DETERMINANTS OF UTILIZATION OF MATERNAL AND NEONATAL HEALTHCARE SERVICES BY MOTHERS IN EMBAKASI SUB-COUNTY, NAIROBI, KENYA

Okoth Joshua Odhiambo

A Research Project Report Submitted in Partial Fulfilment of the Requirements for Award of the Degree of Master of Arts in Project Planning and Management of the University of Nairobi

2017

DECLARATION

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

Signature:_____ Date _____

Okoth Joshua Odhiambo
Registration Number: L50/77925/2015

This research project has been submitted with my approval as the university supervisor.

Signature:_____ Date_____

Dr. Chandi Rugendo
Lecturer
Department of Open Learning
University of Nairobi.

DEDICATION

I dedicate this research project to my parents Mr. Henry Okoth and Mrs. Mary Okoth, who taught me that even the hardest task can be accomplished if it is done one step at a time.

ACKNOWLEDGEMENT

I wish to register my sincere gratitude to my supervisor Dr. Chandi Rugendo for his guidance, expertise and close attention that enabled me to refine this research document. I would also like to acknowledge the contribution of my faculty lecturers for laying the course work foundation upon which this research project was developed.

Special gratitude goes to the University of Nairobi Librarian at both Jomo Kenyatta Memorial Library and Kikuyu Campus Library who through their advice, facilitated access to valuable information that made this research work possible. Last but not least, my sincere thanks to the department of Extra-Mural Studies staff members and the 2015 Masters class in Project Planning and Management for overwhelming support and guidance in the entire period.

TABLE OF CONTENTS

DECLARATION ..... **ii**

DEDICATION ..... **iii**

ACKNOWLEDGEMENT ..... **iv**

TABLE OF CONTENTS ..... **v**

LIST OF TABLES ..... **x**

LIST OF FIGURES ..... **xii**

LIST OF ABBREVIATIONS AND ACRONYMS ..... **xiii**

ABSTRACT ..... **xiv**

CHAPTER ONE:INTRODUCTION **1**

1.1 Background to the study 1

1.2 Statement of the problem 3

1.3 Purpose of the study 4

1.4 Objectives of the study 5

1.5 Research questions 5

1.6 Significance of the Study 5

1.7 Limitations of the study 6

1.8 Delimitation of the Study 6

1.9 Assumptions of the study 7

1.10 Definitions of Significant Terms as Used in the Study 7

1.11 Organization of the Study: 8

CHAPTER TWO:LITERATURE REVIEW **9**

2.1 Introduction 9

2.2 Overview of Utilisation of Maternal and Neonatal Health Care Services 9

2.2.1 Utilisation of Antenatal care services 11

2.2.2 Utilisation of Skilled assistance during delivery 13
2.2.3 Utilisation of skilled post-partum care 14
2.3 Level of Education of mothers and utilisation of maternal and neonatal health care services 16
2.4 Length of waiting time for services and utilisation of maternal and neonatal health care services 17
2.5 Privacy in service delivery and utilisation of maternal and neonatal health care services 19
2.6 Service Integration and utilization of maternal and neonatal health care services 20
2.7 Theoretical Framework of the study 22
2.8 Conceptual Framework of the study 23
2.9 Research gaps 25
CHAPTER THREE:RESEARCH METHODOLOGY 28
3.1 Introduction 28
3.2 Research Design 28
3.3 Target Population 28
3.4 Sample Size and Sampling Procedure 29
3.4.1 Sample Size 29
3.4.2 Sampling procedure 30
3.5 Research instruments 30
3.5.1 Piloting of research instruments 30
3.5.2 Validity of the research instruments 31
3.5.3 Reliability of the Instruments 31
3.6 Data Collection Procedures 31
3.7 Data analysis techniques 32
3.8 Ethical Considerations 32
CHAPTER FOUR:DATA ANALYSIS, PRESENTATION & INTERPRETATION 33
4.1 Introduction 33
4.2 Questionnaire Response Rate 33

4.3 Demographic Information 33
4.3.1 Area of residence 33
4.3.2 Age of respondents 34
4.3.3 Marital Status 35
4.3.4 Level of education 35
4.3.5 Number of deliveries 36
4.4 Utilisation of maternal and neonatal health care services 37
4.4.1 Skilled assistance during delivery 39
4.4.2 Skilled Post-partum care for mother and new-born 40
4.5 How waiting time for services influences utilisation of Maternal and Neonatal Health Care services 41
4.5.1 Number of hours in the queue 41
4.5.2 Satisfaction with explanation provided by staff for long waiting times. 41
4.5.3 How waiting time for services influences utilization of antenatal care services 42
4.5.3 Rating of length of waiting time for services in health facilities in Embakasi sub-county 43
4.6 How Privacy in Service Delivery influences Utilisation of Maternal and Neonatal Health Care Services 44
4.6.1 Extent to which privacy in service delivery influence utilization of maternal and neonatal health care services 44
4.7 How Level of Service Integration influences Utilisation of Maternal and Neonatal Health Care Services 45
4.8 Level of Education of mothers and utilisation of Maternal and Neonatal Health Care Services 46
4.8.1 Level of education of mothers 47
4.8.2 Functional Health Literacy level 47
4.9 Qualitative findings associated with utilisation of maternal and neonatal health care services in Embakasi sub-county 49
4.9.1 Utilisation of maternal and neonatal health care services 49
4.9.2 Attendance to recommended number of ANC services 49

4.9.3 Skilled assistance during delivery 49
4.9.4 Attendance to skilled post-partum care 49
4.9.5 Level of education of mothers and utilisation of maternal and neonatal health care services 50
4.9.6 Length of waiting time for services and utilisation of maternal and neonatal health care services 50
4.9.7 Privacy in service delivery and utilisation of maternal and neonatal health care services 51
4.9.10 Level of service integration and utilisation of maternal and neonatal health care services 51
CHAPTER FIVE:SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENADATIONS 52
5.1 Introduction **52**
5.2 Summary of the study findings **52**
5.2.1 Utilization of maternal and neonatal health care in Embakasi Sub-county 52
5.2.2 Maternal level of education influences utilization of maternal and neonatal health care services 53
5.2.3 Length of waiting time for services influences utilization of maternal and neonatal health care services 53
5.2.4 Privacy of services influences utilization of maternal and neonatal health care services 54
5.2.5 Integration of services influences utilization of maternal and neonatal health care services 54
5.3 Discussion of Findings 54
5.4 Conclusion 57
5.5 Recommendations of the study 58
5.6 Suggested area for further study 59
REFERENCES 60
APPENDICES 67
APPENDIX 1: LETTER OF INTRODUCTION 67
APPENDIX 2: INDIVIDUAL IN-DEPTH INTERIVIEW (IDI) QUESTIONNAIRE 68

APPENDIX 3: HEALTH CARE PERSONNELS INTERVIEW GUIDE 74

APPENDIX 4: KREJCIE AND MORGAN TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION 76

LIST OF TABLES

Table 2.1: Matrix Table for Summary of Empirical Literature 26

Table 3.1 Target population 29

Table 3.2 Sample size 29

Table 4.1 : Response Rate 33

Table 4.2: Area of residence 34

Table 4.3: Age Bracket 34

Table 4.4: Marital Status 35

Table 4.5: Level of Education 36

Table 4.6: Number of deliveries. 36

Table 4.7: Attendance of ANC clinics during last pregnancy 37

Table 4.8: Number of antenatal care visits during last pregnancy. 38

Table 4.9 Gestation period in which ANC clinic attendance was started. 39

Table 4.10: Place of delivery 39

Table 4.11: Skilled Post-partum care. 40

Table 4.12: Length of waiting time for services. 41

Table 4.13: Satisfaction with explanation for long waiting time for services 42

Table 4.14: Influence of length of waiting time for services on utilization of maternal and neonatal healthcare services 42

Table 4.15: Rating of length of waiting time for services 43

Table 4.16 : Influence of privacy in service delivery on utilization of maternal and neonatal healthcare services 44

Table 4.17: Level of satisfaction with privacy of service delivery 45

Table 4.18: Influence of service integration on utilization of ANC services 45

Table 4.19 : Level of satisfaction with integration of services 46

Table 4.20: Level of education 47

Table 4.21: Functional health literacy level..... 48

Table 4.22: Limitations of low education level 48

LIST OF FIGURES

Figure 1: Conceptual Framework that illustrates variable relationships 24

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	**:**	Acquired Immune Deficiency Syndrome
ANC	**:**	Antenatal Care
HIV	**:**	Human Immunodeficiency Virus
MCH	**:**	Mother Child Health
SDG	**:**	Sustainable Development Goal
WHO	**:**	World Health Organization
UNFPA	**:**	United Nations Population Fund
UNICEF	**:**	United Nations Children's Fund
UN DESA's	**:**	United Nations Department of Economic and Social Affairs
NCRC	**:**	National Crime Research Centre
SID	:	Society for International Development
SPSS	**:**	Statistical Packages of Social Sciences

ABSTRACT

This study sought to establish the determinants of utilization of maternal and neonatal health care services in Embakasi sub-county. The study focused on determinants of utilization of three aspects of maternal and neonatal health care services in Embakasi sub-county, namely number of antenatal care visits, skilled assistance during delivery and post-partum care for mother and newborn after delivery. Low levels of education of mothers, long waiting time for services, lack of privacy in service delivery and poor service integration are the key factors behind the low utilization of maternal and neonatal health care services in public health facilities in Embakasi sub-county. The adverse consequences of low utilization of maternal and neonatal health services are well documented in literature. They include high maternal and infant deaths, increased maternal related injuries and disabilities, high fertility due to unintended childbearing and disempowerment of women against access to sexual and reproductive health rights. Kenya has one of the highest maternal death rates in the world at 448 per 100,000 live births above the MDG target of 147 per 100,000 by 2015. Embakasi sub-county, in particular has frequently experienced maternal and newborn deaths despite the government of Kenya initiating a policy of free maternity services (FMS) in all public facilities in June 2013. The purpose of this study was to establish the determinants of utilization of maternal and neonatal health care in Embakasi sub-county. The level of utilization of maternal and neonatal health care services in the public health facilities in Embakasi were established. The study design employed was descriptive survey design, which was conducted among women seeking maternal and neonatal health care services in 4 public health facilities in the area. The target population was 1,870 mothers. A sample of 317 mothers for the study was obtained guided by Krejcie and Morgan table for determining sample size from a defined population. One structured questionnaire was used to obtain data from study participants and a structured interview guide was used to collect additional information from one health care personnel from each facility. The analysis of quantitative data was done using Statistical Package for Social Sciences while qualitative data was analyzed thematically and the findings presented in tables. The findings of this study showed that utilization of maternal and neonatal health care services is influenced by education level of mothers, waiting time for services, privacy in health care delivery and service integration. The study recommended that the hospitals should improve on the privacy of the sections of the facilities where MCH services are offered as well and increase in education of mothers and community sensitization campaigns as means of accelerating uptake of maternal health services. The government and policy makers should also employ more staff to improve health worker to client ratio with an aim of reducing the waiting time for services. Finally, the study recommended an improvement in service integration to ensure all MCH services are provided under one roof.

CHAPTER ONE
INTRODUCTION

1.1 Background to the study

World Health Organization report (2015), estimated that globally, 289 000 equivalent to about 800 women each day died during pregnancy and childbirth in 2013, a decline of 45% from levels in 1990. It suggested that most of them died because they had no access to skilled routine and emergency care. Izumi foundation (2013) reported that more than 4 million infants die each year worldwide. Approximately two-thirds of infant deaths occur during the first month of life, making the first days of a child's life critical to its survival and future health. According to the report, the immediate causes of newborn death include infection, complications related to premature birth, birth asphyxia, and congenital anomalies. Poor maternal nutrition, maternal reproductive tract infections, low birth weight, and access to health services also contribute to newborn deaths.

Africa accounts for a big chunk of global maternal deaths. In 2013 about 289,000 women worldwide died during pregnancy or childbirth, and of those deaths 62% occurred in sub-Saharan Africa. Trends in Maternal Mortality: 1990 to 2013. The report adds that in 2013, the maternal mortality ratio in developing countries was 230 women per 100,000 births, versus 16 women per 100,000 in developed countries. Globally, 3 million newborns die each year and there are 2.6 million stillbirths, with Africa accounting for more than half of both numbers.

Kenya Demographic Health Survey (2008/09) In Kenya, maternal mortality remains high at 488 maternal deaths per 100,000 live births. While this is below the Sub-Saharan average of 640 deaths per 100,000, Kenya experiences a very slow progression in maternal health. Many of these deaths could have been averted if women had timely access to skilled attendance and essential obstetric and neonatal care. UNFPA (2015) a recent analysis by the University of Nairobi showed that 98 per cent of these deaths are concentrated in just 15 of the country's 47 counties. These 15 counties include Garissa, Homa Bay, Isiolo, Kakamega, Kisumu, Lamu, Mandera, Marsabit, Migori, Nairobi, Nakuru, Siaya, Taita-Tavet, Turkana and Wajir.

The Government of Kenya took action to address this problem by initiating a policy of free maternity services (FMS) in all public facilities in June 2013 and the First Lady of Kenya spearheaded the 'Beyond Zero' campaign, which has drawn national attention and resources to the cause of preventing maternal mortality. With these efforts in place only 44 per cent of Kenyan women give birth in the presence of skilled health personnel, who are able to address complications. Only 39 per cent of women use modern methods of birth control, which, by allowing women to space and plan their pregnancies, reduces the risk of maternal death and 106 girls give birth out of every 1,000 girls aged 15 to 19. UNFPA (2014).This policy though faces many challenges such as inadequate funding, little investment in new infrastructure, lack of equipment and low staffing. Kenya National Commission for Human Rights (2013). This has led to a decline in number of women seeking these essential services.

Regions in Nairobi that have high maternal and neonatal mortality rates include Kibra, Embakasi, Kamukunji, Makadara, Madhare and Ruaraka. PSRI & UNICEF, 2008). Embakasi sub-county is characterized by high levels of fertility, neonatal and maternal mortality rates. The KDHS (2008) report shows maternal mortality rates for Embakasi as 6.5. This means that women are exposed to risks that can be fatal with each pregnancy and delivery.

The rapid urbanization in Kenya at an annual rate of 4% has been characterized by the mushrooming of urban informal settlements in the last two decades. The public healthcare systems have not been able to keep up with this rapid growth thus have not been able to cater for the health needs of those in the informal settlements such as majority living in Embakasi sub county in Nairobi, Kenya. According to Magadi (2010) Embakasi has eight slums which include Dandora, Embakasi, Kariobangi, Mukuru, Njiru, Ruai, Umoja and Soweto. According to the 2009 Kenya Population and Housing Census, KPHC (2009), Embakasi Sub-county, then known as Embakasi division has a total population of 925,775. Of these, 468,097 (50.56%) are male while 457,678 (49.44%) are female. The sub-county covers a total area of 203.63 Square Kilometers. According to Abdhala *et al* (2009), given the pervasive poverty and lack of quality health services in the slum areas, the maternal mortality situation in this setting can only be expected to be worse.

