

# Men perspectives on attending antenatal care visits together with their pregnant partners in Misungwi district, rural Tanzania: a qualitative study

Maendeleo Boniphace (✉ [bongangai@yahoo.com](mailto:bongangai@yahoo.com))

Anglia Ruskin University Faculty of Medical Science

**Dismas Matovelo**

Catholic University of Health and Allied Sciences

**Rose Laisser**

Catholic University of Health and Allied Sciences

**Hadija Swai**

Bugando Medical Centre

**Victoria Yohana**

Catholic University of Health and Allied Sciences

**Sylvia Tinka**

Catholic University of Health and Allied Sciences

**Lusako Mwaikasu**

Bugando Medical Centre

**Hannah Mercader**

University of Calgary Cumming School of Medicine

**Jennifer L Brenner**

University of Calgary Cumming School of Medicine

**Jennifer Mitchell**

University of Calgary Cumming School of Medicine

---

## Research article

**Keywords:** Male attendance, Pregnant partners, Antenatal care, Rural-Tanzania.

**DOI:** <https://doi.org/10.21203/rs.3.rs-33575/v1>

**License:**  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

---

# Abstract

**Background:** Mens' attendance, together with their pregnant partners at facility-based antenatal care (ANC) visits is important, yet remains uncommon in parts of rural Tanzania. This study examined perspectives of men on attending with their pregnant partners in Misungwi District, Tanzania.

**Methods:** Individual interviews (n=6) and focus group discussions (5) were conducted using semi-structured questionnaires with fathers, expectant fathers and other key informants (health providers, volunteer community health workers, Village leaders). The interviewers were researchers trained on how to conduct interviews prior field visits. The questions were asked using Tanzania National language (Swahili). Transcripts were recorded, transcribed in Swahili Language and later on it was translated in English language. The research team conducted thematic analysis using English language by grouping related codes into themes. The main themes were obtained upon agreement with the research team.

**Results:** Two key system/societal-level themes were identified: (1) males who attended facility-based ANC visits and experienced lack of being given ANC feedback from health care workers and partners and hence men felt excluded from visit services; and (2) traditional cultural beliefs and gender roles strongly influenced the choice not to attend visits. This resulted into men being hidden pregnancy details (secrecy) from their partners in the community.

**Conclusion:** To maximize gender equity in maternal and health requires involvement of men at ANC visits in Misungwi. This can be achieved by addressing core traditional and systemic barriers including use of community health workers. Improved communication between partners and health care providers through provision of ANC feedback and male involvement in examination room is warranted to promote access to ANC.

## Background

Maternal mortality remains a problem worldwide, especially in Africa. Globally, more than 800 women die every day from preventable causes; women from resource poor settings are most at risk[1]. In Sub-Saharan Africa, 1 in 38 women will die due to preventable or treatable complications of pregnancy and delivery[2] [3]. Care during pregnancy (antenatal) and delivery by skilled health providers at a health facility are associated with reduced maternal and child morbidity and mortality [4] [5].

Gender equality is recognized as an important social determinant of health. Involvement of men in maternal and child health is core to gender equality especially its impact on maternal and child health outcomes. Male responsibility in transforming social norms towards health and development, including taking responsibility for reproductive health issues is critical[6]. This call to action has been emphasized since the International Conference on Population and Development[7] and the Fourth World Conference on Women[8] and remains a priority today towards gender equality targets for the 2030 Sustainable Development Goal Agenda. Increased male engagement in maternal child health, can increase shared decision making around impactful health choices such as parenting, health care-seeking for delivery and

illness, contraception and family planning. Increased male involvement during pregnancy reduces maternal stress via emotional, logistical, and financial support. Male participation at ANC visits is associated with increased use of delivery and postnatal health services and reduced postpartum depression[9].

