HEALTH FACILITY DELIVERY AMONG WOMEN WHO HAVE DELIVERED IN THE LAST SIX MONTHS IN KWALE COUNTY-KENYA

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OCTOBER 2015
DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

This Work is dedicated to my family, Mother and the Community for their keen interest and support throughout the process. I will not let you down. Keep praying for me.
ACKNOWLEDGEMENT

I thank the Almighty Allah for enabling me complete this Masters of Public Health degree course successfully.

I acknowledge the technical support offered by my supervisors; Prof. Margaret Keraka and Prof. Agina Okello. They have provided thorough guidance to me throughout the process.

Thank you.
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<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<td>ANC</td>
<td>Antenatal Care</td>
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<td>DRH</td>
<td>Division of Reproductive Health</td>
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<td>EmOC</td>
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<td>FANC</td>
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<td>FCI</td>
<td>Family Care International</td>
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<td>HIV</td>
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<td>HTC</td>
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<td>IBP</td>
<td>Individual Birth Plan</td>
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<td>ICPD</td>
<td>International Council for Population and Development</td>
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<td>Kenya Aids Indicator Survey</td>
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<td>NCPD</td>
<td>National Council for Population and Development</td>
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<td>NRHS</td>
<td>National Reproductive Health Strategy</td>
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<td>PMTCT</td>
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<td>SPSS</td>
<td>Statistical package for social sciences</td>
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<td>STDs</td>
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ABSTRACT

Maternal and neonatal morbidity and mortality are major public health concerns in most developing countries and in under resourced settings. Provision of safe motherhood is of utmost importance in the reduction of maternal mortality. Increasing the proportion of babies that are delivered in health facilities is an important factor in reducing the health risks to both the mother and the baby. The main objective of the study was to assess the level of health facility utilization for child delivery and the associated factors in Kwale County. This was a community based cross-sectional descriptive study. A multistage sampling technique was used to select 272 mothers who had delivered within six months from the target community. Data was collected using semi-structured questionnaire, FGD guide and an interview schedule. Statistical techniques including chi-square test, odds ratio and multiple logistic regression were employed in the analysis. All the analysis was done in SPSS version 17.0 for windows. P-value less than 0.05 were considered statistically significant. Results of the study indicates that, among the 272 mothers who participated in the study, 180(66.2%) were married and 162(59.6%) were of Islamic religion. Most of the mothers, 213(78.3%) had not completed Primary level of education. Of all the deliveries, 119(43.8%) were under skilled attendants at the health facilities. Mothers from Matuga and Kinango districts were less likely to deliver at the hospital (AOR; 95%CI: 0.078(0.013-0.487) and 0.032(0.06-0.172) respectively. Chances of delivering at the health facility increased with the increase in age and similarly those whose partners had higher level of education were more likely to deliver at the hospital.(AOR;95%CI: 0.008;0.001-0.061). In conclusion, the study revealed that utilization of skilled delivery attendance services was still low than expected with a high number of deliveries being attended by unqualified lay persons at home. There was need to strengthen the education infrastructures, implement cost effective and sustainable measures to improve the quality of maternal health services with an aim of promoting safe delivery and hence reducing maternal mortality.
CHAPTER ONE: INTRODUCTION

1.1 Background

Maternal health remains a challenge in developing countries. The numbers of women dying every year from maternal related causes have remained high in developing countries despite various efforts to bring them down. Globally, over 500,000 women, 99% of them mainly from low income countries are estimated to die each year from complications arising from pregnancy and childbirth (WHO 2009). For every maternal death, 30% or more women suffer disabling and humiliating injuries. In addition, almost 9 million children die every year, of which 4 million newborn babies die within the first month of life and 3.3 million babies are born dead (Canavan 2009).

Globally, an estimated 548 000 maternal deaths occurred in 2010, a decline of 47% from levels in 1990. Sub-Saharan Africa (56%) and Southern Asia (29%) accounted for 85% of the global burden (245,000 maternal deaths) in 2010. At the country level, two countries account for a third of global maternal deaths: India at 19% (56,000) and Nigeria at 14% (40,000). The global maternal mortality rate (MMR) in 2010 was 210 maternal deaths per 100 000 live births, down from 400 maternal deaths per 100 000 live births in 1990. The MMR in low income countries of 240 per 100,000 live births was 15 times higher than in high income countries with 16 per 100,000 live births. Sub-Saharan Africa had the highest MMR at 500 maternal deaths per 100 000 live births, while Eastern Asia had the lowest among MDG developing regions, at 37 maternal deaths per 100 000 live births. The MMRs of the remaining MDG developing regions, in descending order of maternal deaths per 100 000 live births are Southern Asia 220, Oceania 200, South-
eastern Asia 150, Latin America and the Caribbean 80, Northern Africa 78, Western Asia 71 and the Caucasus and Central Asia 46, (WHO 2012)

In 1994, Kenya was one of the countries that endorsed the resolution of the International Conference on Population and Development (ICPD) in Cairo, Egypt. As a follow up on these recommendations, the government drew up the National Reproductive Health Strategy (NRHS) 1997-2010. The NRHS identified the following as priorities: Access to quality maternal and child care services; utilization of quality and cost effective Mother/Child Health (MCH) services; effective referral systems; clean/safe delivery and emergency obstetric care; adequately equipped health facilities to provide quality MCH services; effective management of complication of pregnancy; post abortion care and establishment of district audit systems on maternal and perinatal deaths.

According to the government of Kenya’s Sessional paper no. 1 of 2000, the National Council on Population and Development (NCPD) in the Ministry of Finance and Planning, set the following demographic targets for Kenya: reduction of maternal mortality rate from 590 per 100,000 births in 1998 to 230 by 2005 and 170 by 2010, and increase the proportion of deliveries attended to by qualified personnel from 45% in 1998 to 90% by the year 2010.

Despite major efforts by the Kenyan government to promote the health and survival of mothers and babies through the provision of adequate Reproductive Health (RH) services and specifically the inauguration of the Safe Motherhood and Child Survival initiative,
success still remains elusive. Although significant gains have been achieved in Kenya’s health indicators, high maternal morbidity and mortality levels still persist, particularly associated with prolonged and obstructed labour, unsafe abortion, hemorrhage, hypertensive diseases of pregnancy, sepsis, anemia, malaria, STDs and HIV/AIDS (KSPA 2010). An estimated 488 women per 100,000 live births die as a result of pregnancy related complications, childbirth and sequele in the postnatal period, making maternal death the leading (27%) cause of death among women of reproductive age.

Though there has been a decline in the proportion of births occurring at home from 59% in 2003 to 56% in 2008-09, according to the 2008-09 Kenya Demography Health Survey (KDHS) only 44% of births in Kenya are delivered in a health facility.

Literature shows that a number of factors have been cited to affect the utilization of maternal health care. Stewart and Sommerfelt (2010) using the demographic and health survey data for Bolivia, Egypt and Kenya, found that the use of maternal health care (delivery services) are influenced by a myriad of social, cultural and economic factors. They found that it was positively and significantly associated with urban residence, education level, household wealth, age and parity.

1.2 Problem Statement

The health care a mother receives during pregnancy, at birth and after delivery of a baby is important for the survival of the mother and the child. That care is quite often not available to many mothers. During pregnancy, antenatal care provides an opportunity for
the identification and treatment of pregnancy complication and provides advices on places of deliveries and referral to the pregnant women. In Kenya, research findings according to the National Reproductive Health Strategy 1997-2010, indicate that more than 52% of all pregnant mothers country wide attend at least more than the four(4) focused antenatal care visits as prescribed, but less than 41% deliver at health facilities or are attended to by a skilled health personnel during delivery.

In addition to the place of delivery, the assistance a pregnant woman receives during child birth has great implications to the health of the child and the mother. The skills of the birth attendant determine the outcome in handling the delivery both in attending to the complications and observing the hygiene standards. The KDHS 2008-09 indicated that only 44% of births are assisted by a skilled provider (doctor, nurse or midwife). Twenty eight percent (28%) are assisted by a traditional birth attendant and 21% by untrained relatives or friends while 7% receive assistance from no one. As a result of these, the national maternal mortality rate for Kenya is still high at 488 per 100,000 live births.

The proportion of all births occurring in health facilities in the entire Kwale County is 22.6 % (CRA 2011). The national figures in relation to the place of residence according to the KDHS 2008-09 indicate that 74.7% of urban women deliver their babies in health facilities while only 35.4% of the rural residents deliver their babies in health facilities. More specifically, in Coast region alone, more than 55% of women do not deliver their babies in health facilities. It is with this background that the research was conducted to
establish factors that influence women in Kwale sub-counties of Matuga, Kinango and Msambweni in Coast Province not to deliver in the health facilities.

1.3 Study Justification

Pregnancy is a natural event but it can be risky leading to complications and even death. The type of assistance a woman receives during pregnancy, at birth and soon after, has important health consequences for both the mother and the child.

Poor utilization of quality reproductive health service continues to contribute to maternal morbidity and mortality in developing countries. Understanding the preferences of the people and the various factors that influence their preferences will help to put in strategies that will improve utilization of skilled obstetric services and thereby reduce unnecessary loss of lives.

The level of utilization of hospital delivery services is an important maternal health indicator. It is therefore, imperative to assess utilization of hospital delivery services in the county and factors influencing it. Understanding determinants of hospital delivery services utilization would enable the development of consumer-tailored interventions that are comprehensive enough to improve users’ perspectives on the health system and subsequently sustain its utilization. Identification of socio-demographic characteristics that impact on their perspectives on delivery care may create an avenue to devise strategies that will improve uptake of these services. This continuing decline in the
proportion of women delivering at the health facilities should instigate interventions that will encourage every pregnant woman to seek health facility services during delivery.