The adverse consequences of low utilization of maternal and neonatal services are well documented in literature. They include high maternal and infant deaths, increased maternal related injuries and disabilities, high fertility due to unintended childbearing and disempowerment of women against access to sexual and reproductive health rights. Results from Kenya's social atlas survey that was carried out in 2014 shows that Embakasi sub-county has a maternal mortality rate of 795 per 100,000 births against the national rate of 488 per 100,000 live births, (KNBS 2014). Further, only 38.1% of births are delivered at a health facility against the national average of 44%. Additionally, only 63.1 percent of the children are fully immunized against a national average is 83%. Among married women in the reproductive ages (15-49 years), only 20% are using contraceptives against a national contraceptive prevalence rate of 45%. Little is known why the uptake of these key maternal services is so low and scanty research has been done to systematically document the underlying factors. This gap formed the starting point of this study. This study therefore sought to establish the determinants of utilization of maternal and neonatal health care services by mothers in Embakasi sub-county, Nairobi.

1.2 Statement of the problem

The maternal mortality ratio in Kenya is unacceptably high. According to the World Bank report (2015) there were 510 maternal deaths per 100,000 live births and the infant mortality rate stood at 37 deaths per 1000 live births in 2014. This indicates that Kenya has challenge in tackling maternal and neonatal health care in the country. According to UNFPA (2015) a recent analysis by the University of Nairobi showed that 98 per cent of these deaths are concentrated in just 15 of the country's 47 counties in which Nairobi is part hence making Embakasi sub-county in Nairobi an ideal area of study.

According to the study done by Monica Magadi (2004) Embakasi division had the lowest proportion of health facility deliveries in Nairobi with only 41% of women delivering in a health facility under skilled assistance. The study further indicated that there are eight slums in Embakasi sub-county and an approximately total population of 927,482. UNEP (2015). According to Abdhala *et al* (2009), given the pervasive poverty and lack of quality health services in slum areas, the maternal mortality situation in this setting can only be expected to be

worse. Kanyiva *et al* (2014) Women living in the slums of African cities such as slums of Embakasi in Nairobi report low levels of utilization and maternal and neonatal health care services.

The 2008-09 KDHS found that less than half (47 percent) of all pregnant women in Nairobi make the WHO recommended four or more ANC visits per pregnancy. Only 60 percent of urban women make four or more ANC visits compared with less than half (44 percent) of rural women. The data further show that most women do not receive antenatal care early in the pregnancy; only 15 percent of pregnant women obtain antenatal care in the first trimester of pregnancy; the median number of months at first visit is 5.7, (KNBS, 2010). The report further adds that despite improved antenatal care attendance in Embakasi sub-county, the rate of delivery in a health facility is low. Only 42 percent of live births in the five years preceding the 2008-09 KDHS took place in a health facility.

Embakasi sub-county thus remains vulnerable to the access of quality maternal and neonatal health care due to high informal settlements within its boundaries. Abdhala *et al* (2009) found that utilization of maternal and neonatal health care progress is further complicated by the fact that there are only five Maternal and Child Health Support facilities, covering a female population of 457,678. The five health facilities are Mama Lucy Kibaki Hospital, Kayole I, Kayole II, Mukuru Health Centre and Diwopa Health Centre. Even though maternal and child health care infrastructure in these facilities has improved over time as a result of various interventions by the government and other non-state actors, many women are still unable to attend the recommended number of ANC visits, access skilled assistance during delivery and attend required post-partum services after delivery. This study therefore sought to identify the determinants of utilization of maternal and neonatal health care services among mothers in Embakasi Sub-county and offer some recommendations for action.

1.3 Purpose of the study

The purpose of this study was to establish the determinants of utilization of maternal and neonatal health care services by mothers in Embakasi sub-county.

1.4 Objectives of the study

The study was guided by the following specific objectives.

1) To establish how level of education of mothers influences utilization of maternal and neonatal health care services by mothers in Embakasi sub-county.
2) To examine the extent to which length of waiting time for services influences utilization of maternal and neonatal health care services by mothers in Embakasi sub-county.
3) To examine the extent to which privacy in service delivery influences utilization of maternal and neonatal health care services by mothers in Embakasi sub-county.
4) To establish how level of service integration influences utilization of maternal and neonatal health care services by mothers in Embakasi sub-county.

1.5 Research questions

This study was guided by the following research questions:

1) How does level of education of mothers influence utilization of maternal and neonatal healthcare services by mothers in Embakasi sub-county?
2) To what extent does length of waiting time for services influence utilization of maternal and neonatal healthcare services by mothers in Embakasi sub-county?
3) To what extent does privacy in service delivery influence utilization of maternal and neonatal healthcare services by mothers in Embakasi sub-county?
4) How does level of services integration influence utilization of maternal and neonatal healthcare services by mothers in Embakasi sub-county?

1.6 Significance of the Study

Maternal mortality rates in Embakasi sub-county remain high and this study aims at contributing to better understanding of the factors that influence utilization of existing maternal and neonatal health care services by mothers in Embakasi sub-county, Nairobi. Seeking antenatal services on time by pregnant women helps detect complications and informs mothers on ways to care for themselves and the babies while skilled assistance during delivery decreases both neonatal and maternal morbidity and mortality.

Analysis of patterns of maternal health care utilization behavior in the sub-county is necessary in formulating relevant policies to address key differentials in maternal mortality. Therefore, this study is not only beneficial to women but also policy makers.

A better understanding of the utilization of all maternal health care services will aide in attaining national maternal mortality goals as articulated in various strategies and vision 2030 hence contributing to the achievement of SDGs 3 and 5.

1.7 Limitations of the study

The greatest limitation encountered during the study was language barrier for the mothers who were either illiterate or unable to read and write in English. This was addressed by interviewing the mothers who were not able to fill the questionnaires. The interviews were conducted in English or Kiswahili depending on the language the mother was conversant with. The other challenge that was encountered was fear of victimization especially when the participants reported weaknesses in the services. This was mitigated by assuring the participants that the study was purely for academic purposes and was not meant to punish or victimise anyone and that they were not to indicate their particulars on the questionnaire or interview schedule.

1.8 Delimitation of the Study

The study focused on establishing the determinants of utilisation of maternal and neonatal healthcare services among women of reproductive age in Embakasi sub-county. It did not consider other health care services offered to mothers. However, because it would not have been practical to cover all the women population in the sub-county, sample was taken from various public health facilities in Embakasi sub-county with a population of 1,870 women who had benefited from maternal and neonatal health care programs in the sub-county. Finally, this study focuses on Embakasi sub-county only; therefore, its findings and conclusions cannot be generalized to other sub-counties in Nairobi or to the entire country.

1.9 Assumptions of the study

The study assumed that the mothers who sought maternal and neonatal health care services in public health facilities within Embakasi sub-county were all residents of the area and hence their responses would be relevant to objectives of this study. It was further assumed that the respondents would be cooperative, truthful (objectivity) and trustworthy in their responses to the research instruments and would be available to respond to the research instruments on time.

1.10 Definitions of Significant Terms as Used in the Study

Embakasi Sub-county is one of the decentralized units through which county government of Nairobi, Kenya provides functions and services.

Level of education of mothers refers to a measure of a mother's formal education level. It also refers to the highest level of education attained by mothers.

Maternal health care services are services offered to a woman during pregnancy, at childbirth and the postpartum period to guarantee well-being of both the mother and the child.

Neonatal health care services refers to the health services provided to the child under 28 days of age, this being the period when the child is at the highest risk of dying.

Privacy in services delivery is the use of screens and other physical barriers to ensure that other people do not see clients during service provision. It also refers to the practice of ensuring confidentiality of client information and only authorized people can access the documents.

Level of Service integration is the extent to which all mother-child-health services are offered within one department or under one roof.

Utilization of maternal and neonatal health care services means the extent to which mothers and their new-borns use particular service in a specific period of time. In the case of ANC, it refers to the number of ANC visits that a mother makes during one pregnancy. In the case of new-borns, it refers to the number of visits provided to a child under 28 days of age.

Length of waiting time for services refers to the time it takes a client between arrival at the maternal and child health clinic and the time she starts receiving the services. It also refers to the number of hours client waits in the queue before receiving services.

1.11 Organization of the Study:

This study has been organized into five chapters; Chapter one consists of introduction and, background to the study which provides an overview of the components of the Study. This includes the development of context by providing background information and a summary of the state of existing research on the challenges facing maternal and neonatal health care. Purpose of the study, statement of the problem, objectives of the study, justification of the study, limitation of the study, delimitation of the study, definition of significant terms and the structure of the study. In Chapter Two, the literature review is organized into two broad categories which include an analysis of published information related to the objectives of the study as well as discussion of the theoretical framework in which theory of health promotion is reviewed in relation to the study. Chapter Three presents the steps which were followed to meet the objectives of the study. Chapter Four provides a summary of the data collected. The chapter is organized in sub-sections: first, in the instrument return response rate, the trends are explained using percentages, tables, figures and descriptions of data, to present the findings of the study. The findings are presented as per the objectives and research questions. Chapter Five presents the summary of the findings as well as discussions of the research findings.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter gives a brief review of literature in the area related to the present study. The studies reviewed helped to design this study and avoid pitfalls. Additionally, the findings of the previous researchers were utilized to substantiate and support the interpretation of the result of the present study. Literature for this study was sourced from secondary sources. An intensive survey of the literature related to the present work was done by referring to a number of journals, encyclopedias, books, abstracts, and national level publications. The literature review is organized under the following broader themes: Broader causes of maternal and neonatal mortality; overview of challenges facing maternal and neonatal heath care; theoretical framework; theory of health promotion and the conceptual framework.

2.2 Overview of Utilisation of Maternal and Neonatal Health Care Services

Previous studies have shown that the utilization of maternal health care services in developing countries has significant consequences for both the safe transition of the mother through pregnancy and child birth, and the survival and health of the child during early infancy, (Khan, 2007).

In spite of the importance of maternal care, poor access to and low utilization of such services continue to be important determinants of maternal mortality and morbidity throughout the world, (Mekonnen, 2003). Despite the benefits of maternal healthcare services, many women in developing countries do not receive pre-natal care at all, and the care that is received is often characterized by an insufficient number of visits timed late into the pregnancy. Furthermore, the delivery care utilized in most developing countries is dominated by homebirths. Hence, high-risk pregnancies are often not identified, obstetric histories are ignored, opportunities for transmitting family planning messages are missed and important information on child nutrition and healthcare is not disseminated to a large proportion of mothers. Previous literature has documented an urban-rural dichotomy in child health and survival and the utilization of maternal healthcare in developing countries, (Madise and Diamond 1996, 1997; Stephenson, 1998).

According to report released by WHO, UNICEF, UNFPA and the World Bank, the number of women dying due to complications during pregnancy and childbirth has decreased by 34% from an estimated 546 000 in 1990 to 358 000 in 2008. Between 1990 and 2008, the majority of the global burden of maternal deaths shifted from Asia to Sub-Saharan Africa. Differential trends in fertility, the HIV/AIDS pandemic and access to reproductive health are associated with the shift in the burden of maternal deaths from Asia to Sub-Saharan Africa.

Women especially among the rural and urban poor population characterized by lack of access to affordable, quality delivery services, lack of sufficient primary health care and antenatal care, is a major cause of maternal mortality. Several provinces in Kenya, such as Western and Nyanza, report low use of doctors, and over one quarter of women in North Eastern do not get any antenatal care at all, (KNBS,2008/2009).

Maternal mortality tends to be highest in regions with poor health indicators and higher poverty level. Maternal health in Kenya is further restrained by women's lack of resources for seeking health care, low level of education, gender inequalities and lack of decision-making power. Critical delays are also caused when communities are not aware of the signs of life threatening complications and/or when women are delayed in making the decision to seek services, suggesting the importance of providing information, and sensitizing communities to improve health-seeking behavior, Wendy *et.al* (2000).

Scott (2010) attributes neonatal mortality defined as death to a live-born baby within 28 days of life, in Sub-Saharan Africa to three major causes: infection, asphyxia and prematurity. The most common type of infections causing mortality are bacterial such as group B streptococcus (GBS), often acquired during labor, but infections causing mortality also may include malaria, syphilis, and tetanus. Neonatal asphyxia is predominantly caused by maternal complications such as abruption, or preeclampsia. Among preterm infants, conditions that contribute to mortality include respiratory distress, intra-ventricular hemorrhage and infections.

2.2.1 Utilisation of Antenatal care services

Antenatal care (ANC) refers to the regular medical and nursing care recommended for women during pregnancy. Furthermore, it is a type of preventive care with the goal of providing regular checkups that allow doctors or midwives to prevent, detect as well as treat potential health problems that may arise in women during pregnancy (WHO, 2005). ANC service offers a woman advice and relevant information about appropriate place of delivery depending on the woman's condition and status of pregnancy. It also offers opportunity to inform women about the potential danger signs and symptoms which require prompt attention from a health care provider. Furthermore, ANC may assist in abating the severity of pregnancy related complications through monitoring and prompt treatment of conditions aggravated during pregnancy, such as pregnancy induced hypertension, malaria, and anaemia which put at risk both the life of the mother and unborn baby (Bloom *et al*, 1999); (Bhatia and Cleland, 1995).

ANC if well conducted among pregnant women is one of the most important factors in reducing maternal mortality and morbidity. Good care during pregnancy is important for the health of the mother and the development of the unborn baby (Lincetto *et al.*, 2006). Pregnancy is a crucial time to promote healthy behaviors and good parenting skills. Good ANC acts as a linkage between the woman and her family with the formal health system while at the same time increases the chance of using a skilled attendant at birth and contributes to good health through the life cycle. Inadequate care during this time breaks a critical link in the continuum of care, and affects both women and babies (Lincetto *et al*, 2006).

Unfortunately, many women in developing countries still do not receive such care. Reports from some countries in Asia show that a high utilization rate of ANC services results in lowering the risk of maternal mortality (UNICEF, 2008). For example, in South East Asia in 2000–2006, based on the ANC coverage among five countries, Thailand had the highest rate at 98%, whereas Laos had the lowest at only 27%. The highest rates after Thailand were: Viet Nam (91%), Myanmar (76%), and Cambodia (69%). According to the 2005 statistics of Maternal Mortality in South East Asia, Laos, which had the lowest ANC utilization rate, had the highest maternal mortality rate at 660 per 100,000 live births (WHO, 2007).

According to Lincetto *et al* (2006), ANC coverage is a success story in Africa, since over two-third of pregnant women (69 percent) have at least one ANC contact during the course of their pregnancy. However, to achieve the full life-saving potential that ANC promises for women and their babies, four visits providing essential evidence based interventions – a package often called focused antenatal care (FANC) – are required. Antenatal care is free in South Africa's public health system and nearly all pregnant women and girls attend antenatal clinic at least once during their pregnancy (Amnesty International, 2014). However, most pregnant women do not access antenatal care until the latter stage of pregnancy. Such delays have been linked to nearly a quarter of avoidable maternal deaths in South Africa.

