

info@mediresonline.org

ISSN: 2836-2179 RESEARCH ARTICLE

# Male involvement in birth preparedness through health Facility community dialogue in kajiado county- Kenya

Hellen n. Mutsi 1\*, priscilla n. Kabue 1, Justus w. Ngatia 2

<sup>1</sup>Department of Community and Reproductive health-nursing School Kenyatta University

\*Corresponding Author: Hellen n. Mutsi, Department of Community and Reproductive health-nursing School Kenyatta University

Received: 02 June 2023; Accepted: 08 August 2023; Published: 29 August 2023

Citation: Hellen n. Mutsi, Priscilla n. Kabul, Justus W. Ngatia, Male involvement in birth preparedness through health Facility community dialogue in Kajiado county- Kenya 2(3). DOI: 10.58489/2836-2179/020

**Copyright:** © 2023 Hellen n. Mutsi, this is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

#### **Abstract**

Birth preparedness enables families to prepare for pregnancy thus increasing the uptake of antenatal care, skilled birthing, and postnatal care, enhancing readiness to handle pregnancy complications and first delays experienced in seeking obstetric care. Male partners influence maternal health outcomes due to their financial power and cultural endowment. Health facility community dialogue through maternity open days provides a platform for pregnant mothers, and their families/ community to interact with health care providers, visit maternity units, demystify birthing practices, and mitigate any fears/misconceptions/ myths about the birthing process thus empowering them on their reproductive health rights. Kenya has limited data on male involvement in birth preparedness through health facility community dialogue/maternity open days.

The study objectives were to explore health system factors and nomadic cultural community factors that influence male involvement in birth preparedness through health facility community dialogue. Data was collected through structured guided interviews for focused group discussions on eighteen participants and two community health volunteers as key information informants. Health system factors that influence birth preparedness were; infrastructure: space, confidentiality, privacy, adequacy of beds/beddings, cleanliness, hot beverage/showers after birth, waiting time, and health care provider attitude. Nomadic cultural community factors were value-belief. The study showed the above factors hindered male involvement in birth preparedness. The county government of Kajiado to come up with health facility community dialogue forums on birth preparedness through open maternity days by having an annual budget.

Keywords: health care, birthing practices, postnatal care, obstetric care.

#### Introduction

#### Background of the study

Strategies to ensure the safety of a pregnant mother/unborn baby is having an individualized birth preparedness plan introduced in the ANC model by WHO (1). This involves; preconception care, danger signs recognition, planning for skilled birthing, identification of a preferred health care facility for skilled birth, plans for transport, funds set aside for emergency, plan for a caretaker while the woman goes to deliver, identification of a birth companion, blood donor, decision maker in case of emergency, involvement of the community in supporting pregnancy and male partner involvement at an early

stage. The Kenyan government has added the Linda Mama package where all pregnant mothers have to enroll to benefit from free maternal care services (FMC) (2).

### **Problem statement**

Kenya's maternal mortality is 362/100000 live births which are below the WHO recommendation of maternal mortality of 147/100000 live births and the sustainable development goal (SDG) of less than 70/100000 live births. The national infant mortality rate is 39/1000 live births, the under-five mortality rate of 52/1000 live births, and the newborn mortality rate of 22/1000 live births (3). Kajiado County has maternal mortality of 462/100000 live births and infant mortality of 40.2% above the national levels (3).

<sup>&</sup>lt;sup>2</sup>Department of Obstetrics & Gynecology, school of medicine kenyatta university

Pregnancy and childbirth complications cannot be predicted therefore; need for birth preparedness (4, 5, 6). There is no data within Kajiado County on male involvement in birth preparedness and no forums for health facility/community dialogue through maternity open days. **Study questions**: What is the health system factors that affect male involvement in birth preparedness, what are the nomadic cultural community factors that influence birth preparedness among male partners in Kajiado County?

**Broad objective**: To evaluate male involvement in birth preparedness through health facility community dialogue for maternal health care services in public government health care facilities within Kajiado County- Kenya.

# **Specific Objectives**

- To explore the health system factors that influence male involvement in birth preparedness through health facility community dialogue in Kajiado County Kenya
- To explore the nomadic cultural community-related factors that influence male involvement in birth preparedness through health facility community dialogue in Kajiado County- Kenya

Describe the nomadic cultural community-related factors influencing birth preparedness among male partners in Kajiado County- Kenya.

