonatal healthcare utilization and associated factors in Debretabor, northwest Ethiopia. PLoS One [Internet]. 2021;16(9 September):1–16. Available from: http://dx.doi.org/10.1371/journal.pone.0255021
32. Shibeshi K, Lemu Y, Gebretsadik L, Gebretsadik A, Morankar S. Understanding Gender-Based Perception During Pregnancy: A Qualitative Study. Int J Womens Health [Internet]. 2023;15(1). 1–12. Available from: https://doi.org/10.2147/IJWH.S418653
33. Guspianto, Ibnu IN, Asyary A. Associated Factors of Male Participation in Antenatal Care in Muaro Jambi District, Indonesia. J Pregnancy [Internet]. 2022;2022. 1-7 Available from: https://doi.org/10.1155/2022/6842278
34. Khulu ZA, Mudau TS, Sengane MLM. Midwives' Perspectives regarding Involvement of Male Partners during Pregnancy at a Maternal Health Facility in Eswatini. Afr J Nurs Midwifery [Internet]. 2022;24(2). 1-19 Available from: https://doi.org/10.25159/2520-5293/12096
35. Tohan MM, Islam MA, Rahman MA. Exploring the factors behind socioeconomic inequalities in Antenatal Care (ANC) utilization across five South Asian natiaons: A decomposition approach. PLoS One [Internet]. 2024;19(8):1–16. Available from: http://dx.doi.org/10.1371/journal.pone.0304648
36. Nizum MWR, Shaun MMA, Faruk MO, Shuvo MA, Fayeza F, Alam MF, et al. Factors associated with utilization of antenatal care among rural women in Bangladesh: A community-based cross-sectional study. Clin Epidemiol Glob Heal [Internet]. 2023;20(March):101262. Available from: https://doi.org/10.1016/j.cegh.2023.101262

37. Wulandari RD, Laksono AD, Rohmah N. Urban-rural disparities of antenatal care in South East Asia: a case study in the Philippines and Indonesia. BMC Public Health [Internet]. 2021;21(1):1–9. Available from: https://doi.org/10.1186/s12889-021-11318-2
38. Beraki GG, Ahmed H, Michael A, Ghide B, Meles BT, Tesfatsion BT, et al. Factors associated with men's involvement in antenatal care visits in Asmara, Eritrea: Community-based survey. PLoS One. 2023 Oct 1;18(10). 1-16. Available from: https://doi.org/10.1371/journal.pone.0287643.
39. Aborigo RA, Reidpath DD, Oduro AR, Allotey P. Male involvement in maternal health: Perspectives of opinion leaders. BMC Pregnancy Childbirth [Internet]. 2018 Jan 2;18(1). 1-10. Available from: https://doi.org/10.1186/s12884-017-1641-9

MALE PARTICIPATION FACTORS IN ANTENATAL CARE FOR MATERNAL HEALTH IN RURAL AREAS: SYSTEMATIC REVIEW

ORIGINALITY REPORT

19%
SIMILARITY INDEX

PRIMARY SOURCES

1	pmc.ncbi.nlm.nih.gov Internet	83 words — 2%
2	bmcpregnancychildbirth.biomedcentral.com Internet	71 words — 1%
3	Nega Degefa, Aster Dure, Dinkalem Getahun, Zekarias Bukala, Tariku Bekelcho. "Male partners involvement in their wives' antenatal care and its associated factors in southern Ethiopia. A community-based cross-sectional study", Heliyon, 2024 Crossref	58 words — 1%
4	www.who.int Internet	57 words — 1%
5	ejournal.fkm.unsri.ac.id Internet	53 words — 1%
6	Azmeraw Ambachew Kebede, Endeshaw Admasu Cherkos, Eden Bishaw Taye, Getachew Azeze Eriku et al. "Married women's decision-making autonomy in the household and maternal and neonatal healthcare utilization and associated factors in Debretabor, northwest Ethiopia", PLOS ONE, 2021 Crossref	43 words — 1%
7	www.researchsquare.com Internet	36 words — 1%

