

**INFLUENCE OF WOMEN'S PERSONAL CHARACTERISTICS ON
UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN PUBLIC
HOSPITALS IN EMBU COUNTY, KENYA**

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DECLARATION

This research project report is my original work and has not been presented for any academic award in any other University or institution of higher learning for an award of a degree.

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DEDICATION

I dedicate this research project report to my loving parents Michael Namu Njiru and Cecilia Njiru for modelling me into who I am and for their moral and financial support throughout the whole process. My brother Edwin Njiru for his constant reminder that he always looks up to me as the elder sister. My family has been a great support system till the completion of this course.

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ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
CBS	Central Bureau of Statistics
KDHS	Kenya Demographic and Health Survey
KNBS	Kenya National Bureau of Statistics
MH	Maternal Health
MCHS	Maternal and Child Healthcare Services
MHCS	Maternal Healthcare Services
MOH	Ministry of Health
NCAPD	National Coordinating Agency for Population and Development
NGO	Non-Governmental Organization
OBA	Output Based Approach
PNC	Postnatal Care
POD	Place of Delivery
SBA	Skilled Birth Attendant
SDC	Social Demographic Characteristics
SDG	Sustainable Development Goals
SMI	Safe Motherhood Initiative
SPSS	Statistical Package for Social Sciences
TBA	Traditional Birth Attendant
TI	Transparency International
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WRA	Women of Reproductive Age

ABSTRACT

Maternal health care service utilization is an important health issue related to both maternal and child survival as it reduces maternal mortality and morbidity as well as improving the well-being of mothers and their children before, during and after birth. Considering low utilization of maternal health care service especially in Sub-Saharan Africa, understanding what determines utilization becomes important. This study examines influence of women's personal characteristics on utilization of maternal health care services by women of reproductive ages (18-49 years) in Public hospitals; the case of Embu County, Kenya with a view of enhancing the achievement of Sustainable Development Goal (SDG) number five (5). The study was guided by the following objectives; To determine the extent to which women empowerment influence utilization of maternal healthcare services in Public hospitals, Embu county; To determine how age of expectant mothers influences utilization of maternal healthcare services in Public hospitals, Embu County; To establish the influence of family wealth on utilization of maternal healthcare services in Public hospitals, Embu County and to determine how availability of health care services influences utilization of maternal healthcare services in Public hospitals, Embu county. The study employed a cross-sectional survey research design. The study targeted four public hospitals which include Embu Level 5 Hospital and three level four hospitals; Runyenjes, Siakago and Ishiara focusing on women of reproductive ages (18-49 years). Yamane's formula was used and it gave a sample size of 326. The research instruments used were questionnaires where the researcher interviewed expectant mothers face to face. The findings of this study revealed that factors influencing utilization of maternal healthcare services have critical lessons for addressing utilization of maternal healthcare services. For the first objective, the results showed that majority of the respondents who were empowered used maternal facilities. The second objective found that majority of the women who sought these critical services were below 30 years. The third objective revealed that the family income level was very important for the successful utilization of maternal healthcare services. The fourth objective found that availability of maternal healthcare services acts as a motivation to utilization of maternal healthcare services. This therefore implies that the more the maternal healthcare facilities, the better the utilization of maternal healthcare services. The study found that women empowerment, age, family income levels and availability of healthcare facilities were strong indicators for utilization of maternal facilities. The findings are of benefit to the Ministry of Health, policy makers and health related agencies and stakeholders to design appropriate and cost-effective intervention programmes targeting areas with most needs. This may lead to prudent use of resources in the management of maternal health and hence mitigating maternal mortality while enhancing reproductive health and resource efficiency. The study recommended the Ministry of Health to make deliberate policies that will involve women aged 28 years and above as role models to sensitize other women on the importance of making the required minimal visits to Antenatal clinics.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The term maternal health includes the health of women during pregnancy, childbirth and the postpartum period. It encompasses the health care dimension of family planning, preconception, prenatal and postnatal care in order to reduce maternal morbidity and mortality (World Health Organization, 2012 Maternal Health). Three out of the seventeen Sustainable Development Goals (SDG's) relate to health. Goal number five, which is the focus of this study, is aimed at achieving gender equality and empowers all women and girls. Under this goal, we have sub-section 5.6 which aims at ensuring universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences. This goal is monitored by two indices namely: maternal mortality ratio and proportion of births attended by skilled health personnel. Globally, in the year 2008, there were an estimated 358,000 maternal deaths and of this, the developing world accounted for (355,000) or 99% (WHO, UNICEF, UNFPA, &The World Bank, 2010). These figures have financial implications for the health sector of affected countries. On one hand, high income countries with high standards of living spend an average of 7.0% of Gross Domestic Product (GDP) on health and on the other hand, low income countries, with low standards of living, spend an average of only 4.2%on the health sector (Cieza and Holm, 2010.) Apparently, approximately one half of the global population lives in rural areas, but these areas are served by less than a third of the total nursing workforce and by less than a quarter of the total physician workforce (Dayrit, Dolea, & Braichet, 2010.)

In the year 2000, 251,000 maternal deaths occurred in Africa and 40% of the deliveries were attended by a Skilled Birth Attendant (World Health Organization, 2005). Sub-Saharan Africa accounted for slightly more than half (270,000) of the maternal deaths in 2005. An increase in maternal deaths over the years can be observed. Nearly three fifths (204,000) of the maternal deaths in 2008 occurred in the sub-Saharan Africa. Though there is a slight drop in maternal mortality rates from

2005-2008, the number is still high in developing countries like Kenya, pregnancy and child birth complications are major causes of maternal and child death and these deaths are attributed to the fact that most pregnant mothers do not get the appropriate care they need as a result of certain barriers to the health care facilities. Complications of pregnancy and childbirth are a leading cause of maternal morbidities and mortalities for women of reproductive age (15 – 49 years). It is estimated that over 500,000 women and girls die from complications of pregnancy and childbirth each year, worldwide, with approximately 99% of these deaths occurring in developing countries. With maternal mortality ratio of 545 deaths per 100,000 live births. It is also reported that, for every woman that dies from pregnancy-related causes, 20 – 30 more will develop short- and long-term damage to their reproductive organs resulting in disabilities such as obstetric fistula, pelvic inflammatory disease and sometimes a ruptured uterus. (WHO, 2007). These high morbidity and mortality rates make maternal health a huge public health problem in the developing countries of the world, including Kenya.

Kenya is one of the countries that suffered 65% of maternal deaths in 2008. It accounted for 7,900 (2.2%) of the global maternal deaths. According to the 2008-2009 Kenya Demographic and Health Survey (KDHS) maternal mortality in Kenya remains high at 7.9% as only 44% of births are managed by health professionals and 43% are delivered in health facilities. These statistics clearly show that over half (56%) of deliveries are done by non-professionals and more than half (57%) of deliveries are done outside healthcare facilities. Between the periods 2003 – 2008/2009, there was a rise in maternal mortality rates in Kenya from 0.6% to 0.8%, indicating an increase of 0.2% (Kenya National Bureau of Statistics (KNBS) and Macro, 2010). Embu County has a health infrastructure consisting of both public and private facilities. It is the host to Embu level 5 hospital and three level 4 Hospitals; Runyenjes, Siakago and Ishiara. There are also a large number of smaller health facilities across the county.

1.2 Statement of the Problem

On a macro-level, maternal death and subsequent child death is associated with a loss of productivity leading to an estimated global economic loss of about US\$ 15 billion (USAID, 2001). Hence, MH also has developmental consequences beyond its more obvious health ones. This was recognized by world leaders at the Millennium

Summit, in 2000, by including it as the fifth Sustainable Development Goal (SDG). SDG 5 focuses on improving MH and initially had one target to reduce maternal mortality rate by 75.0% between 1990 and 2015 and to achieve universal access to reproductive health. Delivery in health facilities is still challenging in developing countries in which higher number of women attend antenatal clinic but about half of them deliver at home without assistance of skilled professional.

Despite efforts made by the government to fully implement free maternal health care services, the country continues facing several challenges. For example, according to Muthoni(2016) there are 1.6 million women delivering annually in the country whereby one million deliver in public hospitals,200,000 in private hospitals while 400,000 are underserved to maternal health services due to charges which are unaffordable to many. The largest public maternity Hospital, Pumwani Hospital, requires an increase in the number of operation theaters from the current two to about seven to cater for the growing number of women seeking delivery. In addition, many Kenyan public hospitals must improve on two essential fronts skilled attendants at delivery and availability of essential obstetric and newborn care. (Mwaura 2013). Based on this report it is clear that there is still underutilization of maternal health care services in Kenya therefore the study sought to investigate factors influencing utilization of maternal health care services in public hospitals: a case of Embu county, Kenya.

1.3 Purpose of the Study

The study sought to investigate the influence of women's personal characteristics on utilization of maternal health care services in Public Hospitals in Embu County.

1.4 Research Objectives

The study was guided by the following objectives:

- i) To determine the extent to which women empowerment influences utilization of maternal healthcare services in Public Hospitals in Embu County.
- ii) To determine how age of expectant mothers' influences utilization of maternal healthcare services in Public Hospitals in Embu County.

- iii) To establish the influence of family income levels on utilization of maternal healthcare services in Public Hospitals in Embu County.
- iv) To determine how availability of maternal health care services influences utilization of maternal healthcare services in Public Hospitals in Embu County.

