FACTORS INFLUENCING DELIVERIES UNDER TRADITIONAL BIRTH ATTENDANTS IN KALOLENI AND RABAI DISTRICTS OF THE KILIFI COUNTY, KENYA

BY

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DECLARATION

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

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This research project has been submitted for examination with my approval as the University's Supervisor.

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DEDICATION

I dedicate this work to my loving wife Brenda for her love, help, patience and understanding throughout the training period.

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TABLE OF CONTENTS

CHAPTER THREE: RESEARCH METHODOLOGY

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

LIST OF TABLES

Table **Page**

LIST OF FIGURES

Figure **Page**

ABBREVIATIONS AND ACRONYMS

DSW	Deutshe Stiftung Welbevolkerung (German Foundation for World Populations)
EU	European Union
HIV	Human Immunodeficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
MOPHS	Ministry of Public Health and Sanitation
CPR	Cardio-pulmonary Resuscitation
KDHS	Kenya Demographic and Health Survey
USAID	UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
GH	BUREAU FOR GLOBAL HEALTH
HIDN	OFFICE OF HEALTH, DISEASE AND NUTRITION
EMONC	Emergency Obstetric and Neonatal Care
HHCC	household-to-hospital continuum of care
CS	Caesarian Section
PMTCT	Prevention of Mother-to-Child Transmission of HIV
ICPD	International Conference of Population and Development DRH
	Division of Reproductive Health
UNFPA	United Nations Family Planning Program
BCG	Bacilli Calmette Guerin

ABSTRACT

Home deliveries are a big contributor to maternal and neonatal deaths. The purpose of this study was to establish why a sizeable number of mothers still deliver at home under Traditional birth attendants in Kaloleni and Rabai Districts of Kilifi County. The study was carried outfrom July-August 2012 through gathering qualitative and quantitative data from available health records, administration of questionnaires and focused group discussions tailored to fulfill the study objectives. The data was then analyzed using Statistical Package for Social Sciences (SPSS) and presented by use of frequency tables. From the study: young mothers below 20 years of age, from poor households, living more than 4 kilometers from a health facility in Kaloleni and Rabai region were the most likely to deliver under TBAs .These mothers were also found to be illiterate (>92%) and had been through very few years of schooling. It also came out clearly that close family relatives are an important factor as they influenced decision to deliver under a traditional birth attendants. Retrogressive cultural practices, poverty, poor accessibility to facilities and high rates of illiteracy are contributing factors towards home deliveries in the region.
The study recommends that poverty reduction, provision higher level of education, involvement of the entire family in promotion of deliveries at hospitals and improvement of accessibility to health facilities at all times should be enhanced to get more mothers delivering at health facilities.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Maternal and Neonatal health services are the pillars of family health (Perinat, 2004). However, delivering a child remains one of the biggest health risks for women worldwide (Maternal Health Stuff, 2012), globally seven million women are affected by health problems related to childbearing. It is baffling to note that one thousand five hundred women die every day while giving birth (UNICEF, 2009). That translates to half a million deaths of mothers every year. This study will shade light on the subject in Kaloleni and Rabai sub-counties of Kilifi County and offer recommendations for interventionson the same. Internationally, increasing attention has been concentrated on reducing maternal and neonatal mortality, acknowledging the tragedy of not preventing these avoidable deaths. Such deaths include 36,000 women annually in the 12 countries in the region of East and South-East Asia (ESEA). Many of the 647,000 neonatal deaths annually in the same region are also avoidable.

Of the more than 500,000 women who die in Africa each year as a result of complications arising during pregnancy, half live in Sub-Saharan Africa. Yet death is not the only outcome resulting from pregnancy complications. For every woman who dies, at least 30 others are injured and disabled.

In Sub-Saharan African countries, MMRs in teaching hospitals are also high. For instance, in Adeoyo Hospital in Nigeria, the MMR was 963 per 100,000 live births between January 2003 and December 2004. The Neonatal Mortality Rate (NMR) in KNH from January to December of 2000 was 215 per 1000 live births .The NMRs are high in other African countries such as Nigeria, (53 per 1000 live births) and Ethiopia (51 per 1000 live births) [WHO, 2010].A woman in Niger has a one in seven chance of dying during the course of lifetime from complications during pregnancy or delivery. This is a stark contrast to the risk for mothers in America, where it is one in four thousand pregnancies, or in Ireland, where it is just one in forty-eight thousand pregnancies. Addressing this gap is a multidisciplinary challenge, requiring

emphasis on education, human resources, community involvement and social equality(UNICEF, 2009).

In Kenya, a woman's lifetime risk of dying is one in 38 compared to one in 2000 in the developed world The World Health Organization (WHO) reported that Kenya's progress towards improving maternal and neonatal health is presently "insufficient" with little or no progress having been made over the past decade. It is also important to note that newborn deaths represent 38% of all deaths among children underfive years of age in Kenya.

Presently, the situation in Kenya is that only 43% of child birth takes place in a health facility under the watchful eye of a skilled birth attendant [KDHS, 2008]. The most noted reason why mothers prefer to deliver at home under a traditional birth attendant is inaccessibility of health facilities due to long distances, limited time of service provision which makes it difficult for pregnant women to get help any time and other socio-cultural issues. As a result of this, one in five women in Kenya risks losing a newborn baby during her lifetime. Pre-term birth accounts for 29% of neonatal deaths globally and approximately 14% of babies are born with low birth weight. Early neonatal outcomes are affected by nutrition, lifestyle and socio-economic status of mothers.

The Safe Motherhood Initiative in 1987, ICPD (write in full, no abbreviations initially, put it later when it appears next) in 1994, again in ICPD+5 and the Millennium Development Goals all focus on the need for action in reducing maternal mortality. The Partnership for Maternal, Newborn and Child Health launched in September, 2005 reinforced the link between maternal and newborn health, which was often overlooked in many health programs (Maternal and Neonatal Health -UNFPA, 2005)]

Despite the inauguration of the Safe Motherhood Initiative (SMI) in Nairobi in 1987, Kenya has made limited progress towards improving maternal mortality. Between 1980 and 2010, the national maternal mortality ratio (MMR) was 400–560 per 100,000 live births.This means that close to six hundred newborns lose their mothers per every one hundred thousand live births. The ratios are higher for the major teaching and referral hospitals where obstetrics complications are

concentrated. For example, the MMR in Kenya's largest referral hospital, Kenyatta National Hospital (KNH), was 922 per 100,000 live births in 2004. In Kilifi District Hospital in Kenya, the MMR was 250 per 100,000 live births between 2008 and 2010 [9].

According to UNICEF's flagship publication, maternal mortality as one of the most intractable problems for development work with a glaring difference in risk occasioned by carrying a pregnancy for women in industrialized world and their counterparts in developing countries. This is often termed as the greatest health divide in the world.

At a minimum, to reduce neonatal maternal deaths, women must be guaranteed antenatal care, provision of skilled birth attendants and emergency obstetric and postpartum care. The essential interventions will only be guaranteed within the context of improved education and abolition of discrimination. However, as the 2015 deadline for the Millennium Development Goals draws closer, the challenge for improving maternal and newborn health goes beyond meeting the goals. Success will be measured in terms of lives saved and lives improved by 2015 (UNICEF, 2009). There has been a deliberate move by the Kenyan Government and other partners to equip health facilities to provide maternal and neonatal health (MNH) services. Despite this, there still has been a downward trend in number of women using the health facilities for deliveries (DRH, MoPHs, 2009). Maternity care survey focusing on women who had given birth in the past 5 year shows that 95% of women received antenatal care from a skilled service provider, but only 46% had delivered under the assistance of a skilled birth attendant, and that only 44% of the births occurred in a health facility. Infant mortality (between birth and first birthday) was found to be 71 in 1000 live births in the Coast Counties. Majority of these deaths occurred within the first week of life (KDHS, 2009). It is observed that of the reported 96% of babies who received the first (BCG) vaccine, only 40% of them were born in a health facility, which by implication means a big proportion of the children are borne at home [KDHS 2009].

Health care facilities cannot save a woman's life if she cannot reach it, cannot afford it, and does not know it is there and when to seek it, or is not permitted to use it.

1.2 Statement of the Problem

Safe- motherhood is an important aspect in maternal health and child survival. However, in this region, only 34% of deliveries in Kaloleni/Rabai Districts, Kilifi County occur in health facilities. The bulk of the deliveries take place at home under the care of a traditional birth attendant (TBA), where lack of skills, exposure to infections, and absence of emergency and referral mechanisms are the norm.

Studies done in Nyanza Province in Kenya have shown that poor transport system, sudden onset of labor pains, culminating into the birth of a child, the decision to deliver at home and lack of knowledge are the leading causes of the majority of child births that occur at home as opposed to births in health facilities where skilled professional assistance, emergency services, immunization, referral services, PMTCT and other child and maternal survival mechanisms are available.

Delivering at home exposes the mother and the newborn to grave risks which can culminate into death or life changing malformations and infections. Absence of immunization services against diseases and subsequent exposure of the baby to pathogens due to unhygienic conditions at home can easily leads to neonatal deaths (Ministry of Health, 2004).Despite all the dangers cited above, a sizeable number of mothers in Kaloleni and Rabai Districts still prefer home delivery. This study therefore sought to establish the factors which make this mode of delivery preferred by a sizeable number of the mothers, but only come for the BCG vaccine to immunize their babies.

Generating information on maternal and neonatal health was necessary in order to establish whether this trend had been observed elsewhere in the country, and if different, to suggest the necessary measures to address the situation.

1.3 Purpose of the study

The purpose of this study was to establish the factors behind preference for home deliveries in Kaloleni/ Rabai Districts of the Kilifi County.

