

# **FACTORS AFFECTING UTILIZATION OF POSTNATAL CARE SERVICES IN KENYA**

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## **ABSTRACT**

Approximately 30-40% of direct maternal deaths in Africa are due to hemorrhage, mostly in the postpartum period both in the hospital and in the community levels. In sub Saharan Africa only 13 % of the mothers attend postnatal care .Adequate utilization of postnatal care can help reduce mortality and morbidity among mothers and their babies. This study was carried out in Province General Hospital Nyeri, Kenya with the objective of determining the factors affecting the utilization of postnatal services. It was a descriptive survey and convenience sampling method was used to identify the required sample population and a data was analyzed using descriptive statistics. A total of 240 women successfully completed the survey. The questionnaire generated demographic information about the mothers' knowledge about postnatal services awareness and demographic characteristics that were found to influence the uptake of postnatal services included age, marital status, and parity.

Its was found that most women lacked awareness about the services given in postnatal clinic and long waiting time and cultural beliefs were among factors that affected utilization of postnatal care. From the study the utilization of the postnatal services at the hospital in 14.2% which is quite low considering the need for postnatal services. The research recommends enhanced advocacy and communication to the mothers on the need for use of postnatal services in the hospital.

## **KEYWORDS**

Postnatal care, Provincial General Hospital Nyeri Kenya, Maternal mortality, Parity, Post partum period

## INTRODUCTION

### *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 the 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).

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. The findings by the WHO, UNICEF and UNFPA, show that a woman living in sub-Saharan Africa has 1 out of 6 chances of dying in pregnancy, childbirth and after delivery.

According to WHO( 2004) 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).

## *KENYA*

According to the Kenya Demographic Health 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.

## *PROVINCIAL GENERAL HOSPITAL NYERI*

There are a number of reproductive services offered in 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 education among others. A review done in 2010 showed that a total of 5400 attended Antenatal clinic and only 270 (5%) attended postnatal clinic (2010 Provincial General Hospital, Nyeri report).

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

## **STATEMENT OF THE PROBLEM**

The Kenya Demographic Health Survey (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 in other parts of the country (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 KDHS indicated that only 7% of women attended postnatal care services, while in Province General hospital, Nyeri only 5% attended postnatal in year 2010. This study sought to expand further on other factors affecting utilization of postnatal care services at the Provincial General Hospital, Nyeri, Kenya.

## **PURPOSE OF THE STUDY**

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

## **OBJECTIVE**

The objectives study was “To identify factors affecting the utilization of Postnatal care services in Nyeri Provincial Hospital”.

## *RESEARCH QUESTIONS*

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

## **SIGNIFICANCE OF THE STUDY**

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 occur during the process of childbirth or in the first week thereafter (WHO, 2007)

The millennium development goal of reducing the maternal mortality ratio 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 serves 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.

## **LIMITATIONS OF THE STUDY**

Due to time and financial resources constraints the study was confined to Provincial General Hospital, Nyeri. It's anticipated that some clients may hold back some information which they may regard sensitive. The researcher assured the respondents of strict confidentiality for any information given and that such information was for the purpose of the study only.

## **DELIMITATIONS**

The researcher limited the study to awareness and factors affecting utilization of postnatal care services in 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. The researcher conducted study in the department because postnatal care services were offered in the department.

## **ASSUMPTIONS OF THE STUDY**

The study assumed that the respondents provided reliable and valid data that was useful in making conclusions in relation to the study.

*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 a 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 referred to what prevent women from utilizing postnatal care services.

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

## **LITERATURE REVIEW**

### *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 were reviewed with particular emphasizes on the findings and methodological issues in developing countries

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 the study the researcher sought to investigate factors affecting utilization of postnatal care services.

### *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.

Report from central province in Kenya 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).

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)

#### *POSTNATAL CARE*

Postnatal care Focused Postnatal Care (FPNC) is globally accepted as a key to improved maternal health and reduced mortality.