In African culture, males are often the key family decision makers including decisions related to whether, when and where a pregnant woman should begin ANC services. In Nigeria and Ethiopia, women who made decision to attend ANC jointly with their husbands/partners were significantly more likely to attend the recommended four or more antenatal visits compared with women whose husbands/partners made family decisions alone[10] [11, 12]. Similarly, in Eritrea and Ethiopia, women involved in family decision making, were more likely to attend more and earlier ANC services at health facilities[13]; those lacking decision-making involvement often did not then not attend ANC visits until their third trimester[14].

Cultural norms and socioeconomics also influence a pregnant woman's access to health services and where delivery occurs. Common beliefs related to pregnancy and childbirth in communities may be longstanding such as 'a long labor indicates a marital affair'; these can impact a decision to deliver at home[15].

One southern Tanzanian study reported home deliveries were due to women's reluctance to make their own decision, compounded by a lack of money[15]. Often, the decision about delivery location was made by the pregnant woman's mother, mother-in-law or husband[15].

Many African countries and communities have made efforts to increase male engagement in maternal and newborn health. In Malawi, one program involves peers who encourage each other[16] [17] and in Uganda, education programs share the positive experiences of women who delivered by Skilled Birth Attendants[18]. In Ghana, reproductive health campaigns emphasized the importance of responsible sexual behavior, small family size and mutual respect for women. These education programs have led to reduced total fertility and mortality rates and contraceptive prevalence rates have been increasing steadily in Ghana over the years[19].

While some studies have explored the barriers around male involvement in African countries, we sought to build on this literature by looking specifically at perspectives of men on their participation in ANC visits. We focused on local rural communities in Misungwi district, Lake Zone, Tanzania where maternal and child mortality is amongst the highest in the country and where participation of men in ANC is limited. This study builds on a qualitative 2016 survey in which women respondents identified lacking male engagement as a barrier to their seeking facility-based ANC.

## Methods

This qualitative study intended to deepen understanding of male perspectives towards their attendance at facility-based ANC visits together with their partners. This study was nested as a sub-study within a larger longitudinal implementation and evaluation of the Mama na Mtoto project intervention in rural

Tanzania, which aimed to improve the delivery of essential health services to pregnant women, mothers, newborns, and children under five in Misungwi and Kwimba Districts.

## **Study Setting**

Misungwi District (2,579 square kilometers, population 351,607) is located in the Northwestern part of Tanzania, 45 kilometers from Mwanza town. Misungwi district has a predominantly rural population (91%) and residents are speaking both Tanzania National language (Swahili) and tribe language (Sukuma). The major economic activities are cattle-keeping and subsistence farming. Misungwi district has 2 hospitals, 4 health centers and 45 dispensaries. Two communities ('divisions') were selected for study, owing to their high maternal mortality, according to local health records.

## **Study Design**

This qualitative study used semi-structured interviews involving In-depth Interviews (IDI), Focus Group Discussions (FGD), and Key Informant Interviews (KII) and was informed using the Ecological model[20] as an overarching framework which enabled this examination of barriers according to influenced by individual, interpersonal, community and system/societal level factors.

## **Study Team**

The research team consisted of medical practitioners (nurses, doctors and a nutritionist), Lecturers, from Bugando Medical Center and the Catholic University of Health and Allied Sciences (CUHAS-Bugando). The research team had trained moderator(s) and note-taker(s) who spoke Swahili or Sukuma.

## **Sampling Procedure**

Interview and focus group participants were recruited using purposive sampling. Males selected for focus group participation comprised the following categories: Men, whose partners were pregnant for the first-time, men with one or more than one child. Key informants selected included village leaders (potential influencers of health service uptake), volunteer community health workers (CHWs), and health providers working at local primary care facilities. Exclusion criteria included: cognitive disability (unable to adequately participate), males below 18 years old, non-permanent residents of Misungwi and new Misungwi residents (i.e. living in Misungwi for less than six months prior). And those who had attended any of the interviews in this research in the data collection process example FGD, IDI and KII were not allowed to participate.

Initial contact was made with the village executive officer (local leader) who organized orientation meetings with village officials and CHWs. Subsequently, a public meeting was organized during which community members were informed about the study aim and selection criteria were shared. The meeting was intended to build trust, identify representative participants, and ensure voluntary participation. Participants were selected by meeting attendees. Meetings were then held with selected participants to ensure and document voluntary consent and select a date and venue.