# Methodology

The study employed an explorative-descriptive qualitative research design, using a narrative approach to explore and conceptualize the male partner involvement in birth preparedness through health facility community dialogue/maternity open days. There was little information on this topic, as the researcher wanted to understand the phenomena in its natural setting (nomadic culture) to answer difficult why, what and how questions. Study variables were: dependent variable (male involvement in birth preparedness), Independent variables were: (health system factors- Infrastructure, space, birthing beds, confidentiality, cleanliness, privacy, hot beverage/shower, maternity pads), waiting time, attitude of health care provider, nomadic cultural community factors: (value-beliefs).

**Study Area-** Kajiado County is among the 47 counties in Kenya, situated 78 Km from Nairobi city, with a population of 1,117 840 and 316,179 households. Males are 557,098, females are 560,704 with 38 intersex people. It covers 21,292.7 square km (26). It's semi-arid, temperature ranges between 20-30° C with per annual rainfall of 500-1250mm. Pastoralism is the main economic activity (7).

The target population was households with married male partners, aged 18 years and above with children aged 0-2 years. Community health volunteers(CHVs) were interviewed as key information informants (KIIs) to provide information on health facility community dialogue for open maternity days on birth preparedness.

**Inclusion-** Male partners aged eighteen years and above, with children aged zero-two years, CHVs who came from the area of their jurisdiction.

**Exclusion-** Male partners whose babies had died during delivery or were mentally challenged. For CHV if you did not come from the area where the research was being conducted.

**Sampling technique**- Purposive sampling technique used to select households; a health facility used as a point of reference with the help of the CHV aware of house-holds with potential male partners.

Sample size- Three groups were used, consisting of six members, a total of eighteen participants, supported by Krueger and Morgan on the use of 3-6 groups for focused group discussions (FGDs). I maintained the quality of data, had the right respondents, did in-depth interviews, maintained the principle of saturation, ensured active even participation, careful wording, neutral attitude, and appearance summarized the events fairly. Stimulated and guided the discussion by examining thoughts, feelings, and how ideas developed hence gained indepth discussions. An open atmosphere was enabled until saturation of information was reached exploring the group opinions and thoughts, data audio/video taped and documented.

**Method of Data Collection-** Guided interviews for FGDs on male partners and CHVs as KIIs

**Instruments** (trustworthiness): The idea of discovering the truth, deployed as follows;

**Credibility-** Reflexive journaling, inter-coder checks, development of code books, presented what was collected, credentials/background given, findings linked to research objectives.

**Dependability-** Careful documentation, decision trail by comprehensively recording the information, maintained inquiry audit by having an independent auditor.

**Confirmability-** Careful documentation, maintained a decision trail, inter-coder checks/developed a code book, later subjected the findings to peer review

**Transferability-** Took comprehensive field notes, and reached data saturation. Presented thick vivid descriptions that had undergone quality enhancement efforts by subjecting the findings to

peer review and debriefing.

**Authenticity-** reflexivity, prolonged engagement, persistent group discussion, audiotaping and verbatim transcription. Presented thick vivid documentation, and transparency on findings with impactful evocative writing in place.

**Collection Data Procedure-** Approvals from Kenyatta University Research Committee, NACOSTI, and Kajiado County research committee.

Data Analysis /Management- Data conceptualized, coded, sought into themes, sub-themes, categories, patterns, and relationships and analyzed using narrative analysis, results linked to research objectives.

Ethical considerations - Approval from Institutional Research and Ethics Committee Kenyatta University, NACOSTI, Kajiado County Research Committee. Written informed consent from the study participants, voluntary participation. Privacy and anonymity were maintained, with respect of respondents, freedom and right to self-determination, and voluntary informed consent. Confidentiality is assured by storing information collected in the lockable cupboard, pass ward used. Participants were informed that the information obtained was solemnly used for the purpose of research, and participants signed a non-disclosure statement, reminded to keep information revealed private.

# Participant's Consent and Board Clearance

Participation was on a voluntary basis and participants were free to withdraw at any stage of the study. Privacy was ensured by interviewing the male partners and anonymity was ensured by not having any form of identification on the data collection tools. Respect for the respondent, freedom, and right to self-determination upheld. Voluntary informed consent of participation before administering the questionnaire with no threat or undue influence. Confidentiality is assured by storing all the questionnaires collected in lockable cabinets accessible only to the researcher and research team. A password is used to protect electronic data in the computer. The participants informed that information obtained solemnly be used for the purpose of the research. Data was analyzed but no name was included in the study. On the informed consent, the researcher added an additional paragraph with details on issues of confidentiality, the form read as follows:

To the participants, this is a focused group discussion and the researcher will take every caution to ensure confidentiality of data. The researcher reminded the

# **Emergency and Nursing Management**

participants to keep whichever information revealed by fellow participants in the focused group discussion private and should not disclose to others whatsoever. This is followed by a non-disclosure statement, individually signed by all the participants. It read as follows:

#### Results

#### **Data Analysis**

Data was analyzed simultaneously with data collection, transcribed verbatim information audio taped. Narrative analysis was deployed, transcripts were read repeatedly, and words with similar categories were grouped into themes and subthemes.

