

**FACTORS AFFECTING UTILIZATION OF POSTNATAL CARE SERVICES AT
CENTRAL PROVINCIAL GENERAL HOSPITAL, NYERI, KENYA**

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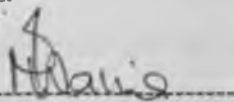
**A RESEARCH REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIERMENT FOR THE AWARD OF A DEGREE OF MASTER OF ARTS IN
PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI**

2011

DECLARATION

This research project is my original work. The work has not been presented for any award in any institution.

SIGNED-----



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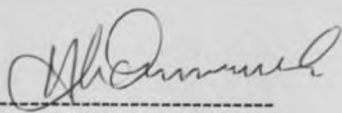
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DEDICATION

This work is dedicated to my darling husband Steve, who is the essence of love, personal source of encouragement and inspiration and cause of my passionate pursuance of the course. To my daughters Loise and Roseanne, who continually provided incentives and for ensuring that I completed my assignment in time.

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I am greatly indebted to Dr. Harriet Kidombo, my project supervisor for her tireless guidance, critique, patience, support and encouragement that made this work possible. May God bless you. Thanks to the University of Nairobi for providing me with an opportunity to pursue this degree in our locale. Special thanks to the lecturers and staff of Nyeri Extra Mural Centre for the tireless efforts and dedication during the course.

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To all, may the Almighty shower you with heavenly blessings.

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ABBREVIATIONS AND ACRONYMS

WHO	-	World Health Organization
HIV	-	Human Immunodeficiency Syndrome
ICDP	-	International Conference on Population and Development
UNICEF	-	United Nations Children's Education Fund
UNFPA	-	United Nations Population Fund
KDHS	-	Kenya Demographic Health Survey
FPNC	-	Focused Postnatal Care
PNC	-	Postnatal Care
MDG	-	Millennium Development Goals
UN	-	United Nation
MCH/FP	-	Maternal Child Health/Family Planning

ABSTRACT

Approximately 30-40% of direct maternal deaths in Africa are due to hemorrhage, mostly in the postpartum period. Most maternal deaths due to postpartum hemorrhage occur in settings (both hospital and community). A large proportion of maternal deaths occur during the first 48 hours after delivery, yet this is when coverage and programmes are at their lowest along the continuum of care. In sub Saharan Africa only 13. % who attended postnatal care .Adequate utilization of postnatal care can help reduce mortality and morbidity among mothers and their babies. To improve maternal, newborn and infant health status through increasing the proportion of women receiving essential postpartum services is a strategy many countries have adopted. This study was carried out in Central Province General Nyeri, Kenya with the objective of determining the factors affecting the utilization of postnatal services. It was a descriptive survey which employed both descriptive and qualitative approaches of data collection methods. A convenience sampling method was used to identify the required sample population. The survey was completed by 240 women who responded to a semi- structured questionnaire. The questions that were asked generated demographic information about the mothers; mothers' knowledge about postnatal services, awareness and barriers to utilization of the postnatal services. The data was analyzed using descriptive statistics and a scientific package for social sciences version 17 (SPSS). The demographic characteristics that were found to be associated with the utilization of postnatal care services were age, marital status and the number of children. Knowledge on postnatal care influenced utilization of postnatal care positively. Some of the key findings of the study were that most women lacked awareness about postnatal service and those who knew about these services knew about immunization and family planning. Long waiting time, rudeness of health providers and cultural beliefs were among the factors found to affect utilization of postnatal care services. Finally the ministry of health should educate women and communities about the importance of postnatal care, danger signs during postpartum period, and its availability and should evaluate the services periodically from the user's perspective to maintain the quality of services.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Approximately 30-40% of direct maternal deaths in Africa are due to hemorrhage, mostly in the postpartum period (lancet, 2006). The postpartum period in Africa is often marked by cultural practices. Many communities throughout Africa observe practices that keep mothers and babies indoors for the first month after birth-a period of seclusion. If a mother becomes ill during this period of seclusion, seeking formal health care is often delayed (Charlotte *et al.*, 2008).

Postnatal care is the care given just after delivery and through six weeks of life and is recognized as a critical time for both mother and the baby. Postnatal care is one of the most important maternal health- care services for not only prevention of complications of impairment and disabilities but also reduction of maternal mortality. Postnatal care services enable the health professionals to identify post delivery problems, including potential complications and prompt treatments as well as promoting health of the mother and baby (WHO, 2006). Postnatal care seeks to improve maternal, newborn and infant receiving essential postpartum, newborn care and family planning services (WHO, 2006).

According to WHO (2006) the elements of postnatal care are *inter alia*; 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 mother and baby by skilled attendant, assisting the mother and her family to evaluate and 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 when necessary (WHO, 2006).

The international conference on population and development (ICPD 2004) held in London, defined the concept of reproductive health as human right. The ICPD held in Nepal (Kathmandu declaration on reproductive health 2009) emphasized on focused postnatal care. This is because it was realized that postpartum period is one of the vulnerable times in a woman's reproductive life cycle in developing countries which contribute to over 60% maternal deaths. Among the reproductive health services offered in healthy facilities focused postnatal care is the least attended to at a mere 7% (ICPD, 2009). The 2009 Kathmandu declaration on reproductive health urged governments to make reproductive health services available, acceptable and affordable to women of reproductive age. According to demographic and Health Survey (DHS) data from 25 African countries, two-thirds of women in sub-Saharan give birth at home, but only 13% of all women receive a postnatal visit within two days (Lancet, 2006).

World Health Organization (WHO, 2008) defines Focused postnatal care as a four schedule personalized care given to a woman immediately after delivery, within 48 hours, two weeks and six weeks. Postnatal care is a key strategy for reducing maternal mortality though millions of women in developing countries do not receive it (Simkhada, 2008). The findings by the WHO, UNICEF and UNFPA, showed that a woman living in sub-Saharan Africa has 1 out of 6 chances of dying in pregnancy, childbirth and after delivery. These Studies have indicated the majors factors which prevent women in developing countries from accessing postnatal care which include; distance from the health facilities, cost related problems such as direct fees and the cost of transportation, drugs and supplies, multiple demands on women's time, lack of power in decision making within the family and poor quality of services including poor handling by health providers (WHO, 2004: Safe motherhood).

According to the Kenya Demographic Survey (KDHS) the postnatal situation in Kenya is not better either. The report shows that, only 7% attended postnatal care within two days after birth, 27% within three to six weeks and 5% within six weeks. For instance, in central province 44.2% didn't attend postnatal care, 0.4% attended within 3-6 days and 4.3% within six weeks (KDHS 2008/2009). There is therefore need for awareness creation among women to attend and utilize the postnatal care services offered in health facilities in Kenya.

The Kenya general health system is broadly structured into six levels that are level 1-6. The community (level 1) which comprises families and households, level 2 and 3 consist of primary health services where health promotion and basic treatment services are provided and only simple diagnostic and short term in-patient are provided at these levels. Major treatments are offered in level 4 which comprise of district and sub district hospitals. Provincial general hospitals (level 5) serve as a referral for level 1-4 and offer major diagnostic and treatments. Level 6 are the national referral and teaching hospitals (MOH, 2006). Central Province General hospital, Nyeri, Kenya is a level 5 hospital.

There are a number of reproductive services offered in Central Province General hospital in Maternal and Child Health/ Family planning (MCH/FP) department which include; Antenatal care, delivery, Family planning, immunization, cervical cancer screening, HIV counseling and testing, postnatal care, health messages among others. A review done in 2010 showed that a total of 5400 attended Antenatal clinic and only 270 (5%) attended postnatal clinic (2010 central province General Hospital report).

This study therefore intends to investigate the factors affecting utilization of postnatal care services at the Central provincial General Hospital, Nyeri, Kenya.

1.2 Statement of the problem

The KDHS report 2008/2009 indicates that the Maternal Mortality Ratio (MMR) remains high an average of 488/100 000. The proportion of mothers attending antenatal care at least once stood at 91.5%, deliveries by skilled attendants (42%), institutional deliveries (43.6%) and only 5% attended postnatal care and 81% of those who delivered outside health facility never get any postnatal services attention (KDHS, 2008/09).

The postpartum period constitutes an important transitional period necessary for maternal health among women who have just delivered. There is a definite need to understand the determinants of postnatal care services. A Study done at Mbeere District on utilization of antenatal services and maternal services (Mwaniki, 2002) reported that 93% attended antenatal care but only 10% attended postnatal care, distance from the facilities is reported to affect utilization of the services.

Most studies done in Kenya on postnatal care focused on newborn care with no attention to maternal care. For instance, studies done in Nairobi and Machakos (Mwangangi & Muindi 2003) concentrated only on resources as factors influencing postnatal care. The study reported that only 8% attended postnatal care services owing to the problem of resources that is human resources, equipments and supplies in the health facilities. Utilization of postnatal care services in Kenya has taken a declining trend over the years. The 2008/2009 DHS indicated that only 7% of women attended postnatal care services, while in central province general hospital only 5% attended postnatal in year 2010. This study seeks to expand further on other factors affecting utilization of postnatal care services at the Central Provincial General Hospital, Nyeri, Kenya.

