

ASSESSING MEN'S KNOWLEDGE AND PERCEPTIONS OF MALE INVOLVEMENT IN
MATERNAL AND CHILD HEALTH SERVICES AND THEIR INFLUENCE ON CLINIC
ATTENDANCE IN SUBA SUB COUNTY, KENYA

BY

NOEL OTIENO ODHIAMBO

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DECLARATION

This research thesis is my original work and has not been presented in any other college or university for a degree.

PROPOSED BY:

Noel Otieno Odhiambo Sign..... Date.....
PG/MPH/00021/2013.

SUPERVISORS:

This research thesis has been submitted for examination with our approval as university supervisor.

1. Sign..... Date.....

Dr. Harrysone Atieli (PhD)

Department of Public Health,
School of public health and community development.

2. Sign..... Date.....

Dr. Louisa Ndunyu (PhD)

Department of Public Health,
School of public health and community development.

DEDICATION

I would wish to appreciate the role of my beloved wife Maurine who offered assistance amid her household chores to this end. My children, Audrey, Jayden and Meyer, for the time I spent without their companies to enable me accomplish my work.

Lastly, I wish to extend my regards to my parents the late Kepha and Mary Odhiambo for their love for education that provided the drive towards this work.

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ABSTRACT

Male Involvement (MI) in Maternal and Child Health (MCH) services such as pre-conception care, antenatal care (ANC), prevention of mother-to-child transmission (PMTCT) of HIV, skilled birth and management of birth complications, is an intervention that plays a crucial role in improving MCH outcomes. Increased utilization of MCH services is an essential package in reducing the risks associated with pregnancy and child bearing since mothers may develop serious life-threatening complications. However, MI survey done in Kenya estimates men's participation in reproductive health to be < 30% against the target of > 30% by Kenya PMTCT guidelines of 2016. This study therefore sought to assess men's knowledge in MCH, perceptions of MI in MCH services and attendance in MCH clinic in Suba Sub County Hospital. The specific objectives were to determine men's attendance in MCH clinic, men's knowledge in MCH services, men's perceptions of MI in MCH and to evaluate strategies from men to increase male involvement in MCH services. This cross-sectional study conducted in 2016 among 354 participants, assessed men's attendance, knowledge and perception of MI in MCH services. Both qualitative and quantitative data were collected. A pre-tested questionnaire was administered and Focus Group discussions and Key Informant Interviews were conducted to consented participants by the Community Health Volunteers. In bivariate analyses, odds ratios (OR) at 95% confidence intervals (CI) was used for the association between the proportion of men who accompanied their spouse (s) to the clinic, their demographics and knowledge. In multivariate analyses, adjusted odds ratios was used to calculate the independent variables that were associated with clinic attendance. Perceptions characteristics was calculated using Poisson regression. The response rate was 352/354 (99.4%) with men attendance to MCH services at 58/352 (16.3%). Health worker provider's attitude towards men (OR=0.5, 95%CI [0.3-0.8] p= 0.005), men's preferred time of attending MCH clinic (OR=6.7, 95%CI [1.1-43.5] p= 0.05), the frequency of men accompanying spouse to MCH clinic (OR=0.1, 95%CI [0.04-0.3] p= 0.001), duration taken to reach MCH clinic (OR=5.6, 95%CI [1.3-24.6] p= 0.023), use of family planning methods (OR=0.36, 95%CI [0.18-0.72] p= 0.004 and awareness about the methods used to reduce HIV mother to child transmission (OR=35, 95%CI [0.19-0.65] p= 0.01), were independently associated with men's attendance in the MCH clinics. Sensitization of men about reproductive health services by the relevant authorities in order to increase their awareness and knowledge to increase their involvement in MCH were among the suggested interventions. In conclusion, there was significantly low male involvement in MCH services (16.3% compared to the > 30% targets by Kenya PMTCT guidelines, 2012). Low MI was associated with men's knowledge in MCH services and perceptions of MI in Suba Sub-county. Enhance dissemination and awareness creation on the importance of MI in MCH services could improve male involvement.

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ABBREVIATIONS/ACRONYMS

AIDS - Acquired Immune Deficiency Syndrome

ANC – Antenatal Care

CI – Confidence Interval

CHV- Community Health Volunteer

ERC – Ethical Review Committee

EMTCT – Elimination of Mother to Child Transmission of HIV

FP – Family Planning

FGDs- Focus Group Discussions

HIV - Human Immunodeficiency Virus

HTC - HIV Testing and Counseling

HCW – Health Care Worker

KDHS- Kenya Demographic Health Survey

KIIs- Key Informant Interviews

MCH - Maternal and Child Health

MI – Male Involvement

MTCT - Mother to Child Transmission

MDG - Millennium Development Goals

MOH – Ministry of Health

MPH - Master of Public Health

NASCOP - National AIDS and STD Control Programme

PMTCT - Prevention of Mother to Child HIV transmission

PIN – Participants Identification Number

STI - Sexual Transmitted Disease

UN – United Nations

UNAIDS - Joint United Nations Programme on HIV and AIDS

UNICEF - United Nations Children's Fund

VCT - Voluntary Counseling and Testing

WHO – World Health Organization

DEFINITION OF TERMS

Antenatal Care Clinic: A clinic attended by pregnant women until birth to monitor the growth of the fetus and to treat any infections e.g. STI.

Culture: A set of ideas, beliefs and ways of behaving of a particular group of people or organization.

Community Health Volunteers: Liaison officers in the community units and the hospital.

Community Unit: A health service delivery structure within defined geographical area covering a population of approximately 5000 people.

Maternal and Child Health Services: Are health services provided to mothers (women in their child bearing age) and children to improve their health and reduce their mortality due to complications arising from pregnancy, giving birth and after birth. They include services in Prevention of Mother to Child of HIV Transmission (PMTCT), Family Planning (FP) and skilled delivery.

Male Involvement: The act of men accompanying the spouse to MCH clinic to seek for medical interventions or to give birth.

Prevention of Mother to Child Transmission of HIV: An intervention strategy to prevent vertical HIV transmission to children during pregnancy until the age of 18 months.

Vertical Transmission: HIV transmission from HIV infected mother to her baby.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Maternal and Child Mortality remains a significant public health concern globally (WHO, 2016). The global Maternal Mortality Ratio (MMR) was 216 deaths per 100,000 live births whereas in Sub-Saharan Africa, where 87% of the global rates occur, the MMR was 546 deaths per 100,000 live births. This was more than twice the global ratio during the same period (WHO, 2014). Comparatively, in Kenya, the national MMR was 362 maternal deaths per 100,000 live births (KNBS & ICF Macro, 2014). In Homa-Bay County where this study was conducted having MMR of 583 per 100,000 live births higher than the national average (KNBS & ICF Macro, 2014).

HIV infection has been cited by World Health Organization (WHO) as one of the major health indicators associated with Maternal and Child Health outcomes (WHO, 2016). There were an estimated 36.7 million people living with HIV globally in 2016, 1.8 million new infections occurring in the same year, with about 43% of the new infections reported among women of reproductive age. Sub-Saharan Africa accounting for 64% of the new infections (UNAIDS, 2015). Kenya is ranked among the countries with high HIV burden in Africa with an estimated 1.5 million people living with HIV in the country, national prevalence of 5.9 % (KNBS & ICF Macro, 2014). Homa-Bay County where Suba is situated is one of the 47 counties ranked with the highest HIV prevalence of 26%, 4.5 times higher than the national HIV prevalence, its Mother to Child Transmission rate at 16.8% twice the national average (NACC, 2016).

Male involvement in Maternal and Child Health services has been cited to be low according to the Kenya national survey on male involvement (MI) in MCH services (< 30% as described by the PMTCT guidelines, 2012) in all the 47 counties (NCPD, 2014) whereas MI in Maternal and Child Health is associated with improved outcomes (Comrie-Thomson *et al.*, 2015). With highest HIV prevalence and greatest PMTCT need in Homa-Bay County, it was paramount to assess MI, their perceptions of being involved in reproductive health and their knowledge in maternal health services which is unknown in Suba Sub County at the MCH clinic. In this

context male involvement refers to the various ways in which men relates to, supports and attend to reproductive health activities and issues (DeCock, 2012).

Male involvement is a crucial component to optimize MCH services (Alio *et al.*, 2010). Until the 1990's, interventions on maternal health targeted only women, especially promoting women's visits to health facilities for maternal and child health (MCH) services, ignoring that lack of men's involvement significantly contributed to poor health outcomes for both women and children (Nwakwuo & Oshonwoh, 2013). However, recognition that male involvement is critical for improving maternal and child health services led to increased advocacy for male involvement in MCH (Kululanga *et al.*, 2011). This recognition of the impact of male involvement shaped the recommendations made at the 1994 International Conference on Population and Development, which urged interventions that take to account men's shared responsibility in improving MCH. Since the increased focus on male involvement, the role of men in maternal health has been seen as the missing link in improving maternal and child health indicators (Kululanga *et al.*, 2011).

Studies on male participation showed significant positive impact on the maternal and child health (Gungor & Beji, 2007) (Alio *et al.*, 2010) through better decision-making on issues affecting health for their spouses and children, increased disclosure of HIV status with increased likelihood to adopt low risk behaviours, better adoption of HIV of prevention practices including PMTCT and increased compliance to family planning and infant nutrition (Ditekemena *et al.*, 2012). Even though male involvement in reproductive health has gained more visibility, gendered beliefs still define roles and influence how maternal health issues are approached in many parts of the developing world (Yargawa & Leonardi-Bee, 2015). A number of studies have shown that men play an important role in family planning and other maternal health issues (Comrie-Thomson *et al.*, 2015; Gungor & Beji, 2007).

Male involvement has become increasingly important due to the high prevalence of HIV and its effects on maternal and child health in Kenya (KNBS & ICF Macro, 2014). Male involvement in the health of women and children is considered an important avenue for addressing gender influences on maternal and newborn health (Brubaker *et al.*, 2016). However it has remained a challenge because maternal and child bearing issues have long been regarded as a women's

domain and men attending MCH clinics are seen as strangers. Challenging gender inequity through male involvement in maternal healthcare has beneficial consequences for access and could significantly influence the health outcomes of women and children (Comrie-Thomson *et al.*, 2015).

Some studies have found that health interventions that target and involve men are strongly associated with enhanced and better birth outcomes and increased use of skilled maternal healthcare services (Nanjala & Wamalwa, 2012; Nkuoh *et al.*, 2010). This includes safer birth practices, family planning, HIV prevention, birth preparedness, emergency obstetric access, emotional support and partner communication (Ampt *et al.*, 2015; Yargawa & Leonardi-Bee, 2015). Male involvement has been practical in different contexts and found to be beneficial in a number of domains, including safer birth practices, family planning, HIV prevention, partner communication and emotional support (Dudgeon & Inhorn, 2004). In addition to the benefits for women and children, male involvement has potential benefits for men. These include improved quality of paternal and couple relationships, a more valued and constructive role for men, and increased access to, and familiarity with, the health system (Ampt *et al.*, 2015).

There is however little information available on men's levels of knowledge in maternal and child health services with some studies suggesting that men have little or no information, or are otherwise misinformed about maternal and child health (August *et al.*, 2015). A study conducted in Tanzania on Male Involvement showed that 61 percent of men in the study who accompanied their wives or partners to ANC clinics had little or no awareness of the specific components of ANC (August *et al.*, 2015). In another study in Nigeria, the knowledge of Male Involvement by men was low with only 15% of men having knowledge on maternal health including services offered there (Obionu, 1998).

Without proper information, men who are poorly informed or disengaged from pregnancy and childbirth may present serious barriers to women's ability to act in their own and their children's interests (Kabagenyi *et al.*, 2014). Despite their frequent position as primary decision-maker, men tend to be excluded from antenatal health services and spaces in which they could learn more about family planning, pregnancy and childbirth. The exclusion can be socially or

culturally based, in that pregnancy and childbirth is often considered women's domain and there are economic drivers for men to work away from home (Kaye *et al.*, 2014). An exclusive focus on women in maternal health programs may result in health services that are inaccessible to men (Sapkota *et al.*, 2012). This exclusion may mean that men are less able to make informed decisions about reproductive and maternal health, and less willing to engage in such decision-making with their partners (Sapkota *et al.*, 2012).

A number of studies have highlighted the importance of men in making decisions pertaining to maternal health issues and called for male involvement in MCH (Falnes *et al.*, 2011; Gordon *et al.*, 2012). However, the men do not have sufficient knowledge on maternal health issues and that limits women's access to MCH care (Kabakyenga *et al.*, 2011). A study done in Nepal found that men possess little knowledge and experience regarding maternal health, lack of knowledge regarding complications and danger signs during pregnancy and delivery has been frustrating for men and has prevented their involvement (Sapkota *et al.*, 2012). As decision maker for the family, decisions around when, where and even if, a woman should have access to healthcare often falls on men (Sapkota *et al.*, 2012). When men lack sufficient knowledge on health within patriarchal societies where they are both the head and decision makers, the health of their women and that of their children often suffers with women having little control over family finances, little decision making ability and restricted movement in some cases (Nyondo *et al.*, 2013).