Table 3.1.1 Demographic Characteristics

M = =! = I: I =

Variable	Number	%
Age		
18-30 years	12	74
30-40 years	3	11
40-50 years	0	0
Above 50 years	3	15
Marital status	18	100
<b>Educational level:</b>		
Primary	17	95
Secondary	1	5
College	0	0
University	0	0
Occupation:		
Employed	0	0
Self-employed	4	21
Unemployed	14	79
Male partner with		
children (0-2		
years)	10	58
One	5	26
Two	3	16
More than two		
Religion:		
Christian	18	100
Muslim	0	0
Others	0	0
Monthly Income	5	32
Below 10,000	10	53
10,000-20000	2	11
20,000-30,000	1	4
30,000-40,000	0	0
Above 40,000		

#### **Themes**

The themes for the study were; health system factors and nomadic cultural related community factors that affect male involvement in birth preparedness.

### Health System Factors

# Accompaniment of female partner to a health facility

Few agreed to have accompanied their spouses for Ante Natal Care (ANC) at least once while the mother was almost due for birth, which formed the first and only ANC attendance. A few reported having taken their wives for skilled birth because it is a government directive for birth certificates for a child enrollment to pre-primary grade one (PP1). If it were not for the directive for every child having a birth certificate their wives would have given birth at home.

#### Respondent one: (Nyumba Kumi Elder)

"My wife had a home delivery, when I went to pick an introductory letter in order for me to get a birth certificate as a requirement when enrolling the child in PP1 our area chief was very strict and quarreled with me, he told me to always take my wife for hospital birth".

The Ministry of Education uses the national education management information system (NEMIS) to track students'/pupil data to ensure a hundred percent transition from primary to secondary school through the free primary education policy introduced in 2013. Schoolchildren enrolling for PPI (pre-primary grade 1), he/she needs a birth notification. This can only be obtained after skilled birth in the hospital which leads to obtaining a birth certificate. This is a mandatory document (40).

#### Reception at the health facility

For the few who had taken their wives for ANC (antinatal care) or skilled delivery, reported that the reception was good, their spouses were seen first though other women were already on the que.

# Respondent one

"During ANC I took my wife once in the hospital when she was almost delivering, we were served first on time though other mothers were on the que but I was left at the waiting area so I don't know the services that my wife received."

#### Male Partner Birth Preparedness

Few who had ever taken their female partners for maternal health services said their partners were taken in for examination, but for the male partner, they were only called in for Human Immune Virus (HIV) testing.

# Respondent one

"When I took my wife for the ANC, I was left outside at the waiting area, my wife went in to be examined. I was called in for HIV testing, though I had fear of getting positive results".

#### Respondent two

"My wife used to bleed while pregnant; she was given herbs we did not go to the hospital".

# Infrastructure/supplies in the hospital

Few male partners, who had taken their wives for skilled birth, reported that the room is small with some women laboring/birthing naked, so they are not allowed in the laboring room. Confidentiality is not maintained, as the health care provider is taking history about HIV status/quarreling a mother for not attending four ANC visits or not registered with Lthe INDA mama package. LINDA mama package is a financial insurance cover for pregnant mmothersup-to to six weeks post-delivery, yet other clients are hearing, this can make mothers avoid seeking maternal health services or form legal suits.

No adequate beds/bedding mfor others sharing beds in labor or post-birth, mostly in sub-county/county referral hospitals.

### Respondent one

"The room is small; we males are not allowed in because other mothers are laboring/birthing naked".

Lack of supplies like warm bathing water, soap, hot beverages, maternity pads, and basins, and sometimes gloves for delivery:

### Respondent two

"I took a basin, soap, sanitary pads, and tea for my wife in the hospital after birth, the health facility did not have water so I had to take her home for a bath."

#### Respondent three

"I took my wife to a hospital for the birth, nurse quarreled with her about why she had not enrolled for Linda mama/ not attended four ANC visits, while we at the waiting area were getting the conversation. I had another mother being asked about her HIV status, and whether on drugs".

# Complications during pregnancy or after

The majority responded that their partners had complications while pregnant/after delivery but they did not know they were danger signs.