1.3 Purpose of the study

The purpose of the study was to establish the factors affecting utilization of postnatal care services at Central Provincial General Hospital, Nyeri and suggest ways of improving the situation at the health facility.

1.4 Objectives

The objectives of this study were:

1. To establish the influence of woman's educational level on utilization of postnatal care services in Central Province General Hospital, Nyeri.
2. To determine the influence of women's marital status on utilization of postnatal care services in Central Province General Hospital, Nyeri.
3. To determine the influence of women's parity on utilization of postnatal care services in Central Province General Hospital, Nyeri.
4. To determine the influence of woman's awareness level on the utilization of postnatal care service in Central Province General Hospital, Nyeri.
5. To establish the influence of woman's age on utilization of postnatal care services in Central Province General Hospital, Nyeri.
6. To determine the influence of distance from the facility on utilization of postnatal care services in Central Province General Hospital, Nyeri.
7. To determine the barriers to utilization of postnatal care services at Central Provincial General, Hospital, Nyeri.

1.5 Research Questions

1. To what extent does the level of woman's education influence utilization of postnatal care service in Central Province General Hospital, Nyeri?
2. In what ways does woman's marital status influence utilization of postnatal care services in Central Province General Hospital, Nyeri?
3. How does woman's parity influence utilization of postnatal care services in Central Province General Hospital, Nyeri?
4. Does an increase in awareness about postnatal care services increase utilization of the services in Central Province General Hospital, Nyeri?
5. How does woman's age influence utilization of postnatal care services in Central Province General Hospital, Nyeri?
6. To what extent does distance from facility influence utilization of postnatal care services in Central Province General Hospital, Nyeri?
7. Are there barriers to that impede utilization of postnatal care services at Central Provincial General Hospital, Nyeri?

1.6 Significance

A number of problems women experience surrounding childbirth occur in the postpartum period, the six weeks following delivery. Approximately 30-40% of direct maternal deaths in Africa are due to hemorrhage, mostly in the postpartum period (WHO, 2006). Such problems can be detected and treated through proper follow up visits for women during the postpartum period. About 75% of maternal deaths occurs during the process of childbirth or in the first week thereafter (WHO, 2007) According to Demographic and health survey data from 25 countries in African countries, only 25% attended postnatal care services (Lancet, 2006).

The millennium development goal of reducing the maternal mortality ration by 75% by 2015 will remain beyond our reach unless the problem of postpartum is confronted as a priority. The level of utilization of postnatal care services is an important maternal health indicator.

In using the findings of this study, health care providers will be able to understand why women are not utilizing postnatal care services. The study could serve as an insight for the modification of plans and policies for future development regarding postnatal care. The study shall also add to the body of knowledge in the field of maternal health.

1.7 Limitations of the study

Time and financial resources constrains may not allow for a country wide study on all healthy facilities. The study will thus be confined to Central provincial General Hospital, Nyeri. The respondents may also hold back some information which may be regarded as sensitive and confidential. The researcher assured the respondents of strict confidentiality for any information given and that such information shall be for the purpose of the study only.

1.8 Delimitations

The researcher limited this study to education, age of women, marital status, awareness and distance from the facility as factors affecting utilization of postnatal care services in Central Province General Hospital, Nyeri, Kenya in Maternal Child Health/Family Planning (MCH/FP) department. The MCH/FP department offers reproductive health services to women of reproductive age 15-49 years but the study included postnatal women whose children are less than six months. The researcher conducted study in this department because postnatal care services are offered in this department.

1.9 Assumptions of the study

The study assumed that the respondents shall provide reliable and valid data that will be useful in making conclusions in relation to the study.

1.10 Definition of significant terms as used in the study

Postnatal care: -is the assistance given to a mother immediately after birth for a period of six weeks to reduce complications and deaths as well as promote health.

Parity: -number of children a woman has delivered

Postpartum period: -starts after expulsion of placenta up to 42 days (6 weeks)

Focused postnatal care: - personalized assessment after birth up to 6 weeks. It has 4 scheduled visits: immediately after birth, within 48 hours, within 2 weeks and at 6 weeks.

Postnatal services: it comprises of care given to women after birth and includes: physical examination, immunization, family planning, health education on mother and baby care, treatment and counseling services.

Maternal health: refers to the well being of a mother during pregnancy and after birth.

Maternal mortality: -is death of a woman while pregnant or within 42 days of termination of the pregnancy irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by pregnancy and its complications but not from accidental or incidental causes (WHO, 2006).

Maternal Mortality Ratio (MMR): -number of maternal deaths during given time period per 100 000 live births during the same time-period.

Utilization of services: -use of postnatal services by women after delivery of their babies.

Barriers to utilization:-in this study refer to what prevent women from utilizing postnatal care services.

Awareness:-having knowledge of or understanding of postnatal care services

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter aims to present a critical review of the literature on determinants of postnatal care utilization. Relevant studies in both developing and developed countries will be reviewed with particular emphasizes on the findings and methodological issues in developing countries and avoid pursuing approaches that have failed in past. Review of the frameworks from existed research will be depicted, followed by construction of the frame work that will be used in explaining factors affecting utilization of postnatal care.

Previous studies on maternal health examined either factors influencing use of health services for example study done in Kenya Machakos and Nairobi (Mwangangi & Muindi 2003), investigated only on availability of supplies while others have investigated the causes of and level of maternal mortality. In this study the researcher seeks to investigate factors affecting utilization of postnatal care services.

2.2 Postpartum period

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 time. Approximately 30-40% of maternal deaths in Africa are due to hemorrhage, mostly in the postpartum period. The figure below shows percentage of maternal deaths in Africa

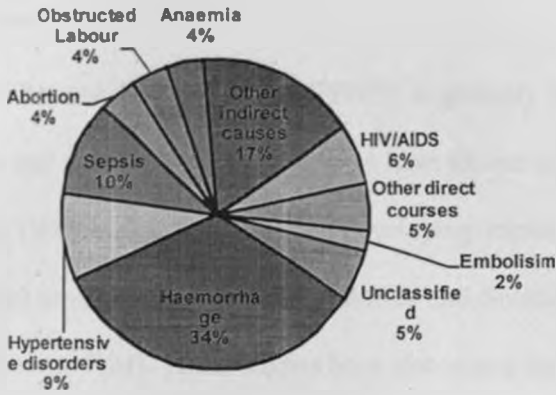


Figure 2.1. Maternal mortality in Africa

Sources: (Khan *et al.*, 2006)

Report from central province that is midyear 2010/2011 showed that maternal mortality has increased with most death occurring in the first 24 hours (60%) after delivery and 27% between 24 hours to 2 weeks. This is the period when there is low utilization of postpartum care (central province maternal death report 2010/2011).

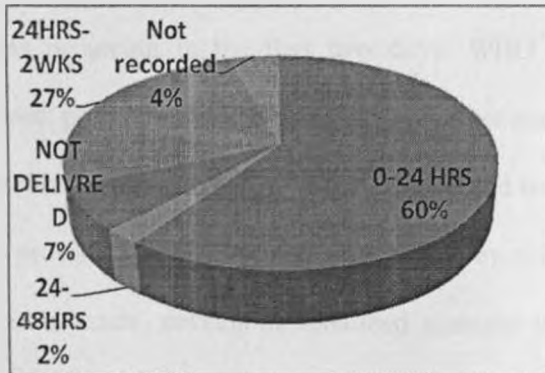


Figure 2.2. Maternal mortality Central Province

Sources: Central province report, 2010

According to WHO (2007) an estimated 70% of women in sub-Saharan Africa do not receive postpartum care. Approximately 45% of maternal deaths occur within first 24 hours of delivery and another 23% occur on 2-7 days. Four visits postpartum care visits are recommended for the health and well being of mother and newborn (WHO, 2007)

2.3 Postnatal care

Postnatal care Focused Postnatal Care (FPNC) is globally accepted as a key to improved maternal health and reduced mortality. 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, P.24). These studies have also noted that about 75% of maternal deaths occur in the first week after delivery with developing countries; Kenya included accounting for 60% of these deaths (WHO, 2006). The majority of women in developing countries receive almost no postpartum. For example, in very 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 in 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 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 when 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

and is crucial to achieving the eight MDGS, Population development and health goals as well as realizing vision 2030 (KDHS, 2008/2009).

Studies in the United States of America indicated that adequate antenatal, delivery and postnatal care utilization are influenced by the mother's relationship with the partner (Scheffer and Lia-Hoagberg, 1997). A Study conducted at Nepal (in South Asia) on utilization of postnatal reported that, the utilization of PNC services is low in Nepal, only 21% of the new mothers receive PNC. 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 (Dhaka *et al.*, 2007). The social-cultural practices around child birth such as maternal seclusion after delivery and cultural beliefs in a community play a vital role in non-utilization of PNC services in Nepal (Dhakal *et al.*, 2007). 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, 1994). This is due to cultural beliefs for instance maternal seclusion.

2.4 Maternal Age

Since older and younger women have different experience and influence, their behavior on seeking postnatal care also vary, commonly, younger women are more likely to utilize modern health facilities than older women as they are likely to have greater exposure and knowledge to modern health care and also access to education.