To promote god health and survival of mothers and their babies, Kenya adopted the WHO focused ANC package that promotes interventions that addresses the most prevalent health issues that affect mothers and newborns (Villar *et al*, 2001). The major goal of focused ANC according to Harriet and Onyango-Ouma (2006) is to help women maintain normal pregnancies through: Targeted assessment to ensure normal progress of the cycle of child bearing and newborn period, and to facilitate early detection of pregnancy related complications, chronic conditions, and other problems or potential problems that can have negative effect on the pregnancy and; Individualized care to help maintain normal growth progress, including preventive measures, supportive care, health messages and counselling (including empowering women and families for effective self-care), and birth preparedness and complication readiness planning. For women whose pregnancies are progressing normally, WHO recommends a minimum of four ANC visits- ideally, at 8 to18 weeks, 24-26 weeks, 32 weeks and 36-38 weeks. Each visit should include care that is appropriate to both the overall condition and stage of pregnancy.

According to KNBS and ICF Macro (2010), ANC is most beneficial in effective prevention of advance pregnancy outcomes when it is sought early in the pregnancy and is continued through to delivery. According to a study by Chuma and Thomas (2013), only a minority of pregnant women (36%) make the required minimum of four ANC visits in public health facilities in Nairobi. This is lower than what was reported in the 2008 Kenya Demographic and Health Survey (KDHS) which estimated that 47 percent of pregnant women in Nairobi

attend at least four ANC visits. The difference is however expected considering that the data presented by Chuma and Thomas only relate to those women seeking ANC in public health facilities. According to the 2008 KDHS, 16 percent of pregnant women seek ANC from the private sector (KNBS and ICF Macro, 2010). In Embakasi sub-county, only 18.3% of women achieved the minimum 4 antenatal visits recommended by WHO (UNFPA, 2015).

2.2.2 Utilisation of Skilled assistance during delivery

A significant proportion of mothers in developing countries still deliver at home unattended by professional health workers. In diverse contexts, individual factors including maternal age, parity, education and marital status, household factors including the size of the family, household wealth, and community factors including socioeconomic status and distance to and from health facilities determine place of delivery and these factors interact in diverse ways in each context to determine eventual place of delivery. Odhiambo *et all* (2006) looked at antenatal care and delivery care among women in Western Kenya and demonstrated that among other factors, older women, high parity, lower socioeconomic status, low education levels and more than an hour walking distance were associated with delivery outside health facilities in the area.

Studying poor urban dwellers in Nairobi, Fosto *et al* (2009) found from that wealth, education, parity, place of residence were associated with place of delivery. Oduk (2006) demonstrated that these factors together with marital status and age at birth of last child determined use and timing of first Antenatal Care (ANC) visit and type of delivery. In Kenya, maternal mortality rate has not reduced over recent years, and may even have increased from an estimated 380/100000 live births in 1990 to 530/100000 live births in 2008. Although a number of factors may have contributed to this, including improved identification of maternal deaths, health facility delivery remained low at 44% and 42.6% in the early 1990s and in 2008 respectively, (KDHS,2008) . This is against the UNICEF (2008) recommendation of 100% hospital delivery, required to ward off any health effects of child birth and hence to reduce the rate of maternal and child deaths through delivery.

Recent evidence on determinants of place of delivery in Kenyan utilizing a nationally representative data and controlling for all factors is lacking, yet understanding the influences on place of delivery in Kenya is crucial to identifying key priority areas for policy and practice to increase the prevalence of skilled assisted deliveries.

2.2.3 Utilisation of skilled post-partum care

Post-partum care is a care provided to women and their babies within 42 days after delivery, A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery, and these first two days following delivery are critical for monitoring complications arising from the delivery,(WHO,2014).World Health Organization recommends that after an uncomplicated vaginal birth in a health facility, healthy mothers and newborns should receive care in the facility for at least 24 hours after birth. If birth is at home, the first postnatal contact should be as early as possible within 24 hours of birth. At least three additional postnatal contacts are recommended for all mothers and newborns, on day 3 (48- 72 hours), between days 7-14 after birth, and six weeks after birth (WHO, 2014).

The postpartum period is one of the most vulnerable times in a woman's reproductive life cycle. In developing countries, over 60% maternal deaths occur during this period. Approximately 30% -40% of maternal deaths in Africa are due to hemorrhage, mostly in the postpartum period. According to WHO (2007) an estimated 70% of women in sub-Saharan Africa do not receive postpartum care services. In addition, an estimated 45% of maternal deaths occur within first 24 hours of delivery and another 23% occur on days 2-7. Four postpartum care visits are recommended for the health and well-being of mother and newborn soon after delivery (WHO, 2007).

Postnatal care Focused Postnatal Care (FPNC) is globally accepted as a key to improving maternal health and reduces mortality rates. Studies have shown that one maternal death occur per minute globally (WHO 2007, P.I). Further, developing regions accounted for 99% (533,000) of these maternal deaths, with sub-Saharan Africa and Southern Asia accounting for 86% of the deaths (UN 2008). These studies have also noted that about 75% of maternal deaths occur in the first week after delivery within developing countries; Kenya included accounting for 60% of

these deaths (WHO, 2006). The majority of women in developing countries receive almost no postpartum care. For example, within the poor countries and regions, such as those in Asia and sub-Saharan Africa only 5% of women receive postnatal care (Safe Motherhood, 2002). Since most maternal deaths occur during delivery and the postpartum period due to complications, the first week after delivery is the most critical time in the postnatal period, with most complications occurring within the first two days. WHO recommends integrated postnatal care that includes; prevention of complication of mother and baby including vertical transmission of diseases from mother to baby, early detection and treatment of problems and complication readiness, provision of care to the mother and baby by skilled attendant, assist the mother and her family to evaluate, develop personalized postnatal care plan, counseling for HIV and testing, counseling for contraception (birth spacing) and resumption of sexual activity, health promotion using health messages and counseling, referral of mother and baby for special care where necessary (WHO, 2006). Effective care during the first week postpartum -especially during the first 24 hours is essential to maximize survival of mothers and newborns. Access to postnatal care and proper understanding of utilization of health care during the postnatal can reduce maternal mortality.

A study conducted among women in urban slums of Nairobi by Odhiambo (2008) on utilization of post-partum care services reported that, the utilization of PNC services is low in Kibera, Mukuru, Kayole, Madhare and Ziwani, with only 21% of the new mothers receiving the 4 recommended PNC visits. Similarly, only 17% of mothers received their first postnatal check-up within two days of delivery. The reason is due to their low social status, poverty and ethnicity which are prevalent in the areas. The social-cultural practices around childbirth such as maternal seclusion after delivery and cultural beliefs in a community play a vital role in underutilization of PNC services in Kenya. In Botswana, it has been reported that although 47 percent of women attended antenatal care at health facilities, 82 percent gave birth at home and none attended postnatal care services (Chipakacha, 2014). This is due to cultural beliefs such as maternal seclusion.

2.3 Level of Education of mothers and utilisation of maternal and neonatal health care services

Maternal education has been shown repeatedly to be positively associated with the utilization of maternal and neonatal health care services (Addai, 2000; Addai, 2008; Akin and Munevver, 2006; Beker *et al*., 2003; Celik and Hotchkiss, 2000; Ferdnandez, 2004; Stewart and Sommerfelt, 2001). Although, in general, women in higher socioeconomic groups tend to exhibit patterns of more frequent utilization of maternal health services than women in the lower socioeconomic groups, factors such as education appear to be important mediators in ensuring mothers adopt maternal care (Addai, 2000;Addai, 2008; Leslie and Gupta, 2009).

Mother's education has been seen to greatly influence health care utilization in general. For instance, in a study in Kenya, using Demographic Health Survey (DHS) data, Oduk (2015) found quantitatively important and statistically significant effect of mother's education on the use of antenatal care, delivery services and post-partum care. In a study on inaccessibility and utilization of antenatal health-care services in public facilities in Nairobi, Hadi *et al* (2007) reported that years of schooling have a significant positive influence at both moderate and adequate levels of services. Researches by Caldwell *et al* (2003) and Raghupathy (2006) on the role of education in the use of health services by women present similar results.

Literacy has been shown to be complementary to health services. Studies of African states have noted that literate mothers utilize modem health services more than do illiterate mothers and saw this as a way in which literacy led to lower infant and child mortality. Jared (2004) Comparing differentials in infant mortality among states in rural Kenya, concluded that adult female literacy affects infant mortality primarily through its association with better medical care at birth of the child (and perhaps during the prenatal period), and secondarily due to its association with preventive and curative medical care during the post-natal period. Nagi (2005) comparing the rural and urban societies in Kenya, noted that, although there is little difference between these states in the availability of medical facilities, the people in urban areas use medical facilities much more than in rural settings, and that a major factor appears to be the higher literacy in the

urban areas, particularly among females, which likely increased awareness about the need and right to use public facilities. In rural India, Caldwell *et al* (1983) showed that some education was necessary for a person to feel any identification with modern as distinct from traditional curative measures and that with increased schooling parents were more likely to bring sick children to health services, to follow the suggested treatment properly, to persist sufficiently long with treatment, and to report back to the health service if a cure was not being effected.

An analysis of data from UNFPA (2014) report suggested that the gain in life expectancy at birth was 20% when the sole intervention was easy access to adequate health services for illiterate mothers, 33% when it was education without health facilities, but 80% when it was both. It was reported that an educated mother is more likely to be listened to by doctors and nurses, and she can demand their attention even when their reluctance to do anything more would completely rebuff an illiterate. These studies imply that it is not the availability of health facilities alone that determines health as much as their utilization and it is by encouraging their use that literacy plays a critical role. His distinction may account for not only some of the power of literacy, but also the lack of significance of the availability of health facilities in some analyses. Other studies have suggested that health services may also act as substitutes for widespread literacy. Otieno *et al* (2004) analysis of household records from the 2009 Kenyan Population Census suggested that urban public health activities are substitutes for the health care knowledge and the management capacity that an educated mother brings to her family. The study in presenting relationships between years of mother's education and child mortality in Kenya, noted that not only is the national level low, but that differences on account of education are much lower between educated and un-educated women.

2.4 Length of waiting time for services and utilisation of maternal and neonatal health care services

Availability of health care services is defined both as a treatment that is delivered at a time convenient for the patient, and as the availability of professional help in the area and at the time of need (UNICEF, 2011). From this definition, it can be concluded that individuals who experience too long waiting time may fail to access health services. Several studies have shown

that long waiting times are a barrier to utilization of maternal and neonatal health care services (Chowdhury *et al*, 2003; Mathole *et al*, 2004).

Studies show that mothers avoid health care services and in effect nullify their preventive care. They can be put off by long waiting times among other factors (UNICEF, 2011). A study conducted in Vietnam among doctors and midwives revealed that long waiting times due to very detailed record taking was a barrier to sexual and reproductive health service delivery. According to Klingberg-Allvin *et al* (2006), this was a general problem but acted as a barrier particularly for adolescent clients as they were concerned about the need to remain anonymous and had a desire for the procedures to be completed as quickly as possible.

Long waiting periods did upset some women in Viet Nam and they felt unable to question this because of their lower status (Nguyen *et al*, 2007). A cross-sectional survey conducted in Laos among female sex workers revealed that one of the main barriers to service use (sexually transmitted infection treatment services) was long waiting time (Ketkesone *et al*, 2012). In a quantitative study in Bogra District in northern Bangladesh investigating client satisfaction with a number of health services, including family planning and maternal services, multivariate analysis revealed that length of waiting time was negatively associated with client satisfaction (Aldana *et al*, 2001). Another study, conducted in Pakistan, found long waiting times, unaffordable costs, and negative attitudes on the part of providers as barriers to youth seeking health care (Ali and de Muynck, 2005).

In South Africa, both health care providers and clients agree that effective provision of comprehensive services is hindered by a host of logistical problems. Common constraints expressed include shortage of human resources and high case loads which lead to longer waiting times and loss of clients (Farzana *et al*, 2012). In Kenya, most of the patients' suggestion offered on improvement of services are about reduction of waiting time and availability of drugs for treatment (Luoma *et al*, 2010). A study by Kizito (2016) revealed that long waiting time before patients see a specialist, receive consultation and access the associated procedures are now endemic in Kenyan public hospitals. Numerous detrimental factors therefore come into play

when waiting lists become very long including the additional administrative support required as well as increased mortality and morbidity rates.

2.5 Privacy in service delivery and utilisation of maternal and neonatal health care services

Medical privacy or health privacy is the practice of maintaining the privacy and confidentiality of patient records and information. This involves both the conversational discretion by health care providers and the security of medical records. The terms can also refer to the physical privacy of patients from other patients and providers while in a medical facility, (Robling *et al*, 2004).

In health service provision, privacy and confidentiality is of paramount importance to the clients and health workers. Privacy and confidentiality includes use of screens and ensuring client information and documents are only accessed by authorized people (CHAK, 2011). Health professionals have long realized that confidentiality is crucial for certain sensitive topics like reproductive health and mental health. In situations where services are not discrete or are already stigmatized, clients may find it difficult to seek care (Nare`*et al*, 1997).

The significance of privacy and confidentiality in health care settings as basic human rights was emphasized at the 1994 International Conference on Population and Development (ICPD, 1995). Cohen (2002) underscored the importance of privacy and confidentiality. They noted that most clients are eager to talk about their health concerns with a physician if assured that the information will remain confidential. A study conducted in Vietnam in clinics, which provide post abortion care indicated that clients were treated respectfully but there was lack of privacy (Klingberg-Allvin *et al*, 2006). Lack of privacy at public clinics was seen as prohibitive to adolescent clients and was believed to make many of them choose private clinics instead.

In a quantitative study in Bogra District in northern Bangladesh investigating client satisfaction with a number of health services, including family planning and maternal services, multivariate analysis revealed that attention to privacy was a powerful predictor of client satisfaction (Aldana *et al*, 2001). Women visiting the clinic for maternal or reproductive issues were

especially likely to report privacy as important. However, privacy was achieved for less than half of these individuals. Another study by Mohammad-Alizadeh *et al* (2009) on Iranian family planning services, there were diverging views about the degree of privacy at different clinics. No clear pattern emerged, but lack of privacy was perceived to exist in clinics in all income areas, whether due to space limitations (where more than one provider had to share the same room) or simply thoughtlessness.

In a study conducted in Northern Kenya by Asim (2004) on determinants of utilization of ANC services by Muslim women, it was reported that although Muslim women do want to receive skilled ANC care in a health facility, they often have trouble with accessing and using such services. These difficulties were attributed to lack of privacy, healthcare providers' insensitivity and lack of knowledge about Muslim women's religious and cultural practices, and health information that lacked the cultural and religious specificity to meet Muslim women's maternity care needs.

Additionally, in a study conducted in Kenya by Birungi and Onyango-Ouma (2006) on acceptability and Sustainability of the WHO Focused Antenatal Care package, it was further reported that only one-third of the consultations in the clinics ensured privacy and confidentiality. This calls for more investigation and intervention to improve privacy in our health facilities.

2.6 Service Integration and utilization of maternal and neonatal health care services

To respond to the needs of pregnant women, ANC services must address multiple conditions directly or indirectly related to pregnancy, including malaria, nutrition deficiencies, STIs, HIV, and TB. ANC services should also provide required information and advice on pregnancy, childbirth, and the postnatal period, including newborn care. The most effective way to do this is through integration of programmes and availability of health care providers with a wide range of skills.

Integrated services refer to a package of preventive and curative health interventions for a particular group (WHO, 2008). It can also refer simply to multipurpose service delivery points.