#### Respondent two

"My wife convulsed while pregnant, had a continuous headache, she took herbs and she felt well, but convulsions reoccurred again".

#### Strategies to improve male involvement in ANC/ Labour/ PNC

"Maternity units /boma initiatives/mobile clinics should be near where our cattle are or within migratory corridors, support boy child education, offer males services together with ANC".

# Overall satisfaction with maternal health care services

#### Respondent one

"The government health centers are far, with one nurse, always closed on weekends/night, so we rely on private hospitals which are expensive."

#### **Nomadic Cultural Community factors**

Socio-Cultural Value / Belief

Maasai communities are pastoralists, their culture does not allow a discussion of unborn children, birth is viewed to be natural.

#### Respondent one

"We do not know what birth preparedness is because our culture does not allow discussion of the unborn child, we perceive maternal health to be women's affairs and birth to be natural if you are seen on the road with your pregnant partner, you are viewed to be so weak and controlled by your wife".

# Respondent two

"Maasai men do not discuss women issues, it's our responsibility as morans to take care of community security and protect our families and cattle".

### Health facility community dialogue

The Department of Health through community health strategy with the support of good neighbors has mapped and assigned CHV 53 households each, to link the community to the health facility. There are no maternity open days in the county where the health facility invites the community to the maternity units, shows them services offered, demystifies myths/misconceptions, teaches the pregnant mother and communitabouton their reproductive health rights, solves any disputes, and lets the community be aware of which services are offered and how the community can support to improve the services hence increase utilization. This is attributed to, a lack of budgetary allocation for maternity open days, on a quarterly basis annually.

# Respondent CHV one

"We educate the community on the importance of ANC/ hospital delivery, though it's hard to get the male partners and educate them, nomadic culture perceives maternal health to be women issue it's hard to involve them in maternal health".

#### Respondent CHV two

"There are no forums for maternity open days for allowing the community to visit maternity units be educated on their reproductive health rights or taken round the maternity unit."

#### **Discussion**

# **Health system factors**

# Accompaniment of male partner to health facility for ANC, Skilled delivery, PNC

Few reported to have accompanied their partners for ANC or skilled delivery, but none had taken the mother and baby for PNC services. Fourth ANC attendance in Kenya is at 52% nationally, this tends to agree with the sentiments from the participants that their wives managed to attend at-least one ANC visit when almost due for birth (KDHS, 2014).

A few reported having taken their wives for skilled delivery due to the Ministry of education- Kenya policy of child enrollment to PP1 to have a birth certificate for allocation of NEMIS number (40). This shows that

# **Emergency and Nursing Management**

they attached skilled birth to obtaining a birth certificate.

The respondents reported that it is only during PMTCT time that they were called in for HIV counseling and testing. This tends to correspond to previous research done in Cameroon and Rwanda, which showed that male partners were left outside at the reception area, so they feel not part of birth preparedness (9,10,11).

They also reported fearing taking their wives for ANC because it's mandatory they will be tested for HIV yet they fear the outcome of the results which tends to concur with studies done in Ethiopia, Uganda and Nepal (12,13,14,15, 16,17,18). None of them took their spouses/newborns for PNC.

#### Respectful maternal care

The few study respondents who have ever accompanied their spouses for maternal health care services reported that the reception was good, they were served first, and their partners were given services in a respectful manner (19,20).

### Male partner involvement in birth preparedness

On birth preparedness, the respondents reported that they were left seated outside at the waiting area. This study's results tend to concur with previous studies which agree that sometimes healthcare providers see it as a burden involving male partners in birth preparedness due to the high volume of clients seeking maternal health care (21,22,23,24,25,26,27,28,29,30).

# Health system Infrastructure

In terms of space, confidentiality, and privacy, male partners felt the health systems need to increase spaces in ANC/labor ward in order to accommodate them. They were never allowed in labour rooms because mothers will be laboring/birthing naked. This concurs with studies done previously which found out that male partners are never allowed in labour rooms due to lack of space, privacy and confidentiality (31,32).

Adequacy of beds/beddings is a challenge in sub county/county referral hospitals due to high volume of pregnant mothers seeking skilled services. This has led to congestion, leading to early discharge of postnatal mothers before forty-eight hours are over. The WHO and Kenyan ministry of health policy on post birth discharge recommends after 48 hours because most maternal deaths occur after 24 hours due to secondary PPH (33,34,35).

Mothers are supposed to be offered a hot beverage after birth, due to bleeding and depletion of blood volumes most mothers tend to shiver. Warm fluids stimulate milk production given that most mothers may not be well hydrated before/during labour, the study respondents reported having been told to bring tea or food for their partners. Birthing rooms are cold unlike home delivery where the room is lit by firewood for warmth.

