

**MALE PARTNER INVOLVEMENT IN PROMOTING ANTENATAL CARE
AND SKILLED DELIVERY ATTENDANCE IN IN BUNGOMA COUNTY**

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**A thesis submitted to the School of Public Health, Biomedical Sciences and
Technology in partial fulfilment for the requirements of the award of the Masters
of Science Degree in Public Health (Epidemiology and Population Health) of
Masinde Muliro University of Science and Technology**

December 2021

DECLARATION

Declaration by student

This Thesis is my original work prepared with no other than the indicated sources and support and has not been presented elsewhere for a degree or any other award.

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DEDICATION

To my parents Mathew and Rebecca. My husband George, my son Martin and daughters Sonya and Rosa for their support and encouragement.

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ABSTRACT

Globally, male partner involvement in antenatal care and skilled delivery services remains a challenge to effective management. Maternal morbidities and mortalities arise from underutilization of antenatal care and skilled delivery and this can be reduced by male partner involvement. Benefits of male involvement have been reported in developed countries but it is low in Sub-Saharan Africa. In Kenya male partner involvement in maternal services remains low despite it being recognized as one of the pillars of safe motherhood. Therefore, this study was conducted to investigate the predictors of male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula Sub-County of Bungoma County in Kenya. The study adopted a cross-sectional design. A sample size of 366 men and 7 community health volunteers were included in the study. Additionally, direct observation was done in 5 health facilities. A multistage sampling design was applied for the selection of participants. Data was collected using a pre-tested semi-structured questionnaire, interview schedules and observation checklist. Data were analysed using descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences version 25. The Association of the predictors were assessed using Odds Ratio and Chi-Square at the significance level of 0.05. Thematic analysis was used to analyse qualitative data. Data were presented using tables, figures narratives and direct quotes. The study found a low level of male involvement (18%) in promoting antenatal care and skilled delivery services. Monthly income (OR: 0.21, $p = 0.008$) and living with a partner (OR: 0.31, $p = 0.005$) were socio-demographic predictors of male partner involvement. However, age and number of children had an increasing association of male partner involvement. Health facility factors did not equally predict male partner involvement. However, it was further established that distance, availability of antenatal care and delivery services, the number of health workers at the antenatal care and maternity had an increasing association with male partner involvement. Qualitative data established that, lack of awareness, cultural restrictions, lack of men friendly services, lack of specialized pregnancy services, unfriendly and few health workers were predictors of male partner involvement. The study concluded that there was low level of male involvement. Monthly income, living with a partner, cultural restrictions and inadequate awareness on the need for involvement were socio-demographic predictors of male partner involvement. Health facility factors were insignificant predictors. The study recommended that the Ministry of Health should create awareness campaigns and public education with targeted messages on negative cultural practices that hinder male partner involvement in maternal health services in Bungoma County.

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ABBREVIATIONS AND ACRONYMS

AFIDEP	African Institute for Development Policy
ANC	Antenatal Care
APHIA-PLUS	AIDS, Population and Health Integrated Assistance
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral
CHEWs	Community Health Extension workers
CHRIO	County Health Records and Information Officer
CHVs	Community Health Volunteers
KHIS	Kenya Health Information System
FANC	Focused Antenatal Care
FGD	Focus Group Discussion
GOK	Government of Kenya
HH's	Households
HIV	Human Immunodeficiency Virus
HWs	Health Workers
I	Involved
ICPD	International Conference on Population and Development
KDHS	Kenya Demographic Health Survey
KII	Key informant interview
KNBS	Kenya National Bureau of Statistics
KNH	Kenyatta National Hospital
MANI	Maternal and New-born Initiative
MDG	Millennium Development Goals
MI	Male Involvement

MMR	Maternal Mortality Rates
MNCH	Maternal Neonatal and Child Health
MPI	Male partner Involvement
MOH	Ministry of Health
NI	Not Involved
NASCOP	National Aids and STIs Control Program
NGO	Non-Governmental Organization
PHC	Primary Health Care
PMTCT	Prevention of Mother-to-Child Transmission of HIV/AIDS
RH	Reproductive health
SDG	Sustainable Development Goals
TBAs	Traditional Birth Attendants
UNFPA	United Nations Population Fund
UNICEF	United Nations Population Fund
USAID	United States Agency for International Development
WHO	World Health Organization

OPERATIONALISATION OF TERMS

Antenatal care visit: A scheduled visit of a four-week interval an expectant mother is expected to attend to monitor her health and the health of the unborn child and receive various interventions

Antenatal Care: Support and services pregnant women receive from trained healthcare providers including Couple counselling and testing and pregnancy care in general.

Antenatal clinic: A department within a health facility where consultations, antenatal profile (blood tests and urinalysis etc.) physical examination on pregnancy progress takes place

Antiretroviral drugs: Medicines used in the management of HIV infection

Community health extension worker: This is a trained healthcare provider either working at the health facility or the community coordinating and supervising activities performed by community health volunteers. This study will focus on those working at the community level.

Community Health Units: They are health service structures with a defined geographical area and assigned to a facility. The structure supports 1,000 HH's or 5,000 people who live in the same geographical area, sharing resources and challenges.

Community Health Volunteer: They are community-based resource person who provides level 1 services and support community for their initiatives to improve their health status. In this study, they do the mapping of pregnant women at the

Household level and refer them for appropriate services to health facilities with their partners. They also create demand for maternal services and do advocacy for male involvement.

Family planning: Choosing the number of children in a family and the length of time between their births

Health facility factors: These are factors within the health facility (infrastructure, policy and human resources) that promote or hinder male partner involvement during pregnancy.

Health worker: Refers to an accredited health professional such as a licensed midwife, clinical officer, doctor or nurse who has adequate proficiency and the skills to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and also in the identification, management and referral of complication in women and new-borns.

Level of male involvement: These are various ways in which men were involved in order to promote antenatal care and skilled delivery attendance of the partners. It was measured in three levels: male partner being involved in planning with his partner for ANC and skilled delivery, accompanying partners for ANC and skilled delivery services and male partners providing necessary support to their partners to access ANC and skilled delivery services.

Male partner Involvement: Incorporating men in the antenatal care and skilled delivery services which include accompanying, being involved in services his partner is receiving, financial support, decision making on skilled. ANC and delivery services

Male partner: Any adult man who is aged at least 18 years who is married or is in an informal union with a woman and takes care of and supports her.

Postpartum (postnatal) period: The period immediately after the child and extending for about six weeks

Predictors: These are factors/ determinants that either promote or hinder male partner involvement in maternal services

Prevention of Mother to Child Transmission: Interventions given by the health providers to the antenatal mother who is HIV positive e.g. Provision of ARV/ART, infant feeding options, zero-status disclosure to the partner and adherence counselling

Prophylaxis: Short-term antiretroviral treatment

Skilled delivery: Refers to childbirth managed by a skilled attendant (trained health worker) under the enabling conditions of a functional emergency obstetric care and referral system.

Socio-demographic characteristics: They are an individual's characteristics like age, level of education, type of marriage, marital status, culture and average monthly income which are used to measure social support.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Antenatal care and skilled delivery services refer to the services offered to an expectant woman during pregnancy; provided by skilled personnel, supported by an enabling environment (necessary equipment, supplies, medicines and infrastructure) and a functional referral system (WHO, 2015). Antenatal care links the woman and her family with the health care system, which may increase the chance of using a skilled attendant at birth and contributes to good health throughout the life cycle (Shibamuma *et al*, 2015). In the past, these services were seen and regarded as feminine responsibilities and this has excluded men from maternal health services yet men are heads of families and control all spheres of a women's life, including making decisions in most sexual and reproductive health-related affairs in the household (Zakari *et al.*, 2016). During pregnancy, a woman is physically, psychologically, and emotionally challenged which requires her family and health facility adequate care, wellbeing and happiness throughout the pregnancy period (Kariuki & Seruwagi, 2016). Therefore, men can use this opportunity to reinforce and ensure that their female expectant partners seek recommended Antenatal care and skilled delivery services (Davis *et al.*, 2016).

World Health Organization (2015), recommends a universal global target of at least 90% coverage for both Antenatal care and skilled services. However, this is not the case. For instance, according to UNICEF (2019), it was estimated that globally, 211 million pregnancies occurred annually; out of those, only (58%) completed four minimal recommend Antenatal care visits and (68%) received skilled delivery services. To add on to that, 15% of them developed complications, over 500,000 died due to

causes related to pregnancy or child-birth. Male partners' involvement in Antenatal care and skilled delivery services have the potential to reduce delays in the decision of when and where to utilize these services from. In the African setting, male partners involved in these services as shown to increase uptake of Antenatal care and skilled delivery services (Wai *et al.*, 2015). Maternal morbidities and mortalities arise from pregnancy, childbirth or postpartum complication, this could be reduced by male partner involvement in pregnancy and childbirth services as prescribed by the safe motherhood policy, which recognises male involvement as an effective intervention to improving maternal and child health (WHO, 2015).

Despite the call for male partner involvement in antenatal and skilled delivery services, they are barely involved in their female partner's care during pregnancy and childbirth (Mpembeni *et al.*, 2015). Previous studies in developed and developing countries have reported that socio-demographic factors have influenced their involvement (Pokharel, 2019) and that health facilities created barriers to their involvement (Longworth *et al.*, 2015). This study didn't determine the level of male partner's involvement and only covered their involvement during antenatal period, these studies took place in Asia and Sweden which are geographically different from the current study. Sociodemographic characteristics of participants and the systems within the health facilities are equally different. Inadequate male partner involvement in antenatal care and skilled delivery services could contribute to the persistent maternal morbidities and mortalities because they make decisions on when and where their pregnant women seek services from (Craymah *et al.*, 2017).

In the West Pacific region, a study on male involvement in reproductive, maternal and child health, indicated that male involvement in the said services was low due to socio-

cultural norms (Davis *et al.*, 2016). Sharma, Bhuvan & Khatri (2018) in their qualitative study that targeted male teachers and health workers, noted that in Nepal, there was limited male involvement in reproductive health services due to sociocultural and psychosocial norms, lack of education and misinformation were hindering factors to male involvement. These studies targeted different groups which were different from the current study that targeted men and community health volunteers (CHVs). Moreover, both studies investigated cultural practices that influence male involvement which was different from the current one that looked at other socio-demographic predictors other than the culture that influenced male involvement in promoting Antenatal care and skilled delivery services.

In South Africa, Yende *et al.*, (2017), reported that most (88%) of women preferred being accompanied to the clinic with their spouses but only (12%) attended the clinic with their partners once and preferred Saturdays and early weekday's mornings. Peneza and Muluka, (2018) in their qualitative study in Tanzania, found that the health policies demanded the presence of a male partner when attending the first antenatal care but this was not the case. Women attended clinics without being accompanied by their male counterparts. To increase male involvement in those services, pregnant mothers were not attended to unless accompanied by their male partners. In Ghana, one study indicated that the level of male involvement was 70% and was high among those who lived together with their partners (Annoon *et al.*, 2020). In Nigeria, the main barrier to male participation in antenatal care was the job demand, social stigma and long waiting time in the antenatal care clinics (Falade-Fatila & Adebayo, 2020). Most of the studies above focused on male involvement during the antenatal period only leaving out their involvement during the delivery period which the current study sought. One study targeted women and focused on their perceptions of male involvement. This was

different from the current study that targeted men to establish predictors of their involvement and compared the findings if they yielded the same results or were different.

In Kenya, antenatal care and skilled delivery services are free of charge and 92% of pregnant women attended antenatal care services at least once, however, only (58%) of the expectant mothers completed the four minimum antenatal care visits and only (68%) received skilled delivery services (KDHS, 2014). To achieve the achievement of Sustainable Development Goal three, aiming at reducing maternal mortality ratio by 75%, Kenya should have an MMR of 147/100,000 live births by 2030 (SDG3) (UN, 2015). In order to address this, faster progress is needed in the coverage of antenatal care (ANC) and skilled delivery coverage in high burden regions.

Studies that have been done in Kenya showed low levels of male involvement. However, they focused on their involvement in PMTCT and family planning. For instance, according to NASCOP, (2014), only (15%) of male partners were involved in maternal services of their partners during PMTCT. Aluisio *et al.*, (2016) in their study showed that only (26%) of men accompanied their wives to the antenatal care visits to ensure the survival of their HIV-free infants. On top of that, Angeso & Okoth, (2018) in their study; on factors influencing male partner involvement in antenatal care in Kenya, concluded that the friendliness of health providers at the reproductive department had a positive effect on the involvement of male partners in ANC and skilled delivery services. A report from a national survey on male involvement in family planning services revealed that, in rural western Kenya, barriers in male partner involvement were inadequate and incorrect information on mother and child health (MCH) and family planning, opposition from male peers and mothers-in-law, cultural

demands, unfriendly service providers, slow service with long waiting hours and inadequate male MCH service providers (GoK, 2014). A study from Kakamega county Kenya established that male partner involvement in prenatal services was influenced by the level of education, living together, occupation and socio-cultural norms (Kiptoo *et al.*,2016)

There is a paucity of information on male partner involvement in maternal health services in Bungoma county and it was ranked among the bottom 15 counties with the lowest 4th antenatal care and skilled delivery of <50%, 68% coverage respectively (KDHS, 2014). From available data, Bumula Sub- County contributed to this low coverage. In Bumula, out of the 8,000 annual expected pregnancies, about 30% of expectant women completed four and more ANC schedules with 47% receiving skilled delivery (DHIS, 2016). This study therefore aimed at investigating predictors of male partner involvement in promoting ANC and skilled delivery attendance in Bumula Sub-County, Bungoma County, Kenya.

1.2 Statement of the Problem

Globally, approximately 800 women die every day (MMR of 211/100, 0000) due to pregnancy or childbirth related complications, and almost all maternal deaths (99%) occur in developing countries (WHO, 2016). Bungoma county recorded a higher maternal mortality ratio of 382/100,000 live births (KDHS, 2014). This is higher than the national record of 362/100,000 live births and much far higher than the universal WHO target of <147/100,000 live births by the year 2030. Additionally, it was ranked among the bottom fifteen counties with the lowest proportion of women receiving the minimum four recommended ANC visits (50%) and skilled delivery (68%) (KDHS, 2014). Bumula sub-county may have contributed to this undesired state of affairs. In

Bumula Sub County, only 85% of pregnant women completed the 1st ANC services while 30 % completed the four minimum visits and only 47% received skilled delivery (KHIS, 2016). This implies that most expectant women 70% for ANC and 53% for skilled delivery were at risk of having maternal morbidity or maternal mortality or both.

One of the reproductive health policy strategies aimed at increasing uptake of antenatal care and skilled delivery services is male partner involvement in maternal health services. Despite this strategy being in place to encourage male partner participation in reproductive health, male partner involvement was still low in family planning, HIV programs and immunization however in Kenya. The national ANC male involvement level was 5.1%, with western region being at 5.3% (MOH, 2015). This is against the universally accepted limit of 90%. Additionally, existing interventions such as free maternal care services indicate a very slow progression in improving the maternal health indicators (NASCO, 2016). There is a paucity of information on the level of male involvement in Bumula.

The socio-demographic information is not known as there is no documentation. Studies have shown that male involvement in ANC and skilled delivery services is influenced by a multiplicity of context-specific factors (Nungari, 2014); Longworth, *et al.*, 2015 and Pokherel *et al.*, 2019. These factors associated with male partner involvement in ANC and skilled delivery services include socio-demographic, health related factors and partner's perceptions towards involvement. However, these factors vary by context, therefore it was prudent to investigate on factors that were likely to be more important in the context of Bumula Sub-County. It is against this backdrop that this study sought to investigate the predictors of male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula Sub-County.

1.3 Objectives of the Study

1.3.1 Main Objective

To investigate the predictors of male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula sub-county, Kenya.

1.3.2 Specific Objectives

The study was guided by the following specific objectives;

1. To establish the level of male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula Sub-County
2. To determine the male partners' socio-demographic factors predicting male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula Sub-County
3. To determine health facility factors predicting male partner involvement in promoting ANC and skilled delivery attendance in Bumula Sub-County.

1.4 Research questions

1. What is the level of male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula Sub-County?

1.5 Research Hypothesis

1. Male partner socio-demographic factors are insignificant predictors of their involvement in promoting antenatal care and skilled delivery attendance.
2. Health facility factors are insignificant predictors of male partner involvement in promoting antenatal care and skilled delivery attendance.

1.5 Justification for the Study

Increased male involvement in maternal health care services may lead to increased utilization of antenatal care and skilled delivery services by the expectant women. This may contribute to reduction in maternal and infant mortality in Bumula Sub-County of Bungoma County.

This study would contribute to a better understanding of the socio- demographic factors and health facility factors that influence their involvement in antenatal and skilled delivery services in Bumula Sub-county of Bungoma County.

The CHVs as resource persons doing promotive and preventive health services at the community level, they understand the perspectives of most men as far as the topic is concerned. Individual men, families and communities need to be empowered to contribute positively to making pregnancy safer by involving male partners. Male partner involvement in reproductive and family health may provide an important strategy in achieving both women's empowerment and women's health goals.

1.6 Significance of the Study

It is within Kenya Vision 2030 – Social Pillar – that health practices are moved from curative to preventive. This movement promotes consumption of health care services by all; which promotes male partner involvement in maternal health services. This study is based on this vision to comprehend the situation in Bumula sub-county of Bungoma County. This would help inform targeted interventions for improved male involvement in maternal health services.

Findings from this study would inform the County Government of Bungoma- MOH department to come up with initiatives that promote male involvement and eventually

better utilization of skilled birth attendance. This will contribute to reduction of the unacceptably high maternal mortality ratio associated with home delivery. The findings will also contribute to the existing body of knowledge on male partner involvement in choice of delivery site. Moreover, the findings of this study will be useful for MoH to strengthen male involvement in antenatal care by communicating clear policies.

1.7 Scope of the Study

The study was conducted in the Bumula Sub-County and only focused on the predictors of male involvement in promoting antenatal care and skilled delivery attendance. The target population included married men with a child of utmost six months and CHVs. The data was collected between June 2020 to August 2020.

1.8 Limitation and Delimitation of the Study

A cross-sectional research design was applied in this study. Data was captured at one point in time yet the study should be continuous for accuracy. To address this, participants were interviewed on events about their partner's last pregnancy which were reviewed and analysed.

The study was carried out in only one sub-county in Bungoma County, hence sample size was small. However, Bungoma County fairly homogenous population which makes it possible to generalise the findings to the rest of the sub-counties. Besides, qualitative data was collected for triangulation to address the bias. Purposive sampling technique was applied in the selection CHV (chairpersons of community units) which did not give equal chances of participation to the rest of the CHVs and also could have attracted bias from the key informants. This was addressed by the selection of more experienced CHVs believed to have worked long and engaged more with men at the community level, hence had a better understanding of the matters under study.

Additionally, male partners for FGDs were sampled during the community dialogue days, which excluded the ones who did not attend which would create bias; however, to address biasness, randomisation was used to pick members of the FGD.

Also, accessibility to the households was cumbersome and time-consuming thus potentially delaying the data collection process. To address the issue of accessibility due to the sparse distribution of households within Bumula sub-county, one research assistant covered two sub-locations that were in close proximity. Furthermore, the availability of men (participants) was a challenge due to their busy work schedules. To enhance the availability of men for the study, the CHVs sensitized households on the study before data collection to enhance their availability and participation. Male partners with a child of utmost 12 months were preferred for the study because they were able to recall the recent events regarding the last pregnancy of their partners.

1.9 Theoretical Model

Health Belief Model (HBM) was used to conceptualise the study. The Health Belief Model posits six constructs that predict health behaviour: risk susceptibility, risk severity, benefits to action, barriers to action, self-efficacy, and cues to action. According to this model, people will take action to prevent illness if they regard themselves as susceptible to a condition if they believe it would have potentially serious consequences, if they believe that a particular course of action available to them would reduce the susceptibility or severity or lead to other positive outcomes, and if they perceive few negative attributes related to the health action.

This study sought to explore the level of male partner involvement and factors influencing antenatal care visits and uptake of skilled delivery. These factors shape the roles of male partners during birth preparedness particularly during planning, decision

making and accompaniment during antenatal care visits and skilled delivery. The cues to action from the HBM play a key role in determining the level of male involvement in antenatal care and uptake of skilled delivery. Male partner involvement stems from knowledge of antenatal care and the skilled delivery process. This in return determines the level of male participation in pregnancy planning, decision making and accompanying the partner to antenatal care visits and during delivery.

1.10 Conceptual Framework.

Male partner involvement in antenatal care and skilled delivery is a subject of safe motherhood. Based on the HBM, the conceptual framework was formulated. This study conceptualises that, level of male partner involvement (planning, accompaniment and support); sociodemographic factors (age, education level, monthly income, number of children, type of marriage and living together); and health facility factors (accessibility, availability, affordability, availability of Health Workers, space and waiting time were predictors of male partner involvement in promoting antenatal care and skilled delivery services. The level of male partner involvement, sociodemographic factors and health facility factors (independent variables) have a direct influence on male partner involvement (dependent variable) as shown in Figure 2.1. The arrows show the interrelationships among the variables of the study. Individual Perceptions (Perceived susceptibility, Perceived severity, Perceived barriers and Perceived benefits) were the moderating variable. Willingness of male partners to be involved in promoting ANC and skilled delivery services would be influenced by their perceptions which are at four levels. These would directly or indirectly influence their involvement. Moreover, the cues to action acts as reminders, also enhances individual's perception then this leads to likelihood of involvement.