On other hand older women are likely to depend on past experience thus fail to utilize health care services. One study in Nepal (Sharma *et al.*, 2007) gave result that women under the age of 35 years utilized postnatal more than those above 35 years.

2.5 Women's level of awareness

Existing research on health outcome in developing countries has shown the important role the media in disseminating information on health related issues. Three sources of information are usually used: radio, television and newspapers and magazines. Study done in India reported that, women exposure to information through the radio, television and newspaper significantly increases the utilization of delivery and postnatal care (Shariff & Singh 2002).

2.6 Women's Autonomy

Autonomy has been defined as the capacity to manipulate one's personal environment through control over resources and information in order to make decisions about one's own concern or about close family members. Women's autonomy thus can be conceptualized as their ability to determine events in their lives, even though men and other women may be opposed to their wishes (Bloom *et al.*, 2001, p.68). Study done in a North Indian city showed that, women's autonomy as measured by the extent of movement, appears to be a major determinant of postnatal care utilization among the poor to middle income women (Bloom *et al.*, 2001).

2.7 Barriers to utilization of postnatal care

Study done on utilization of postnatal care in Al-Hassa, Saudi Arabia reported that lack of awareness is the main barrier to the utilization of postnatal care (Abdul, 2008). Another study done at Nepal (South Asia) on utilization of postnatal care services reported that lack of awareness was the main barrier to the utilization of postnatal care for only a third of women received a postnatal care (Dhakal *et al.*, 2007). Another study done at Uganda on utilization of postnatal care reported that the main reason for non-utilization of postnatal care is lack of awareness or not perceiving a need for it (Annet, 2004).

Study done at Bangladesh (Mustarfizur, 2009) amongst the maternal characteristics, education of women has been found to have the strongest association with the use of postnatal care services. Mother's education has a positive effect on the utilization of postnatal care after delivery. The higher educated mothers are more conscious than illiterate mothers on utilizing the services. Another study done at India reported that husbands who have attained higher education attainment play a more important in utilizing health care services than men with less schooling (Sharif & Singh 2002, p.10).

From previous studies, several factors have been seen to influence utilization of postnatal care service. This includes level of education, social cultural issues such as lack of awareness, not perceiving a need for it and inadequate resources in the health facilities. Increased educational attainment influences services use in several ways, including increasing women's power in decision making and creating awareness for the need of health services (Stephenson & Tsui, 2002).

Social pressure especially from spouses has emerged as an important factor influencing utilization of postnatal care services. The dependence of women on their husbands have pertained them to seeking health care (Firkree *et al.*, 2004). A study done in Benin reported that women had to negotiate with their husbands to pay for visit to health care (Grossmann-Kendal *et al.*, 2007)

The findings by the WHO, UNICEF and UNFPA, showed that a woman living in sub-Saharan Africa has 1 out of 6 chances of dying in pregnancy, childbirth and after delivery (WHO, 2004 : Safe Motherhood) reported that factors which prevent women in developing countries from accessing postnatal care include: distance from the health facilities, cost including direct fees and the cost of transportation, drugs and supplies, multiple demands on

women's time, women lack of power in decision making within the family and poor quality of services including poor handling by health providers.

A Study done in South Africa reported that women are discharged from maternity wards 24 hours after normal delivery. The result is that postnatal care is provided by family members and grandmothers who are often assisted by traditional healers thus there utilization of postnatal care in health is very low (Dhafer, 2009).

Effective care during the first week postpartum –especially during the first 24 hours is essential to maximize survival of mothers and newborns. Access to Focused postnatal care and proper understanding of utilization of health care during the postnatal can reduce maternal mortality and is crucial to achieving the eight MDGS, Population development and health goals as well as realizing vision 2030 (KDHS, 2008/2009).

In Ethiopia the level of maternal mortality are among the highest in the world. The maternal mortality rate is estimated to be between 700 and 1000 per 100 000 per life births (UNICEF, 2004). Study done in Ethiopia revealed that only 26.1 percent and 3.3 of the women receives antenatal and postnatal care services respectively (Geller *et al.*, 2007)

2.8 Conceptual Framework

There are various health seeking behavior and health utilization frameworks that can be useful in analyzing factors affecting utilization of maternal health services.

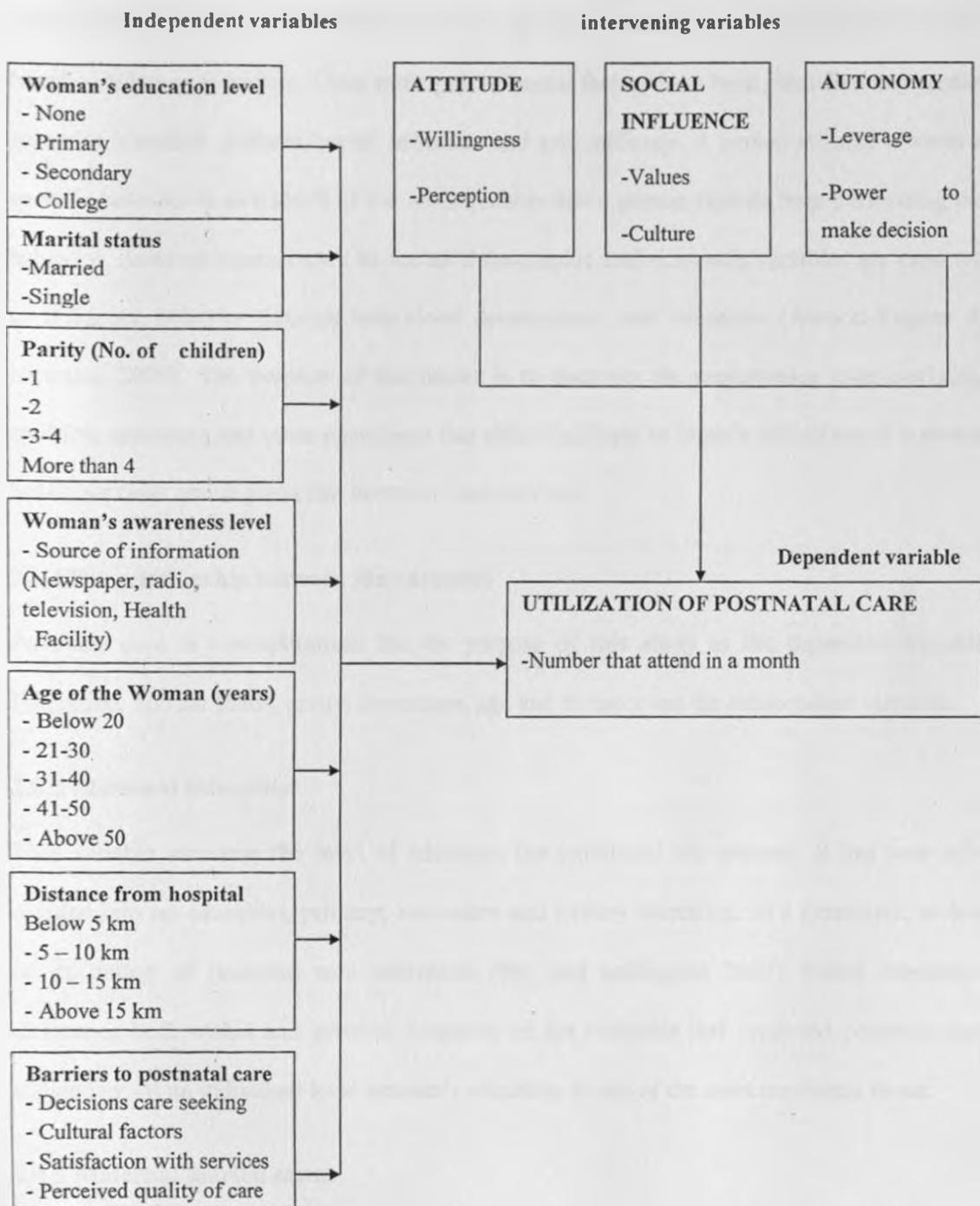


Figure 2.3: The conceptual Framework

In the conceptual model, the behavior such as the choice of delivery is considered to be the result of behavior intention. Three main psycho-social factors have been identified that predict behavior intention: attitude, social influence and self- efficacy. A person attitude towards a specific behavior is as a result of the consequences that a person expects from performing the behavior. External sources such as social/ demographic and economic variables are expected to influence behavior through behavioral determinants and intentions (Amooti-Kaguna & Nuwaha, 2000). The purpose of the model is to discover the predisposing characteristics, enabling resources and other conditions that either facilitate or impede utilization of maternal health services and in particular postnatal care services.

2.8.1 The relationship between the variables

Postnatal care is conceptualized for the purpose of this study as the dependent variable Education, marital status, parity, awareness, age and distance are the independent variables.

2.8.2 Maternal Education

This variable measures the level of education the individual has attained. It has been subdivided into no education, primary, secondary and tertiary education. In a systematic review of utilization of postnatal care utilization (Say and colleagues 2007), found substantial difference both within and between countries on the variables that predicted postnatal care utilization .At an individual level woman's education is one of the most consistent factor.