Health facilities do not have warm water/ showers with some health facilities water bought through vendors, therefore, mothers are required to shower with cold water immediately after birth or go home for shower. These findings tend to disagree with ministry of health directives and policy on maternal health care that recommends delivery rooms to have warm showers, wall heaters, mothers to be provided with hot beverages, and rooms to be pre-warmed before birthing (36, 37,38,39).

# Complications during and after pregnancy

Most of the respondents reported that their partners had complications before and after delivery of which they did not know were danger signs, this tends to concur with other studies done in Ethiopia, Malawi, Uganda and also Kenya confidential inquiry into maternal deaths (CEMD) which shows that families did not understand danger signs in pregnancy (40, 41, 42, 43).

#### Nomadic cultural community factors

#### **Cultural value-belief**

Majority of the respondents agreed that the nomadic culture affect male partner involvement in birth preparedness, they believe/perceive there should be no preparation for unborn child. Which tends to concur with a study done in Kajiado County on utilization of free maternal health care services (23). Nomadic culture views maternal health as a women affair (23, 27, 32, 34, 38). Male involvement is critical in case a pregnant mother needs proper feeds; investigations needed like point of care ultra sound. When a woman goes to seek health care services, she needs to seek permission from the male partner for support/bus fare, thisresults concurs with studies done in Uganda, Ethiopia and Ghana (1, 2, 3, 6, 22, 32, 35, 45, 46)

#### **Conclusions**

They were few male partners who had ever taken their female partners for ANC or skilled delivery but none had taken their spouses nor their babies for postnatal care. For the few who had taken their partners for the ANC/skilled birth, they had inadequate knowledge on what services their spouses received nor any knowledge on birth preparedness.

# WON IDEA AS A RESEACHER

The study was able to inform policy on the need to strengthen male involvement in maternal newborn health in order to achieve the ministry of health objective of ICPD25 commitments of:

Zero preventable maternal/perinatal mortality, zero unmet need for family planning and zero harmful cultural practices.

The study proved some policy weaknesses and gaps in terms of implementation.

Some policies like open maternity days that forms a forum for communities to be empowered on their

reproductive health rights and engage male partners involvement in maternal new born health issues at Kajiado county in order to improve on maternal indicators like antenatal care, postnatal care, skilled birth, maternal/perinatal mortality and reproductive health rights not being implemented.

Another policy weakness/gap witnessed, was implementation of guidelines like availing of water in all health facilities, availing of hot beverages, maternity pads to mothers in labour and after birth, ensuring labour rooms are pre-heated before birth and during birth.

I presented the results at division of reproductive and maternal health Kenya ministry of health headquarters that deals with policy development and implementation, guidelines and standard operating procedures development and technical assistance at county level on maternal newborn health.

As a researcher, I am privileged to work at policy level at ministry of health division of reproductive and maternal newborn health, therefore; I used the results to strengthen the already existing policies on maternal/newborn health and come up with maternal newborn health standards. The ministry is working on capacity building of health care providers on respectful maternal/newborn health. As a researcher, I understood the need to respect and understand how culture influences health-seeking behaviors that later affect maternal/newborn health indicator nationally.

#### Further Research

The researcher recommends further studies on strategies to improve male involvement in birth preparedness within Kajiado County.

The researcher recommends further studies on the impact of maternity open days on maternal newborn health indicators within Kajiado County Kenya.

The researcher recommends further studies to explore why nomadic culture view maternal newborn health as a woman centered affair, males should not be involved and women should give birth the way their animals do without support.

The researcher recommends further studies to understand why ministry of health policy guidelines on quality of care for mothers who have given birth to be offered warm birth by having heaters in labour room, warm beverage to stimulate milk production, being offered warm baths, health facilities having adequate running water in place in government health facilities. This fosters respective maternity care, attends to reproductive health rights of women and newborns as enshrined in the Kenyan constitution (2010) Act (43) and encourages skilled birth.

The researcher recommends the county government of Kajiado to budget for maternity open days forums every quarter of the year to capture the male partner and communities on maternal newborn issues.

Kajiado County offers an enabling environment for through political goodwill for male involvement in maternal newborn health.

# 1. How The Person Focused On, Became Interested

The 18 participants who comprised of community leaders amongst others gave their views as it is on the ground. They had no interest in whichever way the data they gave would influence their lives and maternal newborn health. The only thing that they wanted to change is for the governor of Kajiado County to bring hospitals near their reach. In addition, Kajiado County ensures that they open health centers on weekends and at night.