International donors including the U.S. President's Emergency Plan for AIDS Relief and the World Health Organization (WHO), emphasize the need to expand the entry points to counselling and testing, which are also offered in ANC clinics, so that more people can know their HIV status (Fischer *et al*, 2007). This approach includes the incorporation of counselling, testing and other relevant information into clinical settings, where the primary reason clients seek services is for other health concerns.

In Zambia, researchers conducted a stepped wedge evaluation and found that integration of ANC and HIV services doubled the proportion of treatment-eligible women enrolling in HIV care, as well as doubling the proportion of treatment-eligible women initiating HAART while pregnant (Killam et al, 2010). In a study conducted in Kenya by Baotran *et al* (2011), it was established that integration of HIV/AIDS care into ANC clinic increased client satisfaction with the services.

Studies by Esendi *et al* (2010) on urban poor in Kenya found that poorly equipped health facilities in the slums and characterized by standalone services and lack of essential drugs and supplies often discouraged women from utilizing maternal services. Due to financial constraints, poor women in the slums resort to self-medication because they cannot obtain all the essential services in a single location. The 2005-06 Kenya Integrated Household Budget Survey showed that there is a higher incidence of self-diagnosis and visiting of kiosks to purchase medicines, especially in urban informal settlements where women feel that services are not available in same health facility. This has seen proliferation of unregulated and unregistered pharmacy kiosks in the various slums of Embakasi, notably Kayole and Mukuru. The study reported that women in these slums only visited a hospital only when faced with a serious illness that was life threatening.

In Mama Lucy Kibaki Hospital, antenatal care services are both partially integrated and provided in a standalone maternal and child health (MCH) clinic. The MCH clinic provides partially integrated services and mothers who are attending the first visit are normally sent to the laboratory for baseline laboratory tests. The more youthful pregnant women who require youth friendly services are also referred to youth friendly clinic. An interview

with the nursing officer in charge of MCH clinic indicated that due to shortage of clinicians, sometimes the doctor is not there and the pregnant women who are unwell are referred to the general outpatient department.

2.7 Theoretical Framework of the study

The theoretical background used in this study is based on the theory of health promotion to address the study objectives. Nola Pender (2002) developed the Health Promotion Model (HPM) that is used universally for research, education, and practice. The health promotion model focuses on helping people achieve higher levels of well-being. It encourages health professionals to provide positive resources to help patients achieve behavior specific changes. The goal of the HPM is not just about helping patients prevent illness through their behavior, but to look at ways in which a person can pursue better health or ideal health.

According to Pender (2002), the HPM makes four assumptions: Individuals strive to control their own behavior, Individuals work to improve themselves and their environment, Health professionals, such as nurses and doctors, comprise the interpersonal environment, which influences individual behaviors and Self-initiated change of individual and environmental characteristics is essential to changing behavior. According to the theory, past behavior, cultural traditions, and family traditions can impact a person's ability to engage in health-promoting behaviors. For example, in Kenya some religions deny people access to seek medical attention such as maternal and neonatal health care. Also People will pledge to participate in behaviors that they believe will produce anticipated health outcomes and that obvious and not-so-obvious barriers can hinder a person's promise to act on a specific behavior.

The HPM thus concludes that the health seeking behaviors of pregnant mothers are based on perceived benefits and costs, enabling and modifying factors that affect access to and utilization of maternal and neonatal health care services. These factors influence their decision to seek these services. According to the medical dictionary, health behaviour is defined as an action taken by a person to maintain, attain or regain good health and to prevent illness. In the context of this study, health behaviour is the activity undertaken by the mothers to seek antenatal care services which include identification and management of obstetric complications, tetanus

toxoid immunization, intermittent preventive treatment for malaria during pregnancy and identification and management of infections including HIV, syphilis and other sexually transmitted infections (STIs).

The relevance of this theory to the study is found in sense that people's behavior, commitments, values, norms, and beliefs encourage them to pursue better health or ideal health such as maternal and neonatal health care. In this case HPM can be used in solving challenges facing maternal and neonatal health care which are poverty, gender-based violence and gender inequality through promoting behavior change and perception towards health services. To achieve low levels of poverty, gender inequality and gender based violence, behavior change among people is key. Much literature has been discussed on how poverty, gender inequality and gender based violence are influenced by people's behavior and the effects of human behavior towards maternal and neonatal health care. Pender found that; Confidence in one's ability to perform a specified behavior increases the chances of continuous participation of such behavior, People's beliefs about their capabilities to perform a specific health behavior can result in a lesser amount of perceived barriers to such behavior, When a person receives positive encouragement concerning a behavior, they are more likely to feel confident in their abilities, thus resulting in health-promoting behaviors and increased positive reassurance and maintaining a positive attitude for a health-promoting behavior increases the probability of commitment to such behavior. HPM therefore would play significant role in promoting behaviors that would result to intake of health services such as maternal and neonatal health care among people and help in solving the challenges facing maternal and neonatal health care.

2.8 Conceptual Framework of the study

The focus of this study is to define the relationship between the dependent and the independent variables. In this study the independent variables include education level of mothers, waiting time for services, privacy of service delivery and integration of services while the dependent variables are the three aspects of utilization of maternal and neonatal health care services, namely, number of antenatal care visits, attendance to skilled assistance during delivery and number of post-partum care visits. Figure 1 shows how the variables of the study are related.

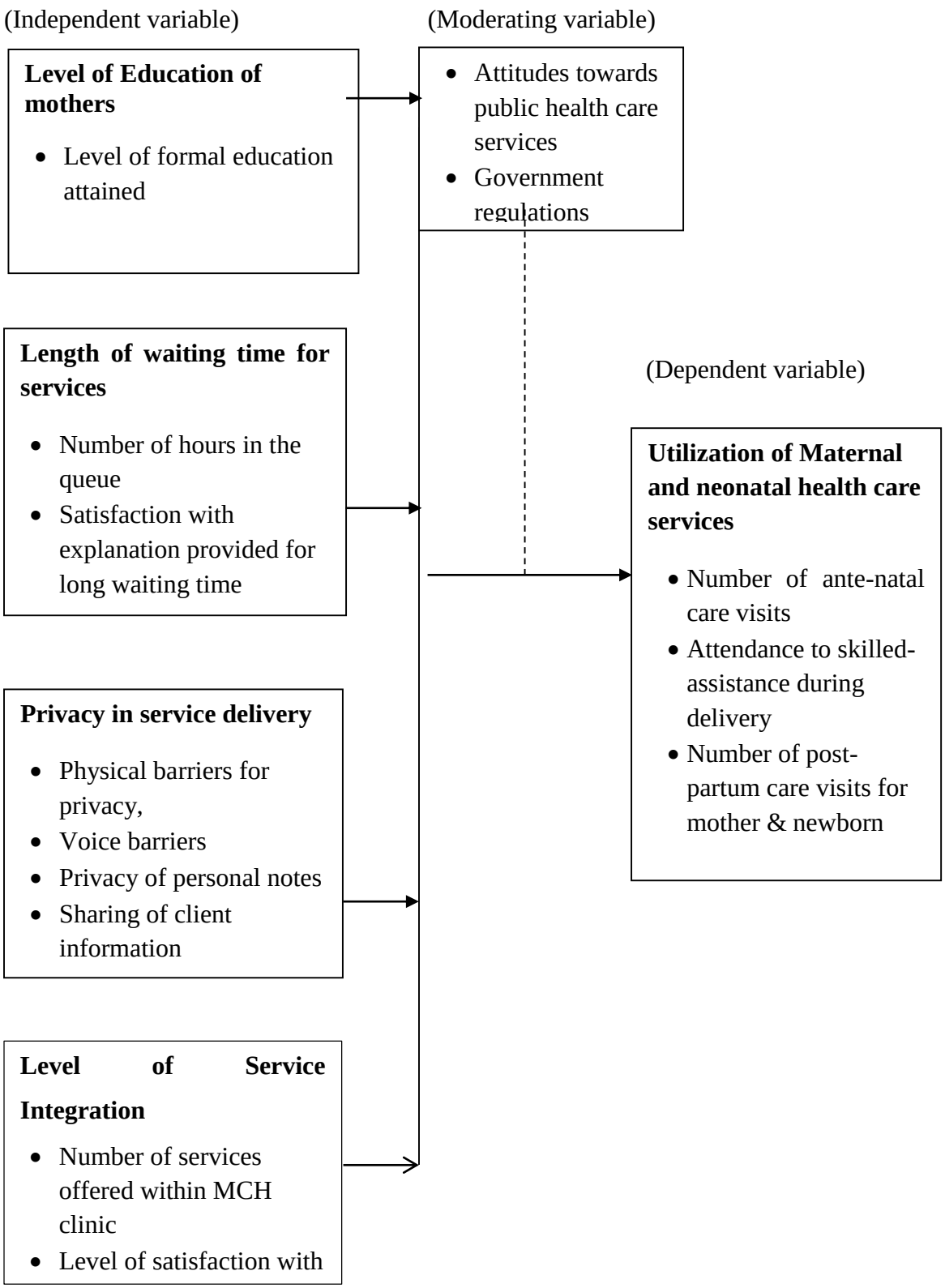

Figure 1: Conceptual Framework that illustrates variable relationships

In this study independent variables are the factors that are presumed to affect dependent variable. Independent variable are therefore factors that need to be put in place in order to improve the levels of utilization of maternal and neonatal health care services with a focus to Embakasi-sub county, Nairobi. The factors include education level of mothers, waiting time for services, privacy of service delivery and integration of MCH services.

Dependent variable (outcome) in this study is the utilization of maternal and neonatal health care services. Three aspects of utilization of maternal and neonatal health care services that were discussed include number of ANC visits, attendance to skilled assistance during delivery and number of post-partum care visits for mother and newborn. The level of utilization of the three variables will be determined by the independent variable as indicated. Moderating variables represent factors that may alter the impact of independent variables on dependent variable and for this particular study, perceived attitudes and perceptions towards services in public health facilities and existing government policies and legislations were identified as the moderating variables.

2.9 Research gaps

This chapter reviewed various literatures in relation to determinants of utilization of maternal and neonatal health care services. Various literatures reviewed are summarized in the table 2.1, Summary of Literature Review

Table 2.1: Matrix Table for Summary of Empirical Literature

Author (year)	Focus of the study	Findings	Knowledge gap
Lincetto *et al* (2006).	Opportunities for Africa's Newborns	Over two-thirds of pregnant women (69 percent) have at least one ANC contact.	There is low Utilization of ANC services in Kenya. Both studies do not however indicate the percentages per number of visits
KNBS and ICF Macro (2010).	Kenya Demographic and Health Survey 2010	47% of pregnant women in Kenya attend at least four ANC visits	
Chowdhury *et al*, (2003).	Skilled attendance at delivery in Bangladesh	Long waiting time discouraged women from utilizing ANC services in government clinics	There is also no information on relationship between Waiting time for services and utilization of maternal and neonatal health care services in Embakasi sub-county.
Aldana et al, (2001).	Client satisfaction and quality of health care in rural Bangladesh	Length of waiting time was negatively associated with satisfaction of users of maternal services.	
Hadi *et al* (2007	Effect of Education level of mothers on utilization of ANC Services in Kenya	Years of schooling have a significant positive influence at both moderate and adequate levels of services.	The study was limited to influence of education on utilization of ANC services. Did not provide information about other aspects of MCH care such as delivery and postpartum
Caldwell *et al* (2003)	The role of education in the use of health services by women.	Increased schooling parents were more likely to bring sick children for health services	Study did not indicate how each level of schooling influences utilisation of MCH services.

Privacy in service delivery and utilization of maternal and neonatal health care			
Klingberg- Allvin *et al*, (2006).	Perspectives of midwives and doctors on adolescent sexuality and abortion care in Vietnam	Lack of privacy at public clinics was seen as prohibitive to adolescent clients and was believed	The study focused on adolescent clients only.
Birungi and Onyango- Ouma (2006).	Acceptability and sustainability of the WHO focused antenatal care package in Kenya	Client privacy was sometimes Compromised	The other studies did not look at associations between privacy and utilization of services.
Aldana et al, (2001).	Client satisfaction and quality of health care in rural Bangladesh.	Privacy was positively associated with satisfaction of users of maternal services.	
Killam *et al* (2010).	Antiretroviral therapy in antenatal care to increase treatment initiation in HIV-infected pregnant women	Integration of ANC and HIV services doubled the proportion of treatment-eligible women enrolling in HIV care, as well as doubling the proportion of treatment-eligible women initiating HAART while pregnant	The studies were specifically on integration of HIV/AIDS services on ANC services. They did not consider other services like laboratory and youth friendly services.
Baotran *et al* (2011).	Patient satisfaction with integrated HIV and antenatal care services in rural Kenya	Integration of HIV/AIDS care into ANC clinic increased client satisfaction with the services	

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives a detailed outline of how the study was carried out. It describes the research design, the target population, the sample size and sampling procedure, research instruments, data collection procedures, data analysis techniques and ethical considerations.

3.2 Research Design

The study employed a descriptive survey research design. The approach is considered appropriate because the study involved fact finding and enquiries to assess the determinants of utilization of maternal and neonatal health care services in Embakasi sub-county. The design was suitable for this research since it provided qualitative and quantitative data collection methods of selecting samples to analyze and discover occurrences and allow generalization of findings. Survey design also yields maximum information and provide an opportunity for considering many different aspects of the problems.

3.3 Target Population

The study population targeted women of reproductive age seeking maternal and post-natal services in selected public MCH facilities in Embakasi sub-county, Nairobi. Target population consisted of 1,870 women who seek the services in these hospitals as per the recorded figures obtained from the County Ministry of Health records represents the average number of women who seek maternal and neonatal health care services in these facilities monthly. These facilities included Mama Lucy Hospital, Mukuru Health Centre, Kayole II Hospital and Diwopa Hospital. These women were considered appropriate for the research because they were considered to have understanding of the determinants of utilization of the maternal and neonatal health care services provided at these facilities. Additional information was obtained from two health care providers in each health facility who work in the MCH unit.

Table 3.1 Target population

HEALTH INSTITUTION	AVERAGE NO OF WOMEN WHO BENEFIT FROM MATERNAL AND NEONATAL HEALTH CARE SERVICES (MONTHLY)
Mama Lucy Kibaki Hospital	1600
Mukuru Health Centre	50
Kayole II Hospital	180
Diwopa Hospital	40
Total	**1,870**

Source: Department of Health, Embakasi-Sub County (2016)

3.4 Sample Size and Sampling Procedure

This section involves the sample size and sampling procedure

3.4.1 Sample Size

The sample size included 317 mothers visiting the maternal and child health clinics in hospitals. The number of mothers was derived from the Krejcie and Morgan table for determining sample size from a given population.

Table 3.2 Sample size

ORGANIZATION	POPULATION	%	SAMPLE
Mama Lucy Kibaki Hospital	1,600	18.0	271
Mukuru Health Centre	50	18.0	8
Kayole II Hospital	180	18.0	31
Diwopa Hospital	40	18.0	7
Total	**1,870**	**72.0**	**317**

Source: Department of Health, Nairobi County

3.4.2 Sampling procedure

Stratified random sampling technique was used to obtain a sample size from the population. According to Orodho, (2003), sample procedure is the most definite plan determined before any data is collected by obtaining a sample size from the population. Sampling is done because it is not possible to obtain information from the universe or the whole target population to answer the research question accurately. Stratified random sampling was used to draw the target population and provide the same results. The sample was drawn from women registered to receive maternal and neonatal health care in various public hospitals in Embakasi sub-county. The list was compiled in order to determine the totals. A simple random sampling was conducted to select the beneficiary who completed the questionnaire.

