

ASSESSMENT OF UTILIZATION OF POSTPARTUM CARE SERVICES
AMONG WOMEN IN WEBUYE WEST, BUNGOMA COUNTY, KENYA.

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A research thesis submitted in partial fulfillment of the requirements for the award of the degree of Master of Science in the school of Public Health of Kenyatta University.

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DECLARATION

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

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DEDICATION

I dedicate this work to my daughters Benecia and Abreana for their encouragement, and all the postpartum women for their support and participation.

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ABBREVIATIONS AND ACRONYMS

ANC	Antenatal care
CHVs	Community health volunteers
CU	Community Units
DHIS	District health information system
DRH	Division of Reproductive Health
HCWs	Health Care Workers
HIV/AIDS Syndrome	Human Immunodeficiency Virus/Acquired Immunodeficiency
KMNH	Kenya Maternal and Neonatal Health
MCH/FP	Maternal Child Health/Family Planning
MNHK	Maternal Neonatal Healthcare in Kenya
MOH	Ministry of Health
MMR	Maternal Mortality Rate
NGQOPC	National Guidelines for Quality Obstetrics and Perinatal Care
NRHS	National Reproductive Health Strategy
PNC	Post natal Care
PPC	Postpartum Care
PMTCT	Prevention of Mother to Child Transmission
TPPC	Targeted Postpartum Care
UNICEF	United Nations Children's Fund
UNPFA	United Nations Population Fund
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Community Units –A set of 8-10 villages headed by 2 Community health extension workers and 10 community health volunteers in providing community health services.

Children: In this study refer to male and female babies aged between 6-9 months old.

Utilization: Is use of postpartum care services by a woman while attending at least three mandatory postpartum visits from the recommended four against the acceptable timing period of 6 months, and it involves being attended to by a skilled healthcare worker in health facilities.

Targeted Postpartum Care: Is an approach which defines a set of postpartum services delivered to the mother in a minimum of four visits spread over six months. It involves health promotion using health messages on self-care, nutrition, resumption of sexual activity, breastfeeding. Also includes provision of essential care involving treating complications, infections, screening for other conditions, referral and checking health status of the mother. Counseling and advice on family planning, HIV testing, danger signs, harmful practices and return date.

Postpartum Care Services: These are a range of services with timings and key elements given by a skilled healthcare worker to a woman immediately after delivery extending to six months. It involves advising, checking the general health status of the mother through provision of promotive, curative and preventive services and care as outlined in the targeted postpartum care.

Postpartum period: Is time from placental expulsion extending to six months after a woman has given birth.

ABSTRACT

Postpartum care is an important link in the continuum of care for maternal health. The postpartum period is critical because most maternal deaths occur during this time, yet this is the most neglected period for quality care provision. Postpartum Care (PPC) services are essential in the first six weeks extending to six months. When not offered they lead to complications, poor outcomes like morbidity and mortality. The aim of this study was to assess utilization and factors influencing utilization of PPC services among women in Webuye West, Bungoma County, Kenya. The study adopted a descriptive cross sectional design. The study population was all women of reproductive age with living children aged 6-9 months. Six Health Care Workers (HCWs) were key informants. The study composed of a sample of 384 women. The sampling techniques were purposive and simple random sampling. Data collection tools were a semi structured questionnaire, focus group discussions and interview guide. Data was analyzed using Statistical Package of Social Sciences (SPSS) version 20. Statistical analysis was done using Pearson's Chi-Square test. On proportion of women utilizing postpartum care services only 33.6% utilized in the required timings and the attendance of mandatory visits was less than 40% which was below the recommended. All the four PPC visits were statistically significant to utilization. On socio cultural factors majority 85.8% of the women reported staying indoors during this period. Majority 55.7% of them had cultural beliefs and practices performed, both being statistically significant to PPC utilization. Religious beliefs and practices too were dependent on use of PPC (X^2 $p < 0.011$). On knowledge factors majority 70.6% of the women first knew the services during ANC from HCWs, awareness of first and fourth visits were statistically significant to PPC service use. On health facility factors majority 74.8% of the women reported availability of the basic services and majority 75.9% of HCWs were friendly and helpful. These influenced service utilization. Majority 51.0% paid for services and waited for 31-60 minutes. HCWs availability, friendliness, waiting time and service charges were statistically significant ($p \leq 0.005$) thereby influencing PPC utilization. In conclusion the proportion of women utilizing PPC service was low. Utilization of PPC services being statistically significant and dependent on various factors including , staying indoors, religious beliefs and practices , knowledge during ANC , availability of HCW, waiting time, HCWs helpfulness and friendliness and service charge ($p \leq 0.005$). The study therefore rejected the null hypothesis. The study recommends that there is need to increase more awareness on PPC service utilization by HCWs and community volunteers. Community involvement and collaboration of teams to mitigate socio cultural beliefs and practices. The County MOH and facility managers to implement policies on PPC and continuous capacity building that emphasize PPC service utilization and maternal, neonatal, child health (MNCH) integration.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The postpartum period biologically refers to the time immediately after birth to six weeks thereafter when the mother's body, including her hormone levels and uterus size, return to pre-pregnancy conditions (WHO, 2013). Postpartum care (PPC) is offered to a mother from the time of placental expulsion up to 6 weeks after delivery extending to six months. It involves health promotion, prevention, early detection and treatment of complications and disease, provision of advice regarding contraception, nutrition and immunizations, the Kenya Maternal and Newborn Health model (KMNH, 2009). Targeted postpartum care is an approach which defines a set of PPC services delivered to a mother in a minimum of four visits spread throughout the first six months following delivery (WHO, 2013).

Globally, more than half a million women die each year from complications of pregnancy and childbirth, a large proportion of maternal deaths occur during the first 48 hours after delivery and account to 99% in developing countries (WHO, 2013). Postpartum care is an important link in the continuum of care for maternal health to prevent mortality and morbidity. In China coverage and quality of postpartum care is poor and these also applies to low and middle income countries Africa inclusive (Chen *et al.*, 2014).

The same trend is found in Sub Saharan Africa most maternal deaths are due to causes directly related to pregnancy and childbirth extending to postpartum period. These

includes unsafe abortion and obstetric complications such as severe postpartum hemorrhage, infections or puerperal sepsis, anemia, STI/HIV/AIDS, hypertensive disorders, embolism among others (Ukachukwu, 2009). The maternal deaths in Sub-Saharan Africa averages to 640 deaths per 100,000 live births and the leading cause for 34% of these deaths is hemorrhage, majority of which occurs in the postpartum period (WHO, 2013).

The postpartum period is very critical for the newborn and the mother. This is so because most maternal deaths and complications occur during this time, yet this is the most neglected period for the provision of quality care (Erin *et al.*, 2007). Postpartum care (PPC) is important for the mother to treat complications arising from the delivery, as well as to provide the mother with important information in promotion and safe guarding of her health (Abdella, 2010).

Kenya experiences a very slow progression in maternal health during this period, despite efforts to increase PPC service delivery facilities from six out of ten in 2010 to eight out of ten in 2011 in every region (KSPA, 2011). In Kenya 51 % of women receive postpartum check and care, 43% being from rural areas compared with 65 % from urban (KDHS, 2014). The 3rd Sustainable Development Goal (SDG) aims to reduce the maternal mortality ratio to less than 70% by the year 2030 ,the maternal mortality rate being 510 maternal deaths per 100,000 live births which is still high (WHO, 2015). Complications related to pregnancy, childbirth and delivery are among the leading causes of morbidity and mortality among Kenyan women (KNBS, 2010).

To strengthen postnatal services in Kenya, the Ministry of Health (MOH) rolled out the Kenya Maternal and Newborn Health model, which outlines the Targeted Postpartum Care (TPPC). In the TPPC package the number of visits recommended in the postpartum period were increased to four. These include a checkup within 48 hours, within two weeks, six weeks and at four to six months respectively. This aims to prevent any complications to the mother occurring after childbirth and ensure that the mother is healthy and there is no transmission of infection from mother to child too (KMNH, 2009 & MOH 2008). The postpartum visits provide health care workers with an opportunity to identify health problems early enough in the mothers so as to offer early interventions successfully. This has resulted into increasing effort to promote PPC utilization, particularly in developing countries with high maternal mortality rates, Kenya being one of them (Nabukera *et al.*, 2006).

1.2 Problem statement

Globally, more than half a million women die each year from complications of pregnancy and childbirth, majority of this during the postpartum period especially the first forty eight hours after delivery. It is estimated that three quarters of women do not receive postpartum care and this leads to about 60–80 % of maternal deaths during this period (WHO, 2013).

In Africa, most mothers and newborns do not visit the health institution following birth, indicating that postpartum care programs are among the weakest of all reproductive health programs .In Sub Saharan Africa, maternal mortality still remains unacceptably

high accounting for 87% of maternal deaths (WHO, 2014). Locally, in Kenya 51 % of women receive postpartum check and care, 43% being from rural areas compared with 65 % from urban (KDHS, 2014). Majority of maternal deaths in developing countries occur in the immediate postpartum period (WHO, 2013).

Postpartum care services in Webuye West are offered at facility level and the main referral hospital is Webuye County Hospital. Bungoma is among the top 15 counties with highest maternal deaths of 266 per 100,000 live births (UNPFA, 2014), Webuye West, reporting amongst the highest deaths of 67 in 100,000. Majority of these deaths occurring in the postpartum period, which is unacceptably high (DHIS, 2014). The use of PPC services among women in Webuye West remains low as compared to other maternal health services. From October 2014 to March 2015, attendance for PPC services in health facilities in the sub county was at 11% in comparison to other maternal health services, (DHIS, 2015 Webuye sub county Hospital). An audit done by the hospital MCH team on 50 MCH booklets (maternal part) for the PPC visits in relation to service utilization, in April 2015 showed no attendance within 48hours, 1st visit- for home deliveries) but 50% attendance for those with hospital delivery, non-attendance for 2nd visit (1- 2 weeks) for all women, 50% attendance on 3rd visit (4-6 weeks) and non-attendance on the 4th visit (4months -6months).

This was followed up by report on incidences of complications leading to morbidity post-delivery from the post natal clinic and post natal ward at Webuye Sub county Hospital from January-April 2015 (DHIS 2015). The results showed that postpartum hemorrhage, puerperal sepsis, eclampsia /hypertension were ranked highest among other

complications. Service utilization entails that a woman attends mandatory visits within the stipulated timelines where key elements in service delivery are offered. This in turn prevents the rising morbidity and mortality especially in the crucial periods within two weeks post-delivery where a woman is vulnerable.

In Webuye West ,from the above statistics and information, PPC service utilization has been poor and it is with these that the researcher found out that there is a need for assessing and determining the factors influencing utilization of PPC services at the several points in time in the extended period of postpartum.

1.3 Justification

In Webuye West Sub County services to reduce maternal mortality and morbidity have been scaled up led by the main referral hospital of Webuye Sub County Hospital. This has been through the beyond zero program, availability of ambulances, refurbishment and upgrading of health centers and dispensaries to improving access and availability of PPC services. Also training of skilled birth attendants, HCWs, traditional birth attendants and community mobilization on utilization of PPC services .The public health team has also been incorporated in this.

The sub county has implemented the free maternity services introduced in 2013 by the government (MNHK, 2013) and Targeted postpartum care (TPPC) as a key in maternal health promotion (KMNH, 2009).These are to enhance and improve PPC utilization leading to improved and sustained health status of the women. Despite the above initiatives to address issues of safe motherhood, PPC service utilization is still poor in

Webuye West. There has not been any study done in this sub county on utilization of PPC, and this study is intended to provide baseline information. Postpartum care promotes continuum of care to women thereby improving a woman's health and survival. When PPC is not offered as intended within this period it may result in maternal health complications leading to morbidity.

1.4 Research Questions

- i. What proportion of women utilizes postpartum care services in Webuye West, Bungoma County?
- ii. What socio-cultural and knowledge-related factors influence utilization of postpartum care services among women in Webuye West, Bungoma County?
- iii. What health facility-related factors influence utilization of postpartum care services among women in Webuye West, Bungoma County?

1.5 Hypothesis

The null hypothesis (H_0) was used.

H_{01} Socio cultural factors have no influence on utilization of PPC services among women in Webuye West, Bungoma County.

H_{02} Knowledge related factors have no influence on utilization of PPC services among women in Webuye West, Bungoma County.

H₀₃ Facility related factors have no influence on utilization of PPC services among women in Webuye West, Bungoma County.

1.6 Broad objective

To assess utilization of postpartum care services among women in Webuye West Bungoma County, Kenya.

1.6.1 Specific objectives

- i. To determine the proportion of women utilizing postpartum care services in Webuye West.
- ii. To determine socio-cultural and knowledge-related factors influencing utilization of postpartum care services among women in Webuye West.
- iii. To establish the health facility-related factors influencing utilization of postpartum care services among women in Webuye West.

1.7 Significance

The findings from this study are to be used by the Webuye county hospital management team and Webuye West Sub County to be able to plan and formulate new strategies on ways of improving and promoting utilization of PPC services by women. In so doing this will improve the mothers' health, children and family at large. Policy formulation and implementation on utilization of PPC services by the team if implemented will help in reduction of maternal mortality and morbidity.

The findings of this study will also benefit the health care workers (HCWs) in direct contact with these women as they will be able to come up with practical ways both in hospital and community on how to improve service delivery so as to scale up use of these services.

1.8 Delimitation and limitation

1.8.1 Limitation

The women's MCH booklets were used to confirm attendance and service offered. Some were not updated or well documented. Recalling events 6-9 months back by the women may have created recall bias. Majority of the women seek their own services at same time they take their children to child welfare clinic and utilize same booklet. So the child part was used as a point of reference whenever a woman did not exactly remember when they sought the service.

1.8.2 Delimitation

Since some of the information in the MCH booklets was not well documented, women were asked to recall the events and care given retrospectively. Quigley *et al.*, (2007) found that maternal recall is reliable compared to medical records for certain pregnancy related and delivery events including complications among others.