1.4 Objectives of the study

The purpose of the study was realized through the following specific objectives: -

1. To establish if the level of mother's education has influence on preference for delivering under Traditional Birth Attendants;
2. To explore if cultural practices/ traditions influence the shunning of medical facilities for delivery;
3. To inquire if accessibility to health facilities influences child birth under Traditional Birth Attendants
4. To investigate if poverty influences delivery away from health facilities.

1.5 Research questions/Research hypothesis

1.5.1 Research questions

1. What is the educational level of the mothers who prefer to be delivered bya traditional birth attendant?
2. Are traditional practices a factor that influences home deliveries in the region?
3. What is the effect of access to health facilities on delivery?
4. What is the income level of the women who prefer to be delivered by traditional birth attendants?

1.5.2 Research hypothesis

The hypotheses were as follows:

1. H_0: There is no relationship between the level of education of the mothers and the decision to seek childbirth services under traditional birth attendants
   $H_{1:}$ There is a relationship between the level of education of the mothers and the decision to seek childbirth services under traditional birth attendants

2. H_0: There is no relationship between cultural/ traditional practices and choice to deliver under traditional birth attendants

H_1: There is a relationship between cultural/ traditional practices and choice to deliver under traditional birth attendants

3. H_0: There is no relationship between accessibility to a health facility and the choice of childbirth under traditional birth attendants
   H_1: There is a relationship between accessibility to a health facility and the preference of childbirth under traditional birth attendants
4. H_0: There is no relationship between the socio-economic status of the women and the preference to deliver under traditional birth attendants
   H_1: There is a relationship between the socio-economic status of the women and the preference to deliver under traditional birth attendants

1.6 Significance of the study

The study is significant as many women who develop complications during delivery under traditional birth attendance are more likely to lose their lives when compared to those who seek these services in a health facility. Such deaths can be avoided when the reasons that influence the choice for home delivery as opposed to delivery at the health facility are established. The information generated through the study can help in the identification ofappropriate strategies that promote delivery at the health facilities. Apart from that, the findings of this study would provide insight into the reasons why a sizeable number of mothers in the region deliver at home, information, which would help the health providers and other stakeholders to improve maternal and neonatal health in the two districts. In addition to that, the information generated can be useful for areas with similar characteristics in the coastal counties, shedding light on shortfalls in existing reproductive health provision strategies in the area.

1.7 Delimitations of the study

The research covered women who had delivered within the last one week of the study and had brought their babies to receive the first BCG vaccine for immunization. Thus mothers who never brought their babies for BCG immunization could simply have been left out. It was carried out in

7 health facilities in the Kaloleni and Rabai districts of the Kilifi County among which has 17 dispensaries, one health center and one level IV hospital; three faith based facilities: one hospital and two dispensaries, and another ten registered private health facilities, [District Health Records Information Office – 2011/2012]. It coveredPublic Health facilities in which, majority of maternal and neonatal services are provided. Private health facilities were left out.

1.8 Limitations of the study

The limitations of the study included the large geographical spread of the health facilities in the study area, financial constraints, inadequate time and personnel. Other limitations arose due to language barrier and illiteracy among the target study population.

1.9 Basic assumptions of the study

The study assumed that:

1. All research instruments are administered effectively.
2. The target mothers from within the region were readily available and willing to participate in the study
3. All the interviewees (mothers who have brought children for BCG immunization at health facilities) responded faithfully and honestly.

1.10 Definition of Significant Terms

Safe- motherhood: Encompasses social and cultural factors, as well as addresses health systems and health policy that ensures that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth.

Neonatal health (Syn: newborn health): Relating to the period immediately succeeding birth and continuing through the first 28 days of extra-uterine life

Neonatal mortality rate (per 1000 live births): This is the number of neonates who die within one month of life per 1000 live births.

Maternal health: Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period.

Obstetric care: Refers to lifesaving services for maternal complications being provided by a health facility or professional unit

Eclampsia: Eclampsia is a serious condition most commonly defined as seizures or coma in a patient with other indications of pregnancy-induced hypertension

1.11 Organization of the study

The study was organized in five chapters. Chapter 1 contain the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitations, limitations, basic assumption of the study and definition of significant terms. Chapter 2 provides the literature review on the study. It also covers safe-motherhood, giving the global picture on the subject, followed by analysis of the situation in Kenya, before zeroing on in the Coast Counties, with specific emphasis on Kaloleni and Rabai Districts. Chapter 3 presents the research design, target population sample size and sampling procedure, data collection methods, validity and reliability of research instruments, methods of data analysis, operational definition of variables and ethical considerations. Chapter 4 is the data presentation, analysis and interpretation. Chapter 5 concludes the study, presenting a summary of findings, discussions, conclusions, recommendations of the study and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Reproductive health is a state of physical, mental, and social well-being in all matters related to the reproductive system at all stages of life. It implies that people have the capability to reproduce and the freedom to decide if, when, and how often to do so. It includes the right to appropriate health-care services that enable women to safely go through pregnancy and child birth.

While the delivery of a child is an important milestone in the human life cycle, it presents many challenges, many of which, life threatening. According to KNBS, maternal mortality in Kenya has remained unacceptably high at 688 maternal deaths per 100,000 live births (with some regions reporting MMRs of 1,000/100,000 live births) in 2009/10, an increase from 514/100,000 in 2003, 690/100,000 in 1999. Most maternal deaths are due to causes directly related to pregnancy and childbirth unsafe abortion and obstetric complications such as severe bleeding, infection, hypertensive disorders, and obstructed labor. Others are due to causes such as malaria, diabetes, hepatitis, and anemia, which are aggravated by pregnancy (2008). In some communities, however, there are other factors that result in the high rate of maternal complications. These are factors that have been witnessed in many developing countries.

2.2 Maternal and Neonatal Health

Maternal and neonatal health is also called safe-motherhood which are the services that the mother and the baby get in order to have a healthy outcome for both the mum and her baby. A series of health interventions have been set up by policies regarding conception of a baby, how to carry it to term and deliver safely without compromising the health of the mother and the child (Family Care International, 2004)

2.2.1 Millennium development goals and reproductive health

Millennium Development Goals (MDGs) number 4, 5& 6 targets to reduce child mortality improve maternal health and combat HIV/AIDS, malaria and other diseases. The Government launched a Maternal and Newborn Health (MNH) Road Map in August 2010 whose goal is to accelerate the reduction of maternal and newborn morbidity and mortality towards the achievement of the Millennium Development Goals (KNBS, 2008). Onunga argues that this is expected to play a major role in improving motherhood in all parts of the country (2012). The National MNH Road Map offers a new and revitalized dimension of efforts of all stakeholders. It provides a framework for building strategic partnerships for increased investment in maternal and newborn health at both institutional and programmed levels. Implementation will take a phases approach and the final reporting year will be 2015 (KNBS, 2008).

The Target of goal number 4 is to reduce the mortality rate of the child less than 5 years of age by two thirds, between 1990 and 2015.The number one target of goal 5 is to reduce maternal mortality ratio by 75% between 1990 and 2015 and to increase births attended by skilled personnel. The second target is to achieve universal access to reproductive health by 2015 [MOH, 2000]. Mitchel confirms that successful implementation of these goals will be a major boost in the health care sector of Kenya, as well as a key factor that will help to reduce the number of mother and child deaths, per year. To ensure all expectant mothers are safe and that they get quality health services, the government has to abolish user fees in all public maternity hospitals and clinics (2009). Mothers should be encouraged to deliver in the nearest maternity facility under the supervision of a skilled health worker (Heatonic, et.al.,2003). The government is committed to shifting budgetary resources from curative health to preventive health services (this shift was included in the 2010/2011 Budget). This will help deal with childbirth problems before they become serious. There are sustained efforts on decentralization of healthcare system to the districts to ensure local needs are better addressed (MOH, 2012).

2.2.2 Reproduction and Maternal Health

In developing countries, between 25 and 33% of all deaths among women, of reproductive age, result from complications of pregnancy or childbirth. Comparison between maternal deaths between poor countries in Africa and the developed world shows that the risk of an African woman dying from a complication related to pregnancy or childbirth is 1:16; while the risk of a woman from a developed country dying from a complication related to pregnancy or childbirth is 1:2,800 (WHO, 2000).

The poor performance of maternal health indicators is due to weaknesses in healthcare systems like poor infrastructure, inadequate staff and supplies, poverty and unfavorable socio-economic factors. Onunga insists that more rural women should receiving skilled assistance during delivery, in order to reduce long-standing disparities between urban and rural areas. Serious disparities in coverage are also found between the wealthiest and the poorest households. In the developing regions as a whole, women in the richest households are three times as likely as women in the poorest households to receive professional care during childbirth (2012).

To reduce and bring down the high maternal mortality, the government has to addres's several challenges including the need to ensure the availability of adequate maternity services and skilled personnel to attend to complicationscaused by unsafe/induced abortion, malaria, and HIV/AIDS, among others (UNICEF, 2009).

Several factors contribute to poor state of maternal health services, especially childbirth, in Kenya; MNHP explains the three delays[1] that contribute to maternal death as deciding to seek care, reaching care and receiving care. These are: Delay in deciding to seek care may be caused by failure to recognize signs of complications, failure to perceive the severity of illness, cost considerations, previous negative experiences with the healthcare system, and transportation difficulties. Other factors such as financial capability may play in this. People who lack enough funds may decide to hold onto their problems for a little longer, hoping that the problems will calm down (MOH, 2012).

Delays in reaching care are created by the distance from a woman's home to a facility or provider, the condition of roads, and a lack of emergency transportation.
Delays in receiving care may result from a lack of healthcare personnel, poor skills of healthcare providers, unprofessional attitudes of providers, and shortages of supplies and basic equipment. Research shows that most of the hospitals, especially in the interior parts of the country, do not have enough medical attendants. UNICEF confirms that this is due to negligence, since some parts have been neglected by their area representatives, and hence do not receive the required support from the government. Doctors also don't like working in some of these places since the state of security and general level of life may be poor, meaning that the few health care attendants who are available have to serve the whole community. This results to a shortage of healthcare attendants (2012).