2.8.3 Maternal marital status

The variable could be a contributing factor in the utilization of postnatal care services. The status of the woman that is whether single, married or separated may influence in decision making on seeking postnatal care.

2.8.4 Parity (number of children)

This variable will indicate if the number of children a woman has plays an important role in deciding about the utilization of postnatal care services

2.8.5 Awareness level

This variable measures women's exposure to information. The variable will indicate if the frequency of reading newspaper, listening to radio, watching Television attending health messages and knowledge will increase awareness in utilization of postnatal care services.

2.8.6 Maternal age

Age of the respondent is represented by a continuous variable ranging from 15 to 49 years old. The age could be a contributing factor in the utilization of postnatal care services. Among the predisposing factors such as age represent biological imperative suggesting the like hood for the need of health services. Mother's age at birth is an important factor to determine the use of postnatal care services.

2.8.7 Distance

This variable will indicate the distance from facility in kilometers. The distance from facility matters in utilization of postnatal care services

2.9 summary of Literature Review

From the review, postnatal care is a key strategy for reducing maternal mortality, but millions women in developing countries do not receive it. The main reason identified for the non-utilization of postnatal care is lack of awareness, cultural beliefs among others. Most maternal deaths occur during postpartum period and these deaths can be prevented if postnatal care services are utilized in health facilities.

A conceptual framework with independent, intervening and dependent variables has been diagrammatically presented and a brief explanation on the variables done.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the study area and materials and methods that were used in conducting the study. The materials and methods discussed include; study design, study population, sampling design and sample size determination, data collection instruments, method of data collection, the study variables, recruitment and training of research assistants, validation of tools, ethical considerations and lastly data management, analysis, dissemination and utilization.

3.2 Research design

Research design is a plan showing how the problem under investigation will be resolved. The study will adopt descriptive survey design. A descriptive survey design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. (Parloo, 2006). This design was ideal for this study since it is most suitable as the researcher is intending to gain immediate knowledge and information on factors affecting utilization of postnatal care services as they exist on the ground and also economical on both time and funds.

To achieve the aim of the study, both qualitative and quantitative research approaches of data collection methods, analysis presentations were used. Both methods reduce bias as they check the quality of each analysis. Qualitative research seeks to describe and analyze the culture and behavior of humans and their group from the point of view of those being studied (Kombo & Tromp, 2006).

It is flexible, interactive and uses the natural settings. Qualitative research includes the use of questionnaires, in depth interviews, case studies and focus group. For this study questionnaires were used as instruments of data collection.

3.3 Target population

A population is a group of individuals, objects or items from which samples are taken for measurement (Kombo & Tromp, 2006). In this study, postnatal women visiting the Maternal Child Health (MCH) at Central Province General Hospital Nyeri were targeted. The target population comprises 800 mothers (MCH/FP monthly reports) within the postnatal period who will be attending the Child Welfare Clinic during the month of data collection period. Women who met the inclusion criteria were included in this study that is all the women within postnatal period, the mothers whose children are less than six months and those who gave consent. All the mothers who have come for other services apart from the postnatal care, those children are above six months and those who refused to give consent were excluded.

3.4 Sample size

Sample size is the number of observations used for calculating estimates of a given population without having to survey each member of the population. In the study the sample size was 240 mothers.

3.4.1 Sampling Technique

According to Orodho and Kombo (2002), sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire population.

Sampling is the process of obtaining information about the entire population by examining only part of it (Kothari, 1985). Sampling makes the scope of the study manageable;

The researcher estimated that an average number of mothers attending child welfare clinic per day was 40. Convenience sampling was used in this study because mothers come to the facility at different time intervals. Convenience sampling is a non probability sampling which involves the sample being drawn from that part of the population which is close to hand. That is a sample population selected because it is readily available.

Table 3.1 shows the target population of 800 mothers who attended clinic for a period of one month child in Maternal Child Health clinic (MCH).

Table 3.1 Target population

Days	Daily attendance in the clinic	Weeks	Weekly attendance
1	40	1	200
2	40	2	200
3	40	3	200
4	40	4	200
5	40		
Total	200		800

Table 3.2 shows daily attendance of mothers approximately 40 per day. 30% sampling ratio was used.

Table 3.2 Daily attendances

Days	Daily attendance	Sampling ratio	Sample size
1	40	30%	12
2	40	30%	12
3	40	30%	12
4	40	30%	12
5	40	30%	12
Total	200	30%	60

Table 3.3 shows weekly attendance and sampling ration of 30% thus attained a sample size of 240 mothers in one month

Table 3.3 Weekly attendances.

Weeks	Weekly attendance	Sampling ratio	Sample size
1	200	30%	60
2	200	30%	60
3	200	30%	60
4	200	30%	60
Total	800	30%	240

The researcher used 30% of the subject because the population was 800 and according to Cochran, William G. 30% sample size is sufficient for small population less than 1000.

3.5. Training of Research Assistants.

Two research assistants were recruited to help carry out the study. They were trained in a two day seminar on how to interact with clients and how to obtain the most accurate information on utilization of postnatal services. They were also trained on their roles to ensure competences. Additional training on research ethics and the importance of maintaining confidentiality was also carried out.

3.6 Research Instruments

In this study, data was collected using questionnaires in English language but translated during interview to either Kiswahili or kikuyu language depending on the respondent's preferred language. The purpose of the study was explained to all the eligible respondents. Upon accepting to participate in the study, they were required to give verbal/written informed consent. The study was conducted in a place that provided both comfort and privacy to the respondents. Questionnaires were preferred because they are quickest, cheapest, and relatively confidential. The questionnaires consisted of open ended and closed ended questions.

Section A was for identification and code number, Part B of the research tool was personal data of the respondents, Section C are questions relating to postnatal care, Section D on awareness and Section E on barriers for utilization.

3.6.1 Validity of instruments

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure (Campbell & Stanley, 1966). Validity is based on the adequacy with which the terms in an instrument measure the attributes of the study. Content validity of the instrument was ensured through constructive criticism from colleagues in the maternal health department who have an extensive experience and expertise in questionnaires construction. The questionnaires were revised and improved according to the advice and suggestions made.

3.6.2 Reliability of instruments

Reliability is defined as the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials (Mugenda & Mugenda, 1999). Pretest of the data collection tools was conducted at Thika level five hospital where the questionnaires were administered to 30 clients. Pretest helped to make necessary adjustments in the research instrument for easier understanding. The necessary instructions in simplified medical terms were used to ensure correct interpretations were made.

3.8 Operationalization of Variables

The variables were operationalised by looking at their behavioral dimensions, indicators or properties denoted by the concept. This rendered the variables measurable. The measurements was both objectives and subjective.

Table 3.4. Operationalization of Variables

Objectives	Variable	Indicators	Measurement scale	Type of analysis
To investigate factors affecting utilization of PNC services	Postnatal care utilization (Dependent variable)	Number that attend PNC services in a month	Percentage of mothers attending postnatal care	Descriptive
Determine the influence of educational level on utilization of PNC services	Education (Independent variable)	-Woman level of education	-Academic qualifications None Primary Secondary College	Descriptive
To determine the influence of women's marital status on utilization of PNC services	Marital status(independent variable)	-Maternal marital status	Status Married Single Separated	Descriptive
To determine the influence of women's parity on utilization of PNC services	Parity(independent variable)	-Woman parity	-Number of children	Descriptive Cross tabulation
Determine the women's awareness level on the utilization of PNC services	Awareness (Independent variable)	-Reading newspaper -Listening radio -Watching television -Health messages	-Frequency of reading newspaper -Frequency of listening to radio -Frequency in watching television -Number of health messages attended	Descriptive Descriptive Descriptive Descriptive

To establish the influence of woman's age on utilization of PNC services	Age (independent variables)	-Women age bracket mix	-Age of women	Descriptive and Pearson chi-square
Determine influence of distance from the facility on utilization of PNC services	Distance (independent variable)	-Distance from facility	-Distance in kilometers	Descriptive

3.9 Data Analysis Technique

The collected data in the questionnaires was cleaned, coded and entered into the computer using the statistical package for social sciences (SPSS) version 17 for analysis. Statistical tests applied chi-square and correlation. The variables captured in the data set included: postnatal care, education, age, marital status, distance and awareness. These variables were used to determine factors affecting utilization of postnatal care services.

The information gathered from the data was to enable exploratory data analysis using descriptive statistics. Data analysis was done and the findings were presented using frequency tables, cross tabulated tables and bar charts.

3.10 Ethical Issues in Research

Confidentiality was maintained throughout the study. No participant's name was used, subsequently in the report or publication derived from the study. In order to carry out this study, approval was received from University of Nairobi, Central Province Hospital, Nyeri Research Medical board. Clients participating or not participating in this study all received the standard care according to the laid down protocols by the Ministry of Health, Kenya. The

purpose of the study was explained to each eligible respondents and informed consent sought.