# 2. Other people who helped me in my achievements were

My supervisors from Kenyatta University: Dr. Priscilla Kabue and Dr.Justus Ngatia. Research assistants Tracy Morinua, Jack Lugalia and Wycliff Bitengo. Others were the county education officer and health director Kajiado County-Kenya because there was some information that I had to verify from the office.

#### 3. History of the topic before I became involved

A study had been done by Karanja S et al, 2018 (21) on determinants of nomadic community utilization of free maternity services within Kajiado County. The researchers found out that irrespective of free maternity care as a government policy inaugurated on June 1st 2013, the utilization was minimal due to male partners viewing maternal newborn health as a woman's issue and also the nomadic culture never allowing discussion or any preparation for unborn baby, therefore, there was no birth preparedness male partners. The researchers recommended exploring birth preparedness amongst male partners. As a researcher, I developed an interest to understand how the health facility involves the nomadic communities in birth preparedness because there is a government policy on maternity open days that directs health facilities and communities to meet every quarter and discuss maternal newborn health for community ownership of health thus advocating for primary health care. Through observation, one could rarely see a male partner accompanying a female partner for maternal newborn health services in a health facility.

#### 4. On data analysis

Data that was coded, conceptualized, put in patterns and coded into themes and subthemes was what was being collected from the study participants through focused group discussions.

# 5. How author's findings affected the field being discussed?

It has fostered policy change at national level, because male are decision makers in African society, are educated compared to women and are economically empowered. Therefore, every program in order to achieve its objective in maternal newborn health has to involve the males in order for the country to achieve its indicators like zero preventable maternal/perinatal mortality, zero unmet need for family planning, zero harmful cultural practices like

# **Emergency and Nursing Management**

teenage pregnancies, early marriages and gender based violence.

#### Recommendations

# Health facility community Dialogue/open maternity days

Inco-operation of maternity open days in county health budget to engage communities considering their nomadic culture.

#### References

- Moinuddin, M., Christou, A., Hoque, D. M. E., Tahsina, T., Salam, S. S., Billah, S. M., ... & Arifeen, S. E. (2017). Birth preparedness and complication readiness (BPCR) among pregnant women in hard-to-reach areas in Bangladesh. *PloS one*, 12(12), e0189365.
- Acharya, A. S., Kaur, R., Prasuna, J. G., & Rasheed, N. (2015). Making pregnancy safer—birth preparedness and complication readiness study among antenatal women attendees of a primary health center, Delhi. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 40(2), 127.
- 3. Andarge, E., Nigussie, A., & Wondafrash, M. (2017). Factors associated with birth preparedness and complication readiness in Southern Ethiopia: a community based cross-sectional study. *BMC pregnancy and childbirth*, 17(1), 1-13.
- August, F., Pembe, A. B., Mpembeni, R., Axemo, P., & Darj, E. (2016). Community health workers can improve male involvement in maternal health: evidence from rural Tanzania. Global health action, 9(1), 30064.
- Atuahene, M. D., Arde-Acquah, S., Atuahene, N. F., Adjuik, M., & Ganle, J. K. (2017). Inclusion of men in maternal and safe motherhood services in inner-city communities in Ghana: evidence from a descriptive cross-sectional survey. BMC pregnancy and childbirth, 17, 1-10.
- Azeze, G. A., Mokonnon, T. M., & Kercho, M. W. (2019). Birth preparedness and complication readiness practice and influencing factors among women in Sodo town, Wolaita zone, Southern Ethiopia, 2018; community based cross-sectional study. Reproductive health, 16, 1-12.
- Berhe, A. K., Muche, A. A., Fekadu, G. A., & Kassa, G. M. (2018). Birth preparedness and complication readiness among pregnant women in Ethiopia: a systematic review and metaanalysis. *Reproductive health*, 15, 1-10.
- 8. Babalola, S., & Fatusi, A. (2009). Determinants of