Health professionals who work to improve healthcare in developing countries generally acknowledge that addressing the multiple causes of maternal and newborn mortality and morbidity must be a top priority, but little progress has been made towards achieving this objective over the past twenty years.

For millions of women who lack access to skilled care during delivery, special joy that mothers and their families feel at childbirth is often overshadowed by life-threatening risks that both mother and child face. Too often, the miracle of new life is transformed into a painful struggle for survival (FHI, 2006).
At least 529,000 women die every year as a result of pregnancy and childbirth worldwide, nearly all of them occur in developing countries. For every woman who dies in a pregnancy-related complication, 30 women suffer disability. Newborn mortality is even greater: over four million infants die every year within the first 28 days of life, again, mostly in developing countries. 75% of these deaths occur within the first week of life, and 25 – 45 % occurs within twenty four hours of life. This immense loss of life is needless and unacceptable. A high percentage of maternal and newborn deaths could be prevented by providing pregnant women with skilled care-givers and a number of proven, effective, and timely interventions for the mother and her baby (Safe motherhood, 2010).

Although effective interventions for many causes of maternal and neonatal deaths are well documented, effective delivery of care remains a major challenge in developing countries, where more than 60 million women deliver without skilled providers – most at home. For many women, access to health facilities is hampered by distance to or cost of services, or because transport is unavailable or unaffordable. In addition, social barriers – such as women lack of decision-making power, freedom of movement, and control over finances, or cultural incompatibility of facilities – can deter them from using maternal and child health services. Many countries have committed to the United Nations' Millennium Development Goal of reducing maternal mortality by three quarters and child mortality by two third by the year 2015. To reach the latter goal, there must be a strategic focus to reduce newborn deaths because 38% of under five deaths occur within the neonatal period (0 to 28 days of life). This goal will be unattainable unless barriers to health care are effectively addressed (Safe motherhood, 2010).

Studies have demonstrated that the implementation of essential maternal and newborn care (EMNC) in community based settings can reduce the number of deaths among mothers and newborns dramatically, including those mothers who give birth at home attended by skilled providers. In one pilot study in India, newborn deaths were reduced by 62% using a model for home/based newborn care (Senate bill 2865, 2003).

Delivery of healthcare is also problematic. Many primary healthcare facilities and district-level facilities in developing countries struggle to meet the existing demand for care due to poor infrastructure, shortages of basic or appropriate equipment and adequate supplies, inadequate numbers of skilled health staff or low retention of existing skilled health staff at facilities close to community, lack of competency-based pre-service and continuing education programs, poor communication and referral linkages, and absence of legal authority for service providers to perform to certain life-saving procedures (WHO, 2012).

Any approach to improve essential maternal and newborn care services must address the issues of the community and the health system together, systematically, and in close collaboration among all stakeholders if it is to be successful (Hallstein., et.al,2010). The community and

healthcare providers need to join forces and work together in order to overcome these complex obstacles, with the long-term goal of ensuring that pregnant women and newborns receive appropriate and timely care – preferably as close to home as possible. Achieving a significant reduction in maternal and neonatal mortality will be facilitated by developing a comprehensive (integrated community) approach to address the social and health systems issues within the community, and in both peripheral and district-level facilities, through maternal and newborn programming and implementation, otherwise called the Household-to-Hospital Continuum of Care (HHCC (Woznialet.al.2004).

2.2.3 Maternal and neonatal health in Kenya

In 2003, infant mortality was 77/1000 live births and in 2008-09 KDHS, it declined to 52/1000 live births. The under-five mortality equally declined from 115/1000 in 2003 to 74/1000 live births in 2008-09. Kenya has therefore seen an improvement and a subsequent decline in reproductive health and maternal and child health; where 88% of women attend at least one Antenatal Clinic (ANC) in pregnancy; more than 58% deliver outside the designated health facilities with skilled birth attendants. It is estimated that only 10% of women who deliver at home receive any type of postnatal care. The maternal mortality ratio is 414 / 100,000 live births. Neonatal mortality rate is 33/1000 live births, with majority of deaths occurring within the first week of life. This is contrary to the global evidence that indicates maternal and prenatal mortality rates decline when women have access to a continuum of skilled care during pregnancy, birth and the postpartum period.

The maternal mortality ratio in Kenya has remained at over 400 per 100,000 live births since 1998. KDHS 2008-09 puts maternal mortality rate at 488 to 100,000. The neonatal mortality rate was estimated at 33 per 1000 live births in 2003 (28 in 1000 live births in 1998), while the perinatal mortality rate was estimated at 40 in 2003 and 45 per 1000 live births in 1998. Statistics from 2003 KDHS indicated that nationally, only 42% of births in Kenya were attended to by a skilled attendant. Skilled attendance implies access to appropriately trained health providers whether in a health facility or through domiciliary care, and having access to a rapid means of referral in case of emergency. In this context, the traditional birth attendants (TBAs) are not recognized as providers of skilled care (KDHS 2009).

Most neonatal deaths are due to infections, birth asphyxia, birth injuries, complications of prematurity and low birth weight, and birth defects (Karen, 1983). Maternal deaths occur mostly due to the five "direct" obstetric complications: postpartum hemorrhage, obstructed labor/ruptured uterus, pre-eclampsia/eclampsia, puerperal sepsis, and unsafe abortions. Among the "indirect" causes of maternal deaths are: severe anemia, malaria, HIV/AIDS and tuberculosis.

2.2.4 Antenatal care (ANC)

Antenatal care is the health care that a mother receives during pregnancy. What happens in antenatal care, delivery and soon after delivery is important for the well-being and survival of the mother and her child. Components of antenatal care include health education targeting the mother on danger signs of pregnancy, nutrition, child care, and general health and hygiene. It is during this time that the mother is advised to deliver in a health facility.

92% of women in Kenya receive antenatal care from a medical professional, either from a doctor (29%), or nurses and midwives (63%). A small fraction, less than 1% receive antenatal care from traditional birth attendants, and 7% do not receive any antenatal care at all.[KDHS 2008-09] The 2008 -09 KDHS data indicate a rise since 2003 in medical antenatal coverage. Trends in use of antenatal care show that the proportion of women who had antenatal from trained medical provider rose slightly from 88% in 2003 to 92% during the survey. There has been a shift also from use of nurses and midwives (70% in 2003 down to 63% in 2008-09) towards doctors (18% in 2003 and up to 29% in 2008 -09(KDHS 2008-09)

Examination of differentials in antenatal care shows that high parity women are more likely than low parity mothers not to see anyone for antenatal care (Tinterental, 2003). Rural women are less likely than their urban counterparts to get antenatal care from a doctor, and they are more likely to get no care at all. There are also regional variations in antenatal care coverage, with over one quarter of women in North Eastern province not getting any care at all. Women in

Western and Nyanza provinces have low use of doctors for antenatal care compared with their use of nurses, from Coast and Central provinces, the reverse is true. [KDHS 2008 -09]

Majority of women receive antenatal care from Public Health facilities (83%), only 16% get this services from private health facilities. 5% and 3% of women in Western and North Eastern province received antenatal at home respectively.

Under normal circumstances, WHO recommends that a woman without complications should make at least four antenatal care visits, the first of which should be during the first trimester of pregnancy(WHO, 2012) In Coast Province, 47% of women make four or more antenatal visits. 60% of women in urban areas make four or more antenatal visits compared to 44% of rural women. Most women do not receive antenatal care early in pregnancy: only 15% seek this care within the first trimester; and only 52% receive this care before the sixth month of pregnancy. The median number of pregnancy at first visit is 5.7 months (KDHS, 2008 -09)

The picture about the situation in the Coast Counties includes that for Kaloleni and Rabai Districts in general.

2.2.5 Maternal and neonatal Health in Kaloleni and Rabai Districts

The population of Kaloleni and Rabai Districts is 276,575 when projected using the 2009 Kenya National population Census which puts the population growth rate of this region at 3.1% per annum. Out of this number 66,935 are women of reproductive age and 9750 of them are expected to become pregnant in 2011/2012. The fertility rate for Kaloleni is 6.7 compared to the national average of 4.7. This is not surprising given that the region is bedeviled by early pregnancies and early marriages, sometimes children whose age is as low as 12 years become mothers. The family planning uptake is only at 38%. [DHRIO's Office 2011/2012, Kaloleni District] The percentage of mother who delivered in health facilities in Kaloleni/ Rabai Districts is 35% much lower than the national average of 42% (MOH).

2.2.6 Education and health-seeking behavior

Education is the ultimate eye-opener for every conservative society (Mooney, 2009). It is the only tool that can be used to help people realize the importance of seeking professional medical services, when faced with a health issue (Branson, 2011). Without the awareness of the need and demand for high-quality services, women will not access services even if they are available. The goal of creating informed demand is to increase community understanding and appropriate, efficient use of healthcare services during pregnancy, childbirth, and the postpartum period. Communication strategies geared toward demand generation should focus on educating individuals and groups about what needs to be done, what can be done, whom to consult, when, and what to expect (Heatonic, 2003). Accurate information alone does not create informed demand, however. People are more likely to accept new information if they understand it, understand their options, and understand possible benefits and consequences. Research findings by DSW in the end of the Safe-motherhood project review- Kaloleni/Rabai Districts showed that women who have had formal education are more likely to choose delivery at a health facility, unlike the illiterate counterparts.