1.9 Conceptual Framework

Independent variables

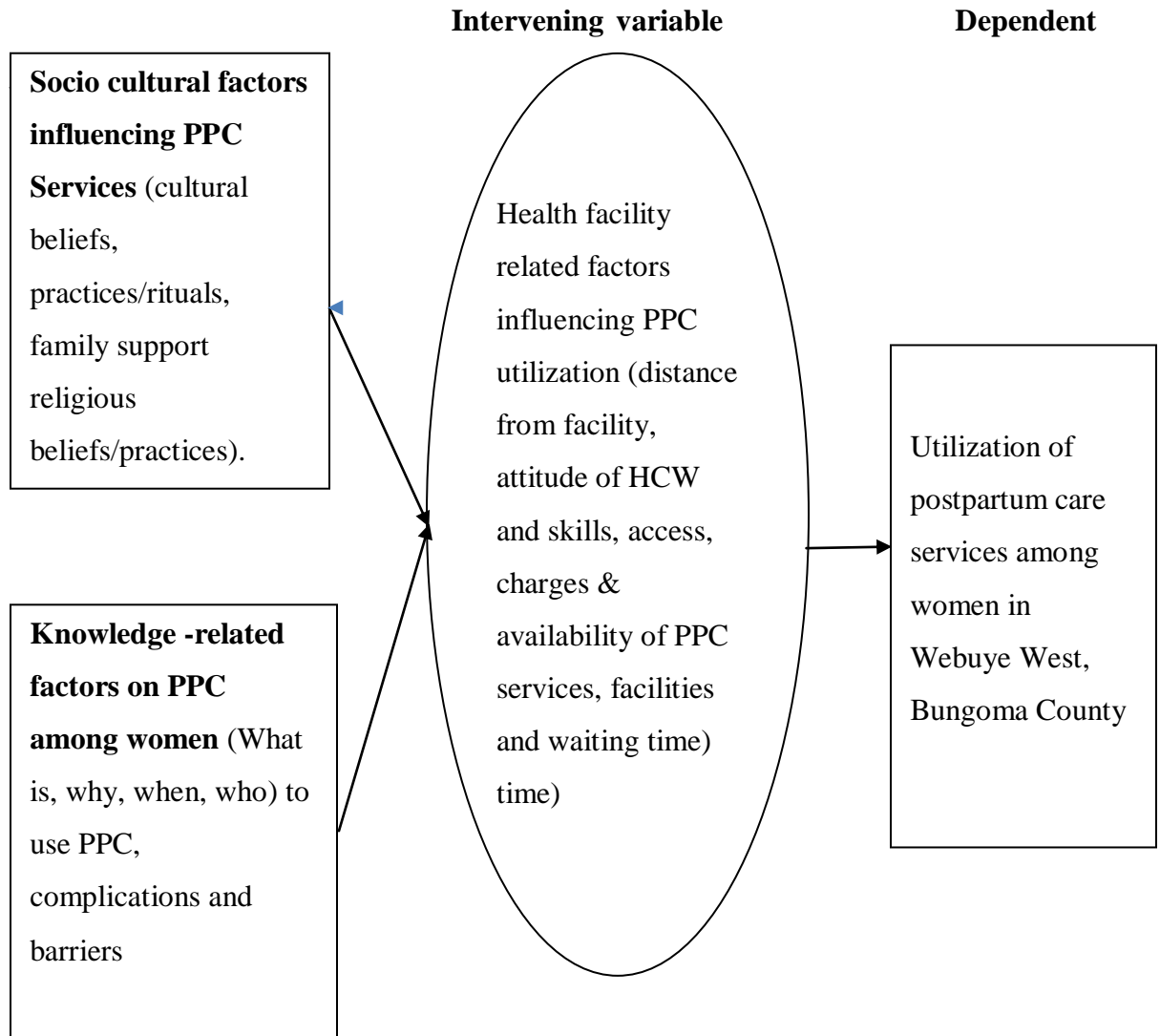


Figure 1.1 Conceptual framework (Adopted from Andersen & Newman, 1973)

The Andersen's Behavioral Model was used, in this study it demonstrates use of health services in accessing healthcare (Andersen, 1968) which later modified by his colleagues (Andersen & Newman 1973). According to this model, the use of the healthcare services is a function of three sets of individual characteristics namely predisposing, enabling and need.

In predisposing characteristics: these were use of ANC, knowledge of mother on PPC and permission or family concern about the care, cultural beliefs, practices towards PPC. The predisposing factors reflect the fact that families with different characteristics have different propensities to use healthcare services. In enabling characteristics included: income, ease of access, and distance from facility. These reflect the fact that some families, even if predisposed to use health services, must have some means of obtaining them. The need characteristics were: expected benefit from care, skilled HCW/attendance, skills, attitude of HCW, availability of health facilities, postpartum care services and waiting time. The need factor is the most immediate cause of the use of health service. The need factor reflects perceived health status. These included, how people view and experience their own general health, functional state and illness.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Postpartum Care is important and crucial, more so in developing countries where maternal morbidity and mortality are unacceptably high. This makes maternal mortality one of the most important and crucial health issues facing women. It's estimated that three quarters of women do not receive postpartum care and this leads to about 60–80 % of maternal deaths during this period (WHO, 2013). The health of mothers in society is very important and often regarded as an indicator the health of the society (Starrs, 2006). Normally the first two days following delivery are critical for monitoring complications that may arise during this time. This is the main reason why a postnatal and postpartum care visit is ideal during this time to educate a new mother on how to care for herself and her newborn as they tend to value child than self (Neupane and Doku, 2013).

Its mandatory that women delivering in a health facility should remain for observations for the first-24 hours, those delivering at home too need close observation and recommendable by a skilled birth attendant as he/she will be able to intervene early and appropriately incase mothers need any help (UNICEF,2009). It is globally recognized that postpartum care services are essential in reducing maternal deaths and improving their physical and psychological wellbeing and health in general (WHO, 2013).

Postpartum care not only promote the healthy behaviors of mothers and infants, but also facilitate early detection and treatment of medical complications, provide extra visits for self and infants, prevent maternal-to-child transmission of diseases, such as HIV, and

advocate breast feeding and family planning .These are essential services to the mother during this period (Kerber *et al.*, 2007).

In Kenya despite efforts to increase PPC service delivery ,there is a very slow progression in maternal health during this period, (KSPA, 2011) and 51 % of women receive postpartum check and care, 43% being from rural areas compared with 65 % from urban (KDHS,2014).

There are personal and community factors that affect utilization of maternal health services positively and negatively. In this study they included: education, poverty, autonomy, transportation, parity, age, marital status and the presence or absence of previous pregnancy complications. Community included: adequacy of health care infrastructure, attitudes about health care utilization, wealth, availability of health facilities and HCWs (Gage, 2007).

2.2 Socio demographic Characteristics of Women

2.2.1 Age

In a study to determine utilization of PPC and its factors in rural China, the women who utilized PPC services had a mean age of the 27.6 ± 7 years old and majority were under the age of 35 .This is the peak age in reproduction (Xiang and Xiong, 2014). In another study on factors affecting post natal care for women in West Bank, on parity and marital status it revealed that majority of the postnatal women had married at less than 20 years of age, had more than one child making them not utilize PPC as expected as they said had other responsibilities to take care. Utilization of PPC was significantly higher among

those who were more 21 years of age at the time of their first marriage than any other group (Dhaher *et al.*, 2008).

2.2.2 Education

According to Gage (2007), on barriers of utilization of maternal health in Mali, the mother's level of education had an important impact on the use of maternal health services. In high education areas the study revealed that, social networks provided women with access to contacts and information on safe motherhood and reduced uncertainty about formal health systems. Educated mothers in Nepal, attended ANC, delivered at health facility and had delivery assistance from health workers ended up utilizing PNC/PPC services, unlike the uneducated whose uptake was very low (Paudel *et al.*, 2013).

2.2.3 Parity

In a study on postnatal care in Pakistan, on the number of children a woman had, birth order was found to have a statistically significant effect on the fact that, the higher the birth order, the lower the need for PPC utilization (Budhwani *et al.*, 2015). On parity too, the women who utilized healthcare more had fewer children, but those who had more than five children it was less. They associated this with more skilled attendance who gave them more information in previous deliveries and they thought they had enough experience and more information on PPC so not so keen to going back for more (Neupane & Doku, 2013).

2.3 Proportion of utilization of postpartum care services

In a study done in Gondar ,Ethiopia on utilization of PPC by mothers more than half utilized once, a quarter twice and the rest used three and or more times within 6 weeks after delivery .Though overall utilization was generally high , the most crucial elements especially in the first 2 weeks was very low and large segments of mothers utilized only immunization services which are at the 4-6 weeks postpartum implying on a fraction PPC in relation to key elements was utilized to maximum (Tesfahun *et al.*, 2014). Neupane and Doku, (2013) highlighted poor utilization of PPC since only a small fraction of one fifth, utilized postpartum services among other services offered to the mothers making it underutilized .In another study in Nepal on PPC uptake, services use was very low among the mothers despite them having maternity incentive scheme in place and a major focus on maternal health emphasized (Paudel *et al.*, 2013).

2.3.1 Postpartum visits

In Kenya, the Kenya Maternal Neonatal Health (KMNH) model has Targeted Postpartum Care (TPPC), which increased the number of visits recommended in the postpartum period to four .This included; a checkup/visit within 48 hours, and visits within 2-4 weeks, 4-6 weeks and at 4-6 months (KMNH,NRHS, 2009 & MOH 2008). A study in four Sub Saharan countries on needs assessment on maternal and child health, showed that specific policies for PPC services were weak and there was little evidence of effective postpartum care implementation. Utilization was poor during the first week after childbirth as only 25 % of the women in Burkina Faso, 33 % in Kenya, 41 % in

Malawi, 40 % in Mozambique received the PPC care during this period (Duysburgh *et al.*, 2015).

The Ministry of Health in China advocates that at least 70% urban women and 60% rural women are supposed to have three postpartum visits by health care workers in view of promoting maternal child health (CMOH, 2008). In a study among rural Chinese women on utilization of PPC services, a third never went for any postpartum visits, and more than half of those who had the visits did not receive standard postpartum visits of at least three times. The three times are in view of the crucial care mothers get at the specific periods in the PPC service delivery (Xiang and Xiong, 2014).

2.4 Socio cultural-related factors influencing PPC service utilization

2.4.1 Cultural Practices and beliefs

There were contrasting cultural practices during postpartum period among Pakistani and American women. Pakistani mothers are expected to rest and be pampered for a period of 40 days known as the “chilla” and they return to their mother’s home to deliver and recuperate. A mother lactates for 40 days and does not go out of the house or sit on the floor for 40 days. But American women this was different as women deliver and can do all the chores and activities all by themselves with no restrictions. The Pakistani women are not left alone for fear that they may be possessed by the devil who may harm them, and hence their mothers stay with them to ensure they follow cultural requirements (Qureshi and Pacquiao, 2013). On the barriers hindering mothers to go for maternal services in Palestine, women did not want to go out before 6 weeks after delivery which

is a traditional custom in their culture of remaining indoors during this period as they have to adhere strictly to it to avoid breaking of the culture that has been passed on from generations (Dhaher *et al.*, 2008).

A study done in Western Indonesia found out that it was a custom that women after delivery, traditional birth attendants provided a regular daily service to the mothers in their homes. This was to check the mother's condition until the 40th day after delivery before the women are allowed to get out and indulge freely in other activities (Titaley *et al.*, 2010). Among Thai women fire practices are done in the postpartum period, they stayed by the fire for 1, 3, 5, 7, and 9 nights. They believed that the woman would have too many children in the subsequently. After these nights the woman does not leave the house until an exit fires practice was done. These made them stay indoors thus affecting seeking of PPC services (Elter *et al.*, 2014).

In PPC utilization and cultural practices among women in Korea, it was important that new mothers adhere to the norm of staying indoors for at least a month after giving birth. This includes some form of mandated rest, assistance with household tasks, and some level of social seclusion because mothers are viewed as being extremely fragile and vulnerable during this time (Juyeon, 2014). During the first month post child-birth, women engage in practices such as limiting maternal role responsibilities, activity to restore future health and prevent disease. Physical activity was limited to lying in bed for the entire month to restore the imbalance between cold and hot before a woman assumes the mothering role and this affected PPC use (Liu *et al.*, 2014).

2.4.2 Family support and decision making

Family support was important to women after delivery, in an ethnographic study, transnationalism was evident in the timely visits of participants' mothers from Pakistan who came to provide most needed support for their daughters during delivery and postpartum. Their mothers came to guide them and offer emotional care during this period. On the other hand those who were about to deliver returned to Pakistan at any time during this period to seek family support after delivery (Qureshi and Pacquiao, 2013). In a study on exploring roles of family members in women's decision to use postpartum health care services, it emerged that the family played the supporter, opponent and active participant in care roles. They were always there during this period to offer support and decision making in all aspects of PPC care to the women (Abushaikha & Khalaf, 2014).

In another study on utilization of PPC by mothers, the ability to make decisions by a mother herself had a significant association with utilization of postpartum care. Mothers who made their own decisions were more likely to use the service than those who did not. The reason was based on the community belief about the hierarchy of authority in the household over mothers by their husbands. Many waited for their husbands to decide for them concerning their own care during the postpartum period (Teshahun *et al.*, 2014).

2.4.3 Religious beliefs

Religion promoted or hindered PPC service utilization. In their ethnographic study on PPC service utilization on Pakistani women on religiously unacceptable behaviors in the

postpartum period, majority said there was no worship, neither praying in the mosque nor going out of the house for 40 days after delivery. On lactation during this time they had some associated religious and magical practices. They said all these are performed or observed to protect mothers and their babies against dangers likely to be caused by supernatural powers during this period limiting PPC services use (Qureshi and Pacquiao, 2013).

2.5 Knowledge-related factors influencing PPC services utilization

2.5.1 Awareness of postpartum care and services among women

Tesfahun *et al.*, (2014) on a study on utilization of PPC services found out that awareness of services served as a means through which utilization is enhanced. Majority of mothers were aware that they were supposed to receive PPC services after delivery. They further cited; the need to receive vaccinations, be counseled on family planning, to prevent and treat delivery related problems, to receive nutritional advice, to discuss breastfeeding as reasons for attending clinic during this period . Those who were aware said the sources of information was from health extension workers who were the majority followed by nurses, family and the least from doctors. Chen *et al.*, (2014) in their study on PPC in rural Hebei, found out that there was lack of awareness on the availability of free postpartum services among women, but a strong willingness from them on receiving these services if at all they had known about them. Lack of awareness on PPC among women and communities, no provision of information by providers and lack of services were the main reasons for not seeking PPC leading to 61% of deaths and complications in the postpartum period among the women (Suvedi, 2009).

On use of postpartum services and what the service was all about in a study in southern Tanzania, majority of the women were not able to differentiate between the care in the first six weeks extending to 6 months with the Expanded Programme on Immunization, most associated it with immunizations of the child alone and child related services and could not relate it to maternal care (Mrisho *et al.*, 2009).

Information on care and other services was identified as insufficient especially on self-care. This affected them both mother and child during the hospital stay and after discharge from hospital as they were not comfortable to care for self perfectly well (Rudman and Waldenstrom, 2007). In a study on knowledge among mothers on postpartum care, half of the mothers knew they are supposed to go for postnatal checks up for self-up to 3 visits so as to accomplish the set services and care that is recommended (Shah and Pariyar, 2016).

2.5.2 Importance and when to go for postpartum care

On continuum of care post-delivery, comprehensive postnatal care package was essential and was put in place. It included routine visits in the immediate days following childbirth. This is when risks were high for the mother. It was complemented by promotion of healthy behaviors like exclusive breast feeding, identifying of complications and facilitating referrals where applicable. This was to ensure a healthy mother (Kerber *et al.*, 2007). On need for PPC services, it was reported that half of the women who had at least one new health problem arising in the first three months, retained it over time as they had not gone for the crucial ones early in this period. When

these services were not offered, the cost effectiveness of major interventions was particularly high in terms of the low cost covered and the high number of lives saved if they would have done so early (Adam *et al.*, 2005).

Majority of mothers perceived that PPC was helpful to self, and children's health, but on actual use slightly more than half of mothers utilized the services in Gondar Zuria, Ethiopia. (Tesfahun *et al.*, 2014). In another study on reasons for attendance, the two primary reasons for women's attendance for postnatal/partum services were to receive own care and immunizations for their babies (Warren *et al.*, 2015). The majority of the mothers had awareness on maternal care services inclusive but they did not know when they should seek PPC services and concluded that mothers' awareness about PPC service is more focused on the immunization of their babies than other services for self (Tesfahun *et al.*, 2014).

Almost two-thirds of the women considered postnatal care as important and essential in a study on factors associated with lack of postpartum care among Palestinian women. The most frequent reason for not obtaining PPC care was that women did not feel sick and therefore felt that they did not need the care, followed by not having been told by the doctor to come back. On the barriers to go for services fewer women were not aware of the service availability, some had no one to take care of the children, still others stated having experience with previous deliveries and therefore not needing additional information among the reasons This limited to some extent the care they were to receive during this period (Dhaher *et al.*, 2008).