- use of maternal health services in Nigeria-looking beyond individual and household factors. *BMC* pregnancy and childbirth, 9, 1-13.
- Baraki, Z., Wendem, F., Gerensea, H., & Teklay, H. (2019). Husbands' involvement in birth preparedness and complication readiness in Axum town, Tigray region, Ethiopia, 2017. BMC pregnancy and childbirth, 19(1), 1-8.
- 10. Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal*, 19(4), 426-432.
- 11. Chikalipo, M. C., Chirwa, E. M., & Muula, A. S. (2018). Exploring antenatal education content for couples in Blantyre, Malawi. *BMC pregnancy and childbirth*, 18(1), 1-14.
- 12. Tura, A. K., Girma, S., Dessie, Y., Bekele, D., Stekelenburg, J., van den Akker, T., ... & Ethiopian Obstetric Surveillance System Steering Committee. (2023). Establishing the Ethiopian Obstetric Surveillance System for monitoring maternal outcomes in Eastern Ethiopia: a pilot study. Global Health: Science and Practice, 11(2).
- Evans, D. P., Shojaie, D. Z., Sahay, K. M., DeSousa, N. W., Hall, C. D., & Vertamatti, M. A. (2021). Intimate partner violence: barriers to action and opportunities for intervention among health care providers in São Paulo, Brazil. *Journal of Interpersonal Violence*, 36(21-22), 9941-9955.
- D-zomeku, V. M., Mensah, B. A. B., Nakua, E. K., Agbadi, P., Lori, J. R., & Donkor, P. (2020). Exploring midwives' understanding of respectful maternal care in Kumasi, Ghana: Qualitative inquiry. *Plos one*, 15(7), e0220538.
- Tekile, A. K., Woya, A. A., & Basha, G. W. (2019). Prevalence of malnutrition and associated factors among under-five children in Ethiopia: evidence from the 2016 Ethiopia Demographic and Health Survey. *BMC research notes*, 12(1), 1-6.
- Gharaee, M., & Baradaran, H. R. (2020). Consequences of unintended pregnancy on mother and fetus and newborn in North-East of Iran. The Journal of Maternal-Fetal & Neonatal Medicine, 33(5), 876-879.
- 17. Hailu, M., Gebremariam, A., Alemseged, F., & Deribe, K. (2011). Birth preparedness and complication readiness among pregnant women in Southern Ethiopia. *PloS one*, *6*(6), e21432.
- Iliyasu, Z., Abubakar, I. S., Galadanci, H. S., & Aliyu, M. H. (2010). Birth preparedness, complication readiness and fathers' participation

- in maternity care in a northern Nigerian community. African journal of reproductive health, 14(1).
- 19. Unit, S. (2021). Promises to keep: Impact of COVID-19 on adolescents in Kenya.
- Maternal, J. H. P. I. E. G. O. (2001). Neonatal health (MNH) Program. Birth preparedness and complication readiness: A matrix of shared responsibilities. JHPIEGO-MNH, 23-31.
- Kabakyenga, J. K., Östergren, P. O., Turyakira, E., & Pettersson, K. O. (2011). Knowledge of obstetric danger signs and birth preparedness practices among women in rural Uganda. Reproductive health, 8, 1-10.
- 22. Kaso, M., & Addisse, M. (2014). Birth preparedness and complication readiness in Robe Woreda, Arsi Zone, Oromia Region, Central Ethiopia: a cross-sectional study. *Reproductive health*, 11, 1-12.
- 23. Karanja, S., Gichuki, R., Igunza, P., Muhula, S., Ofware, P., Lesiamon, J., ... & Ojakaa, D. (2018). Factors influencing deliveries at health facilities in a rural Maasai Community in Magadi sub-County, Kenya. *BMC pregnancy and childbirth*, *18*(1), 1-11.
- Kakaire, O., Kaye, D. K., & Osinde, M. O. (2011).
  Male involvement in birth preparedness and complication readiness for emergency obstetric referrals in rural Uganda. *Reproductive health*, 8, 1-7.
- 25. Kalisa, R., Smeele, P., van Elteren, M., van den Akker, T., & van Roosmalen, J. (2018). Facilitators and barriers to birth preparedness and complication readiness in rural Rwanda among community health workers and community members: а qualitative study. Maternal health. neonatology perinatology, 4, 1-7.
- 26. Kwambai, T. K., Dellicour, S., Desai, M., Ameh, C. A., Person, B., Achieng, F., ... & Ter Kuile, F. O. (2013). Perspectives of men on antenatal and delivery care service utilisation in rural western Kenya: a qualitative study. *BMC pregnancy and childbirth*, 13(1), 1-10.
- Mohamed, S. F., Izugbara, C., Moore, A. M., Mutua, M., Kimani-Murage, E. W., Ziraba, A. K., ... & Egesa, C. (2015). The estimated incidence of induced abortion in Kenya: a cross-sectional study. *BMC pregnancy and childbirth*, 15, 1-10.
- 28. Kenya National Bureau of Statistics. (2019). *The* 2019 Kenya Population and Housing Census: Population by County and Sub- County. Kenya