1.5 Research Questions

The following were the research questions

- i) To what extent does women empowerment influence utilization of maternal healthcare services in Public Hospitals in Embu County?
- ii) How does the age of expectant mothers' influence utilization of maternal healthcare services in Public Hospitals Embu County?
- iii) How does family income level influence utilization of maternal healthcare services in Public Hospitals in Embu County?
- iv) How does availability of maternal health care services influence utilization of maternal healthcare services in Public Hospitals in Embu County?

1.6 Significance of the Study

This study sought to establish maternal healthcare requirements in hospitals as well as influence of women's personal characteristics on utilization of these services. According to Global Health Observatory (GHO) data, WHO recommends that expectant mothers should visit the healthcare facilities before conception or latest start their first antenatal clinic at sixteen weeks. However, this does not happen in most cases.

The study results enable the Ministry of Health as well as the relevant Government of Kenya departments as they work towards policy and practical improvements in provision of maternal health care services thus reducing the number of maternal deaths consequently contributing to the attainment of SDG number 5. This research therefore provides opportunities to government and other key health care stakeholders avoid wastage of resources as they will know the factors influencing maternal health care service utilization. Accordingly, appropriate and cost-effective intervention programs can be designed and targeted to the areas with most needs. Significantly, this may lead to prudent use of resources in the management of maternal health and hence

mitigating maternal mortality and enhancement of reproductive health with desirable consequences on the health status of women and the population.

The results of this study add to the existing body of scientific knowledge on the factors influencing utilization of maternal health care services in public hospitals; the case of Embu County, Kenya. This may act as springboard for further research in this area and thus bridge knowledge gaps.

1.7 Delimitation of the Study

The study involved collecting information from expectant mothers who came to seek maternal healthcare services in four public hospitals in Embu County in the month of August 2016. The county is divided into 4 sub counties; Manyatta, Runyenjes, Mbeere North and Mbeere South. In each sub county lay a level 5 or level 4 hospital. Namely, Embu level 5 hospital, Runyenjes level 4 hospital, Siakago level 4 hospital and Ishiara level 4 hospital. The focus was on expectant mothers who came to seek medical services at the MCH. Kianjokoma level 4 hospital was however excluded from the study because the hospital has recently been made a level 4 Hospital and the Maternity Unit was still under construction. The study focused on four variables women empowerment; age of expectant mothers; family income level and availability of maternal health care services.

1.8 Limitation of the study

There was language barrier while interviewing a few respondents in the study location and therefore we had to translate the questions to Swahili language and mother tongue to ensure comprehension. Some respondents were reluctant to be interviewed since they were in pain hence more time was spent with them and they were made to understand that the research would improve their livelihood and of all women seeking maternal services in public hospitals. Others felt their personal space was being infringed and were given reassurance that the information given would be held with utmost confidentiality.

1.9 Assumptions of the Study

The researcher assumed that the targeted respondents from the sampled households would be available and that they would provide all the information sought truthfully. It was also assumed that the medical practitioners and expectant mothers would cooperate during the time of data collection.

1.10 Definitions of Significant Terms

The following are the significant terms of the study:

Women empowerment: refers to creation of an environment for women where they can make decisions of their own for their personal benefits for example on family planning and when to seek maternal healthcare services as well as for the society. It often involves the empowered developing confidence in their capacities. This is achievable through the level of education, increasing awareness levels and family support.

Age of Expectant Mother: the time a woman has lived, length or stage in life. Specifically, the study focuses on the age of women of reproductive age between age (18-49) years and when they decide to get children.

Family Income Levels: a measure of combined incomes of all people sharing a household or place of residence. It includes every form of income from expectant mother or spouse. e.g., salaries and wages, retirement income, near cash government transfers like food stamps and investment gains.

Availability of Maternal Health care services: means obtainable or accessible of health care services for women during pregnancy, childbirth and the postpartum period. It encompasses the healthcare dimensions of family planning, preconception, prenatal and postnatal care in order to reduce maternal morbidity and mortality. Also staffing of the healthcare personnel and the distance the expectant mother has to travel to seek these services.

Utilization of Maternal Health care services: refers to making practical or worthwhile use of maternal healthcare services, affordability and using the services offered to women during pregnancy, childbirth and the postpartum period.

1.11 Organization of the Study

This research study is organized in five chapters. Chapter one provides an introduction that includes: the background of the study, statement of the problem, purpose of the study, objectives and research questions. It also covers the significance of the study, delimitation, limitations of the study, assumptions of the study, definitions of the significant terms as well as the organization of the study. Chapter Two is the literature review of relevant works explaining the Factors influencing utilization of maternal health care services in public hospitals, theoretical framework and conceptual framework, the relationship between the factors on the conceptual framework, gaps in the literature review as well as the summary of the literature review.

Chapter Three outlines the research methodology which includes research design, target population, sample size, sampling technique, research instruments reliability and validity and procedures for data collection and analysis techniques. Chapter Four presents data analysis, presentation and interpretation of the research findings. Chapter Five entails the summary of research findings, discussions, conclusion, recommendations and suggestion for future studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is structured based on the research objectives. It reviews what various scholars and authors have studied on factors that influence utilization of maternal health care services in Hospitals globally and locally. The chapter also presents a theoretical and conceptual framework on which the study is based.

2.2 Global Trends in the Utilization of Maternal Health Care Services

Health behaviour is the activity undertaken by individuals for the purpose of maintaining or enhancing their health, preventing health problems, or achieving a positive body image. Cockerham, (2012). In this discourse, health care utilization refers to the use of health care services by people (Opaluwa, 2011). Accessibility of health services has been shown to be an important determinant of utilization of health services in developing countries (Mekonnen and Mekonnen, 2002). Thus, in order for an individual to utilize health services, they must have both physical access to a health facility and the health facility must also be able to provide the required services; the patient must also be able to pay for the health care services offered either through cash or by use of health insurance or any third party means (Shauri, 2010.)

A study carried out in Peru on the effects of education on utilization of maternal health care services shows that there is a strong positive relationship between education and the use of maternal healthcare services (Elo, 1992). A woman's autonomy or level of independence in decision making is important in explaining utilization of maternal and child health care services. Urban residence and husband's education have all been found to have a positive relationship to antenatal care utilization (Woldemicael, 2007; Dairo & Owoyokun, 2010). A cross sectional study in India by (Prasad, 2014) on the factors affecting the use of maternal health services in Madhya Pradesh state found out that women delivering at young ages were more likely to use antenatal care, receive skilled attendance at delivery and use postnatal care services. Women in urban areas tended to use maternal health care services more than those living in the rural areas. The levels of skilled attendance at delivery and post-natal care decreased steadily with increased birth order (Jat, 2011). The study also found that an increase in the education of the mother enhances the use of the

three indicators of the use of maternal health services namely prenatal care, delivery care, and postnatal care. Finally, child parity seemed to affect the use of skilled attendance at delivery and post natal care.

Another research by Mondal (2009) carried out in Bangladesh found that the level of education (both wife and husband) increased the likelihood of seeking help from qualified medical professional. Women who reside in urban areas had a higher odd of seeking medical assistance than those in rural areas. Women from families with a high socio-economic status are more likely to receive treatment from a doctor or a nurse. From the above studies, we can be able to deduce that socio-economic status as indicated by, level of education (both wife and husband), place of residence and religion increase the probability that women of reproductive ages will utilize maternal health care services.

A research carried out in Ethiopia (Mekonnen and Mekonnen, 2003) on the utilization of maternal health care services found that there was low coverage of maternity service in the country. The place of residence, woman's education, marital status, religion, parity and number of children under five years were found to have an important influence on utilization of maternal health services by women of reproductive ages. Additionally, married women were observed to be more likely to use antenatal care than their unmarried counterparts. Religion was also found to be an important predictor of antenatal care utilization. Among urban women, utilization of antenatal care is higher for those with two or more children than for those with one child. On the other hand, utilization of delivery care services is lower for those with two or more children than those with one child (Mekonnen and Mekonnen, 2002).

In another study carried out in Ethiopia by (Ayele, Belayihun, Teji&Ayana2014) on factors influencing the use of maternal healthcare services, it was found that education of women determines use of antenatal care in that utilization increased with education level. Religion also affects use of antenatal care in that those who followed Orthodox, Muslims and Protestant religions exhibited comparable and higher use of antenatal care than those who followed traditional beliefs. Marital status and religion also had an impact in determining the use of antenatal care (Mekonnen & Mekonnen, 2003; Mekonnen & Mekonnen, 2002.)

A research done in rural Gambia by (Jallow, Chou, Liu & Huang,2012) on access to emergency obstetric care found that structural factors in maternal health care provision discourage women from seeking care. For instance, where pre-natal care was provided on specific days in each community during week days, it hindered other people from attending. There may exist difficulties in transportation, such as poor condition of the road, lack of readily available transport, inadequate means of transportation, poor provider attitude towards patients, fear of punishment by health care providers based on previous experiences or just gossip can lead to delays in the decision-making process of visiting a health facility by patients.

A survey carried out on the utilization of antenatal care services in a Nigerian Teaching Hospital found that over two fifths (47%) of the women started attending antenatal clinic only in the third trimester of the pregnancy period even though antenatal care services in the state hospital that the study was carried out were offered free of charge. (Peltzer and Ajegbomogun, 2005). In another study conducted in Nigeria, the use of maternal health services was significantly related to the level of maternal education, maternal age and marital status. Higher use was positively related to knowledge of where the healthcare service was located. Respondents with more than 4 children underutilized available maternal health services and utilization of maternal health services by respondents was significantly related to satisfaction with quality of services received. Women's and husband's education and place of residence have strong positive associations with healthcare utilization (Woldemicael, 2007).