This study therefore assessed the awareness of Safe motherhood and delivery practices and the factors underlying the preference of place of child delivery among the women of Kwale County.

1.4 Research questions

1. What is the level of utilization of Health facilities in Kwale County for child delivery?
2. What is the level of knowledge on the Safe Motherhood practices?
3. What factors influence utilization of hospital delivery by pregnant women?

1.5 Main Objective

The main objective of the study was to establish factors influencing utilization of health facilities during delivery.

1.5.1 Specific Objectives

The objectives of the study were:

1. To determine the proportion of women utilizing health facilities for child delivery.
2. To determine the level of knowledge of safe motherhood practices among pregnant women attending ANC at the health facilities.
3. To determine the social, cultural and economic factors influencing the utilization of the health facility for child delivery.

**1.6 Significance and Anticipated Output of the Research**

These study findings will be used to encourage the wide acceptance of hospital deliveries. This is because the factors would have been identified and alternative solutions designed for interventions to promote hospital deliveries for pregnant women. There is advantage of pregnant women delivering at hospital/health facility or attended by skilled personnel in that danger signs will be detected in advance thus avoiding delays and complications of pregnancy and delivery will be handled professionally. Attendance by medically trained persons will also facilitate referral or management of the complications. This would thus reduce/prevent maternal and child mortality, pregnant and delivery complications and mother-to-child HIV/AIDS transmission. Maternal health after delivery (postpartum care), both preventive and curative care is also provided. Such care includes examination of mother’s nutritional status, treatment for anemia and advice on diet, child care, breastfeeding, weaning and post partum family planning. Immunization of the child against major childhood diseases is also done. All these benefits are vital thus pregnant women should have access to skilled attendance during delivery, in order to improve maternal and child health in Kenya.

**1.7 Conceptual framework**

Various health seeking behavior and health utilization frameworks are used in analyzing factors affecting utilization of health facilities and skilled attendance for child delivery.
The Thaddeus and Maine three delay model (1994) is used to understand factors contributing to maternal mortality and morbidity

**Delay- One: Decision making**

**Socioeconomic/cultural factors**
- Low income of woman/family
- Low or no education of woman
- Previous perceived experience of poor quality of care, long distance and cost
- Permission from husband/mother-in-law/father-in-law

**Delay- Two:**
- Access to reach health facility
  - Uneven distribution and long distance to health facility to deliver
  - High cost of transport and road infrastructure
  - Long time spent to travel to health facility
- Communication

**Delay- Three:**
- Quality of care at health facility level
  - Shortage of skilled attendants
  - Incompetent skilled attendants
  - Inadequate drugs, equipment and supplies
  - Lack of referrals, monitoring and evaluation
  - No protocols and guidelines

- Low utilization of health facility for child delivery
- Low skilled attendance at child birth
- Low knowledge level on safe motherhood practices

**High Maternal Mortality**

(Source: Thaddeus and Maine 1994)

Figure 1: Conceptual Framework

The three delays, in making decisions which is mainly influenced by the socioeconomic and cultural beliefs, the delays in accessing the health care site for the services sought and the health facility related factors have an influence to the level of utilization of the health facility.
facilities, being attended by skilled birth attendant at the health facility and the services provided at the facility. Addressing these factors at the various levels greatly reduces maternal morbidity and mortality due to pregnancy.

1.8 Limitation of the Study

The research included all mothers who delivered within the last six months in the sampled households of Kwale County. Mothers who attended postnatal care at the clinics with their babies, whether delivered at home or at health facilities were not interviewed. The study population was only limited to the biological parent (mother) of the child upon confirmation. Foster mothers or guardians were excluded from the study.

Due to financial, vastness of the county, poor communication infrastructure and time constraints, the study was limited to only the mothers within the sampled households in the selected locations and not extended to the health facilities in the three districts.
1.9 Operational definitions

**Reproductive age** - Age between 15 – 49 years in women

**Skilled attendant/professional** - Trained doctor, clinical officer, nurse or midwife, not a traditional birth attendant

**Postpartum care** - Maternal health care given after delivery by skilled a health worker at a health facility

**Data** - Facts and Information collected for a special purpose

**Goal** - Higher order objective to which an intervention is intended to contribute to

**Antenatal care** - Health care service given to pregnant women from time she realizes to be pregnant until the birth of a baby by a skilled health worker at a health facility

**Maternal mortality** - Deaths of women while pregnant or within 42 days of termination of the pregnancy.

**Parity** - Number of pregnancies reaching viability and not the number of fetuses delivered.

**Safe motherhood** - Going though pregnancy safely with an outcome of a live and well mother and baby.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the situation on the literature available globally and in Kenya on the maternal mortality levels, antenatal care and safe motherhood programmes, skilled care delivery services and the place of delivery by women.

2.2 Maternal Mortality Levels

2.2.1 Global Perspective

Maternal death without doubt is associated with considerable grief and depression. It also directly affects child survival as it increases the chances of newborn death by 2-4 times. The loss of a woman in the prime and productive part of her life also adversely affects family income and increases the socio-economic burden on the man and children. Indeed, women’s economic contribution is essential to reducing poverty (UNFPA 2010).

Each year, out of an estimated 120 million pregnancies that occur worldwide, more than half a million women die during pregnancy and childbirth. For every woman who dies another 30 suffer long-lasting injuries and illnesses, translating to more than 50 million women. Most maternal deaths could be prevented by ensuring good quality maternal health services, including antenatal and postnatal care, skilled care during childbirth, emergency obstetric care and prevention of unwanted pregnancies. Maternal health is inextricably linked with the survival of the newborn. Findings indicate that every year four million babies die in the first four weeks of life and a similar number are stillborn. Three quarters of neonatal deaths occur within the first week and the highest of dying is
within the first 24 hours. Almost all (99%) neonatal deaths occur in low income and or middle income countries (Montagu, 2011).

2.2.2 Kenya

Maternal and perinatal health has emerged as the most important issue that determine global and national wellbeing. This is because every individual, family and community is at some point intimately involved in pregnancy and the success of child birth (WHO 2006). Despite the honour bestowed on womanhood and the appreciation of the birth of a new born baby, pregnancy and child birth is still considered a perilous journey.

The maternal mortality rate (MMR) in Kenya is estimated to have declined from 590 maternal deaths per 100,000 live births between 1989 and 1998 (KDHS 1998) to 414/100,000 in 2003 (KDHS 2003) and has now risen to 488 per 100,000 live births (KDHS 2008-09). Considering the average of 4.6 children, the Kenyan woman has 1 in 36 chances of dying from maternal causes in her life time.

2.3 Antenatal Care and Safe Motherhood Programmes

2.3.1 World wide

Maternal health refers to the health of a mother during pregnancy, childbirth and the period after birth. The care a mother receives during pregnancy, at time of delivery and soon after is important for the survival of both the mother and her child. Among other interventions, the mother is offered an HIV test, alerted on any Pregnancy complications, told the tentative expected delivery time, emphasized to deliver under a skilled birth
attendant at the health facility and nutritional requirements including breastfeeding during post partum care.

Safe Motherhood involves going through pregnancy safely with an outcome of a live and well mother and baby. It is an established fact that about 15% of all pregnancies result in complications that require emergency obstetric care (Fikree et al 2007). In developing countries, one woman in 16 may die of pregnancy-related complications compared to one in 2,800 in developed countries. Most of these deaths are avoidable. The main causes are known and more than 80% maternal deaths could be prevented or avoided through actions that are proven to be effective and affordable, even in the poorer countries of the world (WHO 2008). Antenatal care provides a variety of preventive interventions for pregnant women and their babies, including tetanus immunization, nutrition education and counseling about their plans for delivery, PMTCT and postpartum family planning.

Attendance of ANC also allows women who have risks to be identified and monitored and subsequently referred for delivery care to the appropriate health facility. It is also during such visits that service providers can develop rapport with women, making them more likely to seek skilled assistance during labour and delivery. Skilled care during child birth and immediately afterwards can make a critical contribution to preventing these maternal and newborn deaths and disabilities (Izugbara et al 2009)
2.3.2 Kenya

Two decades after the launch of the Safe Motherhood campaign in Kenya in 1987, half a million women, most of whom live in developing countries, continue to die from maternal causes each year. Key health-care interventions can largely prevent women from dying of pregnancy-related causes. Attendance of antenatal care, delivery in a medical setting and having a skilled health worker at delivery improve maternal health. However, use of these interventions is limited in developing countries (Galadanci et al. 2007).

In Kenya, the utilization of antenatal services is high. The KDHS 2008-09, states that 92% of mothers receive antenatal care from a skilled provider, most commonly from a nurse (63%). However, only one third (1/3) of these women attend before the last trimester of pregnancy, which is too late to receive the optimum benefits of ANC. Moreover, only 44% of births take place in health facilities. This figure however varies from around 89.4% in Nairobi, 44.4% in Coast to 17.3% in North Eastern Province.

To promote the health and survival of mothers and babies, Kenya has adopted the WHO focused antenatal care (FANC) package that promotes interventions that address the most prevalent health issues that affect mothers and newborns (KSPA 2010). The major goal of the FANC is to help women maintain normal pregnancies. The recommended package targeted improvement in the content and quality of the existing ANC services. It included care from a competent provider and its continuity, preparation for birth and potential complications, health promotion and disease prevention, detection of existing diseases
and management of complications and health education and counseling on danger signs in pregnancy, nutrition, breast feeding, STIs, malaria, family planning and individual birth plan.