3.5 Research instruments

The study used structured and unstructured questionnaire and interview guides. The questionnaire was used to collect data from 330 respondents who were beneficiaries of maternal and neonatal health care and those who were unable to fill the questionnaires were interviewed. A structured questionnaire had questions that are accompanied by a list of all possible alternatives from which respondents selected the answer that best described their situation. The questionnaire was appropriate for this study because it is time saving in addition to ensuring uniformity in the way questions are asked. Brink (2009). The study used interview guides to collect data from the health personnel's from each of the hospitals. The interview guides had open-ended questions. Use of an unstructured interview was expected to produce more in-depth information on the health personnel's beliefs and attitudes, thus reinforcing data from the questionnaire for purposes of triangulation. The interview guides were administered on a face to face basis. According to Marshall and Rossman (1997) the less structured approach allows the interviews to be much more like conversations than formal events hence permitting the respondents' views to unfold.

3.5.1 Piloting of research instruments

Piloting test was conducted which helped to establish the reliability of the research instruments. According to Baker (1994) a sample size of 10-20% of the sample size for actual study is a reasonable number of participants to consider in a pilot study. Thabane, Ma, Chu, Cheng,

Ismaila, Rios, Robson, Giangregorio and Goldsmith (2010) are of the opinion that sample size calculations may not be required for some pilot studies however, it is important that the sample for a pilot be representative of the target study population. A sample of 31 beneficiaries of maternal and neonatal health care from public health facilities in the adjacent Kamukunji Sub-County was used in the piloting.

3.5.2 Validity of the research instruments

Validity refers to the extent to which a tool measures the items for which it is intended to measure. The data collection techniques must provide information that is not only correct but also relevant to the research questions. To guarantee validity of the research instruments, the questionnaire was discussed by the supervisor as well as experts in the field of maternal and neonatal healthcare. Secondly, a pilot study was carried out with 31 respondents from Kamukunji Sub-County in order to identify items that were ambiguous.

3.5.3 Reliability of the Instruments

Reliability is the consistency and dependability of a research instrument to measure a variable. Brink (2009). To ensure reliability of the research instrument, test retest was used. It involved administering the questionnaire to 31 women of reproductive age seeking maternal and neonatal health care services in a selected health facilities. After two weeks, the questionnaire was re-administered to the same group of people. Correlation between the two tests was calculated using Cronbach's Alpha formula. The result was found to be 0.8. Coefficient of 0.6-0.7 is a commonly accepted rule of thumb that indicates acceptable reliability and 0.8 or higher indicates good reliability, Tavakol and Dennick (2011). With this high correlation value of 0.8, the instrument was therefore considered reliable for data collection.

3.6 Data Collection Procedures

The researcher and 4 research assistants visited the public health facilities in Embakasi sub-county where the data was collected on maternal and neonatal health care. A rapport was created prior to the collection of the data. Data was collected using a self-administered questionnaire. and those who were unable to fill the questionnaires were interviewed. The researcher used questionnaires with checklist. Each item on the questionnaire was developed to address specific

objective of the study. The items on the questionnaire were structured and unstructured. The questionnaires were self-administered and the researcher and his assistants were present to clarify on any questions that were unclear to the respondents.

3.7 Data analysis techniques

After data collection, the raw data collected was systematically organised to facilitate analysis. Completed questionnaires were cross examined for both completeness and consistency. Descriptive statistics was used in data analysis. This entailed the use of frequency distribution tables and percentages to summarise the data on the closed ended items in the questionnaire. Data obtained from open-ended items in the questionnaires was categorized according to themes relevant to the study and presented in narrative form using descriptions. Analysis of data employed Statistical Package for Social Scientists (SPSS) software where descriptive statistics was generated.

3.8 Ethical Considerations

In this study, ethical consideration were made by identification of the researcher to the respondents, giving reasons why the research is being carried out and the consequences of the respondents' participation in the study. The respondents were informed that the research were purely for academic purposes. A copy of the authority letter was used for identification while gathering information/data from sampled individuals, groups and institutions. Respondents were assured that the information obtained would be confidential, and they were required to provide information truthfully and honestly.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION & INTERPRETATION

4.1 Introduction

This chapter outlines the research outcomes obtained from field responses and data. This chapter includes the demographic information, presentation of results and analysis based on the objectives of the study and as explored by the questionnaires, employing descriptive statistics.

4.2 Questionnaire Response Rate

Out of the 317 questionnaires administered, 305 were dully filled and returned, which represents a 96% response rate. Mugenda and Mugenda (2003), asserts that a 50% response rate is adequate, while a response rate that is more than 70% is very good. Therefore, the response rate was considered adequate for the analysis. Table 4.1 presents the response rate of the study.

Table 4.1 : Response Rate

Response	Frequency (f)	Percentage (%)
Responded	305	96
No Response	12	4
Total	**317**	**100**

4.3 Demographic Information

The researcher asked the respondents to indicate their area of residence, age, marital status and education level, as some of the socio-demographic factors that determine utilization of maternal health and neonatal heath care services.

4.3.1 Area of residence

The respondents were requested to state their area of residence. Table 4.2 shows the study findings on the respondents area of residence.

Table 4.2: Area of residence

Area of residence	Frequency (f)	Percentage (%)
Embakasi sub-county	231	76
Elsewhere	74	24
Total	**305**	**100**

From the findings in Table 4.2, majority of the respondents, 231(76%) who visited the various public health facilities in Embakasi are actually residents of Embakasi sub-county. 74 respondents representing 24% indicated that they were from nearby sub-counties and had only visited the facilities to seek medical assistance. The results indicate that majority of the women seeking MCH services at the time of this study were residents of Embakasi sub-county and therefore a good representative sample for the study.

4.3.2 Age of respondents

The respondents were requested to state the age bracket in which they belonged. Table 4.3 shows the study findings on the respondents age bracket.

Table 4.3: Age Bracket

Age Bracket	Frequency (f)	Percentage (%)
15-20 years	20	7
21-25 years	89	29
26-30 years	105	34
31-38 years	70	23
Over 38 years	21	7
Total	**305**	**100**

From the findings in Table 4.3, majority of the respondents, 105(34%) indicated that they were in the age bracket of 26-30 years, while 89(29%) of the respondents were in the age bracket 21-25 years. Those respondents who were in the age bracket of 31-38 years were 70 representing 23%, 20 respondents representing 7% in the age bracket 15-20 years and 21 respondents representing 7% were aged 38 years and above. The results indicated that majority

of the respondents were in reproductive age group (15-49 years) hence appropriate for this study. This study has also shown that women from all the age group as indicated in the table 4.3 utilized maternal and neonatal health care services.

4.3.3 Marital Status

The respondents were requested to indicate their marital status. Table 4.4 shows the study findings on the respondents' marital status.

Table 4.4: Marital Status

Marital Status	Frequency (f)	Percentage (%)
Married	175	58
Single	86	28
Widowed	34	11
Divorced	10	3
Total	**305**	**100**

The results in Table 4.4 indicate that majority of the respondents, 175(58%) were married; 86(28%) were single; 34(11%) were widowed while 10(3%) were divorced. The findings imply that there were more women who were married than those who were single, widowed and divorced combined seeking maternal and antenatal health care services. The latter represents a proportion most likely to face delays in seeking maternal and neonatal care services since studies have shown that husbands play a crucial role in influencing their partners to seek skilled care during pregnancy, delivery and after birth, (Jimoh, 2003).

4.3.4 Level of education

The respondents were asked to state their highest education level. Table 4.5 shows the study findings on the respondent's education level.

Table 4.5: Education Level

Level of Education	Frequency (f)	Percentage (%)
No Education	6	2
Primary Education	162	53
Secondary Education or Higher	137	45
Total	**305**	**100**

The findings indicate that 137 respondents representing 45% had acquired a secondary level or higher education level; 162 respondents representing 53% had acquired primary education and 6 respondents representing 2% indicated that they had no education at all. The study findings indicate that most users of public health facilities are women of low academic attainment given that only 45% had a secondary level of education or higher. This is further contributing to the lower levels of health care services uptake since higher level of education has been shown to improve ANC use and especially early entry, thus investing in women's education will have far-reaching benefits in improving maternal health, (Lule *et al,* 2005).

4.3.5 Number of deliveries

The respondents were asked to state the number of live deliveries they have had in the past. Table 4.6 shows the study findings on the respondent's number of deliveries.

Table 4.6: Number of deliveries.

Number of deliveries	Frequency (f)	Percentage (%)
None	0	0
One	162	53
Two	90	30
Three	35	11
Four	15	5
More (specify)	3	1
Total	**305**	**100**

Study findings in table Table 4.6; indicate that 162 mothers representing 53% had only one delivery. Those who had more than 4 deliveries accounted for 1%, those with 4 deliveries were 5%, those with 3 deliveries accounted for 11% while those with two deliveries accounted for 30%. From these findings, we can conclude that mothers with one child are the most users of maternal and neonatal health care services in Embakasi sub-county followed by those with two children. As the number of children increases, the clients reduce in number.

4.4 Utilisation of maternal and neonatal health care services

Respondents were asked about their utilization of maternal and neonatal health care services provided at the various facilities they visited in the sub-county. First, the study sought to find out if the mothers attended ANC clinics during their last pregnancy. The findings are summarized in the Table 4.7.

Table 4.7: Attendance of ANC clinics during last pregnancy

Attendance of ANC Clinics	Frequency (f)	Percentage (%)
Yes	272	89
No	33	11
Total	**305**	**100**

The study findings in Table 4.7 shows that 272 mothers representing 89% had attended the antenatal care clinic during their previous pregnancy while 33(11%) reported not attending any ANC clinics. The finding is nearly consistent with UNICEF (2014) report which indicated that over 17% of women in Nairobi deliver without do not attend ANC clinics during pregnancy.

The study further sought to establish the number of antenatal care visits that the mothers had made in the course of the previous pregnancy. Table 4.8 shows the study findings on the number of ANC visits by the mothers.

Table 4.8: Number of antenatal care visits during last pregnancy.

Number of visits	Frequency (f)	Percentage (%)
One	63	21
Two	104	34
Three	86	28
Four	47	15
More (specify)	5	2
Total	**305**	**100**

The study findings in Table 4.8 indicate that 47(15%) of the respondents have attended at least four antenatal care visits during their last pregnancy, 5 respondents representing 2% have attended more than four antenatal care visits, 86 respondents representing 28% have attended at least three antenatal care visits, 104 respondents representing 34% have attended antenatal care visits at least twice, while 63(21%) respondents have attended antenatal care visits at least once during their last pregnancy. These findings indicate that even though a number of women are attending antenatal care visits, only 14% are attending the WHO recommended minimum of 4 antenatal care visits before delivery. The findings are nearly consistent with UNFPA (2015) report that showed only 18.3% of pregnant women in Nairobi are attending the minimum antenatal care visits recommended by the World Health Organization.

The study sought to establish the period during pregnancy in which the mothers commenced their antenatal clinic and the feedback is provided in the Table 4.9.

Table 4.9 Gestation period in which ANC clinic attendance was started.

Gestation Period	Frequency (f)	Percentage (%)
0 – 3 months	52	17
4 – 6 months	207	68
7 – 9 months	40	13
Don`t know	6	2
Total	**305**	**100**

The study findings in Table 4.9 shows that only 52 mothers representing 17% started attending ANC clinic within the recommended first 3 months of pregnancy. Majority of the mothers (68%) started attending the ANC clinic at 4-6 months gestation, which is a bit late while 13% of the mothers started attending the clinic towards pregnancy term.

4.4.1 Skilled assistance during delivery

Respondents were requested to indicate the place of last delivery. Table 4.10 shows the study findings on the respondents' place of last delivery.

Table 4.10: Place of delivery

Place of Delivery	Frequency (f)	Percentage (%)
Home	70	23
Health Facility	204	67
Other (Please specify)	31	10
Total	**305**	**100**

The results presented in Table 4.10 indicate that 204 representing 67% of the respondents delivered in a health facility under assistance of skilled personnel while 70(23%) delivered at

home under supervision of traditional birth attendants (TBA). 10% of the respondents are having their first pregnancy. The study findings indicate that 23% of women still prefer to give birth at home, against the UNICEF (2008) recommendation of 100% hospital delivery, required to ward off any health effects of child birth and hence to reduce the rate of maternal and child deaths through delivery.

4.4.2 Skilled Post-partum care for mother and new-born

Respondents were requested to indicate whether they sought skilled care for both the mother and the newborn baby shortly after discharge from the hospital and before 28 days of age including mandatory immunizations. Table 4.11 shows the study findings on the respondents' post-partum care.

Table 4.11: Skilled Post-partum care.

Number of visits	Frequency (f)	Percentage (%)
None	23	8
One	84	27
Two	172	56
Three	21	7
More (specify)	5	2
Total	**305**	**100**

The results presented in Table 4.11 indicate that 21(7%) of the respondents have attended at least three skilled post-partum care services after their last delivery, 5 respondents representing 2% have attended more than three of such visits, 172 respondents representing 56% have attended at least two post-delivery care visits, 84 respondents representing 27% have post-partum care visits at least once while 23(8%) respondents reported not having attended a single post-partum care services. These findings are consistent with Kenya Demographic Health Survey (2014) which reported that nearly 31.5% of women in Kenya do not seek skilled assistance after delivery while 12% of newborns do not receive mandatory immunizations required within first month of birth necessary to boost their immune system.

4.5 How waiting time for services influences utilisation of Maternal and Neonatal Health Care services

The study sought to find out how waiting time for essential services influences utilization of maternal and neonatal health care services.

4.5.1 Number of hours in the queue

The respondents were asked to indicate the length of waiting time on the queue before receiving required ANC, delivery or post-natal care services in the facilities they visited. Table 4.12 shows the study findings on the respondents' average waiting time for services.

Table 4.12: Length of waiting time for services.

Length of waiting time for services	Frequency (f)	Percentage (%)
0 – 1 hours	70	23
2 – 4 hours	98	32
More (Please specify)	137	45
Total	**305**	**100%**

According to the findings in Table 4.12, 70 (23%) of the respondents indicated that on average, the waited for at least one hour before receiving services, while 98(32%) of respondents indicated they waited for 2-4 hours before receiving services. Majority of the respondents (45%) indicated that they waited for more than 4 hours before receiving the services. These findings suggest that patients are generally taking long hours in the queues before receiving services in public hospitals in Embakasi sub-county which is consistent with study by Kizito (2016) which revealed that long waiting time before patients see a specialist, receive consultation and access the associated procedures are endemic in Kenyan public hospitals.

4.5.2 Satisfaction with explanation provided by staff for long waiting times.

The study sought to find out if the respondents were satisfied with the explanation provided for long waiting time before receiving services. Table 4.13 presents the study findings on the respondents satisfaction with explanation provided for long waiting time for services.