2.5.3 Complications during postpartum period

Awareness on complications is important to women, in a study on postpartum utilization of services and factors affecting it in North West Ethiopia, those mothers who were aware of maternal complications that can occur during postpartum period were more likely to use than mothers who were not aware. This was due to the fact that majority of them delivered in a health facility and had been informed of the immediate and subsequent care they are supposed to receive (Limenih *et al.*, 2016). Majority of the respondents in a study done in Nepal knew complications during this period. They mentioned postpartum hemorrhage, genital infection, mastitis, painful breast engorgement, vaginal bleeding among others which are the most common complications (Shah and Pariyar, 2016).

2.6 Facility-related factors influencing PPC service utilization

2.6.1 Distance from facility, place of delivery, access ,charges and availability of PPC services

A majority of women in Nepal who attended Ante natal care, and delivered in hospital had more than two PPC checks ups compared with those who did not, as PPC information is shared to mothers at the clinic and when they deliver in hospital its mandatory they are given especially the first 48 hours (Neupane & Doku, 2013).In another study in Tanzania on use of maternal services and its determinants postpartum care was given by skilled attendants at delivery and those who delivered in hospital it was significantly higher especially among younger women as they tended to fear home

deliveries .This resulted in them seeking assistance from skilled birth attendants in hospitals (Mpembeni *et al.*, 2007).

Distance especially longer from the health facilities served as a major problem hindering access to PPC and other maternal services. This remained a major problem in access of services by women (Titaley *et al.*, 2010 and Rahman, 2010).Utilization of services was strongly associated with access to health services as, one to two hour travel to the nearby health centers resulted in women being 2.21 times more likely to utilize the service than those who travelled for more than 2 hours (Tsefahun *et al.*, 2014).This was also seen in another study as distance was not related to the utilization of prenatal services or medical deliveries, but impacted negatively on use of postnatal care by women as they blamed this on distance (Budhwani *et al.*, 2015).

Staff shortages, inadequate in-service training and inconvenient transportation limited MCH workers in providing postnatal visits of adequate quality making services .This made the services unavailable to women in rural China (Chen *et al.*, 2014). Of those who utilized these PPC services in one district in Ethiopia, half were from health extension workers and community health agents in outreach service, nearly half did from health institutions, and less than one percent of mothers received services from trained birth attendants (Tsefahun *et al.*, 2014). Logistical barriers such as inaccessible transportation, long waits and lack of child care further limited the likelihood of a postpartum visit in a study on use of PPC (DiBari *et al.*, 2014).

Formal and informal fees for access of maternal health services especially during pregnancy, childbirth, and the immediate postpartum period constituted a substantial financial barrier for poor women in accessing care leading to nonuse of PPC therefore poor utilization (Gabrysch & Campbell, 2009). Warren *et al.*, (2015) on quality of care in facilities offering PPC in Kenya showed that more than four fifths of the women were seen within 48 hours and received care in their first 48 hours at voucher facilities than those at non-voucher facilities. This was because non voucher facilities proved expensive for them that they could not meet the costs. A section of the HCWs reported they were exposed to some clinical updates for a range of maternal and newborn care, but some were unable to translate this knowledge into practice as they often only focused on infants care rather than providing a comprehensive package of care for both mother and child. Mrisho *et al.*, (2009) in a study in rural Tanzania found out from HCWs that a majority of women who gave birth at home did seek PPC services immediately, but came three to seven days later. The reasons being: waiting for the baby's cord stump to fall off, allowing the mother and baby to regain energy lost at delivery, lack of money and distance to the health facility.

In a study on improving maternal use of PPC services in four Sub Saharan countries, findings were that despite the availability of PPC services in almost all health facilities, less than half of the women received PPC within seven days after childbirth and thereof (Duysburgh *et al.*,2015).

In nearly all in-depth interviews with health care providers, suggestions were made that incentives such as refresher courses be offered to HCWs to improve job skills in PPC

service delivery. These providers too complained of high workload, inadequate equipment and poor remuneration as main obstacles they faced in service provision (Mrisho *et al.*, 2009). In another on PPC service utilization in Philippines more than half of the participants had not received the MCH booklets. Of those who had, a quarter received from hospital or clinic, more than half from a health center, and the rest from other locations. Women reported using the MCH booklets at their check-ups by half and baby's check-ups less than 10% (Yamashita *et al.*, 2014).

2.6.2 Follow up and support to women

Follow up and support of care by HCWs was important to women for promotion and prevention of health. Mothers were satisfied with the support from nurses, but missed follow-up contact from midwives. Nearly half of all mothers commented on insufficient support attesting that continuity in the chain of care was lacking and support for mothers' physical and emotional health was insufficient in Scandinavia (Mia *et al.*, 2015).

2.6.3 Attitude of healthcare providers and Waiting time

Overall evaluation of care received, postnatal women seemed satisfied with their care, waiting times, and time spent with a provider, regardless of facility type. On clinical competence on the amount of time spent by staffs with women, and their caring attitude, was excellent (Warren *et al.*, 2015). Still on staffs attitude the women said it was poor which led to poor rapport between health providers and patients. On use of PPC services in rural Uganda , poorly equipped health facilities contributed to poor service utilization

as most providers only focused on immunization of the babies leaving the mother aside as reported by the mothers, this lead to mothers not receiving services as required (Nabukera *et al.*, 2006).

Among reasons given for non-utilization of postnatal care service, negative staff attitude was cited by the one fifth of mothers as contributing to this (Idris *et al.*, 2013). Staffs in a hospital in Sweden were avoiding contact, not showing concern about the mother's feelings, and not asking the mother's health. They persistently asked women to leave, sometimes despite medical complications, or who expressed relief and happy feelings when with women, made them feel unimportant and invisible and this made care inaccessible by women (Rudman & Waldenstrom, 2007).

2.6.4 Staff support and training in provision of PPC services

Staff support is vital in provision of these services for optimum use. Abuya *et al.*, (2013) in a study in health facilities in Kenya on staff support on review of facilities' remittances found out that little was spent on provider training in both public and private facilities in Kenya. Most providers had no access to training sessions and technology updates from the MOH. They were unaware of the national postnatal /partum guidelines, and this contributes to service discontinuity after delivery leading to non-use of PPC.

In checking PPC service delivery among nurses, availability of medical equipment and infrastructure, selected providers receiving reproductive health training, organizational chart guidelines, documentation and official adoption for use led to improved PPC delivery. This motivated staffs to offer PPC services because of the support they

received. All trained supervisors in all cadres of clinical staff having job descriptions that had been disseminated, community involvement through establishing groups and better working environment established within through staff created satisfaction in provision of PPC services in Armenia (Topucuoglu, 2005).

Clinicians in an urban teaching hospital in New York, felt they did not have the time or the training to deal with the psychosocial issues experienced by women during this period. But women on the other hand, looked to providers for support as they knew this is their role to help them and link them for continuity of care in case of additional services like lactation specialists, visiting nurse services, and social workers. This affected them in provision of PPC services. The women, too felt staffs could contact them on phone, refer and prepare them to transition into the postpartum period (Anika *et al.*, 2014).

2.6.5 Antenatal care attendance by women

ANC attendance is key in preparation of PPC as information is first shared here. Women who had antenatal follow up were aware of postpartum care than those who did not as its part of preparation for continuum of care after delivery (Tesfahun *et al.*, 2014). Majority of women in a cross sectional study on lack of postnatal care among Palestinian women, those who attended ANC visits reported 6 or more antenatal visits for their last pregnancy and a spontaneous vaginal delivery without problems. After delivery few of them reported being informed about danger signs by the nurses and doctors related to the

baby's or the mother's health before hospital discharge after delivery and these led to non-use as they lacked vital information prior (Dhaher *et al.*, 2008).

2.7 Summary of Literature Review

Postpartum care is important more so in developing countries where maternal morbidity and mortality are unacceptably high, making maternal mortality one of the most important health issues for women. The available literature shows that postpartum care services are among the latest interventions in maternal health care in developing countries. The utilization of these services varies from one country or region to another depending on the various influencing factors. The reviewed literature confirms that socio cultural, knowledge related and health facility related factors influence utilization of PPC. These are some of the reasons for poor/underutilization of the postpartum services. The gaps identified in literature are that though majority countries and regions have availed PPC services, utilization is still poor by the women. The barriers have been identified but the implementation and strategies to improve and increase use are yet to be done. It is for this reason that that this study will be able to confirm if this is the situation in Webuye West.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Study Area

Webuye West Sub County is found in the eastern part of Bungoma County, located in the western part of Kenya. It covers an area of 242.6km² with 2 divisions (Bokoli and Webuye), 3 locations and 12 sub locations with 20 community units and 210 villages (Bungoma County Development Profile, 2013, DHIS, 2014). It has a total population of 230, 253, women comprising of 117,876 of which 61,827 are women of reproductive age (KNBS, 2010). In Webuye West PPC is offered at all levels of the health facilities and the main referral hospital being Webuye County Hospital. Other public health facilities include 2 health centers and 7 dispensaries (DHIS, 2014).

The hospital has a department of public health which serves the entire Webuye West sub county offering community health services provided by public health officers, nurses and community health volunteers. Each of the community unit (CU) is headed by two community health extension workers, that is a nurse and a public health officer and supported by a community health volunteer (CHV), who together form a public health team. The study was carried out in three locations of Webuye West which are; Bokoli, Webuye and Sitikho. Out of the total twenty CUs, ten CUs were selected for the study and included in Bokoli (Mahanga, Bokoli A, B and Miendo) .Webuye (Township A, B, C and D). Kakimanyi has (Kakimanyi, Munyila and Milo). A total of 420 women with children 6-9 months old were identified in the 10 CUs and a list generated. The study

area was suitably selected because of the underutilization of postpartum care services which had led to some morbidity and mortality as per the problem at Webuye West.

3.2 Research Design

A descriptive cross-sectional design was adopted and used to collect both qualitative and quantitative data on utilization of postpartum care among women in Webuye West Sub County. This was because such a design helps assess a sample at one specific point in time. The related factors on the topic were measured at a specific point in time for this defined population.

3.3 Variables

3.3.1 Independent variables

The socio cultural-related factors included cultural beliefs, practices/rituals, family support and religious beliefs/practices. The knowledge related factors included: women's understanding of PPC, where it's offered and by whom, when to go for PPC, risks associated with nonattendance of PPC and the importance of PPC

3.3.2 Dependent variable

The dependent variable was utilization of postpartum care services by women. This was dependent on the utilization of the recommended three mandatory visits against the four targeted ones in the set periods of PPC.

3.3.2 Intervening Variable

Health facility factors were intervening variables and they included: access /availability of services and commodities, health facilities offering PPC, attitude of HCW, their skills, support, and competency and waiting time.

3.3 Target Population

The target population was all women of reproductive age living in Webuye West.

3.4 Study Population

The target population was all women of reproductive age (15-49) years in Webuye West with living children aged between 6-9 months old.

3.4.1.1 Inclusion criteria

- i) All women of reproductive age (15-49) years residents of Webuye West for more than 6 months and biological mothers to living children aged 6-9 months.
- ii) The women and The Health care workers who consented to the study.

3.4.1.2 Exclusion criteria

- i. Those women who were sick / had very sick children requiring urgent medical attention.
- ii. Those women who had travelled out of their residence during the study period.
- iii. The Health care workers who did not consent to the study and were on leave.

3.4 Sample Size Determination

Sample size determination was by of Fisher's formula (Fisher, 1973) for finite population more than 10,000. Women of reproductive age in Webuye County is 61,827 (KNBS, 2010).

The formula:
$$n = \frac{Z^2 pq}{d^2}$$

Where n=minimum desired size for a population greater than 10,000

Z=standard normal deviation, normal distribution set at 1.96 corresponding to 95% confidence level.

p=proportion of target population estimated to have particular characteristics 50% (0.50). In Kenya women of reproductive age utilizing PPC is 51% (0.51) according to (KDHS, 2014).

q=1-p

d²=margin error or degree of accuracy required set at 5% (0.05)

Therefore $n = \frac{1.96^2 \times 0.51(1-0.51)}{0.05^2}$

0.05²

=384.006

n=384

For the HCWs, two from each level of health facility were selected therefore, 6 were interviewed.

3.5 Sampling Techniques

The Webuye West was selected by purposive sampling. The sampling frame was at the community unit level whereby out of the 20 CUs in Webuye West, 10 were picked by simple random sampling. Lottery method of writing 20 names of the CUs, put in a bowl and ten picked from them randomly. Those selected included Webuye A, C, B &D,

Bokoli, Mahanga, Miendo, Kakimanyi, Milo, Muhila .A request for a list of women from the 10 CUs was generated by the CHVs (they serve specific CUs and villages so have vital information about the women and their children's ages) .Webuye (Webuye A, C, B &D) had 180, Bokoli (Bokoli, Mahanga and Miendo) had 100 and Kakimanyi(Sitikho) (Kakimanyi, Milo, Muhila) CUs had 120 women. A generated list from all the CUs 1 to 400 women was made by assigning numbers (this was regardless to the CU as some had more women than the other based on the specific characteristics of their children's ages). Sixteen numbers were randomly eliminated by use of every 25th woman cancelled from the list until the sample 384 was met. The sixteen eliminated women were placed in the two focus group discussions.

The key informants were the HCWs working in the MCH departments in the three levels of the health facilities in Webuye West. They were selected by purposive sampling as they offer the PPC services. Two were randomly picked from each level during the period of data collection and interviewed. For focus group discussions which were two and each group had eight participants.

3.6 Construction and Research Instruments

A semi structured questionnaire was constructed which consisted of open ended and closed questions in line with the objectives under study. Questions on proportion of utilization, socio cultural, knowledge related and facility related were constructed to answer these components under study. Focus group discussion guide with questions was developed. The questions were developed with open ended questions in line with

objectives addressing utilization and factors influencing utilization of PPC among women seeking PPC in WWSC. An interview schedule for the HCWs was constructed. It had open ended questions. First hand accurate and in depth information was obtained from them as key informants. These instruments are found in appendix II, III and IV.

A checklist of the PPC services offered at the 3 levels of public health facilities is attached in the appendix V. For private facilities services are same as at hospital level.

3.7 Pre-Testing

3.7.1 Validity

Validity indicates the degree to which an instrument measures what is supposed to measure, the accuracy, soundness and effectiveness with which it is intended to measure (Mugenda, 2011). The research instruments went through face validity whereby they were availed to the two supervisors to evaluate them effectively ensuring they captured the topic under study. After this they were checked by a psychometrician for common errors like double-directed, confusing, and leading questions for discussion. The unclear items were then reviewed and adjustments made before final tools' construction.

3.7.2 Reliability

Pretesting was done; it's where the tool is administered to the subjects followed by treatment and at the end a post-test done on the same subjects (Mugenda, 2011). This ensured the tool yields same results even after the repeated test. Field pretesting was done at the randomly selected CUs (among the 20) not under study. This was done at

Matulo CU where 10% of the sample size was used. After this, Cronbachs Alpha Coefficient was used to measure internal coefficient, checking the correlation between questions loading onto the same factor. It was set at 0.70 at alpha =0.05, significance level of confidence is accepted. It was found to be 0.85. Adjustments were made accordingly to improve the reliability.