## **Data Collection**

An interview guide was developed in advance by the research team by incorporating personal experience of team members plus relevant literature. This tool was piloted in a different but similar setting with men of similar characteristics, and small modifications and probes were added to the guide.

Sukuma-speaking research assistants were recruited to assist in data collection for non-Swahili speaking participants. Swahili is the national Tanzanian language; for non-Swahili speakers, translation was provided when obtaining consent.

In total, five focus group discussions, six in depth interviews, and six key informant interviews were conducted with a total of 50 participants. Focus groups were stratified by participant type to promote comfort and build on common emergent themes[21] and included 15 men whose partners were pregnant for the first-time, 29 Fathers who had one or more than one child. Some of these men were selected randomly each parity group following the FGD to provide more in-depth feedback to meet saturation. Interviews were held with 1 health care provider, 3 village leaders and 2 community health workers (Table 2).

Facilitators conducted semi-structured interviews with participants, recording interviews with two audio recorders per interview. Research assistants wrote field notes and documented non-verbal cues which provided a secondary source of data. Recordings were transcribed then translated—those conducted in Swahili were translated into English while those in Sukuma were translated from Sukuma to Swahili and then into English language.

## **Quality Checks**

Quality checks for all transcripts were performed by research team members who were not involved in data collection and were later reviewed by the research interviewers who were in the field and were the results had some queries the team than was in the field had to listen the tape records and agree on proper transcription. This team read and re-read all transcripts while listening the audio recordings for the purpose of validating the transcripts for accuracy and language.

## **Data Analysis**

Team meetings held after each data collection session reviewed emergent themes and led to tool modifications including addition questions and probes to ensure capturing and understanding of preliminary themes. A determination of saturation occurred when repetition was noted, and no additional themes were emerging.

Research team analysts read all transcripts, coded and sorted data using Nvivo V.12. Coding was be conducted by reading transcripts line by line; data was labelled with a word or phrase that described the data and the code entered into Nvivo V.12. Open coding was initially conducted, with later readings and coding informed by the ecological model[20] and relevant literature. Codes were collated and sorted into

broader themes. Memos were made to describe the rationale and process of sorting codes into the themes. Discrepancies and disagreements between analysts about themes were settled through discussion till consensus was achieved.

### **Member Checking**

All respondents were contacted six months later through phones and invited to attend FGD, IDI and KII meeting in neutral venue in Misungwi to review the themes. We did 3 FGD, 1 IDI and 1 KII. The FGD had on average 7 respondents, IDI all respondent attended while for KII only five attended the meeting. For those who did not attend the meetings were called and the FGD respondents said that they had travelled while the health care worker for KII said had another workshop. All preliminary results were presented after the analysis in these meetings and the respondents were asked to confirm key themes, provide any missing information which was not captured in the themes. All respondent agreed on the information and themes which was presented to them without changes.

## **Results**

The table below shows demographic characteristics of men respondents whereby the majority of the respondents were aged above 35 years and most men had primary education.

### **Demographics of study participants (N=50)**

Characteristics	N	%
Age <sup>+</sup>		
25-34 years	15	30
≥35 years	35	70
Highest education level achieved		
Primary	41	82
Secondary (I-IV)	8	16
High (Form VI+)	1	2
Occupation/category		
Peasant	42	84
Village leader	2	4
CHW	2	4
Health provider	2	4
Pastor	1	2
Other (driver)	1	2
Marital status		
Married	40	80
Common law relationship	10	20

Based on the five focus group discussions, six key informant interview and six In-depth interviews, two broad themes informed by Heise's Ecological model were identified. The two broad themes were; 1. Inconsistency and exclusion experienced by men attending facility-based ANC visits and 2. Male ANC attendance influenced by cultural beliefs and traditional gender roles.