In addition, it was emphasized that the participation in this study was purely voluntary.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

In this chapter the results of the study are described and the analysis of the data was presented. The demographic predictors used in this study were age, education, marital status and parity. The outcome (dependent variable) was postnatal care service utilization. Data analysis was done using descriptive statistics. Comparisons of responses and chi-square analysis to establish whether there was any relationship between independent variables and utilization of postnatal care services was done using the statistical package for social sciences (SPSS) version 17 of analysis. The findings were presented in narrative, tables, charts and graphs as per the specific objectives. Out of the grand total of 240 questionnaires which were used in the study, all of them were filled; hence a response rate of 100%.

4.1. Demographic factors

In order to assess the demographic factors that determine the utilization of postnatal care services among postpartum women attending Central Province General Hospital, Nyeri, age, education, marital status, distance from the health facility and number of children were used as the demographic predictors in this study. Table 4.1 shows that majority of the respondents 74.2% were between 21-30 years of age, 17.9% in the 31-40 age group, 6.3% below 20 years and only 1.7% were in the age group of 41-50 years.

Table 4.1 distribution of respondents by age

Age	Frequency	Percent
<20	15	6.3
21-30	178	74.2
31-40	43	17.9
41-50	4	1.7
Total	240	100.0

As shown in Table 4.2, a significant majority 47.1% of the respondents had attained secondary education, 40.8% primary education while only 12.1% had tertiary education.

Table 4.2 distribution of respondents by education level

Level	Frequency	Percent
Primary	98	40.8
Secondary	113	47.1
Tertiary	29	12.1
Total	240	100.0

On marital status, majority of the respondents 80.8% were married while those single were 17.9% and only a small proportion 1.3% were separated as shown in Table 4.3.

Table 4.3 distribution of respondent by marital status

Status	Frequency	Percent
Married	194	80.8
Single	43	17.9
Separated	3	1.3
Total	240	100.0

Majority of respondents 63.8% resided within a distance of 0-5km from the hospital, 21.3% a distance of 5-10km, and 9.2% travelled a distance of more than 15km to the hospital and only 5.8% resided 10-15km from the hospital as shown in Table 4.4.

Table 4.4 Distance of respondents' residence from the hospital

Distance in kilometers	Frequency	Percent
0-5	153	63.8
5-10	51	21.3
10-15	14	5.8
>15	22	9.2
Total	240	100.0

Of all the study participants, 49.6% had 2-3 children, 44.2% had 1 child, 3.8% had 4-5 children and only 2.5% had more than 5 children as shown in Table 4.5.

Table 4.5 distribution of respondents by number of children

No. of Children	Frequency	Percent
1	106	44.2
2-3	119	49.6
4-5	9	3.8
>5	6	2.5
Total	240	100.0

4.2 Utilization of postnatal care services

This section presents information about utilization of postnatal care services in Maternal Child Health (MCH) clinic at the Central Province General Hospital, Nyeri. Variables addressed included mothers' attendance and non attendance of postnatal care services and the factors that affect the utilization of the postnatal services.

Table 4.6 shows the attendance and non attendance of postnatal care services. The results shows that majority of the respondents 85.8% did not attend postnatal care services whilst only a minority 14.2% presented themselves for the postnatal care services.

Table 4.6 whether respondents attended postnatal services or not

Response	Frequency	Percent
Yes	34	14.2
No	206	85.8
Total	240	100.0

4.2.1 Reasons for attending postnatal services

Mothers provided various reasons for attending postnatal care services as depicted in Table

4.7. The results show that majority of the respondents 38.2% attended the clinic for immunization services for the child, 32.4% attended the clinic to seek treatment for self or child and only 26.5% attended the clinic for comprehensive postnatal care services.

Table 4.7 Distribution of respondents by reasons for clinic attendance

Service	Frequency	Percent
To seek for treatment	11	32.4
Child's immunization	13	38.2
Family planning	1	0.9
Check up for both mother and baby	9	26.5
Total	34	100.0

4.2.2 Reasons for not attending postnatal care

In Figure 4.1, respondents provided various reasons for not attending postnatal care services. Majority of the mothers 49.5% reported that they found it not necessary, 44.4% said that they did not attend postnatal care services because they had no problem whilst 6.3% reported that they were not aware of the postnatal services.

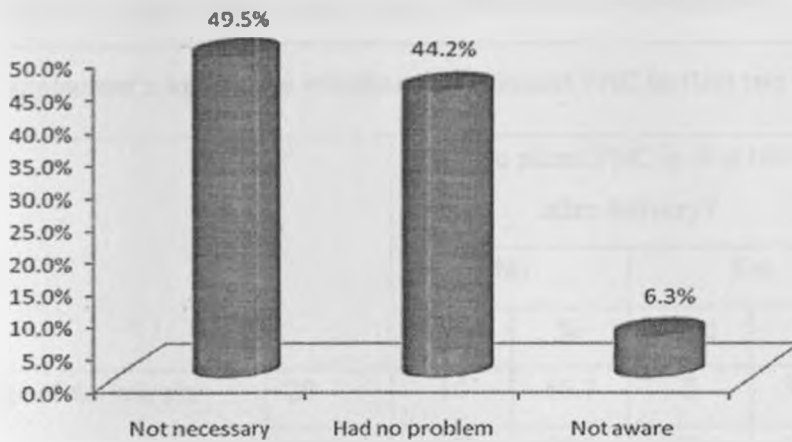


Figure 4.1 Reasons for not attending postnatal care

4.2.3 Comparison of age and post natal care attendance

Majority of respondents who were 66.7% in below 20 years of age did not attend PNC while 33.3% did. Of those in the age 21 to 30 years, 86.0% did not attend, 90.7% of those in age 31 to 40 years did not attend clinic while none of those in the age 41 to 50 years attended the clinic. Clinic attendance was associated with age of client which was of statistical significant ($p=0.034$) as shown in Table 4.8 as determined by Pearson chi-square test greater than 5 and P-value less than 0.05.

Table 4.8 Comparison of age against post natal care attendance

Respondent's age versus whether she attended PNC in first two wks after delivery						
		Did you attend PNC in first two wks after delivery?				
		No		Yes		
		Freq	%	Freq	%	
Age of the woman	<20	10	66.7	5	33.3	$\chi^2 = 8.684,$ df=3, p=0.034
	21-30	153	86.0	25	14.0	
	31-40	39	90.7	4	9.3	
	41-50	4	100.0	0	0.0	
Total		206		34		

4.2.4 Comparison of marital status and postnatal care attendance

Table 4.9 shows a cross tabulation of postnatal care attendance status and marital status. The results show that single women were better at attending postnatal clinic compared to married women. Majority of married women 89.1% did not attend postnatal, 72.2% of single women did not attend postnatal services. Majority of single women attended postnatal services 27.7% whereas only 10.9% of married women attended postnatal which was statistically significant (p=0.011) as determined by Pearson chi-square test and was considered statistically significant when less than 0.05.

Table 4.9 Marital status versus postnatal care attendance

		Did you attend PNC in first two wks after delivery?				value
		No		Yes		
		Freq	%	Freq	%	
Marital status	Married	172	89.1	21	10.9	$\chi^2 = 9.052,$ df=2 p=0.011
	Single	32	72.7	12	27.3	
	Separated	3	100.0	0		
Total		206		34		

4.2.5. Utilization of postnatal care services against distance to woman’s home

Of all the women who resided less than 5 kilometres from the hospital, 15.3% attended postnatal clinic in the first two weeks following delivery, 17.6% of those residing between 5 and 10 kilometres attended postnatal care while nearly all the mothers 92.9% who were 10-15 kilometres from the hospital did not attend postnatal care. All mothers living more than 15 kilometres from the hospital did not attend the postnatal care services within 2 weeks after delivery. Though apparently distance had an influence on postnatal care attendance, the same was no significant relationship between the distance and attendance of clinic $R=.115$, $P = 0.076$ as shown in Table 4.10. The P-value was 0.076 which greater than 0.05 as determined by using Pearson chi-square test.

Table 4.10 Comparison of distance of woman's home from hospital and postnatal care attendance in first two weeks after delivery?

		Attend PNC in first two weeks after delivery?				Total	Value
		No		Yes			
		Freq	%	Freq	%		
Distance of woman's home from hospital	0-5	129	84.3	24	15.3	153	$\chi^2=4.902$ df=3, P=0.076
	5-10	42	82.4	9	17.6	51	
	10-15	13	92.9	1	7.1	14	
	>15	22	100	0	0.0	22	
Total		206		34		240	

4.2.6 Comparison of the number of children a woman has and PNC attendance

The number of children woman an important role in deciding about the utilization of postnatal care services. This study demonstrates that with each additional birth, utilization level decreases. This can be associated with experience and exposure. This study showed an inverse relationship between the number of children a woman has and postnatal care services utilization. The more the children, the less likely the woman attends postnatal clinic, a relationship that was statistically significant (p=0.010) as shown in Table 4.11 and P- value determined using Pearson chi-square test and considered statistically significant when less than 0.05.