Perceptions of male involvement by men plays crucial role in their participation in maternal and child health given the sensitive nature of gender roles and relations in many cultures (Kwambai *et al.*, 2013). Understanding the context of a particular setting, potential barriers that might influence men's perceptions about male involvement, and attitudes towards a new intervention are necessary first steps in designing services that include men in maternal health care (Dumbaugh *et al.*, 2014). Most cultures, especially in Africa, regard pregnancy and delivery as a female domain; therefore, men are often not expected to accompany their wives to the clinic or be present during delivery (Nkuoh *et al.*, 2010). Other barriers such as the perceptions that culturally maternal and child health was a woman's activity, and it was thus shameful for a man to be found in such settings was reported as a barrier to male involvement in maternal health services, demotivating men from attending maternal clinic (Tonwe-Gold *et al.*, 2009).

In other studies, it was part of the cultural norm that men should not participate in antenatal care activities with societal ridicule for men who accompanied their wives to clinic, terming them as being jealous, over-protective of their wives and lacking in self-confidence (Nkuoh *et al.*, 2010; Reuben Mahiti *et al.*, 2017). A study found that women were not allowed to lead in the decisions of accessing health in families, it was inconceivable for a woman to tell a man what to do, and worse still for him to consent to what she says (Falnes *et al.*, 2011). Cultural norm forbids women from taking decisions at home on matters such as antenatal care, family planning and skilled delivery and thus served as a major obstacle to women's efforts of involving their spouses. It was men who would make those decision (Nkuoh *et al.*, 2010).

There have been several strategies discussed to increase male involvement in maternal and child health services. Current policies on maternal and child health place increasing demands for providers to engage male partners. This requisite brings to the fore the ongoing challenges that fathers have historically faced in working within these systems. (Gordon *et al.*, 2012). Without adequate information, men view involvement in ANC and MCH as either an attack on their masculinity, a waste of time, an unnecessary role or intrusion into a woman's field (Brusamento *et al.*, 2012; Sapkota *et al.*, 2012). To increase male involvement and address these views, several strategies that can be used to have been documented in literature. Some of the strategies documented in various studies to improve male involvement in maternal and child health includes inviting men through letters or through antenatal cards for appointment in the clinics, provision of a male-friendly environment that ensures privacy while accompanying his spouse to the clinic, community-based programs that target men at the household level, male education on their involvement, couple counseling, and mass media campaigns (Nyondo *et al.*, 2013).

1.2 Statement of the Problem

Suba Sub County situated in Homa-Bay County has the highest HIV prevalence in the Country. It has the greatest PMTCT intervention need among women of reproductive age compared to the other 46 Counties in Kenya and Mother to Child Transmission rate is double the national average (NACC, 2016). The Kenya national survey done on male involvement in maternal and child health indicated low male involvement in all the 47 counties (<30% as described by the PMTCT guidelines, 2012) (NCPD, 2014). Proportion of men participating in MCH clinic in Suba Sub County hospital is unknown. Other factors that influence male involvement in maternal and child health services include their knowledge and perception of male involvement in maternal services (August *et al.*, 2015). Therefore, men's knowledge and perceptions needs to be investigated in Suba Sub County where this factors have not been studied. Context specific strategies and solutions on male involvement has not been tapped from men's point of view and yet is crucial in informing formulation of policies that is acceptable to the Suba people.

1.3 Objectives of the Study

1.3.1 Broad Objective

To assessing men's knowledge, perceptions of male involvement in MCH services and influence on MCH clinic attendance in Suba Sub-county, Kenya.

1.3.2 Specific Objectives

1. To determine men's attendance of MCH clinics in Suba Sub-county.
2. To assess men's knowledge of male involvement in MCH services and its influence in MCH clinic attendance in Suba Sub-county.
3. To determine men's perceptions of male involvement in MCH services and its influence in MCH clinic attendance in Suba Sub-county.
4. To evaluate views of men on strategies that can be employed to increase male involvement in MCH services in Suba Sub-county.

1.3.3 Research Questions

- 1) What is men's attendance in MCH in Suba Sub-county?
- 2) What is the knowledge of men in MCH services and how does this influence their MCH clinic attendance in Suba Sub-county?
- 3) What are men's perceptions of male involvement in MCH services and how does this influence their MCH clinic attendance in Suba Sub-county?
- 4) What are men's views on strategies that can be employed to improve their involvement in maternal and child health services in Suba Sub-county?

1.4 Significance of the Study

The findings of this study indicated low male involvement in MCH clinic. Despite a lot of advocacy for male involvement in maternal health in literature, in practice it is not happening. Therefore this calls for context specific solutions from local studies to inform on local policies to increase male involvement in maternal health. This is important in providing local and targeted interventions to improved male involvement in maternal health services. Increased male involvement in maternal health care services may lead to increased utilization of maternal health services by women and their children. This may ultimately have an impact on reduction of maternal and infant mortality in Suba Sub-County.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents findings from other studies on male involvement in reproductive health, men's knowledge on maternal and child health services, men's perceptions of male involvement in maternal and child health services and strategies to increase male attendance in maternal and child health clinics. Conceptual and operational framework of the study has also been presented.

2.2 Male Involvement in Maternal and Child Health Services

Reproductive health programmes have for a long time focused on women and left out men in maternal and child health (MCH) services (Alio *et al.*, 2015). Men serves as the gateway to women's access to maternal and child health services (Ampt *et al.*, 2015). Engaging men in services that promote MCH contributes significantly to better health outcomes during pregnancy, at birth and after birth (Alio *et al.*, 2015). Given the dominance of men in social and governance structures such as in political arena, community leadership and at household level, access to health care for women and children have been associated with male involvement in reproductive health matters (Kululanga *et al.*, 2011).

In the past, maternal health subject was predominantly seen and treated as a purely feminine domain (Falnes *et al.*, 2011). This was so because of the notion that women were meant to look after the children for the family according to the study done by Byamugisha et al (Byamugisha, 2010). Although male involvement in maternal and child health services was not given much attention in the past, men played and continue to play a vital role in the health of their female counterparts and children (Nwakwuo & Oshonwoh, 2013). A cross sectional study done in Zimbabwe highlighted the important role played by men in making decision pertaining maternal health and call for male involvement in Antenatal Care Clinic (ANC) and MCH services (Kainz *et al.*, 2010). A study by (Dudgeon & Inhorn, 2004) showed that women's access and utilization of ANC services was associated with their partners involvement in the ANC clinic. A study conducted in Kenya also reiterated that women accompanied by their husbands to the clinic were more likely to visit PMTCT clinics (Onono *et al.*, 2015). Comparatively, another study in Tanzania showed that male involvement during pregnancy increased health seeking behavior of pregnant women (Vermeulen *et al.*, 2016).

Male involvement and its effect on mother and child health is illustrated in PMTCT where the success of the programme is through male partner involvement, mother and child health is addressed as a family responsibility and not just a woman's affair (Theuring *et al.*, 2009). The involvement of both partners in prenatal clinics increase couple HIV testing and adherence to HIV prevention such as use of condoms, use of family planning reducing stigmatization (Ampt *et al.*, 2015). A study conducted in Western Kenya found that Mother-To-Child HIV transmission risk in exposed children was significantly associated with low male involvement in maternal and child health services (Onono *et al.*, 2015). The study also indicated that women whose male partners accompanied them to the antenatal care clinic had lower incidences of Mother-To-Child-Transmission of HIV compared to women whose partners did not take part in PMTCT interventions (Onono *et al.*, 2015).

A cross sectional study conducted in Mbale Regional Referral Hospital, Uganda determined the level of male involvement in the ANC programme and identified determinants of male involvement and found that the majority of men (74%) were not involved in ANC programme, only 5% of men accompanied their spouses to the antenatal clinic (Byamugisha, 2010). Similarly, a qualitative study conducted on a group of Bangladeshi male participants also reported lower participation of men in prenatal clinics because they felt uneasy in discussing reproductive health related issues with their spouses (Shahjahan *et al.*, 2013). The study reported lower numbers of men accompanying their spouses to the healthcare facilities and rarely dealt with issues related to reproductive health interventions (Shahjahan *et al.*, 2013).

2.3 Men's Knowledge on Maternal and Child Health Services

Men who were poorly informed or disengaged from pregnancy and childbirth presented serious barriers to women's ability to act on their own and their children's interests (Falnes *et al.*, 2011). Despite their frequent position as primary decision-makers, men tend to be excluded from health services and spaces in which they could learn more about family planning, pregnancy and childbirth (Sapkota *et al.*, 2012). The exclusion can be due to socio-cultural issues, in that pregnancy and childbirth is often considered women's domain and there are economic drivers for men to work away from home (Falnes *et al.*, 2011). An exclusive focus on women in maternal health programs may result in health services that are inaccessible to men (Falnes *et al.*, 2011).

This exclusion may mean that men are less able to make informed decisions about reproductive and maternal health (Sapkota *et al.*, 2012).

A number of studies have highlighted the important role played by men in making decisions pertaining to maternal health issues and called for male involvement in MCH (Kululanga *et al.*, 2011; Kwambai *et al.*, 2013). However, men lack adequate knowledge on maternal health issues that limits women's access to MCH care (Kululanga *et al.*, 2011; Kwambai *et al.*, 2013). Lack of knowledge regarding complications and danger signs of pregnancy has prevented men from being involved in reproductive health services (Sapkota *et al.*, 2012). Lack of knowledge undoubtedly affects maternal health outcomes. Despite the fact that men may not be knowledgeable in reproductive health related matters, they control the situation through their decision making (Sapkota *et al.*, 2012).

A study done by (Ditekemena *et al.*, 2012) cited that husbands' interest levels and their attempts to support pregnancy health were relatively high, whilst low knowledge levels appeared to pose a significant obstacle to positive involvement (Ditekemena *et al.*, 2012). This study was comparable with another study done in Uganda by (Kaye *et al.*, 2014) which showed that most men were willing to learn about their expected roles during pregnancy and childbirth and were eager to support their partners during pregnancy (Kaye *et al.*, 2014). The same study further cited that health system was unwelcoming, intimidating and unsupportive for men (Kaye *et al.*, 2014). In the same study it was suggested that to improve male involvement in reproductive health included creating more awareness for fathers, male-targeted antenatal education and support, and changing provider attitudes (Kaye *et al.*, 2014).

In Southern Ethiopia male partners with comprehensive knowledge on HIV and AIDS were found to be 1.97 times more likely to be involved in the PMTCT program than those who do not have comprehensive knowledge on HIV and AIDS and this could have been due to the fact that men who did not have comprehensive knowledge on HIV and AIDS may have failed to appreciate the role of men in prevention of HIV infection from mother to child (Yargawa & Leonardi-Bee, 2015). A study done in Nepal also found that men possessed little knowledge and experience regarding maternal health services, lack of knowledge regarding complications and

danger signs during pregnancy and delivery was frustrating for men and had prevented their involvement (Sapkota *et al.*, 2012).

Another finding by (Jooste & Amukugo, 2013) stated that, in general, men do not accompany their female partners when they attend the clinics, nor do they participate fully in the antenatal and post-natal care with their partners because they perceive that there are private issues that are only meant for women and men are not supposed to know (Jooste & Amukugo, 2013). The study further showed that male partners would sit in their car for prolonged hours waiting for their wives at the clinic because they did not understand the services which were offered at the clinic and their expectations in the clinic (Jooste & Amukugo, 2013).

2.4 Men's Perceptions of Male involvement in Maternal and Child Health Services

Men's perceptions about their roles in the reproductive health are generally based on gender expectations, roles and cultural beliefs (Nkuoh *et al.*, 2010). Given the sensitive nature of gender roles and relations in many cultures, a lot of efforts have been put forward to include men in maternal health services (Kululanga *et al.*, 2011). In most cultures, especially in Africa, men regard pregnancy and delivery as a female domain (Nkuoh *et al.*, 2010). Men's perceptions and attitudes were seen as barriers to increasing male involvement in prenatal care and reproductive health. (UNICEF, 2016).

A study done by Tonwe-Gold *et al* indicated that men perceived being involved in woman's affair was shameful and it was an abomination for a man to be found in such settings, this was reported as a barrier for male involvement in prenatal and maternal care (Tonwe-Gold *et al.*, 2009). Similarly in another study men perceptions of being involved in women's reproductive health was reported as barriers for male involvement in maternal care, men who accompanied their spouses to the clinic were ridiculed as being jealous, over-protective of their wives and lacking confidence, touching the very core of their ego (Nkuoh *et al.*, 2010). In most African cultures, women were not allowed to take leadership roles so it was therefore almost inconceivable for the woman to tell the man the importance of being involved in their reproductive health and worse still for him to consent to this. (Nkuoh *et al.*, 2010). Barriers cited for male involvement included inadequate information for men on MCH services, incorrect information of their involvement in reproductive health issues, poor spousal communication about reproductive health, peer influence and community pressure.

A study done by Ditekemena *et al* found that men had negative assumptions on antenatal care, believing that it was a woman's forum and men who were involved were powerless and dominated by their wives thereby facing stigma from their peers because of negative perceptions (Ditekemena *et al.*, 2012). This caused them to shy away from PMTCT and ANC clinics. Women's low uptake of PMTCT services and failure to return for HIV results were also attributed to poor partner support (Theuring *et al.*, 2009).