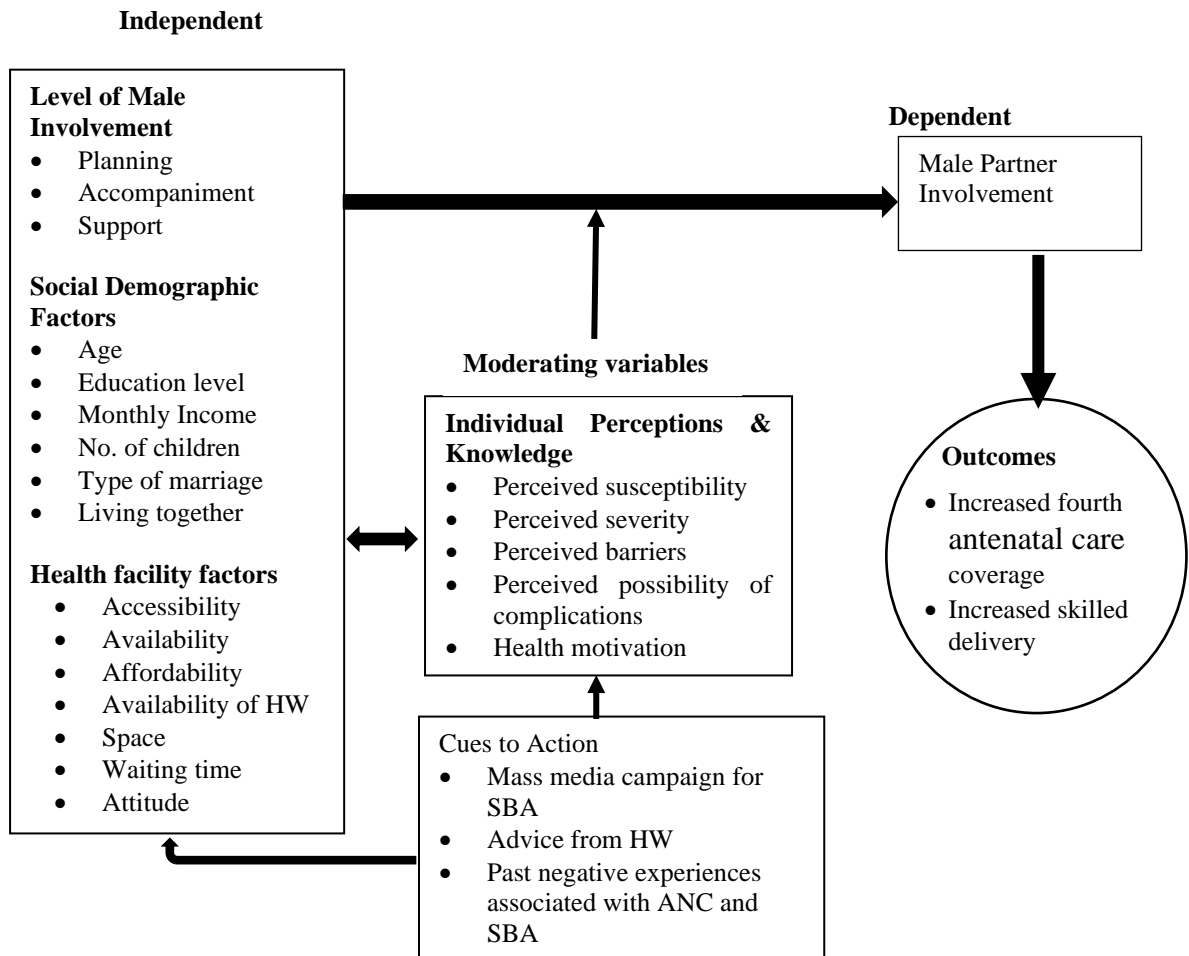


Figure 1.1: Conceptual Framework (adapted with modification from Dansowaa 2013)

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

It was estimated that 303,000 women died from pregnancy-related causes and 2.6 million still-birth during the third trimester (Blencowe, 2016). Within a continuum of care, ANC provides a chance for health-care functions including screening, diagnosis and management of diseases (WHO, 2016). Additionally, WHO observes this as an opportunity for male partners to communicate with and support expectant women. The Focused Antenatal Care (FANC) model suggests that 1st visit takes place before 16 weeks, the second at 16- 28 weeks, the third one at 28-32 and the fourth at about 36 weeks (WHO, 2016). It is known that if women adhere to the recommended schedules, ANC can reduce the occurrence of maternal morbidity and mortality (Chorongo *et al.*, 2016). From these previous studies, we have understood that adherence to the schedules is important; however, currently the uptake of the four ANC visits is still below the global recommendation. This study therefore investigated why the uptake was still low.

In Africa, poor utilisation of antenatal care and skilled delivery attendance stems from the skewed perception among male partners that reproductive health is women's affair (Kulalanga *et al.*, 2012). Moreover, culture is one of the factors limiting male partner involvement in promotion of antenatal care and skilled delivery (Amoakoh-Coleman *et al.*, 2015). Wai *et al.* (2015) posits that men's involvement in antenatal care increase the utilization of maternal health services. However, men are barely involved in their partners' care during pregnancy and child-birth (Aborigo, 2018). Previous studies helped us understand that male involvement in ANC and skilled delivery is important generally, culture is a hinderance to their involvement; however, they failed to address

the health facility factor predicting male partner involvement. This study sought to address the health facility factors.

In Kenya, the percentage of pregnant women attending at least one ANC visits is relatively high at 92% (KDHS, 2014). However, the proportion of women attaining the recommended 4 minimal visits and above was 58% and skilled delivery at 68% (KDHS, 2014). This is less below the WHO target of having 90% of births attended by skilled health professional by 2030 (WHO, 2015). Kenya is lagging in safe motherhood promotion as compared to the global average of 4th ANC 58% and 81% skilled birth. Attainment (United Nations, 2015). Bungoma County records 4th ANC at 50% and skilled birth 68% with Bumula sub-county recording 4th ANC at 30% and skilled birth at 47% (KHIS, 2016). It is observed from previous studies in Bungoma County especially is performing dismally in the attendance of 4th ANC and skilled delivery. However, these studies did not specifically address the issue of male partner involvement in the promotion of ANC and skilled delivery attendance. This study thus investigated the male partner involvement in ANC and skilled delivery services.

2.2 Level of Male Partner Involvement

It is known that male partner involvement in antenatal care and skilled delivery improves their partners' health (Ampet *et al.*, 2015). In Sweden, Anderson *et al.*, (2016), male partners are actively involved in the pregnancy and childbirth care because of the legislation on maternal health services. Furthermore, first-time fathers and young fathers are more involved during pregnancy (Anderson *et al.*, 2016). In America, a national survey on engaging men in prenatal health lessons via eHealth forum, targeting 962 men, indicated that 81% were involved in the eHealth prenatal lessons and preferred this platform for their involvement in prenatal services (Mackert *et al.*, 2017).

Additionally, Mackert *et al.* (2017) this was workable for most men to participate as compared to the traditional one that required them to be physically present in the clinics which were not working well. Previous studies have shown that it was important for male partners to participate in antenatal care through provision of lessons; however, there was limited literature on the specific levels of male partner involvement such as planning, accompaniment and support, which study pursued.

In Bangladesh, a study on factors associated with male involvement in reproductive care, using data from Bangladesh demographic and health survey 2011 revealed that out of the 1196 men targeted in that study, only 40% were actively involved in their partner's reproductive health services (Bishwajit *et al.*, 2017). In Nepal, a study to determine social factors associated with the involvement of husbands in birth preparedness plans and complication readiness, targeting 125 husbands, indicated that male involvement in these services was 57.6 % (Bhusal & Bhattarai, 2018). The study in Bangladesh measured the level of involvement based on their knowledge, practice and awareness regarding reproductive health. The study findings above were from developed countries with developed health systems and legislation especially in Sweden and America that guide how men should be involved in maternal services. These studies were different from the current one which was conducted in a rural setup of a developing country that investigated predictors of male partner involvement in a system that advocates for physical involvement of men in maternal health services to see if results were different

In Uganda, a case study by Muherwe & Nuhu, (2018) on whether healthcare facilities and programmes in western Uganda were encouraging or discouraging men participation in maternal and child health care, found that there was still a low level of

male partner involvement in MCH services due to health institutional factors. In Ghana on male involvement in maternal health, targeting opinion leaders (chiefs, elders, assemblymen and leaders of women groups) and healthcare workers on their views of men's perception of their role in maternal health services, showed low levels of male involvement in pregnancy (Aborigo *et al.*, 2018). Another quantitative study in Ghana, a community-based study that targeted 420 men, explored factors influencing male involvement during antenatal care in Kassena, Nankana Municipality, revealed that the level of male partner involvement in antenatal care was 67.2% (Kumbeni *et al.*, 2019).

In Ethiopia, a quantitative study to assess the prevalence of male partner attendance at ANC clinics and associated factors influencing their involvement during their partners' antenatal visit, the study targeted 609 women findings reported that the prevalence of male partner involvement in antenatal care services of their partners was at 41.4% (Kassahun *et al.*, 2018). One quantitative study in Nigeria that assessed the level of male involvement in maternity care, targeted 145 married or cohabiting men revealed that an average of them knew the expected roles of males in maternity care (Mbadugha *et al.*, 2019). Most of these studies assessed only male involvement during the antenatal period and left out their involvement during equally important delivery. Additionally, male partner involvement was measured using one variable: Male partner accompanying his female partner to antenatal care or skilled delivery. This was different from the current study that measured male involvement using three variables; accompaniment, male partner involved in planning and decision making where the female partner would seek services and provision of necessary support to the partner to seek services. Some of the studies above the established level of male involvement in maternal health services but targeted different subpopulations on their views, this was

different from the current study that targeted men themselves to establish predictors that influenced their involvement in promoting ANC and skilled delivery attendance.

Two studies from Ghana yielded contradicting results. Findings from few studies on the other hand were from pregnant women attending antenatal care services only, leaving out the ones attending skilled delivery services and those who did not attend these services which were key to establish too. However, the current study targeted men at the community level established their level of involvement during antenatal care and delivery services of their partners. Lastly, the majority of them adopted a quantitative approach only while the current study adopted both quantitative and qualitative approaches to accomplish its objectives.

In Mombasa Kenya, one study on male partner involvement in the choice of the delivery site, concluded that there was a low level of male partner involvement in the choice of the site of delivery and involving male partners and encouraging joint decision-making in reproductive and family health programs would provide an important strategy in achieving maternal health goals (Onchong'a, *et al.*, 2015). On top of that, a national survey on male involvement in antenatal services indicated that male involvement in maternal services was associated with increased uptake of maternal health services and infant BCG immunization (Odeny *et al.*, 2019). Moreover, this study targeted mother-child pairs attending postnatal services for immunization. In Njoro Kenya, a study on the influence of male spouse participation in maternal utilization of antenatal care, male involvement was determined by their frequency of participation in influencing the decision on the timing of antenatal care visits, financial support for antenatal care visits and decision on the health care facility for delivery, concluded that there was a low level of male involvement due to tight time schedules and difficulties in getting

permission from work limited male spouse participation in antenatal care visits (Rotich *et al.*, 2019). In Busia County, Kenya, a study to explore barriers to their involvement in antenatal and postnatal services revealed that few men were involved in antenatal and postnatal services of their partners despite various barriers (Ongolly & Bukach, 2019). The previous studies had different unit of analysis which these studies did not capture on male partner involvement in antenatal care and skilled delivery.

Literature from the above studies indicated the benefits of involving men in immunization services but targeted women and children and it was inclined towards immunization, unlike the current study that focused more on men and investigated predictors of their involvement during antenatal and delivery services of their female partners to see if the findings remained the same or different. One study above focused more on male involvement during the antenatal period, another one on their involvement in the choice of the delivery site, unlike the current one that investigated predictors to their involvement during both antenatal and delivery period. In as much as the study in Busia explored the barriers to male involvement, it didn't indicate the percentage or extent of male involvement. This was established by the current study.

2.1.1 Planning for antenatal care and Skilled Delivery services

In Nepal, a qualitative study on the role of husbands in maternal health and safe childbirth reported that husbands were not involved in planning for and deciding where their female partners would seek services because they felt they had no role to play in pregnancy issues (Lewis, 2015). In India, a quantitative study on male involvement in maternal and infant care, targeting 151 male participants, found out that joint couple planning and decision making was high 82% regarding antenatal care (Ghimire & Pun, 2017). In Bangladesh, a cross-sectional quantitative study on knowledge and

involvement of husbands in maternal and new-born health, targeting couples with a wife with most recent birth, revealed that out of 317 men, 240 (75%) of them were involved in discussing birth preparedness and complication readiness with their partners (Rahman *et al.*,2018). In Bangladesh, a study that targeted couples living in slums revealed that husbands' discussion with health workers regarding maternal and reproductive health issues of their female partners were the most important predictors in support for their wives during pregnancy, childbirth and the postpartum period (Zakaria *et al.*,2021).

According to Matseke *et al.*, (2017), in their qualitative study that explored the meaning and understanding of male partners' involvement in pregnancy-related care among men in rural South Africa, found out that male partners perceived that planning for antenatal care and skilled delivery was a female responsibility and hence they were not involved. In Ghana, men were not involved in the planning phase for antenatal care and skilled delivery services because of poor spousal communication (Craymah *et al.*, 2017). However, in Tanzania a study by Gibore *et al.*, (2019) reported that most (89%) male partners were involved in planning and making a joint decision on where the partner would seek ANC service from. This high involvement was attributed to the successful implementation of safe motherhood projects. Most women never informed their male partners when they got pregnant and when they start antenatal care clinics. In Mozambique, findings from a quantitative study revealed low agreement between couples on the decision where the partner would seek services and when to start antenatal care.

One study in Bangladesh measured planning with a health worker which was different from the current study that measured a male partner planning for antenatal care and

skilled delivery services with his partner to see if would yield different results. The study from Nepal and Bangladesh besides targeting men involvement in maternal health services also studied their involvement in child health services. These studies were different, from the current one that targeted men involvement in promoting antenatal care and skilled delivery services of their partners. The findings from most of the studies above were from quantitative approaches, targeted couples, with few targeted only men who had visited health facilities. This was different from the current one that adopted both qualitative and quantitative approaches, targeted primarily men and community health volunteers to determine if would yield different results

In Malindi Sub-County, Kilifi County, Kenya, a qualitative study to assess male involvement in maternal health planning; a key to utilization of skilled birth services, established that lack of involvement of male partners in planning maternal health services contributed to underutilization of skilled birth services by pregnant women (Nyandieka *et al.*, 2016). In Mombasa County, most of the male partners, seldom participated in planning/deciding on delivery site with their female partner and never made a joint choice on delivery site nor supported their women to access the delivery at the health facility (Onchong'a *et al.*, 2017). Contrary to a study by Kiptoo *et al.*, (2016) showed that most male partners in Mumias East and West sub-counties, Kenya were involved in planning on the partners would seek antenatal care and skilled delivery services. The findings above were findings from either qualitative or quantitative in approach, targeted health facilities and various stakeholders including couples. Some studies focused on male involvement during the delivery or postnatal period which was different from the current study that adopted both qualitative and quantitative approaches and investigated predictors of male partner involvement during both antenatal and delivery period. Two studies took place from one region (Coastal, Kenya)

which was geographically different from the current study. the study from Mumias East and West sub-counties had different unit of analysis despite similar geography.

2.1.2 Accompanying for Antenatal Care and Skilled Delivery services

In Bangladesh, a quantitative study that involved couples (n=317) on Knowledge and involvement of men in maternal and new-born health concluded that male partners accompanying women when receiving health services was positively correlated with women's use of skilled delivery. In relation to the accompaniment for each service, 47% accompanied their wives to ANC and 67% during delivery (Rahman *et al.*, 2018). One study in Malaysia on involvement in maternal health by male counter-parts, Marzo *et al.*, (2018) revealed that most male partners in the Muar district were highly involved during the pregnancy period of their partners with most (89%) of the male partners accompanying their female partners to attend ANC clinics; while about 57% of the male partners accompanied their female partners for delivery.

A qualitative study in Nepal, indicated that most men were involved in income-generating activities hence lacked time to accompany their spouses for ANC services (Sharma *et al.*, 2018). In their community-based qualitative study, Younas *et al.*, (2020) on their study on male partners' knowledge and practices of antenatal care in Swat district, involving married men, who were selected through convenient sampling, found that in Pakistan there was good practice by male partners in attending antenatal care with 95% of the males accompanying their female partners. The studies above were from countries from one region with contradicting findings, most of them targeted couples and women and examined knowledge, practice and perceptions. These were, however, different from the current study that investigated predictors of male partners, targeted majorly men and additionally CHVs were the target to triangulate the findings

to see if they yielded different results. In as much as there was good practice and involvement of male partners in ANC service, the study participants were selected through convenient sampling which did not give participants equal chances to be selected, unlike the current study that adopted simple random sampling in picking the male partners.

A quantitative study in Namibia, involving men who were selected through purposive sampling, whose partners were attending PMTCT services to determine the level of male involvement and factors influencing their involvement in PMTCT, found that most men (78%) disagreed that men should accompany their female partners to antenatal care with only 23% accompanying their partners to the clinics (Shiyagaya *et al.*, 2016). In Ethiopia, a study on the role of male partners in the utilization of maternal health services targeting couples revealed that out of 210 couples only 34.1% accompanied their spouses for antenatal care services once, with only 23.1% physically entered the antenatal care rooms with their partners (Mohammed *et al.*, 2019). In Nigeria, a quantitative study that assessed male partners' involvement in pregnancy-related care among married men, revealed that most men believed that they had no role to play in their partner's pregnancy, with only 20% accompanying their partners to ANC and 19.6% during delivery (Falade-Fatila & Adebayo, 2020). Most of the studies above targeted couples and only measured one variable (accompaniment) as the level of male partner involvement. These studies were different from the current one in that, most measured male partner involvement using three variables and focused more on male involvement during the antenatal period and skilled delivery, unlike the Ethiopia one that focused on their involvement during the antenatal period only. Some of the studies above adopted quantitative approaches, while the current one adopted both qualitative and quantitative approaches one focused on male involvement in PMTCT

services, which is just one package among services offered to pregnant women during the antenatal period and the other study focused more on male partner involvement during the antenatal period which was different from the current study which investigated predictors of their involvement to compare and see if the results would be different.

In Mombasa Kenya, one study hospital based on male partner involvement in the choice of the delivery site established that 84% of men interviewed agreed that they should accompany their spouses for delivery with only 18% accompanying (Onchong'a *et al.*, 2015). In Kakamega County, a study on male partner involvement in maternal care services during the perinatal period determined that a large age gap between couples restricted men from accompanying their spouses to the antenatal care clinics and for maternity services because a good number of participants were in polygamous marriages so the old men felt ashamed of being involved (Kiptoo *et al.*, 2016). A study in Busia County Kenya on barriers to male partner involvement in antenatal and postnatal care, targeting 96 couples, indicated that despite cultural barriers, 55.8% of men accompanied their spouses for antenatal care services while others financed the trips (Ongolly & Bukachi, 2019).

From the above literature, it is clear that men few men accompany their partners for ANC and delivery services in Kenya. All three studies in Kenya targeted couples with none targeting men themselves. The studies above concentrated on male partner involvement during the antenatal period with one focusing on their involvement in the choice of delivery site and it was hospital-based. This was different from the current study that targeted men and CHVs to investigate their predictors in promoting antenatal care and skilled delivery attendance.

2.1.3 Support for antenatal care and Skilled Delivery services

Fathers need to be actively involved in the pregnancy process of their female partners by providing physical and emotional support, encouraging the expectant mother, understanding the influence of hormones, empathizing with her and being patient with her (Eddy & Fife, 2020). In Nepal, a quantitative study involving 151 men reported that there was 40% male involvement in maternal and child health services, the rest did not due to absenteeism and busy job schedules (Ghimire & Pun, 2017). Additionally, the findings indicated that only 45.7 % of the men supported their spouses emotionally during pregnancy with only 58% encouraging them to exclusively breastfeed the children. In Bangladesh, another quantitative study that explored women's perceptions of male involvement in antenatal care, childbirth and postnatal care, targeted 200 women, indicated that only 60% of the husbands took care of their spouses during pregnancy, 44% during child-birth and 30% during postpartum period due to lack of awareness on the need to be involved (Zakaria *et al.*, 2021).

The study findings above were from women on their views about male involvement in maternal and child health services. This study was different from the current study in that it only targeted men and did not cover their involvement in child health rather concentrated on predictors of their involvement in promoting antenatal care and skilled delivery attendance. Both studies reviewed above adopted a quantitative approach in studying the objectives which were different from the current one which adopted both qualitative and quantitative approaches to study its objectives.

In South Africa, a qualitative study on male partners' views of involvement in maternal health care services reported that most men felt there was not much expected of them to do because most activities were done by women. However, they provided financial

support and performed hard chores especially during the postnatal period (Nesane *et al.*, 2016) Another qualitative study in Tanzania, on men's roles in care-seeking for maternal and new-born health, involving men, reported that men arranged transport to facilities and also provided supplies and medications required by their expectant partners but still, their overall involvement was low (Greenspan *et al.*, 2019). According to Nigusie *et al.*, (2020) in Ethiopia, women reported that men supported their spouses during pregnancy and childbirth period by assisting them in household chores, arranging and buying food for them and reminding them to take medicines prescribed in ANC clinics but still there was low male involvement in maternal services.

In Uganda, one study on male partner involvement in utilization of antenatal care services in targeted 135 men that employed both quantitative and qualitative methods, revealed that only 62% of male partners provided transport to their partners to access ANC and 73% provided nutritious food as advised at the clinics but still the extent of male involvement was average -51% (Alupo *et al.*, 2020). The study in South Africa focused on the role of men during the postnatal period with that one of Ethiopia targeting women which were different from the current study that basically targeted men and investigated predictors of their involvement not roles during antenatal and delivery period and compared if findings were different.