### **Inconsistency and exclusion experienced by men attending facility-based ANC visits**

Men reported inconsistent experiences when attending ANC together with partners. While Tanzanian government directives recommend that pregnant women attending ANC services together with a male partner will be given priority, this practice was inconsistently occurring. While some men reported care being expedited due to their presence, others reported standard care.

*There are no priorities [silence]... when you are at the clinic, provider's help who comes first and after you are done with the examination with the provider, you will be given the card for you to come back next visit. That means there is no priority (expectant father).*

Some men reported they felt they were or would be excluded from care when attending ANC visits together with partners. Some men described choosing not to escort their partners since most facilities lack the physical space to accommodate them. Often they described being left outside during ANC while their wives/partners received service within the building. One father shared, *"The challenge is when you go to the clinic with your wife, they enter her in the room, and then you stay outside like a watchman of the bicycle [laugh]" (father with more than one child).*

Men shared that they felt their time was wasted when they could not attend in the examination room:

*"But there is one challenge that, when you escort your wife for ANC, when you reach at health facility you can find yourself in trouble, no chairs or space...you just remain walking around the clinic and no one is considering you, your wife is busy with a child and clinic services but for me, you are just wasting your time for walking around the health facility and exchanging ideas with your fellow men, this makes us not want to accompany our wives to the clinic" (expectant father).*

Beyond the physical space, men reported receiving limited or no information regarding their partner, pregnancy progress or other pertinent medical information. Many men shared that they had expected to be actively included in the checkup:

*... I want to be involved in the examination room to be given findings [laugh] but not for me to remain outside...when I reached the clinic, they call my wife's name, then they leave me outside... men have to go with their wife in examination room in order to hear the results she is told, if it is nutrition and if it is a lack of blood I need to know and not wait only her to tell me. What if she forgets other important things...so in my opinion men need to be in examination room (father with more than one child).*

### **Male ANC attendance influenced by cultural beliefs and traditional gender roles**

This theme revolved around common local cultural beliefs especially those related to traditional gender roles such as men working outside the home with women fulfilling the household labour. Pregnancy, childbirth and childcare are often categorized as "women's work." Two interesting subthemes were (a) secrecy; and (b) shame.

#### **Secrecy**

Men described that it was common practice for a woman to keep her pregnancy a secret from her partner. Similarly, women often keep pregnancy progress details a secret, reducing a male partner's ability to engage fully in maternity issues and care. One expectant father shared his experience



*When they are told some things, they do not tell us, their husbands, that is what am seeing. When she comes from the [ANC] clinic she will not even communicate to her husband, she might be told to tell her husband [cough] but she will not...we are seeing that in our households—they don't give us information (expectant father).*

This practice was recounted by other expectant fathers and community key informants. According to one health provider, *"you may find women are secretive, they don't put things open to their men, they don't give them information"* (health provider).

## **Shame**

Entrenched traditional gender roles intersect with men's masculinities leading to reports of men feeling shame, stigma and resistance related to ANC attendance. Many men perceive that the act of attending ANC will be interpreted by others as being dominated or "whipped" by their wife/partner. One father explained

*We escort our wives to clinic but everyone has his or her perception; others will perceive that you are right, others will judge you negative by saying, "This man has reached to an end." Others will say, "This man has been charmed by his wife". (Expectant father)*

A father explained how education, poverty and lack of employment might be linked to perceptions around male engagement in ANC:

*There are two categories in this community; those who are somehow educated and those who are too traditional. For the educated category, the act of escorting your partner to ANC services is regarded as caring and loving and is seen as normal but for the other group of men escorting their partner to the clinic is regarded as someone who has been whipped by his wife" (father with one child)*

*...you find [men] are busy looking for family income, then the issue of escorting women to the health facility becomes difficult. It is better to look for a wage job (Expectant Father).*

Many men reported that their time can be better spent working, rather than attending ANC appointments:

*What causes men not to escort their partners first is economy. Our economy is poor, and you cannot go together at [ANC] clinic if you do not have something for consumption at home...when we go together, what will we eat after coming back from the clinic? (father with one child).*