In Africa, all the reviewed studies have focused on influence of women's personal characteristics on utilization of maternal health care services such as maternal education, religion, marital status and residence. Few studies have also been carried out to find out the distance of patients from the health facility. Thus, this underscores the need for the present study in trying to find out the influence of how far one resides from a health facility and utilization of the health facility and age of the expectant mother influences the utilization of maternal healthcare services as well as affordability of these services. (Ebuehi, Roberts & Inem2006)

2.2.1 Maternal Health Care Services in Kenya

According to (Magoha, 2014), both the public and private sectors provide healthcare services in Kenya, and National Government owns 51 percent of all health facilities in the country. The private for-profit and not-for-profit sectors own 34.3 percent and 14.8 percent of all facilities in that order (Blumenthal & Hsiao, 2005). Kenyan health facilities depend heavily on out-of-pocket (OOP) payments as the main source of health care funding. In 2009/2010 for example, OOP payments accounted for 36.7 percent of total health expenditure. Charging of user fees in health facilities and other out-of-pocket payments have negatively affected the use of health care services in the entire country (Alexander and Kotelchuck, 2001). Most of the Kenyan population across the country cannot afford to pay for health care, and the poor living in county governments such as Embu are less likely to utilize health services when they become ill. In addition, wide discrepancy in exploitation exists between geographical regions and between urban and rural areas. Socio-economic and geographic inequities are wider for inpatient care than it is with the outpatient care. Those who pay for care incur high costs that are sometimes disastrous and espouse coping strategies with negative implications for their socio-economic status, while others simply fail to seek care.

The 2003 Kenya Demographic and Health Survey indicated that almost 90% of Kenyan women received antenatal care from a medical professional with 18% being attended to by doctors, 70% by nurses or midwives while 10% received no antenatal care at all (Central Bureau of Statistics (CBS)[Kenya.] In a study carried out in Kenya by (Fotso, 2009), it was found that women's overall autonomy is insignificant in health seeking behaviour. Further, women with at least secondary education were more likely to deliver in a health facility in general or in inappropriate health facility compared to those with no education. The likelihood of delivering at a health facility in general and in the well-equipped facilities significantly decreases as parity increases.

Another survey carried out using data from the 2003 KDHS found out that young women mostly used skilled professional assistance during delivery. Rural women were less likely to deliver with the assistance of either a Traditional Birth Attendant (TBA) or skilled professional. Women from rich households were more likely to

deliver with a TBA or skilled professional. Educated women were more likely to deliver with assistance of skilled professionals as opposed to non-educated. Women with more than 2 children were less likely to deliver with the assistance of TBA or skilled professionals compared to those with one child (Ochako, 2011).

2.2.2 Beyond Zero Campaign Program

After the introduction of the free maternity health care in the year 2013, which failed to bring significant decrease in the rate of death among women and pregnant women, the Office of the First Lady spearheaded its focus on maternal health and child survival chaperoned by Her Excellency Margaret Kenyatta. A given framework was meant to speed up the action and accelerate the attainment of national and international commitments to maternal, child health and HIV/AIDS targets. The office of the First Lady came up with Beyond Zero Campaign to address high maternal and child mortality, alongside conditions related to HIV, more so Mother Child HIV transmission. Beyond Zero Campaign was introduced with an aim of ensuring that momentum taken by preventable deaths among mothers and children is reduced to beyond zero and give new impetus that will help prevent mother to child transmission of HIV. In Embu County, a van was donated to the County to assist expectant mothers get better accessibility to maternal healthcare facilities.

2.3 Women empowerment and utilization of maternal health care services

Women empowerment and equality is a fundamental human right and critical to achieve development objectives, including health. Women's increased political participation, control of resources including land, access to employment and education are crucial for promoting sustainable development. There are numerous pathways by which greater gender equality can lead to improvements in health and quality of life for women and their family members. Women with greater agency are more likely to have fewer children, more likely to access healthcare services and have control over health resources, and less likely to suffer domestic violence. (Alsop, Bertelsen & Holland 2006.)

Their children are more likely to survive, receive better childcare at home and receive health care when they need it. At the same time, improved health outcomes for women can help to strengthen their own agency and empowerment. Healthy women

are more able to actively participate in society and markets and take collective action to advance their own interests. Studies in developing countries have consistently shown maternal schooling to be strongly and positively associated with utilization of MHCS (Mariam and Mitike, 2004 ;) The higher a women's level of education the more likely she is to utilize MHCS. Some studies have suggested that more educated women are able to comprehend the importance of receiving prenatal care and are also more likely to know where to get it (Obermeyer & Potter, 1991; Raghupathy, 1996). Some researchers, however, question the strong independent effects of education on MHCS utilization. They argue that other factors such as childhood place of residence, husband's educational level and socioeconomic environment, interact to dilute this strong association (Gage and Calixte, 2006)

2.4 Age of expectant mothers and utilization of maternal health care services

According to (Burgard2004) expectant mothers' age at birth plays an important role in utilization of MHCS, though the direction of the effect is often contradictory. Some studies show a lack of association between maternal age and health service utilization (Celik & Hotchkiss, 2000; Magadi, Agwanda & Obare, 2007) or higher utilization for younger women than older ones. However, age is highly correlated with parity and when controlled for, the apparent advantage of younger women disappears, and older women are found to be more likely to seek MHCS (Reynolds, Wong &Tucker, 2006.) This is because younger women are more likely to be experiencing first-order births which is in turn positively associated with MHCS use, hence will appear to be using more services if parity is not controlled for. Possible explanations for higher use of MHCS by older women could include the fact that women in this cohort are generally more experienced and knowledgeable about healthcare services and their use which may improve utilization. Older women may also be more confident and have higher household decision-making power than younger women, particularly adolescents (Reynolds, Wong & Tucker, 2006), which will improve their likelihood of health service use.

2.5 Family income levels and utilization of maternal health care services.

It is well recognized that increased income positively affects utilization of healthcare services (Elo, 1992; Fosu, 1994; cited in Chakraborty, 2003.) The costs of seeking healthcare services may include cost for transportation, user fees (official and/or

unofficial), cost of medication and other supplies. women from poor families or those with limited financial resources may have challenges paying for such costs and are likely to be deterred from using MHCS (Gabrysh and Campbell, 2009) when they noted that hospital births drastically declined in Nigeria following the introduction of user fees in the 1980s.

Research also indicates that women whose husbands have higher status occupations are more likely to use MCHS. This is because such occupations are usually associated with greater wealth, making it easier to bear the costs of healthcare. However, various studies have shown that women are less likely to utilize MHCS when they do not have personal control over finances (Defo, 1997; Furuta & Salway, 2006; Gage and Calixte, 2006) suggesting that an interaction between autonomy and family income levels produces health services utilization. Overall, women are more likely to use health services as their economic status and autonomy level increases. (Fosto, Ezeh & Essendi, 2009.)

2.6 Availability of maternal healthcare services and utilization of maternal health care services

The location and quality of services available are also important factors affecting MHCS utilization. Proximity to a health facility has been found to affect the use of MHCS especially in rural areas (Rahaman, 1982 cited in Chakraborty, 2003) as these facilities are usually located at long distances. For many, lack of transportation and/or considerations of the cost of transportation serve as mitigating factors to healthcare seeking. For others, the low quality of services and anticipation of poor behavior from health staff may be the mitigating factors. Many factors interact in different ways to predict utilization of healthcare services. For example, utilization of ANC for women in the rural parts of both northern India and KwaZulu Natal, South Africa is inadequate. But while the reason for rural women in India is a lack of willingness to invite health workers into their homes; in Kwazulu Natal it's because women have little or no time left after completing their essential household chores (Say and Raine, 2007.) Physical access to facilities in Kenya is one of the most critical barriers to maternal health care due to the insufficient number of facilities, distance to facilities, and inadequate transportation infrastructure. In fact, in replies to Kenya's 2008-2009 Demographic and Health Survey, the largest percentage (42 %) of women who

delivered outside a health facility did so because the facility was too far away. Some roads are at their worst state especially during the rainy season with only a few major tarmac roads. This has not only made it difficult to reach public healthcare facilities in the county but also made it very expensive to reach such facilities (Sialubanje, 2014).

2.7 Theoretical framework

This study was conducted within the framework of Symbolic Interactions. Symbolic Interactions is a micro level theoretical approach that focuses on social interactions in specific situations. It has roots in the thinking of Max Weber (1864-1920), a German Sociologist and George Herbert Mead who emphasized understanding a particular setting from the point of view of the people in it (Giddens and Sutton, 2009). The core principles of social interaction theory include meaning, language and thought. Meaning arises in the process of interaction between people and are handled in and modified through an interpretive process used by the person in dealing with things he/she encounters. Language is the vehicle through which meanings that arise out of our thoughts are transported in social interactions. This theory is helpful in trying to understand the meanings that people attach to certain symbols so that they seek maternal health care services. The interpretation that people derive from the symbols and maternal health care utilization enabled the study to come up with strategies to improve maternal health care utilization and thus reduce maternal and child mortality. In looking at the influence of women's personal characteristics on utilization of maternal health care services in Public Hospitals, the researcher used the Health Belief Model (HBM) embedded within the larger purview of Symbolic Interactions perspective.

2.7.1 Symbolic Interactions and Illness Behaviour

Illness is social and exploring the meanings that patients give to symptoms and illness becomes important. Patients are the first to recognize their illness and to decide to visit a medical practitioner, who then takes a medical history. Patients describe illness on what society teaches them and this affects the diagnosis (Laurence and Barbara 2007). For this study, it was assumed that women of reproductive ages (18-49 years) must be able to draw meanings from the symptoms and attach meanings to those symptoms in order for them to be able to utilize the available maternal health care

services. Borrowing from the symbolic interactions perspective and because illness is social, the study tried to explain maternal health care utilization using the HBM.