In Kenya, Kiptoo *et al.*, (2016) in a study that targeted couples, noted that the majority of male partners in Mumias East and West provided funds for antenatal care compared to helping with household chores and reminding their women about her ANC. In Kilifi, Kenya, a study on factors influencing male involvement in safe motherhood among communities in the Kenya coastal region targeted primarily women attending ANC and health providers, reported that men provided finance to facilitate their partners' access

clinics as compared to physically accompanying them. Additionally, they provided food, protected and direct their women during the pregnancy period (Ouma & Karanja, 2018). The current study not only interviewed the men but also CHVs. This gave the current study a holistic understanding of the level of male partner involvement as a factor influencing male involvement in promoting ANC and skilled delivery attendance

According to the literature above, several studies have been conducted on the levels of male partner involvement in the antenatal or delivery period. Nevertheless, these studies have been limited to specific countries, regions and institutions. Hence, the study investigated if similar findings would be observed at Bumula Sub-County, Bungoma.

2.2 Socio-Demographic Factors Influencing Male Partner Involvement

2.2.1 Age

In Nepal, a study on male partner involvement in maternal and infant health care among purposively selected men concluded that male involvement in the said services was significantly associated with respondents age (Ghimire & Pun, 2017). Men who were less than 35 years were more involved in maternal and child health as compared to those above 35 years. In Egypt, Metwally *et al.*, (2015) in a community-based study aimed to assess the husband's accessibility, behaviour and attitude toward antenatal care, targeted husbands of women in the reproductive age. One thousand husbands were randomly selected in 23 rural villages. The study found that husbands who were younger than 20 years at the time of marriage were nearly three times more likely to be unaware of the risks during pregnancy and the postnatal period compared with those whose age at the time of marriage was more than 20 years. This study assessed the husband's knowledge, attitudes and behaviour towards ANC which was different from the current one which established socio-demographic predictors and further

investigated their involvement during both ANC and delivery services. In Tanzania, Chibwae *et al.* (2018) found out that male involvement in ANC and skilled delivery was associated with age. There was more involvement among men aged 25-34 years towards VCT and family planning services as compared to those who were less than 25 years. This was because the men in this age group could easily be reached by health information. This study focused on male partner involvement in PMTCT and family planning, leaving out their involvement in the entire antenatal period and skilled delivery which was equally important to study.

In Uganda, Alupo *et al.* (2020) found out that male partners aged 35 years and above, were more likely to be involved in antenatal care services of their spouses compared to those aged < 35 years. Even though the study from Uganda adopted both qualitative and quantitative approaches like current study, however, investigated predictors of male partners' involvement in promoting antenatal care and skilled delivery attendance, not knowledge and perceptions. Falade-Fatila and Adebayo (2020) in Nigeria found that age was not a predictor of male partner involvement in antenatal care and skilled delivery. The study found that most men who were involved had attained the secondary level of education (68.7%). Other than targeting male partners, the study also targeted CHVs to assess their perspectives in regard to male partner involvement in promoting antenatal and skilled delivery services but not only involvement during antenatal services as reported from Nigeria and Uganda, to establish if they yielded different results. Lastly, the study in Uganda targeted male partners whose spouses attended obstetric emergency services which were different from the current one that targeted men who were involved in both emergency and non-emergency obstetric services.

In Kiambu County, Kenya, it was established that male partner level of participation in maternal and child well-being programs decreased with an increase in their age (Francis, Kisovi & Otor, 2018). The findings from the above study were from male partners who were involved in family planning, PMTCT and VCT and infant feeding services which are different from the current study which targeted predictors of their involvement during only antenatal and skilled delivery services which most studies have not focused in. Apart from targeting men, the current study also targeted CHVs who work at the community level providing promotive and preventive health services who also interact more with men. In this study they were key informants. The study employed only a quantitative approach while the current study employed the use of both quantitative and qualitative data that gave an in-depth understanding of the socio-demographic factors that influenced male partner involvement in promoting antenatal care and skilled delivery attendance of female partners.

2.2.2 Level of education

A Bangladesh study by Rahman *et al.* (2018), found out that the level of education among male partners was not an important correlate of their involvement in reproductive health programmes. This study targeted couples with the female partner being in the postnatal period employed a questionnaire as the main data collection tool and measured male involvement as accompanying partner and participating in the services that the female partner received. The current study differed from the above one in that, it studied the level of male partner involvement that was measured at three levels; in addition to accompaniment, male partner involved in planning for antenatal care and skilled delivery services and male partner provided necessary support to the female partner access ANC and skilled delivery services. Additionally, the study paid attention to male involvement during the postnatal period, which was different from the

current one that paid special attention to their involvement during the antenatal and skilled delivery period to compare if it would yield different results.

In Namibia, Shiyagaya *et al.* (2016) noted that male partner's level of education was a significant determinant of their involvement in antenatal care and skilled delivery attendance. In Ethiopia, Worku *et al.* (2020), husbands who attended tertiary education were more likely to be involved (AOR=4.47) compared to those who could not read and write. Worku *et al.* (2020) found out that the level of education was not associated with increased male involvement in reproductive health services. Worku *et al.* targeted 806 husbands of pregnant women or had a child of less than one year old, data were collected with the aid of a structured questionnaire. This study focused on individual male partner factors that were associated with their involvement only in birth preparedness and emergency readiness during the delivery period, leaving out the antenatal period.

A study in the Kenyatta national hospital showed that most of the men who were involved during the antenatal and postnatal period of their spouses had secondary and tertiary levels of education (Nungari, 2014). Even though the above studies concurred in their findings, they targeted male partner involvement in PMTCT services which is only one element of services provided to pregnant women during the antenatal care period and delivery their involvement in all packages of services provided during antenatal through to delivery period is equally important. This was achieved by the current study which focused on the predictors that influenced their involvement in promoting antenatal care and skilled delivery services to their female partners.

In Kakamega County, a study that targeted couples and employed both qualitative and quantitative approaches to explore the socio-demographic, cultural and health facility

factors associated with maternal care services during the perinatal period, showed that a majority of the men who participated in the study had attained primary level of education but few of them were involved in these services (Kiptoo *et al.*, 2016). In as much as both studies employed both qualitative and quantitative approaches to achieve the objectives of the studies, the current study targeted men only and determined predictors of their involvement during both perinatal and natal period of their female partner's services, unlike the Kakamega study which concentrated more on factors associated with their involvement during the perinatal period.

2.2.3 Number of children

A study in India established that the number of living children was a predictor of male involvement; the more the number of living children, the lesser the male involvement (Sarvar & Sonavane, 2018). Concurring with the findings in India, in Nepal, Pokharel (2019) revealed that the involvement of male partners in maternal and child health services would increase if the couples were planning for the first child and gradually decreased in consecutive pregnancies. Additionally, in cases where a woman had a complication with the previous pregnancy, involvement of a male partner during the next pregnancy would increase because they already knew the complications related to the pregnancy or childbirth (Pokharel, *ibid*). This study, targeted 100 men of Hindu and Muslim religion different from that of Bumula even though the study did not study religion as a predictor of male partner involvement.

Craymah, Oppong and Tuoyire (2017) in Ghana, revealed that male involvement in antenatal care delivery and postnatal period was influenced by the number of children. The desire by men to have more children made them more involved in the ANC and skilled delivery. This study had a smaller sample size which was difficult to generalise

the findings. It also based its findings on one type of data collection method (quantitative). This was different from the current study which targeted a larger sample size of 373 men and additionally, employed both qualitative and quantitative approaches to its study hence would generalise its findings. In Tanzania, a study on factors influencing male partner involvement in antenatal care services in a low resource setting, targeting married men (841) with a partner who had second and more pregnancies, reported there was no association between numbers of children with the level of male involvement (Gibore *et al.*, 2019). Any man with any number of children would be involved. Another study in Tanzania, investigating the attendance of male partners to different reproductive health services, concluded that having less than two children was associated with male involvement (Kabanga *et al.*, 2019). Men with less than two children were more involved than those with more than two. These studies were conducted in the same country but yielded contradicting findings.

In Kenya, a study involving 222 couples, on male partner involvement in antenatal care services in Mumias East and West Sub-counties, reported that male partners who had 2-4 children were more involved in maternal health services compared to those who had 1-2 and above five children because they had not achieved the desired family size (Kiptoo *et al.*, 2016). These study findings concurred with findings from a study in Njoro town that explored the influence of male partner spouse participation in maternal utilisation of antenatal care services, targeting pregnant women revealed that most participants had three children. This also showed that the mean number of children to the mothers were two. The study in Mumias targeted couples while the one in Njoro targeted women. These studies were different from the current study in that they targeted majorly women and couples while the current one targeted men and CHVs to see if the results remained the same or different. The study in Njoro took place in a

cosmopolitan town while the current one was conducted in a rural set-up similar to the one in Mumias East and West Sub-counties.

2.2.4 Living with the partner

In Nepal, one study indicated that men who lived together with their partners had increased chances of being involved in receiving services together with their partners at ANC (Gill *et al.*, 2017). These findings corroborated from Ghana to assess factors influencing male involvement in antenatal care, involving men whose partners were pregnant or had delivered 12 months prior to the study, demonstrated that living together with a partner during pregnancy increased the likelihood of male involvement in these services (Kumbeni *et al.*, 2019). These study findings further corroborated with studies Malawi and DRC. In as much as the above studies focused on their involvement during the antenatal period leaving out the delivery period which the current study established.

In Kenya, a study in Mumias, Kakamega County, also indicated that male partners' living together with their spouses were two times more likely to influence the male partner to be involved in deciding where his partner would seek ANC services and skilled delivery services (Kiptoo *et al.*, 2016). This study revealed the same results despite the fact that they were geographically different. The same variable was studied in Bumula targeting only men and established whether the result would be different or the same.

2.2.5 Type of Marriage

In Myanmar, Wai, *et al.* (2015), reported that monogamous marriage was a significant predictor of male partners' involvement in maternal health care (ANC, natal and postnatal). Male partners who attended at least one, from a monogamous marriage,

antenatal care increased the likelihood of the female partner using skilled birth attendance (Wicaksono, 2016). These studies showed that type of marriage was a predictor of male partner involvement in antenatal care and skilled delivery attendance. This study also investigated whether type marriage would predict male partner involvement in antenatal care and skilled delivery services.

In Uganda, men in monogamous marriages and those cohabiting were more involved in antenatal care services of their partners as compared to those who were in polygamous marriages (Kariuki & Seruwagi, 2016). In Mombasa County, Kenya, a study on male partner involvement in the choice of the delivery site established that most partners' who were involved were in monogamous marriages (Onchong'a *et al.*, 2015). Similarly, a study in the western region, Kenya on male partner involvement in maternal health services during the perinatal period determined that among the few men who were involved in the prenatal and natal period of their partner's pregnancy, more than three quarters (79.6%) of them were in the monogamous type of marriage (Kiptoo *et al.*, 2016). The current study interviewed men and this provided a true reflection of marriage type as a factor influencing male involvement. Furthermore, it employed the use of both quantitative and qualitative data that gave an in-depth understanding of the type of marriage as a socio-demographic factor influencing male involvement.

2.2.6 Monthly Income

In Nepal, Sharma, Bhuvan and Khatri (2018) stated that when a male partner was the solo income generator, this hindered male involvement in reproductive health services. Furthermore, it was noted that male partners who earned USD 42.80 were more involved than those who earned less than USD 42.80 (Sharma *et al.*, 2018). This study

was purely qualitative with a focus on health workers and teachers, while this study's unit of analysis was male partners with a child of at most 12 months.

In Uganda, it was revealed that high monthly income earnings ($p=0.0342$) had a significant relationship with the involvement of male partners in antenatal care (Kariuki & Seruwagi, 2016). A study in Ghana by Kumbeni *et al.* (2019) in Kassena Nankara Municipality, found out that men's monthly income earning did not influence their involvement. There was no significant difference in male involvement in antenatal care between men who earned less than USD 102.95 and those who earned less than USD 102.95 (Kumbeni *et al.*, 2019). While it was known that monthly income influenced male partner involvement from the studies; Kariuki and Seruwagi (2016) unity analysis was male partner involvement with a pregnant woman or a child of at most two years, Kumbeni *et al.*, (2019) study was only limited to male involvement in ANC, while current study targeted men with a child of less than one year and looked at both male partner involvement during antenatal care and skilled delivery and compared with the above studies to see if results were the same or different

In Kenya, while studying male partner involvement in ANC in Kenyatta National hospital, Nungari (2014) found out that most of the male partners did not accompany their spouses to the clinics because they earned less than Ksh. 30,000. Kiptoo *et al.* (2016) found out that in Mumias West and Mumias East sub-counties, male partners with employment and access to income supported their female partners to attend ANC and skilled delivery. Ongolly and Bukachi (2018) stated that low income among male partners affected male partner involvement in antenatal care and PNC in Butula sub-county. Kenya. Nungari's study only focused on male partners who had accompanied their partners for antenatal care services living out the male partners who do not attend

ANC. Besides, the study was conducted in an urban environment to a national referral hospital hence it had a different setting as compared to this study that had a rural setting. The study in Mumias East and West sub-counties targeted couples while this study targeted only male partners. Ongolly and Bukachi study picked participants who lived within the health facility, which was prone to bias by sidelining the male partners who lived further from the health facility, which this study addressed to avoid potential bias.

2.3 Health Facility Factors Predicting Male Partner Involvement

Findings from a qualitative study in Nepal determined that in rural areas, lack of health facilities during emergency obstetric conditions, forced male partners to travel with their spouses long distances in order to access specialised maternal health services (Pokharel, 2019). According to Yargawa and Leornardi-Bee (2015), in their systematic review and a meta-analysis of literatures in developing countries found that there was no association between health facility factors with male partner involvement in maternal health services from the reviewed countries. In Bangladesh, Bishwaijit *et al.* (2017) in their study on factors associated with male involvement in reproductive health service, using demographic and health survey data and targeted 1196 married men, which assessed knowledge awareness and practice regarding reproductive health, revealed that women had to wait for a long time before receiving ANC and delivery services due to cumbersome procedures at the health facility. This further resulted in negative male partner perceptions of the services in health facilities.

These studies showed that male partner involvement in antenatal care and skilled delivery was influenced by health facility factors. The majority of the men were left out in the care and support of their pregnant wives because they were unable to meet transportation expenses for their partners and themselves to the clinics. It was also

observed by another qualitative study in Nepal on factors influencing male participation in reproductive health services, that lack of information and dominance of clinics with female health workers were factors that hindered male partner involvement (Sharma *et al.*, 2018). The studies from Nepal adopted only a qualitative approach in accomplishing the study objectives. These were different from the current study that used both qualitative and quantitative data to investigate predictors. Findings from the above studies also relied on information from secondary data sources which was different from the current study that relied on information from the men and CHVs themselves to see if the study yielded the same or different results.

In Ghana, a quantitative study on male involvement in maternal healthcare, involving 100 male partners, determined that 80% of them lived within a 5 kilometres radius to the nearest health facility but only 35% were involved in antenatal care services of their partners (Craymah, *et al.*, 2017). According to Kariuki and Seruwagi, (2016), in Uganda, in their study on determinants of male partner involvement in antenatal care, the study targeted 384 men and used qualitative and quantitative methods in collecting data, concluded that health-worker attitude, waiting for time and cost of antenatal services influenced male involvement in antenatal care services of their spouses. It was also noted by Nasene *et al.*, (2016) in South Africa that in their qualitative study titled male partner's views of involvement in maternal healthcare services established that health workers were unwelcoming, intimidating and unsupportive towards not only the pregnant women but also their partners who accompanied them for services. In Tanzania, Gibore *et al.*, (2019) noted that the long waiting time experienced by women attending ANC services were associated with low male involvement in maternal care.

In Kenya, Kenyatta National Hospital, Nungari (2014) found out that some men felt health providers were few to handle the huge numbers, hence were overworked; the presence of the male partners in the clinics would burden them further thus experiencing burnout. Nyandieka *et al.* (2016) noted that male involvement in antenatal care services was hampered by long waiting times. In Kakamega County, most health facilities had few healthcare workers and that they were overworked that led to burnout when male partners were involved in maternal health services (Kiptoo *et al.*, 2016). Besides, Kiptoo *et al.* (2016) found out that most male partners preferred their women to access TBAs services from ANCs due to inadequate transport for them, their partners and other family members to get to the health facilities which were located far away from their homes. Even though men were aware of the benefits of their involvement in maternal health services, poor attitude from the healthcare workers and unfriendly antenatal care services hindered their involvement in Njoro, Kenya (Rotich, Aura-Odhiambo & Muthoka, 2019). Expenses incurred at antenatal care and PNC clinics were predictors that influenced male involvement in promoting antenatal care and skilled delivery services in Butula, Kenya (Ongolly and Bukachi, 2019).

While it was made clear by these studies that health facility factors influenced male partner involvement in ANC and skilled delivery, the setting of most of these studies were in urban settings. Besides, most of these studies focused on male partners who visited the facilities with a female partner, excluding those male partners who failed to visit health facilities, a group which this study investigated. Additionally, most of them were conducted in urban settings and findings were compared to see if they yielded different results.

2.4 Summary of Literature Review and Knowledge Gap

From the above-outlined literature, it was clear that involving male partners in various aspects of reproductive health led to increased uptake of contraception, prevention of mother to child transmission (PMTCT) and treatment of sexually transmitted infections but this study would want to investigate predictors of male partner involvement in promoting antenatal care and skilled delivery attendance. Most of the available information regarding male partners involved in promoting antenatal care and skilled delivery is related to HIV testing, family planning and STI management. More research is needed regarding ways to involve men in the other services offered at the antenatal clinic and maternity. There is information on socio-demographic characteristics of few male partners that were involved in reproductive health services especially in family planning, HIV services and STI management, however, the findings on the level and socio-demographic characteristics cannot be generalised since regions vary differently.

The level of participation during the antenatal period and delivery and factors that predict their involvement in this region were not clearly known in Bumula. Further, the qualitative survey on male involvement in family planning and reproductive health services in 2014, only identified HIV testing and long waiting time to family planning services as factors that discouraged men from being involved in accompanying their wives to clinics. There is no national survey however that has been done to indicate the level of male involvement in antenatal and skilled delivery services and what predicts their involvement. Most of the studies did not indicate the extent of male partner involvement if so did, it cannot be generalised for Bumula Sub- County.

Most studies that were done initially, have targeted couples, women, health-workers and other groups with few targeting men. Lastly, the majority of the studies adopted

quantitative approaches which were different from the current study that adopted both qualitative and quantitative approaches. There was a paucity of literature regarding the male partner's involvement in maternal health programs in Bungoma County. Furthermore, most of the previous studies reviewed had varying methodologies and recommended further research, some studies produced contradictory and inconclusive results creating a gap for further research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Area

This study was conducted in Bumula Sub County located in Bungoma County, in western Kenya. It is the second-largest sub-county after Tongaren. It borders Kanduyi to the North, Kabuchai to the East, Sirisia to the South and Busia County to the West. It has 7 administrative wards, 10 locations and 24 sub-locations (KNBS, 2019). The sub-county covers about 248.70 Km² with a population of approximately 229,379 persons (KNBS, 2019). The area is inhabited predominantly by the Bukusu, a sub-tribe of the Luhya, who practice subsistence farming and non-farming activities such as petty trade (KNBS, 2019). Bungoma has maternal, newborn and child health activities led by the national government and county government of Bungoma and supported by the non-governmental organisation like AMPATH-PLUS, Save the Children and MANI Project Kenya at both the community and MoH facilities. Bumula was chosen because it recorded the lowest proportion of women receiving fourth antenatal care and skilled delivery services in the county.

There are 12 public health facilities and 2 Faith-Based facilities (level 2 = 10, level 3 = 3, and level 4 = 1) serving 44 community units (CUs) with 440 community health volunteers (CHVs) (MoH Bungoma) where promotive activities concerning antenatal care and skilled delivery services are provided. Each of the CU is attached to a particular health facility. All activities performed by CHVs are supervised by Community Health Extension Workers who respectively report to the medical officer in charge of the sub-county.

3.2 Study Design

A cross-sectional research design was used. The design employed both quantitative and qualitative approaches. Data was collected at a single point in time to examine the relationship between the variables of interest. In this study, data on both the independent variables (level of male involvement, socio-demographic predictors and health facility factors) and the dependent variable (male partner involvement in promoting antenatal care and skilled delivery) were collected.

3.3 Study Population

The study population comprised two groups: male partners and community health volunteers. Additionally, the research conducted direct observation in five health facilities. Community health volunteers were key informants for this study. This study population was drawn from Bumula sub-county in Bungoma County, Kenya.

3.3.1 Inclusion and Exclusion Criteria

Inclusion Criteria

Married men who had a younger child of 12 months and below (to avoid recall bias) and consented to participate were included in the study. Additionally, community health volunteers (CHVs) chair-persons of randomly selected CUs, with at least one year of working experience at the community level were included. The CHVs do promotive and preventive activities at the community level where the majority of the men are as compared to health workers at the facility level who interact with fewer men who visit health facilities.

Exclusion Criteria

Male partners below 18 years of age were not included in the study since they had not attained the Kenyan legal age of consent, single men who had children of 12 months

and below, male partners with children of more than 12 months of age, men who were mentally unstable with a child of 12 months and below and Community health volunteers (CHVs) who had a working experience of less than one year at the community level and were not chair-persons of CUs were excluded.

3.5 Study Variables

3.5.1 Dependent Variables

The dependent variable was male partner involvement in promoting antenatal care and skilled delivery attendance. Male partner involvement was measured at three levels: male partner involved in planning for antenatal care and skilled delivery services, accompanying partner to the health facility for antenatal care and or skilled delivery attendance services and provision of necessary support to his partner to access antenatal care and delivery services. This was measured based on whether the male partner was involved in planning for the pregnancy with his partner and involved in decision making where the partner attended antenatal care/skilled delivery, accompanied his partner for antenatal care/ skilled delivery services and finally provided the necessary support to the partner to access the antenatal care and skilled delivery services.