Table 4.13: Satisfaction with explanation for long waiting time for services

Satisfaction with explanation Provided for long waiting time	Frequency (f)	Percentage (%)
Yes	70	23
No	204	67
No explanation provided	31	10
Total	**305**	**100**

From the findings in Table 4.13, majority of the respondents, 204(67%) indicated that that they were not satisfied with the explanation provided by the staff on long waiting time followed by 23% who indicated that they were satisfied with explanation provided by hospital staff. 31 respondents representing 10% indicated that despite the long hours in the queue before receiving services, no explanation was provided. The findings reveal that most of the respondents were dissatisfied with the number of hours they spent in the queue waiting for services and this means that waiting time could be one of the deterrents of utilization of these services as recommended by medical practitioners.

4.5.3 How waiting time for services influences utilization of antenatal care services

The study sought to find out from the respondents if waiting time for services influenced their rate of utilization of maternal and neonatal health care services. Table 4.14 presents the study findings on how waiting time for services influences utilisaiton of health care.

Table 4.14: Influence of waiting time for services on utilization of maternal and neonatal health care services

Does length of waiting time for services influence Utilisation of services?	Frequency (f)	Percentage (%)
Yes	229	75
No	70	23
I don`t know	6	2
Total	**305**	**100**

From Table 4.14, 75% of respondents indicated that length of waiting time had influence on utilization of maternal and neonatal health care services while 23 held the view that length of waiting time for services had no influence on utilization of the said services. 2% of the respondents did not know whether length of waiting time for services had an impact on rate of utilization of maternal and neonatal health care services. The study findings suggest that length of waiting time for services is crucial in the uptake of maternal and neonatal health care services. Those who answered yes were asked to elaborate how length of waiting time influences utilization of maternal and neonatal health care services. The explanations given by respondents were that long waiting time discourages mothers from coming for the services since it wastes their valuable time. This means that if the waiting time for services in the health facilities is long, utilization of the services will be low. The findings are consistent with a study by Mathole *et al* (2004) which concluded that individuals who experience too long waiting time may fail to access health services.

4.5.3 Rating of length of waiting time for services in health facilities in Embakasi sub-county

The study sought to find out the respondents rating of length of waiting time for services in Embakasi sub-county. Table 4.15 presents the study findings on respondents rating of length of waiting time for services.

Table 4.15: Rating of waiting time for services

Rating of length of waiting time for services	Frequency (f)	Percentage (%)
Convenient	0	0
Long	73	24
Too long	232	76
Total	**305**	**100**

From the findings in Table 4.15, no single respondent indicated the length of waiting time for services as convenient while 73 respondents equivalent to 24% rated the length of waiting time as long. 232 (76%) respondents described the waiting time for services as too long. The findings reveal that majority of the respondents considered the waiting time for maternal and neonatal health care services in public health facilities in Embakasi as inconveniencing. This

means that waiting time could be one of the factors contributing to low utilization of maternal and neonatal health care services in Embakasi sub-county.

4.6 How Privacy in Service Delivery influences Utilisation of Maternal and Neonatal Health Care Services

The study sought to establish how privacy in service delivery influences utilization of maternal and neonatal health care services in public health facilities in Embakasi sub-county.

4.6.1 Extent to which privacy in service delivery influence utilization of maternal and neonatal health care services

The study sought to establish whether the mothers considered privacy in service delivery as a determinant of utilization of maternal and neonatal health care service. Table 4.16 presents the study findings.

Table 4.16: Influence of privacy of services on utilization of maternal and neonatal health care services

Privacy of services influences Utilisation	Frequency (f)	Percentage (%)
Strongly agree	156	51
Agree	118	39
Disagree	28	9
Strongly disagree	3	1
Total	**305**	**100%**

Study findings in Table 4.16 shows that 51% of the respondents strongly agreed that privacy of services influences utilization of maternal and neonatal health care services while 39% agreed with this statement. However, 9% of them disagreed while 1% of the respondents strongly disagreed with the statement. This means that privacy should be highly considered during service provision in order to improve utilization maternal and neonatal health care services as the mothers considered it significant.

The study further sought to establish whether the respondents were satisfied with the privacy of services that they received in public health facilities in Embakasi sub-county. Table 4.17 summarizes study findings on respondents satisfaction with privacy of service.

Table 4.17: Level of satisfaction with privacy of service delivery

Are you satisfied with privacy of services provided?	Frequency (f)	Percentage (%)
Yes	70	23
No	235	77
Total	**305**	**100**

Study findings in Table 4.17 shows that 23% of the respondents were satisfied with the privacy of services while 77% were not satisfied with privacy of services provided at the facilities. This implies that there is a need to improve the physical conditions in these MCH clinics so that all mothers can be satisfied with the privacy of services.

4.7 How Level of Service Integration influences Utilisation of Maternal and Neonatal Health Care Services

The study sought to establish how level of service integration influences utilization of maternal and neonatal health care services in public health facilities in Embakasi sub-county. The results are presented in Table 4.18.

Table 4.18: Influence of level of service integration on utilization of ANC services

Do you think that having all the MCH services Under one roof has influence on utilization of MCH services?	Frequency (f)	Percentage (%)
Yes	272	89
No	28	9
I don`t know	5	2
Total	**305**	**100**

The study findings in Table 4.18 shows that 89% of the respondents indicated that level of service integration influenced utilization of maternal and neonatal health care services while 9% were of contrary opinion. 2% of the respondents did not know whether level of service integration had any influence of utilization of maternal and neonatal health care services. This means that level of service integration highly influences utilization of MCH services since the client obtains all the services in one department. The researcher also asked the respondents to rate their satisfaction with the level of service integration in public health facilities they visited and the feedback is presented in Table 4.19.

Table 4.13 : Level of satisfaction with integration of services

Level of satisfaction with Integration MCH services	Frequency (f)	Percentage (%)
Highly satisfied	16	5
Satisfied	118	39
Dissatisfied	138	45
Highly Dissatisfied	33	11
Total	**305**	**100%**

The study findings in Table 4.19 indicate that 5% of the respondents were highly satisfied with level of service integration, 39% were satisfied, 45% were dissatisfied while 11% were highly dissatisfied with level of integration of services in MCH clinics in health facilities within Embakasi sub-county. The findings indicate that there is still a need for improvement in service integration in public health facilities within Embakasi sub-county.

4.8 Level of Education of mothers and utilisation of Maternal and Neonatal Health Care Services

The study sought to find out how level of education of mothers affects utilization of maternal and neonatal health care services in Embakasi sub-county.

4.8.1 Level of education of mothers

The respondents were asked to state their highest education level. Table 4.20 shows the study findings on the respondent's education level.

Table 4.20: Education Level

Level of Education	Frequency (f)	Percentage (%)
No Education	6	2
Primary Education	162	53
Secondary Education or Higher	137	45
Total	**305**	**100**

The findings in Table 4.20 indicate that 137 respondents representing 45% had acquired a secondary level or higher education level; 162 respondents representing 53% had acquired primary education and 6 respondents representing 2% indicated that they had no education at all. The study findings indicate that most users of public health facilities are women of low academic attainment given that only 45% had a secondary level of education or higher. This is further contributing to the lower levels of health care services uptake since higher level of education has been shown to improve MCH use and especially early entry, thus investing in women's education will have far-reaching benefits in improving maternal health, (Lule *et al*. 2005).

4.8.2 Functional Health Literacy level

The respondents were asked to rate their functional health literacy skills (the degree to which respondents have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions). Table 4.21 shows the study findings on the respondent's health literacy skills.

Table 4.21: Functional health literacy level

Level of Education	Frequency (f)	Percentage (%)
Basic	266	87
Intermediate	36	12
Proficient	3	1
Total	**305**	**100**

The findings in Table 4.21 indicate that 266 (87%) respondents reported they possess basic functional health literacy skills, 36 (12%) had intermediate health literacy skills while 3 (1%) reported proficient health literacy skills. The study findings indicate that majority of respondents had less than proficient health literacy skills hence were not in a position to obtain, process, and understand basic health information and services needed to make appropriate health decisions.

The researcher also asked the respondents to indicate if their level of education has limited them from fully utilizing maternal and neonatal health care services. Feedback is presented in Table 4.22.

Table 4.22: Limitations of low education level

Has your low educational level limited you from fully utilising health care services?	Frequency (f)	Percentage (%)
Yes	270	89
No	35	11
Total	**305**	**100**

From the study findings in Table 4.22, 89% of the respondents indicated that their education levels have limited them from fully utilizing available health care services while 11% responded in the contrary. Those who responded yes further stated that low education levels have contributed to increased incidences of medication error, poor health knowledge, increased hospitalizations and under-utilization of health care services as some of the advances outcomes of low education levels.

4.9 Qualitative findings associated with utilisation of maternal and neonatal health care services in Embakasi sub-county

Interview guides were administered to two health care personnel in each of the four MCH clinics within the public health facilities in Embakasi sub-county.

4.9.1 Utilisation of maternal and neonatal health care services

The respondents were asked to rate the level of utilisation of all the three aspects of maternal and neonatal health care services in Embakasi sub-county. Majority of the respondents indicated that utilisation of all the three aspects of MCH care services was generally low compared to the number of women in the area.

4.9.2 Attendance to recommended number of ANC services

The respondents were asked to indicate if pregnant women in the area attend the WHO recommended minimum of four ANC visits during pregnancy. Respondents indicated that majority of the expectant women in the area do not seek ante natal care early in their pregnancy and make on average 2 ANC visits which is only half of the recommended number of visits per pregnancy. One nurse indicated that this makes it difficult for the maximum benefits of antenatal care to be realised by expectant women in the area.

4.9.3 Skilled assistance during delivery

The study sought to establish if women in Embakasi sub-county seek skilled assistance during delivery. From the interview guides, the respondents indicated that generally younger women (low parity) use skilled professional assistance during delivery as opposed to older women who are less likely to use skilled professional assistance during delivery, as they feel experienced and knowledgeable from previous birth experiences. Some respondents indicated that women who had more contacts with health facilities in terms of the number of antenatal clinic visits were more likely to deliver in a health facility than the women who have no or less ANC clinic visits.

4.9.4 Attendance to skilled post-partum care

The study sought to establish if women in Embakasi sub-county seek skilled post-partum care for mother and the new-born soon after delivery. The respondents indicated that generally less than

half of women delivering in the health facilities came back for post-partum care services. They attributed the low utilization of post-partum care services to mother's lack of knowledge about its importance and their lack of perceived need especially if they are feeling well. The majority of the mothers had an awareness of post-partum services but they did not know when they should seek those services, with the services mainly being accessed at or after 6 weeks. One health personnel indicated that those mothers who had an awareness about post-partum services only focused on the vaccination component as opposed to others such as counselling, discussions on infant feeding and breast care, prevention of post-partum bleeding and assistance in identification of danger signs during the postnatal period.

4.9.5 Level of education of mothers and utilisation of maternal and neonatal health care services

The study sought to establish if education level of mothers has an influence in utilisation of maternal and neonatal health care services. Respondents in the interview guides pointed out that educated women were more likely to use maternal and neonatal health care services than uneducated mothers. They noted that the effect of education was strong especially during delivery with non-educated women less likely to deliver with assistance of skilled professional and more likely to deliver under supervision of traditional birth attendants who are prevalent in the area.

4.9.6 Length of waiting time for services and utilisation of maternal and neonatal health care services

The study sought to establish the number of hours clients wait in the queue before receiving services in the MCH clinic. Respondents indicated that on average, clients spend 2-4 hours per hospital visit, which in the opinion of health providers is too long. The long waiting times has seen some mothers avoiding health facilities and instead resorting to self-medications. Some respondents reported that long waiting periods usually upset some women in the health facilities leading to demoralization with health care service provision.

4.9.7 Privacy in service delivery and utilisation of maternal and neonatal health care services

The study sought to establish the measures the MCH facilities have put in place to guarantee privacy of services provided to mothers seeking maternal and neonatal health care services. All the facilities reported that they had separated male and female, as the issue of mixed gender wards is a huge concern to patients. At Mama Lucy Hospital, the nurses reported that majority of beds have been fitted with bedside curtains to ensure privacy. Effort is being made to secure all the beds in the clinic. Some respondents also stated that staff are advised to keep voices as low as possible when discussing sensitive patient information. Regarding patient information, respondents reported that they have a policy that compels healthcare providers to keep patient data confidential by requiring those who hold such data to restrict access to authorised personnel only. Respondents held the view that privacy in service delivery had an impact on utilization of maternal and neonatal health care services explaining that patients will generally shy away from health facilities where they are not confident of confidentiality and privacy in service delivery.

4.9.10 Level of service integration and utilisation of maternal and neonatal health care services

The study sought to establish how level of integration of services influences utilisation of maternal and neonatal health care services in the health facilities. In Mama Lucy Kibaki Hospital, antenatal care services are both partially integrated and also provided in a standalone maternal and child health (MCH) clinic. The MCH clinic provides partially integrated services and mothers who are attending the first visit are normally sent to the laboratory for baseline laboratory tests. The more youthful pregnant women who require youth friendly services are also referred to youth friendly clinic. In all health facilities (except Kayole II hospital), HIV care has been fully integrated into ANC clinics. The respondents reported that this has resulted in a variety of benefits for HIV-positive women and their new-borns; including better uptake of maternal and neonatal services, more women receiving professional counselling, reduction of the time to treatment initiation, improved quality of care, and reduction of stigma associated with HIV.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENADATIONS

5.1 Introduction

The chapter presents a summary of the major findings that were outlined in chapter four and summary on the assessment of determinants of utilization of maternal and neonatal health care services by mothers in Embakasi Sub-County, Kenya. The chapter further makes a comprehensive conclusion based on the established relationship between key indicators of utilization of maternal and neonatal health care services and major recommendations are made. Finally, areas of further research are suggested.

5.2 Summary of the study findings

Summary of findings was done in accordance to the dependent and independent variables.

5.2.1 Utilization of maternal and neonatal health care in Embakasi Sub-county

The study sought to establish the status of utilization of three aspects of maternal and neonatal health care in Embakasi sub-county; number of antenatal care visits during pregnancy, attendance to skilled assistance during delivery and attendance to skilled post-partum care.

The study findings established that even though a number of women in Embakasi sub-county are attending antenatal care visits during pregnancy, only 14% are attending the WHO recommended minimum of 4 antenatal care visits before delivery. This is below the Nairobi county average of 18.3% according to UNFPA (2015) report.

On the area of skilled assistance during delivery, the study findings established that only 67% of the respondents delivered in a health facility under assistance of a skilled personnel while 23% delivered at home under supervision of traditional birth attendants (TBA). This is against the UNICEF (2008) recommendation of 100% hospital delivery, required to ward off any health effects of child birth and hence reduce the rate of maternal and child deaths through delivery. Finally, on the area of attendance to skilled post-partum care for mother and new-born, the study findings established that only 56% of the respondents have attended at least two post-delivery

care services including all immunizations recommended during the first one month of delivery. This falls short of the national average of 83%, (KDHS, 2014).

5.2.2 Maternal level of education influences utilization of maternal and neonatal health care services

The first objective of the study sought to establish how level of education of mothers influences utilization of the three aspects of maternal and neonatal health care services in Embakasi sub-county.