2.7.2 The Health Belief Model

According to Glanz (2008) Health Belief Model contains several primary concepts that predict why people will act to prevent, to screen for, or to control illness conditions; these include susceptibility, seriousness, benefits and barriers to behaviour and cues to action). The HBM suggests that preventive action taken by an individual to avoid a disease is due to the perception that they are susceptible and the occurrence of the disease would have some severe personal implications (Cockerham, 2012). Thus, women may only seek maternal health care services if they deem that the pregnancy they are carrying may have likelihood of affecting them. HBM assumes that by taking a particular action, susceptibility (likelihood) would be reduced. However, the perception of the threat posed by disease is affected by modifying factors which are demographic, socio-psychological and structural variables that can influence both perception and the corresponding cues necessary to instigate action (Cockerham, 2012.)

Action cues are required because while an individual may perceive that a given action would be effective in reducing the threat of disease, the action may not be taken if it is further defined as too expensive, too unpleasant or painful, too inconvenient, or perhaps too traumatic (Cockerham, 2012.) The women may seek for health care because by so doing, they feel that they have reduced the likelihood of them experiencing difficulties during the entire period of pregnancy. The likelihood of action involves a weighing of the perceived benefits to action contrasted to the perceived barriers. Therefore, it is believed that a stimulus in the form of an action cue is required to “trigger” the appropriate behaviour. Such a stimulus could either be internal (perception of bodily states) or external (interpersonal interaction, mass media communication, or personal knowledge of someone affected by the health problem) (Cockerham, 2012).

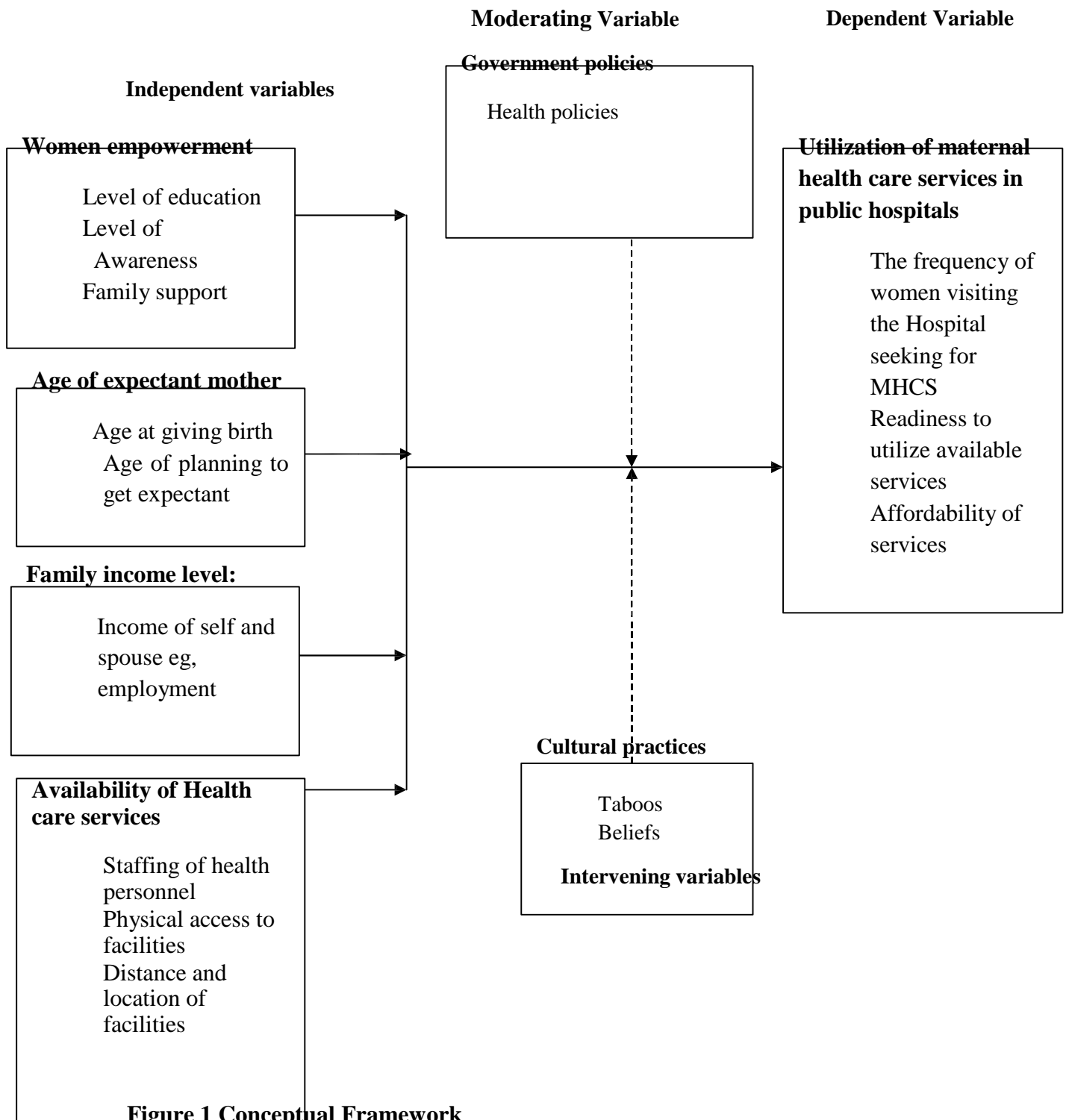
Women may also decide to take or not to act depending on the benefits they will get as opposed to the barriers they will experience. The model assumes that if a person regards himself or herself susceptible to a condition, believes that the condition would

have potentially serious consequences, believes that course of action available to them would be beneficial in reducing either their susceptibility to or severity of the condition, and believes the anticipated benefits of taking action outweigh the barriers to (or costs of) action, one is likely to take action he or she believes will reduce their risks (Glanz et al., 2008).

According to (Cockerham, 2012) it is important to note that health seeking behaviour has been observed to be based upon the value of the perceived outcome (avoidance of personal vulnerability) and the expectation that preventive action would result in that outcome. Finally, the theoretical framework informs this study based on the five constructs that make up the HBM. Thus, women may only utilize maternal health care services if they feel that the pregnancy they are carrying may have a likelihood of affecting their wellbeing and that by so doing they feel that they will reduce the likelihood of them experiencing difficulties during the entire period of pregnancy. Women may also decide to take or not to act depending on the benefits they will get as opposed to the barriers they will experience.

2.8 Conceptual framework

According (Mugenda and Mugenda, 2008) Conceptual framework involves forming ideas about relationship between variables in the study and showing these relationships graphically or grammatically. Therefore, it is used in research to outline choices or to present a preferred approach to an idea or thought. These variables and their relationships are illustrated in: Figure 1



The conceptual framework depicts the relationship between the independent variables and the dependent variables. The dependent variable is utilization of maternal healthcare services while the independent variables are: women empowerment, age of expectant mother, family income level and availability of healthcare services.

2.9 Summary of the Reviewed Literature.

The chapter has reviewed available literature on community participation from global to local perspectives. The global literature includes a study carried out in Peru, Bangladesh, Gambia and Nigeria and Ethiopia. It has also looked at several studies done in Kenya giving the demographics of percentages of expectant mothers who visit both the public and private hospitals and factors which limit them to utilize these services. The chapter also gives a review of Beyond Zero Campaign which was introduced by Her Excellency First Lady of Kenya Mrs. Margaret Kenyatta and the impact it has brought to utilization of maternal health care services. It has also reviewed utilization of maternal services in relation to the study objectives.

The chapter has presented both a theoretical and conceptual framework on which the study is based. The theoretical framework used is that of Symbolic Interactions. It has roots in the thinking of Max Weber (1864-1920), a German Sociologist and George Herbert Mead who emphasized understanding a setting from the point of view of the people in it (Giddens and Sutton, 2009) while the conceptual framework depicts the relationship between the independent variables and the dependent variables. The dependent variable is utilization of maternal healthcare services while the independent variables are: women empowerment, age of expectant mother, family income level and availability of healthcare services. The study also attempted to fill the identified gaps especially on conceptualization of participation and how the identified four factors influence public participation in community projects in Kenya.

Table 2.1 Research Gap Table

Variable	Author	Findings	Research Gap	Filling the Gap
Women empowerment	(Alsop, Bertelsen and Holland 2006)	Ladies with more prominent organization will probably have less youngsters, more inclined to get to social insurance benefits and have control over wellbeing assets, and less inclined to endure abusive behavior at home.	The author has not talked about how women should be empowered.	This study will fill this gap by showing how women should be empowered using, education, family support and awareness.
Age	(Celik& Hotchkiss, 2000; Magadi, Agwanda & Obare, 2007)	The author found out that there is an absence of relationship between maternal age and wellbeing administration usage	The author said age was not a factor influencing utilization of healthcare services.	The research filled this gap by finding out that expectant mothers between 18-22 years had a better utilization of maternal healthcare services.
Family wealth	(Gabrysh and Campbell, 2009)	The expenses of looking for medicinal services administrations may incorporate cost for transportation, client charges (official and additionally informal), cost of solution and different supplies.	The author did not give much information on the attitudes found in rich people verses that found in poor people.	This study filled in the gap by looking beyond family wealth and the attitudes and beliefs among poor people

Variable	Author	Findings	Research Gap	Filling the Gap
Availability of maternal healthcare services	(Sialubanje, 2014).	2009 Demographic and Health Survey, the biggest rate (42 %) of ladies who conveyed outside a wellbeing office did as such because the office was too far away. Some roads are at their worst state especially during the rainy season with only a few major tarmac roads. This has not only made it difficult to reach public healthcare facilities in the county but also made it very expensive to reach such facilities (Sialubanje, 2014).	The author found that a large percentage of women (42%) delivered outside healthcare facilities because of distance.	However, the study found that women travelled up to 100 kilometers to seek these services. The study filled the gap by showing the importance of building more facilities because despite the distance, women had the will to be attended in healthcare facilities

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the research methods used to find answers to the research objectives. The research design, target population, sample size and sampling procedures. Research instruments, methods of data collection and data analysis and ethical considerations are presented in the chapter.