3.5.2 Independent Variables

The independent variables included socio-demographic predictors which were: age, level of education, type of marriage, number of children, living with a partner and monthly income. Age was categorized into two (< 35, > 35 years), while monthly income after data collection was categorized into two according to KNBS (2017) (below Kes 24,000 and Kes 24,000 and above). Additionally, health facility predictors were also included. They were measured based on: distance to the nearest health facility (five-kilometre radius), taken before receiving antenatal and or skilled delivery, service

paid for, availability of antenatal care and or skilled delivery services at all times, accessibility antenatal care and or skilled delivery services at all times, enough seats for male and female partners, number of health workers at antenatal care and maternity.

3.6 Sampling Design

3.6.1 Sampling Strategy

Multistage sampling was employed. Bumula sub-county was purposively sampled. The eight administrative locations in the Bumula sub-county were selected using the census method. A systematic sampling technique was employed to sample 12 sub-locations and the sample size was proportionately apportioned for each of the selected sub-location. Simple random sampling was employed to pick male partners who met the criteria until the desired sample size for each of the selected sub-location was achieved. Participants who consented to participate were given a questionnaire to fill with the assistance of trained research assistants where necessary.

Male partners for Focused Group Discussions (FGDs) were selected from the married men having a child of less than or equal to 12 months. They were identified by sub-chiefs of the sampled sub-locations. Two members were selected from the other 11 sub-locations. A total of 22 male partners formed 2 groups of 11 participants each. It was considered to check whether the agreement level between the groups were similar or alternative that warranted the third FGD. However the outcomes were similar hence maintained the two groups. Out of the 22 members forming the two FGDs, 68.6% were male partners below 35 years. Key Informant Interviews were also conducted for CHVs. Chairpersons of community units were randomly picked during a community dialogue day and interviews were scheduled. A total of seven CHVs were interviewed. Lastly, direct observation was made in five randomly selected health facilities within

Bumula sub-county. The variables that were observed were the opening and closing times of the antenatal care clinics and maternity wards, the number of health workers at the service delivery points, service charter, space at the waiting bay and consultation rooms and availability of men at antenatal care and maternity departments.

3.7 Sample Size Determination

Cochran formula was used in calculating sample size (Singh & Masuku, 2014) with an attrition rate of 10% since the sample size was less than 10,000, it was adjusted using the finite population correction for proportions based on the populations. In addition, an a priori power analysis, using the software application G*Power 3.1 for Windows (Faul, Erdfelder, Buchner, & Lang, 2009), demonstrated that a sample size of 398 was sufficient in order to discover significant effect sizes. This formula was chosen because it permits the researcher to adjust the formula to a population of less than 10,000 accordingly. The number of households with a child of 12 months and below was 9525 (CHRIO, Bungoma county, 2016)

$$n_o = \frac{z^2 pq}{e^2}$$

$$n_o = \frac{(1.96^2)(0.5)(0.5)}{0.05^2}$$

$$n_o = 384 + (10\% \text{ attrition}) = 422$$

Since the sample size was less than 10,000 it was adjusted using the finite population correction formulae

Finite Population Correction For Proportions

$$n = \frac{n_o}{1 + \frac{(n_o-1)}{N}}$$

$$n = \frac{422}{1 + \frac{(422-1)}{9525}} = 398,$$

$Z=1.96$, $p=0.5$ (for maximum variability), $e=0.05$ (5% margin of error), n_0 =estimate population sample, N =actual population, n =desired sample size.

The estimated sample was then proportionally calculated from each ward based on the representative samples found from the formulae above. The summary of proportional calculation is shown in Table 3.1.

Table 3.1: The sampled villages

Location	Sub-location	Village sampled	No of Household	No. of Household sampled	Sample size
Siboti	Musakasa	Murumba	193	8	22
		Mupeli	188	7	
		Sitabicha	184	7	
		Namateleme B	116	4	
South Bukusu	Lumboka	Kimatuni	160	6	33
		Kaya East	120	5	
		Tabuti A	122	5	
	Muanda	Nabikoto A	210	8	
		Naika	120	5	
		Naluende	125	5	
		Namatotoa	Sihendu	158	
Khasoko	Khasoko	Khelela	148	6	30
		Khayo A2	168	7	
		Khayo A1	169	7	
		Namanze B	125	5	
		Simichi A	230	9	
Kabula	Kabula	Malinda A	230	9	25
		Kabula market	180	7	
		Napara	170	7	
Napara	Khasolo	Namawanga	137	5	18
		Masielo	148	6	
		Myanga a	125	6	
Kimaeti	Syombe	Tulukunyi B	117	5	29
		Lelekwe B	115	5	
		Malinda	160	6	
Kibuke	Kibuke	Weyeta	156	6	18
		Kimwanga market	150	6	
Bumula	Bumula	Namwini	723	30	105
		Syekumulo	1100	45	
		Sifuniiame	890	37	
Mabusi	Mabusi	Matili	900	37	100

		Namaika	770	32	
		Namwenge	900	37	
		Netima	170	7	
Mukwa	Kisawayi	Bosio B	145	6	18
		Kisawayi B	122	5	
Total	12	36			398

After proportionally calculating the numbers in each location the final representative sample was 398. In order to enhance the validity and reliability of the study findings, the investigator also conducted two FGD for men, consisted of 11 members each (2x11=22), seven KII for CHVs and field direct observations in 5 randomly selected health facilities because the facilities were providing antenatal care and skilled delivery services.

Table 3.2: Total study population per each target group

Target population	Sample size	Data collection tool
Men	366	Questionnaire and FGD guide
CHVs	7	Key Informant Interview guide
Health Facilities	5	Observation checklist
TOTAL	378	

3.8 Data and Information Collection

3.8.1 Procedure Data

Before data collection, the researcher recruited and trained six research assistants (one for two sub-location) for two days to assist in the administration of the questionnaires, data collection and FGD interviews. The research assistants were Diploma holders in Community Health. They were chosen because they had covered research in their course and were therefore easy to train. The training covered communication skills, data collection procedures, how to obtain informed consent and ethics in research.

The quantitative data were collected using semi-structured questionnaires. The participants explained the purpose of the study and asked for their consent before the commencement of filling the questionnaires. All the participants who consented were

issued with a pretested self-administered questionnaire. The questionnaires were serialized starting with one (1) and a household was assigned to one serial number. Male respondents were a total of 398(100%) to whom questionnaires were administered. The questionnaires were checked for completeness and when they were not complete, corrections were done before the respondents were released. Each research assistant handed in their filled questionnaires to the researcher at the end of each day for cleaning and storage. The return rate was 344(86.4%) which were completely filled. According to Kothari (1993), over 60% returns rate was acceptable for a study such as this one. The hard copies were kept under key and lock while the electronic data was stored both in the flash disk and computer secured with a password only accessible to the principal investigator.

There were 7 key informants selected (4 male and 3 female). The key informant interviews were scheduled about a week before the material day. The interviews were carried out in a closed room to enhance privacy and silence and lasted for about thirty minutes. The interview was interested in the opinions of CHVs on the level of male partner involvement in promoting antenatal care and skilled delivery attendance, challenges men face during involvement and ways to be applied to enhance their involvement. The principal investigator facilitated the interviews. The audio proceedings were recorded and backup notes were taken.

Two Focus Group discussions were conducted for men. Before the meeting schedule, the invitation was done two weeks in advance and the participants were reminded two days to the material day. These participants were randomly picked from the other 11 sub-locations that were not involved in the quantitative study. This population had no prior information of the study. The FGDs were carried out from one of the health

facilities that was centrally placed, in an open space with adequate privacy, that adhered to coronavirus pandemic Ministry of Health regulations. The participants were positioned to sit in a C shape with the principal investigator (moderator) and the 2 research assistants seated at the front.

Before the starting of the FGD session, the participants were asked to introduce themselves. The research assistants and principal investigators then introduced themselves. The purpose of the study was explained to the participants and they were further informed that involvement in the discussion was voluntary with no victimization. All the participants gave verbal consent and the discussions began. Participants were encouraged to discuss freely as the research assistants took notes and tape recordings of the discussions. Photos of the session were also taken by the principal investigator. The discussion took 50 minutes each.

3.8.2 Data Collection Instruments

The principal investigator developed and used a self-administered questionnaire to collect quantitative data on the predictors of male partner involvement in promoting antenatal care and skilled delivery services. The questionnaire had both open-ended and closed-ended questions which were divided into three parts: socio-demographic, level of male involvement and health facility factors influencing male involvement. Also, an observation checklist was used to collect quantitative data.

An observation checklist was designed to capture what was observed on male partners involvement while visiting selected health facilities. The variables that were observed included; opening and closing time of the MCH and maternity departments, service charters with male-friendly services on them, service area (adequate sitting space for men and enough space that accommodated the men with their partners and the service

provider), men at clinics accompanying/ receiving services together with their partners at antenatal care/maternity departments and the number of health workers at antenatal care clinics and maternity wards.

Qualitative data was collected by three sets of data collection tools namely; FGD interview guides and KII guides. Pre-tested interview guides of questions that guided the FGD and the interviews were facilitated by the principal investigator and trained research assistants who were well versed with the native language. The principal investigator served as the moderator. The principal investigator and research assistants introduced themselves and asked the participants to do the same. The principal investigator explained the purpose of the study including; benefits, risks involved, confidentiality, willingness to participate and whom to contact when the need arose.

The interview guide was composed of open-ended questions, this gave the researcher a detailed understanding of issues under study and information that could not be directly observed. In-depth interviews were conducted on seven chairpersons of the CHV from community units, drawn from all the 7 administrative wards of the Bumula sub-county. The CHVs were purposively included in this study because they work at the community level and interact with men while discharging their duties, they were well placed in understanding the variables under study. Four of them were female and 3 were male, their ages ranged between 26- 46 years. All the interviews were tape-recorded and notes were taken by the principal investigator to supplement the recordings.

3.8.3 Pre-test

Pretesting of the data collection tools was carried out in Watoya Sub-location of Kabula ward, Bumula sub-county, Bungoma County in Kenya. The sub-location involved in the pretesting of the tool was not included in the actual study. The pre-test involved 40

participants who met the criteria. Questionnaires were administered to 40 participants alongside FGD of 6 members and 3 CHVs for KII.

3.8.4 Reliability

The study was carried out after a pilot study had been carried out on a population with similar characteristics. The results were used to edit inappropriate questions, gauge the reaction of respondents to questions in the study for necessary corrections. Reliability was done by use of split half test where participants were divided into two sets, one set given odd-numbered questionnaires and another one given even-numbered questionnaires and the responses were compared. Using Pearson's correlation coefficient (R), this was scored and the study was found to be reliable at 0.8.

3.8.5 Validity

Validity is the accuracy and meaningful of inferences that are based on the research results (Mugenda and Mugenda, 2003). To determine the content validity of the items, a team of experts reviewed the tools to establish the relevance of the variables in the questionnaires. The questionnaires and other tools were pre-tested before actual data collection. Content validity was also ensured through cross-checking with the supervisors. The researcher used content validity to measure all possible items that measured the concept.

3.9 Data Analysis

Quantitative data were analysed with the aid of Statistical Package for Social Sciences (SPSS) Version 25. Male partner involvement in promoting antenatal care and skilled delivery was a transformation of planning, accompaniment and support into one variable. Male involvement responses were, therefore, scored where 1 score was awarded to involved and 2 scores were awarded to not involved. Descriptive data were

presented using tables and charts. A bivariate analysis was performed to obtain Odds Ratios that established whether there was an association between the variables at a p-value ≤ 0.05 statistical level of significance.

The qualitative data were tape-recorded, transcribed and analysed for content analysis with similar categories and grouped manually into themes relating to male partner involvement in promoting ANC and skilled delivery attendance. Results were presented as direct quotes from participants or as narrations. These results were finally triangulated with the quantitative data.

Table 3.3: Summary of statistical techniques

Specific objective	Variables	Statistics	Statistical tool
Objective 1: Level of the male partner's involvement	Male partner involved in: <ul style="list-style-type: none"> - Planning for ANC/SD services; - Accompanying partner and; - Providing necessary support to the partner to access services 	Descriptive (Frequencies, percentages and means) Verbatim	SPSS v25
Objective 2: Socio-demographic factors	Age, level of education, type of marriage, number of children, income per month and living together with a partner	<ul style="list-style-type: none"> - Descriptive (Frequencies and percentages) - Inferential (Odds Ratio and Chi Square) - Verbatim 	SPSS v25
Objective 3: Health facility factors	<ul style="list-style-type: none"> - Distance - Time taken - Payment for services - Availability; - Accessibility; and - No. of health- workers; 	<ul style="list-style-type: none"> - Descriptive (Frequencies and percentages) - Inferential (Odds Ratio and Chi Square) - Verbatim 	SPSS v25

3.10 Logistical and Ethical Considerations

The researcher sought permission from the School of Public Health, Biomedical Sciences and Technology, Institutional Research and Ethical Committee (IREC) at Masinde Muliro University of Science and Technology and a research permit from the National Council of Science, Technology and Innovation (NACOSTI). The researcher further sought permission from the Bungoma County Commissioner, County director of education and MOH before carrying out the study. Before data collection, permission was further sought from MOH Bumula, chiefs, sub-chiefs of sampled Sub- locations and health facility in-charges of the few sampled facilities. The researcher ensured the confidentiality of individual participants was protected by concealing their names and other personal details. Encryption of data was done on all electronic devices used to store recorded audio from Key Informant Interviews and Focus Group Discussions. Access to encrypted data required a password.

Beneficence ensured that participants were protected physically, psychologically, economically and socially. With it, no vulnerable populations were used in the study and respondents were told to quit when they were uncomfortable, and arrange interviews whenever possible. Respect for persons was observed where the researcher explained the purpose of the study and obtained consent for the participants. The participants were treated as autonomous beings, appointments were kept, and the researcher was flexible and provided the option to participants to withdraw at any time during the study without being discriminated against. In this study, informed consent was obtained in writing after explaining the purpose of the study to the participants and respondents.

Confidentiality on data safeguard and personal information collected during the study were made inaccessible to nonparticipation groups. The right of participants to confidentiality was respected by not using individually identifiable information in the process of sharing the results of the study with persons outside the research team or even during report writing.

CHAPTER FOUR

RESULTS

4.1 Socio-demographic Characteristics of the Respondents

The results in Table 4.1 showed that the participants aged below 35 years were the majority (74.1%). According to African Institute for Development Policy (AFIDEP) (2018), Kenya youthful age was categorised as from 18 – 34 years. This also connotes the period when fertility is at the peak hence the demand for reproductive health services. The majority of the participants (98.3%) had acquired formal education. Also, the study revealed that all respondents were married with most of them (87.8%) being in monogamous marriages. A majority of male partners had more than one child (66.6%). Most male partners (97.1%) had a monthly income in the low category (below KES. 24, 000). Lastly, most male partners (92.4%) were living together with their partners.

Table 4.1: Socio-demographic characteristics (predictors) of the respondents

Socio-demographic factors	Frequency (n)	Percent (%)
Age		
< 35	255	74.1
≥ 35	89	25.9
Education		
Formal	338	98.3
Informal	6	1.7
Type of marriage		
Monogamous	302	87.8
Polygamous	42	12.2
Number of children		
1	115	33.4
> 1	229	66.6
Monthly income (KES)		
< 24,000	334	97.1
≥ 24,000	10	2.9
Living in partner	0	
Yes	318	92.4
No	26	7.6

Data was presented proportions (%) of respondents; n, 344

4.2 Level of Male Partner Involvement

The results illustrated in Figure 4.1, shows the level of male partner involvement in promoting antenatal care and skilled delivery attendance. The three levels (planning, accompaniment and support) were collapsed and measured as one variable: male partner involvement. The researcher calculated the mean of the three variables. From which the variables that had 1 to 1.4 were considered involved and given code 1 while 1.5 to 2 were considered uninvolved and given code 2. The findings showed that only 18% of the male partners in Bumula Sub-County of Bungoma County were involved in promoting antenatal care and skilled delivery attendance.

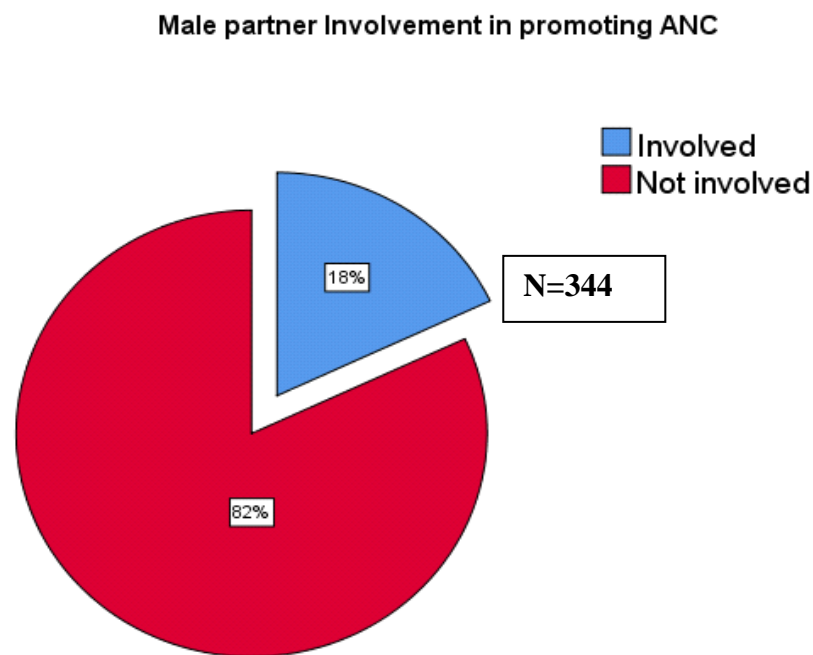


Figure 4.1: Male partner involvement

4.2.1 Key informant and Focus Group Discussion

Some of the Key informant and FGD participants' responses were in agreement with this finding. A majority of the Key Informants 85.7% (six out of seven) reported a low level of male partner involvement as illustrated below:

... Male partner involvement in antenatal care services of their female partners is very poor but slightly better during the delivery period.

... since male partner involvement is low, during our household visits, we normally remind and encourage men on the need for their involvement in care and support of their pregnant partners but most of them are reluctant and others are busy with their daily working schedules.

Equally, 77% of the male partners in FGD reported that there was a general low male partner involvement in antenatal and skilled delivery services. They added that men were usually involved in providing support at the household level in cases where the women are unable to support themselves as summarized by the following quote:

...men in this community rarely involve themselves in pregnancy and childbirth activities. They are restricted by the culture which does not permit them to be actively involved in issues to do with pregnancy and child-birth

4.2.2 Planning, Accompaniment and Support

The results in Table 4.2 shows a different level of male involvement and extent of involvement. It was established in the study that only 16.9% of the male partners were involved in planning for antenatal care and skilled delivery service. Accompaniment was the second main contributor to 18 per cent of male partner involvement where it was represented by 54.1%. Support provided by the male contributed 96.5% of involvement in antenatal care and skilled delivery services. The support provision was further distributed as follows: 26.5% provided support through monitoring nutritional requirements of their partners, 23.8% supported household chores, 20.3% supported with birth preparedness, 19.1% provided financial support and 6.8% provided psychosocial support.

Table 4.2: Level of male partner involvement

Level of male involvement	Frequency (n)	Per cent (%)
Planned for ANC with the partner(where &when)		
Yes	58	16.9
No	286	83.1
Accompanied the partner to the clinic for services		
Yes	186	54.1
No	158	45.9
Supported the partner		
Household chores	82	23.8
Psychosocial	23	6.8
Birth preparedness	70	20.3
Monitoring nutritional requirements	91	26.5
Financial	66	19.1
No support	12	3.5

[Results presented in proportion (%); n, 344]

The findings in table 4.2 were in agreement with the discussions with men during FGD.

It was ascertained by 36% of the FGD participants that it was common for men to plan together with their partners as explained in the following quotes;

... It was my first child and thus it was important for me to be part of the planning process. Naturally, it is a woman's responsibility but I had to invest my time in her pregnancy.

... My wife was sickly before I realised that she was expectant. This made me ask her to attend clinics to diagnose her condition.

... My wife had only one child and that was not enough according to our family plan. We tried to get another. So it was of utmost importance for her and me to plan together and attend clinics to procure guidance on our future possibilities of the unforeseen child.

The 64% of the men who had a different opinion regarding planning, explained that planning was uncommon because most male partners assumed that once the women realised, they were expectant or they were experiencing labour pains they knew what should happen next. According to them, this did not require their involvement.

... My wife avoided sharing any information regarding pregnancy or pregnancy-related conditions. She seldom told me about her hospital visits and the purposes that drove her to the clinic.

... Women know about their welfare – health-wise or otherwise – therefore, as the man in the house I have nothing to offer. She is the professional one in the house with a wealth of knowledge in maternal issues.

According to the Key Informants, the current birth plan emphasises planning for delivery leaving out planning for antenatal care services. According to most of them 71% (five out of seven), this could be contributing to inadequate involvement as mentioned by one Key informant:

...We usually sensitise men to be involved in planning for skilled delivery. There is little emphasis on planning for ANC services. I feel we should have a plan for antenatal care services.

According to the FGD forum, about accompaniment, 45.5% of male partners accompanied their partners to ANC/ skilled delivery. However, this was contradicted with the findings in Table 4.2 which indicated 54.1% accompaniment.

Reasons for accompanying included:

...My partner was very weak and sickly during her last pregnancy. It was my role as her husband to accompany her to the clinic and even explain to the health worker how my wife felt. Leaving her alone to get to the clinic could be dangerous.