There was training of the five research assistants prior to data collection and they were appropriately selected CHEWs who serve the CUs. They were selected by simple random sampling. This was because they had vital information on the women. Their CHVs constructed the list of the target population prior. The CHEWs were diploma holders in nursing and having worked in that community for more than one year preceding the study and understood the local language. They were trained by the principal researcher for 2 days. Training was on information of topic under study, recruitment of participants (in collaboration with the CHVs), how to administer the data collection tools, notes taking, recording and organizing data during collection.

3.8 Data Collection Techniques

Data collection was done through interviewer administered questionnaires by the research assistants in relation to the CUs they serve. A list of 10 community units was generated. A request from the CHVs for a list of all women who meet the criteria was done from each CU. The 384 women who met the criteria were identified in all the CUs under study. They were randomly selected and another list constructed in relation to the CUs for easier access. The selected women were visited on appointment and the

questionnaires administered after consenting until the desired sample was achieved. The questionnaire administration started from the first woman on the list until the last in each CU and each questionnaire was answered between 30-45 minutes. Two focus group discussions of 8 women each were selected from the sampled population randomly and informed of the group discussions with other women. A set of open ended questions were posed by research assistants one was the moderator as the other took notes and tape recorded. One consent was signed by the researcher in each group after oral consent (audio recorded), the discussions took 1-1¹/₂hours. Data was collected through notes taking and tape recording. These took place in identified health facility nearby (Webuye Sub county Hospital and Bokoli Sub county Hospital). Prior arrangements had been made and this was concurrently during the period of data collection.

An interview schedule was planned for the HCWs and took place at each of the 3 selected health facility levels (Bokoli Sub county Hospital, Webuye Health Centre and Kakimanyi Dispensary). The interview guide had open ended questions which were posed to the HCWs based on sociocultural and facility related factors. Two HCWs from each facility were randomly selected while on duty. Data was collected through asking questions and taking notes.

3.9 Data Analysis

After data collection, quantitative data was coded and analyzed using Statistical Package of Social Sciences (SPSS) version 20. Statistical testing for association was done using Pearson's Chi-Square test, p value set at $p < 0.05$ level of significance. Qualitative data

from FGD and interviews were organized, transcribed and translated. The data was then sorted cleaned and labelled in themes. Descriptive statistics like means, frequencies and percentages were used. The findings were presented in form of figures, charts, graphs, narratives and tables.

3.10 Logistical and Ethical Considerations

Authority to carry out the study was sought from Kenyatta University Graduate School. Ethical approval and clearance was obtained from Kenyatta University Ethics Review Committee. Research permit was obtained from National Commission of Science, Technology and Innovation. Authority was then sought from Bungoma County through the County Commissioner; the Director Ministry of Education and Director Ministry of Health. Permission was then sought and granted by area chiefs and village heads.

Informed consent was sought from the participants. They were explained for verbally the purpose of the study then a written consent was signed, orally (tape recorded) for FGD, as outlined in appendix III (purpose, procedure, benefits and risks). For those under 18 years their parents or guardians signed the consent as witnesses. The participation was voluntary, the participants were not forced or coerced to participate and had the right to refuse or discontinue at any time with no negative consequences. No incentives were offered for their participation. Anonymity and confidentiality was ensured and assured to the participants. There was use of codes and not names on the questionnaires. For FGDs participants were assured that the information was being tape recorded and remained in the group, they were to feel free in discussions. Data collected was kept

under key and lock at all times. Qualitative data was password protected and stored in an electronic file with access limited to the principal researcher. The participants were assured that the collected data will be destroyed after 2 months of completion of academic requirements. Privacy of participation was also ensured as the research assistants visited them inside their homes individually after prior arrangements at the participants' convenient timings. FGD was arranged at the nearby dispensary and hospital room for privacy, confidentiality and convenience.

CHAPTER FOUR: RESULTS

4.1 Introduction

The study aimed at assessing utilization of postpartum care (PPC) services among women in Webuye West, Bungoma County, Kenya .The study targeted 384 women of reproductive age. From the three main locations, Webuye CUs had majority 45.6% (n=175) of the respondents followed by Kakimanyi (Sitikho) 30.5% (n=117) then Bokoli 23.9% (n=92).

4.1.1 Demographic characteristics of the respondents

The study findings showed that majority 49.9% (n=192) were aged between 25- 34 years. On level of education 35.4% (n=136) had secondary and marital status majority 81.5% (n=313) were married .On the number of children, 51.7% had 1 or 2 with the rest 3 and more and majority 94.1% (n=361) were Christians. This is shown on table 4.1.

Table 4.1: Respondents Demographic characteristics.

Item	Response	Freq. n=384	Percentage
Age	< 18 Years	12	3.1%
	18-24 Years	139	36.1%
	25-34 Years	192	49.9%
	35-44 Years	41	10.9%
Education Level	No Formal Education	25	6.5%
	Primary (Incomplete)	93	24.2%
	Primary (Complete)	87	22.7%
	Secondary	136	35.4%
	Tertiary	35	9.1%
	Others	8	2.1%
Number of Children	1 Child	104	27.0%
	2 Children	95	24.7%
	3 Children	78	20.3%
	4 Children	44	11.5%
	5 or more Children	63	16.5%
Marital status	Married	313	81.5%
	Single	60	15.5%
	Widowed	7	1.7%
	Divorced	4	1.1%
Religion	Christian	361	94.1%
	Muslim	21	5.3%
	Others	2	0.6%

4.1.2 Attendance of Antenatal Care

As shown on table 4.2, majority of women 99.1% (n=381) had attended ANC. The study also established that 68.6% of women had attended ANC at least four times consistently from visit 1-4 and majority 77.0% (n=296) delivered in a health facility.

Table 4.2: Antenatal attendance and place of delivery

Item	Response	Freq.	Percent	Mean
ANC attendance	Yes	381	99.1	
	No	3	0.9	
Number of ANC visits	1	8	2	4
	2	19	5	
	3	60	15.7	
	4	176	45.9	
	5	57	14.8	
	6 and more	43	12.1	
	Don't know	11	2.8	
Place of current (this) delivery	Health Facility	296	77	
	Home	83	21.6	
	Others (TBA)	3	0.8	
	Prefer not to say	2	0.6	

4.2 PROPORTION OF WOMEN UTILIZING OF POSTPARTUM CARE

4.2.1 Receiving of Postpartum Care Services

On receiving of PPC services majority 57.9% (n=222) reported to have ever received while 42.1% (n=162) had never. Among those who ever received, 33.0% did so in less than 48 hours and 38.3% between 1 to 2 weeks following delivery as shown in figure 4.1.

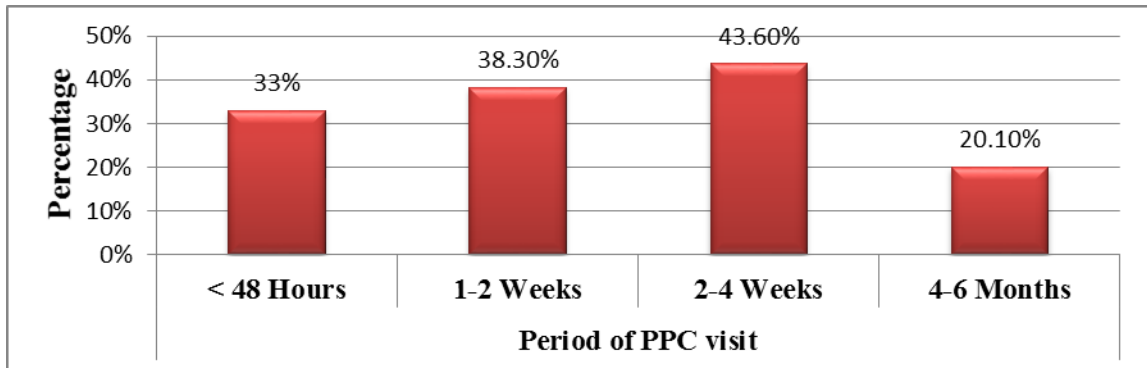


Figure 4.1: Receiving of Postpartum Care Services

4.2.2 Number of visits and utilization of PPC services

On the standard period in relation to visit of PPC utilization, 33.6% attended the mandatory three visits and four visits were 14.8% as presented in the table 4.3.

Table 4.3: Number of visits and PPC service utilization

Item	Number of times	Women who attended	Percentage
Number of visits	1	98	44.0%
	2	79	35.7 %
	3	75	33.6 %
	4	33	14.8%

From the FGDs on the number of visits majority of the women said they were not aware/not sure of the number visits and service therein, one group said, “*We attended clinic but do not know how many visits as we have never been told about these specific timings,*” (FGD, Bokoli). In another group, on the number of visits, women concurred “*you come to clinic a number times but don’t know the frequency and when,*” (FGD, Webuye).

The study tested the strength of relationship between utilization and various visits using Pearson chi-square test. The study established that utilization of PPC was dependent on various timing with 4-6 being the most utilized period as shown on table 4.4.

Table 4.4: Statistical analysis of timings of PPC and utilization

Timings	Utilization of Postpartum care		
	Percentage of attendance	Chi-sq. Value	Asymp. Sig.
<48 Hours	33.0%	124.568	0.000**
1-2 Weeks	38.3%	152.946	0.000**
4-6 Weeks	43.6%	205.286	0.000**
4-6 Months	20.1%	61.733	0.000**

NB ** Means significant

4.2.3 Reason for Attendance of PPC services

The women had various reasons for attending PPC services, 40.5% reported taking their baby for immunization and for general checkup, 38.0% having a family planning session, 23.5% as advised by HCW, 21.2% counselling as shown in figure 4.2. Majority of the women in the FGDs said *they were not aware/not sure a woman is supposed to attend clinic after delivery as no one had told them and those who were coming came because they were unwell or brought their babies, this concurred with findings narrative above in visits (FGD, Bokoli).*

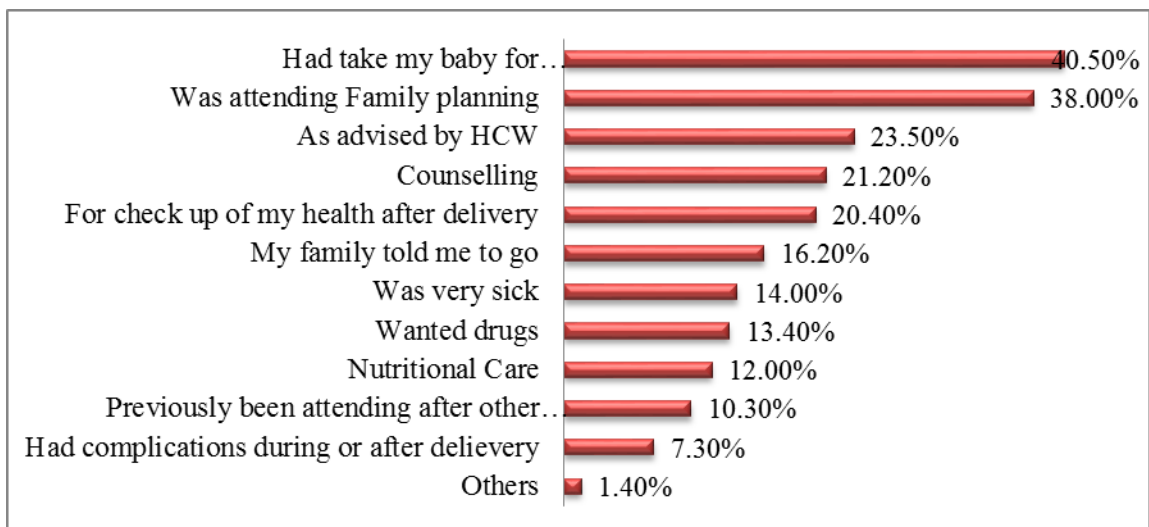


Figure 4.2: Reasons for PPC services attendance

The statistical analysis using chi-square established that attendance of PPC was dependent on advices received from CHW, family members and counseling. Need for some children services such as immunizations, medicines and nutritional advices made women attend PPC as shown on table 4.5.

Table 4.5: Relationship between reason for attendance and PPC utilization.

Item	Utilization of Postpartum care	
	Value	Asymp. Sig.
Reasons for attendance		
As advised by HCW	9.000	0.003**
Family members and counseling	4.902	0.021**
Need for some children services such as immunizations, medicines and nutritional advices	114.255	0.000**
Complications after delivery and need for checkup	6.767	0.008**
Previous experiences such as giving birth	4.803	0.019**
Need for family planning services	163.248	0.000**

N/B ** significant

4.2.4 Reasons for Non-Attendance of PPC services

From figure 4.3 the 42.1% of the women who did not attend ,majority 30.4 % were not aware of the service .This was also evident in one of the FGD as women attested that they did not come as they were not aware of the service. *“We are not aware of the services and what we know is to come back for family planning after six weeks as we bring children for immunization,”* (FGD, Webuye).

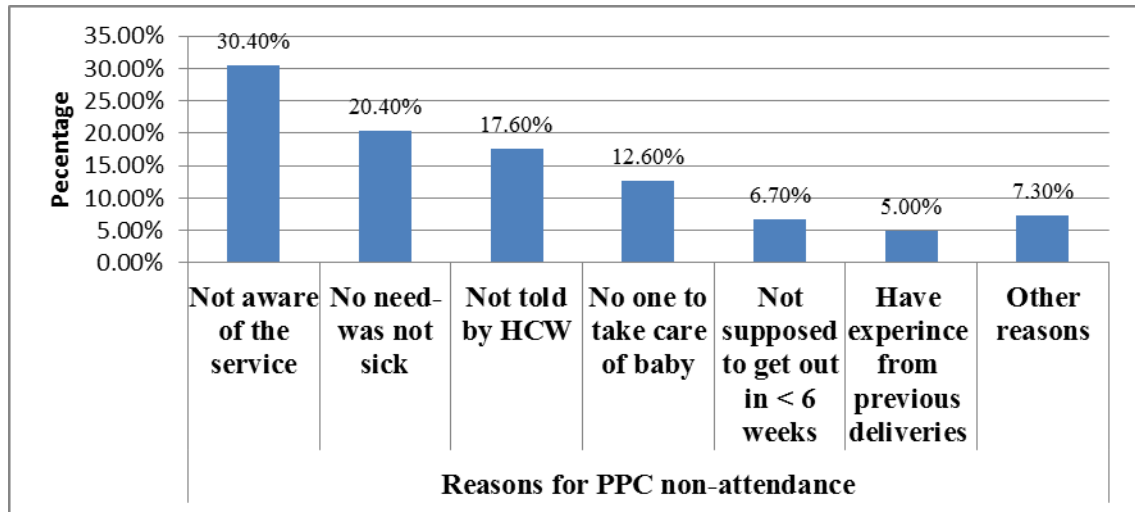


Figure 4.3: Reasons for non -attendance of PPC services

4.3 SOCIO-CULTURAL AND KNOWLEDGE RELATED FACTORS INFLUENCING PPC SERVICES UTILIZATION.

4.3.1 Cultural beliefs and practices

4.3.1.1 Presence of cultural beliefs and practices

The study findings established that majority of the women, 55.5 % (n=213) agreed that there were cultural beliefs related to PPC utilization and 39.5% (n=152) disagreed while 5.0% (n=19) were not sure.

4.3.1.2 Various types of beliefs and practices.

The findings established that there were specific cultural beliefs and practices during postpartum period on PPC and remaining indoors was by majority 42.5%(n=91) The as shown on table 4.6 .From one (FGD, Webuye) on beliefs and rituals women said “After

you are allowed to go out, you rise up early before others wake so as no one sees you as there are other birds in the air if they defecate on you your baby's fontanel will not close and as mother you may develop some bad illnesses. Also your father in-law is the first person to hold the baby, smear it with ashes so as nothing bad happens to both of you.