Health providers attitude towards men on reproductive health treating the services as women's affair leaving men out and not being part of the care impacted negatively on men's subsequent visits (UNICEF, 2016). In a cross sectional study conducted by Turan et al cited that negative perceptions of health providers towards men that accompanied their spouses limited the utilization of facility-based ANC and delivery care, (Turan & Nyblade, 2013). In another study men were not allowed in ANC and maternal health clinics with their wives due to congestion, lack of privacy in ANC clinics and labour rooms which negated the efforts directed towards encouraging the participation of men in care (Theuring *et al.*, 2009).

2.5 Strategies for Male Involvement in Maternal and Child Health

Although many studies have attempted to come up with strategies to increase the involvement of men in reproductive health matters, not much has been achieved (Alio *et al.*, 2011; Brusamento *et al.*, 2012; Ditekemena *et al.*, 2012). It is therefore important to design and implement context-specific, appropriate strategies to increase male involvement in maternal and child health and build on best practices. Among the strategies include building on cultural norms such as men's role in caring for their family, as an effective strategy for encouraging men's involvement in prenatal health. (Kaida *et al.*, 2010). Strategies suggested include making clinics more 'father-friendly' in order to be more mindful of the needs of fathers and allow clinic staff adequate time to engage men and women effectively (Msuya *et al.*, 2008). The success of this intervention requires health service providers to have a more welcoming attitude towards fathers attending the clinic and to be mindful of the needs of fathers, including providing support through waiting spaces for men or couples.

A study done by (Msovela & Tengia-Kessy, 2016) in Tanzania cited invitations of men to the clinic and community sensitization as some of the strategies that encouraged men to engage in

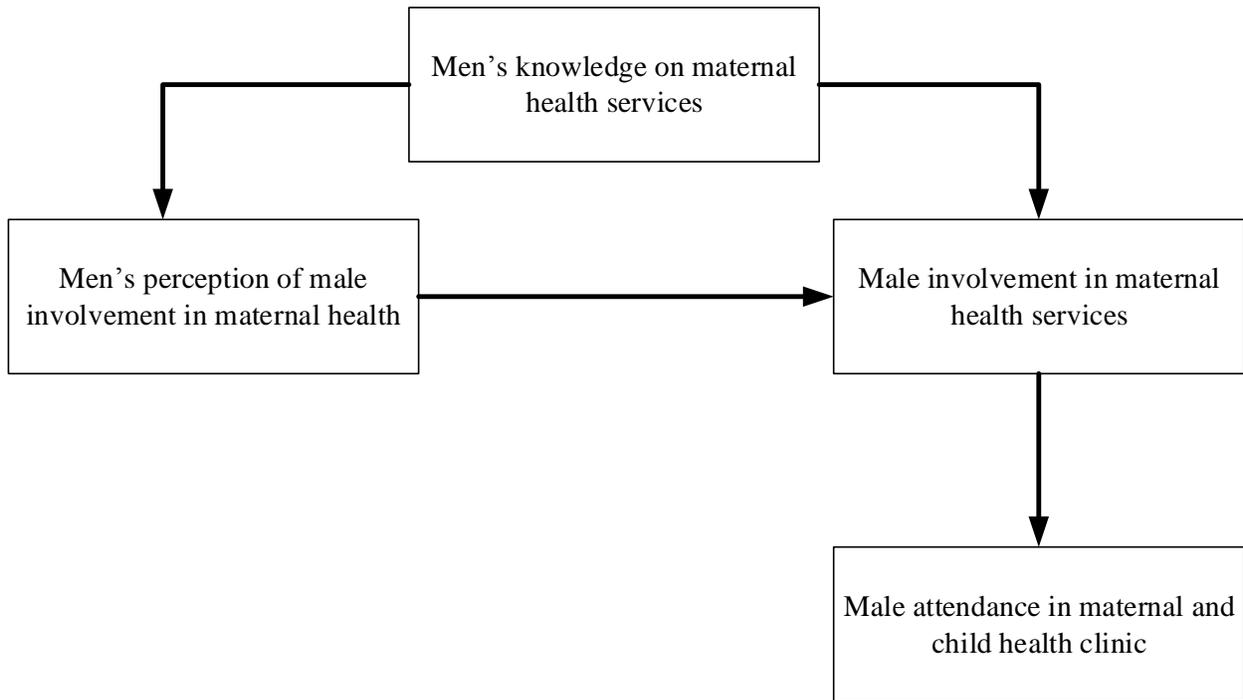
family planning services. This resonates another study done by (Nyondo *et al.*, 2013) in Malawi which cited invitation of men through letter and giving priority to the women who were accompanied by their spouses to be provided with clinical services by the healthcare workers (Nyondo *et al.*, 2013). Male education on reproductive health, community based programs on male involvement, couple counseling, provision of a male friendly environment that ensures privacy and mass media campaigns among other strategies were also seen as successful (Turan & Nyblade, 2013).

Other strategies cited to manage low male involvement included couple focused health education and communications programs, education and empowerment of women on the role of men in reproductive health and ANC, and provision of incentives for men to encourage more male involvement (Msovela & Tengia-Kessy, 2016). Extending clinic hours to accommodate more men, prioritization of couples during prenatal clinics, scheduled prenatal/Antenatal care days to coincide with market days, and provision of male health service packages that includes HIV testing and STI screening, blood pressure and blood sugar evaluation and general medical examinations at facilities were also cited as effective and proven strategies to encourage increased male involvement (UNICEF, 2016).

2.6. Conceptual Framework

This conceptual framework is an analytical tool to give a summary of the goal of the study. The study aims at assessing men's knowledge in MCH services and perceptions of male involvement which has an impact on their involvement in MCH services hence determines their clinic attendance

Figure 2.1: Study Conceptual Framework

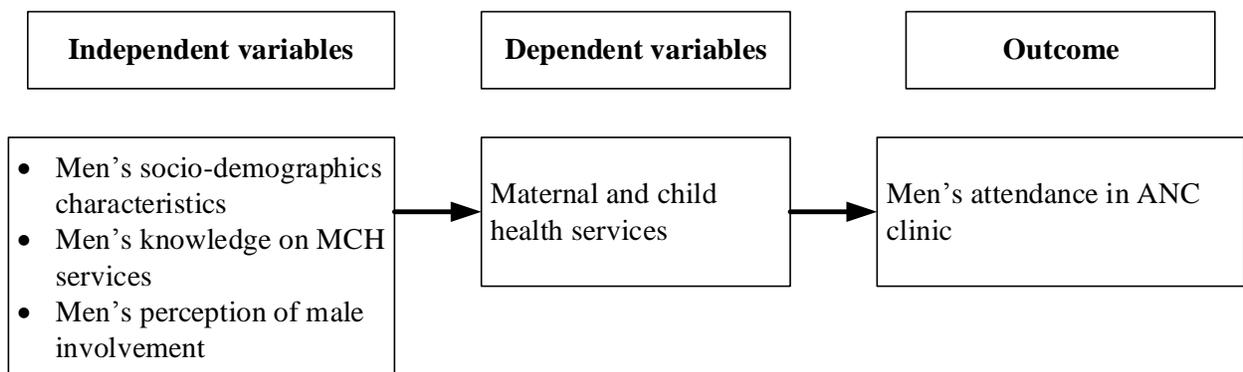


Adapted from (Ganle *et al.*, 2016)

2.7. Operational Framework

The following operational framework has been used as a guide to conceptualize the interactions between the Independent variables, dependent variables and the outcome of the study.

Figure 2.2: Study Operational Framework



Adapted from (Ganle *et al.*, 2016)

CHAPTER THREE: METHODS

3.1. Introduction

This chapter provides a detailed description of the methodology of this study. This includes the study area, study population, inclusion and exclusion criteria of study participants, study design, sample size determination, sampling procedures, validity of data collection tool, reliability of data collection tool, data collection procedure, measurement of variables, data collection tools, data management analysis and ethical considerations.

3.2. Study Area

The study was done in Suba Sub County in Homa-Bay County which is located in western Kenya along Lake Victoria where it borders Kisumu and Siaya Counties to the North, Kisii and Nyamira Counties to the East, Migori County to the South and Lake Victoria and the republic of Uganda to the west. Suba Sub County is divided into five administrative divisions namely: Gwassi, Central, Lambwe, Mbita and Mfangano.

Table 3.1: Suba Sub County Administrative Divisions

Suba Sub county administrative divisions	
Division	Population
Central	17,574
Gwassi	37,232
Lambwe	18,366
Mbita	36,460
<u>Mfangano</u>	16,270
Total	125,870

Source: KNBS, (2009) Population and Housing Census

The County lies between latitude $0^{\circ} 15'$ South and $0^{\circ} 52'$ South and between longitude 34° East and 35° East and covers an area of $4,267.1 \text{ KM}^2$. The County headquarter is in Homa-Bay town.

3.3. Study Population

Homa-Bay County had an estimated population of 1,126,006 persons consisting of 550,288 male and 585,719 female (KNBS & ICF Macro, 2014). In Suba Sub County the population was 125,870 persons constituting 61,362 male and 64, 508 female (KNBS & ICF Macro, 2014).

3.4 Inclusion Criteria

- Married men aged 18 years and above.
- Men with least one child who was below 5 years old or a pregnant wife (s).
- A native of Suba.

3.5 Exclusion criteria

- Married men who did not have a child.
- Men who are married to men.

3.6 Study Design

This was a cross-sectional study employing quantitative and qualitative data collection methods designed to assess men's knowledge and perceptions of male involvement in Maternal and Child Health services. Data was collected at a single point in time to examine the relationship between the variables of interest.

3.7 Sample Size Determination

Sample size was determined using (Fisher, 1998) formula as follows:

$$n = \frac{Z^2 \times (P) \times (1 - P)}{M^2}$$

Where,

Z = is the critical value based on the desired confidence level (e.g., z = 1.96 for 95% confidence level)

M= is the margin of error or precision of the estimate in this case m = 0.05

P= is the prevalence of male involvement = 30% (PMTCT guideline, 2016)

Calculation

$$n = \frac{[1.96 \times 1.96] [0.3] [1 - 0.3]}{0.05^2}$$

$$n = 354 \text{ Married men}$$

3.8 Sampling Procedure

Table 3.2: Sample Size Distribution per community unit

Community Unit	Number of households	Number of sample households	Number of men interviewed in the households
Suba Rural	1624	184	182
Nyamarandi	980	57	57
Sumba West	500	113	112
Total	3104	354	354

The sampling frame for this study was 3,104 households in Suba, Nyamarandi and Sumba West community units in Gwassu division where 354 men were interviewed from the 354 sampled households in the three activated community units. The activated community units were chosen for the study because they were already assigned Community Health Volunteers and linked to nearest health facilities by the Suba local government. Activation in this context meant the community units had a system in place linking it to the nearest health facility, a CHV assigned for the linkage.

Probability proportional to size sampling technique was used to determine the number of men interviewed within the households in the three community units. The proportions were arrived at as follows: Sindo rural had the highest number of households 1624 (52% of the total households in the three community units), Sumba west with 980 (32%) and Nyamarandi with 500 (16%) respectively. The same ratio was applied to the sample size (354) to calculate the number of households in which men were interviewed in each of the community units. The calculation was done as follows; Sindo rural, 184 households (52% of the study sample size), Sumba west 113 household (32 % of the study sample size) and Nyamarandi 57 households (16% of the study sample size). After determination of the number of households in which men were interviewed per community unit, Systematic random sampling was used to select the households in which men were interviewed i.e. in Sindo rural community unit, interviews were done after every 8 household ($184/1624*100$), Sumba west interviews were done after every 11 household ($113/980*100$) and Nyamarandi interviews were done after every 11 household ($57/500*100$). Three trained Community Health Volunteers (CHVs) conducted the interviews in the three community units.

3.9 Validity of Data Collection Tools

A pilot study (10% of the sample size) was conducted within Gwassi division to validate the questionnaire where 32 men were interviewed. The data collected in the pilot study was not included in the main study. According to (Mugenda & Mugenda, 1998) validity is the accuracy and meaningfulness of inferences of the data collection tool which are based on research results.

3.10 Reliability of Data Collection Tools

Saunders, Lewis and Thornhill, (2009) defined reliability as a measure of the degree to which a research instrument yields consistent results after repeated trials. The research instruments' reliability was measured by determining the internal consistency of the pre-tested responses. Internal consistency is the ability of a test instrument to reproduce the same results when repeated several times by different methods.

3.11 Data Collection Tools

Quantitative data was collected using questionnaire written in English and translated into Luo version. The questionnaire had the title of the study and introductory remarks about the study. The questionnaire contained five sections as follows: Demographic information of the participants, male attendance in MCH clinic, men's knowledge in MCH services, men's perceptions of MI in MCH services and strategies to improve male involvement in MCH clinic. In qualitative data all the discussions were tape recorded during the Focus Group Discussions and Key Informant Interviews which was later transcribed into scripts for data analysis. Hand written notes were also taken during the FGDs and KIIs sessions.

3.12 Data Collection Procedure

The research team recruited to carry out the interviews and collect data comprised of three Community Health Volunteers (CHVs) who were fluent in spoken and written English, understood the local Luo and Suba languages, they were familiar with the study area and they were residence of Suba. They were taken through a two days training on the purpose of the study, basic research ethics requirements, interviewing skills, filling of the questionnaire, understanding the translated version of the questionnaire and procedure on community entry. Approval letter was obtained from the area chief allowing them to conduct the interviews in the households.