...I accompanied her once because the nurse had advised her to do so during her next visit. She had complications that could not be handled in Siboti. So I was invited to be explained to.

...She developed labour pains before her delivery time, I had to seek help immediately from the hospital.

...These days the government has really helped us! It's doing everything, even buying few items for the baby. We are now focusing on other things; nothing is left for us to be involved!

Conversely, 55. % (12/22) of male partners in the FGD did not accompany their female partners and the following number of reasons.

Reasons for not accompanying:

... I didn't accompany her because I didn't know it was a requirement and after all our culture does not permit us. However, my brother's wife accompanied her for delivery.

... Most men in this community don't accompany their wives for clinic services, but few do for deliveries especially when their mothers and co-wives are not around. The delivery period is dangerous. They have to accompany them because in case anything bad happens they don't get blamed. The delivery period is not a joke! Women undergo difficulties and need to be supported properly.

... To my knowledge, pregnancy is not a disease! I didn't see why she needed to be accompanied. I left her to go alone while I went to work. During delivery, our CHV escorted her to the hospital. I followed her later after she has delivered.

... It's better to speak the truth here, some of us are guilty of not accompanying the partners to the health facility for ANC or delivery services because of previous negative events that we encountered.

The reasons for accompanying or not accompanying female partners for services also were in line with the reasons articulated by Key Informants who explained that:

... As CHVs, we refer men with their partners for ANC services to the nearest health facilities. Some of those who accompany their partners, come back complaining that they were left unattended to, so they never see need to be there hence they won't accompany their partners during the next visit.

... Sometimes back we used to have men to men support groups in each sub-location where men were given education on their roles during the pregnancy period of their partners. During that time, men accompanied their partners for services, but since the NGO that supported the program left, the support groups just died. Very few men nowadays accompany their partners.

... Some men have left their responsibilities to us CHVs especially when their partners have pregnancy-related complications. We refer them to the health facilities without their presence.

Additionally, findings from FGDs on other support male partners provided to their female partners to ensure they sought ANC and skilled delivery services corroborated with findings in Table 4.2 as presented herein:

Financial support

...When my wife told me, she was going to the hospital for the ANC clinic, I provided her with money for transport.

... I bought items for delivery and saved some money to spend during the delivery time in case of emergency.

... I bought medicines that were prescribed for her use and also paid for an x-ray that the doctor had advised her to do.

... I hired a house help to assist her during her last pregnancy. She once lost a pregnancy because of overworking. I had to be careful this time around.

Physical and psychological support:

... During the last pregnancy of my wife, I requested my sister to assist her with household chores because I was always out.

... For me, I was always out by 5 Am. When I returned in the evening, I ensured I had carried enough food and fruits for her.

... My wife was sickly and weak during her last pregnancy, I also kept on encouraging her that all will be well.

... Malaria disturbed her, I ensured that she slept under a mosquito net, took her medicines as advised at the clinic and I ensured she got to the clinic when the dates were due.

4.2.3 Direct observation on levels of male partner involvement

Furthermore, some of the findings from the direct observation made in the visited health facilities also were in agreement with findings in table 4.2 in all the seven facilities that were visited, few male partners were observed accompanying their partners for antenatal care services; however, they kept themselves away from the clinic environment. A few of them were seated under shades waiting for their partners as they received services. Others were found at the postnatal unit visiting their partners post-delivery while others were waiting from outside while their partners received services in labour wards.

The study also established that the majority (82%) of male partners were not involved in promoting antenatal care and skilled delivery service. Even though it was not within the scope of the study, it was prudent to find out the reasons that contributed to their lack of involvement. The study established that cultural restrictions contributed 43.3% of the male non-involvement in antenatal care and skilled delivery services. Also, there were other intrinsic contributors to the non-involvement of male partners in antenatal care and skilled delivery attendance and were: the lack of awareness (24.4%), other family members taking up the role of the male partner (16.3%), inherent perception (11.6%), peer influence (2.3%) and partners living away from home (2%). This reason stood out in the study that was worth mentioning to understand areas that need addressing to improve on male partner involvement in antenatal care and skilled delivery attendance. The results were illustrated in Table 4.3.

Table 4.3: Reasons for the non-involvement

Reason	Per cent (%)
Cultural restrictions	43.3
Living away from home	2.1
Other family members taking up the male partners' roles	16.3
Inherent perception	11.6
Peer influence	2.3
Not aware I should be involved in ANC and delivery	24.4

The results were presented proportions (%); n, 344

4.2.4 Opinions of male partner involvement

Male partner involvement is the epitome of safe motherhood globally. While this is known, about 68% of male partners who participated in this study noted that there had not been adequately involved in antenatal care and skilled delivery services of their female partners. However, a majority 86% of male partners agreed that adequate involvement would increase the uptake of the said services by their female counterparts as described in Table 4.4.

Table 4.4 Male partners' opinions on the level of male partner involvement

Question	Yes	No
Were you adequately involved in your partner's last pregnancy to ensure that she utilized all ANC and delivery services she required for her?	32%	68%
In your own opinion, do you think adequate male partner involvement in maternal services can promote the utilization of ANC and skilled delivery services by their partners?	86%	14%

Data was presented in proportions (%) of the participants; n, 344

4.2.5 Increase of level of male involvement

According to Table 4.4, the study findings above established that there was low (32%) male partner involvement in promoting antenatal care and skilled delivery attendance in the Bumula sub-county. It further established from male participants and Key informants what needed to increase the level of male partners' involvement in order to promote antenatal care and skilled delivery services of the female partners. Responses were themes as shown below:

Increase public awareness on the need for male involvement;

... MOH should conduct public awareness with targeted information for men, to reinforce and emphasize the importance of male partner involvement ANC and delivery period.

...What makes us not accompany our partners to the clinic is that the health care workers don't insist that we should accompany them. Hence, it's not a big issue to bother ourselves to get to the clinic. If they want us to be involved, let them emphasize this in a manner that can be taken seriously.

...I suggest that during chief baraza's day besides discussing issues of that day, we should have a specialist to keep reminding men on the importance of male involvement.

Even if we accompanied our spouses, we cannot do it all the time, it will be better to be told at what level are we supposed to accompany them.

Change of male mindset on the need to be involved;

...It's high time for us men to be serious on this matter and get involved as required. There is no excuse for our pregnant women not attending ANC clinics as required because of us, the services are here with us, let's use them.

...Let the truth be said, some of us are reluctant to get to the clinic with our partners because of previous negative experiences... not all that happened previously is happening now.

Disregard negative cultural beliefs on male partner involvement in maternal health services;

...It's difficult to change what people are used to be doing, but slowly with frequent reminders, they can disregard these negative cultural practices.

...Presently, our culture is fading, people don't nowadays strictly follow what the culture dictates, though there are those few who cannot be involved in activities concerning women and pregnancy.

Similar suggestions were also shared by most Key informants. However, one key informant had this different suggestion:

...There is no uniformity in the manner in which male partner involvement in maternal health services is advocated for and implemented. We work at the community level, implement what we have been directed to do. For us, it was an NGO's program, now that the NGO's contract came to an end, the program also died. The MOH didn't continue with what the NGO initiated, there should be uniformity in the manner in which the MOH and partners work to avoid confusion.

4.3 Socio-demographic factors influencing male partner involvement

The social-demographic factors in Table 4.5 were examined further to establish whether these predictors were independent of male partner involvement in promoting ANC and skilled delivery attendance. The study utilized the Odds Ratio test for inferential statistics at the 0.05 significance level. The results of bivariate analysis on the association between socio-demographic predictors and male partners' involvement.

Monthly income and living together with a partner were statistically significantly associated with male partner involvement in promoting ANC and skilled delivery services. Age, education, type of marriage and number of children were statistically insignificantly associated. This is according to the computed Odds Ratio for each variable as shown; Age (OR: **1.39**; 95% CI 0.72 - 2.71; $p = 0.33$), education level (OR: 0.43; 95% CI; 0.08 - 2.41; $p = 0.33$), type of marriage (OR: 0.57; 95% CI; 0.27 - 1.21; $p = 0.14$), number of children, (OR: **1.57**; 95% CI; 0.89 - 2.75; $p = 0.12$), monthly income (OR: 0.21; CI 95% 0.06 - 0.73; $p = \mathbf{0.008}$) and living together with partner (OR: 0.31.13 - 0.73; CI 95% 0.13 - 0.73; $p = \mathbf{0.005}$). The study found out that monthly income and living with partner were statistically significant predictors of male partner involvement. The null hypothesis was therefore rejected. Moreover, monthly income and living with partner were 0.79 and 0.69 times less likely to influence male partner involvement in antenatal care and skilled delivery services respectively.

It was established that age, education level, type of marriage and number of children were statistically insignificant predictors of male partner involvement in antenatal and skilled delivery services. Therefore, the researcher failed to reject the null hypothesis. However, the age of the male partners and number of children were 1.39 and 1.57 times more likely to be involved. In Addition, education status, type of marriage, monthly income and living with a partner were 0.57 and 0.43 times less likely to be involved.

Table 4.5: Socio-demographic factors predicting male partner involvement

Socio-demographic factors	Male partner involvement		OR	95% CI	P-value
	Involved	Not involved			
Age					
< 35	49 (19.2%)	206 (80.8%)	1.39	0.72 - 2.71	0.33
≥ 35	13 (14.6%)	76 (85.4%)			
Education					
Formal	60 (17.8%)	278 (82.2%)	0.43	0.08 - 2.41	0.33
Informal	2 (33.3%)	4 (66.7%)			
Type of marriage					
Monogamous	51 (16.9%)	251 (83.1%)	0.57	0.27 - 1.21	0.14
Polygamous	11 (26.2%)	31 (73.8%)			
Number of children					
1	26 (22.6%)	89 (77.4%)	1.57	0.89 - 2.75	0.12
> 1	36 (15.7%)	193 (84.3%)			
Monthly income (KES)					
< 24,000	57 (17.1%)	277 (82.9%)	0.21	0.06 - 0.73	.008
≥ 24,000	5 (50.0%)	5 (50.0%)			
Living with a partner					
Yes	52 (16.4%)	266 (83.6%)	0.31	0.13 - 0.73	.005
No	10 (38.5%)	16 (61.5%)			

Data was presented in frequencies (n) and row proportions (%). OR, Odds Ratio; CI, Confidence Interval; KES, Kenya Shillings.

4.3.1 Focus group discussion and key informants' responses

The findings in Table 4.5 differed from the findings from Key informants and male participants in FGD which revealed other socio-demographic predictors of male involvement as; lack of awareness, cultural restriction and competing tasks. A summary of some of the explanations from FGDs is presented below.

Adequacy of awareness on involvement:

...We support our partners during pregnancy because it's a moral responsibility to do so. We are not aware that it's a policy requirement.

...In my home facility, they don't ask female partners to be accompanied by us but in Bumula sub-county hospital they do, one time my wife attended the clinic there and she was asked I accompany her on her next visit.

Cultural restrictions:

... Despite most of us having an education, cultural demands have to be adhered to. Pregnancy is not a man's purview.

... In Bukusu culture, men do not have any role to play during their partner's pregnancy. That is my mother's and TBA's affair, mine is to provide for the family. Not to take care of my wife when she is pregnant. After all, she is not sick.

... During our time when we were young boys, we never saw our fathers being involved in pregnancy issues. It was mainly our grandmother and our aunts to be involved. As a young man, myself I participate when I am required to.

Competing male partner tasks

... Most men in this community are self-employed. We leave our houses very early and return home late. Going to the ANC clinic with my wife is a waste of time. It means I have to forfeit the whole day to do that. How will my family meet its needs? I am the sole breadwinner and I have to provide for my family in all aspects.

... My employer only allows me to rest over the weekend and during weekends the clinics don't function. Due to that, I have no other time to accompany her.

KIIs participants also added on that:

... When it comes to issues to do with pregnancy and childbirth, all men in this region behave the same! They literally keep off and leave the responsibilities to women. Their support is minimal and restricted to support after delivery back in their homes.

... most men only get involved when they desire to have a child in circumstances where the wife has taken long to conceive or have difficulties with childbirth

4.4 Health facility Predictors that Influenced Male Partner Involvement

The researcher further sought to establish the health facility predictors that influenced male partner involvement in promoting antenatal care and skilled delivery attendance.

Table 4.6 showed that most of the partners (67.4%) lived within a radius of 1 – 5 km from the nearest health facilities and they were not involved in promoting antenatal care and skilled delivery services of their partners. A majority of male partners

acknowledged that their female partners received antenatal care (70.9%) and skilled delivery (72.1%) services within 1 hour of arriving in the clinics, yet still male partners were not involved. Also, the study found that most male partners did not pay for antenatal care and skilled delivery (69.5%) with a majority not being involved in antenatal care and skilled delivery services of their partners. Antenatal care and skilled delivery services were both available (83.4%) and accessible (87.8%) further, most of them were not involved in the said services. The majority of male partners (70.1%) acknowledged the lack of two or more healthcare workers at the antenatal care and maternity respectively clinics. However, most of them (35.7%) acknowledged that at the maternity there were two and more healthcare workers still yet most of them were not involved in promoting antenatal care and skilled delivery services of their partners.

Table 4.7: Health facility predictors of male partner involvement

Health facility factors		Frequency	Per cent (%)
Distance to the nearest facility (Km)	≤ 5	232	67.4
	> 5-10	112	32.6
Time taken before receiving ANC Services	≤1 hour	244	70.9
	>1 hour	100	29.1
Time taken before accessing skilled delivery services	≤1 hour	248	72.1
	>1 hour	96	27.9
Services paid for	Payment	105	30.5
	No payment	239	69.5
ANC and delivery service were available at all times	Yes	287	83.4
	No	57	16.6
ANC and delivery service were accessible	Yes	302	87.8
	No	42	12.2
Enough seats for male and female partners	Yes	103	29.9
	No	241	70.1
Number of health workers at ANC above two	Yes	103	29.9
	No	241	70.1
Number of health workers at Maternity above two	Yes	123	35.8
	No	221	64.2

Data was presented in frequencies (n) and row proportions (%); n, 344

Table 4.7 shows results on bivariate analysis on the relationship between health facility factors and male partner involvement in promoting antenatal care and skilled delivery services. None of the health facility variables was statistically significantly predictor of male partner involvement. Therefore, the study failed to reject the hypothesis. However, the computed Odds Ratios showed an increasing association of the following variables: distance to the nearest health facility (**OR : 1.22**; 95% (CI : 0.67 - 2.23); $p = 0.51$); time taken receiving ANC service (**OR: 1.22**; 95% (CI : 0.65 - 2.28); $p = 0.53$), time taken before receiving ANC and skilled delivery service (**OR: 1.40**, 95% (CI - 0.74 - 2.69); $p = .30$), availability of ANC and delivery services at all times (**OR: 1.21**; 95% (CI - .56 - 2.61), $p = 0.63$), number of health workers at the ANC more than two (**OR: 1.62**; 95% (CI : 0.92 - 2.88); $p = .10$) and number of health workers at the ANC more than two (**OR = 1.62** ; 95% (CI : 0.93 - 2.83) $p = 0.09$) with male partner involvement.

The male partners living within five kilometres from the health facility were 1.22 times more likely to be involved in antenatal care and skilled delivery attendance as compared to those living more than five kilometres from the health facilities. Time taken before receiving antenatal care service which was one hour and less was 1.22 times more likely to influence male partner involvement as compared to time more than one hour. Besides, antenatal care service, time taken before receiving skilled delivery of one hour or less was 1.4 times more likely to influence male partner involvement. The availability of antenatal care and delivery services at all times in health facilities was 1.21 times more likely to influence male partner involvement. More than two health workers at antenatal care clinics and maternity wards were 1.62 times more likely to influence male partner involvement respectively.

Moreover, the following variables had a decreasing association: services paid for (OR: 0.68; 95% (CI: 0.36 - 1.28); $p = 0.23$), accessibility of antenatal care and delivery services (OR: 0.71; 95% (CI: .35 - 1.73), $p = 0.81$) and enough seats in the consultation room for the couple OR: 0.84: (CI: 0.47 - 1.46), $P=0.41$ with male partner involvement. Therefore, this meant that payments for antenatal and skilled delivery services were 0.32 times less likely to influence male partner involvement. Accessibility to antenatal care and delivery services by male partners was 0.28 times less likely to influence their involvement. The study established also that presence of enough seats in the consultation room for the couples was 0.16 times less likely to influence their involvement.

Table 4.8: Health facility predictors of male partner involvement

Health facility factors	MPI		OR	95% CI	p-value
	I	NI			
Distance to and from the health facility (Km)					
≤ 5	44	188	1.22	0.67 - 2.23	0.51
> 5	18	94			
Time taken before receiving ANC Services					
≤1 hours	46	198	1.22	0.65 - 2.28	0.53
>1 hours	16	84			
Time taken before accessing skilled delivery services					
≤1 hours	48	200	1.40	0.74 - 2.69	0.30
>1 hours	14	82			
Services paid for					
Payment	15	90	0.68	0.36 - 1.28	0.23
No payment	47	192			
ANC and delivery service were available at all times					
Yes	53	234	1.21	0.56 - 2.61	0.63
No	9	48			
ANC and delivery service were accessible					
Yes	53	249	0.78	0.35 - 1.73	0.81
No	9	33			
Enough seats for male and female partners					

Health facility factors	MPI		OR	95% CI	P-value
	I	NI			
Yes	20	83	0.84	0.47 - 1.46	0.41
No	42	199			
Number of health workers at ANC above two					
Yes	24	79	1.62	0.92 - 2.88	0.10
No	38	203			
Number of health workers at Maternity above two					
Yes	28	95	1.62	0.93 - 2.83	.09
No	34	187			

MPI = Male partner involvement; I=Involved; NI= Not Involved; OR= Odds Ratio; CI= Confidence Interval

4.4.1 Opinions from focus group discussion and key informant interviews

The results could be corroborated with some of the explanations of men in FGD and KII participants and what was directly observed in visited health facilities as themed below;

Inadequate health facility infrastructure

... The number of health facilities in the Bumula sub-county is fairly enough, the challenge is that there are few healthcare workers in these facilities. Most facilities have at most 3 health care providers who provide services in all departments including antenatal and delivery rooms.

.... There is usually one nurse at the clinics attending to the women and children, even in the labour ward, the same nurse at the clinic will be handling those with labour pains.

... There is no room or space for men in our hospitals to sit from, the available space is usually full of women and children. Even the space in the consultation rooms is very small, and some lack extra chairs, so if the man accompanies his wife, he will be left standing as the partner receives services.

... The health facilities in Bumula are sparsely distributed, which still negatively influenced male partner involvement. There are still issues because of distance. The existing facilities should be improved and equipped and if need be, new ones constructed especially in areas where families travel a long distance to receive ANC and skilled delivery services.

Need driven male involvement:

... Men in this community get involved during the pregnancy of their wives when there are complications and their wives have been referred for specialized care otherwise if there are no complications or referral, you can hardly find them in the facilities

... Some men have left their responsibilities to us CHVs and the health workers at the facilities especially when their partners have pregnancy-related complications. We refer them to the health facilities without their presence.

...If the male partner is away for one reason or another, he has to come or send money for the woman to seek services. Also, due to a lack of money, some men postpone approving their partners to seek services until a later day when they get the money.

Negative attitude from health workers:

... When I got to the facilities with my wife, I was ignored by the health workers at the clinic, I didn't even have a place to sit, I was not even involved in the services my spouse was receiving, I ended up regretting why I even accompanied her.

Heeeeee! ... These days they fear mishandling clients. Most of the health workers fear being reported to the county for mistreating patients or even their relatives. For that reason, those who had poor attitudes have so far changed...But you can't rule that out, on one or two occasions some people may complain.

From observation made in facilities visited, majority of facilities lacked enough sitting space for both women and their partners, in some facilities, due to few staffs, skilled delivery services were only accessible and available during day time. Most of the facilities operated with 2-4 health workers who in most circumstances multi-tasked, hence leaving the departments not fully covered. Emergency services like caesarean sections, blood transfusion and ultrasound lacked in 90% of health facilities. Furthermore, space in the consultation rooms was inadequate, it only accommodated the health worker and the pregnant mother. In addition to the long queue, few male partners who had accompanied their partners and were observed at the maternity wards. None was found at ANCs nor in the waiting bays.

Most facilities lacked service charters. For those with them, there were no male-friendly services on them but indicated the time within which services were provided to the mother. Most health facilities opened at 0800hrs and closed at 1700hrs. In the seven facilities visited, ANC services started at 0900hrs and ended by 1400hrs. However, the clinics were left open up to 5 pm. Maternity departments remained opened throughout the day in five facilities with two operating only during the daytime. Most facilities provided laboratory services but only Bumula Sub-County hospital offered blood transfusion services. There were no ultrasound and caesarean section services in the whole sub-county services.

Lastly, as a means to promote and improve levels of male partner involvement in antenatal care and skilled delivery services in health facilities, members from the FGD and Key Informants forums stated that:

Provision of male-friendly services

... I urge our Ministry of Health department to introduce more outreach antenatal care services to our villages. At least we won't spend more time and money to travel to the hospitals. For me, if the outreach comes nearer home, I will be involved.

... We also wish we could have male health workers in the clinics. Men feel comfortable when they are served by their fellow men.

Improve health facility infrastructure to accommodate male partners

... Yes, we may get to the clinics with our partners, but where do we sit with them? If it's possible, we want a private wing for those who come as couples for services.

... At the clinics, you find only one nurse serving around 50 mothers. She will take like 30 minutes on her as others patiently wait to be served. For us men, we can't wait for that long. If more nurses will be at the clinics, we won't mind waiting a little bit longer to be served.

... In my own opinion, now that we had structures at the community level promoting male partner involvement in maternal health services, I suggest that they are revived and we begin from there.

... Health facilities should uniformly implement male partner involvement activities in ANC and delivery services across all facilities to enable men to cope with the practice.