2.4 Skilled Care Delivery

2.4.1 Global

All women and babies need maternity care in pregnancy, childbirth and after delivery to ensure optimal pregnancy outcomes. However, around the world, one third of births take place at home without the assistance of a skilled attendant. The WHO, strongly advocates for “skilled care at every birth” to reduce the global burden of 536 000 maternal deaths, the 3 million stillbirths and 3.7 million newborn deaths each year. Countries measure the proportion of deliveries assisted by skilled attendants frequently since it is one of the indicators of progress towards Millennium Development Goal 5, which aims to improve maternal health (UN 2008).

The impact of skilled care on maternal mortality is evident in many countries. According to (WHO 2012), data from a range of developing countries there is indication that maternal mortality is generally lower in countries where a higher proportion of deliveries are conducted by skilled attendants. Based on the information currently available, experts agree that skilled care should be a central element of any policy or programme that aims to reduce maternal deaths. In order to make skilled care universal, in September 2000 the members of the United Nations system adopted the Millennium Development Declaration, which include the goal of reducing maternal mortality by 75% between 1990
and 2015. The Declaration identifies the proportion of birth attended by skilled personnel as an indicator of this goal.

Just over half of women in developing world give birth with the help of a skilled attendant. This means that every year, whether by choice or necessity, 50 million women in developing countries give birth cared for only by a family member, a traditional birth attendant or no one at all. In developed countries, where only a small fraction of maternal deaths occur—just 1% of the global total—skilled care during childbirth is nearly universal (WHO 2008)

Appropriate delivery care is important for both maternal and perinatal health, particularly in cases where childbirth complications arise. Even though most women do not experience major problems during childbirth, complications that do occur can be sudden and unpredictable, requiring immediate action. Maternal and perinatal outcomes in such cases are greatly improved when such complications occur in the presence of a trained attendant. It is important that mothers deliver their babies in an appropriate setting, where professional attention and hygienic conditions can reduce the risk of complication and infections that may cause death or serious illness to either the mother or the child. Births that are delivered at home are more likely to occur without the assistance of a medically qualified person.

2.4.2 Kenya

Research indicates close link between the health of the newborn with the health of their mothers. About 30–40% of neonatal and infant deaths result from poor maternal health
and inadequate care during pregnancy, delivery, and the critical immediate postpartum period. Data also suggest that a mother’s death affects the overall well-being of her surviving children (Kirigia et al 2006).

In Kenya, majority of mothers (56%) deliver their babies at home often without medical supervision. It has also been found that most of maternal deaths in Kenya occur among mothers who deliver at home or/and stay away from health facilities (KDHS 2008-09).

The objective of providing safe delivery services is to protect the life of the mother and her child. An important component of efforts to reduce the health risks to the mothers and children is to increase the proportion of babies delivered under the supervision of health professionals. Proper medical attention under hygienic conditions during delivery can reduce the risk of complications and infections that may cause serious illness or even death to the mother or the baby or both.

A study among the urban poor in two slums of Nairobi established that although 70% of women reported that they delivered in a health facility, only 48% delivered in a facility with skilled attendant. Besides education and wealth, the main predictors of place of delivery included being advised during antenatal care to deliver at a health facility, pregnancy “wantedness”, and parity. The influence of health promotion (i.e., being advised during antenatal care visits) was significantly higher among the poorest women (Bazant, 2008).
2.5 Place of Delivery

Previous studies have observed factors predicting the delivery care to include cultural, socioeconomic, demographic and service accessibility factors. Low maternal or paternal educational attainment, low socioeconomic status, rural residence, young maternal age, and high-order births have been observed to be associated with high probabilities of deliveries outside a health facility (Awoyemi et al. 2011). It is important, however, to understand the specific factors that are important in various settings, since these may vary considerably. For example, in Nigeria, (Iyaniwura and Yussuf 2009) noted that fear and the physical inconvenience of a hospital delivery were the predominant reasons among Indian mothers for reluctance to have hospital deliveries. In a longitudinal study in a low-mortality region of Kenya, factors such as distance to hospital and previous hospital delivery were observed to be related to place of delivery intentions. For the majority of women in this community, whether or not to deliver in hospital seemed mainly a question of opportunity (Wajira et al. 2011).

Distance and accessibility of services exert a dual influence in health care utilization. Long distance or inaccessibility of services can be an actual obstacle to reaching a health facility or can be a disincentive even to trying to seek care. The issue of access is an acute problem for rural inhabitants in most developing countries. Inhabitants of rural areas often have to walk or improvise means of transportation to reach a health care facility. The role of distance and accessibility has been assessed by the severity of the condition in which patients arrive at the facility. Sizable proportions of maternal deaths in the developing countries, especially in rural areas, occur on the way to a hospital (Thaddeus
Accessibility of services is a function of a number of factors, including distance and time to services, cost of services, and even psychosocial barriers. It is important to note that availability of services does not necessarily imply accessibility, since services may be available within a community yet inaccessible to some members of the population within the same community. In this paper "accessibility of services" refers mainly to physical accessibility, measured in terms of distance and time to the nearest delivery care health facility, even though we recognize that access to services is also a function of other factors.

2.5.1 In Coast Province of Kenya

According to the KDHS 2008-09, data indicate that 92% of pregnant women in Kenya receive antenatal care from a medical professional, either from a doctor, nurses or midwives. A small fraction of 7% do not receive any antenatal care. The vast majority of women who obtained antenatal care went to government sources (83%), while private medical sources were only reported by 16% of women. The most common source of ANC is government health centres and government hospitals.

In comparison to other provinces, the data shows that women in Coast Province are most likely to use public/government sources for ANC at 90.8%. However, based on the place of delivery, the KDHS 2008-09 indicate that 54.6% of women in coast province deliver at home while only 44.4% deliver in health facilities (both public and private). More specifically, in Kwale County, the proportion of all births occurring in the health facilities in all the three sub-counties is 22.6% (CRA 2011).
Mother’s knowledge is an important factor in enabling them in attending ANC. Findings from a study by Mansur et al 2010 on the relationship between educational attainment and maternal health care utilization in Bangladesh indicated that education attainment of the mother is a predictor that affects the maternal health care utilization, as mothers who were educated were more likely to use ANC than those without. Educated mothers have also been reported to be having substantial knowledge on risk factors. In a study in Bangladesh on the relationship between education attainment and maternal health care utilization, reported that educational attainment of the woman has a positive, strong and significantly impact on the use of antenatal care (Mansur et al 2010).
CHAPTER THREE: MATERIALS AND METHODS

3.1 Introduction

This chapter covers the research methods and materials used in terms of the research design, study variables, the location of the study and target population, sampling techniques and sample size. It also explains the research instruments used; the pre-test of the tools and data collection techniques, data management and statistical analysis procedures, and the ethical and logistic considerations used.

3.2 Research Design

The research study design employed was a community based cross-sectional descriptive study design. The design gives a snapshot of the frequency of the characteristic in the population which is the number of women delivering in hospitals at a point in time.

3.3 Study Variables

The variables in this study were; the utilization of health facility for child delivery (place of delivery) among women as the dependent variable and the independent variables as the factors/varied reasons for not delivering in health facilities such as the Socio-demographic, cultural, economic factors, and distance to the health facility.

3.4 Location of the Study

The study was conducted in Kwale County of Coast region. Kwale is one of the six Counties of Coast Region and consists of three administrative districts/constituencies.
The study was based in all the three sub-counties that formed the catchment areas. The three sub-counties are Msambweni to the South East, Kinango to the West and Matuga to the North East.

This location was chosen because of peculiar mixed attributes on socio-economic and demographic characteristics of its inhabitants though the history of most the people inhabiting the study areas owes allegiance to the Mijikenda ancestry, in which pregnant women are granted leave from their matrimonial home to return to their parental home to deliver. The main subsistence crops are maize and cassava, with other fruit trees also grown as cash crops.

In each district, there is a main referral hospital and a number of health facilities offering maternal services, as indicated in the map in appendix iv. The County, according to the 2009 Population and Housing Census results, has an estimated population of 649,931 (Female 333,934, Male 315,997), 122,007 households and an estimated births of 24,765 annually.

3.5 Target Population

This was a community based study thus carried out at the homesteads. The target population was all the women of reproductive age in the county. Mothers who had delivered within six months at the time of the study formed the study population. The mothers were residents of the sub-counties of study and were the biological parents of the
child born. Also, biological mothers who were less than 15 years were also included in the study.

All the mothers below 18 years were voluntarily included in the study after consenting as they were considered as mature minors. Foster mothers who were taking care of the child either after the biological mother died or was not available at the time of the interview were not included in the study.

3.6 Sampling Techniques and Sample size

A multi-stage sampling technique was used to select the study subjects. Kwale County had three sub-counties and 38 locations by the time of the study. Eleven (11) locations were selected by using simple random sampling technique. Each location had 3 to 4 sub-locations. One sub-location was selected from each of the selected locations using the same simple random sampling technique.

The number of households to be included in each sub-location was determined in proportion with the total number of households found in each sub-location. Finally, based on the sampling frame of each sub-location, mothers who had delivered within six months were selected from the selected nine sub-locations by using systematic random sampling method. A systematic selection was conducted across every 3rd household with a random start, where the sample interval was calculated by dividing number of households of the selected sub-location by the sample size allocated to the sub-location. In case of no eligible candidate was identified in a selected household, the interviewer
was told to move to the household until an eligible respondent is found. The final interviewed women were 272.