The participants who were eligible based on the inclusion criteria and were willing to participate were taken through informed consent process by the CHVs. During the informed consent process the participants were taken through the purpose, the objectives and the duration of the study. Study participants were requested to sign the consent form before participating in the study. After consenting a private and confidential place was identified, and the interview was carried out. If the participant was not ready for the interview, the CHVs requested them for another appointment and moved to the next household. An average of 8 questionnaires were administered each day per CHV. The data collection process took two weeks. A total of 354 questionnaires were administered out of a sample size target of 354. Data was collected using a questionnaire which entailed both open ended and close ended questions administered through face to face interview. It had instructions for the interviewer for guidance during the interview sessions. In instances where a participant did not understand English, the CHVs used the translated Luo version to conduct the interview.

In qualitative data, an experienced moderator for FGDs and KIIs was hired to moderate FGDs and KIIs interviews which took an average of 1 hour. A guide for FGDs and KIIs written in English and translated in Luo was used to guide the discussions. Data was collected in four (4) Focus Group Discussions comprising eight participants in each FGD.

Participants of the Four FGDs were purposively identified in Gwasi division in three community units where the study was conducted, Sindo rural community unit had the majority of participants interviewed (184) hence two FGDs were conducted in Sindo rural, one in Sumba west community unit (113) and the last one in Nyamarandi Community unit (57). Two of the FGDs were for men and the other two for women. FGDs for women were included in the study to give more insight of the issues influencing MI on a couple perspective because women perspective on male involvement is critical to understand wholesomely issues that are coming up on MI in reproductive health.

Two of the FGDs were conducted in Suba Sub County hospital (One FGD for men and another for women) in both FGDs the women were from Sindo rural community unit. The third FGD was conducted in ROO dispensary located in Sumba west community unit which comprised of eight men and the last FGD was conducted in Nyamrisra dispensary located in Nyamarandi community unit which comprised of eight women. A guide (Appendix 7) of 4 questions was used to generate questions during the discussions. Verbal consent was first sought. The discussions were conducted in Luo language. The discussions were tape recorded with handwritten notes taken as a backup reference.

Six Key informant interviews were conducted targeting the area chief, one community health volunteer, one nurse, one mother to mother support leader, one religious leader and one Clinical after seeking their verbal consent. This group of interviewees were purposively and carefully

selected because they represented the leadership at the health sector as well as the community and provided relevant and important views on the Subject matter of male involvement in MCH services. Data was captured through tape recording and note taking and the interview lasted an average of 60 minutes. To ensure anonymity, the names of the Key Informants were not captured on the KII guide. Furthermore, the interviews were conducted in private places and information collected only shared with the research team place to ensure privacy and confidentiality. Key Informant Interviews guide was used and verbal consent was sought. Interviews were conducted under private and conducive environment.

3.13 Measurement of Variables

3.13.1 Independent Variables Included:

3.13.1.1 Socio-Demographic Variables Included: Age categories: 18-30; >30 years, Education categories: No education; Primary education; Secondary; Tertiary/ college. Duration of marriage categories: < 5 years, 5-10 years, > 10 years. Number of wives: One, >One. Tribe: Luo, Suba and Others Religion: Protestant, Catholic and Others. Occupation: Fisherman, Fish trader, Farmer and Others

3.13.1.2 Knowledge Variables Included: Knowledge on services offered at ANC clinic, knowledge on benefits of attending ANC clinic, knowledge on mother to child HIV transmission, knowledge on Family planning, knowledge on myths that deter male involvement, knowledge on skilled delivery, knowledge on benefits of skilled delivery and knowledge on birth complications.

3.13.1.3 Perception Variables Include: Roles of men in ANC services, age on male involvement, clinic waiting time on male involvement, provider's attitude on male involvement, desired clinic operation time on male involvement.

3.13.1.4 Dependent Variables: Attendance of Men at the ANC clinic.

3.14 Data Management and Analysis

3.14.1 Quantitative Data Analysis

All the CHVs were provided with a folders where all complete questionnaires were kept. Checking for completeness and accuracy of completed data collection forms was done at the end of each day and gaps identified were addressed with the respective CHVs. The quantitative data was transferred from the questionnaires into a Microsoft-Excel worksheet, the data was cleaned prior to exporting to STATA software version 13.1. Frequency were used to display the data. Chi-square test was used to test for significance where applicable. In bivariate analyses, odds ratios (OR) at 95% confidence intervals (CI) was used for the association between the proportion

of men who accompanied their spouse (s) to the clinic and demographic, knowledge and in multivariate analyses, adjusted odds ratios was used to calculate for independent variables that were associated with clinic attendance. Perceptions characteristics were calculated using Poisson regression. In multivariate analyses, a manual backward elimination approach was used to reach the most parsimonious model including factors that were associated with men who accompanied their spouse (s) to the clinic at the significance level of $P \leq 0.05$. All statistical analyses were performed using STATA v 13.1.

3.14.2 Qualitative Data Analysis

The qualitative data (FGD and KII) were Subjected to a thematic content analysis. This approach entailed the categorization of recurrent data collected under thematic areas. The scripts were exported to Nvivo 8 for coding then content analysis method was used to analyze both data from FGDs and KIIs.

3.15 Ethical Considerations

Permission to conduct this study was obtained from Maseno University Graduate Studies (SGS) (Appendix 9). Ethical clearance and authorization was sought from Maseno University Ethical Review Committee (Appendix 9), County director of Health Homa-Bay (Appendix 10), Suba Sub County office (Appendix 11) and the local administrative Chief (Appendix 12). Possible disclosure of the identity of all participating was minimized by not using their names instead giving Personal Identification Number (PIN). The information collected from the participants was kept confidential. The participants were free to ask any questions about the study at any point were at liberty to stop participating at will if they felt like discontinuing. The information collected from the participants was coded so that they were not linked to the responder by their name, privacy and confidentiality was observed.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter is a description of the study results on the socio-demographic characteristics of men who participated in this study. It also entails results of men's attendance in MCH clinic, men's knowledge on MCH services, men's perception of male involvement and their influence on MCH clinic attendance. Ultimately it describes the responses on the opinion of men on strategies that can be employed to encourage male involvement in MCH services. The results include both quantitative and qualitative data collected through questionnaires, and also from FGD's and KIIs.

4.2 Socio-demographic characteristics of the study participants

Out of the 354 male participants recruited; 354 responded the survey giving a 100% response rate. Among the 354 male participants who were interviewed, slightly more than half 184 (52.3%), were aged 30 years and above. Among them 14.7% were men who attended the MCH clinic versus 85.3% men who did not attend the MCH clinic.

Overall, slightly less than half 158 (44.9%), (13.9% attended MCH clinic versus 86.1% none attendance of MCH clinic) of the participants in this study had primary education and about a third 130 (36.9%) (18.5% attended MCH clinics versus 81.5% none attendance of MCH clinic) had secondary education. Of the 354 participants 174 (49.4%) (16.7% attended MCH clinic versus 83.3% none attendance of MCH clinic) were from the Suba ethnicity. Further, about a third 136 (38.6%) (14% attended MCH clinic versus 86% none attendance of MCH clinic) were of Luo ethnic background. The study found that majority of the participants 301 (85%) were Christians by religion of which 167 (47.4%) (19.8% attended MCH clinic versus 80.2% none attendance of MCH clinic) were protestants. This was closely followed by 134(38.1%) (11.9%

attended MCH clinic versus 88.1% none attendance of MCH clinic) participants where were Catholics.

In terms of occupation; 105 (29.8%) (15.3% attended MCH clinic versus 88.1% none attendance of MCH clinic) were farmers. When combined majority of participants engaged in fishing activities including; 79 (22.4%) were fish traders, 59 (16.8%) were fishermen and 11(3.1%) boat owners. Concerning marital status majority of participants in this study 326 (92.6%) (16% attended MCH clinic versus 84% none attendance of MCH clinic) were married. Further, majority 275 (78.1%) (16% attended MCH clinic versus 84% none attendance of MCH clinic) were married to one wife while slightly above half 183(52%) (32% attended MCH clinics versus 82.5% did not attended MCH clinics) of the study participants had been married for a period of between 5-10 years, as shown in table 4.1.

Table 4.1 Socio-demographic characteristics of the study participants

Variable	Men's attendance in MCH clinic						P
	Overall (N = 354)		Yes (n = 57)		No (n = 295)		
	No	%	No	%	No	%	
Age							
18 Years	9	2.6	2	22.2	7	77.8	0.674
18-30 Years	159	45.2	28	17.6	131	82.4	
>30 years	184	52.3	27	14.7	157	85.3	
Education Level							
Primary	158	44.9	22	13.9	136	86.1	0.671
Secondary	130	36.9	24	18.5	106	81.5	
College/University	56	15.9	9	16.1	47	83.9	
None-Formal	8	2.3	2	25.0	6	75.0	
Tribe							
Luo	136	38.6	19	14.0	117	86.0	0.864
Suba	174	49.4	29	16.7	145	83.3	
Kisii	17	4.8	3	17.6	14	82.4	
Kuria	3	0.9	1	33.3	2	66.7	
Decline	9	2.6	2	22.2	7	77.8	
Others	13	3.7	3	23.1	10	76.9	
Religion							
Muslim	8	2.3	1	12.5	7	87.5	0.33
Protestant	167	47.4	33	19.8	134	80.2	
Catholic	134	38.1	16	11.9	118	88.1	
Other	43	12.2	7	16.3	36	83.7	
Occupation							
Fisherman	59	16.8	9	15.3	50	84.7	0.728
Boat Owner	11	3.1	2	18.2	9	81.8	
Fish Trader	79	22.4	12	18.2	67	84.8	
Farmer	105	29.8	14	13.3	91	86.7	
Others	98	27.8	20	20.4	78	79.6	
Marital status							
Single	18	5.1	3	16.7	15	83.3	0.789
Married	326	92.6	52	16	274	84	
Others	8	2.3	2	25	6	75	
Number of Wives							
One	275	78.1	44	16	231	84	0.852
Two	53	15.1	10	18.9	43	81.1	
Three	5	1.4	1	20	4	80	
Others	19	5.4	2	10.5	17	89.5	
Duration in Marriage							
< 5 Years	71	20.2	15	4.8	56	78.9	0.197
> 5 years	183	52	32	17.5	151	82.5	
>10 Years	77	21.9	9	11.7	68	88.3	
Not applicable	21	6	1	4.8	20	95.2	

4.3 Men's Attendance in MCH Clinic

The attendance of men in the MCH clinic was measured by asking men if they had ever accompanied their wives to PMTCT or ANC or MCH clinic. Only a few men 58 (16.3%) responded that they had ever accompanied their spouse(s) to the clinic. Therefore, men's clinic attendance was found to be 16.3%, as shown in figure 4.1. This was found to be below the average expectations ($\geq 30\%$) by the Kenya ministry of health.

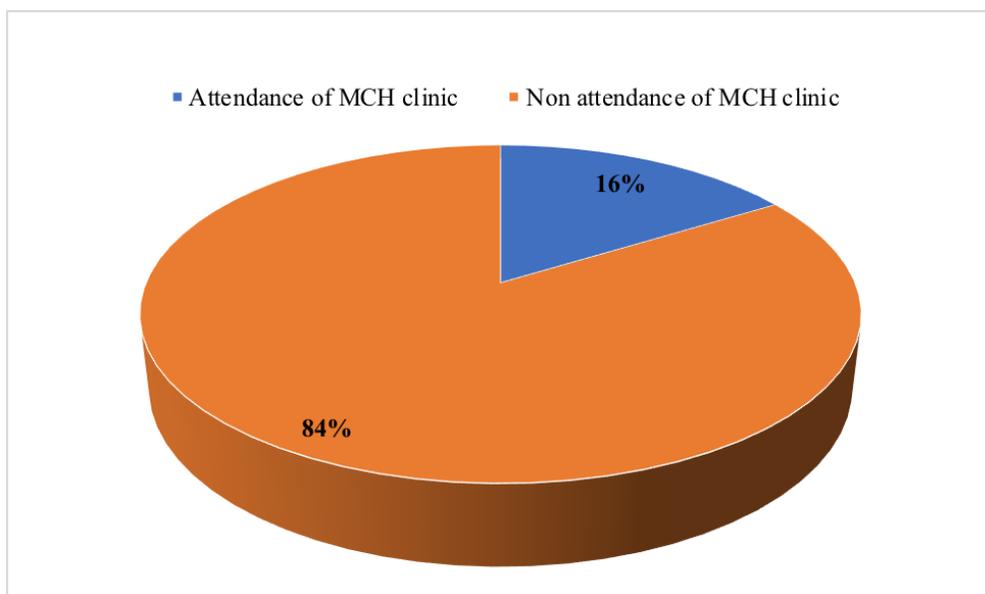


Figure 4.1 Proportions of Men by Attendance to the MCH Clinic.