Provision of specialised maternal health services

... It's high time for Bumula Sub-County to have an operating theatre, X-ray department and reliable blood transfusion services. Men can be involved if the services are here. Otherwise, referrals of women who require these services will still be left to us, health facilities or the women themselves

CHAPTER FIVE

DISCUSSION

5.1 Level of Male Partner Involvement

The study recorded a low level of male partner involvement in promoting antenatal care and skilled delivery attendance despite the majority of male partners acknowledging the importance of their involvement in maternal health services. Male partner involvement was measured at three levels; planning and decision making, accompaniment and provision of support. These results are reflective of previous studies conducted elsewhere in Kenya (Onchong'a, *et al.*, 2015; Rotich *et al.*, 2019). However, unlike this study, these previous studies did not measure male partner involvement at the three levels as presented in this study. Again, they focused on antenatal care and uptake of skilled delivery in isolation. The results were lower compared to studies from other sub-Saharan Africa countries particularly Ghana and Ethiopia which recorded (67.2%) and (41.4%) respectively (Kumbeni *et al.*, 2019; Kassahun *et al.*, 2018). Unlike this study, (Kassahun *et al.*, 2018) targeted female respondents. The difference observed could be due to a difference in methods employed to construct the involvement level as well as the study setting. For example, previous studies were hospital-based while the current study was community-based.

These results contrasted with those recorded from studies conducted in Sweden, America and Nepal where the majority of the male partners were involved in their partner's reproductive health services. According to Anderson *et al.*, (2016), most males who were involved were first-time fathers and it was anchored in legislation while Mस्कерт *et al.*, (2017) indicated most men who were involved preferred online platforms. Most participants in this study were not first-time fathers (had more than two children). Although it's a policy in Kenya for males to be involved in antenatal care

and skilled delivery services, most respondents indicated that culture and lack of awareness restricted them.

Partners need to plan together and decide where their female partners would seek maternal services from. Surprisingly, this was not the case for Bumula Sub- County. The results showed that planning for antenatal care and skilled delivery attendance did not take prominence among male partners in Bumula sub-county of Bungoma County. Decision making over the health facility where the spouse should access maternal health services is important in planning. However, the uptake of this is still at its infancy in Bumula sub-county among male partners. It was established that most male partners treated antenatal care and skilled delivery as a woman's affair and thus was no need for them to be involved in planning. Further, they indicated that their expectant spouses already perceived what was expected of them regarding attending antenatal care and skilled delivery. This could explain why there was very low coverage of antenatal care services and skilled delivery.

The men in Bumula have left pregnancy issues to their female counterparts who alone were unable to manage the process as required. This result contrast sharply with Kiptoo *et al.*, (2016) and Gibore *et al.*, (2019) who established that majority of male partners were involved where their partners would seek antenatal care services from. According to Kiptoo *et al.*, (2016), Mumias East and West sub-counties which neighbours Bumula sub-county, education status of the respondents, occupation and living together largely influenced participation of males in planning and decision making. In this study, despite most respondents having formal education and lived together with their spouses, their participation in planning and decision making remained low. This could be attributed to cultural barriers and norms which require other female family members to take up

the male partners roles during the pregnancy of their spouses. However, according to Gibore *et al.*, (2019) joint planning and decision making was successful in Tanzania because of the successful implementation of safe motherhood projects. This study results contrast Rahman *et al.*, (2018), who established (75%) of male partners were involved in planning and discussing birth preparedness and complication readiness with their spouses in Bangladesh.

According to an FGD forum, it was stated by a member that culturally the Bukusu men had no role to play during their female partner's pregnancy (antenatal care and skilled delivery attendance). Basing on the FGD findings, the researcher concurred with the findings that Bumula sub-county was mostly occupied by Bukusu sub-tribe of the Luhya tribe, which they hold dearly on the cultural norms and taboos. Besides, male partner involvement in most cases was delegated to female partner's relatives such as the mother-in-law and female relatives from both families (husband and wife). The role of men, therefore, stopped at providing for the family. It was also discovered that most families in the Bumula sub-county perceived pregnancy as a normal process, not a health complication, one that the wife comfortably could manage. This was supported by the key informant interview that suggested that most women from the Bukusu tribe did not permit male involvement where they failed to disclose when they got pregnant and when they began attending antenatal care clinics, which hampered male partner involvement.

However, this study was in contradiction with other scholarly works of Kiptoo *et al.* (2016) in Kenya and Gibore *et al.* (2019) in Tanzania that male partners participated in planning for ANC and skilled delivery attendance and Marzo *et al.* (2018) in the Muar district that reported 91.3% male involvement in the planning phase. The

inconsistencies might have been caused by the set-up of those studies where in most cases those study areas had enough primary health care centres that were accessible and available. The health workers were locals. The awareness levels among male partners were high with most printed materials on the importance of male partners' involvement.

This study found out that accompanying female partners to attend antenatal care and skilled delivery was above average by most male partners in Bumula sub-county. Accompaniment was a positive contributor to male partner involvement in antenatal care and skilled delivery attendance. Most of the male partner's accompaniment was need driven. The majority of them were motorbike riders, so they provided transport to their partners. This was in agreement with what was observed from the facilities visited. The male partners dropped their spouses at the clinics hanged around and waited for them to receive the services. No man was found at the waiting bays or in the consultation rooms with their partners.

These findings agree with those of Kiptoo *et al.*, (2016) who reported that despite cultural barriers, most men accompanied their spouses to ANC. Similar results were recorded in studies conducted in Asia (Rahman *et al.*, 2018; Marzo *et al.*, 2018 & Sharma *et al.*, 2018). Male partners cited the health complications of their spouses and demands from health care providers compelled them to attend antenatal care clinics. Males who accompanied their spouses were found to have good knowledge of antenatal care services. Male partners indicated that were often left unattended at the facilities hence discouraging them from accompanying their spouses in subsequent visits.

At the FGD forum, a member stated that most male partners accompanied their female partners to attend antenatal care and skilled delivery in the anticipation of anything bad happening they would be on standby to help their wives. To some extent, male partners

accompanied their wives to attend ANC and skilled delivery when female relatives were not in a position to accompany their wives. The third trimester of pregnancy was a delicate period for most women; this period required a lot of care especially when the female partners developed pregnancy complications. Most of the male partners were involved during the delivery phase because during this time there were many risks associated with the pregnancy. The study corroborated with Kiptoo *et al.* (2016) in Mumias, Kakamega who reported 51.8% of male partners accompanied, Gibore *et al.* (2019) in Tanzania, about 63.4% male partners accompanied, Rahman *et al.*, 2018, in Bangladesh who reported accompaniment at 89% of partner to antenatal care and 57% during delivery, Marzo *et al.*, 2018 who reported 95% accompaniment in Malaysia and Jennings *et al.* (2014) in Rwanda, most (86.8%) male partners accompanied female partners to antenatal care. Shared cultural values on gender roles among African societies could explain the observed similarities in these findings.

In this study, more than half of respondents who accompanied their partners to an antenatal care visit reported spending almost the whole day in the facility for their partners to receive services. This discouraged them from accompanying their female partners for antenatal care services in the future in subsequent visits. Studies done in other parts of Africa showed that the longer the time spent waiting for services the lesser the chances were for men to be involved in antenatal care services (Amoakoh-Coleman *et al.*, 2015; Aborigo, 2018; Forbes *et al.*, 2018). Time spent in accompanying partners to antenatal care services or skilled delivery services would have more implications for male involvement in antenatal care among employed men. Findings from the current study during FGD showed that most men were in informal employment or self-employed. Men who were in this category were often not in a position to spend the entire day participating in ANC or skilled delivery services.

To improve male partners accompanying female partners to antenatal care and skilled delivery, it was established that the healthcare workers and program managers were to implement necessary action to advocate and encourage men's accompaniment in antenatal care and skilled delivery services. At antenatal care, pregnant women and their male partners receive health education. The reception of health education might lead to a greater outcome of maternal health behaviours compared to when women receive the education alone. It was well understood that education and health services provided during the antenatal care period have an impact to reduce pregnancy and delivery complications and improve birth outcomes. Hence, if men and women skip this opportunity achieving Sustainable Development Goal number 3 shall just be a dream.

It is well known that the male partner is the head of the family, therefore, should lead the family from the frontline. However, this study showed that most male partners in Bumula sub-county failed to own their responsibilities and hence passed them over to female partners and other third parties (female family members from both divides). These findings showed that Bumula sub-county had experienced improvement regarding male partners accompanying female partners to the antenatal care clinics. The accompaniment was mostly achieved during skilled delivery services of the female partners. The key informant interview supported the argument that male partners in Bumula sub-county were involved mostly during the labour and delivery period. This proportion of men accompanying their partners to antenatal care and delivery would have been attributed to the efforts of an NGO that worked in this sub-county to promote male involvement in skilled delivery services. Surprisingly, while visiting some health facilities, it was observed that there were men seen accompanying their spouses to the clinics, however, they kept themselves away from the clinic environment. This

probably could be explained that it was possible that missed out on the important role of promoting antenatal care and skilled delivery services.

This study, however, contradicted studies by Kidero *et al.*, (2014) in Kenya who found out that only 13% accompanied their female partners for PMTCT services, Shiyagaya *et al.*, (2016) in Namibia where most male partners stated that it was not their responsibility to accompany their female partners to antenatal care clinics and Falade-Fatila and Adebayo (2020) in Nigeria where 20% accompanied to antenatal care and 19.6% accompanied during delivery. This difference would be explained by cultural differences within these regions. According to the key informant, culture was still a problem; some male partners were restricted by cultural norms even though the community was outgrowing some negative practices that affected their health. According to this culture, pregnancy matters were handled by traditional birth attendants and women only. Bumula sub-county has seen improvement in the uptake of 1st antenatal care by the involvement of few male partners even though there were still cultural issues that hold it back. Improvement in antenatal care and skilled delivery attendance were alluded to intervention by Save the Children (NGO) that sensitized the male partners on the importance of participating fully in antenatal care and skilled delivery services of their spouses. Men to men support groups provided informative education on their roles during the pregnancy period. But since the program was terminated, Bumula sub-county recorded a decrease in male partner involvement in the pregnancy. Male accompaniment in Bumula sub-county might have been attributed to interventions by NGOs that operated in the sub-county sensitising male partners on the importance of their involvement in pregnancy.

The majority of male partners provided support to their female partners during the pregnancy period (antenatal care and skilled delivery). It was established that support was provided in various categories such as helping with household chores, provision of psychosocial support, participating in birth preparedness plans, provision and monitoring of nutritional requirements, provision of finances to support antenatal care visits and skilled delivery services. However, the level of male involvement still remained low. The researcher acknowledged that male partners were created with the responsibility of guiding the family by being the head of the family. It is from this point of view that the majority of male partners in Bumula sub-county were involved in supporting their female partners in various aspects.

In the Luhya community, who form the largest group in Bumula sub-county, male partners support female partners mostly in the provision of financial support and psychosocial support. According to key informant interviews, most male partners were active in the provision of psychosocial and financial support. This kind of support encouraged and empowered female partners during pregnancy (antenatal care and skilled delivery). This study was in agreement with Nyandieka *et al.* (2016) study in Malindi sub-county 83% of male partners were involved in planning for the promotion of the utilisation of skilled birth. Moreover, this study agrees with Kiptoo *et al.*, (2016) study in Mumias East and Mumias West sub-counties where 69.7% of male partners provided financial support. Besides, this was also a true reflection of a study by Adeneke *et al.*, (2013) findings which noted that about 96.5% of male partners provided financial support for antenatal care services.

Nevertheless, key informants further stated that they were keen on encouraging male partners' active involvement in the care and support of pregnant mothers during the

antenatal and skilled delivery period. However, some male partners delegated their support to community health volunteers to see through pregnancy-related complications. The assumption being that the CHVs knew about what pregnancy demands at the time and they would be of better assistance as compared to male partners. Well, according to Eddy and Fife (2020), the fathers were needed to actively involve themselves in the pregnancy process; this would be through the provision of psychosocial, physical and financial support. It becomes quite disturbing when the man fails to perceive pregnancy as a delicate period, which key informant interviews stated that male partners in Bumula sub-county did not treat pregnancy as risky. These findings were in line with Abushaikha and Massah (2012), that in Syria, male partners do not treat pregnancy as a risky affair. This study found out that male partners in Bumula sub-county supported their female partners during ANC and skilled delivery, whose finding was in support of Greenspan (2020). There is a low perceived risk during gestation among men hence there poor involvement in the planning phase.

5.2 Social-demographic factors predicting male partner involvement

Age is an important predictor of a person's behaviour, level of responsibility as well his/her perception of life issues especially due to life experiences. It was prudent for the researcher to find out if respondents belonging to different age cohorts reported varying levels of involvement in antenatal care and skilled delivery services. Age was used to determine whether it predicted male partner involvement in promoting antenatal care and skilled delivery attendance. The study established that most male partners were aged below 35 years; out of which only a few were involved in antenatal care and skilled delivery attendance. Therefore, this study found out that the age of the male partners was not a predictor of their involvement in promoting antenatal care and skilled delivery attendance in Bumula sub-county. The lack of statistical significance in age can be due

to the homogeneity of the study population. However, the computed Odds Ratio showed an increasing association between age and male partner involvement in antenatal care and skilled delivery attendance. Despite age not being statistically significant, the study showed that the sampled male partners who were still young and at their prime to grow their families, they had 39% more likely to promote antenatal care and skilled delivery attendance as compared to those men above thirty-four years of age. First time fathers in this study were involved more than the second time and more because their perception on safe pregnancy was high.

This study was in contradiction with the study by Chibwae *et al.*, (2018) of Tanzania that opined that male partner involvement in antenatal care was directly associated with age, Kassahun *et al.* (2018) posited that male partners who were of thirty-five years and above were more involved in antenatal care as compared to those below thirty-five years of age and Francis (2014) in Kiambu, Kenya that found out that male involvement in maternal and child-health services decreased with old age. The differences observed in these study findings could be due to different study settings and different target populations. Young adults of twenty years and below in most cases were not aware of responsibilities associated with pregnancy (antenatal care and skilled delivery); therefore, tend not to get involved in the ANC and skilled delivery process. Metwelly *et al.* (2015) suggested that in Egypt, husbands of less than twenty-one years most of them were not aware of what to expect in pregnancy. This study was in support of Onchong'a *et al.* (2015) and Kiptoo *et al.* (2017) that age was not determinant of male partners' involvement in ANC and delivery attendance. The similarities observed in these studies could be attributed to a shared culture. The inconsistencies in the findings of these previous studies on age as a predictor of male partner involvement in antenatal care and delivery show age is not a predictor of male partner involvement.

It was established that the majority of the male partners (participants) had acquired formal education. However, the study established that the level of education among male partners in Bumula sub-county failed to predict their involvement in promoting antenatal care and skilled delivery attendance. Besides, the Odds ratio showed that male partners with formal education were a 57% less likelihood of being involved in antenatal care and skilled delivery attendance. Furthermore, it was suggested that there were inadequate awareness levels among male partners that limited their involvement in promoting antenatal care and skilled delivery attendance in Bumula sub-county. Education enhances information and mental acuity to understand and analyse risks associated with pregnancy. It is the epitome of reasoning and practising. However, this study showed that regardless of the level of education male partners had, it did not predict their involvement in promoting antenatal care and skilled delivery attendance. Therefore, it could mean that the education acquired did not address the important issues on reproductive health and their involvement in promoting antenatal care and skilled delivery. Besides, culture among the residents is seclusive thus alienating male partners from interacting and participating in pregnancy.

This contradicts studies by Nungari (2014) and Onchong'a (2015) that the level of education of male partners significantly influenced their involvement in the pregnancy process of the female partners – studies that were done in urban settings, unlike this study that was carried out in a rural setting. KDHS (2014) demonstrated that the education level among male partners was a major contributor to their involvement in ANC and skilled delivery attendance. Formal education among the participants was at 98.5% (primary and above attaining of education). Literacy level among these male partners was quite high, however, this failed to predict the male partner involvement in ANC and skilled delivery attendance in Bumula sub-county.

The researcher acknowledged the different settings of the two studies where Nungari (2014) was conducted in an urban city environment with diverse people whilst this study was conducted in the rural setting predominated with one tribe. Shahjahan *et al.* (2013), Ampt *et al.* (2015), Craymah *et al.* (2017), Kiptoo *et al.* (2017) and Nafula (2018) study contradicted with these studies which opined that that male partner's involvement in promoting ANC and skilled delivery attendance increased with higher levels of education. Reflecting on Shiyagaya *et al.* (2016) study, it was clear that inadequacy of awareness on the subject matter of male partner involvement in promoting antenatal care and skilled delivery attendance, most male partners failed to see the need to participate in antenatal care services. Likewise, this study corroborated the study by Rahman *et al.* (2018) and Worku *et al.* (2020) which opined that education level was not an important correlate of male involvement in reproductive health.

Monogamous marriage was the most common type of marriage in Bumula sub-county of Bungoma County in Kenya. However, this type of marriage according to this study failed to predict male partner involvement in promoting antenatal care and skilled delivery attendance. The Odds ratio showed that male partners in monogamous marriages were 43% less likely to participate in antenatal care and skilled delivery attendance. The Bukusu culture permits for polygamous, however, the majority of the participants (88.1%) subscribed to monogamous marriage. The deep-rooted culture among the Bukusu inhabiting most parts of Bumula sub-county denied them the opportunity to participate in pregnancy.

This study was in line with Kiptoo *et al.*, (2016) study on male partner involvement in antenatal care and skilled delivery that type of marriage was not a predictor of male partner involvement in promoting antenatal care and skilled delivery attendance.

Moreover, this study was in support of a report from Mohammed *et al.* (2019) that type of marriage whether monogamous or polygamous were independent of male partner involvement in antenatal care and skilled delivery attendance. Contrary to this study, Wei *et al.* (2015) in Myanmar found out that monogamous marriage was a predictor of male partner involvement in antenatal care and skilled delivery attendance. It was known as posited by Wicaksono (2016) monogamous marriage with whose male partner attended at least one antenatal care resulted in skilled delivery attendance. According to key informant interviews, it was stated that regardless of marriage type, it was not common for male partners to participate in antenatal care and skilled delivery. Craymah *et al.* (2017), in their study on male involvement in maternal health services, differed with this study where it was revealed that monogamous type marriage was a significant predictor of male partner involvement in antenatal care and delivery attendance. But this study established that whether in monogamous or in a polygamous marriage, it did not predict male partner involvement in promoting antenatal care and skilled delivery attendance.

Most male partners in Bumula sub-county had a monthly income below KES. 24,000. The monthly income of these male partners was a predictor in promoting their involvement in ANC and skilled delivery attendance. However. The Odds Ratio showed a decreasing association where male partners whose monthly income was below KES 24,000 were 79% less likely to participate in antenatal care and skilled delivery attendance. This could be in relation to the type of job and industry they work in that do not accord them opportunities to fend and participate in antenatal care and skilled delivery attendance. This was in line with the study by Gibore *et al.* (2019), in Tanzania, which showed that non-involvement by many male partners was associated with higher income: the majority were low earners. Bumula sub-county had the highest

percentage of low-income earners thus resonating with low male partner involvement in ANC and skilled delivery.

This study was in support of Kumbeni *et al.* (2019) study in Ghana that found that monthly income among male partners did not predict their involvement as a reference to this study's Odds ratio. Contrary to this study some scholarly works by Kariuki and Seruwagi (2016) in Uganda and Onchong'a *et al.* (2015) in Mombasa Kenya found that monthly income predicted their involvement in promoting ANC and skilled delivery attendance. Looking at the contrary results from Onchong'a *et al.* (2015) and Kariuki and Seruwagi (2016), the study areas were set in an urban environment whilst this study was conducted in the rural setting hence the difference in results about income. Low income discourages male partners to spend time at the facility rather than fending for the family at the time. This was not different in Bumula sub-county, it was stated in the FGD that most many would prefer to focus on the daily livelihood as compared to physically participate in antenatal care and skilled delivery as corroborated by Bukachi and Ongolly (2018).

The majority of male partners interviewed had at least two children. The number of children in this study failed to predict male partner involvement in promoting antenatal care and skilled delivery attendance in Bumula sub-county. However, the Odds Ratio (OR) showed an increasing association of the male partner's involvement with reference to the number of children. The OR indicated that male partners with one child were 57% more likely to promote antenatal care and skilled delivery attendance in Bumula sub-county of Bungoma County. Fathers of one in most cases look forward to the next offspring and therefore eager to grow the family and explore fatherhood. In this regard,

they tend to be part of the pregnancy process through antenatal care and skilled delivery attendance.

Historically, it was common knowledge that the wealth of a person was measured by the number of children one had. Therefore, the number of children showed the level of maturity and responsibility one had over the family vis-a-viz maternal health (pregnancy); children are a blessing from God and a responsibility for both parents. These findings were in support of Gibore *et al.* (2019) that the number of children did not predict male partner involvement in antenatal care and skilled delivery attendance; however, male partners of one child looking forward to expanding the family were 1.57 times likely to promote antenatal care and skilled delivery in Bumula sub-county. This study was in contradiction to scholarly works by Paavilainen (2013) in Ethiopia, Craymah *et al.* (2017) in Ghana, Sarvar *et al.* (2018) in India and Chibwa *et al.* (2018) in Tanzania and Kiptoo *et al.* (2016), Sharmila (2019) that number of children influenced male partner involvement in promoting ANC and skilled delivery attendance.