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).

#### *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.

#### *WOMEN'S LEVEL OF AWARENESS*

Existing research on health outcome in developing countries has shown the important role of the media in disseminating information on health related issues.

#### *WOMEN'S AUTONOMY*

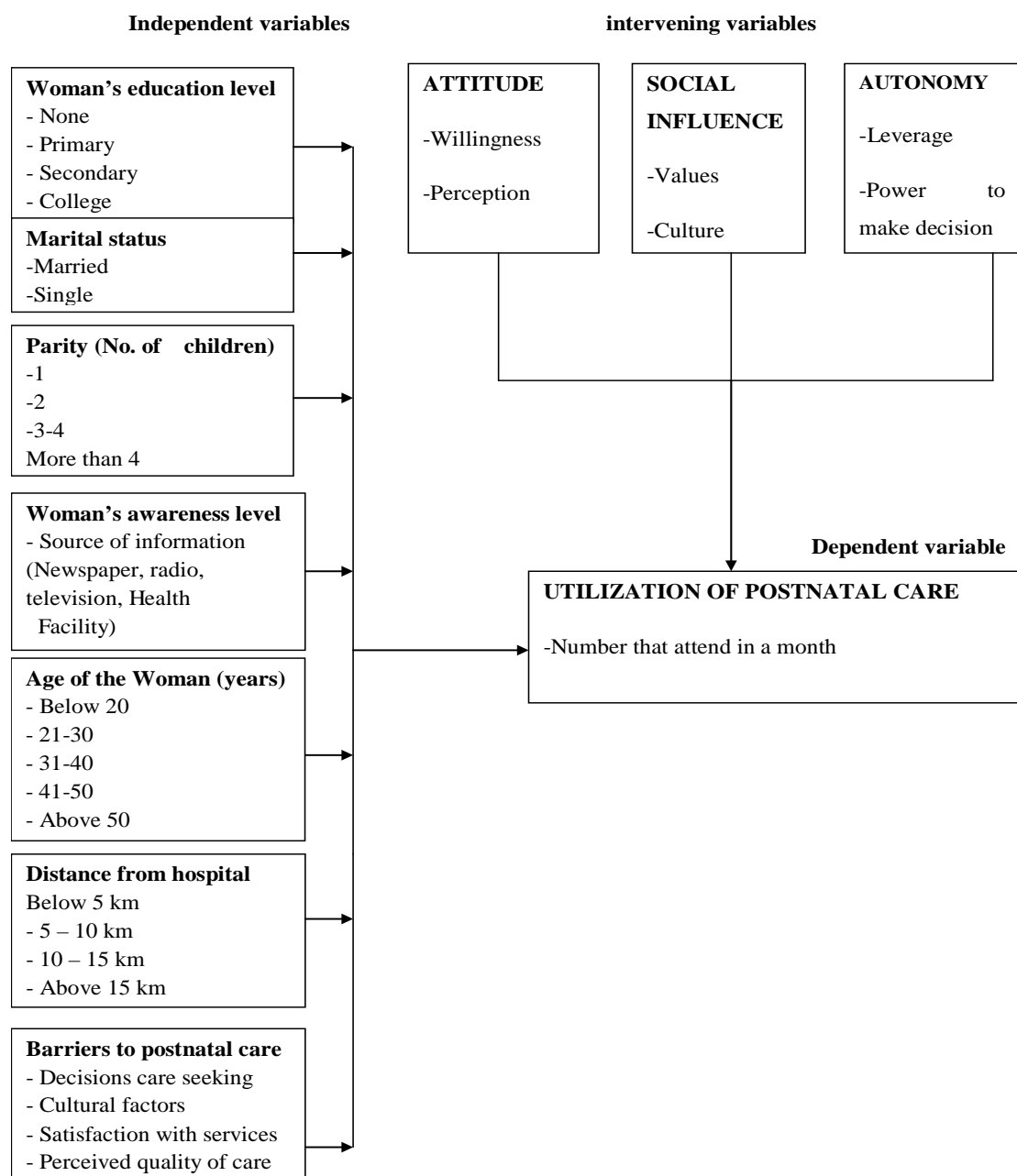
Autonomy has been defined as the capacity to manipulate one's personal environment through control over resources and information in order to make decisions about one's own concern or about close family members.