The method was adopted because it ascertained the presence of the study population (mothers with not more than six months old babies) and avoided the non-responsive households.

Simple verification of authenticity of biological mothers was sought. This is because the main purpose of the study was to get a wide variety of proposed solutions to the existing problem of pregnant women not delivering in hospitals. Therefore the technique permitted the deliberate selection and inclusion of the targeted respondents.

Since this was a formative study, the sample size reflected the number of women delivering in health facilities without reflecting on a size proportional to the general population seeking health care services at the hospitals/health facilities. The sample size was determined using the formulae by Fisher et al (1998).

\[ N = \frac{Z^2pq}{d^2} \]

\( Z = \) Standard normal deviate (1.96)
\( p = \) Proportion of pregnant women delivering in Health facilities in County (22.6%)
\( q = 1 - p \)
\( d = \) Degree of accuracy desired (0.05)

\[ N = \frac{1.96^2 \times 0.23 \times 0.77}{0.05^2} \]

\[ = 272 \]
Total number of Households in the county is 122,047 (KNBS 2009 Census)

Table 3.1: Sampled quota

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>TOTAL LOCATIONS</th>
<th>TOTAL HOUSEHOLDS</th>
<th>SAMPLING INTERVAL</th>
<th>SAMPLED LOCATIONS</th>
<th>SAMPLED RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATUGA</td>
<td>13</td>
<td>28,559</td>
<td>3</td>
<td>4</td>
<td>64</td>
</tr>
<tr>
<td>MSAMBWENI</td>
<td>11</td>
<td>59,484</td>
<td>3</td>
<td>3</td>
<td>132</td>
</tr>
<tr>
<td>KINANGO</td>
<td>14</td>
<td>34,004</td>
<td>3</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38</td>
<td></td>
<td>11</td>
<td>272</td>
<td></td>
</tr>
</tbody>
</table>

3.7 Construction and Research Instruments

The data collection instrument for the study included a questionnaire (appendix ii,a) which encompasses both structured and unstructured questions presented in different sections and an interview schedule. The questionnaire was verified by the supervisors to ascertain the validity to the topic. Questions in the questionnaire were interpreted into Kiswahili by the research assistant to those respondents not understanding English language. In addition FGD guide (appendix ii,b) was also used to gather information relevant to the research objectives.

3.7.1 Pre-test

A pre-test study on 20 mothers attending postpartum clinic Msambweni hospital was conducted prior to the study to ascertain the reliability of the questionnaire. Those who expressed willingness were counseled about their plans for subsequent delivery and postpartum family planning and encouraged to make an Individual Birth Plan (IBP) and updating it regularly. They were explained and made aware of the danger signs of...
pregnancy, delivery and after delivery and where possible always deliver with a skilled birth attendant in hospital in future.

Birth registry and other vital documents from the 3 main referral hospitals in each district were also examined to reveal the number of deliveries and those occurring at home but attend postnatal care at the MCH clinics. Any ambiguities in the questionnaire were corrected before the final data collection process.

3.7.2 Data collection techniques

In-depth interviews were carried out to each respondent after the research assistant had undergone a routine introduction by the key informant in the location. The survey instrument contained both structured and unstructured set of questions and was concentrated more on collecting qualitative data/information with regard to place of delivery in relation to the variables. This was carried out strictly by asking the questions in the questionnaire.

Content analysis/review of written material such as the ANC attendance cards and post natal care cards was done in order to ascertain and obtain quantitative data on the figures of the number of times the mother attended ANC and the approximate population of pregnant women attending health facilities and those delivering in the hospital/ health facilities.
3.8 Data quality management and statistical analysis procedures

Completed questionnaire were coded and captured in a database designed in excel sheet. It was later exported to SPSS version 17 for windows for analysis. Data was summarized using descriptive statistics (frequencies, means and standard deviation). Cross tabulations were done to establish relationships between factors and utilization of hospital delivery services using a chi-square test. Factors significant at 0.05 threshold were entered in a multiple logistic regression to identify significant predictors of hospital delivery controlling for confounders. Results were considered significant at 95% confidence level. The results are presented in form of tables, pie charts and graphs. Qualitative data was analyzed by establishing the common themes as the flow.

3.9 Logistical and ethical considerations

Research assistants were trained on ethical issues of anonymity, confidentiality and privacy. Consent was sought before interviewing any respondent. The research protocol was submitted to and reviewed by the Kenyatta University Ethics Review Committee to meet the requirements. Permission to conduct the research was sought from the Graduate School of Kenyatta University and the Ministry of Higher Education, Science and Technology after submitting a copy of the research protocol for ethical review for human protection as indicated in appendix iii.

Written informed consent was sought to all the study participants by explaining to them the goal of the research. Only those who expressed willingness and signed the consent were interviewed. Confidentiality of the information was maintained and that no names
of the respondents were recorded anywhere on the data collection tools and that the information obtained was used only for the purpose of the research.

Entry protocols to the study area were adhered to while approaching the concerned households and health institutions. All logistical preparations were catered for by the researcher (self) as the study is not sponsored.
CHAPTER FOUR: RESULTS

4.1: Introduction

This chapter presents the findings from the study. The findings are presented as descriptive statistics, using percentages, means, frequency distributions, as well as cross tabulations and regression analysis model to describe the data.

4.2: Socio-Demographic Characteristics of the Study Population

*Table 4.2: Socio-demographic characteristics (N=272)*

<table>
<thead>
<tr>
<th>Character</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (in years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 14</td>
<td>8</td>
<td>2.9</td>
</tr>
<tr>
<td>15 – 19</td>
<td>45</td>
<td>16.5</td>
</tr>
<tr>
<td>20 – 24</td>
<td>70</td>
<td>25.7</td>
</tr>
<tr>
<td>25 – 29</td>
<td>59</td>
<td>21.7</td>
</tr>
<tr>
<td>30 – 34</td>
<td>21</td>
<td>7.7</td>
</tr>
<tr>
<td>35 – 39</td>
<td>30</td>
<td>11.0</td>
</tr>
<tr>
<td>40 – 44</td>
<td>24</td>
<td>8.8</td>
</tr>
<tr>
<td>&gt;45</td>
<td>15</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married monogamous</td>
<td>115</td>
<td>42.3</td>
</tr>
<tr>
<td>Married Polygamous</td>
<td>72</td>
<td>26.5</td>
</tr>
<tr>
<td>Single</td>
<td>56</td>
<td>20.6</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>29</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>Household Income (Kshs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5000</td>
<td>155</td>
<td>57</td>
</tr>
<tr>
<td>5000 – 10000</td>
<td>70</td>
<td>25.7</td>
</tr>
<tr>
<td>10001 – 15000</td>
<td>37</td>
<td>13.6</td>
</tr>
<tr>
<td>&gt;15000</td>
<td>29</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>Education level of mother</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary(not complete)</td>
<td>213</td>
<td>78.3</td>
</tr>
<tr>
<td>Post primary/vocational</td>
<td>41</td>
<td>15.1</td>
</tr>
<tr>
<td>Secondary/A’level</td>
<td>12</td>
<td>4.4</td>
</tr>
<tr>
<td>Higher</td>
<td>11</td>
<td>4.0</td>
</tr>
<tr>
<td>Education level of partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Primary (not complete)</td>
<td>43</td>
<td>23.9</td>
</tr>
<tr>
<td>Post primary/ vocational</td>
<td>101</td>
<td>56.1</td>
</tr>
<tr>
<td>Secondary/A’ level</td>
<td>28</td>
<td>15.6</td>
</tr>
<tr>
<td>Higher</td>
<td>8</td>
<td>4.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Islam</td>
<td>145</td>
<td>53.3</td>
</tr>
<tr>
<td>Christian</td>
<td>68</td>
<td>25.0</td>
</tr>
<tr>
<td>Hindu</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Traditional</td>
<td>33</td>
<td>12.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of children</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>62</td>
<td>22.7</td>
</tr>
<tr>
<td>Two</td>
<td>146</td>
<td>53.5</td>
</tr>
<tr>
<td>More than two</td>
<td>65</td>
<td>23.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation of mother</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business woman</td>
<td>84</td>
<td>31</td>
</tr>
<tr>
<td>H/wife/Unemployed</td>
<td>84</td>
<td>31</td>
</tr>
<tr>
<td>Casual laborer</td>
<td>52</td>
<td>19</td>
</tr>
<tr>
<td>Formal employment</td>
<td>35</td>
<td>12.7</td>
</tr>
<tr>
<td>Farmer</td>
<td>17</td>
<td>6.3</td>
</tr>
</tbody>
</table>

4.2.1 Maternal Demographic Characteristics

A total of 272 mothers consented and responded to the interviews, translating to 100% response rate. As indicated in table 4.2 above, 123 (45.2%) of the mothers were of the youthful age below 24 years old and 187 (68.8%) were in marriage unions. More than half 145 (53.3%) were from Islamic religion and 213 (78.3%) had not completed primary level of education while 43 (23.89%) of their partners had a similar level of education.

Among those that had other children apart from the current delivery, 146 (53.5%) reported to have two. Close to a third of the mothers 84 (31%) were housewives/
unemployed. More than half of the households 155 (57%) had a monthly income of less than Kshs 5,000.