8	Stephen Oswald Maluka, Chakupewa Joseph, Sian Fitzgerald, Robert Salim, Peter Kamuzora. "Why do pregnant women in Iringa region in Tanzania start antenatal care late? A qualitative analysis", BMC Pregnancy and Childbirth, 2020 Crossref	34 words — 1%
9	www.ncbi.nlm.nih.gov Internet	33 words — 1%
10	reproductive-health-journal.biomedcentral.com Internet	27 words — 1%
11	www.researchgate.net Internet	25 words — < 1%
12	Jungari, Suresh Banayya. "Cultural Context of Male Participation in Maternal Health Among Tribal Population of Gadchiroli District in Maharashtra.", International Institute for Population Sciences University, 2021 ProQuest	22 words — < 1%
13	Lucas Lorran Costa de Andrade, Laura Cavalcanti de Farias Brehmer, Bruna Alves Machado Amazonas, Wagner Ferreira Monteiro et al. "The Work Environment of Primary Health Care Nurses: An Integrative Review", Díkaion, 2024 Crossref	19 words — < 1%
14	Maimuna Begum, Mohammad Jahangir Alam, Panam Parikh, Hans De Steur. "Understanding food safety knowledge, attitude, and practices of consumers and vendors: An umbrella review", Food Control, 2025 Crossref	19 words — < 1%
15	www.dovepress.com Internet	19 words — < 1%

16	salford-repository.worktribe.com Internet	18 words — < 1%
17	www.science.gov Internet	18 words — < 1%
18	hsag.co.za Internet	17 words — < 1%
19	journals.plos.org Internet	16 words — < 1%
20	www.researchonline.lshtm.ac.uk Internet	16 words — < 1%
21	Enos Moyo, Tafadzwa Dzinamarira, Perseverance Moyo, Grant Murewanhema, Andrew Ross. "Men's involvement in maternal health in sub-Saharan Africa: A scoping review of enablers and barriers", Midwifery, 2024 Crossref	14 words — < 1%
22	doaj.org Internet	14 words — < 1%
23	Ira Titisari, Finta Isti Kundarti, Ririn Indriani, Eny Sendra, Iva Firdayanti. "Samoby (Safe Mom And Baby): An Android-based Application Increasing The Success Of Childbirth Planning And Complication Prevention Program", The Open Public Health Journal, 2024 Crossref	12 words — < 1%
24	Robab Latifnejad Roudsari, Farangis sharifi, Fatemeh Goudarzi. "Barriers to the participation of men in reproductive health care: a systematic review and meta-synthesis", BMC Public Health, 2023 Crossref	12 words — < 1%
25	www.hindawi.com Internet	12 words — < 1%

26	Idowu Pius Ade-Ojo, Olusanya Rufus Olofinbiyi, Benedict Tolulope Adeyanju, Adebola Ayotomiwa Olajuyin, Tajudeen Oluwaseun Yusuf. "Male partners' involvement during antenatal care in Ekiti State, southwest Nigeria", African Journal of Midwifery and Women's Health, 2022 Crossref	11 words — < 1%
27	ejournal.unmuha.ac.id Internet	11 words — < 1%
28	eprints.qut.edu.au Internet	11 words — < 1%
29	Saumya S. Sao, Jessica N. Coleman, Linda Minja, Rimel N. Mwamba et al. "Who is most vulnerable? Factors associated with presenting to antenatal care without a male partner in Northern Tanzania", Midwifery, 2024 Crossref	10 words — < 1%
30	Subesha Adhikari, Sarina Pradhan Kasaju, Uma Langkulsen. "The influence of COVID-19 pandemic on the mental health of pharmacists as frontline health care providers in Nepal", Heliyon, 2024 Crossref	10 words — < 1%
31	Abroon Qazi, M.K.S. Al-Mhdawi. "Quality and safety nexus: exploringcritical factors inglobalfood security", International Journal of Quality & Reliability Management, 2024 Crossref	9 words — < 1%
32	Mulu Ftwi, Gebremedhin Gebre-egziabher Gebretsadik, Haftu Berhe, Mebrahtom Haftu, Gebrehiwot Gebremariam, Yemane Berhane Tesfau. "Coverage of completion of four ANC visits based on recommended time schedule in Northern Ethiopia: A community-based cross-sectional study design", PLOS ONE, 2020	9 words — < 1%