Table 4. 11 Number of children and postnatal attendance

		Did you attend PNC in first two wks after delivery?				Value
		No		Yes		
		Freq	%	Freq	%	
Number of children the woman has	1	88	83.0	18	17.0	$\chi^2 = .580$ df=4 P=0.010
	2-3	103	86.6	16	13.4	
	4-5	6	100.0	0	0.0	
	>5	3	100.0	0	0.0	
Total		206		34		

4.2.7 Education level and PNC attendance

The education level of the respondents ranged from primary to tertiary level. This study showed that education does not influence utilization of postnatal services for 96.6% of respondents with tertiary education did not utilize the postnatal while only 3.4% utilized the services. Majority of the respondents who utilized the postnatal care services 21.7% attained primary education as shown in Table 4.12. P=0.01

Table 4.12 Education versus postnatal attendance

		Did you attend PNC in first two wks after delivery?				Value
		No		Yes		
		Freq	%	Freq	%	
Woman's level of education	Primary	76	78.3	22	21.7	$\chi^2 = 9.202$ df=2 P=0.01
	Secondary	102	90.3	11	9.7	
	Tertiary	28	96.6	1	3.4	
Total		206		34		

4.3 Respondents' awareness of postnatal care services

4.3.1 Knowledge on Postnatal care services

Knowledge on postnatal care was assessed by use of four key parameters: Whether a respondent has ever heard of postnatal care services, whether she knew of the required services, number of postnatal services a woman should make and listing the postnatal care services. Each correct item had a score of 1 hence a possible total of 4 and minimum of 0. Those whose aggregate scores of 0 and 1 were categorised as having poor knowledge on postnatal care, those who scored 2 had inadequate knowledge, score 3 was good knowledge while score 4 was very good knowledge. The results further showed that majority of the respondents 33.3% had poor knowledge on postnatal services, 24.2% had inadequate knowledge, 22.9% had adequate knowledge whilst only 19.6% had very good knowledge on postnatal services as shown in Table 4.13.

Table 4.13: Postnatal knowledge scores

Knowledge scores	Frequency	Percent	Cumulative Percent
Poor knowledge	80	33.3	33.3
Inadequate knowledge	58	24.2	57.5
Adequate knowledge	55	22.9	80.4
Very good knowledge	47	19.6	100.0
Total	240	100.0	

4.3.2 Influence of PNC knowledge on postnatal care attendance

A total of 80 respondents had poor knowledge on postnatal care out of who only 7.5% utilized postnatal care services. Among those who had inadequate knowledge, 7% went for postnatal care, while among those with adequate knowledge, 16.3% went for postnatal care services. The best attendance 31.9% was reported among those who had very good knowledge on postnatal care and a general trend that the higher the knowledge scores, the better the postnatal care attendance as shown in Figure 4.2. Knowledge on postnatal care influenced utilization of postnatal care positively which was significant ($p=0.014$).

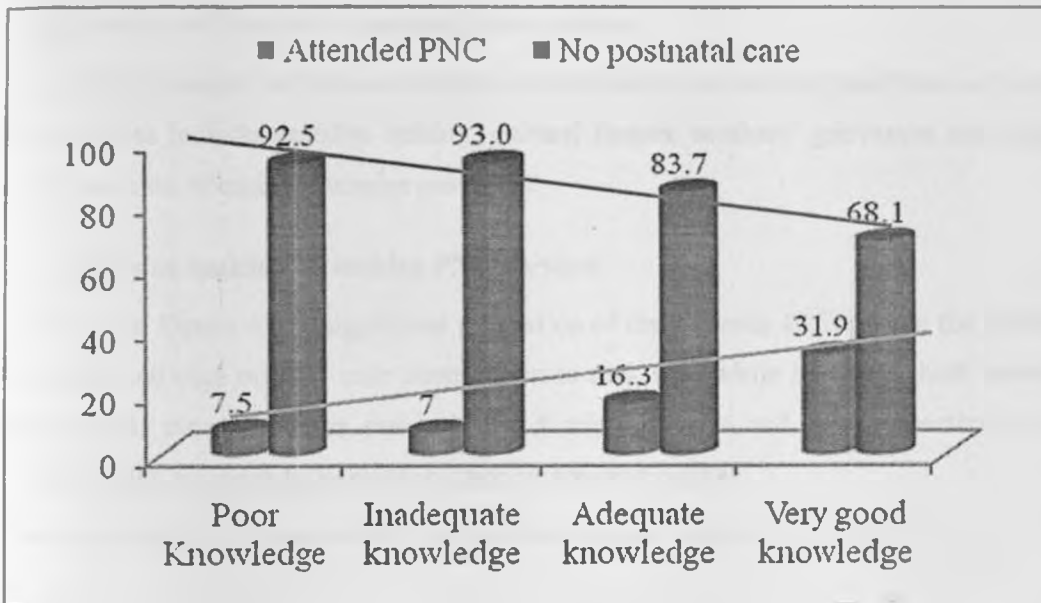


Figure 4.2 Postnatal care knowledge and PNC attendance in first 2 weeks after delivery

4.3.3 Health talks

Health talks are delivered at the MCH clinic as part of creating awareness to women on various health issues. Table 4.14 shows that though health talks were delivered, postnatal care services were not emphasized during Antenatal care. Majority of the respondents 78.8% reported that they received no health talks on postnatal care and only 21.5% reported that there were health talks on postnatal care.

Table 4.14 Distribution of respondents who received Health talk on PNC during ANC

Received Health talk	Frequency	Percent
Yes	51	21.3
No	189	78.8
Total	240	100.0

4.4 Barriers to utilization of postnatal care services

This section presents the factors that hindered mothers from utilizing postnatal care services. The variables include decision making, cultural factors, mothers' grievances and comment about provision of care and service providers.

4.4.1 Decision making on seeking PNC services

As shown in Figure 4.3, a significant proportion of respondents 48.5% made the decision to seek postnatal care on their own about when to seek care while in 42.2%, both herself and partner make the decision on seeking care. A minority 7.1% and 2.1% respectively had the decision made for them by partner or other persons respectively.

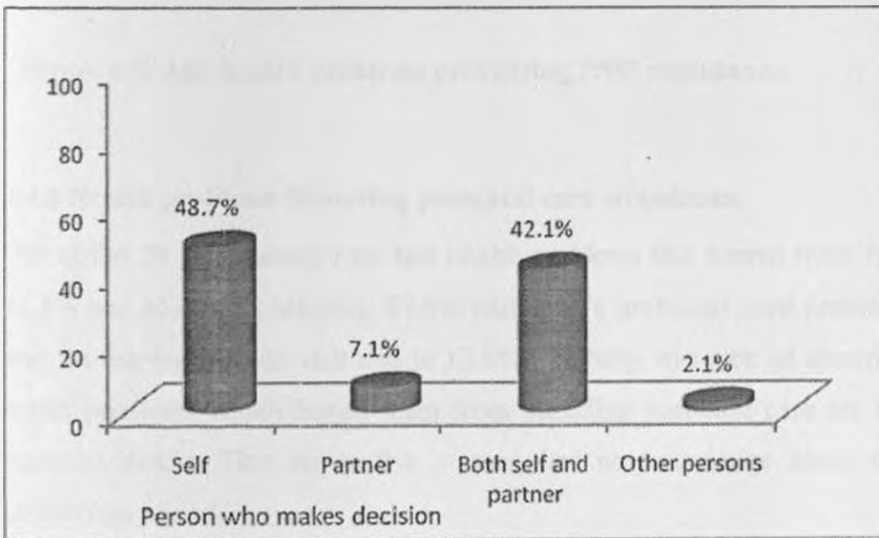


Figure 4.3: Who makes decision on whether a woman seeks postnatal care

4.4.2 Any health problem preventing seeking PNC

A significant majority 87.1% reported that they had no health problem which hindered them from utilizing postnatal care whereas 12.1% reported that they experienced some problems which hindered them from utilizing postnatal services whilst 0.8% did not respond to this question. Among the reasons fronted were religious and family restrictions based on cultural believes that a woman should not leave the house for sometime after delivering as shown in Figure 4.4.

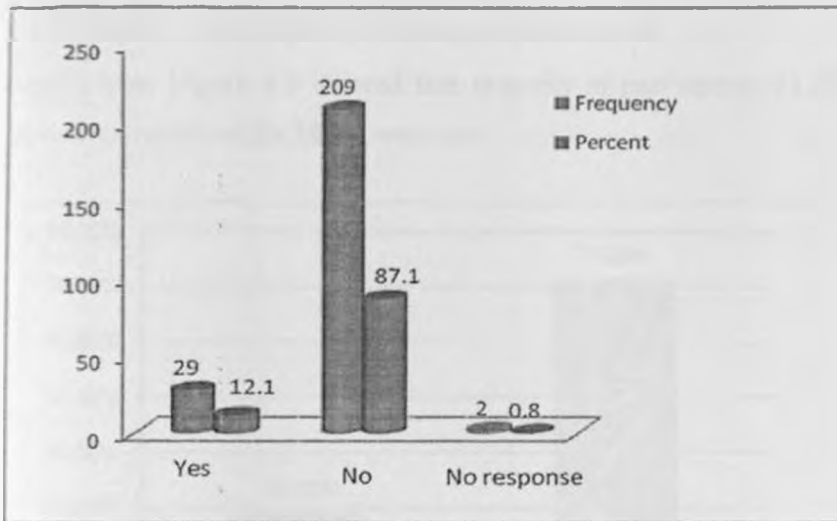


Figure 4.4: Any health problems preventing PNC attendance

4.4.3 Health problems hindering postnatal care attendance

Out of the 29 respondents who had health problems that barred them from attending PNC, 44.8% had bleeding problems, 27.6% had baby's umbilical cord problems, 13.8% reported that the respondent was sick and in 13.8%, the baby was sick as shown in Table 4.15. The health problems which barred them from attending postnatal care are the major causes of maternal deaths. This shows that women had no knowledge about danger signs during postpartum period.