3.2 Research Design

Research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data (Kothari, 2004). The study employed a cross-sectional survey research design in the collection of data study because it can be used to collect data from many people at relatively low cost and relatively quickly. According to (Alan Bryman, 2012) survey research design is always used to collect information from the field at one point in time. A survey design entails data collection on more than one case and at a single point in time in order to collect both quantitative and qualitative information in connection with two or more variables which are often examined to detect patterns of association.

3.3 Target Population of the Study

The target population is the population to which a researcher wants to generalize the results of study (Mugenda and Mugenda, 2003). The study targeted Public Hospitals which include Embu level 5 Hospital and three level 4 Hospitals namely: Runyenjes, Siakago and Ishiara; focusing on women of reproductive ages (18-49 years). According to statistics at the County Health Office, 1758 expectant mothers visited the facilities in the month of July 2016. The study relied on the information given by the expectant mothers who came for antenatal care.

The target population was as shown in Table 3.2

Table 3.2 Target Population

Location	Target Population
Embu Level 5 Hospital	772
Runyenjes Level 4 Hospital	307
Siakago Level 4 Hospital	386
Ishiara Level 4 Hospital	293
Total	1758

3.4 Sampling Procedures and Sample Size

Sampling is a procedure, process or technique of choosing a sub-group from a population to participate in the study (Ogula, 2005.) A sample is a smaller group or sub-group obtained from the accessible population (Mugenda and Mugenda, 2003.) The sample was selected in such a way so as to ensure that certain sub-groups in the population are represented in the sample proportion. Yamane's (1967) formula was used to calculate the sample size. The total population was 1758 giving a sample size of 326 as shown in the following calculation.

$$\text{Yamane's formula} = \frac{N}{1+N(e)^2}$$

N= Population

e= Error tolerance

i.e= 5% which is the confidence level

$$\begin{aligned} n &= \frac{1758}{1+1758(0.05)^2} \\ &= \mathbf{326} \end{aligned}$$

Table 3.2 Determination of Sample Size and Response Rate

Location	Target Population	Sample size	Response rate	Percentage
Embu Level 5 Hospital	772	143	142	43.55%
Runyenjes Level 4 Hospital	307	57	54	16.56%
Siakago Level 4 Hospital	386	72	70	21.47%
Ishiara Level 4 Hospital	293	54	52	15.95%
Total	1758	326	318	98%

3.5 Method of Data Collection

According to (Kothari, 2004) data collection is the process of acquiring subjects and gathering information needed for a study; methods of collection varies depending on the study design. The study employed the use questionnaires. The researcher used questionnaires to elicit information from expectant mothers. Secondary data on the other hand was collected through review of books, journals, reports and internet.

3.6 Validity of the Instruments

Validity refers to utility and indicates the degree to which a research instrument measures what it is intended to measure. It is the degree to which the test items measure a quality for which the test was designed (Kothari, 2004). Validity is the accuracy, soundness or effectiveness with which an instrument measures what it is intended to measure (Kumar, 2005). For this study, the researcher discussed the items in the instrument with the University Supervisor as recommended by Mutai (2000), to ascertain their construct and face validity.

3.7 Reliability of the Instruments

Reliability of the research instrument is its level of internal consistency. An instrument is reliable when it can measure a variable accurately and obtain the same

results over a period (Mugenda and Mugenda 1999). The research study used test-retest method which involved administering the same scale or measure to the same group of respondents at two separate times. A pilot study was conducted on 15 women. Test re-test methods were used to test for reliability of the instruments. The instruments were administered to the respondents and re-administered to the same respondents after one week. This is in line with (Shuttle worth, 2009), who stated that the instrument should be administered at two different times and then the correlation between the two sets of scores computed. The reliability of the instrument was estimated using Cronbach's Alpha Coefficient which is a measure of internal coefficient. A reliability of at least 0.70 at =0.05 significance level of confidence is acceptable (Gable and Wolf 1993).

$$\alpha = \frac{k \times \bar{c}}{\bar{v} + (k-1)\bar{c}}$$

where: k refers to the number of scale items

\bar{c} refers to the average of all covariance's between items

\bar{v} refers to the average variance of each item

The coefficient of reliability was 0.85 implying that the items had a strong relationship to the latent construct.

3.8 Data Analysis Techniques

After collection of data, the data was then coded to enable the responses to be grouped into various categories. Data was tabulated into frequency and cumulative tables in preparation for computer manipulation. After tabulation, quantitative data was analyzed by Statistical Package for Social Sciences software version 22, while qualitative data was organized into themes according to the study objectives. Percentages and frequency distribution tables were used to present the findings.

3.9 Ethical Consideration

Ethics concerns the moral principles and how people should conduct themselves in social affairs (Graham and Benett, 1995.) The researcher got approval from the County Director of Health to collect data from the facilities. The study adhered to ethics by getting consent from the respondents to conduct the study. The names of the participants were not indicated on the Interview Schedule to ensure that they gave more honest responses. Respondents were notified that there would be no monetary compensation for any interview filled since participation was voluntary. All the material that was collected was strictly used for education purpose and was treated with confidentiality.

3.10 Operational definition of variables

The following is a table showing the operational definition of variables:

Table 3.3 Operational definition of variables.

Research Objectives	Type of Variable	Indicator	Measure	Data Collection	Level of scale	Level of analysis
To determine the extent to which women empowerment influence utilization of maternal healthcare services in public Hospitals, Embu County.	Independent: women empowerment	The level of education	Have formal education (primary, secondary, college)	Questionnaire	Nominal Ordinal	Descriptive
		Awareness of problems in MHC	Basic knowledge of maternal health care	Questionnaire	Nominal Ordinal	Descriptive
To determine how age of expectant mothers influences utilization of maternal healthcare services in Public Hospitals, Embu County	Independent: Age	Age of delivering	The age they delivered their first born and the place	Questionnaire	Nominal Ordinal	Descriptive Descriptive
		Birth order The place	Number of children and they birth order	Questionnaire	Nominal	Descriptive

Research Objectives	Type of Variable	Indicator	Measure	Data Collection	Level of scale	Level of analysis
To establish the influence of family wealth on utilization of maternal healthcare services in Public Hospitals, Embu County	Independent: Family wealth	Income	The amount of money their partners earn	Questionnaire	Nominal	Descriptive
		Employment	They daily occupation	Questionnaire	Nominal	Descriptive
To determine how availability of health care services influence utilization of maternal healthcare services in Public Hospitals, Embu County	Independent: Availability of health care services	Distance of the MHC facility	The location of the facility	Questionnaire	Nominal	Descriptive
		Availability of the skilled birth attendant and healthcare services	Comfortable with facilities and services offered in MHC	Questionnaire	Nominal Ordinal	Descriptive
Utilization of maternal health care services in Public Hospitals, Embu County	Dependent: Utilization of maternal health care services in public hospitals	Number of women who visit the facility	The number of children delivered in hospital	Questionnaire	Nominal Ordinal	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter entails the data analysis, presentation, interpretation and discussion of the findings according to the data collected using the questionnaires. This analysis focused on the following themes: socio-economic and demographic dimensions of the local community and women's preferences and perceptions of Antenatal services offered at the health care facilities in Embu County regarding their use of maternal health care services. The study objectives were to determine the extent to which women empowerment influences utilization of maternal healthcare services, to determine how age of expectant mothers' influences utilization of maternal healthcare services, to establish the influence of family income levels on utilization of maternal healthcare services and to determine how availability of health care services influences utilization of maternal healthcare services in Public hospitals in Embu County.

4.2 Questionnaire Response Rate

The total number of the respondents who successfully filled and completed the questionnaires to the researcher's satisfaction were 318 which comprised 98% while 2% respondents did not fill the questionnaire effectively. The questionnaires were administered to expectant mothers in Public hospitals at the MCH who gave their consent to participate in the study. Return visit to the MCH and Maternity Unit was made to encourage the respondents and check on their wellbeing.

4.3 Demographic Dimension of Respondents

This section focuses on different characteristics in relation to utilization of maternal healthcare services. For the purpose of this research, the key interest was to conduct an assessment of the following parameters towards utilization of maternal healthcare services: distance to the nearest maternal health service, age of the respondents, religious affiliation and education levels. These parameters were investigated and results presented in tables.

4.3.1 Distance to the nearest maternal healthcare service

The respondents were requested to indicate the distance they travelled to seek maternal healthcare services. The information is presented in Table 4.1

Table 4.1 Distribution of respondents by distance travelled

Distance	Frequency	Percent
0-5km	117	36.8
5-10km	24	7.5
10-15km	15	4.7
15-20km	12	3.8
20-25km	6	1.9
25-30km	9	2.8
Over 30km	135	42.5
Total	318	100

Table 4.1 shows that majority of the expectant mothers, 42.5% travelled over 30 kilometers to seek maternal healthcare services with many of them saying that they had travelled even longer distances. 36.8% respondents travelled less than 5 kilometers while the rest 21% travelled between 5km and 30km to seek maternal healthcare services. Based on this analysis this implies majority of expectant women travel over long distances to seek maternal health services.