There were various reasons why the participants accompanied their spouse(s) to the clinic. Out of 205 who gave various reasons, about a quarter 50/203 (24.6%) stated seeking ANC/PMTCT services, followed by 49 (24.1%) who sought ANC/PMTCT. The least 9 (0.5%) of the participant accompanied their spouses for delivery and other medical services.

4.4 Men's Knowledge in MCH Services

Table 4.2 summarizes the participant's knowledge and the how that influenced their MCH clinic attendance. The study showed that almost half of the participants (54.5%) were not aware of the MOH effort to enhance men attendance to MCH clinics. For those who accompanied their spouse to ANC clinics 42.9% accompanied their spouses more than ones to the clinic. Regarding time taken to reach the clinic, there were near equal distribution of the number of men who accompanied their spouses to the clinic, those who took 30 min (25.6%), more than 60 min (29.5%) and those who spent 30 to 60 minutes (24.4%) to reach the MCH clinics. When asked the recommended number of visits of ANC attendance, the majority (45.2%) stated four times.

Concerning the services offered at ANC, various combination of services offered at the ANC were stated. The majority of participants 150 (42.6%) knew that HIV testing and counseling as well as immunization services were offered at the ANC clinic while 63 (17.9%) recognized the combination of HIV testing and counseling, immunization and provision of malaria prophylaxis as some of services offered at the ANC clinics.

Assessment on their awareness of the benefits of ANC attendance responses showed that men were aware that free mosquito nets were being provided at the clinic 66 (18.8%). Further among those who responded there were 55 (15.6%) who were aware that mothers are given mosquito nets, are tested and given appropriate drugs for prophylaxis as well as condoms are offered at the ANC clinics. These responses were found to be statistically significant ($p < 0.014$).

The majority 238 (67.6%) admitted having gone for HIV counselling and testing with spouse while 248 (70.5%) were aware of methods to reducing HIV mother to child transmission. Some of the methods mentioned aimed at reducing PMTCT were 56 (15.9%) exclusive breast feeding

while 80 (22.7%) of the participant stated a combination of methods exclusive breast feeding and uptake of ARV for mother and child.

When asked on the benefits of breastfeeding different single or combination of responses were obtained. About 24.4% stated that breast milk leads to healthier baby who are resistant to disease and ending up having strong bones. There were 20.5% who stated that breast milk leads to combination of benefits including healthier baby resistant to disease, having strong bones and with fewer weight problems.

Concerning the family planning, the majority of participant 278 (79) were currently using family planning method with their spouse. When probed on the specific method, the majority 105(29.8%) were using condoms male or female. There were 72 (20.5%) using injectable family planning method while the least 3 (0.9%) were using intrauterine device (IUD).

Table 4.2 Men's knowledge on MCH services

Variable	Overall population		Men's attendance in MCH clinic		P - value	Bivariate uOR (95% CI)
	No	%	No	%		
Aware of MOH effort for MCH attendance						
Yes	160	45.5	36	22.5	0.001	10 (3.3 - 30.5)
No	192	54.5	21	10.9	Reference	Reference
Number of time accompanied spouse for MCH						
1	52	14.8	14	26.9	0.001	0.1 (0.04 - 0.3)
> 1	151	42.9	39	25.8	0.894	1.1 (0.5 - 1.9)
None	149	42.3	4	2.7	Reference	Reference
Time taken to accompany spouse for MCH						
30 Min	90	25.6	14	15.6	0.023	5.6 (1.3 - 24.6)
30 - 60 Min	86	24.4	18	20.9	0.007	7.5 (1.7 - 32.1)
> 60 Min	104	29.5	23	22.1	0.005	7.9 (1.8 - 33.7)
Not stated	72	20.5	2	2.8	Reference	Reference
Recommended attendance						
Twice	37	10.5	6	16.2	0.092	2.6 (0.9 - 8.2)
Three Times	58	16.5	12	20.7	0.015	3.3 (1.3 - 9.1)
Four Times	159	45.2	33	20.80	0.01	3.4 (1.4 - 8.1)
Not stated	98	27.8	6	6.1	Reference	Reference
Services offered at ANC clinic						
HIV counseling and Testing	19	5.4	2	10.5	0.211	4.6 (0.4 - 51.1)
HIV counseling and Testing and Immunization	150	42.6	30	20	0.032	8.8 (1.2 - 64.5)
HIV testing, Immunization and Malaria prophylaxis	63	17.9	12	19	0.041	8.3 (1.1 - 64.5)
HIV counseling and Testing, Immunization, Malaria prophylaxis and Other medical services	38	10.8	8	21.1	0.053	7.8 (0.9 - 64.2)
Other combined different ANC services	38	10.8	4	10.5	0.104	5.9 (0.7 - 50.9)
Not stated	44	12.5	1	2.3	Reference	Reference
Benefits of attending ANC						
Mosquito nets	66	18.8	8	12.1	0.723	1.3 (0.4 - 4.6)
Mosquito nets and Testing and provision of care	55	15.6	9	16.4	0.893	0.9 (0.2 - 3.6)
Mosquito nets, Testing and provision of care and Condoms	49	13.9	10	20.4	0.801	1.2 (0.3 - 4.6)
Mosquito nets and Condoms provisions	23	6.5	1	4.3	0.919	1.1 (0.2 - 5.4)
Other combined different services	119	33.8	27	22.7	0.361	1.7 (0.5 - 5.7)
Not stated	25	7.1	2	8	Reference	Reference
Gone for HIV counselling and testing with spouse						
Yes	238	67.6	45	18.9	0.046	1.9 (1.6 - 3.9)
No	114	32.4	12	10.5	Reference	Reference
Aware of methods to reducing HIV mother to child transmission						
Yes	248	70.5	46	18.5	0.001	0.23(0.14-0.39)
No	104	29.5	11	12.5	Reference	Reference

No - Number; % - Percentage; OR - Odds ratio; CI - confidence interval; u - Unadjusted odds ratio

4.5 Men's Knowledge Factors Associated with Attendance of MCH Clinic

Table 4.3 summarizes Men's Knowledge factors associated with attendance of MCH clinic. In bivariate analysis, participants who were aware of the MOH effort to enhance men attendance to MCH clinics were more likely to attend MCH clinic together with their wives (OR= 10, 95%CI [3.3-30.5], $p = 0.001$) compared to men who were not aware of the MOH effort. Participants who took 30 minutes (OR= 5.6, 95%CI [1.3-24.6], $p = 0.023$), 30 to 60 minutes (OR= 7.5, 95%CI [1.7-32.1], $p = 0.007$) and more than 60 minutes (OR= 7.9, 95%CI [1.8-33.7], $p = 0.005$) to accompany spouse for MCH were more likely to attend MCH clinic together with their wives compared to men who did not state the time taken to accompany spouse for MCH.

Participants who stated three times (OR= 3.3, 95%CI [1.3-9.1], $p = 0.015$) and four times (OR= 3.4, 95%CI [1.4-8.1], $p = 0.005$) as the recommended number of time for the ANC attendance were more likely to attend MCH clinic together with their wives compared to men who did not know the recommended number of time for the ANC attendance. Participants who stated HIV counseling and Testing and Immunization (OR= 8.8, 95%CI [1.2-64.5], $p = 0.032$) and HIV testing, Immunization and Malaria prophylaxis (OR= 8.3, 95%CI [1.1-64.5], $p = 0.041$) as some of the services obtained from the ANC clinics were more likely to attend MCH clinic together with their wives compared to men who did not know the recommended number of time for the ANC attendance. Participants who had gone for HIV counselling and testing with spouse (OR= 1.9, 95%CI [1.6-3.9], $p = 0.046$) were more likely to attend MCH clinic together with their wives compared to men who had not gone for HIV counselling and testing with spouse.

On the other hand, the study reported the participants who accompanied their spouse only once for MCH (OR= 0.1, 95%CI [0.04-0.3], $p = 0.001$) were less likely to attend the MCH clinic together with their wives compared to men who did not accompany their spouse in any instant.

Further, the study found that men who did not know ways of reducing HIV transmission to the baby from the mother were less likely to attend MCH clinic together with their wives (OR= 0.23, 95%CI [0.14-0.39], p = 0.001) compared to men who knew ways of reducing HIV transmission of the baby from the mother. In addition, men who did not use family planning with their wives were less likely to attend MCH clinic with their wives (OR=0.24, 95%CI [0.13-0.43], p =0.0001) compared to men who used FP with their wives. Furthermore, men who delivered their last child at home (OR=0.31, 95%CI [0.16-0.16] p= 0.001) were less likely to attend MCH clinic with their wives. Men who delivered their last child at traditional birth attendant (OR=0.22, 95%CI [0.11-0.44] p <0.0001) were also less likely to attend MCH clinic with their wives.

Table 4.3 Men's Knowledge Factors Associated with Attendance of MCH Clinic

Variable	Overall population		Men's attendance in MCH clinic		P - value	Bivariate uOR (95% CI)
	No	%	No	%		
Methods for reducing HIV mother to child transmission						
Exclusive breast feeding	56	15.9	10	17.9	0.15	1.9 (0.8 - 4.6)
Exclusive breast feeding and uptake of ARV for mother and child	80	22.7	15	18.8	0.492	0.7 (0.3 - 1.9)
Exclusive breast feeding, uptake of ARVs and conception when virally suppressed	60	17	9	15	0.769	1.2 (0.4 - 2.9)
Exclusive breast feeding, uptake of ARVs and Other methods	22	6.3	4	18.2	0.485	0.6 (0.3 - 1.9)
Dont know	90	25.6	12	13.3	0.586	0.8 (0.3 - 1.9)
Other combined different methods	44	12.5	7	15.9	Reference	Reference
Benefits of 6 months exclusive breast feeding						
Healthier baby resistant to disease	44	12.5	7	15.9	0.83	0.8 (0.09 - 6.5)
Healthier baby resistant to disease and having strong bones	86	24.4	13	15.1	0.944	0.9 (0.1 - 7.1)
Healthier baby resistant to disease, having strong bones and fewer weight problems	72	20.5	15	20.8	0.728	0.7 (0.09 - 5.4)
Baby having stronger bones	28	8.0	5	17.9	0.918	0.9 (0.1 - 7.6)
Other combined benefits	71	20.2	14	19.7	0.927	0.9 (0.1 - 6.9)
Dont know	51	14.5	3	5.9	Reference	Reference
Using Family planning methods with spouse						
Yes	278	79.0	47	16.9	0.001	0.24(0.13-0.43)
No	74	21.0	10	13.5	Reference	Reference
Family planning methods currently using with spouse						
IUD	3	0.9	0	0	0.993	0.8 (0.9 - 6.5)
Implant	55	15.6	12	21.8	0.275	1.5 (0.7 - 3.6)
Pills	40	11.4	3	7.5	0.992	1.1 (0.4 - 2.7)
Injectable	72	20.5	13	18.1	0.797	1.1 (0.5 - 2.5)
Natural method	10	2.8	3	30	0.702	0.7 (0.08 - 5.2)
Female and male condoms	105	29.8	19	18.1	0.915	0.9 (0.4 - 2.1)
Not stated	67	19.0	7	10.4	Reference	Reference
Myths deterring men for uptaking Family planning						
Family planning is a women's affair	103	29.3	15	14.6	0.977	0.9 (0.5 - 1.9)
Women's affair and Men should not discuss with women issues of sexuality	21	6.0	5	14.6	0.48	1.4 (0.5 - 3.8)
Men should not discuss with women issue of sexuality	23	6.5	5	21.7	0.342	1.6 (0.6 - 3.9)
Women should give birth to many children so long as she is not sick	39	11.1	7	17.9	0.868	1.1 (0.4 - 2.6)
Women's affair and women should give birth to many children	58	16.5	9	15.5	0.11	0.4 (0.1 - 1.2)
Not stated	108	30.7	16	14.8	Reference	Reference
Place of delivery of last child						
Home	42	11.9	4	9.5	0.001	0.31(0.16-0.61)
TBA	68	19.3	5	7.4	0.001	0.22(0.11-0.44)
Hospital	242	68.7	48	19.8	Reference	Reference

No - Number; % - Percentage; OR - Odds ratio; CI - confidence interval; u - Unadjusted odds ratio

4.6 Independent Variables Associated with Men's MCH Attendance of MCH Clinics

As shown in Table 4.4, the following variables remained significantly associated with men's MCH clinic attendance with their spouses. In multivariate analysis, awareness of MOH effort for men to accompany their wives to MCH clinic, number of time accompanied spouse to MCH clinic, time taken to accompany spouse for the MCH clinic, use of family planning methods, place of last child delivery and awareness about the methods used to reduce HIV mother to child transmission were independently associated with men's attendance of the MCH clinics.

From qualitative data, when probed about the knowledge and importance of men's attendance to MCH clinic, varied responses were gathered both from FGD and KII, including knowledge on the importance of ANC. One FGD 4 participant stated that men generally lack appropriate knowledge regarding MCH services attendance..... *"I think most of them are ignorant; most of them view it that it is not them who is pregnant but the woman. So even if the woman tells him to accompany her to the clinic he doesn't see the need. Because it is the mother who is going to be tested, and it's the woman who will feel the pain and done for all those activities in the MCH. They don't have any knowledge about being involved in the MCH"*.