Table 4.15 percentage distribution of respondents by example of the problem

Health problem	Frequency	Percent
Bleeding	13	44.8
Baby umbilical cord problems	8	27.6
Mother sick	4	13.8
Baby sick	4	13.8
Total	29	100.0

4.4.4 Whether respondents were happy with services

Results from Figure 4.5 showed that majority of participants 71.2% were happy with the services provided while 28.8% were not.

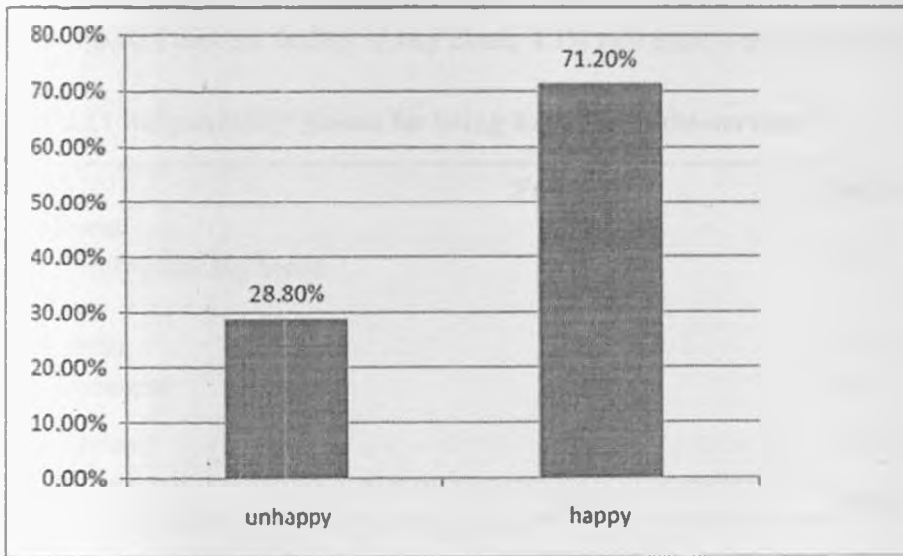


Figure 4.5: If respondents were happy or not with services offered

Among those respondents who were unhappy with services; as shown in Table 4.16, majority 65.2% said that the waiting time was too long, 7.2% said the health workers were not polite, 20.4% complained they were attended to by students who were not supervised while 7.2% said the clients were not strictly served on a first come first served basis and these were among the reasons that discouraged clients from seeking services.

Table 4.16 Reasons for being unhappy

Reason for being unhappy	Frequency	Percent
Long waiting time	45	65.2
Impolite by health workers	5	7.2
Attended to by student	14	20.4
Clients not served on first come basis	5	7.2
Total	69	100.0

4.4.5 Reasons for being happy with services

In Table 4.17; among the 171 respondents who were happy about the postnatal care services received, 41.5% reported they received good treatment, 21.1% were happy because health providers gave good family planning health education, 22.2% said they received good advice, 11.1% reported that the facility is very clean, 4.1% said there was good sitting arrangement.

Table 4.17 Respondents' reason for being happy with the services

Reason	Frequency	Percent
Cleanliness	19	11.1
Good family planning health education	36	21.1
Good sitting	7	4.1
Good treatment	71	41.5
Good advice	38	22.2
Total	171	100.0

4.5 Suggestions for improvement of PNC services

Table 4.18 shows that majority 43.0% said that service providers should reduce on waiting time, 19.3% suggested that the government should employ more health workers, 12.3% said health providers to teach mothers on postnatal care, 9.6% said health workers should be polite to patients, 7.9% said that health workers need to introduce shift to attend clients on lunchtime and students should be supervised and not to be left to attend clients alone.

Table 4.18 Suggestions for improvement of the postnatal care services

Suggestion	Frequency	Percent
Reduce waiting time	49	43.0
Health workers need to be polite	11	9.6
Supervise students	9	7.9
Teach mothers on postnatal care	14	12.3
Employ more health workers	22	19.3
Introduce shift to see clients on lunchtime	9	7.9
Total	114	100.0

4.6 Summary

Cross tabulations and Pearson chi-square employed to determine which factors were significant regarding utilization of postnatal care services. The variables that were found to be significantly influencing postnatal services utilization include age of the respondent, marital status , number of children , education and the knowledge the women had on postnatal care. Long waiting time, impolite health workers, being attended to by unsupervised students were among the factors found to influence utilization of postnatal care services. Cultural beliefs such as maternal seclusion and religious beliefs also influenced utilization of postnatal. Good treatment, good advice good family planning health education and clean facility influenced postnatal care utilization.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMEDATIONS.

5.1 Introduction

This chapter discusses the summary of findings and presents a discussion of the study findings of the study that was aimed at establishing factors affecting utilization of postnatal care services. The study endeavored to find the association between demographic information, awareness and barriers with the utilization of postnatal care services.

5.2 Summary of findings.

There was a high response rate 100% (n=240). The demographic predictors used in this study were age, education, marital status, parity and distance from the facility. Other indicators included awareness and barriers influencing utilization of postnatal care services. This study shows that utilization of postnatal care services was low 14.2% in Central Province General, Nyeri.

In this study, majority of the respondents 54.3% were between 21-30 years and age was statistically significant ($P=0.034$) in utilization of postnatal care services. Younger women attended postnatal care service better while none of the respondents above age 41 years attended postnatal clinic. Maternal education did not influence utilization of postnatal care services. The more the children, the less likely the woman attends clinic, a finding which was statistically significant ($P=0.010$). Though apparently distance had an influence on postnatal care attendance, the same was not significant ($P=0.076$). Long waiting time, rudeness of health providers were among the factors found to affect utilization of postnatal care services. Poor knowledge about postnatal care and cultural beliefs had negative impact on utilization of postnatal care services.

5.3 Discussion of findings.

The study recorded a high response rate of 100% and according to Linder and Wingenbach (2002), surveys that have high response rates provide a measure of reassurance that the findings can be projected to the population from which the sample is drawn. The success of the high response rate (n=240) 100% can be attributed to the fact that the completion and return of the questionnaires was well supervised by trained research assistants.

This study documented a low utilization of postnatal care services at the Central Provincial General Hospital - Nyeri as only 14.2% of the respondents utilized postnatal care services which was almost equal to sub Saharan Africa where only 13% utilizes postnatal care services (Lancet, 2006). Numerous studies in developing countries have shown that demographic factors such as age, parity, education and distance are associated with the use of the postnatal care services (Sharma *et al* (2007); Wong *et al.*, (1987); Obermeyer, 1993). It was well recognized that age plays an important role in women's utilization of maternal health services. Since older and younger women have different experience; and influence, their behavior on seeking postnatal also vary, younger women might have enhanced their knowledge of modern medicine and are more likely to utilize modern health facilities than older women. They are likely to have greater exposure and more access to education. One study done in Nepal (Sharma *et al.*, (2007) gave result that women over 35 are less likely to utilize postnatal care services. In this study the pattern was similar 33.3% of those below 20 years utilized the services, 14 % of those below 30 years utilized the services 9.3 % above 30 years and none above 35 years utilized the services. The findings of this study support this observation for they showed that postnatal utilization had a strong statistical association with the age of women.

Maternal education has a positive impact on the utilization of health care services (Kogan & Leary, 1990, Chakraborty *et al.*, 2002). According to these authors, maternal education increases women's perceived seriousness about maternal health issues. Studies conducted at Bangladesh (K.M. Mustafizur Rahman (2009) showed that maternal education is strongly associated with postnatal care. The higher educated mothers are more conscious than illiterate mother in utilizing the services. The results from this study showed a different pattern of utilizing postnatal care services. Majority of the respondents with tertiary education did not utilize the services. Education did not directly influence utilization of postnatal care services.

The number of children woman has plays an important role in deciding about the utilization of postnatal care services. Study done at Nepal Shamar *et al.*, (2007) revealed that women with higher birth order utilized postnatal care to lesser extent than those with one child. With respect to birth order, this study showed that with each additional birth, utilization level decreases. The decline in postnatal care services among higher birth had also been shown in a study done at Mbeere District, Kenya (Mwaniki, 2002) which agrees with the results of this

study as women with higher birth more than five none attended postnatal care which could be associated with experience and exposure.

Distance limits women's willingness to seek healthcare services particularly when appropriate transportation is scarce and communication difficult (Timyan *et al.*, 1999). In this study 15.3% of the respondents who lived 0-5km from the hospital attended postnatal services whilst no respondents more than 15km from the facility attended postnatal care. This can be explained due to the fact that accessibility and affordability to the health facility was more difficult.