Table 4.3: Distance from the nearest health facility and place of delivery

<table>
<thead>
<tr>
<th>Distance from the nearest health facility</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near (≤ 5 km)</td>
<td>25</td>
<td>9.2</td>
</tr>
<tr>
<td>Far (5 - 10 km)</td>
<td>139</td>
<td>51.1</td>
</tr>
<tr>
<td>Very far (&gt;10 km)</td>
<td>108</td>
<td>39.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Place of delivery</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>125</td>
</tr>
<tr>
<td>Hospital/Health facility</td>
<td>119</td>
</tr>
<tr>
<td>On the way to hospital</td>
<td>28</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>272</strong></td>
</tr>
</tbody>
</table>

More than half 139 (51.1%) of the mothers described the distance to the nearest health facility as far from where they stay whereas 108 (39.7%) reported the distance to the nearest health facility as very far.

The ultimate goal of the study was to establish where the mothers delivered their babies from, who assisted them during delivery and why that place and by that person. Less than half of the mothers 119 (43.8%) delivered at the health facility and 28 (10.3%) delivered while on their way to the health facility, thus still out of the health facility.

4.2.2 Utilization of Antenatal Care

In many instances, the attendance of ANC by pregnant women is directly associated with the outcome of health facility delivery by the mother. This is so because of the
assumption that pregnant mother/women are counselled and advised on how to prepare an Individual Birth Plan (IBP), told where to deliver when the pregnancy is due, sensitized on signs of pregnancy complications and even tested on HIV among others.

Most women in this study were aware of the need for antenatal care, as such, 234 out of the 272 sought treatment (antenatal care) though some used non-conventional facilities. As indicated in Table 4.4 below, 64 (59.3%) of the mothers had attended antenatal care (ANC) clinic only twice, while 6 (5.6%) had attended ANC at least four times.

Table 4.4: Number of times attended ANC

<table>
<thead>
<tr>
<th>Attendance Frequency</th>
<th>No. of Mothers (N= 108)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>23.1</td>
</tr>
<tr>
<td>2</td>
<td>64</td>
<td>59.3</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>≥4</td>
<td>6</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>100</td>
</tr>
</tbody>
</table>

ANC attendance is mostly attributed to be the guide to health facility delivery by pregnant mothers. And of importance is the frequency of attendance as per the ANC schedule by the respondents.

Among the study participants, 234 (86.1%) sought treatment or check up during the gestation period of their pregnancy. Out of these, only 108 (46.3%) of the mothers attended their ANC at health facilities while the majority 115 (49%) were assisted/checked at home either by traditional birth attendants or ‘traditional doctors’.
The remaining 10 (4.7%) of mothers sought their clinic services from community/social health workers, but still at their homes.

![Bar chart showing ANC provider sought by the Mother (N=234)]

**Figure 4.2: ANC Provider sought by the Mother (N=234)**

It is advisable that a pregnant woman attends at least four ANC visits at the nearest health facility during the gestation period. The timing of the first ANC visit is of significant importance as late presentation may result in a missed opportunity to avert preventable pregnancy complications. Therefore, the study investigated to establish the timing of the first ANC visit among the mothers who presented themselves to the formal health facilities.

Majority of the mothers in the study started their ANC check-up between 7-8 months of pregnancy. Even for those who attended ANC at the health facility, more than half presented themselves for the first ANC visit during the last trimester.
4.2.3 The Level of knowledge on Safe Motherhood Practices

Three focus group discussions were conducted, one in each of the three (3) sub-counties selected for the study. Participants included women of the reproductive and child bearing age. They were eight in number in each group. These group meetings were arranged by village elders and the area Assistant Chiefs. The theme of the focus group discussion was to establish the Knowledge of safe motherhood practices and reasons for pregnant women not delivering their babies in health facilities.

Inability to predict the date of delivery among the pregnant women was mentioned by a total of 13 women as a cause of low health facility delivery as well as the sudden onset of labor leading to home delivery and that some could even deliver while on their way to the health facility. This indicated that most of the mothers had no birth plans during the gestation period.

Of all the women interviewed in the FGDs, 14 of them had low awareness on the importance of delivery at health facility or under a skilled attendant. Almost a quarter (6) participants responded that the difference between home delivery and health facility delivery is that while home delivery carries some risks and that when they happen there is little that can be done to help the mother, whereas 19 said that home delivery is costless, has no traveling disturbances and mothers are handled with hearted sympathy by attendants, always encouraged and not disappointed.
High cost was found to be the prominent cause overwhelmingly mentioned by all the three groups. These were reported to also involve, traveling costs, purchasing delivery equipments and drugs. In addition, an unfavorable / abusive language from health workers was mentioned to be a barrier by 4 of the respondents. Other reasons mentioned by the participants were inability of mothers to recognize that they are in labor, fears of being operated for those who are referred to higher centers and unfamiliar with health facility deliveries procedures.

4.2.3.1 PMTCT of HIV; Interventions

All the mothers interviewed were aware of HIV testing and counseling (HTC) and were willing to be tested for HIV. Majority 232 (85.3%) had ever been tested for the virus in their life time. There were 169 (62.1%) of the mothers who were aware that HIV virus can be transmitted from mother to child as indicated in figure 4.3.

![Fig 4.3: Knowledge on HIV and PMTCT](image-url)
A large number, 56 (51.8%) of the mothers who attended ANC at the health facilities reported not to have been counseled or given any information on breastfeeding.

![PMTCT of HIV interventions](image)

**Fig 4.4: PMTCT of HIV interventions**

Figure 4.4 indicates the levels of perceptions on HIV transmission and prevention among the women interviewed. Only 19.1% of the mothers interviewed were aware that a HIV positive mother can reduce the risk of HIV transmission to her baby use of ARV drugs prescribed at the health facilities. And that a low percentage of 9.2% of the mothers too new that by delivering in a health facility under skilled attendants, there are chances of not transmitting the HIV to the child during delivery.

**4.2.3.2 Pregnancy Complications**

Pregnancy can be a challenge before the full term of the gestation period. Pregnant mothers are normally advised on the unexpected eventualities of any complications midway the gestation period. In a multiple answer question, Forty four (40.7%) of all the
women who had attended ANC (108) during the gestation of their pregnancies reported to have been counselled or given information about importance of breastfeeding, while 69 (63.9.4%) the 108 were told where to seek help in case any pregnancy complications that happen. A significant number of 28 (25.9%) of the pregnant women were not informed of where to go and deliver once the pregnancy term was due (fig 4.5).

**Fig 4. 5: Information given during ANC**

### 4.2.4 Place of Delivery

More than half, 153 (56.3%) of the mothers delivered at home under the custody of traditional birth attendants and social health workers within the community who are not medically skilled in child deliveries. And only 53 (44.5%) of all the 119 women who delivered in health facilities, were attended to by a doctor or nurse. The choice of place of delivery was not by accident as 146 (53.8%) indicated to have intended to deliver their babies at the place they delivered.
Asked where the mother would like to give birth from in the subsequent pregnancies, 186 (68.4%) preferred at home. A number of varied reasons as to why the mothers prefer to deliver in those preferred places were sighted. Among them included; the preference to be handled by female counter part one knows (11%), the proximity to the home residence of the mother (28.7%), general safety in case of complications (18.4%) and low cost (41.9%). The cost incurred 114 (41.9%) and nearness to home 78 (28.7%) were among the key reasons for the choice for the place of delivery.

![Bar Chart]

**Figure 4.6: Preferred birth attendant**

Most (51.8%) of the women in the study, preferred to give birth under the assistance of the traditional birth attendants. Very few had indicated to be willing to be assisted with the delivery by male attendants. Prior experience in child delivery assistance (27%), confidentiality observance (37%), courtesy in handling the woman during delivery (18%) and being assisted by a fellow woman (18%) were the reasons proposed to influence birth attendant preference.
4.3 Factors Influencing Utilization of Health Facility

As indicated in table 2 below, district of residence, age, marital status, religious affiliation, distance from the nearest health facility, income and partners level of education and mother were independently significantly associated with choice of place of delivery (p < 0.05)
Table 4.5: Factors associated with hospital delivery

<table>
<thead>
<tr>
<th>Factor</th>
<th>Place of delivery</th>
<th>$\chi^2$-value</th>
<th>df</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home</td>
<td>H/facility</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>District</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwale/Matuga</td>
<td>69(25.4)</td>
<td>50(18.4)</td>
<td>12.748</td>
<td>2</td>
</tr>
<tr>
<td>Kinango</td>
<td>36(13.2)</td>
<td>38(14.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Msambweni</td>
<td>48(17.6)</td>
<td>31(11.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age (yrs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤14</td>
<td>8(2.9)</td>
<td>0(0)</td>
<td>99.361</td>
<td>7</td>
</tr>
<tr>
<td>15-19</td>
<td>39(14.3)</td>
<td>6(2.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24</td>
<td>27(9.9)</td>
<td>43(15.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>32(11.8)</td>
<td>27(9.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td>7(2.6)</td>
<td>14(5.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-39</td>
<td>11(4.0)</td>
<td>19(7.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-44</td>
<td>17(6.3)</td>
<td>7(2.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥45</td>
<td>12(4.4)</td>
<td>3(1.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>H/hold income (Ksh)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5000</td>
<td>138(50.7)</td>
<td>17(6.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000-10000</td>
<td>21(7.7)</td>
<td>49(18.0)</td>
<td>87.06</td>
<td>3</td>
</tr>
<tr>
<td>10001-15000</td>
<td>8(2.9)</td>
<td>29(10.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;15000</td>
<td>10(3.7)</td>
<td>24(8.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married polygamous</td>
<td>42(15.4)</td>
<td>30(11.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married monogamous</td>
<td>59(21.7)</td>
<td>56(20.6)</td>
<td>0.153</td>
<td>3</td>
</tr>
<tr>
<td>Single</td>
<td>34(12.5)</td>
<td>22(8.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>18(6.6)</td>
<td>11(4.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>71(26.1)</td>
<td>74(27.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>27(9.9)</td>
<td>41(15.1)</td>
<td>35.936</td>
<td>3</td>
</tr>
<tr>
<td>Hindu</td>
<td>0(0)</td>
<td>2(0.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>31(11.4)</td>
<td>2(0.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Distance from facility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near (&lt;5 km)</td>
<td>10(3.7)</td>
<td>18(6.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far (5-10 km)</td>
<td>70(25.7)</td>
<td>43(15.8)</td>
<td>10.558</td>
<td>2</td>
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<tr>
<td>Very far (&gt;10km)</td>
<td>73(26.8)</td>
<td>58(21.3)</td>
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### Education level (Mother)