#### *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 in 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).

#### *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. External sources like 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.

#### *THE RELATIONSHIP BETWEEN THE VARIABLES*

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

#### *MATERNAL EDUCATION*

This variable measures the level of education the individual has attained. At an individual level woman's education is one of the most important factor.

#### *MATERNAL MARITAL STATUS*

The variable could be a contributing factor in the utilization of postnatal care services and may influence decision making on seeking care.

#### *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

#### *AWARENESS LEVEL*

This variable measures women's exposure to information like radios, which can increase knowledge and awareness in utilization of postnatal care services.

#### *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.

#### *DISTANCE*

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

#### *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 was diagrammatically presented and a brief explanation on the variables was done.

## **RESEARCH METHODOLOGY**

### *INTRODUCTION*

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

### *RESEARCH DESIGN*

The study used 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. This design was ideal for this study since it is most suitable as the researcher was intending to gain immediate knowledge and information on factors affecting utilization of postnatal care services as they existed on the ground and also was 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 was used. Both methods reduced biasness as they checked 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. For this study questionnaires were used as instruments of data collection.

### *TARGET POPULATION*

In the study, postnatal women visiting the Maternal Child Health (MCH) at Province General Hospital Nyeri were targeted. Women who met the inclusion criteria were included in the study, that is, all the women within postnatal period, the mothers whose children were less than six months and those who gave consent. All the mothers who visited for other reasons, mothers with children above 6 months or those that declined were excluded.

### *Sample size*

In the study the sample size was 240 mothers based on the 30% rule.

### *Sampling Technique*

From the clinic estimates the average number of mothers attending child welfare clinic per day are 40. Convenience sampling was used in the study because mothers come to the facility at different time intervals. Convenience sampling is a non probability sampling which involved the sample being drawn from that part of the population which is close to hand.

### *Research Instruments*

In this study, data was collected using questionnaires in English language but translated during interview to local kikuyu or Swahili 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.

### *Data Analysis Technique*

The collected data in form of the questionnaires was cleaned, coded and entered into the computer using the Microsoft excels. Data information findings was presented in qualitative form.

### *Ethical Issues in Research*

Confidentiality was maintained throughout the short study. No participant's name was used subsequently in the report derived from the study. In order to carry out this study, approval was sought from Provincial General Hospital management and Nyeri Institutional Research Medical board. Participation in the study was purely voluntary.

## **DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

### *Introduction*

In this chapter the results of the study are described and the analysis of the data 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%.

### *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**

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

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**

<b>Level</b>	<b>Frequency</b>	<b>Percent</b>
Primary	98	40.8
Secondary	113	47.1
Tertiary	29	12.1
<b>Total</b>	<b>240</b>	<b>100.0</b>

On marital status, majority of the respondents 80.8% were married while those who were single was 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**

<b>Status</b>	<b>Frequency</b>	<b>Percent</b>
Married	194	80.8
Single	43	17.9
Separated	3	1.3
<b>Total</b>	<b>240</b>	<b>100.0</b>

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**

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

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
<b>Total</b>	<b>240</b>	<b>100.0</b>

*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
<b>Total</b>	<b>240</b>	<b>100.0</b>