Another FGD participant was however preview to the importance of ANC, FGD 3 participant was able to list the importance of ANC including HIV testing and treatment ...⁶.....*What I can add on what R3 has said is that conceiving takes two people, so the best thing is that from the first day at ANC, it is proper for both the man and the woman to go together. Am saying that because if they go together, they can get to know there status, that if it happens that either is infected with HIV it eases the situation especially because the man can support the woman. And even if they are both infected, both of them can be helped through enrolling in care. Even*

through care in case of positive result, the unborn baby can be rescued from contracting the HIV infection. But in case the results are negative, it is of a given joy that....you know when a woman is expecting a baby and is happy, she will give birth to a healthy child”.

Table 4.4 Independent Variables Associated with Men’s MCH Attendance

Variable	Overall population		Men’s attendance in MCH clinic		P - value	Multivariate aOR (95% CI)
	No	%	No	%		
Aware of MOH effort for MCH attendance						
Yes	160	45.5	36	22.5	0.001	9.8 (3.2 - 30.3)
No	192	54.5	21	10.9	Reference	Reference
Number of time accompanied spouse for MCH						
1	52	14.8	14	26.9	0.001	0.1 (0.04 - 0.3)
> 1	151	42.9	39	25.8	0.894	1.1 (0.5 - 1.9)
None	149	42.3	4	2.7	Reference	Reference
Time taken to accompany spouse for MCH						
30 Min	90	25.6	14	15.6	0.023	5.6 (1.3 - 24.6)
30 - 60 Min	86	24.4	18	20.9	0.007	7.5 (1.7 - 32.1)
> 60 Min	104	29.5	23	22.1	0.005	7.9 (1.8 - 33.7)
Not stated	72	20.5	2	2.8	Reference	Reference
Using Family planning methods with spouse						
Yes	278	79.0	47	16.9	0.004	0.36(0.18-0.72)
No	74	21.0	10	13.5	Reference	Reference
Place of delivery of last child						
Home	42	11.9	4	9.5	0.098	0.52(0.24-1.13)
TBA	68	19.3	5	7.4	0.03	0.29(0.13-0.65)
Hospital	242	68.7	48	19.8	Reference	Reference
Aware of methods to reducing HIV mother to child transmission						
Yes	248	70.5	46	18.5	0.01	0.35(0.19-0.65)
No	104	29.5	11	12.5	Reference	Reference

No - Number; % - Percentage; OR - Odds ratio; CI - confidence interval; a - adjusted OR

4.7 Men's Perceptions of Male Involvement and its Influence on Attendance of MCH Clinic

When asked if age contribute to men's attendance of MCH clinic, slightly over half of them 52.8% agreed and compared to 47.1% men who stated that age did not contribute. Men who responded close to half 47.2% agreed that waiting time in the clinic influenced male participation in MCH clinic while 33.8% disagreed on the influence on waiting time on male involvement in MCH.

Concerning the taboo that influenced male involvement in MCH clinic there were 19.9% who stated that men are the head of the house and should spend time looking for food for family while 14.2% who believed that men should not be involved in women's affair. The majority 63.4% of the responded stated that provider's attitude influences male involvement in maternal and child services. Concerning income slightly over half of them 58.5% stated that income influenced male participation in maternal and child services. When asked about what clinical operation hours they would prefer for men to participate in maternal and child services, majority 79.5% preferred 8 to 12 am while only 2.6% had no time preferences.

In bivariate analysis, participants who did not agreed that the provider's attitude influences male involvement in maternal and child services were less likely to attend MCH clinic together with their wives (OR= 0.5, 95%CI [0.3-0.8], $p = 0.002$) compared to men who agreed provider's attitude influences male involvement in maternal and child services. On the other hand, participants who preferred any time of clinic operation hour in maternal and child services were more likely to attend MCH clinic together with their wives (OR= 7.6, 95%CI [1.4-40.3], $p = 0.023$) compared to men who preferred 12 to 4 pm as time for clinic operation hour in maternal and child services.

In multivariate analysis, provider's attitude (OR=0.5, 95%CI [0.3-0.8] p= 0.005) and preferred time of clinic operation hour for MCH services (OR=6.7, 95%CI [1.1-43.5] p= 0.05) were independently associated with men's attendance of the MCH clinics, as shown in Table 4.5.

From qualitative data, when probed about the perception associated with attendance to MCH clinic, varied responses were gathered both from FGD and KII, including cultural issues such as societal taboos, demographic factors such as age, occupation and operation hours for the MCH services: One FGD-2 participant stated *"...What I can add is that most men perceive MCH services as a woman's affairs. They feel that it is the woman who is pregnant, it is the woman who should go to the clinic and he attends to other errands. He feels that if he is involved in the MCH services, where will food come from?"* (FGD 2 for men done in Suba Sub County Hospital)

In FGD 1, one woman had to say this about men's role in MCH; *"...Taboos are there especially given like in our case of Luo culture, they view the responsibility of taking care of the baby lies with the woman. This is to the extent that if a man hears that a woman wants to involve him on issues pertaining to the child care and being involved in the MCH, he will feel that you want to overpower him, and that is not his responsibility..."* (FGD 1 for women done in Suba Sub County Hospital).

The societal expectation of men was shown to influence men's involvement in MCH. In Suba one FGD 2 participant stated..... *"I can add a little bit on what they have said, most men have the knowledge that they are supposed to be involved in the MCH, they know and are aware that it is something they are supposed to be doing. But they say that when he is seen being involved in MCH; people will say that the woman is superior to him, people will see it as female dominance and that's why he is being involved. And this depends a lot on our culture in the community....."*

Preferred time of clinic operation hour for MCH services (OR=6.7, 95%CI [1.1-43.5] p= 0.05) was independently associated with men's attendance of the MCH clinics. This was reinforced in by one of the FGDs held in ROO one of the participant said; '.... *most of the mothers that come here, their husbands are fishermen, so they go at night and come back around 10.am, and 10.am the mother is already here.....*' (FGD3 for men done in ROO Dispensary)

Other participant believed there are no taboos that should deter men's involvement in MCH clinic. In Suba one participant stated that..... "but there is no taboo or any belief whatsoever that deter their involvement ..." (FGD 2 for men held at Suba District Hospital).

Table 4.5 Men's Perception and its Association with the Attendance of MCH Clinic

Variable	Overall population		Men's attendance in MCH clinic		P - value	Bivariate uOR (95% CI)	P - value	Multivariate aOR (95% CI)
	No	%	No	%				
Age bracket contribute to mens attendance of MCH services								
Yes	186	52.8	35	17	0.975	0.9 (0.6 - 1.7)	0.408	0.8 (0.4 - 1.4)
No	166	47.1	22	15.9	Reference	Reference	Reference	Reference
Do you agree that time taken in the clinic (waiting time) will influence male participation in maternal and child services								
Agree	166	47.2	31	19	0.603	1.4 (0.4 - 4.4)	0.945	1.1 (0.3 - 1.5)
Strongly agree	39	11.1	5	12.8	0.933	0.9 (0.2 - 3.9)	0.665	0.7 (0.2 - 3.1)
Disagree	119	33.8	17	14.3	0.941	1.1 (0.3 - 3.5)	0.729	0.8 (0.2 - 2.7)
Strongly disagree	6	1.7	1	17	Reference	Reference	Reference	Reference
Taboos that can hinder men from participating in MCH services?								
Men should not be involved in womens affair	50	14.2	10	20	0.354	1.4 (0.7 - 2.8)	0.346	1.4 (0.7 - 3.1)
It is the duty of the woman to look after the child	35	9.9	4	11.4	0.683	0.8 (0.3 - 2.3)	0.704	0.8 (0.3 - 2.4)
Men are the head of the house and should spend time looking for food for family	70	19.9	15	21.4	0.199	1.5 (0.8 - 2.8)	0.456	1.3 (0.6 - 2.6)
Other combined taboos	197	55.9	28	14.2	Reference	Reference	Reference	Reference
Provider's attitude influences male involvement in maternal and child services								
Yes	223	63.4	41	16.4	Reference	Reference	Reference	Reference
No	121	34.4	16	13.2	0.002	0.5 (0.3-0.8)	0.005	0.5 (0.3-0.8)
Can your income (Money you earn) influence your participation in maternal and child services?								
Yes	206	58.5	35	17	0.659	1.1 (0.7 - 1.9)	0.955	1.1 (0.6 - 1.9)
No	138	39.2	22	15.9	Reference	Reference	Reference	Reference
What clinic operation hours do you prefer for you to participate in maternal and child services?								
8-12 am	280	79.5	46	16.4	0.064	6.8 (0.9 - 51.6)	0.069	7.4 (0.9 - 65.9)
12 - 4 pm	34	9.7	6	17.6	Reference	Reference	Reference	Reference
4-8 pm	20	5.7	4	20	0.064	8.5 (0.4 - 81.2)	0.077	8.5 (0.8 - 91.1)
Any other	9	2.6	1	11.1	0.018	7.6 (1.4 - 40.3)	0.044	6.7 (1.1 - 43.5)

No - Number; % - Percentage; OR - Odds ratio; CI - confidence interval; u - Unadjusted odds ratio; a - adjusted OR; ND - Not done

4.8 Strategies Suggested by Participants to Increase Male Involvement in MCH Services

The views of men on strategies to be employed to increase male involvement in MCH was analyzed and summarized as shown in the Table 4.6 Majority of participants 54.8% suggested mobilization and campaigns by the government and health providers on male involvement could be the required catalyst. Other suggestions included compensation and incentives to be provided to men who accompany their wives to the clinic, giving priority to women attending clinic with husband, Services at the clinics to be improved to accommodate men. The least (0.5%) suggested men to be served by experienced or trained providers who understands men's role.

Table 4.6 Strategies Suggested by Participants to Increase Male Involvement in MCH Clinic

Strategies to be employed for MI	N (354)	%
1. Men should be separated from women at the MCH clinic	16	4.52
2. Priority to be given to women attending clinic with husband	30	8.47
3. Women to be sent home to bring their husbands	25	7.06
4. Mobilization and Campaigns by the government and health providers on male involvement	194	54.8
5. Compensation and incentives to be provided to men who accompany their wives to the clinic	34	9.6
6. Health workers attitude should be addressed through trainings	10	2.82
7. Services at the clinics to be improved to accommodate women	26	7.34
8. Men to be served by experienced or trained providers who understands men's role	2	0.56

From qualitative data, varied suggestions were gathered both from FGD and KII, including improved training to empower men about issues related to MCH clinic, Some of the suggestions from the FGDs included; “...*The health workers can organize.... let's say going even to the chiefs during the barazas and they can educate the community. Once a mother is pregnant, it means that the father is also pregnant, so the man should be involved in the MCH services, which can help...*” (FGD 4 for women done in Nyamrisra Dispensary) Another input from another participant was; “...*The community health worker can go from house to house and have a talk with them, showing them the importance of both partners being involved in MCH, because it is the community health worker who can easily identify them as he/she is closer to the community members...*” (FGD 2 for men done in Suba Sub County Hospital). In the KIIs, the following were some of the responses and opinion on what can be done to advocate for male involvement; ‘...*I think we need to do sensitization to the men....*’ (KIIs, CHEW Female 26 years). ‘...*for PMTCT to be successful, both of them should be involved in testing HIV.....*’ (KIIs, Mentor Mother Leader Female 29 years).

CHAPTER FIVE: DISCUSSION

5.1 Introduction

This chapter discusses the study findings and compares with the findings from other similar studies. The chapter discusses male involvement in MCH clinic, men's knowledge in MCH services and its influence in MCH clinic attendance, men's perception of MI and proposed strategies to increase male involvement in MCH services.

5.2 Male Involvement in Maternal and Child Health Services

Male involvement in maternal and child health encompasses various ways in which men relates to, supports and attend to reproductive health activities (DeCock, 2012). In our context, male attendance implied accompanying the spouse to MCH clinic to seek for medical interventions or to give birth. In this study, men's attendance in MCH clinic was reported to be 16.3%; this was way below the average recommended in the Kenya PMTCT guidelines of $\geq 30\%$ male involvement (Odeny *et al.*, 2013).

Increased male involvement in reproductive health has been reported in various studies: In Uganda a study conducted by Tweheyo *et al.*, (Tweheyo *et al.*, 2010) reported 48% of men accompanying their wives to the delivery wards. In Ghana, a study done by Craymah *et al.* (Craymah *et al.*, 2017) cited that 35%, 44%, and 20% of men accompanied their partners to antenatal care, delivery, and postnatal care services, respectively which showed a slight increase in male involvement when compared to our study findings. In southern Ethiopia, from a most-recent similar study the level of male partner involvement in a PMTCT program was 53% (Tilahun & Mohamed, 2015).

Other studies have reported either lower or similar rates to our study regarding male involvement in MCH clinics. In a study in Uganda only 6% of male partners were found to be consistently involved in MCH services (Tweheyo *et al.*, 2010). In an earlier study conducted in Kenya in 2010 showed men attendance at 11% after an intervention of verbal invitation from the spouses (Farquhar *et al.*, 2001). Another study done in Uganda (Byamugisha, 2010) reported only 16% male attendance and 12% male attendance in study done in Tanzania (Msuya *et al.*, 2008).