- National Bureau of Statistics.
- 29. Legesse, T., Abdulahi, M., & Dirar, A. (2017). Trends and causes of maternal mortality in Jimma University specialized hospital, Southwest Ethiopia: a matched case—control study. *International journal of women's health*, 307-313.
- 30. Mkandawire, E., & Hendriks, S. L. (2018). A qualitative analysis of men's involvement in maternal and child health as a policy intervention in rural Central Malawi. *BMC pregnancy and childbirth*, 18(1), 1-12.
- 31. Gitobu, C. M., Gichangi, P. B., & Mwanda, W. O. (2018). The effect of Kenya's free maternal health care policy on the utilization of health facility delivery services and maternal and neonatal mortality in public health facilities. *BMC pregnancy and childbirth*, 18(1), 1-11.
- 32. Limenih, M. A., Belay, H. G., & Tassew, H. A. (2019). Birth preparedness, readiness planning and associated factors among mothers in Farta district, Ethiopia: a cross-sectional study. *BMC pregnancy and childbirth*, 19(1), 1-10.
- 33. Mullany, B. C., Becker, S., & Hindin, M. J. (2007). The impact of including husbands in antenatal health education services on maternal health practices in urban Nepal: results from a randomized controlled trial. *Health education research*, 22(2), 166-176.
- 34. Nimavat, K. A., Mangal, A. D., Unadkat, S. V., & Yadav, S. B. (2016). A study of birth preparedness of women in Jamnagar district, Gujarat, India. *International Journal Of Community Medicine And Public Health*, 3(9), 2403-8.
- 35. Nanjala, M., & Wamalwa, D. (2012). Determinants of male partner involvement in promoting deliveries by skilled attendants in Busia, Kenya. *Global journal of health science*, *4*(2), 60.
- 36. Nkuoh, G. N., Meyer, D. J., Tih, P. M., & Nkfusai, J. (2010). Barriers to men's participation in antenatal and prevention of mother-to-child HIV transmission care in Cameroon, Africa. *Journal of midwifery & women's health*, *55*(4), 363-369.
- 37. Odimegwu, C., Adewuyi, A., Odebiyi, T., Aina, B., Adesina, Y., Olatubara, O., & Eniola, F. (2005). Men's role in emergency obstetric care in Osun State of Nigeria. *African journal of reproductive health*, 59-71.
- 38. Patton, M. Q. (2002). Qualitative research and evaluation methods. Thousand Oaks. *Cal.: Sage*

Publications, 4.

- 39. Singh, D., Lample, M., & Earnest, J. (2014). The involvement of men in maternal health care: cross-sectional, pilot case studies from Maligita and Kibibi, Uganda. *Reproductive health*, 11, 1-8.
- Currimjee, A., Lima, J. H. N. A., & Troiano, S. (2022). Childcare Arrangements for Low-Income Families: Evidence from Low and Middle-Income Countries. Social Protection Discussion Papers and Notes, (180967).
- 41. Tura, G., Afework, M. F., & Yalew, A. W. (2014). The effect of birth preparedness and complication readiness on skilled care use: a prospective follow-up study in Southwest Ethiopia. *Reproductive health*, *11*, 1-10.
- 42. Tadesse, M., Boltena, A. T., & Asamoah, B. O. (2018). Husbands' participation in birth preparedness and complication readiness and associated factors in Wolaita Sodo town, Southern Ethiopia. *African Journal of Primary Health Care and Family Medicine*, 10(1), 1-8.
- August, F., Pembe, A. B., Mpembeni, R., Axemo, P., & Darj, E. (2015). Men's knowledge of obstetric danger signs, birth preparedness and complication readiness in rural Tanzania. *PloS* one, 10(5), e0125978.
- 44. WHO, U., & Unicef. (2015). Pregnancy, childbirth, postpartum and newborn care. *A guide for essential practice. Volume WQ*, 175.
- 45. Ng'asike, J. T. (2019). Indigenous knowledge practices for sustainable lifelong education in pastoralist communities of Kenya. *International Review of education*, *65*(1), 19-46.
- 46. Yargawa, J., & Leonardi-Bee, J. (2015). Male involvement and maternal health outcomes: systematic review and meta-analysis. *J Epidemiol Community Health*, 69(6), 604-612.
- 47. Ijang, Y. P., Cumber, S. N. N., Nkfusai, C. N., Venyuy, M. A., Bede, F., & Tebeu, P. M. (2019). Awareness and practice of birth preparedness and complication readiness among pregnant women in the Bamenda Health District, Cameroon. *BMC pregnancy and childbirth*, 19(1), 1-8.