2.2.7 Reproductive Health Policy

The National Reproductive Health Strategy 1997-2010 was developed in response to the program of ICPD OF 1994. (Ministry of Health, 2007). The goal of the strategy is to provide a comprehensive and integarated system of reproductive health care through the government, civil society organistaions and the private sector facilities. However, the implimentation of the strategy has been affected by a number of challenges, including the impact of HIV/AIDS epidemic; a general shift of international assistance from population to HIV/AIDS; disparities in health resource allocation and lack of specific interventions targetting the resources to the poor and 'hard to reach' populations. The policy adresses these challenges and provides a framework for revision of the National Reproductive Health Strategy, 1997 – 2010 (MOH, 2007).

The goal of the Reproductive Health policy was to enhance the reproductive health status of all Kenyans by enhancing accessibility, quality and customer satisfaction in provision of the services. Its objectives of the policy was to improve reproductive health by reducing maternal and neonatal morbidity and mortality, promote family planning, provide equity and contribute to reduction in HIV/AIDS and improve overall reproductive health for minorities.
[Ministry of Health, K. 2007).

2.2.8 Management of labor and the delivery process at health facility

Mitchell, (2009) argues that efficient management of labor and delivery processes is essential to ensure safe delivery. It is one of the issues that should be looked at with a lot of keenness, to avoid losing lives because of carelessness. When giving birth, all women need a skilled attendant, with minimal use of invasive procedures such as episiotomy and Universal precautions to be followed to prevent transmission of HIV and blood borne infections.

2.2.9 Traditional home deliveries:

A traditional birth attendant (TBA), also known as a traditional midwife, community midwife or lay midwife, is a pregnancy and childbirth care provider who has no formal training in these aspects (Sainsbury, 2009). Traditional birth attendants provide the majority of primary maternity care in many developing countries, and may function within specific communities in developed countries (Kariuki, 2009.).

Traditional midwives provide basic health care, support and advice during and after pregnancy and childbirth, based primarily on experience and knowledge acquired informally through the traditions and practices of the communities where they originated. They usually work in rural, remote and other medically underserved areas. TBAs do not receive formal education and training in health care provision, and there are no specific professional requisites such as certification or licensure. They often learn their trade through apprenticeship or are self-taught; in many communities one of the criteria for being accepted as a TBA by clients is experience as a mother (Sainsbury, 2009)

2.2.10 Traditional home deliveries in Kenya

Kariuki (2009) confirms that traditionally, women in Kenya used to give birth in their homes. In this predominately rural culture, birth is a meaning-laden event not only for a woman and her extended family but also for the entire community. A pregnant woman is supported by older women in the community. She is cared for by what is now called a traditional birth attendant (TBA). While the value of TBAs has sometimes been debated, they continue to play a vital role in the birth experience for most women in rural African communities. In a continent with 40% unemployment, a depressed economy, and widespread poverty, medical care is often unaffordable or simply unavailable—another reason why many women in rural, African communities turn to TBAs for assistance in labor and birth at home.

The Kisumu Medical and Education Trust (K-MET) observes that the health system has failed the women of Kenya."No woman wants to deliver at home. The health system is failing women. When a woman is in labour, she needs someone to listen to her and offer comfort. One midwife attending to 10 women at once will not have time for such a woman. This is one of the various reasons why women are opting for the services of traditional birth attendants," says Ogutu. [K-MET, 2004]
This research seeks to generate information on the situation in Kaloleni/Rabai districts as a contribution to knowledge on the subject.

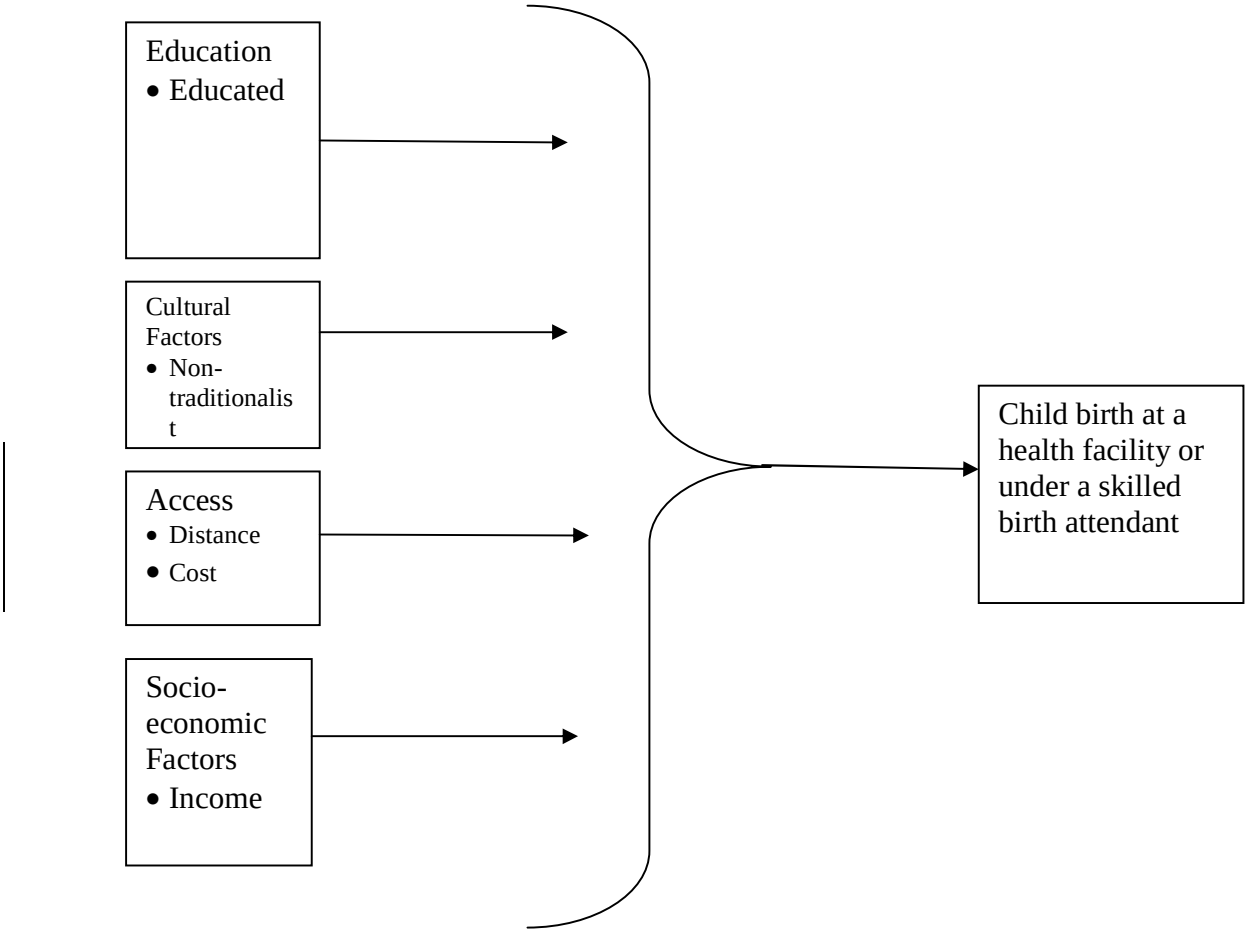
2.3 Conceptual and Operational Frameworks

The operational framework shows the relationship between the independent, moderating, intervening and dependent variables. The conceptual framework took into moderating variables such as: culture and traditions, education level and age of the mother, accessibility of the facility, the poverty level

The independent variables of the study were: adequate knowledge by mothers about safe-motherhood, excellent attitude of staff towards clients who seek delivery services, no competition for clients between skilled service providers and TBAs, encouragement of mothers

to deliver at health facilities by those close to them, adequate privacy for the mother who deliver at a health facility and services offered are up to standard with good customer care.

Figure : Conceptual framework



2.4 Summary of Literature Review

Neonatal mortality rate (NMR) for babies who deliver at home stand at over 120/1000 live births compared to hospital deliveries where it is less than 35/1000. This shows that mothers who deliver at home are four times more likely to end up with a dead baby arising due to child-birth complications when compared to those who choose to deliver in health facilities. It also comes out that half of the neonatal mortalities (51%) were for young mothers (15–24 years) and 64% of maternal deaths were in women between 25 and 45 years who mostly deliver at home under traditional birth attendants (TBAs). Literature sources show that between 2004 and 2011, the

overall maternal mortality ratio in Kenya was 414 per 100,000 live births and the early neonatal mortality rate (<7 days) was 77 per 1000 live births.

It is however clear that maternal and early neonatal deaths occurred in multiparous women, in referred admissions, when the gestational age is under 37 weeks and in latent stage of labor who are brought to health facilities late due to delays occasioned by attempted home delivery under TBAs. Indirect complications accounts for the majority of deaths. Where there are direct obstetric complications associated with the delivery, the leading cause of maternal death is eclampsia and the leading cause of early neonatal death is pre-mature rupture of membranes while pre-term birth and asphyxia are leading causes of early neonatal deaths. TBAs lack skills and necessary medical supplies to manage such conditions.

Most sources also note that safe motherhood is an important aspect in health as exemplified by the importance the Kenyan government and the world at large accords this priority area in terms of policy papers, planning system and resource allocation.

It is the conclusion of many scholars that all efforts must therefore be geared towards achieving the dream of making childbirth a happy experience not just to a few mothers, but to all mothers in the world and that it is important to prevent avoidable deaths of mothers and children in order for the society to grow and develop as envisioned in the Millennium Development goals (Onunga, 2012)

Home deliveries in Kaloleni and Rabai districts of Kilifi County accounted for 65% of child birth by 2012 and there is not enough information in Kaloleni and Rabai to establish why these mothers still deliver at home despite concerted effort by the government and other stakeholders to encourage mother to deliver in health facilities. Available information is scanty, non-specific to the region or outdated in the current set-up of high knowledge about safe-motherhood and practicing the opposite. The study objective was to find out why this was happening.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an overview of the methodological approaches of and research design selected for application to the study. Specifically, this section presents the research design, sampling method and procedures for data collection and analysis.