*Reasons for attending postnatal services*

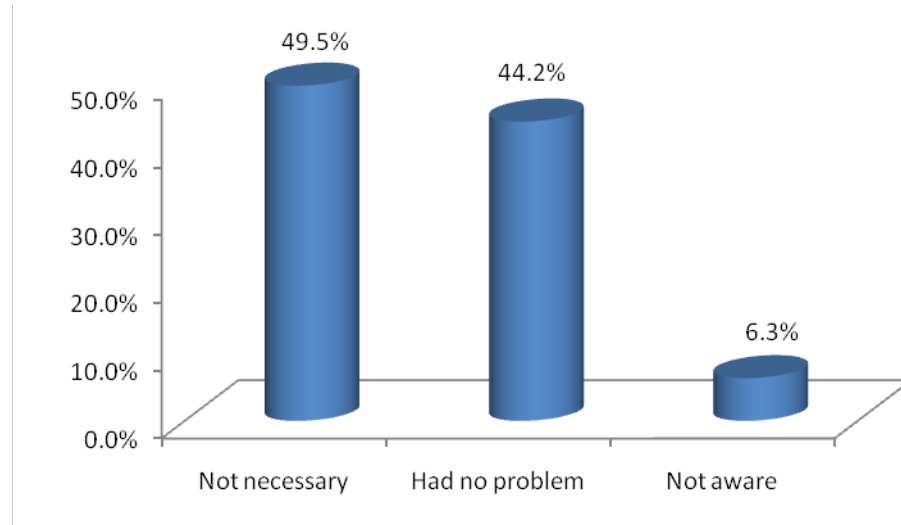
Mothers provided various reasons for attending postnatal care services as depicted in Table 4.7. The results show that majority of the respondents 38.2% attended the clinic for immunization services for the child, 32.4% attended the clinic to seek treatment for self or child and only 26.5% attended the 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
<b>Total</b>	<b>34</b>	<b>100.0</b>

#### 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**

#### 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	

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		

*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		

*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 not significant 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 which was less than 5.

**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	

*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		

*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		

*Respondents' awareness of postnatal care services*

*Knowledge on Postnatal care services*

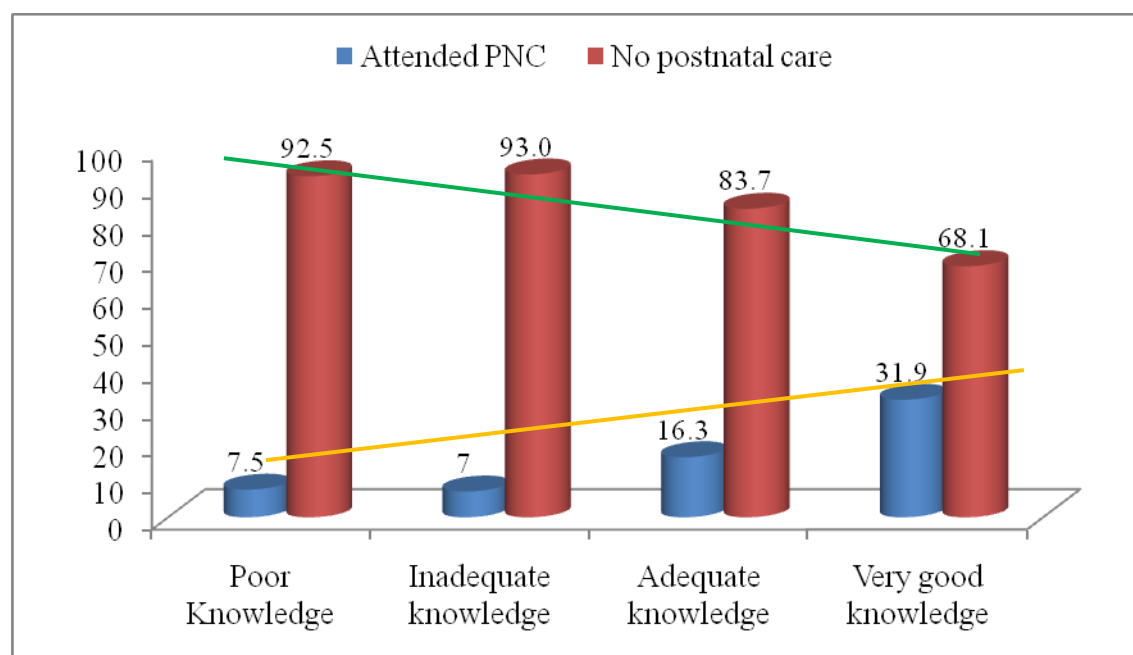
Knowledge on postnatal care was assessed by use of four key parameters: Whether a respondent has ever heard of postnatal care services, whether she knew of the required services, number of postnatal services a woman should make and listing the postnatal care services. Each correct item had a score of 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**