The majority of male partners were living with their female partners in Bumula sub-county of Bungoma County. Living with a partner was a predictor of their involvement in ANC and skilled delivery attendance in Bumula sub-county. However, the Odds Ratio showed that male partners living with their female counterparts were 69% less likely to promote antenatal care and skilled delivery attendance in Bumula sub-county. This was in line with Kiptoo *et al.* (2016) that found out that in Mumia East and West sub-counties of Kakamega County, male partners living with their partners seldom were involved in antenatal care and skilled delivery attendance. Again, FGD members supported the argument, where it was clearly stated that in Bukusu culture men were

not permitted to participate during the pregnancy of their partners: Pregnancy lied squarely with the wife's family. Moreover, the key informant stated that the failure of the male partner's involvement in promoting ANC was caused by the perception that the antenatal care period was a non-risky affair that did not warrant their involvement.

The Bukusu community's perception of male involvement demotivates them from participating as they are seen as lesser individuals. The cultural beliefs and way of life among male partners in Bumula sub-county does not permit male partners to actively get involved in antenatal care and skilled delivery. Traditional birth attendants and mothers-in-law work closely with pregnant women in Bumula sub-county thus leaving men to focus on other roles other than pregnancy. Cultural norms impede male partners' involvement for those who would have otherwise wanted to due to peers' ridicule and negative perception from community members. It is important to note that the socioeconomic status for many male partners was self-employment thence according to the FGD forum most men left home early to fend for the family and return home late.

Contrary to this study findings, the studies by Kulalanga *et al.* (2011) in the Democratic Republic of Congo, Mphonda *et al.* (2014) in Malawi, Gill *et al.* (2017) in Nepal and Kumbeni *et al.* (2019) in Ghana, that living with the partner increased male involvement in promoting antenatal care and skilled delivery attendance. In Kenya, this study disagreed with findings from Kiptoo *et al.* (2016) that living together increased the chances of male involvement in promoting antenatal care and skilled delivery. Despite that living with a partner should be a predictor of male partner involvement in antenatal care and skilled delivery, Bumula has a different perspective to it where the majority of them failed to participate in antenatal care and skilled delivery attendance.

In summary, this study found that age, level of education, type of marriage, number of children, monthly income and living with a partner were not predictors of male partner involvement in antenatal care and skilled delivery attendance. Therefore, the research sought to determine what would be the main deterring reasons for their low involvement in antenatal care and skilled delivery attendance. The outstanding reason was cultural norms that acted as impeding factors towards achieving universal accepted maternal health standards. The inhabitants of Bumula sub-county were deeply rooted in the fabrics of cultural demands that violate the modern culture of both parental involvements in antenatal care and skilled delivery. According to WHO (2016), it is a global requirement to enhance male partner participation in antenatal care and skilled delivery attendance to reach 90% at minimum for both. However, Bumula sub-county was still grappling with implementing universal health coverage due to cultural restrictions.

5.4 Health facility factors influencing male partner involvement

Distance to the nearest health facility is critical in promoting antenatal care and skilled delivery attendance. The study findings showed that most of the male partners and their female partners lived less than a five-kilometre radius from the nearest health facility. Despite the distance being within the permissible radius as per the World Health Organisation requirement, distance to the nearest health facility failed to predict male partners involvement in promoting antenatal care and skilled delivery attendance in Bumula sub-county. However, the Odds Ratio showed that male partners living within a 5 Km radius were 1.22 times more likely to participate in antenatal care and skilled delivery attendance as compared to male partners who were living more than 5 Km away from the health facility. These study findings differed with those of a study by Pokharel, (2019) in Nepal, that rural areas lack health facilities during emergency

obstetric conditions, forced male partners to travel with their spouses long distances in order to access specialised maternal health services and corroborated with findings from Yargawa and Leornardi-Bee, (2015) from their systematic review and a meta-analysis of literatures that there was no association between health facility factors with male partner involvement in maternal health services from the reviewed developing countries.

In Kenya, maternal health services including skilled delivery are free. The study found that most male partners did not pay for antenatal care and skilled delivery services of their female partners, however, the majority of them failed to participate in these services. However, the study established that payments or lack of it were not a health facility predictor of male partner's involvement. It was further noted that the majority did not pay for antenatal care/ skilled delivery services. This was also shown by the Odds ratio that male partners who paid for antenatal care and skilled delivery were 32% less likely to participate in promoting antenatal care and skilled delivery attendance. From the FGD, it was clear that some women paid for lab services during antenatal care and some purchased items for delivery services in cases where required supplies were missing. These findings also were in agreement with key informants who argued that it was not cursed on a stone that antenatal care and skilled delivery services were free.

At times, when health workers lacked supplies, they were left with no choice but to request the male partners to purchase. This however drew complaints from the community. This implies that these services are not 100% free as stated by the Kenya Ministry of health, still, 1/3 of the families with expectant mothers pay for services that are proclaimed to be free. This had the direct implication that men could not afford to pay for these services and indirectly put them off from participating in antenatal care

and skilled delivery services of their partners. These study findings contradicted the studies by Ongolly and Bukachi (2019) that payment for antenatal care and skilled delivery were predictors of male involvement, Kiptoo *et al.* (2017) that inadequate finances among male partners affected uptake of antenatal care and skilled delivery services among women in Mumias East and West Kakamega county and Kariuki & Seruwagi, (2016) that most male partners were not actively involved in antenatal care services of their partners because most of them felt they were being exploited by healthcare providers. However, in Bumula sub-county, inadequate male involvement in antenatal care and skilled delivery was not affected by extortion from healthcare providers in as much as services paid for did not predict their involvement. However, the key informant interview indicated that most of them were controlled by cultural beliefs and norms.

In most facilities in Bumula Sub-County, antenatal care and delivery were available and most participants reported that their partners received services within one hour of arrival at the clinics. The availability of antenatal care and delivery services at all times had an increasing association with male partners' involvement. This showed that male partners were 1.21 more likely to be involved in antenatal care and skilled delivery when the services were offered all the time as compared to when services were not offered at all times. However, availability and time spent in receiving the said services did not predict male partner involvement.

There was an increasing association between the time taken before receiving antenatal care services and time taken before accessing delivery services. It indicated most male partners were 1.22 and 1.40 more likely to participate in antenatal care and skilled delivery when the time taken before receiving services in antenatal care and maternity

were at most 4 hours respectively. The majority of the men in FGD reported that maternal services were available in most health facilities in Bumula but there was a general lack of awareness of male partner involvement in maternal services among men. Awareness of intervention measures has a favourable influence on the uptake of services. Studies have shown that awareness is positively associated with the uptake of services (KNBS, 2014). These findings indicated that men have to be reached out with targeted information and informed the importance of them being involved in ANC and skilled delivery service if Bumula sub-county needs to improve on the uptake of these services among pregnant women. These findings were a true reflection of the findings from Nepal by Sharma *et al.*, (2018) that lack of information on the need for male partner involvement were some of the factors that hindered male partner involvement in maternal services.

Studies carried out by Sharma *et al.*, (2018) and Gibore *et al.*, (2019), showed that female health worker dominated maternal service associated with some negative attitudes of health care workers towards male partners deterred male partner involvement in antenatal care and skilled birth of their spouses. This study to some extent collaborates finding in these studies that showed; lack of space customized for male partners during antenatal care and skilled delivery, accompanied with a negative attitude and few health care workers and keeping male partners longer at the health service place contributed to non-male involvement. The male partners felt inconvenienced and uncomfortable mixing with female and children dominated waiting for a place and lacking a sitting place. A key informant interviewee agreed that in most cases men accompanying their spouses were left standing there without attention. These opinions were in line with what was observed while the researcher did direct observations in the five facilities that: in all the visited facilities there was no space

reserved for male partners who accompanied their partners at antenatal care and maternity. Most consultation rooms lacked an extra seat for a male partner and they were very small to accommodate three persons (Appendix IX).

It was observed that there were no male health providers at antenatal care and maternity in the facilities visited. In most departments, female health workers served pregnant mothers. This also agreed with the observations that were made by KIIs that men were not comfortable being served by female health workers hence preferred male health workers in the clinics for them to fully participate in the said services. These findings were in unison with a similar study by Nasene *et al.*, (2016) in that, in South Africa health workers were unwelcoming, intimidating and unsupportive towards not only the pregnant women but also their partners who accompanied them for services in South and another study in Tanzania, Gibore *et al.*, (2019) that noted that long waiting time experienced by women attending antenatal care services were associated with low male involvement in maternal care.

In this study, there was glaring evidence that the number of health care workers, the dominance of females and children during antenatal care visits coupled with lack of space set aside for accompanying male partners influenced non-male involvement in antenatal care and skilled delivery services of their partners. Lack of space and probably a well-customized area for accompanying male partners may have contributed to the stigma and therefore non-involvement. Other factors discussed by Nasene, *et al* (2016) and Kiptoo *et al* (2016), related to waiting for so long notwithstanding, came out so clearly in the study, through KII and FGD that culture plays an important role and therefore the main predictor of non-male involvement in both antenatal care attendance and skilled delivery rather than health facility factors. Further, the study findings were

supported by another study conducted by Kariuki and Seruwagi, (2016) in Uganda which conclude health-worker attitude, waiting time and cost of antenatal services influenced male involvement in antenatal care services of their spouses. Similarly, this study reported that healthcare workers in Bumula sub-county were not flexible and accommodative to the most male partner who would have wished to participate in antenatal care and skilled services. However, this study differed from a study in Kenyatta National Hospital, by Nungari (2014) which determined that in Kenyatta National Hospital, Kenya, despite the heavy and busy antenatal care clinics and congested maternity, most health workers in those departments were welcoming and friendly.

Having the recommended number and satisfied healthcare workers who were not overwhelmed by clients and were well-motivated encouraged a good relationship with clients seeking antenatal care and skilled delivery services. Bumula sub-county most health facilities, however, failed to meet the required number of healthcare workers in their facilities (Level 2 to Level IV). As directly observed, in all facilities visited, most ANC clinics and maternity departments were managed by one health worker, with exception of one facility which was level IV that had two health workers at antenatal care and maternity. This was much low as compared to the requirement by the Kenya Human Resources for health Norms and Standards, (2014) that recommended at least two health workers in each department (ANC/Maternity) in levels 2 and 3 facilities and four in level 4 health facilities. As also indicated by key informants and male partners in FGDs, that the inadequacy of healthcare providers at the antenatal care and Maternity demotivated male partners from being involved.

There was a statistically insignificant association between the number of health workers more than two at the antenatal care and Maternity wings and male partner involvement. However, the Odds Ratio obtained showed that despite the insignificant relationship, there was an increasing association between the number of health workers at antenatal care and maternity wing and male involvement. This indicated that male partners were 1.62 times more likely to attend antenatal care and skilled delivery when health workers were more than two as compared to when health workers were two or less. Male partners in Bumula sub-county, looking at the income, were always busy fending for the families hence had little time spared for other duties such as attending antenatal care and skilled delivery. Also looking at the social fabric of the Bumula sub-county inhabitants, male partners were not raised to incorporate maternal health as their direct responsibility thus this might affect their patience at the health facility waiting for the female partner to receive services. However, with more health workers at the facility attending to maternal health issues, male partners in Bumula sub-county would elevate their participation in antenatal care and skilled delivery attendance.

In all the five health facilities visited for direct observation for antenatal care and childbirth with regard to male partner involvement, only one facility had a service charter but lacked male-friendly services on it. A service charter defines services provided to the public, at what times and cost and what is required of them to receive the services. Findings from the study heavily indicated that lack of awareness on the need for men to be involved was among the leading factors to the non-involvement. These findings were in agreement with those of male partners during FGD whom the majority cited that lack of awareness deterred their involvement and further as alluded by KII that some men were ignorant about them being involved. The health facilities should create demand and inform their communities on the importance of male partner

involvement in maternal health services. This was not the case in Bumula. Implementation of the male involvement strategy in maternal health services is minimal in this region and requires aggressive implementation in order for this county to achieve SDG 3 by the year 2030.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusions

There was a low level of male partner involvement in antenatal care and skilled delivery attendance. Overall, 18% of male partners were involved in promoting antenatal care and skilled delivery attendance. Sixteen point nine (16.9%) were involved in planning for ANC and skilled delivery services, about 54.1% accompanied their partners to ANC or maternity for services and 96.5% provided necessary support to their partners to access antenatal care and skilled delivery services

Monthly income, living together with a female partner, cultural beliefs and practices, inadequate awareness of the need for involvement, busy male working schedules, and reluctance were socio-demographic male predictors of male partner involvement in promoting antenatal care and skilled delivery attendance. However, age, level of education, monthly income level, number of children and type of marriage were not predictors of male partner involvement in antenatal care and skilled delivery attendance.

Looking at the health facility-based predictors, lack of space, health workers attitude, the number of healthcare workers and dominance of female health workers at the clinics, lack of caesarean section, ultrasound and blood transfusion services were some of the predictors of male partners involved. However, according to Odds Ratio inferential statistics, distance covered to the nearest health facility, time taken in receiving services (antenatal care and skilled delivery, availability of antenatal care clinics and delivery services and the number of healthcare workers at antenatal care and maternity had an increasing association with male partner involvement.

6.2 Recommendation

6.2.1 Recommendations for practice

The principal researcher recommends the following on male partner involvement with regards to:

1. The two levels of government through the Ministry of Health should create awareness campaigns and public education with a targeted message on negative cultural practices/mindset that hinder male partner involvement in maternal health services in the Bumula sub-county.
2. Male health workers should be used as the champions to promote male partner involvement in antenatal care and skilled delivery attendance by countering negative cultural beliefs both at the community level and health facility level.
3. Health care services being a devolved function, the county government of Bungoma should improve health facility infrastructures and personnel at the sub-county level to facilitate and provide specialised maternal services that accommodate male partner involvement. Besides, it is the duty of the officer in charge of the health facilities to enforce good behaviour amongst its workforce to enhance a positive attitude towards male involvement in the said services.

6.2.2 Recommendations for policy implementation

1. Kenya ministry of health should assess, review and strengthen the policy on male involvement in maternal services to ensure acceptable full implementation to promote male partners involvement in antenatal care and skilled delivery attendance.
2. The MOH both at National and County level to modify the current birth plan to include an antenatal care plan.

6.2.3 Suggestions for further study

1. The researcher also suggested further study to interrogate reproductive policies that came up after devolution to understand the involvement of male partners in maternal health services within counties.

REFERENCES

- Aborigo, R. A., Reidpath, D. D., Oduro, A. R., & Allotey, P. (2018). Male involvement in maternal health: perspectives of opinion leaders. *BMC pregnancy and childbirth*, *18*(1), 1-10.
- Alio, A. P., Lewis, C. A., Scarborough, K., Harris, K., & Fiscella, K. (2013). A community perspective on the role of fathers during pregnancy: a qualitative study. *BMC pregnancy and childbirth*, *13*(1), 60.
- Aluisio, A. R., Bosire, R., Betz, B., Gatuguta, A., Kiarie, J. N., Nduati, R. ...& Farquhar, C. (2016). Male partner participation in antenatal clinic services is associated with improved HIV-free survival among infants in Nairobi, Kenya: a prospective cohort study. *Journal of acquired immune deficiency syndromes (1999)*, *73*(2), 169.
- Alupo, P., Atim, E. R., Kaggwa, H., Mudondo, C., Ogallo, C., Ogwang, J. ... & Nteziyaremye, J. (2020). Male Partner Involvement In The Utilization Of Antenatal Care Services In Kidera, Buyende District, Uganda: Cross Sectional Mixed Methods Study.
- Amoakoh-Coleman, M., Ansah, E. K., Agyepong, I. A., Grobbee, D. E., Kayode, G. A., & Klipstein-Grobusch, K. (2015). Predictors of skilled attendance at delivery among antenatal clinic attendants in Ghana: a cross-sectional study of population data. *BMJ Open*, *5*(5).
- Ampt, F., Mon, M. M., Than, K. K., Khin, M. M., Agius, P. A., Morgan, C., Luchters, S. (2015). Correlates of male involvement in maternal and newborn health: a cross-sectional study of men in a peri-urban region of Myanmar. *BMC pregnancy and childbirth*, *15*, 122. Doi: 10.1186/s12884-015-0561-9
- Andersson, E., Norman, Å. Kanlinder, C., & Plantin, L. (2016). What do expectant fathers expect of antenatal care in Sweden? A cross-sectional study. *Sexual & Reproductive Healthcare*, *9*, 27-34.
- Annoon, Y., Hormenu, T., Ahinkorah, B. O., Seidu, A. A., Ameyaw, E. K., & Sambah, F. (2020). Perception of pregnant women on barriers to male involvement in antenatal care in Sekondi, Ghana. *Heliyon*, *6*(7), e04434.
- Bhatta, D. N., & Aryal, U. R. (2015). Paternal factors and inequity associated with access to maternal health care service utilization in Nepal: a community based cross-sectional study. *PLoS One*, *10*(6), e0130380.
- Bhowmik, J., Biswas, R. K., & Woldegiorgis, M. (2019). Antenatal care and skilled birth attendance in Bangladesh are influenced by female education and family affordability: BDHS 2014. *Public health*, *170*, 113-121.
- Bhusal, C. K., & Bhattarai, S. (2018). Social Factors Associated with Involvement of Husband in Birth Preparedness Plan and Complication Readiness in Dang District, Nepal. *Journal of Community Medicine & Health Education*, *8*(06).

- Bishwajit, G., Tang, S., Yaya, S., Ide, S., Fu, H., Wang, M. ... & Feng, Z. (2017). Factors associated with male involvement in reproductive care in Bangladesh. *BMC Public Health*, 17(1), 1-8.
- Bishwajit, G., Tang, S., Yaya, S., Ide, S., Fu, H., Wang, M. ... & Feng, Z. (2017). Factors associated with male involvement in reproductive care in Bangladesh. *BMC Public Health*, 17(1), 1-8.
- Byamugisha, R., Tumwine, J.K., Semiyaga, N. and Tylleskär, T. (2010). Attitudes to routine HIV Counseling and testing, and knowledge about prevention of mother to child transmission of HIV in eastern Uganda: a cross-sectional survey among antenatal attendees. *Reprod Health*, 10(12): 7-12.
- Chibwae, A., Kapesa, A., Jahanpour, O. L. A., Seni, J., Basinda, N., Kadelya, E., ... & Dewey, D. (2018). Attendance of male partners to different reproductive health services in Shinyanga District, Northwestern Tanzania. *Tanzania Journal of Health Research*, 20(2).
- Craymah, J. P., Oppong, R. K., & Tuoyire, D. A. (2017). Male involvement in maternal health care at Anomabo, central Region, Ghana. *International Journal of reproductive medicine*, 2017.
- Dansowaa, D.O. E R., (2013). Male partner involvement in maternity care in Ablekumasouth district, Accra, Ghana. *University of Ghana*<http://ugspace.ug.edu.gh>
- Davis, J. L., & Holmes, S. W. (2012). Men and maternal and newborn health: benefits harm challenges and potential strategies for engaging men. Melbourne, Australia: *Compass: women and children's health knowledge Hub*.
- Eddy, B. P., & Fife, S. T. (2020). Active husband involvement during pregnancy: A grounded theory. *Family Relations*.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behaviour Research Methods*, 41, 1149-1160. doi:10.3758/BRM.41.4.1149
- Forbes, F., Wynter, K., Wade, C., Zeleke, B. M., & Fisher, J. (2018). Male partner attendance at antenatal care and adherence to antenatal care guidelines: secondary analysis of 2011 Ethiopian demographic and health survey data. *BMC pregnancy and childbirth*, 18(1), 1-11.
- Francis, K. J., Kisovi, L. M., & Otor, S. O. C. (2018). Maternal and Child Well-being Programmes' factors as determinants of male partner's level of participation in the programmes in Kiambu County, Kenya.
- Ghimire, A & Pun, K. (2017). Male Involvement in Maternal and Infant Health Care, Banke, Nepal. *International Journal of Nursing Research and Practice (IJNRP)*. 4. 10.15509/IJNRP.2017.4.1.342.

- Gibore, N. S., Ezekiel, M. J., Meremo, A., Munyogwa, M. J., & Kibusi, S. M. (2019). Determinants of men's involvement in maternity care in Dodoma Region, Central Tanzania. *Journal of pregnancy*, 2019.
- GoK (2014). National Survey on male involvement in family planning and reproductive health in Kenya. National Council of Population and Development 2014. *Government Printers*.
- Greenspan, J. A., Chebet, J. J., Mpembeni, R., Mosha, I., Mpunga, M., Winch, P. J. ... & McMahon, S. A. (2019). Men's roles in care-seeking for maternal and newborn health: a qualitative study applying the three delays model to male involvement in Morogoro Region, Tanzania. *BMC pregnancy and childbirth*, 19(1), 1-12.
- Jennings, L, Na, M, Cherewick, M., Hindin, M., & Mullany, B., Ahmed S (2014). Women's empowerment and male involvement in antenatal care: Analyses of Demographic and Health Surveys (DHS) in selected African countries. *BMC Pregnancy Childbirth*. 2014 Aug 30; 14:297
- Kabakyenga, J.K., Ostergren, P.O., Turyakira, E., & Pettersson, K.O., (2012): Influence of birth preparedness, decision-making on the location of birth and assistance by skilled birth attendants among women in south western Uganda. *PLOS ONE*; 7
- Kabanga, E., Chibwae, A., Basinda, N., & Morona, D. (2019). Prevalence of male partners involvement in antenatal care visits—in Kyela district, Mbeya. *BMC pregnancy and childbirth*, 19(1), 1-6.
- Kariuki, K. F., & Seruwagi, G. K. (2016). Determinants of male partner involvement in antenatal care in Wakiso District, Uganda. *Journal of Advances in Medicine and Medical Research*, 1-15.
- Kenya Demographic Health Survey (KDHS), (2014). Kenya National Bureau of Statistics (KNBS) and ICF Macro. *Kenya Demographic and Health Survey*.
- Kidero, E. A. (2014). Exploring Male Attitudes on Involvement in Antenatal Care: The Case of Prevention of Mother-to-child Transmission of HIV University of Nairobi).
- Kiptoo, S. K., Kipmerewo, M, Mutai, C. (2016): Male partner involvement on maternal care services during the perinatal period in Mumias East and West sub-counties. Masinde Muliro University of science and technology. *IJAR*: 1219-1232
- KNBS (2017). Kenya National Bureau of Statistics – Economic Survey 2017. <https://www.theelephant.info/documents/kenya-national-bureau-of-statistics-economic-survey-2017/>.
- Kumbeni, M. T., Ziba, F. A., Alem, J. N., & Nborah, S. A. (2019). Factors Influencing Male Involvement in Antenatal Care in the Kassena Nankana Municipal in the Upper East Region, Ghana. *European Scientific Journal*, 15, 21.