3.2 Research Design

This study employs descriptive survey design given its nature as it requires both quantitative and qualitative data to be collected. The design has also been chosen because of its simplicity in the methods of data collection and in its focus on the objectives of the study. According to Mugenda and Mugenda (2003) quantitative research produces quantifiable and numerical data while qualitative research is limited to producing data in the form of statements or words rather than numbers.

This study was about factors that influence maternal health decisions in regard to place of childbirth. It sought to establish why a sizeable number of mothers (65%) deliver at home in Kaloleni and Rabai Districts, Kilifi County in Coast region. The study utilized both quantitative and qualitative data. Quantitative data which gave numerical aspects of various indicators was obtained from various Ministry Of Health Records at the Health Management Information Office at the District level. The collected data covered a span of 5 years from 2007 to 2012 to establish a trend for purposes of the study. Qualitative data was derived from audio recordings from several focused group discussions. Ministry of Health records provided secondary data while primary data was derived from questionnaires and focused group discussions. This study was carried out from 8th August to 21st September, 2012.

In order to obtain the relevant information, the samples were acquired using Cluster sampling technique for the focused group discussion where the mothers, health facility-in- charges and the District Health Management team were clustered separately for the purpose of this study.

Simple random sampling was employed at the facility level during administration of the questionnaires to the mothers. Data was analyzed using SPSS program (Statistical Package for the Social Sciences) and presented using frequency tables.

3.3 Target population

The estimated population of Kaloleni and Rabai Districts was 269,361 people from the 2009 census (KBS, 2009). At a population growth rate of 3.1%, the population as at June 2012 stood at 295,197. However, the study targeted women of reproductive age, between 15-49 years of age who make up 23% (67896) of the population and ultimately the ones who were expected to deliver within the year 2012 who make 14.4% (9750) of the reproductive age. From this perspective, it is desirable to take a sampling frame (that is, a statistical sub-population from which to take the sample), which locates individuals within the population for the purposes of the study. It was in Mariakani DH, St. Lukes Hospital, Rabai Health Centre, Tsangatsini, Mgamboni, Makanzani and Ribe dispensaries that the target population was accessed.

3.3 Sample Size;

The sample size had a far reaching implication to the study since the probability of getting a representative sample of the target population was of great importance. From the demographic data, total number of expected deliveries in Kaloleni and Rabai for the year 2011/2012 was 9750 with 36% expected to deliver in health facilities (MoPHS 2012). Therefore the target population for the study is the 9750 .The sample size was arrived at using the following formula:

$n=N/(1+N(e^2)$ (Mugenda, 1999)

Where: n= sample size

N= population size

e=sampling error

At 95% confidence level, the sampling error is 0.05. Therefore, this implies that the sample size is:

$N=9750/ (1+9750*0.05^2)$

$=384$

Therefore, questionnaires were administered to reach 96 clients at Mariakani District Hospital, 77 at St. Lukes, 68 at Rabai, 45 at Tsangatsini, 30 each at Kinarani and Makanzani and 19 at Mgamboni and Ribe Dispensaries to make a total of 384.

The questionnaires were distributed basing on average monthly workload for the seven facilities. Mariakani is an urban setup, while the rest of the facilities are distributed in the rural parts of the two districts. Four facilities are found within Kaloleni District (St. Lukes, Mariakani, Tsangatsini and Kinarani) while three are within Rabai District (Rabai, Makanzani and Ribe). The clients were selected by systematic random sampling.

3.4 Validity and reliability of research instruments

Selection of the research instruments was based on their validity and reliability to achieve the objectives of this study. Questionnaires and interview guide were the main research instruments used to collect information for this study.

3.4.1 Validity of the data and instruments

Three instruments were carefully developed for data collection purpose through one-on-one administration of questionnaires by research assistants andfocused group discussion with health service providers, the community and managers as instruments for data gathering. Questionnaires reduce biasness because the researcher's own opinions does not influence respondent to answer in a certain manner. On the other hand, focused group discussions provide detailed information since it allows further probing and also have high response rate hence were ideal to collect data from health workers and the community.

In order to achieve the required degree of validity of the research instruments of data collection that is questionnaires and interviews, their design was formulated in such a way that clarity of the objectives of the study is achieved.

3.4.2 Reliability of the instruments

Reliability is the extent to which a research instrument yields consistent result or data after repeated trials (Mugenda & Mugenda, 1999). To ensure reliability of the research instruments, the researcher undertook a pre-test of the questionnaires in Maraiakani District Hospital. The scores obtained from the questionnaires were correlated to establish the coefficient of reliability.

3.5 Data Collection Methods

Data was collected through;

1. Desk-top study to obtain documented information from raw data obtained from health facilities and processed data prepared by the Health Management Information office. Other data was obtained from the DHIS (District Health Information System). This data was collected in frequency tables for further analysis.

2. Field visits and administration of questionnaires to the mothers and caregivers was vital since questionnaires helped gather the information in a standardized way. It made it also easier and quicker to collect the information from the respondents.

3. Focus group discussions with the staff working at the health facilities enabled the researcher to collect data on descriptive aspects of indicators that are non quantifiable aspects such as cultural practices, working conditions and Customer satisfaction

3.6 Data Collection Procedure

The questionnaires were administered by trained research assistants (data collectors) on a face to face basis depending on availability of respondents from the target population. After data collection from the field, questionnaires were checked and verified to ensure accuracy. Interviews were conducted to collect views and opinions from officers offering technical advises on health issues in the districts.

3.6.1 Question answer sessions to fill questionnaires;

Data collectors were initially trained on the questionnaires to develop a common understanding and interpretation of the questions. The data collectors then proceeded to the field to interview respondents. The respondents who could read were taken through the introductory letter and confidentiality issues clarified to them before filling the questionnaire. Data collectors assisted respondents who couldn't read by reading and translating information to obtain consent. Confidentiality issues were also clarified after which they were taken through the questionnaire. Interpretation of questions to respondents was done where necessary;

3.6.2 Review of records for documented information;

The researcher went through health records from the facilities and the District Health Records Information office to obtain data for the research purpose.

3.6.3 Focused discussion and note taking;

Two focus group discussions were carried out at Shangia Dispensary in Mariakani area and Rabai Health Center. Notes were taken and the discussions were recorded for further reference. There were breakaway sessions where the health workers, the District Health Management team and the community members were engaged separately by different research assistants at both sites who later converged to compile the findings. Since a great number of the people of Kaloleni and Rabai Districts (67%), which is the catchment area for the study, cannot read and/or write, there was need therefore, to have an interviewer who interpreted the questions and filled in the answers.

The target group for the study was mothers who had children aged 0-6weeks old. These` were specifically mothers who brought their children for BCG immunization at the health facility. However, each health facility had their own schedule for provision of the service. For instance, BCG immunization services were offered daily (weekdays) at Mariakani D.H., St. Lukes and

Rabai Health Center. Kinarani and Makanzani dispensaries immunized on Tuesdays while Tsangatsini and Mgamboni offered the service on Thursdays. Mothers were therefore interviewed on the respective BCG immunization days at the health facilities.

Focused group discussions were held with the health workers working at Rabai health center and shangia dispensary and mothers from Rabai and Shangia villages. Each focus group had a facilitator who was facilitating the session and a note taker who was noting down responses from the participants.

3.7 Ethical Considerations

Permission was sought from the health facility administration to interview clients at the immunization department. The consent letters were all signed and filed as evidence by the researcher. All participants were assured of confidentiality and anonymity and were only included in the study after giving written informed consent. Inclusion in the study was completely voluntary.

3.8 Data Analysis Techniques and Presentation

Data collected was analyzed using the Statistical Package for Social Sciences (SPSS) and presented through use of tables. SPSS is a computer software (originally known as Statistical Package for the Social Sciences, later modified to read Statistical Product and Service Solutions) that is among the most widely used programs for statistical analysis in social science. It is used by market researchers, health researchers, survey companies, government, education researchers, marketing organizations and others for statistical analysis, data management (case selection, file reshaping, creating derived data) and data documentation.

Data from focus group discussions was organized into themes and coded to enable quantitative analysis. The coded data was analyzed to derive descriptive statistics which were presented in tables

3.9 Operational Definition of Variables

Table3.1: Operational Definition of variables

VARIABLE	Type	INDICATOR	MEASURE	SCALE	TOOLS OF ANALYSIS
Education:	independent	Ability to articulate basic safe motherhood practices	Level of understanding	Ratio data	Index numbers, standard deviation
Cultural/Traditional practices	independent	use of traditional medicines and practices in child birth,	Degree of traditional/ cultural practices	Nominal, ordinal	Index numbers, standard deviation
Accessibility;	independent	Staff availability, Physical accessibility, distance, capability of the facility	Distance to nearest health facility, Ability to obtain services when needed	ratio	Index numbers, standard deviation
Socio-economic	independent	Poverty , main economic activities	Level of poverty	ratio	Index numbers, standard deviation

Women of reproductive age (WRA) is defined as women between the age of 15 and 49 years of age, this category of women are deemed able to reproduce while a traditional birth attendant (TBA) is defined as untrained individuals recognized by the community who attend to deliveries out of the hospital.

Adolescence is defined as age above 10 years up to 18 years and a birth companion in this context means the person who accompanies the expectant mother during delivery.

Illiteracy is defined as inability to read and attitude is defined as the health worker's positive or negative bias towards people seeking childbirth services based on their willingness to perform the duties they should, if in possession of appropriate training and skills. Lastly, training is defined as the possession of knowledge, skills and competencies in offering obstetric care.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter is a summary of the findings from the data collected. Data for this study was collected by use of questionnaires and focused group discussions guided by the operational definition of variables in chapter three to meet the objectives of the study.