<b>Knowledge scores</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
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
<b>Total</b>	<b>240</b>	<b>100.0</b>	

*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**

#### 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**

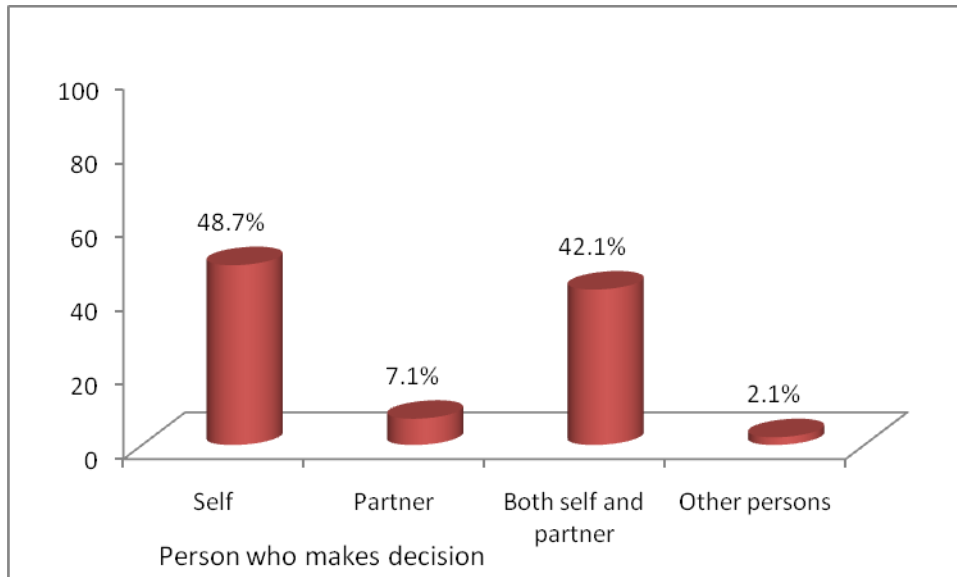
Received Health talk	Frequency	Percent
Yes	51	21.3
No	189	78.8
<b>Total</b>	<b>240</b>	<b>100.0</b>

#### 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.

*Decision making on seeking PNC services*

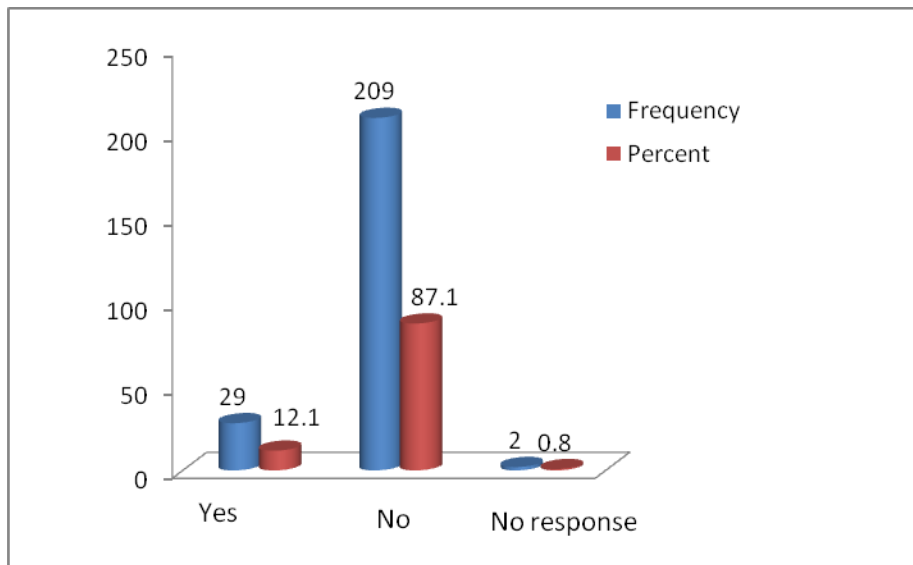
As shown in Figure 4.3, a significant proportion of respondents 48.5% made the decision to seek postnatal care on their own about when to seek care while in 42.2%, both herself and partner make the decision on seeking care. A minority 7.1% and 2.1% respectively had the decision made for them by partner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