- Lowe, M., Chen, D. R., & Huang, S. L. (2016). Social and cultural factors affecting maternal health in the rural Gambia: an exploratory qualitative study. *PloS one*, *11(9)*, e0163653.
- Mackert, M., Guadagno, M., Lazard, A., Donovan, E., Rochlen, A., Garcia, A., ... & Crook, B. (2018). Engaging men in prenatal health via eHealth: findings from a national survey. *JMIR paediatrics and parenting*, *1(2)*, e7.
- Maluka, S. O., & Peneza, A. K. (2018). Perceptions on male involvement in pregnancy and childbirth in Masasi District, Tanzania: a qualitative study. *Reproductive health*, *15(1)*, 1-7.
- Mangeni, J. N, Mwangi A, Mbugua S, Mukthar V. (2013) Male involvement in maternal health as a determinant of the utilization of skilled birth attendants in Kenya. *DHS Working Papers*
- Marzo, R. R., Ahmad, A., Xit, G. V. Q., Ming, N. C., Win, M. T., Talukder, T., & Naidu, J. R. (2018). A study of involvement in maternal health by male counterpart in the family in Muar district.
- Matseke, M. G., Ruiter, R. A., Rodriguez, V. J., Peltzer, K., Setswe, G., & Sifunda, S. (2017). Factors associated with male partner involvement in programs for the prevention of mother-to-child transmission of HIV in rural South Africa. *International journal of environmental research and public health*, *14(11)*, 1333.
- Mbadugha, C. J., Anetekhai, C. J., Obiekwu, A. L., Okonkwo, I., & Ingwu, J. A. (2019). Adult male involvement in maternity care in Enugu State, Nigeria: A cross-sectional study.
- Metwally, A. M., Abdel-Latif, G. A., El Etreby, L., Tawfik, A., Elsayed, D., & Mohsen, A. M. A. (2015). Influence of sociodemographic factors and environmental conditions on husbands' behaviour toward maternal healthcare. *Journal of the Arab Society for Medical Research*, *10(1)*, 18.
- Ministry of Health, Bungoma County. County Health Records and Information office (2016)
- 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.
- Mohammed, B. H., Johnston, J. M., Vackova, D., Hassen, S. M., & Yi, H. (2019). The role of the male partner in the utilization of maternal health care services in Ethiopia: a community-based couple study. *BMC pregnancy and childbirth*, *19(1)*, 28.
- Mohammed, B.H. (2019). Role of the male partner in the utilization of maternal health care services. *Journal of Pregnancy and childbirth*. Biomed central Africa.

- Mugenda, O. M. & Mugenda, A. G (2003): Research Methods. Quantitative & Qualitative Approaches. *Press African Center for Technology Studies (ACTS)*.
- National AIDS and STI Control Programme, Ministry of Health, Kenya. *AIDS in Kenya, 9th ed. Nairobi: NASCOP; 2014.*
- Naume, Z.C. (2015): On the Margins of Health Care Provision: Delivering at Home in Harare, Zimbabwe. *International Journal of Recent Research in Social Sciences and Humanities (IJRSSH)*. Vol. 2, Issue 2, pp: (28-39)
- Nesane, K., Maputle, S. M., & Shilubane, H. (2016). Male partners' views of involvement in maternal healthcare services at Makhado Municipality clinics, Limpopo Province, South Africa. *African journal of primary health care & family medicine*, 8(2), 1-5.
- Nigusie, A., Azale, T., & Yitayal, M. (2020). Institutional delivery service utilization and associated factors in Ethiopia: a systematic review and META-analysis. *BMC pregnancy and childbirth*, 20(1), 1-25.
- Nuamah, G. B., Agyei-Baffour, P., Akohene, K. M., Boateng, D., Dobin, D., & Addai-Donkor, K. (2016). Incentives to yield to Obstetric Referrals in deprived areas of Amansie West district in the Ashanti Region, Ghana. *International Journal for Equity in Health*, 15(1), 1-10.
- Nungari, G.M. (2014): Factors influencing male participation in antenatal care in Kenyatta National Hospital. *Research report submitted to University of Nairobi*
- Nyandieka, L. N., Njeru, M. K., Ng'ang'a, Z., Echoka, E., & Kombe, Y. (2016). Male involvement in maternal health planning key to utilization of skilled birth services in Malindi Subcounty, Kenya. *Advances in Public Health*, 2016.
- Onchong'a, J.M., Were, T., & Osero, J.O, S. (2016). Male partner involvement in the choice of delivery site. *Afr J Reprod Health*. 20 (1) 71-79
- Ongeso, A., & Okoth, B. (2018). Factors influencing male involvement in antenatal care among clients attending antenatal clinic: a case of Kenyatta National Hospital, Kenya. *International Journal of Advanced Research*, 6(5), 72-82.
- Ongolly, F. K., & Bukachi, S. A. (2019). Barriers to men's involvement in antenatal and postnatal care in Butula, western Kenya. *African journal of primary health care & family medicine*, 11(1), 1-7.
- Osofi, A. O. Stewart- John., & Farquhar, C. (2014). Home-based HIV testing for men preferred over facility-based testing in Kenya: a randomized clinical trial. *AIDS (London, England)*, 28(1), 95.
- Ouma, G., Karanja, S., & Udu, R. (2018). Factors influencing male involvement in safe motherhood among communities in Kwale and Kilifi In Coastal Kenya. *Global Journal of Health Sciences*, 3(3), 1-23.

- Paavilainen, M. (2013). Men's Socio-Demographic Background and Maternal Health Care Utilization in Ethiopia
- Pokharel, S. A review on factor influencing the involvement of the male partner in antenatal care in Nepal.
- Rahman, A. E., Perkins, J., Islam, S., Siddique, A. B., Moinuddin, M., Anwar, M. R. ...& Hoque, D. M. E. (2018). Knowledge and involvement of husbands in maternal and newborn health in rural Bangladesh. *BMC pregnancy and childbirth*, 18(1), 1-12.
- Redshaw, M., & Henderson, J. (2013). Fathers' engagement in pregnancy and childbirth: evidence from a national survey. *BMC pregnancy and childbirth*, 13(1), 70.
- Rotich, B. F., Aura-Odhiambo, R. A., & Muthoka, S. (2019). The Influence of Male Spouse Participation in Maternal Utilisation of Antenatal Care in Njoro Town, Nakuru County, Kenya.
- Sarvar, R. and Sonavane, R. (2018). Male involvement in antenatal and natal care practices of their partners – a community-based study in the rural area of North Karnataka. DOI: <https://doi.org/10.17511/ijphr.2018.i2.07>. <https://publichealth.medresearch.in/index.php/ijphr/article/view/88/141>
- Shahjahan, M., Mumu, S. J., Afroz, A., Chowdhury, H. A., Kabir, R., & Ahmed, K. (2013). Determinants of male participation in reproductive healthcare services: a cross-sectional study. *Reproductive health*, 10(1), 27.
- Sham-Una Umar (2015). Factors influencing male participation in Antenatal Care in the Kumasi Metropolis, Ghana. Masters Dissertation. Kwame Nkrumah University of Science and Technology.
- Sharma, S., Bhuvan, K. C., & Khatri, A. (2018). Factors influencing male participation in reproductive health: a qualitative study. *Journal of multidisciplinary healthcare*, 11, 601.
- Shiyagaya, K. N. (2016). Level of male involvement and factors influencing involvement in the prevention of mother-to-child transmission of HIV in the Oshakati, Oshana Region (Doctoral dissertation, University of Namibia).
- Singh, A.S., & Masuku, M. B (2012): Fundamentals of applied research and sampling techniques. *International Jr. of Medical and Applied Sciences*, 2(4), 124-132.
- UNICEF, Liverpool School of Tropical Medicine. Gender influences on child survival, health and nutrition: a narrative review. *New York: UNICEF; 2013*.
- United Nations Children's Fund (UNICEF), Delivery Care, New York, NY, USA, 2017, <http://data.unicef.org/topic/maternal-health/delivery-care/>.

- United Nations Population Fund (2015). Male involvement in reproductive health, including family planning and sexual health. 2015. *WHO recommendations on health promotion interventions for maternal and newborn health*. 2015a; WHO: Geneva.
- Vermeulen, E., Miltenburg, A. S., Barras, J., Maselle, N., Van Elteren, M., & Van Roosmalen, J. (2016). Opportunities for male involvement during pregnancy in Magu district, rural Tanzania. *BMC pregnancy and childbirth*, *16*(1), 1-9.
- Wai, K. M., Shibanuma, A., Oo, N. N., Fillman, T. J., Saw, Y. M., & Jimba, M. (2015). Are husbands involving in their spouses' utilization of maternal care services? a cross-sectional study in Yangon, Myanmar. *PloS one*, *10*(12), e0144135.
- Wassie, L., Bekele, A., Ismael A., Tariku, N., Heran A., Getnet, M., Mitike M., Adamu, A., & Seifu H. (2014): Magnitude and factors that affect males' involvement in deciding partners' place of delivery in Tiyo District of Oromia Region, Ethiopia. *Ethiop. J. Health Dev.* 2014; (Special Issue 1).
- WHO World health organization (2015) b Practical guide to implementing safe motherhood in countries. *WHO/FHE/MSM/2012.11*. Safe motherhood programme. Geneva. UNICEF. Maternal mortality in 2013: *Estimates developed by WHO, UNICEF, UNFPA, and the World Bank*. Geneva.
- Wicaksono, F. (2016). Impact of husband's participation in antenatal care on the use of skilled birth attendants. *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*, *10*(4), 162-168.
- Worku, M., Boru, B., Amano, A., & Musa, A. (2020). Male involvement and associated factors in birth preparedness and complication readiness in Debre Berhan town, North-East Ethiopia. *The Pan African Medical Journal*, *35*.
- World Health Organization (2015). *Integrated management of pregnancy and childbirth: A guide for essential practise, 2015 3rd edition*
- Yargawa, J. & Leonardi-Bee, J. (2015). Male involvement and maternal health outcomes: systematic review and meta-analysis. *Journal of epidemiology and community health*, jech-2014.
- Yende, N., Van Rie, A., West, N. S., Bassett, J., & Schwartz, S. R. (2017). Acceptability and preferences among men and women for male involvement in antenatal care. *Journal of pregnancy*, 2017.
- Younas, M., Parpio, Y., Saeed Ali, T., & Awan, S. (2020). Male partners' knowledge and practices of antenatal care in district Swat, Khyber Pakhtunkhwa, Pakistan: A cross-sectional study. *Journal of Midwifery and Reproductive Health*, *8*(1), 2005-2015.
- Zakaria, M., Khan, A. K. M., Ahmad, M., Cheng, F., & Xu, J. (2021, April). Women's Perception of Male Involvement in Antenatal, Childbirth and Postnatal Care in Urban Slum Areas in Bangladesh: A Community-Based Cross-Sectional Study.

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APPENDICES

Appendix I: Consent Form

I am Rose A.M. Nyang'au, a clinical officer and a researcher currently studying Master of Science in Public Health at Masinde Muliro University of Science and Technology. I invite you to participate in the study "Male Partner Involvement in promoting skilled ANC and Delivery in Bumula Sub- County.

What is the purpose of the study?

The purpose of the study is to determine the level of male partner involvement in ANC and delivery care of their partners and factors influencing their involvement to inform policy in order to improve maternal outcomes

How about the procedure

The questionnaire will be used to obtain information by answering questions and for Focused Group Discussion the proceedings will be taped and noted.

What are the benefits of the study?

The study will help in understanding the need of men adequately in supporting their partners during pregnancy and childbirth. This will also assist to understand the role of male partners during this period. The results will help inform policy on the challenges partners face and strategies on how to improve maternal outcomes.

What are the risks of the Study?

The process of the study especially during the collection of data may bring about psychological stress upon recalling a sad moment especially if he does not support his wife.

The male partner may feel guilty for not fulfilling the expected responsibility towards his wife during the interview.

Confidentiality

The information about what I observe or what you provide during the study will be kept confidential. Questionnaires will be administered to male partners only. Only the Principal Investigator and the interviewers will have access to the information. The information will be kept under lock and key by the Principal Investigator during the study.

Contact information of the Principal investigator

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OR

Dr Tom Were

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Dr. Maximilla Wanzalla

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Participant's Sign.....

Date

Investigator's Sign.....

Date

Appendix 11: Male Respondent Questionnaire

Instructions: (Please read the instructions given and answer the questions as appropriately as possible). You should answer or fill in each section as provided. Attempt to answer every question fully and correctly.

A: Socio-demographic data:

1. What is your age?
2. What is your level of education
a) None, b) Primary c) Secondary d) College e) University
3. What is your marital status:.....
4. What type of marriage are you in? a) Monogamy b) Polygamy c) any other
5. How many children do you have? a) one b) more than one
6. What is the position of the youngest child-----
7. What is your monthly level of income?
a) Below Ksh.24, 000 b) Above Ksh. 24,000
8. Were you living together with your husband at the time of your pregnancy?
 Yes =1 No =2
9. If no, where was your partner? -----

B. Level of Male partner involvement during Antenatal Care and delivery:

1. Did you and your partner plan for where to seek ANC and skilled delivery during the last pregnancy of your partner?
 Yes =1
 No =2
2. Explain your answer.....
3. Did you accompany your partner for any of the clinic appointments?
 Yes =1
 No =2
4. What about during delivery?
 Yes =1 No =2
5. Explain your answer.....
6. Apart from accompanying her for services, how else were you involved to support your partner to seek services?-----
7. Do you think men are adequately involved during antenatal and skilled delivery of their partners? A) Yes B) No

8. In your own opinion, do you think adequate male involvement in antenatal care and skilled delivery services can promote utilization of these services by their female counterparts? A) Yes B) No

9. In your own opinion, what needs to be done to adequately involve men in antenatal care and skilled delivery services?.....

Part III: Health system factors influencing Male partner involvement in promoting skilled ANC and delivery:

1. How far is it from your residence?
 [] 1-5 kms [] Above 5 kms
2. Approximately how long did it take for your partner in receiving ANC services?.....
3. What about during delivery.....
4. Did you pay for ANC services?.....
5. What about delivery services?
6. When you visited the clinic, did your partner receive the services that you went for?
7. Which services didn't your partner receive? A) yes B) No
8. When you visited the clinic did your partner and you have a chair to sit on?
 A) Yes B) No
9. How many health workers were in the antenatal clinic during the time you accompanied your partner to the clinic? A) one B) More than 2
10. What about in the labour ward? A) one B) More than 2

11. What do you think are the issues in the antenatal clinic that would make men not accompany their partners?
12. How do you rate the attitude of health workers at the clinic?
13. Friendly B) Unfriendly
14. What do you think makes men be less involved in the antenatal care services of their wives?

.....

15. What about during delivery?

.....
.....

16. What would you suggest to improve the clinic's environment to be conducive for the men?

.....
.....
.....

17. What strategies do you think we can use to get more men involved in promoting antenatal clinics and skilled delivery?

.....
.....
.....

Thank you very much for your time and for sharing your opinion on the issues discussed.

Appendix 1I1: Focus Group Discussion Guide for Male Partners

Introduction (name, work, etc.)

Discussion questions guide

Qn.1 What is your opinion on male involvement during the Antenatal Care period of their partners? What about during delivery?

Qn. 2 Is it common for male partners to be involved in planning for ANC services with their partners? What of skilled delivery services? What are some of the reasons for involvement in planning/ reasons for non-involvement for planning?

Qn.3 What are the perceptions about men accompanying their wives for ANC services? What about delivery? What about other people in your community?

Qn.4 Apart from accompaniment, how are men in this community involved during the antenatal period of their wives? What about during delivery?

Qn.5 What are the hindrances for male involvement in the care and support of their expectant wives during ANC? What about during delivery?

Qn.6 What can be done to have them more involved during the antenatal period of their partners? What about during delivery

Qn.7 What further comments can you make on the issues we have been discussing?

Thank you very much for your time and for sharing your opinion on the issues discussed.

**Appendix 1V: Key Informant Interview Guide for Community Health Volunteers
(CHVs)**

Introduction (Name, work, etc.)

Discussion questions guide

Qn. 1 What is your opinion on male involvement in pregnancy care of their wives?

What about during delivery?

Qn. 2 how do you rate the level of male involvement in antenatal services of their female partners? What about during skilled delivery?

Qn. 3 are men in this community involved in planning for ANC services of their partners? What about during delivery? Why are they involved in planning not involved in planning?

Qn. 4 Do they accompany their wives for antenatal care services? What about during delivery? How else are they involved? For those who accompany, / don't what are the main reasons?

Qn. 5 What are the challenges that hinder men from being involved during antenatal care of their wives? What about during delivery?

Qn. 6 What needs to be done to have them more involved?

Qn. 8 What further comments can you make on the issues we have been discussing?

Thank you very much for your time and for sharing your opinion on the issues discussed

Appendix V: Observation Checklist

Observations checklist for direct observation at health facilities:

1. Available service charters in visited facilities
2. Clinic opening hours and closing hours
3. Adequate space to accommodate male partners at ANC and Maternity departments
in the waiting bay
4. Available chairs for couples in examination rooms
5. Privacy in the examination room
6. Female partners receiving services with their male partners at ANC
7. Female partners receiving services with their male partners at delivery services
8. Number of health care providers at antenatal care clinics
9. Number of health care providers at delivery rooms
10. Maternity services are available 24 hours

Appendix VI: Map of Bumula Sub-County

IEBC REVISED BUMULA CONSTITUENCY COUNTY ASSEMBLY WARDS



Appendix VII: Checklist of the Level of Male Partner Involvement

Facility		Yes	No
1. Male partners accompanying their spouses to ANC			
Kibuke Dispensary	Level II		×
Miluki Dispensary	Level II		×
Khasoko Dispensary	Level II		×
Kabula Health Centre	Level III	√	
Kimaeti Health Centre	Level III	√	
Siboti Health Centre	Level III	√	
Bumula sub-county hospital	Level IV	√	
2. Male partners accompanying their spouses to delivery services			
Kibuke Dispensary	Level II		×
Miluki Dispensary	Level II	√	
Khasoko Dispensary	Level II		×
Kabula Health Centre	Level III	√	
Kimaeti Health Centre	Level III		×
Siboti Health Centre	Level III		×
Bumula sub-county hospital	Level IV	√	
3. Male partners in consultation rooms receiving services with their female partners at ANC			
Kibuke Dispensary	Level II		×
Miluki Dispensary	Level II		×
Khasoko Dispensary	Level II		×
Kabula Health Centre	Level III		×
Kimaeti Health Centre	Level III		×
Siboti Health Centre	Level III		×
Bumula sub-county hospital	Level IV		×
4. Male partners seen at the maternity labour wards			
Kibuke Dispensary	Level II		×
Miluki Dispensary	Level II		×
Khasoko Dispensary	Level II		×
Kabula Health Centre	Level III		×
Kimaeti Health Centre	Level III		×
Siboti Health Centre	Level III		×
Bumula sub-county hospital	Level IV	√	

Appendix VIII: Checklist on the Health Facility Predictors of Male Involvement

Facility		Yes	No
1. Available service charter with male-friendly services on it			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula sub-county hospital	Level IV		√
2. ANC opens at 0800hrs and closes at 1700hrs			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula sub-county hospital	Level IV		√
3. Adequate space to accommodate male partners at ANC and Maternity departments in the waiting bay			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III	√	
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III	√	
Bumula sub-county hospital	Level IV		√
4. Privacy in the examination room			
Kibuke Dispensary	Level II	√	
Miluki Dispensary	Level II	√	
Khasoko Dispensary	Level II	√	
Kabula Health Centre	Level III	√	
Kimaeti Health Centre	Level III	√	
Siboti Health Centre	Level III	√	
Bumula sub-county hospital	Level IV	√	
5. Were there adequate health care providers at ANC			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula sub-county hospital	Level IV		√
6. Were there adequate health care providers at delivery rooms			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√

Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula sub-county hospital	Level IV		√
7. Maternity services are available 24 hours			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II	√	
Kabula Health Centre	Level III	√	
Kimaeti Health Centre	Level III	√	
Siboti Health Centre	Level III	√	
Bumula sub-county hospital	Level IV	√	
8. Availability of ultrasound services			
Kibuke Dispensary	Level II		×
Miluki Dispensary	Level II		×
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula sub-county hospital	Level IV		√
Bumula sub-county hospital	Level IV		√
9. Availability of blood transfusion× services			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula sub-county hospital	Level IV		√
Bumula sub-county hospital	Level IV	√	
10. Availability of functional operations theatre			
Kibuke Dispensary	Level II		√
Miluki Dispensary	Level II		√
Khasoko Dispensary	Level II		√
Kabula Health Centre	Level III		√
Kimaeti Health Centre	Level III		√
Siboti Health Centre	Level III		√
Bumula Sub-County hospital	Level IV		√
Bumula Sub-County hospital	Level IV		√

FIELD IMAGES



The Service Charter at Bumula sub-county hospital MCH department



Waiting bay at Bumula sub-county hospital MCH department



ANC clinic registration room in Kabula Health Centre