Although studies have published the importance of male involvement in MCH clinics including reduction in maternal stress and increased uptake of prenatal care (Feldman *et al.*, 2000; Ghosh *et al.*, 2010; Gungor & Beji, 2007; Kainz *et al.*, 2010), the low male involvement in our study and other could be attributed to various reasons. The (WHO, 2016) states that in many countries, sexual and reproductive health programs and services are centered around women. Men often are shown to frequently lack information that could assist them in making decisions regarding healthy behaviors and the roles they could play to promote overall family health, including accessing HIV prevention, care and treatment services (WHO, 2016).

Traditional gender norms prevalent in patriarchal societies are also cited to account for the low levels of male partner involvement in maternal and infant health and PMTCT, by making involvement by men in MCH clinic a challenge (Matseke *et al.*, 2017; van den Berg *et al.*, 2015). Conflict in MCH clinic time involvement and work time schedules. The role of men as household bread winner reported in this study and others, conflicts the time involvement with the involvement of men in MCH clinics (Matseke *et al.*, 2017; van den Berg *et al.*, 2015). Odeny *et al.*, (2013) reported men engagement in activities aimed at fetching daily household bread and conflicting with the time required to attend the MCH services (Odeny *et al.*, 2013).

In our study a majority of men were engaged in fishing activities requiring that they spent late night and morning hours in the lake, the time which most women have already left for the clinic or are on their way back from the clinics. Hence, they preferred attending clinic between 4-8 pm in the evening after running their errands.

In Rwanda, a well-intended initiative of male partner involvement that recommend women seeking maternal and child health services to be accompanied by their male partners was counterproductive because it resulted into delays and exclusion of women and their supportive male partners who were turned away from the clinic and further health consultations (Pafs *et al.*, 2015).

5.3 Men's Knowledge in MCH Services and its Influence in Clinic Attendance

In this study various levels of knowledge and awareness related to male involvement in MCH services were probed. Men's knowledge was assessed on policies, services offered and available Kenyan PMTCT & ANC guidelines. Participants who were awareness of the MOH policies and guidelines to enhance men attendance to MCH clinics were more likely to attend MCH clinic together with their wives.

Randomized trials in Turkey, Ethiopia, and China found that contraceptive adoption was significantly higher among women whose husbands were included in contraceptive counselling compared to women whose husbands were not involved (Fisek & Sumbulogly, 1978). A study on the impact of providing antenatal education to prospective fathers in India found a significantly higher frequency of antenatal clinic visits and lower perinatal mortality among the women whose husbands received antenatal education (Bhalerao *et al.*, 1984). Further, in India, an intervention during prenatal consultations to increase men's involvement in their partners'

maternal care increased couples' discussion and use of contraception and improved knowledge about pregnancy and family planning (Varkey *et al.*, 2004).

Men may therefore play the role of 'gatekeepers' to health care in maternal and child health, despite the fact that they often lack relevant knowledge in maternal and child health as insinuated in studies that have been done (August *et al.*, 2015). Men who are poorly informed or disengaged from pregnancy and childbirth may present serious barriers to women's ability to act in their own and their children's interests (Dudgeon & Inhorn, 2004). In another study in northern Uganda men were not aware of their role in ANC and alleged that their non-involvement was for the benefit of their pregnant partners (Tweheyo *et al.*, 2010). A study done by August *et al.* have related low coverage of family planning services including the desire to have more children and lack of knowledge about contraceptive use (August *et al.*, 2015).

In a study on male knowledge of birth preparedness and severity of danger signs showed that men would promptly seek care in a health facility if a woman had severe bleeding, convulsions or swelling of hands and feet. Still, a quarter of the men would go to traditional healers for care of pregnant women in the case of convulsions. This finding indicates that more efforts are needed to make men understand the importance of their involvement in matters dealing with maternal health (Aarnio *et al.*, 2013). A previous study found that one of the strongest factors in antenatal care services was knowledge about antenatal care services (Tweheyo *et al.*, 2010). Once men felt they knew more about antenatal care, they felt more driven to accompany their spouses.

5.4 Men's Perceptions of Male Involvement in MCH Services

Provider's attitude was significantly associated with male involvement in MCH clinic in this study. Studies have reported the importance of the attitudes of health workers on the rate of male involvement. The study is consistent with a study conducted by (Msuya *et al.*, 2008; Nkuoh *et al.*, 2010). They reported that harsh and critical language directed at Ugandan women from skilled health professionals was a barrier to male participation. Harsh treatment of men by health providers discouraged them from returning or participating in prevention of mother-to-child transmission (PMTCT) of HIV activities. In Turkey, it was observed that health care workers were not supporting men who wanted to join in MCH services, and as such a lot of men who visited the clinics with their wives had to stop at the door of the clinic (Pile *et al.*, 1999). Thus, low male involvement in MHC could result from the fear of men being the subject of verbal, emotional, and sometimes physical abuse (Breiding-Buss *et al.*, 2002).

In this study, participants who preferred any time of clinic operation hour in maternal and child services were more likely to attend MCH clinic together with their wives. Similar findings were reported in a systematic review by (Morfaw *et al.* 2016) in sub Saharan Africa in 2013 where lack of time was the main reasons for low male participation (Kalembo *et al.*, 2013). Another studies reported increased male participation in VCT and couple testing occurred in Kinshasa when the MCH services were opened in the evening between 5:00 – 8:00 pm (Ditekemena *et al.*, 2011). Most health facilities offer these services only on weekday mornings, when the majority of men are at work. Yet several studies have identified ANC opening hours as a limiting factor for male involvement (Msuya *et al.*, 2008; Nkuoh *et al.*, 2010).

In this study taboo and cultural practices were not independently associated with male involvement in MCH clinic. In several studies cultural standards were identified as barriers for

male involvement (Msuya *et al.*, 2008; Nkuoh *et al.*, 2010). In one report, men who accompanied their wives to ANC services were perceived as being dominated by their wives. Frequently men perceived that ANCs services are designed and reserved for women, thus are embarrassed to find themselves in such “female” places (Msuya *et al.*, 2006; Mlay *et al.*, 2008; Byamugisha *et al.*, 2010). Certain women too, do not like to be seen with their male partner attending the ANC service (Mlay *et al.*, 2008; Reece *et al.*, 2010). An earlier study in Kenya showed that certain male clients trusted traditional healers but not hospitals and therefore did not attend ANC clinics (Mlay *et al.*, 2008). This study found that men who knew their roles in MCH clinic were more likely to attend MCH (Mlay *et al.*, 2008).

5.5 Strategies to Increase Male Involvement in MCH Clinic

The important role of male involvement in maternal and child health has been established in various studies as an increasingly valuable way to improve a number of health indicators (Ampt *et al.*, 2015). Encouraging outcomes as a result of male involvement in maternal and child health have been shown in a number of studies (Odeny *et al.*, 2013; Yargawa & Leonardi-Bee, 2015). Some of the interventions mentioned in this study to boost male involvement in MCH included; Mobilization and campaigns on male involvement in reproductive health activities. Most men who were interviewed in the study suggested that the government of Homa-Bay County in collaboration with the health providers to launch a sensitization campaigns to the community advocating for male involvement in maternal and child health. Lack of information and education on male involvement in MCH was a key deterrent.

Findings from the literature, suggest that men can be encouraged to take a more active, positive role in MCH through education and training using various strategies such as men-only group talks or one-on-one peer-education, community meetings, distribution of information, education

and communication materials or mass-media campaigns (Msuya *et al.*, 2008; Nkuoh *et al.*, 2010). Studies have also found the importance of various incentives to improve male involvement in MCH clinic. Fast and first service were an incentive when women came with their spouses used in all antenatal and postnatal clinics with appreciable outcomes (Kululanga *et al.*, 2011)

Some of the approaches suggested by this study involved the use of community representatives such as the chiefs, religious leaders and the community health workers to create awareness and sensitize the people in the community about the importance of male involvement and attending MCH services. They are also important in demystifying the taboos, cultures, myths and misconceptions that surround gender roles and responsibilities that ties the society to backward behaviors. This underscores the need for holistic approaches to men's involvement in MCH, that build awareness regarding the benefits of engaging fathers in MCH, while also building health system capacity to engage and serve men.

5.7 Limitations of the Study

This study did not analyze the scientific reasons for the difference between men who accompanied their wives to the MCH clinics verses the ones who did not. This is an important area for future studies.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This section highlights the conclusions that can be drawn from the study findings:

1. It was evident from the study results that, male attendance to the MCH clinic was low (16.3% compared to the Kenya PMTCT guidelines target of > 30%).
2. This study showed that men's knowledge on services offered at the maternal and child health clinics was associated with their MCH clinic attendance.
3. In this study, participant's perceptions of male involvement in MCH services including health provider's attitude towards men in MCH clinics, preferred time of MCH clinic operation hours suitable for men, societal beliefs and taboos on the role of men in a family were significantly associated with men's MCH clinic attendance.
4. Suggested interventions to improve male involvement in MCH clinic in this study are broadly categorized into three areas; sensitization and educational campaigns to the community to improve male involvement in MCH clinics, provision of incentives and appreciation for men involved in MCH services and capacity building health care providers to accommodate men in MCH clinics.

6.2. Recommendations

Based on the study outcomes the following recommendations can be drawn;

1. A wider study be conducted to gauge the overall male involvement in the MCH clinic.
This will provide the temporal and spatial variation across the country with a view of developing strategies for increasing men's involvement in MCH services.
2. Rigorous training and educational campaigns on the importance of male involvement in MCH clinic is recommended to men, community, and health provider.
3. All efforts must be undertaken to improve and change negative societal cultural norms and taboos that hinder male involvement in MCH in Kenya.
4. There is urgent need to adopt the suggested interventions and other strategies that have worked elsewhere to improve male involvement in MCH clinic.

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Appendix 2: Questionnaire

INSTRUCTIONS TO THE RESEARCH ASSISTANT

1. Respondent should not write their name on this form. It is an anonymous survey
2. Let the respondent read through all the options before they make a choice.
3. Let the respondent to circle or tick within the box the answer they think is correct or is their point of view.
4. Let the respondent know that other questions might have more than one answer tick or circle all that are of their choice.

STUDY TITLE

MEN'S KNOWLEDGE, PERCEPTIONS OF MALE INVOLVEMENT IN MATERNAL AND CHILD HEALTH SERVICES AND THEIR INFLUENCE ON THE ATTENDANCE IN SUBA SUB COUNTY, HOMA-BAY COUNTY, KENYA.

INTRODUCTION

Dear Sir/Madam,

I'm a student at Maseno University pursuing a Master in Public Health Degree. Currently I am carrying out the above study in Suba Sub-County as part of the requirements for the fulfillment of my Degree. The purpose of this introduction is to kindly request you to participate in this study by completing the attached questionnaires. All the information collected will be treated as strictly confidential. Your cooperation and support in this study will be greatly appreciated.

SECTION 1:

Participant's identification number (__001_____)

DEMOGRAPHIC INFORMATION

1. Date of interview (day/month/year) (_____)
2. What is your age? (years) 18 18-30 >30
3. What is your marital status?
 Single Married Other (specify) _____
4. How many wives do you have?
 Two Three Four
 Other (specify) _____
5. For how long have you been married? (years) < 5 >5 >10
6. Have you ever accompanied your wife to the clinic?
 Yes No
7. What is your ethnic group?
 Luo Suba Kisii
 Kuria Decline Other (specify) _____
8. What is your religion?
 Muslim Protestant Catholic
 Other (specify) _____
9. What is your level of education?
 Non formal Primary school
 Secondary school College/University
10. What is your main occupation?
 Fisherman Boat Owner Trader
 Fish trader Farmer Other (specify) _____

11. How many times did you accompany your wife?

- 0
- 1
- >1

12. How long does it take you to reach the hospital? < 30 min 30 – 60 min > 60 min

SECTION 2:

Men's knowledge of male involvement in MCH

13. Are you aware of the effort by the MOH to involve men in attending the MCH?

- Yes No

14. What are some of the services offered at ANC clinic?

- HIV testing and counseling
- Immunization
- Malaria Prophylaxis
- I don't know
- Other specify _____

15. What are the benefits of attending ANC clinic?

- Free mosquito nets are provided
- Mothers are tested and given appropriate drugs
- Water guard is given to purify water
- Provision of condoms
- Other specify_____

16. Do you know of ways of reducing HIV transmission to the baby from the mother?

- Yes No

If yes, what are the ways?

- Exclusive breast feeding for 6 months
- Taking ARV prophylaxis for the mother and the baby
- Conceiving when the viral load of the mother is suppressed
- Don't know
- Any other_____

17. What are the benefits of breast feeding a baby in their first 6 months of their life?

- A healthier baby resistant to diseases
- Baby having strong bones
- Less risk of cancer
- Fewer problems with weight
- Don't know

18. Do you use family planning with your sexual partner?

- Yes No

19. What are some of the myths that deter men from getting involved in family planning?

- Family planning is a women affair
- Men should not discuss with women issues of sexuality
- Women should give birth to many children so long as she is not sick
- Don't know

20. Where was your last child delivered?

- Hospital Home TBA Other specify_____

If hospital, did you accompany your wife to hospital for delivery?