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

*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**

*Health problems hindering postnatal care attendance*

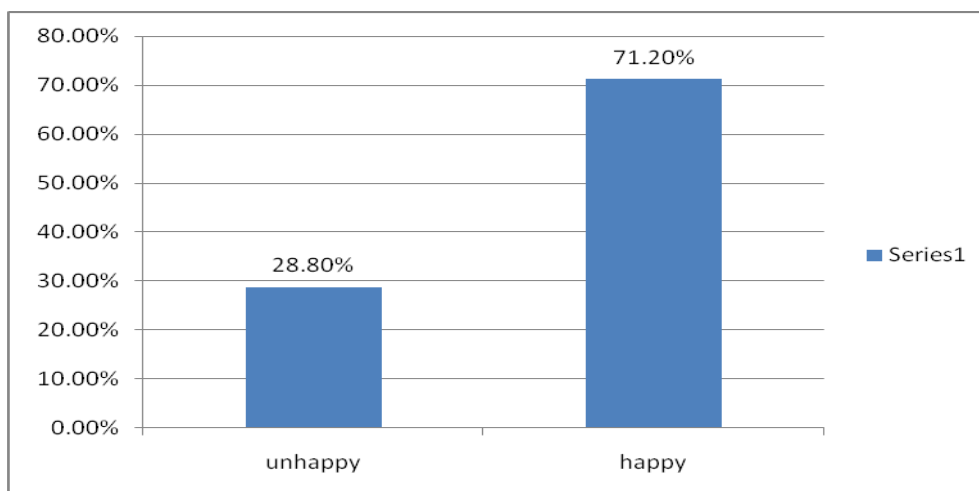
Out of the 29 respondents who had health problems that barred them from attending PNC, 44.8% had bleeding problems, 27.6% had baby's umbilical cord problems, 13.8% reported that the respondent was sick and in 13.8%, the baby was sick as shown in Table 4.15. The health problems which barred them from 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
<b>Total</b>	<b>29</b>	<b>100.0</b>

*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
<b>Total</b>	<b>69</b>	<b>100.0</b>

*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**

<b>Reason</b>	<b>Frequency</b>	<b>Percent</b>
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
<b>Total</b>	<b>171</b>	<b>100.0</b>

*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**

<b>Suggestion</b>	<b>Frequency</b>	<b>Percent</b>
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
<b>Total</b>	<b>114</b>	<b>100.0</b>

## 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.

## **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMEDATIONS.**

### *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.

### *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.

### *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.

### *Conclusion*

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.

### *Recommendations*

The following recommendations may help increase the utilization of postnatal care services in the hospital. In order to improve utilization of postnatal care services, the service providers would benefit from training in how to improve their relationships and communication 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.

The hospital should create awareness programmes on postnatal care services should be implemented, targeting women, husbands and community and this may influence utilization of

postnatal care 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. 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. Similarly, 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. 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.

## **SUGGESTIONS FOR FURTHER RESEARCH**

There is limited information on postnatal care utilization in other areas like the comparative utilization of postnatal services among women in rural and urban settings as well as awareness within communities on the importance of postnatal services.

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