<table>
<thead>
<tr>
<th></th>
<th>Education Level</th>
<th>Sample Size 1</th>
<th>Sample Size 2</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary (Not complete)</td>
<td>129(47.4)</td>
<td>84(30.9)</td>
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</tr>
<tr>
<td></td>
<td>Post primary/vocational</td>
<td>23(8.5)</td>
<td>18(6.6)</td>
<td>9.333</td>
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<tr>
<td></td>
<td>Secondary</td>
<td>3(1.1)</td>
<td>9(3.3)</td>
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</tr>
<tr>
<td></td>
<td>Higher</td>
<td>2(0.7)</td>
<td>8(2.9)</td>
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</table>

### Education level (Partner)

<table>
<thead>
<tr>
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<th>Education Level</th>
<th>Sample Size 1</th>
<th>Sample Size 2</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary (Not complete)</td>
<td>34(18.9)</td>
<td>9(5.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post primary/vocational</td>
<td>41(22.8)</td>
<td>60(33.3)</td>
<td>18.661</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>12(6.7)</td>
<td>16(8.9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher</td>
<td>4(2.2)</td>
<td>4(2.2)</td>
<td></td>
</tr>
</tbody>
</table>

### Number of ANC visits (n=108)

<table>
<thead>
<tr>
<th></th>
<th>Number of Visits</th>
<th>Sample Size 1</th>
<th>Sample Size 2</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One</td>
<td>11(10.2)</td>
<td>14(13.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two</td>
<td>27(25.0)</td>
<td>37(34.3)</td>
<td>2.229</td>
</tr>
<tr>
<td></td>
<td>Three</td>
<td>3(1.9)</td>
<td>10(9.3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At least four</td>
<td>1(0.9)</td>
<td>5(4.6)</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Indicators of Choice of Place of Delivery

<table>
<thead>
<tr>
<th>Factor</th>
<th>B</th>
<th>Sig.</th>
<th>AOR</th>
<th>95.0% C.I. for OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>District of residence</td>
<td></td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwale/Matuga</td>
<td>-2.550</td>
<td>.006</td>
<td>.078</td>
<td>.013</td>
</tr>
<tr>
<td>Kinango</td>
<td>-3.433</td>
<td>.000</td>
<td>.032</td>
<td>.006</td>
</tr>
<tr>
<td>Age-group (yrs) ref&lt;20</td>
<td></td>
<td>.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>-1.221</td>
<td>.283</td>
<td>.295</td>
<td>.032</td>
</tr>
<tr>
<td>26-35</td>
<td>-2.124</td>
<td>.114</td>
<td>.120</td>
<td>.009</td>
</tr>
<tr>
<td>36-49</td>
<td>-4.799</td>
<td>.005</td>
<td>.008</td>
<td>.000</td>
</tr>
<tr>
<td>Education of Partner</td>
<td></td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>-5.315</td>
<td>.000</td>
<td>.005</td>
<td>.000</td>
</tr>
<tr>
<td>Secondary</td>
<td>-4.802</td>
<td>.000</td>
<td>.008</td>
<td>.001</td>
</tr>
<tr>
<td>Education of Mother</td>
<td></td>
<td>.050</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>2.139</td>
<td>.067</td>
<td>8.489</td>
<td>.859</td>
</tr>
<tr>
<td>Secondary</td>
<td>-1.00</td>
<td>.907</td>
<td>.905</td>
<td>.168</td>
</tr>
<tr>
<td>Distance from facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&gt;10 km)</td>
<td>-1.099</td>
<td>.186</td>
<td>.333</td>
<td>.065</td>
</tr>
<tr>
<td>Constant</td>
<td>6.466</td>
<td>.001</td>
<td>642.8</td>
<td>12</td>
</tr>
</tbody>
</table>
As indicated in table 6, multiple logistic regression model revealed that controlling for distance from the facility and Mothers education level, District of residence, age and education level of the partner were significant predictors of choice of place of delivery among the study participants (p<0.05). Those from Kwale/Matuga and Kinango districts were less likely to deliver at the hospital as compared to those from Msambweni. Those whose partners had higher level of education were more likely to deliver at the hospital. Chances of delivering at the health facility increased with increase in age.
CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter discusses the results of the study in relation to the objectives on the level of knowledge on safe motherhood practices, utilization of the health facilities for child delivery and factors affecting utilization of health facility delivery services. It further concludes the findings of the study and suggests recommendations.

5.2 Discussion

5.2.1 Level of knowledge of safe motherhood practices

Poor knowledge of safe motherhood issues among women of reproductive age is related to lack of utilization of maternal health care services in formal health facilities. Pregnant woman’s knowledge on safe motherhood practices is an important factor in enabling them attend ANC, knowing the signs of pregnancy complications before, during and after delivery, preparing for a clean delivery, knowing where to go in case of emergency and generally, preparing an individual birth plan. Findings from a study on Birth preparedness among ANC clients in Kenyatta National Hospital, Nairobi, Kenya by Mutiso et al 2008, indicated that 99% of the respondents did not have a clear plan of what to do in case of an obstetric emergency.

In the current study, only 33% of the interviewed women sought any medical help during pregnancy and 42% were not aware that a pregnant woman infected with HIV/AIDS virus can reduce the risk of giving it to the baby. This is an indication of low knowledge on safe motherhood during pregnancy, labour and delivery. This implies that a pregnant
woman could develop any of the mentioned risks and fail to seek medical help as early as possible simply because they are unaware of the consequences of the symptoms they are experiencing. In this way, they subject themselves to serious life threatening dangers during labour and delivery unknowingly. An example of a similar situation is given by Chiwuzie et al (1995) who reported in a study done in Ekpoma Nigeria that the community was knowledgeable about hemorrhage in pregnancy and delivery, however because of the inability to recognize early warning signs they continued with traditional treatment even when clear evidence of danger existed.

5.2.2 Utilization of health facilities for child delivery

The aim of this study was to determine the level of utilization of health facilities for delivery and its determinants among mothers who had delivered within six weeks prior to the study. The proportion of mothers who delivered at the health facility was 43.8%. This implies that still about 56.2% of the mothers fail to deliver at the health facility and therefore are subjected to dangers that arise during delivery. The level of utilization of health facilities for delivery services found in the current study was similar to the KDHS findings that in Kenya majority of mothers deliver their babies at home often without medical supervision with only 44% by skilled a skilled health provider (KDHS 2008-09). This figure however varies from around 89.4% in Nairobi, 44.4% in Coast to 17.3% in North Eastern region.
However, these findings are higher than the findings that in Kwale County, where the proportion of all births occurring in the health facilities in all the three sub-counties together is 22.6% (CRA 2011).

5.2.3 Factors affecting utilization of health facility delivery services

Literature reveals that a number of factors have been cited to affect the utilization of maternal health care. It is important, however, to understand the specific factors that are important in various settings, since these may vary considerably.

In the current study, district of residence, age and education level of the partner were found to be significant predictors of choice of hospital delivery. These findings were contrary to those found in a longitudinal study in a low-mortality region of Kenya, where they reported that factors such as distance to hospital and previous hospital delivery were observed to be related to place of delivery intentions. For the majority of women in this community, whether or not to deliver in hospital seemed mainly a question of opportunity (Wanjira et al 2011). This difference could be attributed to the differences in the study designs used.

Distance and accessibility of services exert a dual influence in health care utilization. Long distance or inaccessibility of services can be an actual obstacle to reaching a health facility or can be a disincentive even to trying to seek care. The issue of access is an acute problem for rural inhabitants in most developing countries. Inhabitants of rural areas often have to walk or improvise means of transportation to reach a health care facility.
The role of distance and accessibility has been assessed by the severity of the condition in which patients arrive at the facility. Sizable proportions of maternal deaths in the developing countries, especially in rural areas, occur on the way to a hospital (Thaddeus and Maine, 1994). Accessibility of services is a function of a number of factors, including distance and time to services, cost of services, and even psychosocial barriers. It is important to note that availability of services does not necessarily imply accessibility, since services may be available within a community yet inaccessible to some members of the population within the same community. In this study "accessibility of services" refers mainly to physical accessibility, measured in terms of distance and time to the nearest delivery care health facility, even though we recognize that access to services is also a function of other factors.

Distance separates patients and clients from the nearest health facility, becoming barrier particularly in rural areas. The long distance has even been even a disincentive to seek care especially in case of women who would need somebody to accompany. As a result, the factor of distance gets strongly adhered to other factors such as availability of transport, total cost of one round trip and women’s restricted mobility.