21. What are the Taboos that can hinder men from participating in MCH services?

- Men should not be involved in women's affair
- It is the duty of the woman to look after the child
- Men are the head of the house and should spend time looking for food for family
- Any other _____

22. Have you ever gone for HIV counselling and testing with spouse?

- Yes
 No

23. What is the recommended frequency of ANC clinic attendance?

- One
- Two
- Three
- Four
- Other specify _____

24. Aware of methods to reducing HIV mother to child transmission?

- Yes No don't know

25. What are the reasons for men's attendance of MCH clinic?

1. _____
2. _____
3. _____
4. _____

SECTION 3:

Perceptions of men on MCH services

26. What are some of the taboos that can hinder men from participating in MCH services?

- Men should not be involved in women's affair
- It is the duty of the woman to look after the children
- Men are the head of the house and should spend time looking for food for the family
- Other specify _____

27. Do you think age bracket (old or young) would contribute to how men participate in maternal and child health services?

- Yes No

28. Do you agree that time taken in the clinic (waiting time) will influence male participation in maternal and child services?

- Agree Strongly Agree Disagree Strongly Disagree

If you agree or disagree, explain how

29. Which family planning methods do you use with your sexual partner?

- IUD Implant Pills Diaphragm Withdrawal
 Injectable Natural method Male or female condom

30. Do you think health provider's attitude will influence male involvement in maternal and child services?

- Yes No

31. What clinic operation hours do you prefer for you to participate in maternal and child services?

- 8-12 am 12-4pm 4-8 pm Any other _____

32. Can your income (Money you earn) influence your participation in maternal and child services?

- Yes No

Explain how.

1. _____
2. _____

33. What do you think can be done to improve male involvement in MCH services?

1. _____
2. _____

THANK YOU

Appendix 3: Informed Consent form in English

You have been selected by chance to participate in a study assessing men's awareness, views and involvement in maternal and child health services in Suba Sub County. Noel Otieno Odhiambo in charge of this study is a student of Maseno University.

Although the study may not benefit you directly, it will provide information that will guide on formulation of interventions that will improve the health of the families in Suba and Homa-Bay County as a whole.

The appropriate authorities have approved the study and its procedures. For you, these procedures include responding to the questions I will ask, some of which are sensitive. You are free to ask any question about the study at any time if you need more information. I will need about 30 minutes of your time.

Your participation in this study is voluntary; you are under no obligation to participate. You have the right to withdraw at any time and the relationship with the interviewers will not be affected.

The information collected from you will be coded so that they are not linked to you or your family and your identity will not be shared with any other person without your permission.

This consent form has been read and explained to me and I voluntarily consent to participate in this study.

Signature: _____ Date: _____

I have explained this study to the above Subject and I have sought his understanding for informed consent.

Interviewer's signature _____ Date: _____

Appendix 4: Informed Consent form in Dho-luo

Kalatas mar chiwo thuolo

Iyudori ayuda ma onge yiero ekind oganda mondo igol pachi e nonro mar fuenyo kaka chung mag joma chuo kata ng'eyogi e weche mine mayach kod rit mar ngima nyithindo monyuol rocho kata konyo limbe mag mine gi nyithidogi e chenro mag osiptande mag konyo mine mayach ei Suba Sub County ei Homa-Bay County. Noel Otieno Odhiambo mar mbalarieny mar Maseno ema timo nonro ni.

Kata obedo ni nonro ni samoro ok di konyi moriere to obiro kelo paro kaka dangtim mondo joma chuo okonyre kendo owinjre gi joma mine eweche rit mag ngima mine mayach gi nyithindo monyuol ei Suba Sub County ei Homa-Bay County.

Mae nyalo miyo mine mangeny koro tim chenro mag osiptende aeto bange biro miyo gamo kute mag ayaki koa ir miyo nyaka nyathine dog thien

Migao mowinjore osepuodho nonro ni gi kaka ibiro time. Kuomi to chenro gi chalo kaka duoko penjo moko kuom dakika madirom 20. Bende inyalo penjo wach moromora esa asaya kaluore gi nonro ni.

Golo pachi e nonro ni onge achune. Bende kata iyie kata okiyie esa asaya to mano oktim gimoroamora ekindi gi jago matimo nonro ni.

Paro mowuok kuomi idhi ket eyo malingling maok nyis ngama ogolo parono, mak man aka in ema idwaro yangori.

Kalatas mar chiw thuolo ni osesomna kendo onyisa tiende koro ayie kenda mondo agol pacha e nonro ni.

Sei _____ Tarik _____

Asefuono tie nonro ni ne jal mamalono mondo owinj kendo oyiena.

Sei ja Nonoro _____ Tarik _____

Appendix 5: Guide for Focus Group Discussions

Ice breaker

What normally happens at the MCH?

(En ango ma timorega e kar thieth mar mine mayach gi nyithindo/ji adi ma osedhiga e MCH?).
In your opinion, what do you think are some of the roles of men in maternal and child health services?

(E paroni iwuon, iparoni tij joma chuo en mane e yor chiwo thieth ne joma mine mayach kod nyithindo matindo)

2 Do men know about male involvement in maternal and child health services here in Suba? How does it affect their attendance in the clinic?

(En ango ma joma chuo ongeyo e wii bedogi e yor chiwo thieth ne joma mine mayach gi nyithindo matindo ei Suba ka? Ere kaka ngeyo gi rocho kata konyo e biro margi e klinik?)

3 How do men perceive their involvement in MCH services here in Suba?

(Ere kaka joma chuo kawo bedogi e chiwo thieth mar joma mine mayach kod nyithindo matindo)

Probe: What are some of the taboos and beliefs in this community that deter or encourage male involvement in MCH services?

(Gin kweche kata chike mage ma oganda temo jiwo kata odagi korka jogo machuo bedo e chiwo thieth mar joma mine mayach gi nyithindo matindo?)

4 What are some of the strategies that can be employed to increase male involvement in maternal and child health services here in Suba?

(Gin yore mage ma olony ma inyalo keti mondo omed bedo joma chuo e chiwo thieth mar mine mayach kod nyithindo e Suba ka?)

Appendix 6: Key Informant Interview guide

Ice breaker

1. What are some of the beliefs and taboos in this community that influence male involvement in maternal and child health care? (Area Chief)
(Gin kweche kata chike mage mag oganda manyalo rocho kata konyo e bedo joma chuo e thieth mar mine gi nyithindo matindo)
2. What are the perceptions of men on male involvement in this community? (CHEWs)?
(Ere kaka joma chuo kawo bedogi e thieth mar mine mayach gi nyithindo matindo e oganda ka?)
3. What are the roles of men on maternal and child health? (Nurse)
(Tij joma chuo en ango e thieth mar mine mayach kod nyithindo matindo?)
4. What are the experiences of women on male involvement in this facility? (Mother to Mother support leader)
(Gin gik mage kata weche mage ma joma mine osewinjo kata ose neno ewi bedo joma chuo e thieth mar mine mayach kod nyithindo matindo?)
5. What are some of the hindrances for men getting involved in maternal health in Suba? (CHW)
(Gin gik mage ma gengo bedo mar joma chuo e thieth mar mine mayach kod nyithindo matindo?)
6. How does religion affect male involvement in this community? (Religious leader)
(Ere kaka lemo kata dini rocho bedo mar chuo e thieth mar mine mayach kod nyithindo matindo e oganda?)

Appendix 7: MUERC approval letter.



MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

FROM: SECRETARY - MUERC

DATE: 15th December, 2015

TO: Noel Otieno Odhiambo
PG/MPH/021/2013
Department of Public Health
School of Public Health and Community Development
Maseno University

REF: MSU/DRPI/MUERC/00249/15

RE: Proposal Reference Number MSU/DRPI/MUERC/00249/15 Men's Knowledge, Perceptions and its Influence on their Involvement in Maternal and Child Health Services in Suba Sub County, Kenya.

MUERC is pleased to inform you that your proposal application was reviewed and discussed in the Committee meeting held on 3rd December, 2015.

In its review the Committee noted the following **Minor Corrections** to be made before Ethics Clearance is granted:

- i. There is no knowledge gap objectives1, second part of objectives 2, 3 and 4 are addressing in the background and/or statement of the problem. The limited information of men on men's knowledge, perceptions and their influence on men's involvement in MCH services are not outlined. What if these are the only information existing? What will this study actually achieve? can existence of "little" information alone be a basis of a study? What actually is the problem in this study?
- ii. Harmonize the title in the MUERC application form with the abstract.
- iii. Ethical issues must be exhaustively explained to include the rights as explained in the consent form.
- iv. The consent form should be translated into study area local language.
- v. Describe the limitations and potential biases of the study and how they will be addressed.
- vi. Describe the consenting process that will be used in this study.
- vii. Adjust the project timelines as the dates indicate completion of project was in July 2015.

The Committee granted the Investigators thirty (30) working days to make corrections and submit a final draft proposal to MUERC Secretariat for consideration and approval.

Please submit **one copy of corrected draft proposal** and a **signed cover letter** detailing the sections (page Numbers and paragraphs) where corrections are made. Include your **proposal Ref Number** on the cover letter

Thank you.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Dr. Bonuke Anyona', is written over a light blue rectangular background.

Dr. Bonuke Anyona
Secretary - MUERC
Cell phone: +254 721 543 976; +254 733 230 878
Email: sbonuke@gmail.com

MASENO UNIVERSITY IS ISO 9001:2008 CERTIFIED



Appendix 8: County approval letter

MINISTRY OF HEALTH

Telegrams: "MOH" Homa Bay
HOMA BAY COUNTY,
When replying please quote,



MINISTRY OF HEALTH
P.O. BOX 52,
HOMABAY

3rd February. 2016

REF: No. MOH/CTY/GEN/VOL.2/301

To
Suba Sub County MOH
Homa Bay County
Dear Sir,

RE: AUTHORIZATION TO COLLECT DATA FOR MPH STUDY

Please allow and assist Noel Otieno Odhiambo; PG/MPH/021/2013, who is a masters student at Maseno University to collect relevant data as per his study in your Sub County.

Any assistance accorded to him will be highly appreciated,

Yours Faithfully

Dr. Osuri Kevin
DCDH
Homabay County



Appendix 9: Sub County authorization letter

MINISTRY OF HEALTH

Telegrams:
Telephone: +254729-395433
Fax:
E-mail: distsuba@yahoo.com
REF NO: MOH/SSC/ST/VOL.51



Suba District Hospital,
P.O. Box 25-40308,
SINDO.
Date: 11/02/2016

To:
The County Director of Health
PO Box 52,
HOMA-BAY

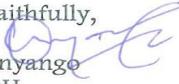
RE: AUTHORIZATION TO COLLECT DATA FOR MPH STUDY IN SUBA SUB-COUNTY

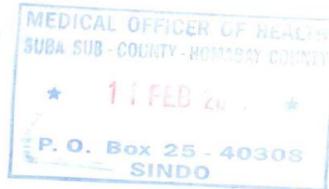
Please refer to your letter Ref.No: MOH/CTY/GEN/VOL.2/301 dated 3rd February, 2016.

This is to confirm to you that Mr. Noel Otieno Odhiambo :PG/MPH/021/2013 who is a masters student at Maseno University has been given permission to collect data in Suba Sub-County in relation to his study.

Please accord him the necessary assistance.

Yours faithfully,


Peter Onyango
For:MOH
SUBA SUB-COUNTY



Appendix 10: Chief's authorization letter



**THE PRESIDENCY
OFFICE OF THE CHIEF KAKSINGRI CENTRAL LOCATION
SUBA DISTRICT**

Phone No: 0724218317
Ref. No: ADM/KAC/VOL/021

P.O BOX 197-40308,
SINDO,
DATE: 11/02/2016

DATE: 11-2-2016

TO WHOM IT MAY CONCERN
RE NOEL OTIENO ODHAMBO PG/MPH/021/2013 MUN
ID NO: 22326835

This is to bring to your attention the above reference who is a student at Maseno University college and is here to undertake a research ^{study} program on Male Male involvement on maternal health within this location and beyond.

This follows the letters ref nos MOH/CT/GEN/VOL.2/301 and dated 3rd February 2016 and MOH/SSC/ST/VOL.51 dated 11/02/2016.

May you accord him any necessary assistance that is towards his course of action and I thank you in advance.

Thanks

Magadi Daniel
OFFICE OF THE CHIEF
KAKSINGRI CENTRAL LOCATION
P.O BOX 197, SINDO

Appendix 11: School of Graduate Studies Approval Letter



MASENO UNIVERSITY
SCHOOL OF GRADUATE STUDIES

Office of the Dean

Our Ref: PG/MPH/00021/2013

Private Bag, MASENO, KENYA
Tel:(057)351 22/351008/351011
FAX: 254-057-351153/351221
Email: sgs@maseno.ac.ke

Date: 30th November, 2015

TO WHOM IT MAY CONCERN

**RE: PROPOSAL APPROVAL FOR NOEL ODHIAMBO —
PG/MPH/00021/2013**

The above named is registered in the Master of Public Health programme in the School of Public Health and Community Development, Maseno University. This is to confirm that his research proposal titled “Men’s Knowledge, Perceptions and its Influence on their Involvement in Maternal and Child Health Services in Suba sub-County” has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.


Prof. P.O. Owuor
DEAN, SCHOOL OF GRADUATE STUDIES



Maseno University

ISO 9001:2008 Certified