Table 4.6: Cultural beliefs/rituals and practices.

Item	Responses	Freq.(n=213)	Percentage
Cultural beliefs or rituals on PPC	Remain indoors to avoid people of bad omen/witchcraft	91	42.5%
	Child naming/shaving/burying placenta/washing child	40	18.8%
	Eat traditional herbs/food	36	17.0%
	Avoid sex due to uncleanness & not harm child	21	10.0%
	Bath with traditional drugs/Herbs	13	6.1%
	Eat meat/soda	6	2.6%
	Be attended by family member	4	1.8%
	Eat Herbs	2	1.2%
Total		213	100%

4.3.1.3 Staying indoors after delivery and reasons

The study established the following cultural practices affecting PPC; staying indoors immediately after delivery for varied periods of time, 43.0% for 7 days, 23.5% between 7 to 30 days and 19.3% for more than 30 days. In one of the FGD this was evident as all women had stayed indoors for a specified period. *“I was told you stay indoors for 3 days, 7 or even a month”, they echoed (FGD, Webuye).*

There were several reasons for staying indoors, 57.3% being traditional requirement for a woman stay indoors for recovery and keep the baby warm, 19.3% helped seclude women and baby from non-family members with bad intentions like witchcraft and bad

omen, both for self and for the baby, 4.3% that women are considered unclean and should not mix with other members of society and 0.8% reported it was necessary for purposes of naming and initiation ceremonies.

As such these factors limited women from attending PPC. In the FGD some mothers argued, *“You stay at home until the child starts smiling/laughing this is culture from the forefathers reason unknown.”* The days of staying indoors vary, for a boy mothers stay indoors for 3 days if it’s a girl 2 days; this has been there from time immemorial so not allowed to question.”(FGD, Webuye, Bokoli). *“After the last day of staying indoors, father in-law is the first person to hold the baby, smeared ash so as nothing bad happens and it’s a cultural practice,”* (FGD, Webuye).

4.3.1.4 Health problems at time of staying indoors and action taken.

Majority 69.2% (n=266) did not experience any health problems while minority 23.8% (n=91) did experience health problems at this time. Those who experienced, majority 52.9% (n=48) sought help from a health facility as shown on table 4.7.

Table 4.7 Health problems and action taken

Item	Responses	Frequency	percentage
Any health problems when indoors	No	266	69.2%
	Yes	91	23.8%
	Can’t remember	27	7.0%
Action taken when faced with health problems	Attended health Facility	48	52.9%
	Sought help from TBA/Herbalist	17	18.9%
	Bought drugs	12	12.9%
	Self-treatment using hot water	4	4.7%
	None/None	10	10.6%

4.3.1.5 Beliefs on caretaker during this period

From the findings 52.7% (n=112) of women reported to have cultural beliefs of who should attend to them during PPC period. Respondents main reasons were linked to trust as: 69.6% (n=78), experience 11.7% (n=13), recovery 10.7% (n=12), cleanliness 6.9 % (n=8) and others did not know 1.1% (n=1). Those who held cultural belief relating to trust reported that women in-laws were recommended as they cannot bewitch the child and mother as they cannot bring bad omen to them.

4.3.1.6 Presence of religious beliefs and specific practices

From the findings on table 4.8, majority 59.4% (n=228) of respondents attested that religious beliefs or practices during this period contributed to their not utilizing PPC. For specific practices 77.4% (n=176) believed a woman is supposed to remain indoors for one month and wait for pastors or church leader's prayers that served for cleansing women and blessing child among others.

In the FGD religious beliefs and practices hindered utilization of PPC this was evident as the women said these were the reasons, *“you stay at home for 3 months without going to church as if you go early when you pray to God He may not answer your prayers or listen,”* (FGD ,Webuye) .Another woman reported *“you stay at home for 14 days before going to church/anywhere, wait for pastor to come and pray for you before allowed to move around/set free as you are still unclean before God. However the church members come after 8 days post-delivery to restrain you at home and come back after 32 days*

they come to set you free to move around. This is so as you are still dirty and not allowed even to have sexual intercourse if you don't follow this something bad happens to you or God can curse you,"(FGD, Bokoli).

From the interviews it was evident the *"women had restrictions of movement as they were secluded for periods ranging from 3days to 4 weeks to avoid bad eyes, to heal faster and wait for church elders to come home pray and release them,"*(Interviewees, Webuye, Bokoli & Kakimanyi).

Table 4.8: Religious beliefs and practices during PPC

Item	Response	Frequency	Percentage
Is there any religious beliefs or practice after delivery	Yes	228	59.4%
	No	155	40.3%
	Don't know	1	0.3%
Specific religious beliefs or practice after delivery	Prayers for cleansing women & blessing Child	176	77.4%
	Shaving, Naming and Praying for the child	15	6.6%
	Remain indoors while being attended by family member	27	11.2%
	Eat well & rest for recovery and healing	5	2.4%
	Don't know	5	2.4%

4.3.1.7 Relationship between socio cultural beliefs and PPC utilization

On relationship between cultural and utilization of PPC services, Pearson chi-square test was not significant .Some of these specific cultural beliefs and practices were dependent on PPC utilization thereby significant. They included remaining indoors to avoid people of bad omen/witchcraft and child naming/shaving/burying placenta/washing child.

On religious beliefs and practices and utilization of PPC services, Pearson chi-square was significant. Since the $P < 0.05$, the study rejects the null hypothesis and concludes there is a dependent relationship between religious beliefs on PPC and the utilization of PPC at 95% confidence interval.

Table 4.9: Statistical analysis of sociocultural factors and PPC Utilization

Item	Have you utilized Postpartum care		
		Value	p-value
Cultural beliefs on PPC	Chi-Sq	4.848	0.0849
Specific cultural beliefs			
Remaining indoors	Chi-Sq	8.26	0.002**
Child naming/shaving, placental burial	Chi-Sq	4.65	0.022**
Religious beliefs /practices	Chi-Sq	14.904	0.011**

4.3.2 Knowledge related factors influencing PPC utilization

4.3.2.1 Awareness of attendance and type of PPC services given

The study established that 76.0% ((n=292) of women were aware of PPC attendance after delivery while 24.0% (n=92) were not. On knowledge on care given the women had multiple responses, 90.2% (n=263) reported awareness on family planning, 74.0% (n=216) health education pertaining to breast examination, safe sex and hygiene, 67.6% (n=197) immunizations among others as shown on figure 4.4.

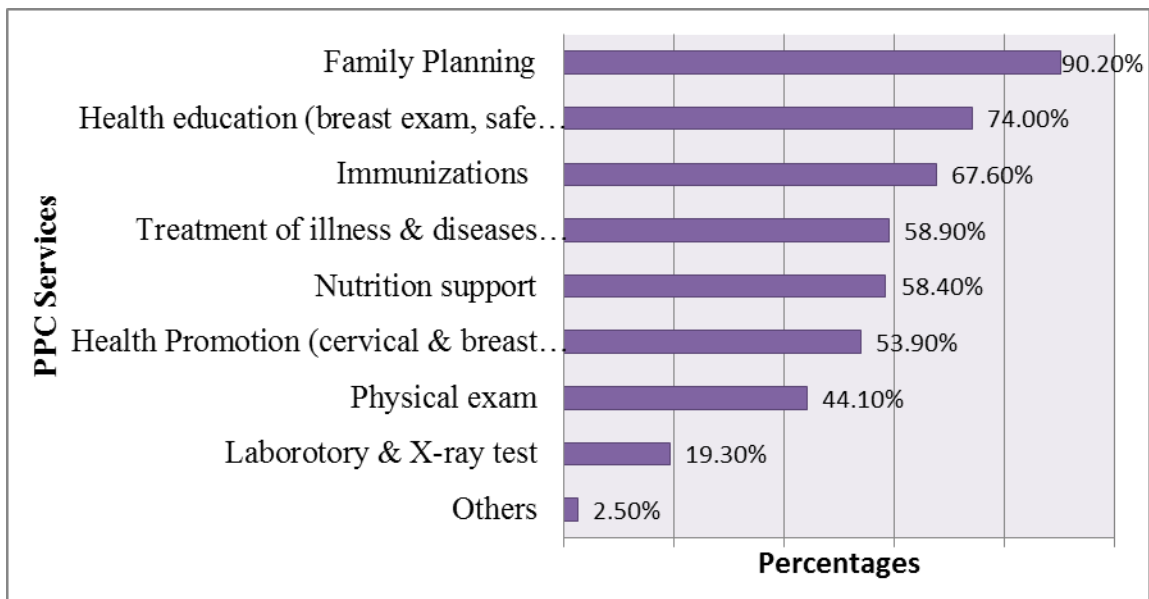


Figure 4.4: PPC care given from delivery-six months

4.3.2.2 Informant of PPC services and sources of information on required PPC.

Majority of the women 79.8% (n=233) were informed by health care workers, 45.9% (n=134) friends, 36.4% (n=106) from husbands and family members and 26.3% (n=77) relatives.

The study also established that women had varied sources of information about PPC services; MCH Booklet was a major source of information 60.2% (n=176) and others like relatives or spouses as the least 10.4% (n=30). As shown in figure 4.5.

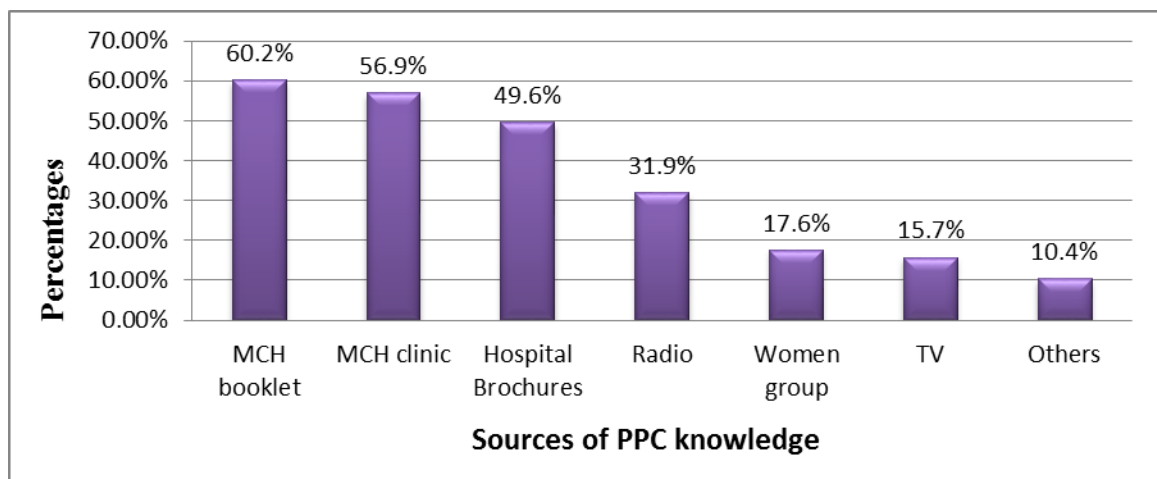


Figure 4.5: Major sources of knowledge regarding PPC

4.3.2.3 Knowledge on Period for source, when, who and periods of PPC care

Majority 70.6% (n=206) of women reported having been informed about PPC during ANC. Most of this happening during the first visit, 30.4% (n=63). Information on who is supposed to get PPC majority 78.4% (n=162) knew women after delivery. For timings

they had multiple responses and majority 59.1%(n=122) knowing at 4-6 months after delivery, with half knowing the critical periods, as shown on table 4.10.

Table 4.10: Knowledge on ANC source, when, who and timings of PPC care (n=292)

Item	Response	Freq.	Percentage
	Yes	206	70.6%
Informed at ANC(source)	No	80	27.5%
	Can't remember	6	2.0%
Which Visit of ANC was PPC introduced(when)	Visit 1	63	30.4%
	Visit 2	23	11.2%
	Visit 3	18	8.7%
	Visit 4	48	23.2%
	Didn't know	55	26.5%
Who is supposed to get PPC(who)	Women before delivery	35	17.1%
	Women after delivery	162	78.4%
	Didn't know	9	4.5%
Timings of PPC services(timings)	<48 Hours	110	53.2%
	1-2 weeks	111	54.1%
	4-6 weeks	99	47.9%
	4-6 Months	122	59.1%

4.3.2.4 Knowledge on required number of PPC visits

On awareness of visits, those who reported to know four visits and less (1-4) were majority 55.9 % (n=162); however, more than five were 22.7% (n=66) and 21.5% (n=63) were not sure on how many PPC visits they were supposed to attend. In one of the FGDs they reported that, *“you come to clinic 4 times but I don't know the frequency and why,”* (FGD, Bokoli), In Webuye *“majority of the women affirmed they have never*

known there is a clinic for mothers after delivery but just come not knowing the frequency nor the number as they bring their children to the clinic,” (FGD, Webuye).

Table 4.11: Knowledge on required number of PPC visits

Number of visits	Frequency	Percent	Mean
0	1	0.3	4
1	8	2.8	
2	27	9.2	
3	45	15.4	
4	82	28.2	
More than 5	66	22.7	
Not sure/Don't Know	63	21.5	
Total	292	100	

4.3.2.5 Knowledge on importance of PPC, complications and what to do

In this study; majority of women 73.4% (n=214) indicated that PPC was important for their health status, health education 66.1% (n=193) and treatment of complications and other diseases 65.8% (n=192) were by majority. Among the mentioned complications after delivery were, heavy bleeding 85.4% (n=249), severe headache 70.6 % (n=206) and fever 64.7% (n=189) were the commonest. On the action to be taken in case faced with any complications majority 93.3% (n=272) reported seeking medical care in the health facility as shown on table 4.12.

Table 4.12: Importance of PPC and complications associated with delivery (n=292)

Item	Response	Freq.	Percentage
Importance of postpartum care	Know health status	214	73.4%
	For treatment of complications and diseases	192	65.8%
	For health education	193	66.1%
	Important for my baby	191	65.4%
	Others	22	7.6%
Complications associated with after delivery	Heavy bleeding	249	85.4%
	Fever	189	64.7%
	Severe headache	206	70.6%
	Foul smelling vaginal discharge	165	56.6%
	Fits	94	32.2%
	Engorged Breast	130	44.5%
	Death	149	51.0%
	Others	19	6.4%
What to do in case of complications	Seek medical care in health facility	272	93.3%
	Talk to close family member/Neighbor	11	3.6%
	Self-medication	2	0.6%
	Don't know	6	2.2%

4.3.2.6 Relationship between knowledge factors and utilization of PPC services

On relationship between knowledge factors and utilization of PPC services, Pearson chi-square results on. Table 4.13 show s there is a relationship between knowledge related factors and PPC utilization. On knowledge of attending PPC it was significant. Regarding informing mothers of PPC during ANC and awareness on various timings

this too were found significant to utilization of PPC .Therefore the study rejects the null hypothesis and asserts that knowledge on attendance, period in the timings (48 hours and 4-6months) and prior information at ANC and utilization are dependent on each other.