4.3.2 Age of expectant mother

Information on age category of the respondents was collected and is presented in Table 4.2

Table 4.2 Distribution of respondents by age

Age	Frequency	Percent
18-22 years	81	25.4
23-27 years	111	34.9
28-32 years	78	24.5
33-37 years	33	10.4
38-42 years	12	3.8
43-47 years	3	0.9
48-52 years	0	0
Total	318	100

As shown in Table 4.2 the study indicated that majority of the women who came for Antenatal care were young with about 75% being below 30 years. This implies that between the ages of 18 to 30 is when the fertility rate of women is highest.

4.3.3 Age of expectant mother when first born was delivered or expected to deliver

The age at which the respondents delivered their firstborns or expected to deliver their first born was established and the results are presented in Table 4.3

Table 4.3 Distribution of the respondent by age when first born was delivered or expected to deliver

Age	Frequency	Percent
18-22 years	162	50.9
23-27 years	111	34.9
28-32 years	42	13.2
33-37 years	3	0.9
38-42 years	0	0
43-47 years	0	0
48-52 years	0	0
Total	318	100

Based on Table 4.3 most of the respondents were young mothers under 30 with the majority, (50.9%) being between 18-22 years. Age of respondents is critical as a variable in this study as it sheds some light on not only the maturity of the study subjects but also ensuring that the selection of study participants remained ethical. Further, age was included because of the assumption that the older the respondents the more mature and experienced on maternal issues and decision making. Indeed, differential age among expectant mothers cannot be gainsaid when it comes to making important maternal decisions that may have value in enhancing maternal and child health.

Early marriages and giving birth at an early age exposes the women to high chances of not accessing higher education thus leading to over reliance on their spouses for all their needs leading to financial dependence. Based on this analysis, this implies that many women give birth at a relatively young age leading to most of them depending on others for their needs.

4.3.4 Marital status

Respondents were asked to indicate their marital status. The information collected is presented in Table 4.4

Table 4.4: Distribution of respondents according to their marital status

Marital status	Frequency	Percent
Single	45	14.2
Married	273	85.8
Divorced	0	0
Widowed	0	0
Total	318	100

Results in Table 4.4 depict that majority (85.8%) of the sampled respondents were married.

Only 14.2% were single. Field observations showed that most of the respondents who were single were between ages 18-22 years old and either lived with their parents or relatives. The high (85.8%) number of respondents in marital union was expected because the study focused on women in their reproductive ages, many of whom were expected to be married due to societal expectations.

4.3.5 Religious affiliation of expectant mother

Information on the religious affiliation of the respondents was collected and is presented in Table 4.5

Table 4.5 Distribution of expectant mother by religious affiliation

Religious affiliation	Frequency	Percent
Christian	315	99.1
Muslim	3	0.9
Hindu	0	0
African Traditional Religion	0	0
Others	318	100

As shown in Table 4.5 majorities of the respondents (99.1%) interviewed were Christians. Only 3 Muslims were interviewed. The percentage of Muslims could have been higher were it not for the fact that a few others refused to participate in the

process for their own reasons and since the process was voluntary then the researcher had to respect their decision. This implies that the main religious beliefs in the area support utilization of maternal healthcare services.

4.3.6 Level of formal education of expectant mother

The respondents were requested to indicate their level of formal education. The information is presented in Table 4.6

Table 4.6 Distribution of the respondents by level of education

Level of education	Frequency	Percent
None	6	1.9
Primary	84	26.4
Secondary	135	42.4
Post-Secondary	93	29.2
Total	318	100

As Table 4.6 indicates, majority of the women who sought antenatal services at hospitals had completed primary school. 65% of the women had secondary or higher level of education. This shows that education is one of the powerful drivers of social change in the society; in this case, the utilization of maternal healthcare services.

4.3.7 Main Source of Income of Expectant Mother

Respondent's source of income in this study was conceived to mean the main livelihood strategy that respondents get by receiving money on a regular basis for work done at the end of every month through investments. This variable was considered important as it helps to highlight the ability of respondents to pay for the transport required to get to the healthcare facility and pay for the minimum required fee in order to seek maternal healthcare services. The respondents were requested to indicate their main source of income. The information is presented in Table 4.7

Table 4.7 Distribution of Respondents by the main source of income

Main source of Income	Frequency	Percent
Subsistence farming	87	27.4
Employment	63	19.8
Business	114	35.8
Dependent	54	16.9
Total	318	100

As shown in Table 4.7 majority of the respondents' main source of income was through business, 35.8% and subsistence farming at 27.4%. This implies that a higher percent of the respondents run their own businesses.

4.3.8 Awareness levels of complications anticipated of not delivering at a healthcare facility by expectant mother

Information on awareness levels of complications anticipated of not delivering at a healthcare facility was given and presented in Table 4.8.

Table 4.8 Distribution of respondents by awareness levels of complications anticipated of not delivering at a healthcare facility

Awareness level	Frequency	Percent
Yes	297	93.4
No	21	6.6
Total	318	100

Based on Table 4.8 expectant mothers seemed aware of complications exposed to them if they fail to deliver at health care facilities. Majority of the respondents 93.4% seemed to know that giving birth at home would pose some risks to both mother and child. Only 6.6% were not aware of these dangers. This implies that, maternal healthcare education needs to be done to enlighten them on the importance of seeking maternal healthcare services.

4.3.9 Awareness of family planning methods by expectant mother

This parameter is important as it shows the level of women empowerment when making decisions about their reproductive health and in making decisions when it comes to planning for the number of children they would wish to have and when to

get their children. The respondents were requested to indicate their awareness of family planning methods. The results are indicated in Table 4.9

Table 4.9 Distribution of respondents according to awareness of family planning methods

Family planning awareness	Frequency	Percent
Yes	288	90.6
No	30	9.4
Total	318	100

As shown in Table 4.9, majority of the respondents 90.6% were aware of family planning methods. It shows that most women knew about family planning methods. However, maternal healthcare education should be carried out to enlighten the remaining 9.4% to eradicate unwanted pregnancies.

4.3.10 Use of family planning method by expectant mother

Use of family planning methods was considered an important variable in this study as it helps to allow people to attain their desired number of children and determine the spacing of pregnancies. It is achieved through use of contraceptive methods and the treatment of infertility. It also lets women to make sure that the baby is getting the best care before and after birth. Information on use of use of family planning method was collected and filled in Table 4.10.

Table 4.10 Distribution of expectant mothers per use of family planning methods

Ever used family planning methods	Frequency	Percent
Yes	213	67
No	105	33
Total	318	100

In Table 4.10, majority of the women, that is two thirds, use family planning methods 67% while a third, 33% did not use family planning methods. Based on these statistics, it implies that women need to be empowered on the advantages of using family planning methods and that they should be made more accessible.

4.3.11 Family planning method used by expectant mother

Respondents were asked to give information on the use of family planning methods.

The results are indicated in Table 4.11

Table 4.11 Distribution of respondents per the family planning method used

Family planning method used	Frequency	Percent
Pills	60	24.7
Intrauterine device	21	8.6
Injection	96	39.5
Condoms	18	7.4
Safe days	12	4.9
Norplant	36	14.8
Total	243	100

Table 4.11 shows that majority of the women who used family planning methods preferred to use the injection. They form 39.5%. The injection was popular among the respondents because it does not leave a permanent scar on the body unlike nor plant which was used by 14.8% of the women. They also preferred the injection to pills which had the second preference with 24.7% because some of them admitted to forgetting to take the daily pill therefore risked getting unplanned pregnancies.

4.3.12 Number of children expectant mother has in total

The respondents were asked to indicate the number of children they have. The results are indicated in Table 4.12

Table 4.12 Distribution of respondents per the total number of children

Number of children	Frequency	Percent
Males	186	54.4
Females	156	45.6
Total	342	100

From Table 4.12, majority of the respondents had male children, 54.4% as compared to girls who were 45.6%.

4.3.13 Number of children delivered in a maternal healthcare facility

Information on the number of children delivered in maternal facilities was collected and presented in Table 4.13

Table 4.43 Distribution of respondents according to place of delivery

Place of delivery	Frequency	Percent
Number of children delivered in a maternal facility	102	89.5
Number of children delivered at home	12	10.5
Total	114	100

From Table 4.13, most of the respondents gave birth in maternal care facilities. They form 89.5% whereas only 10.5% gave birth at home.

These findings are not a surprise to this study in that they show the gains that are being made in enhancing deliveries in health care facilities and in the hands of professionals as envisioned by government policy and the SDGs, especially goal number five (5). However, women need to be educated on the importance of giving birth in healthcare facilities so as to ensure that there are zero mortality rates. This implies that health facilities are safer hence women should make maximum use of them.

4.3.14 Mode of delivery

The respondents were requested to indicate their mode of delivery. Table 4.14 indicates those results.

Table 4.54 Distribution of respondents per mode of delivery

Mode of delivery	Frequency	Percent
Normal delivery	75	65.8
Caesarean delivery	39	34.2
Total	114	100

Based on Table 4.14, majority of the respondents gave birth through normal delivery, 65.8% while minority of the respondents 34.2% gave birth through Caesarean section. This implies that almost half of the respondents needed intensive care after birth. While a woman who has given birth through normal delivery can run her errands with

ease, for a woman who has gone through Caesarean section, it might not be as easy. This does not however mean that Caesarean sections are bad. Where there is risk paused to both mother and child, it is the better alternative and should be taken positively so women should be encouraged to go to health facilities so that their health is monitored and they are given the best care.