Respondents to these questionnaires were mothers who had delivered elsewhere apart from a health facility. The mothers were interviewed at the mother-child clinics during immunization. The data was then analyzed using descriptive statistics such as frequencies and percentages. The findings were then tabulated for presentation in a summarized format guided by the objectives of the study.

4.2 Response rate

From table 4.1 below, 78.4% of the sampled target population (mothers with children aged 0-6weeks) responded to the questionnaires while all the DHMT and health care workers responded. The two focus group discussions also had 100% response rate. There being a response rate above 50% the sample was therefore representative of the population (Mugenda, 2005).

Table 4.1: Response Rate

Respondents	Target number	Actual respondents	% total response
Mothers	384	301	78.4%
FGD with mothers	2	24	100%
Health workers	10	10	100%
DHMT members	10	10	100%

The researcher found the response rate adequate and sufficient for the study and also the purpose of data analysis.

4.3 Level of mother's education, experience at child birth and knowledge:

Most of the mothers who had delivered at home were illiterate as 92% had not gone beyond lower primary. Just 8% had gone beyond upper primary, could be able to read and write.

Table 4.2: Proportion of respondents showing level of education of mothers who had delivered at home

Level of education of mothers who had delivered at home	***No of Respondents***	***% total response***
None	125	41.4%
Lower primary education	155	51.5%
Upper primary	12	4.04%
High school	6	2.03%
College	3	1.03%
Total	***301***	***100.00%***

Majority of the respondents (55%) had less than 3 previous pregnancies, 34% had between 4 and 6 and 11% had more than 7 previous pregnancies as shown in table 4.3. This indicates that most mothers who deliver at home were most likely to have had less knowledge about childbirth and had limited level of education too.

Table 4.3: Proportion of respondents showing number of previous pregnancies

Number of previous pregnancies by respondents	***No of Respondents***	***% total response***
0 – 3	166	55%
4 - 6	102	34%
>7	33	11%
Total	***301***	***100.00%***

About 77% of the mothers who had delivered at home were below 20 years of age with only a small fraction above 24 years of age as shown below in table 4.4. Which shows that majority of the mothers had not had a chance to go beyond primary education.

Table 4.4: Distribution of respondents by their ages (years)

Ages in years	*No of Respondents*	*% total response*
13 – 15	54	18%
16 – 18	106	35%
19 – 20	72	24%
21- 24	57	19%
Above 25	12	4%
Total	***301***	***100.00%***

4.4 Culture and traditions:

All the respondents had delivered at home under the watch of the traditional birth attendants; however, they did not allude to being influenced by a traditional practice to do so.75% of the mothers had the ability to absolutely decide where to give birth while the other 25% had decision as to where to deliver the baby made by the husband and other close relatives. Only 9% had discussed with their partners on where to deliver the baby. Another 11% did yield to pressure from the extended family to deliver at home. However, none of the respondents alluded to using traditional birthing practices like uterine massage or use of uterotonic herbal preparations.

4.5 Accessibility of the facility

More than 68% of the mothers who had delivered at home lived more than 4 kilometers from the health facility, which is conceived as not within walking distance. Interestingly 34% have a health facility within 3 kilometer radius but still delivered at home.

Table 4.5: Distribution of respondents showing distance to access the health facility

Distance in kilometers	*No of Respondents*	*% total response*
0 – 3	103	34%
4 – 6	132	44%
>7	66	22%
Total	***301***	***100.00%***

From the group discussion, the DHMT alluded that the attitude of health workers plays a big role in attracting or scaring patients from a health facilities. It came outthose health care facilities that have a large percentage of unfriendly service providers usually suffer loss of customers. This could mean that patients like to be treated politely, hence will prefer going to facilities with personnel who are polite enough, ready to listen to their problems and empathize with them as they provide treatment. From the focused group discussion, the community identified unavailability of health workers especially at night to conduct deliveries, unwillingness to attend to clients seeking delivery services, and lack of amenities e.g. delivery equipment, consumables and electricity as hindering factors towards demand for services.

Inaccessibility to health facilities due to bad terrain, unavailability of service providers especially when the dispensaries are closed at night and negative staff attitude towards work were noted as factors which lead to more home deliveries. It is also worth noting that influence from relatives especially husbands and mother-in-laws was identified as one of the reasons why mothers deliver at home.

4.6 Socio-economic Factors

The percentage of respondents who said their breadwinners had decent paying jobs were 5%, the vast majority worked as casual laborers - 58% or were unemployed – 22%.Most of the mothers were housewives with no formal or informal employment (70%).
Farming takes up a small source of income for only 2% of the respondents.

Table 4.6: Distribution of respondents showing occupation and source of income for the households

Occupation and sources of income	*No of Respondents*	*% total response*
Decent jobs	15	34%
Casual laborers	166	44%
Unemployed	66	22%
Farming	6	2%
Others	47	16%
Total	***300***	***100.00%***

The traditional birth attendants identified unwillingness by the mothers to be taken to a health facility, late referral and poor transport system as major reasons why they still have a sizeable base of clientele. The discussion with the District Health Management Team (DHMT) identified the following as impediments to demand for services. Competition from traditional birth attendants for clients poses a grave pitfall in their quest to have more mothers deliver at health facility. Another hindrance was identified as lack of privacy at health facilities due to congestion in delivery rooms, erratic supplies of medical supplies lead to frequent stock out of drugs and

other essentials which drove away mothers owing to long list of items they were asked to supply before they could be attended to. It was said that the mothers were being asked to purchase cotton gauze, syringes, scalpel blades and umbilical cord clamps before they could be seen.

4.7The relationship among the variables

The chi-square test was used to determine the relationship between independent and dependent variable.

The relationships between education, cultural, accessibility to health facilities and economic factors were thus tested in relation to home deliveries. The reason for using chi-square was that it helps to determine the significance of the relationship between variables.

4.7.1 Hypothesis testing

1. The relationship between formal education and delivery at a home

H0: There is no significant relationship formal education and home delivery.

H1: There is significant relationship between formal education and delivery at home

P value in Table4.13 is greater than 0.05 (p= .947) means there is significant relationship between formal education and home delivery in Kaloleni and Rabai Sub-counties of Kilifi county. This therefore points to the rejection of null hypothesis and acceptance of alternative hypothesis. This clearly indicated that education had an impact on home deliveries in the region.

Table 4.9: Chi-Square Tests-relationship between formal education and home deliveries

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.108[a]	2	.947
Likelihood Ratio	.110	2	.946
Linear-by-Linear Association	.086	1	.769
N of Valid Cases	282		

a. 1 cells (50.0%) have expected count less than 5. The minimum expected count is 1.82.

2. The role of culture and traditions on choice of place to deliver.

H0: There is no relationship between cultural/ traditional practices on choice to deliver under traditional birth attendants.

H1:There is a relationship between culture and traditions and the decision to seek childbirth services under traditional birth attendants.

The P of 0.602, which is greater than 0.05 at 3 degree of freedom (Table 4.12), this led to rejection of the H_0 and acceptance of H_1. There was therefore, enough evidence for the conclusion that a significant relationship between cultural practices by the community and delivery under a traditional birth attendant.

Table 4.8: Chi-square test showing relationship between traditions and home deliveries

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.860[a]	3	.602
Likelihood Ratio	2.039	3	.564
Linear-by-Linear Association	.056	1	.813
N of Valid Cases	66		

a. 0cells (45.0%) have expected count less than 5. The minimum expected count is 4.02.

3. Relationship between accessibility to health facilities and home deliveries.

H_0: There is no relationship between accessibility to a health facility and the choice of childbirth under traditional birth attendants

H_1: There is a relationship between accessibility to a health facility and the preference of childbirth under traditional birth attendants

The p of 0.724 at 3 degree of freedom is greater than 0.05 (Table 4.11), implying that the chi-square was significant and this indicated that there was a relationship between accessibility to health facilities and demand for delivery services.

In summary, the data analyzed showed that accessibility to facilities had an impact on child delivery at home. The results therefore pointed to the acceptance of the alternative hypothesis and rejection of the null hypothesis.

Table 4.10: Chi-Square Tests showing relationship between the accessibility to health facilities on home delivery

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.320[a]	3	.724
Likelihood Ratio	1.243	3	.743
Linear-by-Linear Association	.132	1	.717
N of Valid Cases	103		

a. 0 cells (50.0%) have expected count less than 5. The minimum expected count is 1.12.

4. Relationship between socio-economic factors and home delivery.

H_0: There is no relationship between the socio-economic status of the women and the preference to deliver under traditional birth attendants

H_1: There is a relationship between the socio-economic status of the women and the preference to deliver under traditional birth attendants

A Pearson chi-square test was conducted to examine whether there was a relationship poverty and home delivery in Kaloleni and Rabai regions. The results revealed that there was significant relationship between the two variables (Chi square value = 2.485, df =1, p = .115) since the p value > α=0.05 (Table4.15), thus H_0 was rejected and H_1 accepted. This meant that poverty has an impact on home deliveries in the region.

Table 4.11: Chi-Square Tests-relationship between poverty and home deliveries

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.485[a]	1	.115		
Continuity Correction	1.359	1	.244		
Likelihood Ratio	2.504	1	.114		
Fisher's Exact Test				.217	.122
Linear-by-Linear Association	2.436	1	.119		
N of Valid Cases	232				

a. 0 cells (50.0%) have expected count less than 5. The minimum expected count is 3.08.

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CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION OF CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the study findings, discussions and conclusions based on the objectives of this study, which were: to identify the effects of level of mother's education on delivering under a TBA; to establish whether cultural practices and traditions affect delivery in medical facilities; to find out the role of accessibility to health facilities in child birth; to identify whether high levels of poverty has an effect on delivery in health facilities and to recommend measures that addresses the situation.