Men reported being ashamed attending ANC with partners if they perceived themselves and their partners to not possess good attire. Shame also resulted with inability to provide the recommended ANC and delivery materials. Men described a fear of others' judgement and being mocked:

*There are some men in this community who don't want to escort their partners to clinic because their partners do not have proper clothes. Men fail to buy nice clothes for their partners and when the time of*

*going to clinic arrives you find that the woman has no proper attire thus making the husband ashamed of going with his wife (Father with more than one child).*

Further shame and discomfort were reported related to needed associations with women arising en route and at the facility. For example, men reported embarrassment while sitting in the facility waiting area, surrounded by other women; they reported feeling as though they did not belong:

*You find at the clinic you're only one or two men alone while seated with many pregnant women around you, you feel ashamed... you get fear of coming next time because you're alone in the bench sitting with many women ( -Father with more than one child)*

*The health facility has no space to accommodate men...for me to sit with many women on the same bench I feel bad because I am alone...around you see all women their eyes are looking at you, get scared so it's better not to go ( expectant father)*

Participants described that in the (majority) Sukuma tribe, males walking together with their partners for a long distance is uncommon. Men avoid this since otherwise, “the community may perceive that you love so much your partner”. One leader explained:

*For us Sukuma people we are not used to walk long distance with partner; you let her go first and then you come after she has reached certain distance. We feel ashamed traditionally that is how we are used (Village leader).*

## **Discussion**

We found that men experienced structural barriers at the health facilities and barriers that were influenced by cultural and gender norms that impacted their engagement in ANC services with their pregnant partners[22, 23]. Although Tanzania government directives have recommended that women who come to the health facility with their pregnant partner be given priority services, men reported that this was not their experience. This community level intervention was aimed to increase male attendance for first ANC visit for HIV tests. However simply giving priority is not consistent, nor is it a straightforward intervention to increase male engagement. In term of gender equality and decreasing the disadvantage women may experience, giving priority to women with a male partner may actually unfairly disadvantage women without partners or who have partners that cannot attend, thus increasing the vulnerability of women. Both men and women may be uncomfortable with aspects of sharing the health facility space. Some male participants expressed discomfort or feelings of shame at being in a waiting room with women or being in the treatment room while their partner disrobed. Other studies have shown that some women prefer the health facilities to be spaces in which they can speak freely with other women[17] and appear that some women prefer to attend without their partner. Interventions to increase male engagement and uptake of ANC more broadly are multifaceted and require input from men, women and health care professionals. In Misungwi districts in rural Tanzania, men reported of having shame/discomfort of sitting with many pregnant women to the same bench who is not your partner. Men explained that very

few men attend clinics while many pregnant women attend ANC as compared to men and so men feel uncomfortable to sit with many women. Having ANC clinics with women who are not their partner creates fear because many women will be looking at men and this makes men scared to sit at ANC rooms.

Cultural and traditional beliefs impact male attendance to ANC services and impact maternal and child health more broadly. In our study, men described that women often keep the details of their pregnancy secret. In the Sukuma tribe in rural Tanzania, there is a longstanding belief if a woman discloses her pregnancy too early, it may result in miscarriage and delayed labor[17]. Traditional beliefs around pregnancy were likewise found by[15]; in Tanzania, there are beliefs that a long labor meant that the women may have had an extramarital affair. This cultural and traditional beliefs results into delayed ANC, labor and delivery seeking practices at the health facility and hence contribute to home deliveries. This will eventually lead to being attended by unskilled birth attendants and hence high maternal mortality[15]. It is equally important to be culturally sensitive and during MnM project baseline results in Tanzania found that it is beneficial to utilize community members to educate others in the community rather than outsiders or professionals. The Mama na Mtoto project in Tanzania has educated and trained peers and community members to become community health workers (CHW) to educate members of the community on a wide range of health-related issues, including MNCH. Such programs may aid in providing accurate health information and ease fears based in cultural myths.