4.3.15 Preferred gender of Medical attendant

The respondents were requested to indicate their preferred gender of medical attendant. The results are indicated in Table 4.15

Table 4.65 Distribution of respondents per the preferred gender of medical attendant

Preference gender of medic	Frequency	Percent
Male	132	41.5
Female	18	5.7
No preference	168	52.8
Total	318	100

The gender of the service provider was considered an important variable in this study because some cultures and religions only accept other women to be midwives and not men. Results in Table 4.15 clearly indicate that over half (52.8%) of the respondents had no particular preference for the gender of provider whilst over two fifths (41.5%) and less than one tenth (5.7%) said that they would want to be attended to by a male or female provider respectively.

The more than half (52.8%) of the respondents who said they had no particular preference for the gender of the provider may be explained first, by the recognition among respondents that providers are bound by a code of ethics and the fact that all staff undergo similar professional training and thus gender consideration does not compromise quality of care and competence among providers. Second, owing to the remote location of the district and the fact that there are limited choices of health care facilities, expectant women may not have opportunity to make choices of health care providers based on other things gender and that they have to do with what is available.

Table 4.15 also shows that over two fifths (41.5%) of the respondents wanted to be attended to by male providers. On probing, further, they revealed that male attendants were more sensitive and kind to them unlike their female counterparts. This implies that many expectant women had a special preference for male practitioners. Their female counterparts should be sensitized on the importance of understanding expectant women especially during labour and child delivery.

4.3.16 Relationship between age at first born delivery and level of education

The relationship between age at firstborn delivery and level of education was established. The information is presented in Table 4.16

Table 4.76 Distribution of respondents according to the relationship between age at first born delivery and level of education

Age in Years	None and Primary		Secondary	&	Post-Secondary
	Frequency	Percentage	Frequency		Percentage
18-22	63	70	99		43.4
23-27	15	16.7	96		42.1
28-32	12	13.3	30		13.2
33-37	0	0	3		1.3
Total	90	100	228		100

Based on Table 4.16, there is a relationship between Table 4.9 which indicates that majority of the respondents who did not have any formal education or studied up to Primary level, 70% gave birth in the age bracket 18-22 years as compared to 16.7% and 13.3% who gave birth to their firstborns in age brackets 23-27 and 28-32 respectively. The high percentage is because women who fail to go to school or have little education tend to get married at an early age therefore giving birth early. Poverty is one a major contributor of lack of education. However, with the introduction of free Primary education, the trend is expected to change for the better.

This implies that almost half of the women who had gone to secondary and post-secondary, 43.4% gave birth between age bracket 18-22 as compared to those who

had learnt up to Primary school or had no formal education. The difference is brought by the fact that education empowers women therefore delaying the age of giving birth because most girls who go through the formal system of education tend to be preoccupied in their studies and tend to settle down later probably when they have had a source of income or are financially independent. Minority of the respondents 1.3% were between age bracket 33-37 which is considered a little late for a first-time mother. As compared to women who had little or no formal education, none had their firstborn in this age bracket.

4.3.17 Relationship between Healthcare and Home deliveries verses level of formal education

The relationship between Healthcare and Home deliveries verses the level of education was established. The information is presented in Table 4.17

Table 4.87 Distribution of respondent’s verses level of formal education according to the relationship between healthcare deliveries

	None and Primary		Secondary & Post-Secondary	
Venue	Children	Percent	Children	Percent
Healthcare facility	129	82.7	177	95.2
Home	18	17.3	9	4.8
Total	156	100	186	100

The number of hospital deliveries was a critical aspect in this study since it gives further insight into the utilization rates of institutional delivery services among the women in Embu County. Findings regarding this variable are presented in Table 4.17. Based on Table 4.17 there is a relationship between Table 4.13 which indicates that of all the respondents interviewed, majority of the women (89.5%) had hospital deliveries, while minority (10.5%) had home deliveries. Table 4.20 sought to find out if there was any relationship between the place of delivery and the level of education. Interestingly, almost a fifth of those who had no formal education gave birth at home. This clearly is an indicator that the level of formal education plays a critical role in ensuring that almost all deliveries are done in healthcare facilities.

Majority of the women who had gone to secondary school and had Post-secondary learning, (95.2%) gave birth at healthcare facilities whereas only (4.8%) who had attained this level of learning gave birth at home. This is a significant improvement as compared to Table 4.19 of (82.7%) and (17.3%) those who gave birth in maternal healthcare facilities and those who gave birth at home respectively. Education levels therefore increases the proportions of delivery taking place in health facilities and the understanding of the fact that healthcare deliveries are important in reducing health risks to both the mother and her unborn child and consequently preventing both maternal and child mortality.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter entails a summary of the findings based on the responses given by the participants of the study and in relation to the study objectives. The discussion of the findings is covered about the existing body of knowledge found in the literature review. Finally, conclusions of the study and suggestions for future research studies are given.

5.2 Summary of the findings of the study

The summary of findings is presented according to the variables in the study.

5.2.1 Influence of women empowerment on utilization of maternal healthcare services

The study shows that women empowerment was significantly related to maternal facilities delivery services utilization. Education being the major parameter that was used to determine the level of women empowerment, 65% of women who had secondary education or higher level of education used maternal healthcare facilities. This implies that education is an important predictor of maternal facilities delivery service utilization since it exposes women to access and knowledge on maternal health issues. This finding could be by the fact that there have been massive campaigns by the GoK and MoH in sensitizing the population about the importance of utilization of maternal health care services to avert the dangers that are associated with pregnancy and child birth through the school education system, door to door campaigns, other media such as the radio, television and even the social media.

5.2.2 Influence of age of expectant mother on utilization of maternal healthcare services

The study found that a large percentage of young pregnant women 75% who were between ages 18-30 years utilized maternal healthcare services. This could be attributed to the fact that during this age bracket, women are at their peak of fertility. The study however found that 23% of women between ages 18-22 years did not start

their maternal clinics before the elapse of the first 16 weeks of pregnancy as compared to women between ages 28-32 years who 71% adhered to WHO recommendations which state that a woman should start her ANC clinics early. This finding could be attributed to the fact that women above age 28 have a more financial stability and have a better autonomy therefore taking full charge of their lives and are fully aware of what it means to carry life in them.

5.2.3 Influence of family wealth of individual on utilization of maternal healthcare services

The study found that majority of the respondents 83.1% had a stable source of income. There was an ascending trend in the use of healthcare services in those with higher economic status. This is because in as much as free maternal healthcare services were introduced, expectant mothers need to meet the transport costs as well as pay the minimum amount required as service charge. Only 16.9% had an unstable source of income as they depended on their families for support which was not always available. However, this did not deter expectant mothers from lower family wealth backgrounds from utilizing the services though the percentage was low. This finding therefore shows that in as much as there is free maternal healthcare, it is crucial for a woman to have extra resources to take care of other miscellaneous expenditure.

5.2.4 Availability of maternal healthcare services and utilization of maternal healthcare services

The underlying assumption for the fourth objective was that utilization patterns could be expected to differ between the urban areas and the rural areas based on differences in the socio-economic factors. Contrary to the expectations, this was not the case. The study found that expectant mothers travelled up to 100 kms to seek maternal healthcare services. Majority of the respondents 42.5% travelled over 30 kms. They were followed closely by 36.8% of expectant women who travelled less than 5 kms. The findings imply that availability of maternal healthcare services led to utilization of maternal healthcare services and the same time, distance did not stop women from seeking these crucial services as majority of them had to travel very long distances.

5.3 Discussions of findings

This section discusses the key findings from the study against literature from the other studies as per the variables.

5.3.1 Influence of women empowerment of expectant mothers on utilization of maternal healthcare services

The study found that maternal health service utilization is significantly higher among women who had autonomy in decisions regarding their household activity as compared to those who were not. It suggests that use of maternal healthcare services is influenced by women's role in decision making. A possible explanation could be that women who have autonomy in decision making are more likely to have a higher autonomy on healthcare, which might lessen their reproductive behaviour risks. The study also confirmed that women's control over household resources has a significant positive effect on Antenatal care and hospital delivery.

According to (Jat, 2011) an increase in women empowerment increases the uses of antenatal care, delivery care and postnatal care. This is in line with this study. Some researchers however, question the strong independent effects of education on MHCS utilization. They argue that other factors such as place of residence and husbands' education level dilute this strong association (Gage and Calixte, 2006). The new information generated from this study is that empowerment focuses not only on the woman but the surrounding factors.

5.3.2 Influence of age of expectant mothers on utilization of maternal healthcare services

The study found that older women were more likely to use ANC compared to younger women. Following predictions of Grossman model (1972) age increases the rate of depreciation of the health of an individual. There is therefore the need to educate the younger women on the need to use ANC and other maternal health services.

A study done in Nigeria, (Ebuehi, Roberts, & Inem, 2006) also found that young women who were 20 years or younger were less likely to use ANC facilities than older women. Young women may be unmarried and may lack social support. They may be unable to use the maternal healthcare facility due to the circumstances

surrounding their pregnancy. It is unfortunate that the women who are at higher risk such the young were less likely to access the appropriate maternal healthcare facilities.