Table 4.13: Relationship between knowledge factors and utilization of PPC

Item	Utilization of Postpartum care		
		Value	Asymp. Sig.
Knowledge of attending PPC	Chi-Sq	27.269	0.000**
	N	292	
Informed of PPC during ANC	Chi-Sq	33.029	0.000**
	N	206	
<48 Hours	Pearson Chi-Square	5.09	0.024**
1-2 Weeks	Pearson Chi-Square	0.778	0.378
4-6 Weeks	Pearson Chi-Square	1.233	0.267
4-6 Months	Pearson Chi-Square	5.908	0.010**

N/B ** shows significant

4.4 HEALTH FACILITY RELATED FACTORS INFLUENCING PPC SERVICE UTILIZATION.

4.4.1 Availability and distance from health facility

Majority of women 98.3% (n=377) had health facility near place of residence while only 1.7% (7 n=) were far. Majority were residing near main sub-county hospitals of Bokoli and Webuye 40.6 % (n=156), and 3.6% (n=14) at private hospitals around. The health center is located adjacent to the hospital. The farthest distance they travelled to seek PPC services is estimated 4 km as by 4.5% (n=17) women, and shortest 0.3% (n=1) few meters with mean of 1.78km, as shown in table 4.14.

Table 4.14: Health Facility Availability and distance

Item	Response	Freq.	Percentage	Mean	
Health facility near place of residence	Yes	377	98.3%		
	No	7	1.7%		
Type of health facility near place of residence	Hospital	156	40.6%		
	Health Centre	143	37.3%		
	Dispensary	87	22.7%		
	Private hospital	14	3.6%		
	Others	1	0.3%		
Distance to the nearest health facility	1 Km	187	48.6%		1.78
	2 Km	112	29.1%		
	3 km	68	17.6%		
	4 Km	17	4.5%		
	Few meters	1	0.3%		

4.4.2 Frequency of Receiving PPC services sought

The women reported having received PPC services that they sought as always by the majority, 50.0% (n=111) and 1.0% (n=2) were not sure.

Table 4.15: Frequency of Receiving PPC services sought

PPC received	Frequency	Percentage
Once	39	17.5%
Sometimes	70	31.5%
Always	111	50.0%
Not sure	2	1.0%
Total	222	100%

4.4.3 Availability of HCWs to offer PPC services

The results as shown in figure 4.6 showed majority, 74.8% (n=166) HCWs were available.

On availability from the FGD women said, *“even if the nurses are there most of the time they are few like one nurse to over 20 mothers if you are unwell you go back home unattended and this makes you not come back again,”* (FGD, Webuye & Bokoli).

From the interviews the HCWs said, *they cover the MCH clinic as a whole 1 or 2 each day for variety of services to include FP, ANC, Postnatal, Immunization, regular booked maternal clinics making them overstretched,”* (HCWs, Webuye & Bokoli).

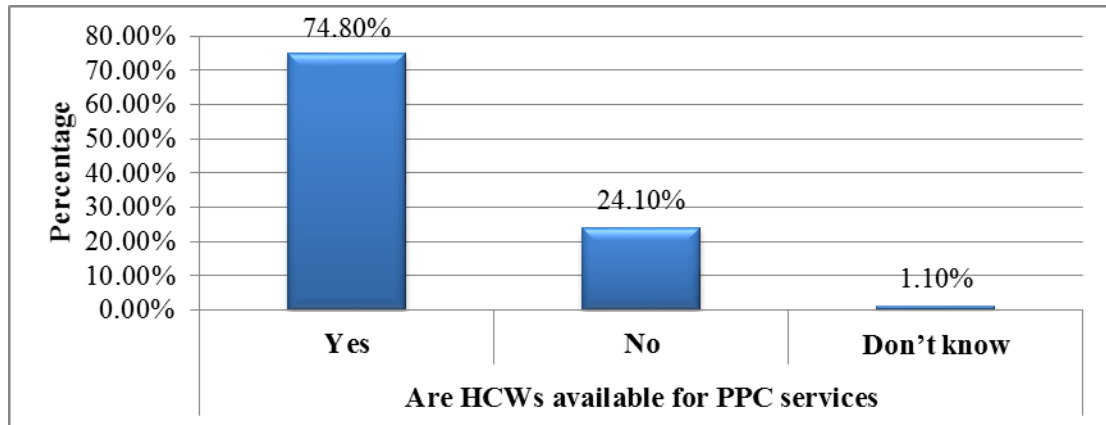


Figure 4.6: Availability of Health care workers

4.4.4. Health care workers helpfulness and friendliness

Majority 75.9% (n=168) of the health care workers were helpful and friendly but 23.2% (n=52) regarded them otherwise. *In the FGDs some women regarded them otherwise, "HCWs talk to them with harsh tone and make them move up and down for services and at the end of the day they don't get what we went for as they tell them they are going off duty so the women go home unsatisfied and this makes them not to come back,"* (FGD, Webuye)

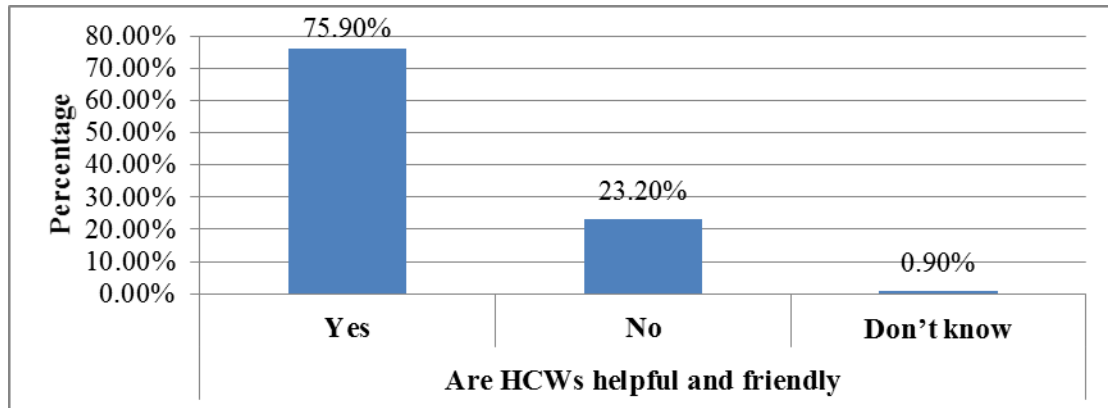


Figure 4.7: Health care workers helpfulness and friendliness

4.4.5 Postpartum care services availability

From the findings majority 81% (n=180) received important/basic PPC services while 19% (n=42) did not. For the type of these services received, majority 79% (n=175) received FP and, 78.7% (n=175) on observation of danger signs and 38.9% (n=86) treatment of complications/danger signs such as heavy bleeding, fever, severe headache, foul smelling vaginal discharge, fits and engorged breasts among others as shown on table 4.16.

From the FGD women in both groups reported FP as the main PPC service received. Others “asserted they were not aware they are supposed to attend PPC clinic but knew some services a woman receives during PPC such as FP and expressed their interest in understanding PPC,” (FGD Webuye and Bokoli). In (FGD, Webuye), majority of women however said that “though we get, we don’t get all PPC services and we did not know we are entitled to.”

Interviews from the HCWs revealed *basic services were available and included counseling, HIV testing, weighing, vital signs, health education on nutrition, breastfeeding and personal care, referrals to higher level care hospitals, Family planning, cancer screening and treatment of complications, ailments and diseases,*”(HCWs, Webuye, Bokoli, Kakimanyi). Also services were available and dependent on the level of health facility, *“at each health facility level services were available but differ to type of health facility as at dispensary, health center and hospital. The HCWs had the basic qualifications from diploma, certificate and registered nurses and no special trainings in postpartum care apart from one who had Family planning and another Immunization course,”*(HCWs, Webuye, Bokoli, Kakimanyi).

Table 4.16: PPC services available

Item	Response	Frequency	Percentage
Received any of PPC services	Yes	180	81.0%
	No	42	19.0%
Services received by women during PPC	Family planning	175	79.0%
	Danger signs	175	78.7%
	Counseling	133	59.9%
	Laboratory Tests	119	53.8%
	Physical examination	111	49.9%
	Drugs and commodities	89	40.3%
	Treat complications/danger signs above	86	38.9%
Others	2	1.1%	

4.4.6 Cost of PPC services

In this study 52.2% (n=116) of women did not pay for any of the PPC services while the rest did, the mean charge was Kenya shillings 130. Among the services charged were 26.3% (n=58) for FP, and least 7.3 % (n=16) MCH booklet and opening file in medical facilities registers as shown in figure 4.17.

Table 4.17: Cost of services

Item	Frequency	Percent	Mean
Amount paid			
Did not pay	116	52.2	130
Ksh. 0-50	41	18.4	
Ksh. 50-100	11	5	
Ksh. 101-200	35	15.9	
Ksh. 201-300	14	6.1	
Ksh. 301-500	4	2	
>500	1	0.3	
Cost for specific services			
Drugs	34	15.1	
Lab Services	52	23.5	
Family Planning Services	58	26.3	
MCH book and File	16	7.3	

4.4.7 Additional services received other than PPC services

From the findings several services were given other than PPC as reported by majority, 63.6% (n=141) reported so. On the content of additional services, majority 85.5% (n=121) appointments for next visit were among the least service and 6% (n=8) could not remember the report as shown on the table 4.18. This was evident too in one of the

groups as majority said, *“When we sought help or care the nurses gave extra information & health education on other services, minority mentioning hygiene, breast feeding and nutritional advice. Vital signs were also taken and check hemoglobin level for those who had anemia. On return date they said HCWs rarely do it”* (FGD, Webuye).

Table 4.18: Additional services received

Item	Service	Frequency	Percent
Additional service apart from what they sought	Yes	141	63.6%
	No	73	32.8%
	Don't Know	8	3.6%
Content of service	Health Education	121	85.5%
	Other available services	5	3.5%
	Self-examination	3	1.8%
	Appointments	5	3.5%
	Can't remember	8	6.0%

4.4.8 Waiting time

Findings from this study indicated that 44.8% (n=99) of the respondents waited for 31-60 minutes with the least 2.8% (n=6) more than 4 hours before being attended by HCW as shown in figure 4.8. Information from the interviews the *HCWs echoed that patients had to wait sometimes for longer hours because they are short staffed, no PPC rooms set aside, lack commodities and vital equipments to render the services. Sometimes any staff without much experience and training on PPC is left in the unit alone* (Interviewees, Webuye, Bokoli and Kakimanyi).

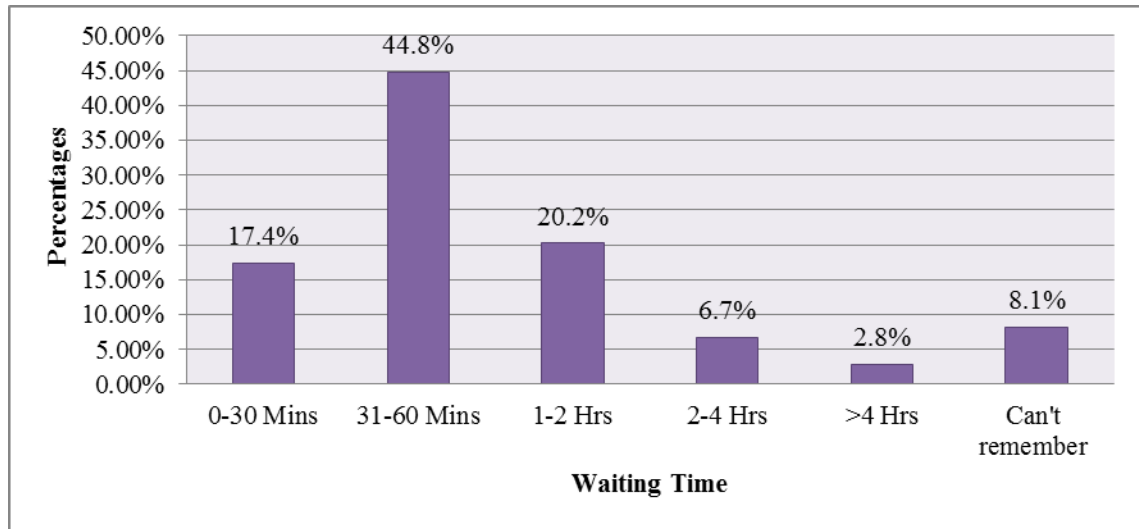


Figure 4.8: Waiting Time

4.4.9 Relationship between health facility factors and utilization of PPC services

Pearson chi-square results as shown on table 4.19 showed that facility near place of residence is not. On the availability of HCW for PPC services, HCWs perceived helpfulness and friendliness, waiting time and charges for services by Pearson chi-square were significant. Since the $P < 0.05$, the study rejects the null hypothesis and concludes availability of HCW for PPC services, HCWs friendliness and helpfulness, waiting time and charges on services are dependent on utilization of PPC services, therefore significant.

Table 4.19: Relationship between health facility factors and utilization of PPC

Item	Have you utilized	Postpartum care	
Health facility near place of residence	Chi-Sq	3.837	0.061
HCWs available for PPC services	Chi-Sq	14.637	0.000**
HCW helpful and friendly	Chi-Sq	7.28	0.005**
Waiting time	Chi-Sq	26.974	0.000**
Charging the services	Chi-Square	7.893	0.005**

NB ** Means significant

CHAPTER FIVE: DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter addresses discussion, conclusion and recommendations as per the objectives of the study. The purpose of this study was to assess utilization of postpartum care services among women in Webuye West Bungoma County, Kenya.

5.2 Discussion

5.2.1 Demographic characteristics of the respondents

In terms of age distribution, majority 49.9% aged between 25- 34 years. This is similar to Xiang and Xiong (2014) the peak age of the respondents was 27.6 ± 7 years old and majority were under the age of 35 this being mean age in reproduction. Majority had formal education 35.9% secondary, and 22.8% completed primary education. This is in agreement with Gage (2007), the mother's level of education had an important impact on the use of maternal health services and in high education areas , social networks provided women with access to contacts and information on safe motherhood and reduced uncertainty about formal health systems.

On parity, majority 51.8% had one or 2, children. In this study this can imply that if a mother initially did not utilize the PPC care in the subsequent deliveries they are unlikely to do so. The women in this study may have considered themselves aware of the service as they had basic formal education, majority delivered in health facilities they may have assumed the initial information given and care is sufficient during this

period, so no need to come back. Majority 94.1% of the women were Christians. In this study religious beliefs and practices which included staying indoors for a period ranging from days to weeks hindered women to receive the relevant PPC services during these periods. Though in this study area the common religion is Christianity, it's evident that religious beliefs and practices affected PPC service utilization.

5.2.2 Proportion of women utilizing PPC services

On proportion of women utilizing PPC services majority 57.9% of the respondents had ever received PPC service/s. Those who received 33.0% and 38.3% did so in most crucial periods of 48 and 1-2 weeks respectively. In the FGD they said, *you come to clinic a number times but don't know the frequency and why*. This is in agreement with Tesfahun *et al.*, (2014) who found out that though utilization generally was high by mothers ,the most crucial elements especially in the first 2 weeks was very low and majority of them utilized only immunization services. More than half utilized once and the rest three and or more times within 6 weeks. In this study majority of the women did not know the frequency of the visits and utilization of PPC, and utilized more in the 4-6 weeks which is largely FP component. They underutilized the crucial periods where mortality is reported to be highest and this poses a greater risk to their health. Further these periods are positively correlated to utilization at all periods spread in the six months. This too implies that all periods are essential and mandatory considering the type of services each period offers, all these geared towards improving maternal health and reducing maternal mortality and morbidity.