Besides education and wealth, the main predictors of place of delivery included being advised during antenatal care to deliver at a health facility, pregnancy “wantedness”, and parity (Bazant2008). Education was similarly found to influence choice of place of delivery. Education empowers the woman to make decision on her own health and that of the family. Majority of the uneducated women gave birth outside the formal health
facilities without the help of skilled birth attendance as compared to those with at least secondary education level though there was no statistical significant difference ($P=0.959$).

A variety of factors have been identified as the leading causes of poor utilization of primary health care services: including poor socio-economic status, lack of physical accessibility, cultural beliefs and perceptions, low literacy level of the mothers and partner. Similar findings were also reported in the current study. Review of the global literature suggests that these factors can be classified as cultural beliefs, socio-demographic status, women’s autonomy, economic conditions, physical and financial accessibility.

Similarly, previous studies have observed factors predicting the delivery care to include cultural, socioeconomic, demographic and service accessibility factors. Low maternal or paternal educational attainment, low socioeconomic status, rural residence, young maternal age, and high-order births have been observed to be associated with high probabilities of deliveries outside a health facility (Lwelamira and Safari 2012). It is important, however, to understand the specific factors that are important in various settings, since these may vary considerably. For example, in a study on Exploring Low Uptake of Skilled Delivery Services and Postpartum Family Planning Services among Women Living in Western Kenya by Naanyu et al 2011 found that fear of HIV testing at the hospital and quality of service provided, are among the predominant reasons among Pregnant women for reluctance to have hospital deliveries.
Social Economic/Cultural factors are some of the reasons given for not delivering in health units among others; all 3 different focus group discussions said that high costs of hospital delivery was a major hindrance for mothers to have delivery in health units. The high costs were contributed to, by travelling costs to health units, purchasing delivery equipments and drugs.

Cultural beliefs and practices often lead to self-care, home remedies and consultation with traditional healers in rural communities. Advice of the elder women in the house is also very instrumental and cannot be ignored. These factors result in delay in treatment seeking and are more common amongst women, not only for their own health but especially for children’s illnesses.

Men play a paramount role in determining the health needs of a woman. Since men are decision makers and in control of most resources, they decide when and where woman should seek health care. Similar findings were echoed in the current study where 57% reported that their partners/husband had the final decision with regards to their health.

Data from this study further emphasised the need for male involvement in women reproductive health issues. Almost all the married women usually seek spousal approval of their choice of ANC and delivery facilities. Majority of the women who used TBA facility indicated that it was to satisfy their husband.
Women are usually not allowed to visit a health facility or health care provider alone or to make the decision to spend money on health care. Thus women generally cannot access health care in emergency situations. This certainly has severe repercussions on health. Despite the fact that women are often the primary care givers in the family, they have been deprived of the basic health information and holistic health services. In many cases, the husband’s decision on health matters of the family members rules. Husband’s decisions on health seeking behaviours are largely influenced by his education level as a result of information exposure. In this study, 67.7% of the women whose husbands/partners had attained primary education, delivered at home compared to only 31.3% whose husbands attained secondary/A level.

The study shows a significant association (P<0.001) between the place of giving birth and the level of education of the husband (p<0.001). Cost has undoubtedly been a major barrier in seeking appropriate health care, not only the consultation fee or the expenditure incurred on medicines, but also the fare spent to reach the health facility hence the total amount spent for treatment turns out to be cumbersome. Thus, household economics limit the choice and opportunity of health seeking.

5.3 Conclusion

The women in the current study were aware of the need for utilization of health facility services and assistance during delivery. Improving level of utilization of facility delivery services is extremely important for successful birth outcomes. Utilization level reported in the current study was relatively low compared to previous researches. Although 43.8%
of the mothers reported to deliver at the health facility, still majority 56.2% of the mothers deliver away from the health facility and are at risk in case of any complication.

Despite the regression model explaining a satisfying amount of variation in choice of place of delivery, there remained a substantial percentage of unexplained variance in choice of place of delivery that could possibly be explained by other affective and cognitive forces that were not included in the theoretical framework. A larger group of mothers were not knowledgeable about safe motherhood during pregnancy and delivery.

Besides providing directions for further research, the determinants of choice of place of delivery found in this and previous researches could be used to develop interventions aiming for increasing and sustaining optimal level of delivery at health facilities. Though delivering at the health facility in resource limited settings is challenging given the cost of living standards, with the help of effective interventions, it is not an impossible goal to achieve. This is a small, but relevant step towards a healthy population who can take care of their children and their family and contribute to the development of their community and country at large.

### 5.4 Recommendations

#### 5.4.1 Recommendations based on the results of the study

Based on the findings from the study, it is recommended that:

1. Health education to the community on the importance of conducting their deliveries in health facilities where skilled personnel will attend them should be
intensified and made more effective. This was even proposed by majority of the participants during the focused group discussions; sensitization will awaken the low knowledgeable on safe motherhood practices and strengthen the community’s health education awareness in general.

2. According to this study the major inhibiting factors was lack of knowledge on the importance of health facility delivery and maternal risks associated with home delivery among women of bearing age. To improve the situation health education should be given to mothers and the community so as to equip them with knowledge on the importance of skilled attendant during childbirth. Provision of compulsory universal education at least to secondary school level, improvement of the economic status of women and targeting men with reproductive health information will significantly improve utilization of obstetric services with resultant reduction in maternal deaths in this community.

3. More comprehensive and customized interventions/ strategies are needed to maintain and sustained high levels of utilization of facility delivery services. Qualified health workers should be made available in all health facilities providing delivery services and that health workers should not humiliate clients but instead should exercise maximum politeness in handling pregnant mothers. Also, essential delivery equipments should be made available in the rural health facilities and be made free if possible or affordable to all.

4. There is need to accelerate the reduction of maternal and newborn deaths by promoting quality and accessible maternal, newborn and child health services. This can be fast tracted through the implementation of the Kenya First Lady’s
Strategic Framework for Engagement in HIV Control and Promotion of Maternal, Newborn and Child Health in Kenya.

5.4.2 Recommendation on further study

The study further recommends more researches on identified specific issues related to choice of place of delivery among women of different age cohorts and geographical settings and find out possible interventions to overcome such issues.
REFERENCES


Bazant E.S (2008): Women’s Place of Delivery and Experience of Quality in Delivery Care: A Quantitative and Qualitative Study in Nairobi’s Informal Settlements. Baltimore, Maryland-USA.


National AIDS Control Council, PEPFAR and United Nations (2013): A Strategic Framework for Engagement in HIV Control and Promotion of Maternal, Newborn and


APPENDICES

Appendix (i): INFORMED CONSENT TO PARTICIPATE IN THE STUDY
A QUESTIONNAIRE ON UTILIZATION OF HOSPITAL DELIVERY AMONG WOMEN WHO HAVE DELIVERED IN THE LAST SIX MONTHS IN KWALE COUNTY

This is a study being conducted by Mwanjama Omari, who is a post graduate student at Kenyatta University pursuing Masters in Public Health.

The purpose of the study is to determine the factors influencing utilization of Health Facility Delivery of Children among Women who have delivered in the last six months in Kwale County.

The study has been granted approval from Kenyatta University and the National Council for Science and Technology. The information obtained from you will be kept anonymous, confidential and will not be used in any way against you. You are encouraged to ask questions for clarification. What the researchers will learn from this study may not help you now. However, it is hoped that the study findings will help to protect women’s health or the health of their children.

If you agree, a researcher will interview you for approximately 20 minutes. Your participation in this study is voluntary.

If you have read the above passage or has been read to you and you understood it, kindly append your signature to show your willingness to take part in the study.

Signature---------------------------------- Date--------------------------------------

OR

LEFT THUMB PRINT------------------------ Date--------------------------------------

Witness: Name---------------------------Signature------------------Date--------------
Appendix (ii): QUESTIONNAIRE

a) **HOUSEHOLD BASED QUESTIONNAIRE**

A QUESTIONNAIRE ON UTILIZATION OF HOSPITAL DELIVERY AMONG WOMEN WHO HAVE DELIVERED IN THE LAST SIX MONTHS IN KWALE COUNTY

My name is………………………………………………………………………………., a research assistant on behalf of Mr. M.Omari, who is a masters student undertaking Master of Public Health at Kenyatta University.

The information given by the respondent will be treated with confidentiality. The aim of this study is to assess the various factors that influence the utilization of health facilities for Child deliveries among women. Please be as genuine as possible.

DATE OF INTERVIEW    _ _    MONTH _ _    YEAR __ __

INTERVIEW NUMBER    __    __    __

A. DEMOGRAPHIC CHARACTERISTICS

1. Which district do you come from?
   1. Kwale/Matuga    ☐
   2. Kinango    ☐
   3. Msambweni    ☐

2. What is your age group?
   a. ≤14 years    ☐
   b. 15 -19 years    ☐
   c. 20 - 25 years    ☐
   d. 26 - 35 years    ☐
   e. 36 - 45 years    ☐
   f. ≥46 years    ☐

3. How much is your household income?
   1. Less than Ksh 5000    ☐
   2. Ksh 5000-Ksh 10000    ☐
   3. Ksh 10000-Ksh 15000    ☐

4. What is your marital status?
   1. Married polygamous    ☐
   2. Married monogamous    ☐
3. Not married/ single □
4. Divorced/ separated □
5. Not applicable □

5. Which religious affiliation do you belong to
1. Islam □
2. Christianity □
3. Hindu □
4. Traditional religion □
5. Other (specify) .................................................................