The study findings indicate that most respondents were women of low formal academic attainment with only 45% having a secondary level of education or higher. It was further established that the respondents had very limited functional health literacy skills implying they did not have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions. The respondents further reported that the limited health literacy levels was resulting into adverse health outcomes such as increased hospitalizations, underutilization of available health care services, poor own health knowledge as well as increased medication errors.

5.2.3 Length of waiting time for services influences utilization of maternal and neonatal health care services

The second objective of the study sought to establish how waiting time for services influences utilization of the three aspects of maternal and neonatal health care services in Embakasi sub-county, namely; number of antenatal care visits during pregnancy, attendance to skilled assistance during delivery and attendance to post-partum care after delivery.

The study findings indicated that waiting time for services influences utilization of maternal and neonatal health care services in public health facilities within Embakasi sub-county. The analysis of both quantitative and qualitative data established that respondents perceived the length of waiting time for services in the public health facilities in Embakasi to be long and this was hindering them from adequately utilizing maternal and neonatal health care services.

5.2.4 Privacy of services influences utilization of maternal and neonatal health care services

The third objective of the study sought to establish how privacy of services influences utilization of the three aspects maternal and neonatal health care services in Embakasi sub-county.

The findings of the study established that privacy of services influences utilization of maternal and neonatal health care services in Embakasi sub-county. Most of the respondents strongly agreed that privacy influence utilization of all MCH services. At the same time, it was also noted that all the public health facilities have put in place structures to guarantee privacy of mothers and their new-borns while seeking maternal and neonatal health care services. However, the respondents indicated that they were not satisfied with the privacy arrangements in the public health facilities within the sub-county and this was viewed as one of the contributing factors to underutilization of maternal and neonatal health care services in the area.

5.2.5 Integration of services influences utilization of maternal and neonatal health care services

The fourth objective of the study sought to establish how integration of services influences utilization of the three aspects maternal and neonatal health care services in Embakasi sub-county. The study findings established that both mothers and health care personnel viewed service integration as playing a role in utilization of maternal and neonatal health care services within the study area. Despite the effort made by the facilities to provide all MCH services under one roof, the respondents indicated that they were not satisfied with the level of service integration in the health facilities which was affecting the uptake of such services.

5.3 Discussion of Findings

This section looks at the findings of the study and compares these findings to what has been found out by other researchers as discovered during literature review. In doing this, the section highlights the key findings that brings out new knowledge and compares it to other findings from other similar studies, thus presenting an argument for the findings from this study.

According to the findings of the study, there is an association between level of education of mothers and utilization of all the three aspects of maternal and neonatal health care services in Embakasi Sub-county. Educated women are better able to break away from tradition to utilize

modern means of safeguarding their own health and that of their children. The findings revealed that respondents who had completed college and secondary education were more likely to utilize maternal and neonatal health care services than those in the primary or no education category. Similarly, in Indonesia, Titaley and colleagues observed that maternal education had a profound effect on seeking medical care (Titaley *et al*., 2009). There are a number of explanations as to why education is a key determinant of modern health care service utilization. Women, who are highly educated have ready access to timely medical information and generally empowered capacitated to make decisions or choices regarding their health seeking behaviors. Indeed, according to a study conducted in 2009, educated women are more likely to be financially independent; enjoy more autonomy within the household and are more confident to make decisions about their own health care services and that of their children (Dhaher et al., 2009). Educated women are also likely to have improved knowledge and information on modern medical treatment and have greater capacity to recognize specific illness (Mrisho et al., 2009).Furthermore; educated women may be able to make independent decisions regarding their own and their children's health leading to greater utilization of modern health facilities. This is consistent with a study by Oduk (2015) which found quantitatively important and statistically significant effect of mother's education on the use of antenatal care and delivery services in Kenya urban settings. Low utilization of maternal and neonatal health care services in Embakasi sub-county could partly be attributed to lower levels of education of mother as identified in the area.

On the second objective of the study, waiting time for services was established to be key in understanding why there was underutilization of maternal and neonatal health care services in Embakasi sub-county. The respondents perceived that the time spent in the queues waiting for for services were long and this discouraged them from coming back for subsequent follow-up visits. Long waiting time was therefore established as a barrier to utilization of antenatal care services. The study was in agreement with Chowdhury et al, (2003), Mathole et al, (2004), Nguyen et al, (2007), Aldana et al, (2001) and Farzana et al, (2012) who found out that long waiting time was a barrier to women seeking maternal and neonatal health care services. The study findings were also in agreement with those of Luoma et al, (2010) in Kenya where suggestions given by most of the patients seeking all manner of services on improvement of

services were about reduction of waiting time and availability of drugs for treatment. Low utilization of maternal and neonatal health care services in Embakasi sub-county is partly because of the many hours mothers have to wait for services in these facilities.

The study further established that there is a relationship between privacy in service delivery and utilization of maternal and neonatal health care services in Embakasi sub-county and that privacy in service delivery has a role in determining whether clients will continue consuming maternal and neonatal health care services. The findings indicated that privacy was important in determining whether the mothers would come for subsequent visits in the hospital. The findings were in agreement with Cohen (2002) who underscored the importance of privacy and confidentiality and noted that most clients are eager to talk about their health concerns with a physician if assured that the information will remain private and confidential. It is also supported by Klingberg-Allvin *et al*, (2006), Birungi and Onyango-Ouma (2006) and Aldana *et al*, (2001) who in their studies concluded that privacy was a powerful predictor of client satisfaction and continued use of reproductive health services in public health facilities.

Finally, the study established that there is a strong association between service integration and utilization of maternal and neonatal health care services by mothers in Embakasi sub-county. The study findings revealed that service integration was important in influencing the utilization of antenatal care services. When all services are available in one department, mothers find it easier to use these services since they do not have to move from one department to another to seek for services. They also reported that they were not satisfied with the level of service integration in health facilities in the area. The findings were in agreement with Killam *et al*, (2010) and Baotran *et al* (2011) who found out that integration of services resulted in increased satisfaction and subsequent service utilization. The supermarket approach to MCH care service provision is therefore important and need to be wholly implemented to achieve maximum service utilization.

5.4 Conclusion

The purpose of this study was to assess the determinants of utilization of maternal and neonatal health care services among mothers in Embakasi sub-county, Nairobi County, Kenya. The study was guided by four objectives along which respondents were asked questions, and responses analyzed. The results of the study showed that there was underutilization of all the three aspects of maternal and neonatal health care services, number of ANC visits, skilled attendance during delivery and attendance to post-partum care after delivery.

In regard to the first objective in the study, the study concluded that there exists a positive relationship between level of education of mothers and utilization of maternal and neonatal health care among mothers in Embakasi sub-county. The study findings revealed that most of the respondents did not have secondary level education and consequently were not able to competently obtain, process, and understand basic health information and services needed to make appropriate health decisions. This was negatively affecting the degree of utilization of essential maternal and neonatal health care services in the area.

In regard to the second objective, the researcher sought to establish how waiting time for services influences utilization of maternal and neonatal health care services in Embakasi sub-county. The study thus concluded that waiting time for services has an influence on utilization of maternal and neonatal health care services in Embakasi sub-county and this can be generalized to other areas. The study findings also concluded that like in other areas of the world, privacy of services influences utilization of maternal and neonatal health care services in Embakasi sub-county. Lack of privacy or inadequate privacy has the potential to make a maternal and neonatal health care service client not come back for subsequent appointments. Finally, the study findings also concluded that service integration has influence on utilization of maternal and neonatal health care services by mothers in Embakasi sub-county. Despite the effort made by the hospital authorities to avail most MCH services under one roof, the clients were dissatisfied with the level of service integration in the hospital and this was partly to blame for the underutilization of maternal and neonatal health care services in the area.

5.5 Recommendations of the study

In 2013, the Kenyan Government came up with a policy of providing free maternity services (FMS) in all public hospitals and health centers with the main objective of reducing maternal and prenatal mortalities. The introduction of the free maternal health policy was with the assumption that there was a significant financial barrier to the use of maternal health services, and this contributed to the high incidence of maternal mortality in the country. Hence, offering a free service would help mothers in their utilization of maternal and neonatal health services. In such a case, the effect of wealth on the use of the service should be insignificant. The results however suggest that there is still underutilization of these services. Other factors are therefore responsible for low uptake of these services.

The study findings established that level of education of mothers influences utilization of maternal and neonatal health care services in Embakasi sub-county. Women with secondary or higher levels of education were seen to be more likely to use adequate ANC, skilled delivery and post-partum care services compared to those without education. Thus, improving the education of the mothers in Embakasi sub-county, will contribute greatly to the use of maternal and neonatal services by women and thus help in reducing maternal and child mortality in the area. Specifically, women should be encouraged to pursue education beyond the primary level as the study has found that women with higher levels of education tend to make adequate use of maternal and neonatal health care. Also, it may be possible that the less educated are not adequately informed about the services being offered freely and also about the adequate utilization for each pregnancy and birth, hence it may be necessary for the Nairobi County Department of Health to intensify the education on the use of maternal and neonatal health care services probably through the mass media (radio, television, print media) and the community announcements, especially in the slum areas where the use of mass media may not be very effective. Thus, we need to continue educating expectant mothers and women in general on a daily basis on the use of these maternal health services and to increase awareness in the communities.

The study further recommends that the issue of lengthy waiting time for services in public health facilities be addressed. Specifically, there is a need to increase the number of nurses and

midwives and equip public health care facilities with modern equipment to reduce the workload of the personnel. MCH infrastructure should be designed in such a way that they are friendly to expectant mothers while they are in the queue waiting for services. At the same time, the infrastructure should take into consideration privacy of the patients. Both visual and auditory privacy should be taken care of as any compromise to clients' privacy makes them shy away from fully utilizing the services. Finally, to the extent possible, all MCH services should be integrated and provided under one roof. Although in most settings it is not always possible to integrate laboratory services, health care personnel should consider establishing all diagnostic services including radiology, laboratory and pharmacy services in all MCH settings.

5.6 Suggested area for further study

This study mainly considered the determinants of utilization of maternal and neonatal health care services, with a focus on the women who are generally considered as the clients. However, there is need to carry a study to explore client-provider interactions in provision of maternal and neonatal health care services in public MCH facilities. Such study will elucidate useful suggestions on improving health care provision, address provider needs and enhance client satisfaction.

REFERENCES

Abt Associates. (2005). Kenya National Health Accounts 2002: Estimating Expenditures on General Health and HIV/AIDS Care. Bethesda, Maryland, USA: Abt Associates, Inc.

Aden, S., *Women Power and Authority in Traditional Kenyan Society*. 2006.

Aldana, J., Piechulek, H., & Al-Sabir, A. (2001). Client satisfaction and quality of health care in rural Bangladesh. *Bulletin of the World Health Organisation, 79*(6), 512-517

Amnesty International. (2014). *Strungle for maternal health: Barriers to antenatal care in South Africa.* London, United Kingdon: Amnesty international Ltd.

Baotran, N. V., Cohen, C. R., Smith, R. M., Bukusi, E.A., Onono, M. A., Schwartz, K., Washington, S. & Turan, J. M. (2011). Patient satisfaction with integrated HIV and antenatal care services in rural Kenya. *AIDS Care*, *24*(11).

Barker, G. (2014). *A Radical Agenda for Men's Caregiving*. IDS Bulletin.

Barker, G., Ricardo, C., Nascimento, M., Olukoya, A. & Santos, C. (2010). *Questioning Gender Norms with Men to Improve Health Outcomes: Evidence of Impact.* Global Public Health.

Birungi, H., & Onyango-Ouma, w. (2006). "*Acceptability and sustainability of the WHO focused antenatal care package in Kenya,*" FRONTIERS Final Report. Washington, DC: Population Council. Retrieved from

Caldwell, 1. C., Reddy, P. H., Caldwell, P. 1983. *The Social Component of Mortality Decline:* An investigation in South India employing alternative methodologies. Population Studies 37:185- 205 (14).

Caro, D. (2009). *Interagency Gender Working Group, Population Reference Bureau*; A Manual for Integrating Gender Into Reproductive Health and HIV Programs: From Commitment to Action.

Chowdhury, A. M. R., Mahbub, A., & Chowdhury, A. S. (2003). Skilled attendance at delivery in Bangladesh: An ethnographic study. *Research Monograph Series*, 22.

Chuma, J., & Thomas, M. (2013). *Free Maternal Care and Removal of User Fees at Primary-Level Facilities in Kenya: Monitoring the Implementation and Impact—Baseline Report*. Washington, DC: Health Policy Project, Futures Group.

Desai, M., Phillips-Howard, P., Odhiambo, F.O., Katana, A., Ouma, P., Hamel, M.J., Omoto, J., Macharia, S., van Eijk, A., Ogwang, S., Slutsker, L., Laserson, K.F. (2013). An Analysis of Pregnancy-related Mortality in the KEMRI/CDC Health and Demographic Surveillance System in Western Kenya. Pp7-8.

Dhaher, E.; Mikolajczyk, R.; Maxwell, A. and Kramer, A. (2008). Factors associated with lack of post-natal care among Palestinian women: A crosssectional study of three Clinics in the West Bank. BMC Pregnancy and Childbirth 2008, 8:26

Dixon J., Luginaah I., and Mkandawire P., The National Health Insurance Scheme in Ghana's Upper West Region: a gendered perspective of insurance acquisition in a resource-poor setting. Soc Sci Med, 2014. 122: p. 103–12.

Essendi, H., Mills, S., Fotso, J.C. (2010). Barriers to Formal Emergency Obstetric Care Services' Utilization. Journal of Urban Health 88 (2): pp356-369.

Fotso J., Madise N, Baschieri A, Cleland J, Zulu E, Mutua MK, and Essendi H, (2012). Child growth in urban deprived settings: Health & Place 18:375-384.

Fotso, J. & Mukiira, C. (2011). Perceived quality of and access to care among poor urban women in Kenya and their utilization of delivery care. Health Policy and Planning 27 (6): pp505-15.

Fredrick, M. (2002), the Urban Working Poor: Towards a Community Development Agenda.

Furuta M. and Salway S., Women's Position within the Household as a Determinant of Maternal Health Care use in Nepal. Int Fam Plan Perspect, 2006. 32(1): p. 17–27.

Greene, M. E., Mehta, M., Pulerwitz, J., Wulf, D., Bankole, A., Singh, S. (2004), Involving Men in Reproductive Health: Contributions to Development. UN Millennium Project.

Grown, C., Gupta, G.R, and Pande, R. (2005). Taking action to improve women's health through gender equality and women's empowerment. Lancet 365: pp541-543.

Hansford, F., O. Anjorim, and K. Pittore, *Gender inequality and maternal and child nutrition* in Northern Nigeria. 2014.

Houweling T A J, Ronsmans C, Campbell O M R, Kunst A E. Huge poor-rich inequalities in maternity care: an international comparative study of maternity and child care in developing countries. Bull World Health Organ 2007;85:745-754.

Iyer, A., Sen, G. & Ostlin, P. (2008). The intersections of gender and class in health status and health care. Global Public Health 3 (Suppl 1): pp13-24.

Jared, A. K. 2004. *Determinants of Regional Variations in Infant Mortality in Rural Kenya:* Population Council.

Kanyiva, M. et al. (2014), maternal health care utilization in Nairobi and Ouagadougou. Evidence from HDSS.