Crossref

33	Syarifah Syarifah, Kintoko Rochadi, Tukiman Tukiman. "Cultural Barriers to Husband's Involvement in Maternal Health in Indonesia Rural Area, A Qualitative Study", Open Access Macedonian Journal of Medical Sciences, 2021 Crossref	9 words — < 1%
34	assets-eu.researchsquare.com Internet	9 words — < 1%
35	bmcpublichealth.biomedcentral.com Internet	9 words — < 1%
36	erepository.uonbi.ac.ke Internet	9 words — < 1%
37	www.primescholars.com Internet	9 words — < 1%
38	Clifford O. Odimegwu, Yemi Adewoyin. "The Routledge Handbook of African Demography", Routledge, 2022 Publications	8 words — < 1%
39	P. Rathnayaka, N. Rathnayake. "Knowledge, Attitudes, and Support of Partners in Preparation for Motherhood and Maternal Satisfaction with Partner Support: A Hospital-Based Cross-Sectional Study in the Galle District", Sri Lankan Journal of Nursing, 2025 Crossref	8 words — < 1%
40	Roza Melfira, Asnawi Abdullah, Nopa Arlianti. "FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN ANEMIA PADA REMAJA PUTRI DI SMAN 6 KOTA BANDA ACEH", Jurnal Kesehatan Tambusai, 2024 Crossref	8 words — < 1%

41	bmjpublichealth.bmj.com Internet	8 words — < 1%
42	consultorsalud.com Internet	8 words — < 1%
43	ir.jkuat.ac.ke Internet	8 words — < 1%
44	ntnuopen.ntnu.no Internet	8 words — < 1%
45	phcfm.org Internet	8 words — < 1%
46	pure.northampton.ac.uk Internet	8 words — < 1%
47	worldwidescience.org Internet	8 words — < 1%
48	Agung Dwi Laksono, Ratna Dwi Wulandari, Noor Edi Widya Sukoco, Suharmiati Suharmiati. "Husband's involvement in wife's antenatal care visits in Indonesia: What factors are related?", Journal of Public Health Research, 2022 Crossref	7 words — < 1%
49	Mekdes Mengesha Jemberie, Meseret Zewdu, Bayew Kelkay Rade. "Husbands' knowledge and involvement in sexual and reproductive health rights of women in Bahir Dar City, Northwest Ethiopia: a community-based study", Frontiers in Public Health, 2024 Crossref	7 words — < 1%
50	Norfleet, Michael. "A Systematic Review of the Literature on Post-traumatic Growth in Police	7 words — < 1%

Officers after Exposure to Potentially Traumatic Events", Pepperdine University, 2021
ProQuest

51 Susan Rose, Nigel Spinks, Ana Isabel Canhoto. "Management Research - Applying the Principles of Business Research Methods", Routledge, 2023 — 7 words — < 1%
Publications

52 Tadele Fentabil Anagaw, Elyas Melaku Mazengia, Eyob Ketema Bogale, Eneyew Talie Fenta et al. "Health-seeking behavior among non-communicable disease patients globally, systematic review and meta-analysis", SAGE Open Medicine, 2023 — 7 words — < 1%
Crossref

53 Ziyanda Alicia Khulu, Malmsey Lydia Mmasello Sengane, Tshimangadzo Mudau. "Midwives' Perspectives regarding Involvement of Male Partners during Pregnancy at a Maternal Health Facility in Eswatini", Africa Journal of Nursing and Midwifery, 2022 — 7 words — < 1%
Crossref

54 Belda Negesa Beyene, Korra Gochano Hirra, Negeso Gebeyehu Gejo, Derese Eshetu Debela. "Husband responses towards birth preparedness, complications readiness, and associated factors in southern Ethiopia: the case of Kena District", Reproductive Health, 2024 — 6 words — < 1%
Crossref

55 Elizabeth Mkandawire, Sheryl L. Hendriks. "“The role of the man is to look for food”: Lessons from men's involvement in maternal and child health programmes in rural Central Malawi", PLOS ONE, 2019 — 6 words — < 1%
Crossref

56 Irene Auma, Dinah Nabaweesi, Sam Orech, John Bosco Alege, Allan Komakech. "Determinants of male involvement in antenatal care at Palabek Refugee — 6 words — < 1%

Settlement, Lamwo district, Northern Uganda:", Cold Spring Harbor Laboratory, 2023
Crossref Posted Content

57 Pascalyne Kavesa Nyamai, Joseph Matheri, Kenneth Ngure. "Prevalence and correlates of male partner involvement in antenatal care services in eastern Kenya: a cross-sectional study", Pan African Medical Journal, 2022 — 6 words — < 1%
Crossref

58 Tirukelem Muhabaw, Solomon Hailemeskel, Abera Lambebo. "Male involvement in antenatal care and associated factors among married men with wives who recently gave birth in Debre Tabor town, North West Ethiopia", BMC Pregnancy and Childbirth, 2024 — 6 words — < 1%
Crossref

EXCLUDE QUOTES	OFF	EXCLUDE SOURCES	OFF
EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	OFF