On the number of PPC visits each attended, 14.8% did 4 PPC visits, 33.6% attended thrice, 35.7% attended twice and 43.9% attended PPC only once in the 6 months. This was statistically significant. From the FGD women said, “*We have never known how many visits because we have never been told.*” This agrees with Xiang & Xiong (2014) who found out that more than half who had the visits did not receive standard postpartum visits of at least 3 times during this period. In this study there was poor utilization as they did not meet the mandatory 3 visits recommended MOH Kenya that warrants utilization of PPC, thereby underutilizing the service. The low coverage of mandatory visits in this study reflects a neglected component in maternal health. Those who attended opted for the main sub county hospitals which are located near places of their residence but majority are not seeking these services, leading to a gap in the continuum of care.

PPC service attendance was significant and dependent on FP, child immunization, being informed by HCWs and complications ($p < 0.05$). This agrees with Mrisho (2009) as women were not able to differentiate between the care in the first six weeks extending to 6 months with the Expanded Programme on Immunization as its meant for children alone and not maternal care. In this study the women tend to go to clinic while taking their children for immunization or FP and this was evident in the FGDs as well.

The proportion that did not attend PPC indicated they were not aware of the PPC services and others found it useless to attend PPC since they were not sick and were not advised by HCWs to come. This too was echoed in one of the groups as they said *all they knew was to come back for family planning after six weeks as they bring their*

children for immunization. This agrees with Chen *et al.*, (2014) who found out that there was lack of awareness on the availability of free postpartum services among women, but were willing to get PPC. Also concurs with Suvedi (2009) found out that lack of awareness on PPC among women and communities, no information by HCWs and lack of services were the main reasons for not seeking PPC causing majority deaths in this period. In this study being informed during ANC was significant to utilization, majority were informed at this time but they did not come back for services after delivery. Socio cultural beliefs and practices may too have contributed to non-attendance.

5.2.3.1 Socio cultural factors influencing PPC service utilization

This study established that after delivery, 43% of the women said they are supposed to stay indoors for a period ranging from a few days to 30 days and even more. In one of the FGD all women stayed indoors for a specified period. *“I was told you stay indoors for 3 days, 7 or even a month, they echoed.”* This is in agreement with Qureshi & Pacquiao (2013) who found out that mothers are expected to rest and be pampered for a period of 40 days lactating for the same period and does not go out of the house. Staying indoors in this study was passed from generation to generation and was culturally embraced.

Cultural beliefs and practices performed by these women included remaining indoors to avoid bad eyes, child naming and shaving .These were significant and dependent to utilization. This concurs with this study to some extent as it was important that new mothers adhere to the norm for at least a month staying indoors and excluded from some

tasks, rest, social seclusion as they were viewed as being extremely fragile and vulnerable (Juyeon, 2014). This is done to ensure healthy mother and baby and as a community social requirement, normally the women themselves cannot oppose as they found the practice being observed. This led to underutilization because of existing cultural beliefs and practices.

Staying indoors post-delivery was practiced by majority of the women ranging from days to 4 weeks. The reasons for these being traditions required them to do so until they recovered, keeping the baby warm, keeping off from bad eyes and omen. As such these factors limited women from attending PPC in this study as they had to adhere to the laid down norms by society they live in failure to it has consequences on their health and wellbeing. In the FGD some mothers argued, *“You stay at home until the child starts smiling/laughing this is culture from the forefathers. The days vary, for a boy mothers stay indoors for 3 days if it’s a girl 2 days, smearing them with ash until they are allowed out.”* This was in agreement with Liu *et al.*, (2014) whereby the first month postpartum women engage in practices such as limiting maternal roles, activity to restore future health and prevent disease. Physical activity was limited to remaining in bed the entire month to restore the imbalance between cold and hot before assuming her roles.

As a result of staying indoors during this periods a minority 23.8% experienced some health problems but majority of them 52.9% sought help from the health facilities. This shows that although traditions are observed in case of problems beyond their capability, they can be broken. Community engagement involving the male partners, father in-laws

and elders can help these women too be accompanied to health facilities for PPC services as they are offered at specific timings only.

On whether women had any cultural beliefs linked to who is supposed to take care of them, half of them 52.7% agreed with this. This agrees with Abushaikha & Khalaf, (2014) on roles of family members in decision to use postpartum health care services, the family actively supported, opposed some activity and actively cared for the mother. In this study immediate family especially the in-laws were allowed to help the woman to heal faster and avoid being bewitched. Cultural beliefs were independent and not significant on utilization of PPC (X^2 $p=0.0849$). Implying that though the women had attached beliefs and practices on PPC services they were not the determinant reasons for underutilization. Due to cultural norms and practices in society sometimes people are adamant to change or question for fear of intimidation or possession of supernatural spells.

In this study 59.4% supported the opinion that religious beliefs or practices during this period contributed to women remaining indoors. A majority, 77.4% believed a woman is supposed to remain indoors for one month and wait for pastors or church leader's prayers that served for cleansing women and blessing child. In one of the FGD religious beliefs and practices hindered utilization of PPC this was evident as the women said these were the reasons, *“you stay at home for 3 months without going to church, if you go early when you pray to God He may not answer your prayers.”*

From the interviews still on this ,it was evident the *women had restrictions of movement as they were secluded for periods ranging from 3days to 4 weeks to avoid bad eyes, to heal faster*. This is in agreement with Qureshi & Pacquiao, (2013) who found out that during this time there were some religious and magical practices, which are performed to protect mothers and their babies against dangers likely to be caused by supernatural powers .In this study majority were Christians as many people tend to strongly uphold their supreme beliefs because of consequences that accompany disobedience on PPC like leaving the compound before the laid down period. Supernatural powers may be cast on one and will not be able to bear children again. This led to underutilization of PPC services especially the most critical period of seclusion which is between first 1- 2 weeks.

The study findings established that utilization of PPC is dependent on women religious beliefs and practices on PPC $p \leq 0.011$ thus adopting alternate hypothesis there is a dependent relationship between religious beliefs on PPC and the utilization of PPC at 95% confidence interval. These beliefs served as a major influence to woman attendance of PPC services. Religious beliefs and practices in this study may be aimed at protecting women at this time from any misfortunes or higher powers attached to childbirth and subsequent pregnancies.

5.2.3.2 Knowledge related factors influencing PPC service utilization

The study established that majority 76.0% of the women were aware they were supposed to go for PPC services. This agrees with Tesfahun *et al.*, (2014) who found out that

majority of mothers were aware that they were supposed to receive PPC services after delivery. At the same time it contrasts with Chen *et al.*, (2014) who found out that there was lack of awareness on the availability of free services, but strongly willing to receive postpartum care. This may have been so because in this study majority of the women attended ANC clinic, delivered in health facilities and were told by the HCWs thereby increasing awareness. In this study women were aware but utilization was poor implying there may be other factors surrounding PPC that made them not go get the services.

On awareness of the specific services from this study findings, 90.2% reported family planning, 74.0% health education pertaining to breast examination, safe sex and hygiene, 67.6% immunizations, and 58.1% reported treatment of illness and diseases associated with pregnancy and childbirth as part of care given to women after delivery among other services. On source of information 79.8% reported to have received the information from HCWs and 45.9% from friends. This concurs with Tesfahun *et al.*, (2014), where the women cited the following reasons for attending clinic; vaccinations, counseling on FP, to prevent and treat delivery related problems, nutritional & breastfeeding advice. Many women while attending ANC are normally given health education on the various services they are entitled to after delivery and this could have been the reason in this study as majority of the respondents had attended ANC.

The study also established that MCH Booklet is a major source of information on PPC services at 60.2%. On usage, it agrees with Yamashita *et al.*, (2014) where more than half of the participants had not received the handbook (MCH). Of those who had, they reported using it at their check-ups by half and their baby's check-ups less than 10%, the

rest at another time. This shows that if a woman carries documented information with them especially at home its likely to act as a reference to remind them to utilize services therein.

Majority 70.6% of women agreed to have been informed of PPC during ANC and they knew it's a service to be offered to women after delivery .This concurs with Neupane & Doku, (2013) who found out that majority of women who attended ANC and delivered in hospital had more than two PPC check- ups compared with those who did not. In this study majority of women had prior knowledge on service itself but not utilized implying there may be other factors leading to underutilization. Pearson chi-square p-value of 0.000 implying there was a dependent relationship between informing mothers of PPC during ANC and the utilization of PPC services. This too was positively correlated. This suggests that there is a significant association between informing mothers regarding PPC at ANC and utilization of subsequent services as they serve as feasible entry point to PPC utilization.

Knowledge on the timings to go for PPC services as spread period of 6 months, the women had varied times and majority 59.1% aware of the 4-6 months. This was in contrary to the MOH expectations, in Kenya, the KMNH model has Targeted Postpartum Care (TPPC), which increased the number of visits recommended in the postpartum period to four to include; a checkup/visit within 48 hours, and visits within 1-2 weeks, 4-6 weeks and at 4-6 months (KMNH, 2009 & MOH 2008). From this study the findings, utilization of PPC was highly dependent on first 48 hours after delivery and 4-6 months the women in this study seemed unaware /uncertain of the specific timings.

Awareness of the crucial periods especially the first 48 hours is crucial as most maternal deaths occur within this period especially if a woman is not in the care of a skilled health worker. Majority of these women 77% delivered in a health facility and this can be used to educate them on need for subsequent care on timing and schedule.

On knowledge on total number of mandatory visits majority 55.9 % knew of them being four and below, however, 21.5% were not sure. In one of the FGDs women concurred *“you come to clinic 4 times but I don’t know the frequency and why,”* While in another *“majority of the women affirmed they have never known there is a clinic for mothers after delivery but just come not knowing the frequency nor the number as they bring their children to the clinic.”* This agrees with Shah & Pariyar (2016) who found out that, majority of the mothers knew a mother is supposed to go for postnatal checks up to 3 visits or more for her care .The women in this study were generally aware of the care but not sure of mandatory and recommended visits, also other factors like socio cultural may have hindered them to go for initial visits where awareness on this is emphasized. Fewer staffs from MCH units to disseminate active health talks on PPC may also be a hindrance.

In this study majority of women 73.4% knew the importance of PPC as they said it helps one know their health status, 65.8% said it is for treatment of complications and diseases, 66.1%, health education, and 65.4% for their baby .This is in agreement with Tesfahun *et al.*, (2014) who found out that majority of mothers knew that PPC is helpful to them, and their children, but only slightly more than half of mothers utilized the services. Also concurs with Warren *et al.*, (2015) who found two main reasons for

women's attendance for PPC services were care for themselves and immunizations for their babies. In this study women knew they needed care and its importance probably from the ANC clinic but this did not translate to them fully utilizing PPC services.

The women knew some of the common complications after delivery which included, 85.5% mentioning heavy bleeding, 64.7% fever, 70.6% severe headache, 56.6% foul smelling vaginal discharge. Though they knew this they did not translate to PPC use. This disagrees with Limenih *et al.*, (2016) who found out that those mothers who were aware of maternal complications during postpartum period were more likely to use the services than mothers who were not aware. Since majority of the mothers knew of PPC in MCH booklets most of these complications are in it and health education by HCWs during ANC could have attributed to this.

5.2.4 Health facility related factors influencing PPC service utilization

The study assessed for health facility related factors influencing utilization of PPC services and the following was discussed: On availability of facilities the study established that majority of women 98.3% had health facility near place of residence. On where they went for primary PPC healthcare, majority mentioned all levels of facilities. This is in agreement with Tesfahun *et al.*, (2014) who found out that half of mothers utilized services from HCWs and community health agents in outreach service and nearly half were from health institutions directly. In this study area health facilities are within the 5km MOH acceptable range making distance not be a major cause as to why

women don't use PPC services. This implies that there could be other factors like socio cultural in this study other than distance leading to PPC underutilization.

On distance from the facilities the farthest distance patients commute to reach nearest health facility was 4 km and the mean distance was 1.78km. Gamma correlation measure was positively correlated. This suggests that the more the distance the less likely women utilize care. This agrees with Tesfahun *et al.*, (2014) who found out that utilization of services was strongly associated with access to health services as, one to two hour travel to the nearby health centers resulted in more likelihood to utilize the service than those who travelled more. Women have a higher health seeking behavior, occupied in social gatherings and distance may not deter them to go for services, but as the distances increases likelihood for utilization reduces as in this study area health facilities are available per the recommended MOH radius.

The results indicated majority 74.8% indicated indeed HCW are available, and gave the women the services when they sought and 75.9% of the HCWs were helpful and friendly. This concurred with Mia *et al.*, (2015) who found out that mothers were happy with the support they received from nurses, but missed follow-up appointment , as there was insufficient support on continuity of care and support for mothers physical and emotional care. This was statistically significant implying helpfulness and friendliness of HCW, was dependent to utilization of PPC .In this study women attributed presence of HCW to service reception. HCWs who are willing, present and have a positive attitude and good communication skills attract their clients who are ready to come over and over again for services.

On availability of HCWs from one FGD they said, “*even if the nurses are there most of the time they are few like one nurse to over 20 mothers if you are unwell you go back home unattended and this makes us not come back again.*” From the interviews the HCWs said, *they cover the MCH clinic as a whole 1 or 2 each day to cover various.* This is in agreement with (Mrisho *et al.*, 2009) in interviews with health care providers, they complained about their workload, inadequate equipment and poor remuneration. Also, Chen *et al.*, (2014) agreed that, staff shortages, inadequate in-service training and transportation limited MCH workers in providing postnatal visits as required. The relationship was significant and positively correlated to utilization of PPC. This may be so because sufficient human resources in terms of staffing improves efficiency in services delivery thereby promoting utilization and this could be the case in this study. Also presence of HCWs in any given health facility motivates women to seek health services.

From the findings, majority 81.0% received important PPC services that were available even though 19.0% did not receive such services. This disagrees with Duysburgh *et al.*, (2015) on improving PPC services at facility level found out that despite the availability of PPC services in almost all health facilities, less than half of the women received PPC within seven days after childbirth and even thereof .This may imply that sometimes availability of HCWs does not guarantee service delivery.

On the services received by women during PPC in this study majority 78.7% received family planning, observation of danger signs, counseling and laboratory tests such as blood tests and cervical screening, among others. From the FGD women cited FP as

main PPC service they received and interviews revealed the basic package PPC services were available dependent on level of facility. This concurs with Tesfahun *et al.*, (2014) who found out that majority of the mothers had awareness on maternal care but more focused on immunization than other services. This is so because the PPC package for visits for basic services as recommended by the MOH are available to all health facilities across the country and there is need for referral systems and follow ups to be put in place in case they are not available.

It was established from this study that 47.8 % of women paid for PPC services at a mean charge of Kenya shillings one hundred and thirty. The major services were family planning services, laboratory services, drugs and MCH book. Utilization and charging services being statistically significant and dependent on each other. This agrees with Gabrysch & Campbell, (2009) whose findings were that formal and informal fees for provision of services during this period contributed to financial barrier for poor women in accessing care leading to non-use. Also Warren *et al.*, (2015) more than four fifths of all women were seen within 48 hours and received care in their first 48 hours at voucher facilities than those at non-voucher. Underutilization in this study could be attributed to payment for the services as they expect free PPC services as outlined in the free maternity protocol .During this period those not in formal employment depend on care of their significant others and when money is not available they are unlikely to come for service. In this study it too can based on the correlation it implies that the more the charges the less the utilization.