Gender norms and roles contribute to gender inequality at the societal, family, and individual level and can be a barrier to male engagement in maternal health. Like other traditional gender normed communities, pregnancy is perceived as a woman's issue[24]. The social stigma against men who partake in traditional "women's work" (such as ANC visits) hinders male engagement in maternal health[25]. There are gendered attitudes and in how men may perceive their involvement in maternal health, including worries about appearing "charmed" or "whipped" by their partners. In our study men perceived that going to ANC while walking together with your partner, the community will perceive that you have been whipped or charmed your wife. And this shows that you have been controlled by her all family decision. This gender cultural aspect creates masculinity for male dominance within the society.

In the Sukuma tribe, men are considered the head of house undertake the decision making and occupy the role of breadwinner. This role of a breadwinner may conflict with the ability for men to accompany women to appointments, be present at delivery or attend post birth appointments. Participants, like those in[23] study in Ghana, reported that their time may be better spent working and for rural communities, this is compounded by issues of poverty, scarcity of work or traveling for work. Such economic difficulties intersect with and can compound gender roles often furthering the division of spheres of home and work. Yet, while it is men who are making the decisions or who may be providing transportation or finances, it is evident that pregnancy is not solely a woman's issue.

## **Study Limitations**

We explored the perception of men about their reasons for not attending ANC. The views of their partners were not explored thus limiting generalizability. While this study accessed multiple perspectives of men,

including those who escorted their partners to ANC, had a pregnant partner, had one or multiple children and involved different age groups of men, including health care workers, we recognize the limitations of a smaller sample size. While the major pregnancy related complications and missed opportunities among men and women may occur in rural areas where staff is scarce and services are limited, we recognize that these issues may exist in urban settings and concurrently also recognize that without including urban men, our findings may not generalize to urban settings. However, the study used multiple methods together deeper understanding of voice of men towards barriers to ANC their attendance with their partners.

## **Conclusion**

Our study examined the barriers to male engagement in ANC services with their pregnant partners. There are structural constraints such as lack of space at health facilities, much work remains to be done on promoting gender equality in rural Tanzania. We found there were cultural and traditional norms that perpetuate gendered masculinity among men in the community. Many men asserted that education is a key factor in both decreasing strict gender roles and increasing male engagement in maternal health. In promoting male involvement, we need to acknowledge and accommodate women who may prefer independent care seeking, just as it will be important to accommodate men who may not want to be actively involved in maternity care or due to logistics or economics are unable to be involved. Solutions that do not involve both men and women, will only further entrench gender inequalities.

## **Recommendations**

Despite having multiple barriers for male engagement to ANC in Misungwi different intervention have been trying to address these barriers. The interventions focusing use of CHWs to visit men at their household, village meeting and health facility by discussing the importance of both partners to seek maternal health services will increase ANC uptake in in Low Middle Income Countries such as Tanzania. When men do attend appointments, health care workers need to provide ANC feedback to men about pregnancy details, including men in the education about the health of their partner, the baby and other related pregnancy/baby related topics.

The MnM project has trained health workers on essential maternal and newborn skills to enhance health facilities and quality services. However, health facilities are still often constrained by space or finances and work aimed at improving the physical space of a facility are important and ongoing. Lastly, continued education and research on increasing male engagement in ways that are geared towards respectful maternity care for both males and females and increasing overall gender equity more broadly, remain important in rural MNHC services.

## **Abbreviations**

CUHAS: Catholic University of Health and Allied Sciences; MNCH: Maternal and Newborn Child Health; ANC: Antenatal Care; PNC: Post-natal care; IDI: In-depth Interviews; FGD: Focus Group Discussion; KII: Key Informant Interviews; MnM: Mama na Mtoto; VEO: Village Executive Officer; CHW: Community Health Workers

## **Declarations**

During the process of this research all aspects of declarations were adhered in terms of ethics and consent to participate, publication of gathered information, availability of data, competing interests, funding and authors contribution as explained hereunder these subsections.