Kenya Demographic and Health Survey (KHDS). (2008-2009). Countdown to 2015 Maternal, Newborn & Child survival: Kenya.

Kenya Integrated Household Budget Survey, (2005-2006). Ministry of Planning and National Development.

Kenya Ministry of Health. (2009). Household Health Expenditure and Utilization Survey Report: 2007. Ministry of Health - Sector Planning and Monitoring Department. Nairobi, Kenya.

Kenya National Bureau of Statistics (KNBS) and ICF Macro, (2008-2009) Kenya Demographic and Health Survey, 2008-2009.

Killam, W. P., Tambatamba, B. C., Chintu, N., Rouse, D., Stringer, E., et al. (2010). Antiretroviral therapy in antenatal care to increase treatment initiation in HIV-infected pregnant women: A stepped-wedge evaluation. AIDS 24: 85–91

Kiragu, K., Schenk, K., Murugi, J. & Sarna, A. (2008). Kenya healthy start pediatric HIV study: Washington, DC.

Klingberg-Allvin, M., Nga, N. T., Ransnjo-Arvidson, A. B., & Johansson, A. (2006). Perspectives of midwives and doctors on adolescent sexuality and abortion care in Vietnam. *Scand J Public Health, 34*, 414-21

Koblinsky M, Matthews Z, Hussein J: Maternal Survival Series S: Going to scale with professional skilled care (vol 368, pg 1377, 2006). Lancet. 2006, 368 (9554): 2210-2210 [5, 8].

Kraft, J. M., Wilkins K. G., Morales G. J., Widyono, M. & Middlestadt, S. (2014). An Evidence Review of Gender-Integrated Interventions in Reproductive and Maternal-Child Health. *Journal of Health Communication.*

Lincetto, O., Mothebesoane-Anoh, S., Gomez, P., & Munjanja, S. (2006). *Opportunities for Africa's Newborns.* Geneva. WHO.

Mathole, T., Lindmark, G., Majoko, F., & Ahlberg, B. M. (2004). A qualitative study of women's perspectives of antenatal care in arural area of Zimbabwe. *Midwifery, 20*(2),122–132.

Matthews, Z., Ramakrishna, J., Mahendra, S., Kilaru, A., & Ganapathy, S. (2005). Birth rights and rituals in rural south India: Care seeking in the intrapartum period. *J Biosoc Sci 37*(4), 385-411.

Ministry of Public Health and Sanitation, Strategic Plan 2008-2012.

Monica, M. (2014), Maternal and Child Health among the Urban Poor in Nairobi, Kenya, Loughborough University.

Mrisho, M., Obrist, B., Schellenberg, J. A., Haws, R. A., Mushi, A. K., Mshinda, H., Tanner, M.,& Schellenberg, D. (2009). The use of antenatal and postnatal care: Perspectives and experiences of women and health care providers in rural southern Tanzania**.** *BMC Pregnancy and Childbirth, 9*, 10

Mrisho, M.; Obrist, B.; Schellenberg, J.; Haws, R.; Mushi, A.; Mshinda, H., & et al., (2009). The use of antenatal and post-natal care: perspectives and experiences of women and health care providers in rural southern Tanzania BMC Pregnancy Childbirth. 2009; 9: 10

Mwabu, G. & Mullei, A. (2000). Status of poverty in Kenya. In the Link between Corruption and Poverty: Lessons from Kenya case studies, edited by A. Mullei. Nairobi: The African Centre of Economic Growth.

Nagi, M. (2005). The Impact of Social and Economic Development on Mortality: Comparative Study of Kerala and West Bengal. See Ref. 38, pp. 57-78.

Neupane, S., Doku D. (2014), Neonatal Mortality in Nepal: A Multilevel Analysis of a Nationally Representative. J Epidemiol Global Health.

Nyovani, M. et al. (2009). Maternal Mortality in the Informal Settlements of Nairobi City: What do we know? *African Population Studies/Etude de la Population Africaine.*

Odhiambo F, Ayisi J, Blokland I, Rosen D, Adazu K, Slutsker L, Lindblade K: Use of antenatal services and delivery care among women in rural western Kenya: a community based survey. Reproductive Health. 2006, 3: 2-10.1186/1742-4755-3-2.

Okul S. and Apuri J., Kenyan Women's Perceptions of Their Health Care Needs. *African Journal of Gender African Studies*, 2007. 16(1): p. 47–63.

Paudel D, Thapa A, Shedain P, Paudel B. (2013).Trends and Determinants of Neonatal Mortality in Nepal: Further Analysis of the Nepal Demographic and Health Surveys, 2001-2011. Kathmandu; Calverton, MD: Nepal Ministry of Health and Population, New ERA; ICF International.

Paudel, D., Shrestha, I., Siebeck, M., Rehfuess E. (2013). Neonatal Health in Nepal: analysis of absolute and relative inequalities and impact of current efforts to reduce neonatal mortality.

Pradhan, Y.V., Upreti, S.R., Ashish, K.C., Khadka, N., Syed U, et al. (2012). Newborn Survival in Nepal: a decade of change and future implications.

Raghupathy, S 1996, 'Education and the use of maternal health care in Thailand', Social Science Med, Vol.43, No.4, pp. 459-471.

Say, L., Chou, D., Gemmill, A., Tunçalp, O., Moller, A, Daniels, J., Gülmezoglu, A., Temmerman, M. & Alkema, L. (2014). Global Causes of Maternal Death: a WHO systematic analysis. Lancet Glob Health 2014, 2: 323–333).

Scott, S., Lawn, J., Rudan, I. & Campbell, H. (2012). Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000. Lancet 2012, 379: pp2151–2161).

Stephenson R, Baschieri A, Clements S, Hennink M, Madise N: Contextual influences on the use of health facilities for childbirth in Africa. Am J Public Health. 2006, 96 (1): 84-93. 10.2105/AJPH.2004.057422. [9, 10, 11].

Titaley, C., Dibley, J., & Roberts, L. (2009). Factors associated with non-utilization of post-natal care services in Indonesia. J Epidemiology Community Health 2009.

Ukachukwu, V. (2009). Maternal Morbidity and Mortality in peri-urban Kenya: Assessing progress in improving maternal healthcare. *East African Journal of Public Health.*

UNFPA. (2011). State of the World Midwifery.

UNFPA. (2012). Fact Sheet: Contraceptives Saves Lives.

UNFPA. (2015). State of the World Population,.

UNICEF. (2008). Countdown to 2015: Tracking Progress in Maternal, Newborn and Child Survival: Report; New York: UNICEF.

UNICEF. (2011). Gender Influences on Child Survival, Health and Nutrition: A Narrative Review.

Villar, J., Ba'aqeel, H., Piaggio, G., Lumbiganono, P., Belizan, J. M., Farnot, U., Al-Mazrou, Y., Carroli, G., Pino, A., Donner, A., Langer, A., Nigenda, G., Mugford, M., Fox-Rushby, J., Hutton, G., Bergsjo, P., & Berebdes, H. (2001). "WHO antenatal care

randomized trial for the evaluation of a new model of routine antenatal care", *The Lancet*, *357*, 1565-1570.

Wendy, J. & Sudan, F. (2000). A Review of Safe Motherhood in Kenya," in Safe Motherhood Initiatives: Critical Issues, Reproductive Health Matters.

WHO. (2010). Every Woman, Every Child- Packages of Interventions for Family Planning, Safe Abortion care, Maternal, Newborn and Child Health. Global Strategy for Women's and Children's Health.

WHO/UNICEF. (2012). An Equity-Focused Strategy to Improve Access to Essential Treatment Services for Children. Geneva: WHO.

World Bank, (2016), reproductive, maternal, newborn, and child health.

Ziraba, A., et al. (2009). Maternal mortality in the informal settlements of Nairobi city: what do we know? Reproductive Health.

APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION

OKOTH JOSHUA ODHIAMBO
UNIVERSITY OF NAIROBI,
P.O BOX 30197,
NAIROBI.

Dear respondent,

RE: ACADEMIC RESEARCH.

I am a post graduate student at the University of Nairobi. This is part of an exploratory study that will assess challenges facing maternal and neonatal health care in Embakasi sub-county.

Enclosed here is a copy of my research questionnaire, which I kindly request you to take a little of your time to fill in. Rest assured that all responses to this questionnaire will be treated with utmost confidentiality. Responses will only be reported in grouped figures and percentages; no individual will be identified once all interviews are completed and the data have been processed.

Thank you very much for your participation and enormous effort in helping in this study.

Yours Sincerely,

Joshua O. Okoth

APPENDIX 2: INDIVIDUAL IN-DEPTH INTERIVIEW (IDI) QUESTIONNAIRE

Introduction

The purpose of this questionnaire is to collect data on determinants of utilization of maternal and neonatal health care services in Embakasi sub-county. The research is partial requirement for the completion of a degree of Masters of Arts in Project Planning and Management.

The information you provide will be confidential and will only be used for the purposes of this research. Responding to this questionnaire confirms your full consent to participate in this process.

Date of interview: _____ Time: Starting: _____ AM. /PM. End: _____ AM. /PM.

Section A. DEMOGRAPHIC DATA OF THE RESPONDENTS

1. Area of residence _____

2. What is your age bracket?

- ☐ 15-20
- ☐ 21-26
- ☐ 27-32
- ☐ 33-38
- ☐ Over 38

3. What is your marital status?

- ☐ Married
- ☐ Single
- ☐ Widowed
- ☐ Divorced

5. What is your highest education level?

- ☐ No education

☐ Primary Education

☐ Secondary Education or higher

6. How many deliveries have you had?

☐ None

☐ One

☐ Two

☐ Three

☐ Four

☐ More than four

Section B: Questions about utilization of maternal and neonatal health care services

6. With regard to your last pregnancy, did you attend Antenatal care clinics?

☐ Yes

☐ No

7. If your answer is yes in number 6 above, how many antenatal clinic visits did you make?

☐ One

☐ Two

☐ Three

☐ Four

☐ More (please specify)

8. In which month of the pregnancy did you commence ANC services?

- ☐ 0 - 3 months
- ☐ 4 - 6 months
- ☐ 7 – 9 months
- ☐ Don`t know

9. Please indicate location of your last delivery.

- ☐ Home
- ☐ Health Facility
- ☐ Other (Please specify)

10. In regards to your last delivery, how many post-partum care visits did you make within the first 1 month of delivery?

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ More (please specify)

Section B: Questions about waiting time for services and utilization of maternal and neonatal health care services

10. On average, how long do you wait in the queue before receiving required ANC, delivery or post-natal care services in this health facility?

- ☐ 0 – 1 hour
- ☐ 2 – 4 hours
- ☐ More (please specify)

11. Were you satisfied with the explanation provided by staff for long waiting time?

- ☐ Yes
- ☐ No
- ☐ No explanation provided

12. In your opinion, do you think that the waiting time above has influence on utilization of maternal and neonatal health care services?

- ☐ Yes
- ☐ No
- ☐ I don`t know

13. If your answer is yes to question 12 above, please explain the reason.

……..

14. From your experiences, how can you rate waiting time in MCH clinics in Embakasi sub-county?

- ☐ Convenient
- ☐ Long
- ☐ Too long

Section C: Questions about privacy of services and utilization of maternal and neonatal health care services.

15. To what extent do you agree/disagree with the following statement? `Privacy of health care services influences utilization of maternal and neonatal health care services. `

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly agree

16. Are you satisfied with the privacy of the services that you received?

- ☐ Yes
- ☐ No

Section D: Questions about integration of services and utilization of maternal and neonatal health care services

17. Do you think that having all the MCH services under one roof would improve utilization of the maternal and neonatal health care services?

- ☐ Yes
- ☐ No
- ☐ I don`t know

18. Please rate your level of satisfaction with the integration of services in the MCH health facility?

- ☐ Highly satisfied
- ☐ Satisfied
- ☐ Dissatisfied
- ☐ Highly dissatisfied

Section E: Questions about level of education of mothers and utilization of maternal and neonatal health care services

19. What is your highest education level?

- ☐ No education
- ☐ Primary Education
- ☐ Secondary Education or higher

20. How would you rate your health literacy skills? (Health literacy skills means the degree to which you have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions)

- ☐ Limited
- ☐ Basic
- ☐ Intermediate
- ☐ Proficient

21. Has your education level limited you from fully utilizing the maternal and neonatal health care services? If yes, please explain.

_____

APPENDIX 3: HEALTH CARE PERSONNELS INTERVIEW GUIDE

The purpose of the questionnaire is to collect data on determinants of utilization of maternal and neonatal health care services by mothers in Embakasi sub-county. The research is partial requirement for the completion of Masters of Arts in Project Planning and Management degree.

The information you provide will be confidential and will only be used for the purposes of this research. Responding to this questionnaire confirms your full consent to participate in this process.

Date of interview: _____ Time: Starting: _____ AM. /PM. End: _____ AM. /PM.

Area of operation_____

1) How would you rate Utilisation of maternal and neonatal health care services health care in the area?

   ……
   ……
   ……...…….

2) Do women attend recommended Antenatal care (ANC) services?

   ……
   ……
   ……...…….

3) Do women in this area seek skilled assistance during delivery?

   ……
   ……
   ……...…….

4) Do women attend post-partum care?

   ……
   ……
   ……...…….

5) In your opinion, does level of education of mothers influence Utilisation of available maternal and neonatal health care services?

……
……
……...……

6) What is the average time that the mothers wait in the queue before receiving services in this MCH clinic? In your opinion, does waiting time for services influence Utilisation of services by mothers in this locality?

……
……
……...……

7) What measures has this facility put in place to guarantee the privacy of services provided to mothers seeking maternal and neonatal health care services? From your experience, does privacy of services influence utilization of maternal and neonatal healthcare services in this area?

……
……
……...……

8) In your opinion, to what extent does integration of services influence utilization of maternal and neonatal health care services in this area?

……
……
……...……

9) What steps have you put in place to ensure all ANC and post-natal services are provided under one roof?

Thank you

APPENDIX 4: KREJCIE AND MORGAN TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N-----n	**N-----n**	**N-----n**	**N-----n**	**N-----n**
10-----10	100-----80	280-----162	800-----260	2800-----338
15-----14	110-----86	290-----165	850-----265	3000-----341
20-----19	120-----92	300-----169	900-----269	3500-----346
25-----24	130-----97	320-----175	950-----274	4000-----351
30-----28	140-----103	340-----181	1000-----278	4500-----354
35-----32	150-----108	360-----186	1100-----285	5000-----357
40-----36	160-----113	380-----191	1200-----291	6000-----361
45-----40	170-----118	400-----196	1300-----297	7000-----364
50-----44	180-----123	420-----201	1400-----302	8000-----367
55-----48	190-----127	440-----205	1500-----306	9000-----368
60-----52	200-----132	460-----210	1600-----310	10000-----370
65-----56	210-----136	480-----214	1700-----313	15000-----375
70-----59	220-----140	500-----217	1800-----317	20000-----377
75-----63	230-----144	550-----226	1900-----320	30000-----379
80-----66	240-----148	600-----234	2000-----322	40000-----380
85-----70	250-----152	650-----242	2200-----327	50000-----381
90-----73	260-----155	700-----248	2400-----331	75000-----382
95-----76	270-----159	750-----254	2600-----335	100000-----384