6. How far away from the government hospital do you leave?
1. Walking distance (less than 5km) □
2. Far (between 5-10km) □
3. Very far (over 10km) □

7. Are there any other health facilities around your home offering maternity services?
1. Yes □
2. No □

If yes, why didn’t you go to that health facility ________________________________?

B. EDUCATION

1. Have you ever Attended School?
1. Yes □
2. No □

2. What is the highest level of school you attended?
1. Primary □
2. Post primary/vocational □
3. Secondary/A’ level □
4. Higher □

3. What is the highest level of school of your husband/partner?
1. Primary □
2. Post primary/vocational □
4. Secondary/A’ level □
5. Higher □
C. OCCUPATION

1. Aside from your own housework, are you currently working?
   1. Yes □
   2. No □

If yes, what is your occupation? _________________________________

2. What is your husband’s/partner’s occupation?
   _________________________________

3. Who in your family usually has the final say on the following decisions?
   a. your own health care___________________________________________
   b. making household purchases for daily needs_______________________
   c. visits to family or relatives____________________________________
   d. what food should be cooked each day____________________________

D. PARITY

1. Have you ever given birth?
   1. Yes □
   2. No □

2. How many children have you given birth to?
   1. None □
   2. One □
   3. Two □
   4. More than Two □

3. Do you have any sons/daughters to whom you have given birth who are now living with you?
   1. Yes □
   2. No □

E. SAFEMOTHERHOOD

1. Did you seek any treatment or check-up services during your pregnancy?
   1. Yes □
2. No □
If yes, whom did you see? ________________________________
Any one else? _________________________________________

2. Where treatment was sought
from___________________________________________

3. How many months pregnant were you when you first received antenatal care for the pregnancy?
_____________________________________________________

4. How many times have you received antenatal care during the pregnancy?
________

5. During any of the ANC visits for the pregnancy, were you given any information or counseled about AIDS or the AIDS virus?
1. Yes □
2. No □

6. Have you heard of HIV Counseling and Testing (HCT)?
1. Yes □
2. No □

7. Have you ever been tested for HIV?
1. Yes □
2. No □

8. Would you want to be tested for AIDS virus?
1. Yes □
2. No □

9. Can the virus that causes AIDS be transmitted from a mother to a child?
1. Yes □
2. No □

10. How can the virus that causes AIDS be transmitted from a mother to a child?
________________________________________________________
________________________________________________________
________________________________________________________
11. Can a pregnant woman who is infected with the AIDS Virus reduce the risk of giving the virus to the baby?
   1. Yes
   2. No

12. How can a pregnant woman who is infected with the AIDS Virus reduce the risk of giving the virus to the baby?
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

13. Were you given any information or counseled about breastfeeding?
   1. Yes
   2. No

14. Were you told about the signs of pregnancy complications?
   1. Yes
   2. No

15. Were you told where to go if you had these complications?
   1. Yes
   2. No

16. Were you told of the safe place for delivery?
   1. Yes
   2. No

F. PLACE OF DELIVERY

1. Where did you give birth from?
   1. Home
   2. Hospital/health facility
   3. On the way to hospital
   4. other(specify)---------------------------------------------

2. Had you planned to give birth at that place?
   1. Yes
   2. No

3. Who assisted you with the delivery of your child?

4. Where would you like to give birth in your future pregnancy if any?
5. Why would you like to give birth at that place?

6. Who would you like to assist you with the delivery of your child?

7. Why would you like that person(s) to assist you during delivery of your child?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

8. In future, would you like to deliver your baby in the hospital?
   1. Yes □
   2. No □

   If yes, why____________________________________________________________

   If no, why____________________________________________________________
b) **FOCUSED GROUP DISCUSSION**

**A QUESTIONNAIRE ON UTILIZATION OF HOSPITAL DELIVERY AMONG WOMEN WHO HAVE DELIVERED IN THE LAST SIX MONTHS IN KWALE COUNTY**

*My name is…………………………………………………………………………………., a research assistant on behalf of Mr. M. Omari, who is a masters student undertaking Master of Public Health at Kenyatta University.*

*The information given by the respondent will be treated with confidentiality. The aim of this study is to assess the level of utilization of the health facilities and various factors that influence the utilization of health facilities for Child deliveries among women.*

*Please be as genuine as possible.*

*Name of the facilitator:______________________________________________________________*

*Discussion questions: ___ ___ ___*

a. Why do pregnant women prefer to deliver at home?

b. Is there any difference between home and health facility delivery of babies?

c. What are the advantages of home delivery compared to health facility delivery?

d. What are the dangers of home deliveries?
Appendix (iii): Research Approvals

a) Kenyatta University Graduate School

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean_graduate@ku.ac.ke
Website: www.ku.ac.ke

FROM: Dean, Graduate School
TO: Juma Mwanjama Omari
C/o Community Health Dept.

DATE: 8th March, 2012
REF: 157/12630/05

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting of 1st March 2012, approved your Research Proposal for the M.P.H Degree, entitled “Factors Influencing Utilisation of Hospital Delivery among Women Who Have Delivered in the Last Six Months in Kwale County, Kenya.”

You may now proceed with your data collection.

Thank you.

JOHN M. ODONGI
FOR DEAN, GRADUATE SCHOOL

c.c. Chairman, Community Health Department

Supervisors:

1. Dr. Margaret Keraka
   School of Health Sciences
   C/o Department of Public Health

2. Dr. Okello Agina
   School of Health Sciences
   C/o Department of Obstetrics and Gynaecology

Committed to Creativity, Excellence & Self-Reliance
b) Kenyatta University Ethics Review Committee

Kenyatta University Ethics Review Committee

Fax: 8711242/8711575
Email: kuerc.chairman@ku.ac.ke
kuerc.secretary@ku.ac.ke
Website: www.ku.ac.ke

Our Ref: KU/K/COMM/51/56

Date: October 9th 2012

Juma Mwanjama Omari
School of Public Health
Kenyatta University
P.O. Box 43844, Nairobi.

Dear Mr. Omari,

APPLICATION NUMBER FKU/061/154 OF 2012 – ‘FACTORS INFLUENCING UTILIZATION OF HOSPITAL DELIVERY AMONG WOMEN WHO HAVE DELIVERED IN THE LAST SIX MONTIES IN KWALE COUNTY, KENYA’

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic, Factors Influencing Utilization of Hospital Delivery Among Women who have Delivered in the last Six Months in Kwale County, Kenya’ dated 12th June 2012.

2. APPLICANT

Juma Mwanjama Omari
School of Public Health
Kenyatta University
P.O. Box 43844, Nairobi.

3. SITE

Kwale County – Kenya.

4. DECISION

The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines, and is of the view that against the following elements of review,

(i) Scientific design and conduct of study,
(ii) Recruitment of research participant,
(iii) Care and protection of research participants,
(iv) Protection of research participant’s confidentiality,
(v) Informed consent process,
(vi) Community considerations.

AND APPROVED and that the research may Proceed ON CONDITION that you incorporate its advise below.
5. **ADVICE/CONDITIONS**

With respect to matters of scientific design and conduct of study and recruitment of research participants, the following specific conditions must be fulfilled in writing before an approval can be granted. The manner of fulfilling these should be outlined and submitted to KU-ERC as soon as possible.

1. Methodology
   a) Describe the inclusion and exclusion criteria clearly.
   b) The pilot study described on page 21 is not clear.

2. Work plan
   Revise the timeline.

3. Consent form
   a) Include the consent form which should be structured as per the KU-ERC guidelines.
   b) KU-ERC should be acknowledged.

4. Questionnaire
   a) Attach a translation of the questionnaire in Kiswahili as implied on page 21.

When replying, kindly quote the application number above.

If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

[Signature]

Prof. Nicholas K. Gikonyo
CHAIRMAN ETHICS REVIEW COMMITTEE

Juma Mwahishama Emali

accept the advice given and will fulfill the conditions therein.

Signature........................................ Dated this day [Date] of [Month] 2012.

cc. Vice-Chancellor
    Director, Institute for Research Science and Technology
c) National Council for Science and Technology

Republic of Kenya

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2214349
254-020-310571, 2213123, 2215420
Fax: 254-020-310523, 310249
when replying please quote
secretary@ncst.go.ke

Date:
12th November 2012

Out Ref:

NCST/RCD/12A/012/54

Juma Mwanjama Omari
Kenyatta University
P.O.Box 43844-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application for authority dated 11th April, 2012 to carry out research on "Factors influencing utilization of hospital delivery among women who have delivered in the last six months in Kwale County, Kenya," I am pleased to inform you that you have been authorized to undertake research in Kwale County for a period ending 31st April, 2013.

You are advised to report to the District Commissioners, the District Education Officers and the District Medical Officers of Health, Kwale County before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

DR M.K. RUGUTT, PhD, HSc.
DEPUTY COUNCIL SECRETARY

Copy to:
The District Commissioners
The District Education Officers
The District Medical Officers of Health
Kwale County.

"The National Council for Science and Technology is Committed to the Promotion of Science and Technology for National Development".
d) Research Permit

THIS IS TO CERTIFY THAT:

Prof/Dr./Mr./Mrs./Miss. Institution
Juma Mwanjama Omati
of (Address) Kenyatta University
P. O. Box 43844-0100, Nairobi
has been permitted to conduct research in
Location
District
County

on the topic: Factors influencing utilization of hospital delivery among women who have delivered in the last six months in Kwale County, Kenya.

for a period ending 31st April, 2013.

Applicant's Signature

Secretary
National Council for Science & Technology
Appendix (iv): MAP OF KENYA SHOWING POSITION OF KWALE COUNTY