### **Ethics approval and consent to participate**

Ethical clearance was obtained from National Institute for Medical Research Lake Zone (MR/53/100/493), the Catholic University of Health and Allied Sciences/Bugando Medical Center joint ethical committee (CREC/201/2017) and the University of Calgary Conjoint Health Research Ethics Board (REB17-1741). Permission to collect data was also obtained from the Misungwi District Medical Officer, Village Executive Officer and Village chairperson(s). All participants signed written informed consent forms whereby one copy was given to the respective respondent and one kept in project locker and confidentiality was adhered throughout the research process.

### **Consent for publication**

All respondents accepted that the information provided as quotations can be published in any peer review journal as references for improving men involvement maternal and child health services. Also, it was agreed by the participants that the quotations should not show their names.

### **Availability of data and Materials**

For further information about the tools, methods and data for this study you may contact Mama na Mtoto project principle investigator Dr Dismas Matovelo at [magonzadm@gmail.com](mailto:magonzadm@gmail.com)

### **Competing interests**

All authors declare that we do not have competing interest.

### **Funding**

This work was carried out with the aid of a grant from the Innovating for Maternal and Child Health in Africa (IMCHA) initiative- a partnership of Global Affairs Canada (GAC), the Canadian Institutes of Health Research (CIHR) and Canada's International Development Research Centre (IDRC). The funder had no any influence on the proposal development, study design, data collection and analysis. The fund provided was used to support training of research assistants, tools developments, and field activities. Therefore, the information given in this study have no influence on the fund from the funders.

## Authors' contributions

BM: Wrote the proposal, designed the research tool and piloted it, drafted the manuscript, collected and analyzed data. DM, JB, JM: Drafted the proposal, reviewed drafted manuscript and provided overall technical guidance and advice. RL: Wrote the proposal, drafted and reviewed the interview guide, analyzed data and reviewed manuscript. ST, HS: Designed and piloted the tool, collected and analyzed data. LM: Reviewed the interview guide and collected data. VY: Reviewed the tool, piloted the tool, collected data and reviewed the manuscript. HM: Reviewed and checked spellings within the manuscript. All authors read and approved manuscript to be submitted in peer review journal for publication.

## Acknowledgements

We send our thanks to Misungwi District Medical Officer, research assistants, MnM field staff, village leaders, CHWs, Community members in the research sites, and Research assistants ( Godfrey Shoo and Flugence Mtabingwa) taking time to make this study possible in Misungwi District in Tanzania.

## Authors' details

<sup>1</sup>Catholic University of Health and Allied Sciences (School of Nursing & Medicine) P.O.Box 1364, Mwanza, Tanzania. <sup>2</sup>Bugando Medical Centre (Department of Obstetrics and Gynecology; and Community Health) P.O.Box 1464, Mwanza, Tanzania. <sup>3</sup>University of Calgary in Canada (Cumming School of Medicine at 3280 Hospital Drive NW Calgary, Alberta T2N 4Z6).

## References

1. McCormick, I., et al., *Effective refractive error coverage: an eye health indicator to measure progress towards universal health coverage*. *Ophthalmic & Physiological Optics*, 2020. **40**(1): p. 1.
2. Bolnga, J.W., et al., *Insights into maternal mortality in Madang Province, Papua New Guinea*. *International Journal of Gynecology & Obstetrics*, 2014. **124**(2): p. 123-127.
3. Sanga, K., C. de Costa, and G. Mola, *A review of maternal deaths at goroka general hospital, Papua New Guinea 2005–2008*. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 2010. **50**(1): p. 21-24.
4. Brown, C.A., et al., *Antenatal care and perinatal outcomes in Kwale district, Kenya*. *BMC Pregnancy and Childbirth*, 2008. **8**(1): p. 2.
5. Campbell, O.M., W.J. Graham, and L.M.S.S.s. group, *Strategies for reducing maternal mortality: getting on with what works*. *The lancet*, 2006. **368**(9543): p. 1284-1299.
6. Economic, U.N.D.f., S. Information, and P. Analysis, *Population and Development: Programme of Action Adopted at the International Conference on Population and Development, Cairo, 5-13 September 1994*. Vol. 1. 1995: New York: United Nations, Department for Economic and Social Information and ....