The findings of the study showed that low level of education, naivety of the mother, poor accessibility and mothers from low-income households are most likely to deliver at home aided by the traditional birth attendants.

5.2 Summary of findings

The study set out to establish external factors influencing deliveries under traditional birth attendants by mothers in Kaloleni and Rabai districts in Kilifi County, Kenya. The summary of the study addressed the research questions and the study objectives. This part will cover several aspects and factors that seem to be influential, and also try to analyze how strong they are, as influencing factors.

Although the human person has an independent mind, a great number of people are usually influenced by their friends, family and acquaintances. From the study, it is evident that 75% of mothers had freedom to choose their preferred place of delivery, without any restrictions. The remaining 25% could also make such decisions, but they were heavily swayed by their relatives and friends, to deliver at home. The most cited relative who had a say on where to deliver was the husband and older woman in the extended family; the mother-in-law and the wife's mother. This can also be used to identify the hierarchy of command in the traditional society. The

husband plays a major role in decision making. If husbands would be convinced to support hospital delivery, then most women, if not all, would follow the same.

A critical analysis of the research proved that more than9% cases of delivery were strongly influenced by husbands. The couple would discuss the best options for child delivery. This makes it sound like some democracy in the family; however, since husbands are to be respected, in the traditional set-up, women always fall for their decisions. Research also shows that some women in Kilifi County do not like home delivery, but they are left with no option but to settle for the same, due to lack of enough health facilities. Therefore, there is need to reach out to the mothers themselves and the woman in her life, especially the older women to get more women delivering in health facilities. Availability of adequate health care will help save many lives increase incidences of safe delivery, by up to more than 60%.

As much as 75% made a personal choice to deliver at home, 11% alluded to having been coerced by the extended family to deliver at home. From the data, 12% of the mothers that delivered at home reported having lost a child within the previous year which translates to an infant mortality rate of 120 per 1000. This compared to the national average shown in the KDHS 2008/09 rate of 88 per 1000 live births is too high. Therefore, one is more likely to lose a baby born at home in the study area compared to the other regions in the country.

It is important to note that one of the most critical factors in the whole process of decision making is education. Formal education differentiates people and makes them reason at a higher level than those people who never attended school. Traditional education makes people conservative, hence such people will hardly accept different ways of doing things; they will prefer home to hospital delivery because they are not sure about what happens in hospital. Some conservatives who have witnessed people die in hospital will always believe that hospitals are bad places where people go to be killed. For such people, it will be very difficult for them to allow their loved ones into the hands of some strangers, in the name of doctors.

The World Health Organization (2011) report that education, in Kilifi County has not been embraced by many people. This was evident in the research, since most mothers who had delivered at home were reported to be illiterate, with their literacy level standing at only 8%.

This means that 92% of this population had not seen the light of education. A few of them had never seen how a school looks like, while the rest had been privileged to attend just a few classes. Most of them had not gone past lower primary education. This shows that more educated women are most likely to embrace delivery at a health facility because out of all the respondents, only 8% had gone beyond upper primary and could be able to read and write. In order to enhance safe-motherhood, educating the girls is an important factor that cannot be ignored. An educated girl will make safe decisions regarding her marriage, in terms of age to marry and who to marry. She will also be responsible of her own health, and will definitely choose safe delivery techniques, which are definitely found in health care facilities. On the contrary, men should not be ignored; being major decision makers, they should also be allowed to obtain their share of formal education, so that they too can develop a high sense of reason.

The distance to the health facility also had influence on the outcome as more than 68% of the mothers who had delivered at home lived more than 4 kilometers from a health facility. . Mothers who lived more than 4 kilometers away from a health facility were more likely to deliver at home maybe basing on the vast distances to cover, unreliability of transport system and poor road network. Interestingly 34% have a health facility within 3 kilometer radius but still delivered at home. When asked, why, they cited distance as a factor. Some say that when a mother is ready to deliver, they cannot start the journey to a health facility since it will be hectic for the mother to walk long distances. Because the place has a poor road network, there are no autos for transport, leaving bicycles and walking as the only alternatives to transport. There are a few motorcycles, but with the high level of poverty, very few people can afford these. On the other hand, they have never thought about taking an expectant mother to hospital in time; say three to four days before delivery, since they think it will cost them a lot, while some people see as if it will be against their traditions to let an expectant mother stay away from her husbands' house for all that while. The problem of accessibility is hence very complicated since it is also compounded by poverty and a concoction of some strong traditions which cannot be easily broken.

Therefore, having more facilities within walking distance of settlements is crucial in getting more mothers delivering at health facilities. Economically, the capability of households to a earn

a decent livelihood is critical in demand for delivery services at hospitals as the percentage of respondents who said their breadwinners had decent paying jobs were 5%, the vast majority worked as casual laborers - 58% or were unemployed – 22%. This shows that women from households that are economically disadvantaged are more likely to deliver at home. The women whose spouses or themselves earn a substantial income are least likely to deliver at home.

Most of the mothers were housewives with no formal or informal employment (70%) which may imply hindrance in their ability to choose where to deliver due to economic hiccups when it comes to choice of a place to deliver. This also may signify a large degree of dependence of the women on the bread-winners in the family thereby impairing their ability to choose a place of delivery.

Interestingly farming take up a small source of income, only 2% of the respondents said their households are engaged in farming as the most significant source of income. This may be due to unfavorable climatic conditions characterized by semi-arid conditions in Kaloleni District. This might have led to a strain in family income, as most of the households might have ended up purchasing basic foodstuffs therefore opting to have their babies delivered at home to reduce expenditure towards child-birth.

From this study, it is the naïve mothers who were more likely to deliver at home than the experienced mothers. Women in Kaloleni and Rabai Districts who are in their first and second pregnancies are the best candidates for the traditional birth attendants as majority of the respondents (55%)- who had delivered at home- had less than 3 previous pregnancies, 34% had between 4 and 6 and 11% had more than 7 previous pregnancies. A good number of these respondents (53%) were also below the adult age, less than 18 years old.

The teenage mothers make up majority of parents in Kaloleni and Rabai according to the results of this study. Motherhood starts as low as at 13 years of age, a time when the child is supposed to be in upper primary school. It’s not therefore surprising that 92% of the mothers who had delivered at home were illiterate as shown by the study.

A sizeable 77% of the mothers who had delivered at home were below 20 years of age with only a small fraction above 24 years of age. Majority of the mothers that delivered at home are inexperienced, still naïve on safe motherhood, and highly dependent as far as economic empowerment is concerned.

It came out from the focused group discussion that unavailability of health workers especially at night to conduct deliveries, unwillingness to attend to clients seeking delivery services by health workers, and lack of amenities e.g. delivery equipment, consumables and electricity as hindering factors towards demand for services by the community.

However, the District Health Management Team (DHMT) identified competition from traditional birth attendants for clients where they solicit for the mothers to offer services at a fee as one of the impediments to demand for delivery services at health facilities.

Other factors that drove mothers away from the health facility include: lack of privacy at health facilities, where mothers shared tiny rooms during delivery and the open delivery 'rooms' which arose due to shortage of appropriate infrastructure.

Erratic supply of medicines and requirements, inaccessibility to health facilities and influence from relatives also played a big role in driving away demand for delivery services.

5.3 Discussion of findings.

The study showed that young naive illiterate mothers from economically disadvantaged households are the ones who delivered most at home under the traditional birth attendant. The findings disagree with the KDHS 2008/09 findings which found that the experienced older mothers are the most likely to deliver at home.

This predisposed the child to grave danger as the same mothers had reported a neonatal mortality rate of 120/1000 live births, which translates to death of 120 babies out of every one thousand live births delivered by the traditional birth attendants in Kaloleni and Rabai districts. This was an indication that women in Kaloleni and Rabai are more likely to lose their babies when born at

home as a separate unpublished study at Mariakani District hospital in the same region had shown a neonatal mortality rate of 33/1000 live births.

The TBA was more ill-equipped to handle emergencies arising from child birth and monitor progress of labor. This may explain why more mothers ended up with a dead baby in the hands of the TBA. The TBA also lacks referral system or is disadvantaged by the existing referral system which put her/ his clients at risk in case their situation deteriorated and warranted better care by a more knowledgeable health practitioner.
Majority of the mothers who sought delivery under the watchful eye of the TBA had partners or husbands who were casual laborers and themselves were housewives (>80%). This showed that their households were poor and had extremely limited resources to cater for child delivery at a health facility: transport, payment of medical bill, and taking care of the other siblings.

Although 75% of respondents said they had made a choice to deliver at home, there was strong evidence from the responses that someone else had a strong commanding influence on their decision. 25% had insinuated that people who were close to them, especially the older women in their households or extended families had influenced their decision.

Husbands are cited as decision makers when it comes to choice of a place to deliver by only 9% of the respondents. This might have been due to neglect of responsibilities by the fathers, negative influence from close individuals towards child birth or competing responsibilities like feeding the family, providing shelter or taking care of livestock. Little male involvement in child birth may have led to the vulnerability of the wives towards seeking childbirth services from TBAs. It should also be noted that out of the 301 parents who had been interviewed at the mother-child clinic, none was male which might also be a good pointer towards the community leaving the neonatal care burden exclusively to the women especially the mothers.

Although the mothers were not forthcoming about traditional practices like uterine massage or use of uterotonic herbal preparations at child-birth, the practice is well established and documented in other previous studies. The mothers may have with-held information in fear of

perceived reprisal since the persons administering the questionnaires were health workers living within the community.

Early pregnancies were a big observation since 54% of the respondents had gotten pregnant before the eighteenth birthday: of these, 47% had gotten their first pregnancy before reaching 15 years. The young age observed may indicate naivety, immaturity and inexperience towards making decision regarding a place to deliver.