5.3.3 Influence of family wealth on utilization of maternal healthcare services

The study found that despite the introduction of free maternal healthcare services, family income levels still has a positive and significant influence on the use of ANC, contrary to the expectation that it should not since the service is free. Women with higher family income levels are more likely to make more ANC visits than women in the lowest wealth quartile. We can infer that even though the service is provided freely, it may come with costs either directly or indirectly and those with resources are more likely to afford it.

According to (Rutsein and Johnson 2004), a study carried out in Bangladesh indicated that a high proportion of home deliveries were reported amongst poorest women (95%) while the proportion of home deliveries among the richest group was at (15%). This agrees with previous findings that shows how family wealth has a positive impact towards utilization of maternal healthcare services. It however defers with studies which have shown that utilization of delivery services is lower for those with two or more children than those with one child (Mekonnen and Mekonnen, 2002).

Other studies indicate that for women seeking care, cost include those for facilities and services and involves both formal and informal fees, the cost of drugs and equipment, transport to a hospital or clinic and the opportunity cost of getting to the healthcare facility and receiving care (Ensor & Cooper 2004, Ensor & Ronoh 2005, McNamee, Ternent, & Hussein 2009.) This therefore agrees with previous findings. However, it differs to some extent because according to (Lule, Ramona, Rosen Washington; 2011) family income levels did not necessarily contribute to ANC visits by expectant women.

In general, it can be concluded that, even though maternal healthcare services are rendered free of charge in Kenya, family income which signifies the financial position of the individuals still a challenge in the use of these services. it still hinders the utilization rates, expectant mothers may still use the services, but not adequately as

recommended by WHO according to Global Health Observatory (GHO) data, in the case of ANC minimum of four visits before delivery to ward off any health effects of child birth and hence reduce the rate of maternal and child deaths through delivery. Thus, to improve the use of ANC, there is need to go beyond providing the free services to finding means of support for expectant mothers. This can be informed by provision of necessary drugs and more importantly, ensuring that these recommended drugs at the healthcare facility to the expectant mothers.

5.3.4 Influence of availability of healthcare facilities on utilization of maternal healthcare services

The study found that availability of public hospitals contributed positively towards utilization of maternal healthcare services. At the inception of HFA/2000, WHO had warned that its goals, support activities, management may be irrelevant if they are not tuned towards maximum utilization. In the USA, hospitals require utilization review procedures as condition for participation. This therefore agrees with previous studies which indicate that the healthcare facilities need to be there in the first place so that people can utilize them.

A Study carried out in Nigeria (Olayinka, Joel, Bukola, 2012) supports Hart's inverse law. The law states that the more disadvantaged a population is, the less likely they are to have access to health services. The study showed that women who live far away from the delivery services were less likely to utilize the services. However, in as much as availability of maternal healthcare services influenced the utilization of maternal healthcare services, some women beat the odds by travelling up to 100 Kms to seek these services. According to (Chen & Lowe2016,) a research carried out in rural Gambia, women travelled as far as 120 kms to seek maternal services. This therefore to some extent defers with this school of thought.

5.4 Conclusions

The findings of this study revealed that factors influencing utilization of maternal healthcare services projects in Kenya: A case of Embu County have critical lessons for addressing utilization of maternal healthcare services. For the first objective that was to determine the extent women empowerment influences utilization of maternal healthcare services. The results showed that majority of the respondents who were

empowered used maternal facilities. This is because the respondents had better knowledge and awareness of the importance to use these facilities as well as the risks faced of lack of utilization of the maternal facilities. The study therefore concluded that women empowerment needed to be done especially in rural areas to encourage more women to take charge of their lives during this period.

The second objective was how age influences utilization of maternal healthcare services projects in Kenya: A case of Embu County. The study found that majority of the women who sought these critical services were below 30 years. However, out of this, very few attended their first antenatal clinic at the recommended time of before the elapse of the first sixteen weeks of pregnancy by WHO. Therefore, the study concluded that sensitization needed to be done to avert maternal mortality and morbidity.

The third objective was on how family income levels influences the utilization of maternal healthcare services projects in Kenya: A case of Embu County. The study revealed that the family income level was very important for the successful utilization of maternal healthcare services. It suggests that income level distribution in a family had a strong effect on utilization of maternal healthcare services. If a family has low income level, then utilization became minimal. Therefore, the study concluded that financial independence should be achieved so that expectant mothers meet other overhead costs met as they utilize free maternal healthcare services.

The fourth objective was to examine how availability of maternal healthcare services influences utilization of maternal healthcare services projects in Kenya: A case of Embu County. Availability of maternal healthcare services acts as a motivation. A motivated team usually achieves high performance. This therefore implies that the more the maternal healthcare facilities, the better the utilization of maternal healthcare services. However, majority of the respondents travelled over 30 kms to seek these services. There study concluded that the maternal facilities needed to be increased to ensure that women travel shorter distances to seek medical attention.

5.5 Recommendations

- i. It is recommended that Ministry of Health should make deliberate policies that will involve women aged 28 years and above as role models to sensitize other women on the importance of making the required number of ANC.
- ii. Further, Non-Governmental Organizations' need to come up with clear policies and lay out education programs to empower women on importance of ANC since a mother's age at birth and family wealth predict utilization of ANC services by the number of visits that the mothers make to the health facility and lastly marital status, religious affiliation and parity strongly predict utilization of SBA
- iii. The Government and Education Institutions needs to carry out further research as it is prudent to focus on other determinants of maternal health care utilization not considered in this study. Understanding the multiplicity of factors with an influence on maternal health care utilization is key in the development of interventions that will work in reducing maternal morbidity and mortality including that of their infants.
- iv. The government should maintain roads and equip the hospitals with the necessary machinery and enough personnel to cater for the increase of expectant mothers who seek these services.

5.6 Suggestions for further studies

The areas suggested for further study are:

- i. Similar studies investigating the factors that influence utilization of maternal healthcare services be carried out in other Countries.
- ii. Studies on factors influencing the implementation of maternal healthcare services by the Hospitals, Ministry of Health and other policy makers.
- iii. Studies to establish other challenges that influence utilization of maternal healthcare services such as taboos and female genital mutilation which are practiced in some parts of the Country.

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APPENDIX I: LETTER OF TRANSMITTAL OF DATA COLLECTION INSTRUMENTS

DAISY BEATRICE WANJIRA NJIRU

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PO BOX 1900 60100

EMAIL: daisyshirah@gmail.com

Dear respondent,

RE: REQUEST FOR YOUR PARTICIPATION IN A RESEARCH STUDY.

I am carrying a research study for my Master of Arts Degree in project planning and management at the University of Nairobi. The study is on factors influencing utilization of maternal healthcare services in LEVEL 5 and LEVEL 4 Hospitals in Embu County. You have been selected to assist in providing the required information because your views are considered important to this study. I am therefore kindly requesting to interview you. Please note that any information given will be treated with utmost confidentiality and will only be used for the purpose of this study.

Yours faithfully,

NJIRU DAISY B. WANJIRA

L50/83287/2015

APPENDIX II QUESTIONNAIRE

Dear respondent,

Please answer the questions to the best of your understanding. Your cooperation in this study is highly appreciated and all the information you provide will be treated with utmost confidentiality. Thank you for your cooperation.

REF: DBWN/UON/8/2016

MATERNAL HEALTH CARE SERVICES QUESTIONNAIRE RESPONSE

Name of Health Facility: HOSPITALS: LEVEL 5 & LEVEL 4

Date.....

AUGUST 2016

Q1. How far is the nearest clinic offering maternal health services?

- a) 0-5 km []
- b) 5-10 km []
- c) 10-15 km []
- d) 15-20 km []
- e) 20-25 km []
- f) 25-30 km []
- g) Over 30 km []

Q2. Your age as at your last birthday:

- a) 18-22 years []
- b) 23-27 years []
- c) 28-32 years []
- d) 33-37 years []
- e) 38-42 years []
- f) 43-47 years []
- g) 48-52 years []

Q3. At what age do you expect to deliver or did you deliver your first born?

- a) 18-22 years []
- b) 23-27 years []

- c) 28-32 years []
- d) 33-37 years []
- e) 38-42 years []
- f) 43-47 years []
- g) 48-52 years []

Q4. Religious affiliation:

- a) Christian []
- b) Muslim []
- c) Hindu []
- d) African Traditional Religion []
- e) Others []

Q5. Level of formal education:

- a) None []
- b) Primary []
- c) Secondary []
- d) Post Secondary []

Q6. Main source of income:

- a) Subsistence Farming []
- b) Employment []
- c) Business []
- d) Dependant []

Q7. Are you aware of any problems or complications of not delivering at a hospital?

- a) Yes []
- b) No []

Q8. (i) Are you aware of family planning methods?

- a) Yes []
- b) No []

(ii) Have you ever used any family planning method?

- a) Yes []
- b) No []

(iii) If YES, which method have you used?

- a) Pills []
- b) IUD (Intrauterine device) []
- c) Injection []
- d) Condoms []
- e) Safe days []
- f) Norplant []

Q9. (i) Is this your first pregnancy?

- a) Yes []
- b) No []

(ii) How many children do you have in total? (Indicate number by gender)

- a) Males: []
- b) Females: []
- c) Total: []

Q10. (a) Number of children delivered in maternal healthcare facility []

- (b) Number of children delivered at home []**
- (c) Number of children delivered through normal delivery []**
- (d) Number of children delivered through caesarean section []**

Q11. Who is your preferred gender of medical attendant?

- a) Male []
- b) Female []
- c) No preference []

Q12. Marital status:

- a) Single []
- b) Married []
- c) Divorced []
- d) Widowed []

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Thank you for your cooperation