7. Caldwell, J.C., et al., *The International Conference on Population and Development, Cairo, 1994. Is its Plan of Action important, desirable and feasible?* 1996.
8. Pavlic, B., L. Ruprecht, and S. Sam-Vargas, *Gender Equality and Equity: A Summary Review of UNESCO's Accomplishments since the Fourth World Conference on Women (Beijing 1995)*. 2000.
9. Yargawa, J. and J. Leonardi-Bee, *Male involvement and maternal health outcomes: systematic review and meta-analysis*. *J Epidemiol Community Health*, 2015. **69**(6): p. 604-612.
10. Ononokpono, D.N. and E.C. Azfredrick, *Intimate partner violence and the utilization of maternal health care services in Nigeria*. *Health care for women international*, 2014. **35**(7-9): p. 973-989.
11. Ononokpono, D.N., et al., *Contextual determinants of maternal health care service utilization in Nigeria*. *Women & health*, 2013. **53**(7): p. 647-668.
12. Gudayu, T.W., *Proportion and factors associated with late antenatal care booking among pregnant mothers in Gondar town, north West Ethiopia*. *African journal of reproductive health*, 2015. **19**(2): p. 93-99.
13. Woldemicael, G. and E.Y. Tenkorang, *Women's autonomy and maternal health-seeking behavior in Ethiopia*. *Maternal and child health journal*, 2010. **14**(6): p. 988-998.
14. Aliyu, A.A. and T. Dahiru, *Predictors of delayed Antenatal Care (ANC) visits in Nigeria: secondary analysis of 2013 Nigeria Demographic and Health Survey (NDHS)*. *The Pan African medical journal*, 2017. **26**.
15. Mrisho, M., et al., *Factors affecting home delivery in rural Tanzania*. *Tropical medicine & international health*, 2007. **12**(7): p. 862-872.
16. Kululanga, L.I., J. Sundby, and E. Chirwa, *Striving to promote male involvement in maternal health care in rural and urban settings in Malawi-a qualitative study*. *Reproductive health*, 2011. **8**(1): p. 36.
17. Ganle, J.K., et al., *'If I go with him, I can't talk with other women': Understanding women's resistance to, and acceptance of, men's involvement in maternal and child healthcare in northern Ghana*. *Social science & medicine*, 2016. **166**: p. 195-204.
18. Tweheyo, R., et al., *Male partner attendance of skilled antenatal care in peri-urban Gulu district, Northern Uganda*. *BMC pregnancy and childbirth*, 2010. **10**(1): p. 53.
19. Odoi-Agyarko, H., *Profile of reproductive health situation in Ghana*. For World Health Organization, Ghana, 2003.
20. Heise, L.L., *Violence against women: An integrated, ecological framework*. *Violence against women*, 1998. **4**(3): p. 262-290.
21. Hennink, M.M., *International focus group research: A handbook for the health and social sciences*. 2007: Cambridge University Press.
22. Peneza, A.K. and S.O. Maluka, *'Unless you come with your partner you will be sent back home': strategies used to promote male involvement in antenatal care in Southern Tanzania*. *Global health action*, 2018. **11**(1): p. 1449724.

23. Ganle, J.K. and I. Dery, *'What men don't know can hurt women's health': a qualitative study of the barriers to and opportunities for men's involvement in maternal healthcare in Ghana*. *Reproductive health*, 2015. **12**(1): p. 93.
24. Vermeulen, E., et al., *Opportunities for male involvement during pregnancy in Magu district, rural Tanzania*. *BMC pregnancy and childbirth*, 2016. **16**(1): p. 66.
25. Lowe, M., D.-R. Chen, and S.-L. Huang, *Social and cultural factors affecting maternal health in rural Gambia: an exploratory qualitative study*. *PloS one*, 2016. **11**(9).

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [T1IDIGuideEng17JUL2018NHVD.pdf](#)