Delay in seeking services is one of the biggest contributors to delivery under TBAs. Most mothers sought services when it was too late, which makes it harder for the TBA to refer them appropriately. The mothers came when they were almost delivering the baby which made referral challenging for the traditional birth attendants.

5.4 Conclusion

The study objectives, formal education has an influence on home deliveries as mothers who were illiterate (>92%) and had been through very few years of schooling are the most likely to deliver at home. Low level of education may have hampered their ability to make decisions touching on child delivery.

Poverty had also a direct influence on home deliveries as more than 80% of young mothers who had delivered at home came from low income households and were also young below 20 years of age.

Poor accessibility to health facilities drive mothers to deliver at home because of the long distances and limited working hours.

It also came out clearly that close family relatives are an important factor as they influenced decision to deliver under a traditional birth attendants. Husbands, older female relatives and the traditional birth attendants all have an influence on place of child delivery.

5.5 Recommendations

The researcher had the following recommendations about external factors that influence deliveries under traditional birth attendants by mothers in Kaloleni and Rabai districts in Kilifi County, Kenya.

i. Level of mother's education on delivering under a TBA;

In order to get all mothers delivering in a health facility under trained birth attendant, efforts need to be made to retain more girls in schools to avoid early pregnancies.

ii. Cultural practices and traditions and their effect on delivering in medical facilities;

Older women in extended families and the traditional family structure have to be considered in order to get more mothers delivering in health facilities. The decision makers in the family should be involved in order to increase the number of mothers delivering in hospitals.

iii. Role of accessibility to health facilities in child birth

Health facilities should be within walking distance <4 kilometers, to get more mothers delivering in them.

iv. Levels of poverty and its effect on delivery in health facilities

Mothers from low income households are more likely to deliver at home. Therefore, there is need to work on economically empowering households through income generating activities.

5.6 Suggestions for further research

Further research needs to be done to establish the effects of having male health workers conduct deliveries in health facilities in Kilifi County, whether it discourages mothers from seeking delivery services. There is also need to establish whether transforming TBAs from conducting

child-birth at home to becoming birth companions has had any impact on number of deliveries at the health facility.

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APPENDICES

Appendix 1: Letter Of Introduction

David Olungo Mang'ong'o
P.O. Box 67,
MARIAKANI.

Tel. +254723953278
25TH July, 2012

The Facility – in- charge,
…….
P.O. Box ……..
……..

RE: PERMISSION TO CARRY OUT RESEARCH STUDY IN YOUR FACILITY

I am a student pursuing a post-graduate degree in Master of Arts, Project Planning and Management (MAPPM) of admission number L50/66272/2010 at the University of Nairobi (SCDE – Mombasa Campus).

I would like to request for your permission to conduct a scientific research about Maternal and Neonatal health in your facility in the month of August and September 2012. The study will seek to shade light on maternal and neonatal health indicators covering the socio-economic factors behind low utilization of safe-motherhood infrastructure in Kaloleni and Rabai Districts.

The information generated from clients shall be treated with utmost confidentiality and no personal information shall be disclosed to any party what-so-ever.

Thank you in advance.

Yours faithfully,

David O. Mang'ong'o (L50/66272/2010)

Appendix II: Consent Form

I have read and understood the requirements for the study (Factors influencing deliveries under Traditional birth attendants by mothers in Kaloleni and Rabai Districts, Kilifi County) and do give informed consent for it to go ahead. The information gathered can be used by the researcher (David O. Mang'ong'o) for the intended purpose(s).

Name of facility:

Name of facility in charge:

Signature:

Date:

Appendix III: Questionnaire for the Clients

Name of facility: _____
Client Number: _____
Kindly answer the following questions. Do not write your name on this questionnaire. The researcher would like to assure you that the information gathered will be held with utmost confidentiality. Please be as honest as possible and answer the questions appropriately by putting a tick ( ) against the appropriate statement or by filling in the blank spaces provided**.**

PART 1

1) How old are you? (more or less)
   a) 10-20 years old ……..…….. [ ]
   b) 20-29 years old …… [ ]
   c) 30-39 years old ……. [ ]
   d) 40 years or more ……. [ ]

2) What is your marital status?
   a) Married…… [ ]
   b) Single…….. [ ]
   c) Widow…… [ ]

3) Are you in a monogamous household?
   a) Yes……. [ ]
   b) No …… [ ]

4) What is your highest level of study?
   a) Primary……... [ ]
   b) Middle School…….…….. [ ]
   c) High School…….……..…….….. [ ]
   d) University or Higher .....……..…… [ ]
   e) Other…… [ ]

5) How many pregnancies have you had?
   a) 1-3…… [ ]
   b) 4-6…… [ ]
   c) 7 or more……. [ ]

6) Have you experienced miscarriages or abortions?
   a) If yes, how many …… [ ]
b) No …… [ ]

7) How many living children do you have?
   a)1-3…….. [ ]
   b) 4-6…….. [ ]
   c) 7 or more…… [ ]

8) How many children have you lost?
   a) 0……. [ ]

b) 1-3…… [ ]
c) 4-6…… [ ]
d) 7 or more …….. [ ]

9) At what age did you have your first pregnancy?
a) 13-15…… [ ]
b) 16-18…… [ ]
c) 19-20…… [ ]
d) 21-24…… [ ]
e) 24 or more…… [ ]

FAMILY AND SOCIAL SITUATIONS:

10) What is your job?
a) Civil Servant…… [ ]
b) Trader.....…… [ ]
c) Farmer.....…… [ ]
d) Housewife…….. [ ]
e) Other (specify) _____

11) What is the job of your husband?
a) Civil Servant …….. [ ]
b) Trader/Businessman …….…….....…… [ ]
c) Farmer/Breeder …… [ ]
d) Unemployed …… [ ]
e) Other (specify) _____

12) Who gives the expenditures for the family?
a) Myself……. [ ]
b) Husband…… [ ]
b) Parents…… [ ]
c) Other (specify) _____

13) Who takes care of your children in your absence?
a) Co-wife..…… [ ]
b) Mother…….. [ ]
c) Step Mother…… [ ]
d) Sister/Brother……. [ ]
e) Older Children....…… [ ]
f) Neighbors/Friends……..…….. [ ]
g) No one.....…….. [ ]

HEALTH (IN GENERAL):

14) How many kilometers is the health center from your house?
a) 0-3 kilometers…… [ ]
b) 4-6 kilometers…… [ ]
c) More than 6 km …….. [ ]

15) Do you use traditional medicine when your child gets sick?

a) Yes……. [ ]

b) No…….. [ ]

PART 2

PREFERENCE OF DELIVERY

PLACE OF DELIVERY AND DELIVERY ATTENDANTS

16. Where did you give (NAME) birth? (If source is hospital, Dispensary or clinic, write the name of the place)

Home

(a) Home [ ]Go to 17

(b) Other specify [ ]Go to 17

Health facility

(c) Hospital [ ] Go to 18

(d) Health post/Dispensary [ ] Go to 18

(e) Private Clinic [ ] Go to 18

(f) Other specify

17. What made it difficult to seek delivery at a health facility?

a. Too far [ ]

b. Too costly [ ]

c. Staff not friendly [ ]

d. Not necessary [ ]

e. Staff not available [ ]

f. Delivery was abrupt [ ]

g. No transportation [ ]

h. Other – specify----------

18. Who assisted you with (NAME's) delivery?

Health Professional (Probe for most qualified person)

(a) Doctor [ ]

(b) Midwife [ ]

(c) Nurse/Staff nurse [ ]

(d) Clinical Officer [ ]

(e) PHO/PHT [ ]

Other person

(f) TBA [ ] go to 19

(g) CHW [ ] go to 19

(h) Family member specify [ ] go to 19

(i) Quack [ ] go to 19
(j) None [ ]
(k) Other specify

19. Did the person who attend to you at home give you traditional medicine to aid you in contraction of the uterus?
(a) Yes [ ]
(b) No [ ]
(c) Don't know [ ]

20. What type of materials did your birth attendant use during your last pregnancy & delivery?
(a) Massage oils [ ]
(b) Ordinary first aid kit [ ]
(c) Home prepared clean materials[Pieces of clothe, kanga,etc] [ ]
(d) Wore gloves [ ]
(e) Other specify

21. What was the instrument used to cut cord?
(a) New razor blade [ ]
(b) Other instrument specify

22. Who cut the cord?

Health Professional (Probe for most qualified person)

(a) Midwife [ ] Go to 23
(b) Nurse [ ] Go to 23
(c) Clinical Officer [ ] Go to 23
(d) PHO/PHT [ ] Go to 23
Other person
(e) TBA [ ]
(f) CHW [ ] Go to 23
(g) Self [ ] Go to 23
(h) Quack [ ] Go to 23
(i) Other specify [ ] Go to 23

23. When did you seek professional help?
(a) Right after the labor pain [ ]
(b) During child birth [ ]
(c) After birth of baby [ ]
(d) Other specify

24. Where was (NAME) put immediately after birth?
(a) With mother [ ]
(b) In cot [ ]
(c) On floor [ ]

(d) Bathed [ ]
(e) Don't know [ ]
(f) Other specify

25. What did you do with (NAME) immediately after birth?
(a) Breastfed [ ]
(b) Bathed [ ]
(c) Let sleep [ ]
(d) Don't know [ ]
(e) Other [specify]

26. Who made the final decision about where you would give birth?
a. no one [ ]
b. myself [ ]
c. me & my husband [ ]
d. husband. [ ]
e. my mother [ ]
f. my father [ ]
g. mother-in-law [ ]
h. father-in-law [ ]
i. sister/sister-in-law [ ]
j. other member of my family [ ]
k. other member of my husband's family [ ]
l. friend/neighbor [ ]
m. health professional [ ]
n. TBA [ ]
o. CHW [ ]
p. other _____
(specify)
q. don't know [ ]

THANK YOU.