Decision to seek healthcare services can be made by the woman herself, husband and other family members (Timyan *et al.*, 1993). In this study single women were better at attending postnatal care services compared to married women. Previous studies indicated that men believe maternal health care services are woman's affairs. The answer lies in involving men in maternal health issues and this may increase utilization of services by married women.

Women's lack of awareness can range from lack of understanding what postnatal services are to lack of knowledge of importance of postnatal service. Study done in Nepal (Dhakah *et al.*, 2007) reported that the main reason for the non utilization of postnatal care services is lack of awareness or not perceiving a need for it. The study suggested that there is need for awareness raising programmes highlighting the importance of postnatal care service. In this study, 44.2% of the respondents did not attend postnatal care services because they had no problems while 49.5% failed to present themselves for postnatal care because they did not think it was necessary. Most women lacked awareness about postnatal services and those who reported they knew about the services only knew about immunization and family planning, they lacked adequate knowledge of comprehensive postnatal care services. Another study done in Al-Hassa, Saudi Arabia (Abdul Abyadi 2008) reported that lack of awareness was the main barrier to the utilization of postnatal care services. The results from these studies concur with this study for 41.3% of the respondents had no knowledge about postnatal services and only 16.3% had good knowledge about postnatal care. In Central Province General Hospital, Nyeri MCH clinic where women were supposed to gain knowledge about postnatal care, health talk on postnatal care was not emphasized during Antenatal care for 78.8% reported no health talk given on postnatal care..

Barriers to utilization of postnatal care ranges from lack of awareness, social cultural factors, health provider's response and facility based. The period following birth in Africa is often

marked by cultural practices. The social cultural practices around child birth such as maternal seclusion after delivery and cultural belief play a vital role in non utilization of postnatal care as reported in a study done in Nepal (Dhakal *et al.*, 2007). In this study there are similar findings for non utilization for postnatal care for instance maternal seclusion and religious belief. Providers response, and care in the facility also contributed to poor utilization of postnatal care for instance respondents reported that the health workers were rude and that the waiting time was long. According to (Simelela, 2006), obstacles to wider access still exist, but they may be overcome by overt policy commitment to maternal health services, partnership between stakeholders, community involvement and quality programs. The rude health workers and long waiting time should not be ignored in order to improve utilization of postnatal care services.

5.4 Conclusions

This study concludes that the utilization of postnatal care services is low at the Central Provincial General Hospital Nyeri as only 14.2% of the respondents utilized postnatal care services.

The study also showed that the most important factors influencing the use of postnatal care services either positively or negatively are maternal age, marital status, knowledge on postnatal care services and the number of children the woman has.

Educating mothers on postnatal care during the antenatal care period was not emphasized and this was a weakness that affects utilization of postnatal care services.

5.5 Recommendations

The following recommendations may increase the ability to utilize postnatal care services: in order to improve utilization of postnatal care services, the service providers would benefit from training in how to improve their relationships with clients which would boost the use of postnatal services. This will also help strengthen the client-service provider relationships, enhance client's satisfaction and therefore help to improve the use of postnatal services.

Awareness programmes on postnatal care services should be implemented, targeting women, husbands and community and this may influence utilization of postnatal care services. Male involvement should be emphasized on in order to support women in decision making especially on seeking health services.

Barriers such as long waiting time, inadequate number of staff and unsupervised students, need to be looked at by hospital authority so as to provide a good conducive atmosphere to the clients and this may improve utilization of postnatal care. The hospital authority should ensure that services are provided at convenient hours for instant creating a lunch hour shift this may help improve utilization of postnatal care services. The ministry of health will need to ensure that health facilities have adequate capacity in term of staffing in order to adequately provide quality care.

The ministry of health has to make a comprehensive plan to overcome informational barriers by increasing the women's understanding and awareness of the need to go for and availability of postnatal services. In addition postnatal women should also be educated about the risks they face, signs of danger during postpartum period and their right and need to have decision making powers over their own health. The increase in awareness and understanding by mothers about postnatal care during Antenatal clinics so as to improve on the use of postnatal is necessary.

The government should have guidelines standards, protocols and most importantly human resources for postnatal period for this will help increase utilization of postnatal hence reduce maternal mortality.

5.6 Suggestions for further research

There is limited information on postnatal care utilization thus further research is recommended in this area in Kenya and developing countries, because many of the studies reviewed for the building of this study were conducted in developed countries and very few in Kenya. Thus the research suggests for further studies in the following area:

A study to compare the uptake of postnatal care services among women at rural and urban settings.

A comparative study to determine utilization of postnatal care among employed women and unemployed women.

A study to determine awareness within the community of availability of and importance of utilizing postnatal care.

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APPENDICES

Appendix 1: Introduction letter

WANGARI NELIE MUIRURI

P.O.BOX 202, NYERI

TEL.0722449390

THE MEDICAL SUPERINTENDENT,

CENTRAL PROVINCE GENERAL HOSPITAL

P.O BOX 27-NYERI

Dear sir/Madam,

RE: Permission to carry out academic research in your institution

I am a student of University of Nairobi pursuing a Masters Degree in Project Planning and Management. I am conducting an academic research on the factors affecting utilization of postnatal care services. The purpose of this letter is to request to be allowed to conduct this research in your institution.

I wish to state that I will strictly adhere to the code of conduct required with total respect to confidentiality. All records and information obtained will be handled discreetly and professionally, will remain confidential unless otherwise through your consent and of any other person involved.

I am looking forward to your kind and favorable consideration.

Yours faithfully

MUIRURI NELIE WANGARI

Appendix 2: Consent form

Hello. My name is NELIE WANGARI MUIRURI; I am a student of University of Nairobi, conducting a study on utilization of postnatal care services. In order to improve the services clients receive at this facility, I would like to ask you some questions related to postnatal care service and your experiences here today or in the past.

The decision to allow this interview or not is completely voluntary and will not in any way affect the services you receive today or in the future visits. You may decline to answer any question or part of question if not comfortable with it. You may also stop the interview at any stage. I however encourage you to answer the questions as the information gathered will be useful in the improvement of post natal care services at this clinic.

The information you provide will be confidential and will not be used for any other purpose other than this study. Further, your identity will remain completely confidential.

Do you have any questions?

Do I have your permission to continue with the interview?

_____ Date ____/____/2011

Interviewer's signature

(Indicates respondent's willingness to participate)

Record the time interview was started _____

Appendix 3: Questionnaire

SECTION A

Identification

Name of interviewer Interviewer code

Client code number-----

Date: -----

Please put a tick (x) in the box next against your response and where applicable write the required responses in the spaces provided.

SECTION B: Demographic Data.

Please put a mark (x) in the box next to the right response and where applicable write the required responses in the spaces provided.

1. Please indicate your age in the appropriate box

Below 20 years

21-30years

31-40 years

41-50 years

Above 50

2. What level of education did you attain?

None

Primary school

Secondary school

Tertiary

3. What is your marital status?

- Married
- Single
- Separated/Divorced

4. How far is your residence from the health facility?

- 0-5 KM
- 6-10 KM
- 11 – 15 KM
- More than 15 KM

5. How many children do you have?

- 1
- 2-3
- 4-5
- More than 5

Section C: Postnatal care (care given to a woman after giving birth up to six weeks)

6. This facility provides postnatal care services. Do you know the postnatal services you are supposed to receive after delivery?

- Yes
- No

(a) If yes, name these services.....

.....

7. Within the first six weeks after delivery how many times are you are supposed to attend postnatal care services?

1

2

3

4

8. Did you attend the two weeks postnatal services care services?

Yes

NO

(a) If yes, what postnatal service did you receive?

Treatment

Immunization

Family planning

Postnatal check up for both mother baby

Others specify-----

(b) If you did not go for postnatal services tick possible reason why you did not attend these services.

Not aware the services are offered

Had no problem

Others specifies -----

SECTION D: Awareness

9 Have you ever heard about postnatal care services?

Yes

No

If yes from where did you get the information about postnatal services?

a) Friends

b) Media

c) Health workers

d) Others specify-----

10. How would you rate the level the information you received?

Excellent

Good

Fair

Poor

11. During your Antenatal visits were you taught about postnatal care?

Yes

No

a) If yes how many times?

1-2

3-4

SECTION E: Barriers to utilization

12. In your family who make decision about seeking health care services?

- Self
- Partner
- Both

Others specify-----

13. Do you know of any cultural factors that prevent women from attending postnatal services?

- Yes
- No

14. If yes, name them-----

15. Since you delivered are there problems that you faced that prevented you from going to receive postnatal services?

- Yes
- No

16. If yes please name them-----

17. If you have used the postnatal care services, are you happy with the way the services are offered?

- Yes
- NO

(a) If yes list the good things which made you happy-----

(b) If no, what weakness did you see in the way postnatal services were offered?-----

18. Give suggestions how postnatal care services can be improved?

Thank you for your cooperation

Appendix: 4 Map of study area and Map of Kenya