In this study, on waiting time 44.8% of the respondents waited 31-60 minutes and one hour and above were 17.3% before being attended to. Information from the interviews the *HCWs echoed that they had to wait sometimes for longer hours reasons being one nurse attending to all areas in the MCH department and movement from one room to next for services as there were not all in one room.* Waiting time being statistically significant. This agrees with DiBari *et al.*, (2014) who found out that inaccessible transportation, long waits and others limited the likelihood of a woman to come for PPC visit. In this study long waits may have led to low use of PPC services as when a woman comes to the facility she comes for both her services and the child's. When she is kept longer in one area she tends not to go for the other service. The HCWs in this study also said that they were short staffed and led to women waiting for long. Also women nature of chores both at home and work makes them constrained with time and when kept in one area for long they tend not to embrace the service. There is no integration of MNCH in these facilities whereby all services are supposed to be in one place, therefore affecting waiting time leading to underutilization.

5.3 Conclusions

PPC service utilization was poor as marked by low attendance of mandatory visits of three. All periods in the four visits of forty eight hours to six months dependent to utilization implying they are essential in maternal continuum of care. On reasons for non-utilization some women were not aware of the service and were not informed by the HCWs.

The socio-cultural factors influencing utilization of PPC services included religious and cultural beliefs. The main practices were seclusion, stay indoors for a period ranging from days to weeks. Utilization of PPC was significant and dependent on religious beliefs and practices on PPC thus rejecting the null hypothesis and adopting alternate hypothesis.

The knowledge related factors influencing PPC utilization were number of mandatory visits and their timings, sources of information (the MCH booklet and ANC clinic) and knowledge on complications .Findings revealed that there was a dependent and significant relationship between knowledge of attending PPC, informing mothers of PPC during ANC,timings (48 hours & 4-6months) and the utilization of .the study rejects the null hypothesis and concludes there is a dependent relationship which is significant between knowledge of attending PPC,ANC awareness and timings and the utilization of PPC at 95% confidence interval.

On health facility related factors influencing utilization of PPC services are; availability of health facility near residence, availability of PPC services, HCWs friendliness, availability and helpfulness, service charges and waiting time. They are significant and dependent on PPC utilization. The study therefore rejects the null hypothesis and adopts alternate by concluding that health facility related factors have influence on utilization of PPC services.

5.4 Recommendations and Areas of Further Research

5.4.1 Recommendations

Based on the study findings the following recommendations have been made:

Raising more awareness about PPC during the ANC period and availing and using of MCH booklets.

Health care workers and community health volunteers involvement in follow ups in every CU to increase awareness of PPC services to include visits, access, importance and timing.

Community involvement and collaboration of teams (HCWs, Church, elders) on PPC service utilization to mitigate sociocultural factors.

Continuous capacity building of health care workers on reproductive health with emphasis on PPC service.

County MOH and facility managers to implement policies that emphasize on PPC services provision including full integration of MNCH services and curbing staff shortage.

5.4.2 Recommendations for Further Research

It is recommended that studies be done on:

1. Strategies to improve and scale up PPC service utilization among women.
2. Knowledge and skills on PPC care services among HCWs.

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Appendix I: Consent Form

My name is Claire Luseno Otunga (Q139/ CTY/ PT/ 25818/2013) a student at Kenyatta University pursuing a Master's degree in Public Health (Reproductive Health).I am carrying out a research study on “Assessment of Utilization of postpartum care services among women in Webuye West , Bungoma County, Kenya.”

Purpose: The purpose of this study was to determine utilization of postpartum care services and the factors influencing utilization among women of reproductive age in Webuye West. The study findings were used to formulate new strategies and policies in improving and promoting utilization of the services. This will improve the women's' health and help in reduction of mortality and morbidity.

Procedure: I am requesting you to participate in this research by giving me your views and opinions on the above subject. Our interaction through questionnaire, interview or discussion will take about 45 minutes –one hour. All information will be confidential as your identity and information you give will not be disclosed to anyone. Informed consent will be obtained by signing the consent form and identified by use of codes and not names. The data collected will be kept under key and lock only accessible to the researchers. Your participation in this study will be voluntary. There were no penalties for declining and you can withdraw at any stage of the study under no intimidation.

Benefits: The study is purely academic and no monetary, individual benefits or compensation for participation. However the study helped in answering the research questions under study. The document will be published and future reference could be made from it by other researchers or the communities.

Risks: There was no harm or risks associated with your participation in the study.

Participant Declaration

I have read and understood the explanation and I agree by consenting to voluntarily participate in the study. I understand that I can withdraw from the study any time and I will not undergo any intimidation or penalties for doing so.

In case of any concerns contact:

The Chairman, Ethics Review committee

Kenyatta University

P.O Box 43884-00100

Nairobi.

Email-Kuerc.secretary.ku.ac.ke

Participant Name:..... Signature.....Date:

Witness Name: Signature.....Date:.....

Research Assistant's Name: Signature.....

Date.....

Appendix II: Questionnaire

I am carrying out a study on utilization of postpartum care services among women in Webuye West, Bungoma County, Kenya. You are kindly requested to provide the information required by the questionnaire. Your cooperation is highly appreciated and the findings of this research are entirely for the purposes of this study and no one will be

penalized or intimidated for the responses provided. The findings shall be availed to the interested parties upon request.

Instructions

Do not write your name

Please tick () in the boxes provided or explain in the space provided

Kindly provide your MCH booklet

PART 1: Socio-Demographic Characteristics of participants

1. Age.....years

2. Educational level 1. () No formal education 2. () Primary (incomplete) 3.() Primary (complete) 4.() Secondary 5. () tertiary 6. () Others, specify.....

3. Number of children.....

4. Marital status 1. () Married 2. () Single 3. () Widowed

4. () Divorced

5. Religion 1. () Christian 2.() Muslim 3.() others, specify.....

6. a) Did you attend antenatal clinics 1. () Yes 2.() No

b). If yes, how many antenatal care visits

7. Place of current (this) delivery 1.() Healthy facility 2.() Home 3. () Others, Specify.....

Part II proportion of utilization (for answers 8 a and b use table 1 and 2 below)

8. a) Have you ever utilized any postpartum care? YES, NO (tick in table 1)

(If Yesproceed to b) if NO proceed to reasons for nonattendance in table 2)

b) At what time in the PPC period? (Tick as many visits as can apply from table 1 below Yes column)

For reasons to YES and NO pick from table 2 and fill in table 1 by use of numbers

Table 1: Number of visits with period

No.	PPC Visits period	Attended		Reasons	Others(list)
		Yes	No		
1	48 hours				
2	1-2weeks				
3	4-6weeks				
4	4 to 6 months				

Reasons (pick from the list) on table 2 below

Table 2: Reasons for attendance and non-attendance of PPC (do not tick on this table)

	Reasons for attendance	Reasons for (non)attendance
1	Was sick(specify sickness)	1. No need as not sick
2	Told by HCW	2.Not told by HCW
3	Had taken my baby for checkup and immunizations	3.No one to take care of baby
4	My family told me to go	4.Not aware of the service
5	For checkup of my health after delivery	5.Not supposed to get out in less than six weeks
6	Previously been attending after other deliveries	6.Have experience with previous deliveries
7	Family planning	7.Others,specify
8	Drugs	
9	Had complications during and after delivery	
10	Counseling	
11	Nutrition care	
12	Others(specify)	

Part III (a) Socio cultural –related factors

9. a) In your culture, delivery how long is a woman supposed to stay indoors?.....Explain.....

b) During this period did you have any health problem? Explain what you did

.....

10. Any cultural beliefs or rituals on PPC? (Name and explain).....

11. Any religious beliefs or practice during this period? Tick 1.() Yes 2.() No

If Yes explain (any that hindered or promoted PPC)

.....

12. Do you have any cultural beliefs linked to who is supposed to take care of you (family support) during this period? 1.() Yes 2.() No. If Yes explain your answer.....

(b)Knowledge related factors

13. Are you aware that a woman is supposed to attend clinic after delivery? 1.() Yes 2.() No

14. What care is given to women after delivery to six months? (Tick as many)

1. () Nutrition support 2.() immunizations 3.() family planning 4.() health education (to include breast examination, safe sex, personal hygiene) 5. () Health promotion (cancer screening (breast, cervical) 6.() Treatment of illnesses and diseases associated with pregnancy and childbirth (HIV/AIDS, hypertension, sepsis, fits, heavy vaginal bleeding, anemia, diabetes 7.() Physical examination (BP check, head to toe, weight

8 () Laboratory and x-ray tests 9.() others specify.....

15. Who informed you about this care? (Tick as many) 1.() HCW 2.() friends

3.() Relatives () 4. Husband or family member

16. Where did you get the information about the care? (Tick all that apply)1.() radio

2.() hospital brochures 3.() MCH booklet 4.() TV 5.() women group 6.()

MCH clinic 7.()Others specify.....

17. Were you informed during the ANC period about PPC? 1.() Yes 2. () No

If Yes, during which visit? () 1 () 2 3 () 4 () 5.()Others specify.....

18. a)Who is supposed to get postpartum care?1.() women before delivery

2.() women after delivery

b) If after delivery for how long? (Tick all that apply) 1.() First 48 hours 2.() 1-2

weeks 3.()4-6 weeks 4.() 4-6 months 5. ()Others, specify.....

19. How many visits in total for postpartum care are you expected to attend/recommended?.....visits

20. What is the importance of postpartum care? Tick all that apply1.() helps know

my health status 2.() it helps healthcare workers establish any complications or

diseases and treat me immediately3.() provide me with important information to care for

myself 4. () Important for my baby 5.()Others specify.....

21. a) Do you know any complication/s a woman can experience after delivery? (Tick all that apply)

1.() heavy bleeding 2.() fever 3.() severe headache 4.() foul smelling

vaginal discharge 5.() fits 6.() engorged breast 7.() death

8.() others, specify.....

b) What should you do when faced with any of the above?

.....

Part IV Health facility related factors.

22. a) Is there a health facility near where you live? 1. () YES 2. () NO

If Yes, name, tick type 1 () Hospital 2. () Health center 3 () Dispensary 4 () Private hospital 5.()Others, specify.....

23. What is the distance from your home to the health facility?..... Km

24. a)How often did you get the postpartum care that you went for? (Tick answer that applies) 1.() Not at all 2.() Once 3.() Sometimes 4.() Always

b) Explain you answer above.....

25. Are the HCWs always available to give you the PPC services when you visit the facilities? 1 () YES 2 () NO

26. Are HCW helpful and friendly towards you while giving you the care?

1.() YES 2.() NO, Explain your answer.....

27. Does the Healthcare worker ask /give you the following services when you seek care 1.() YES 2.() NO If YES (tick as many as can apply)

1.() Ask danger signs (to include heavy bleeding, fever, severe headache, foul smelling vaginal discharge, fits, engorged breast)

2.() Physical examination (vital signs, breast, C/S scar, involution of the uterus, episiotomy condition, lochia, pelvis)

3.() Tests (blood tests (total blood count), cervical screening, (x-ray)

4.() Family planning 5.() Counseling 6.() Nutrition care 7. () Treat complications/danger signs above 8. () Drugs and commodities 9.()Others specify.....

28. Are you required to pay for the services given above? 1.() YES 2.() NO. If Yes, which ones how much.....

29. Does the Health care workers give you more information on the reason for your visit and other information on postpartum care? 1.() YES 2.() NO, if Yes Explain.....

30. How long do you wait for these services each time?

Appendix III: Key Informant Interview Schedule

1. What is postpartum care?
2. What PPC services are offered in these health facilities?
3. Are there any cultural beliefs and practices associated with PPC to these women?
 - a) Are you trained to offer these services &community involvement?
 - b) Any skills or qualifications?
4. Are you provided with enough staff, commodity supplies and equipments to facilitate PPC services?
5. What are the common complications women present during this period?
6. What would you propose to ensure women benefit from postpartum care and attendance?

7.

Appendix IV: Focus Group Discussion Guide & Consent

i) Focus group consent form

FGD NO.....	Date	Place
Number of participants.....	Moderators name:.....	

The information in the consent in Appendix III was availed and read by/to the participants. The researcher ensured that the participants have understood and willingly agree to participate in the discussion. One consent was signed by the researcher in each group after having the following explained to the participants:

They were explained for the information in the fact sheet above and confirmed that they had understood fully through oral consent (audio recorded). The discussion was in form of a group consisting of 8 participants each and took 1-1¹/₂hours. The participants were informed that information was audio recorded. The participants agreed to participate in this study.

Name of researcher.....Signature.....Date.....

ii) Focus Group Guide

1. What is postpartum care?
2. What are postpartum visits, frequency, expectations?
3. Are there any cultural practices and beliefs associated with use of PPC?
4. Are services and HCWs available at the facility?
5. Is postpartum care necessary /important to women?
6. What common complications do women encounter during this period?

7. Which information do HCW provide on PPC services and how?
8. What makes you visit/not visit the health facility for the services?
9. Are there any changes you would propose that will benefit or improve PPC?

Appendix V: List of PPC services at different facility levels

Hospital level	Health Centre	Dispensary
Family planning Breast examination, cancer screening Cervical cancer screening Nutritional support and counseling Breastfeeding support Counseling-specialist Treating PPC illnesses and complications Blood tests and X-rays/ultrasound HIV/AIDS –PITC and PMTCT Physical examination Drugs and commodities Vital signs Referral complications and ambulance services	Family planning Blood test(Hemoglobin) only Counseling-nurses Nutritional support-nurses Breast examination Breastfeeding support HIV/AIDS –PITC and PMTCT Referral complications Drugs for minor complications Vital signs	Family planning Counseling-nurses Nutritional support-nurses Breast examination Breastfeeding support HIV/AIDS –PITC Referral of complications and treatment Drugs for minor complications Vital signs

Appendix VI: Approval from Kenyatta University Graduate School



KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
 Website: www.ku.ac.ke

P.O. Box 43844, 00100
 NAIROBI, KENYA
 Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School **DATE:** 23rd February, 2016

TO: Ms. Claire L. Otunga **REF:** Q139/CTY/PT/25818/13
 C/o Environmental & Population Health Dept.
 Kenyatta University

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge the receipt of your revised Research Proposal entitled “Assessment of Utilization of Postpartum Care Services among Women in Webuye West, Bungoma County, Kenya” as per recommendations raised by the Graduate School Board of 27th January, 2016.

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University’s Website under Graduate School webpage downloads.

Thank you

EDWIN OBUNGU
 FOR DEAN, GRADUATE SCHOOL

c.c. Chairman, Department of Environmental & Population Health

Supervisors:

1. Dr. Scholastica Mathenge
 C/o Medical Laboratory Science Dept.
 KENYATTA UNIVERSITY
2. Dr. Francisca Ongecha
 C/o Medicine Therapeutics, Dermatology &
 Psychiatry Dept.
 KENYATTA UNIVERSITY

EO/cao

Appendix VII: Approval from Kenyatta University Ethics Review Committee



KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

Email: chairman.kuerc@ku.ac.ke
secretary.kuerc@ku.ac.ke
erc@ku2008@gmail.com
Website: www.ku.ac.ke

P. O. Box 43844 - 00100 Nairobi
Tel: 8710901/12
Fax: 8711242/8711375

Our Ref: KU/R/COMM/51/713

Date: 23rd May, 2016

Claire Luseno Otunga
Kenyatta University,
P.O Box 43844,
Nairobi

Dear Luseno,

RE APPLICATION PKU/474/1 574- "ASSESSMENT OF UTILIZATION OF POSTPARTUM CARE SERVICES AMONG WOMEN IN WEBUYE WEST BUNGOMA COUNTY, KENYA."- VERSION 2

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic "Assessment of utilization of postpartum care services among women in Webuye West Bungoma County, Kenya."-Version 2

2. APPLICANT

Claire Luseno Otunga

3. STUDY SITE

Webuye West, Kenya

4. DECISION

The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines AND APPROVED that the research may proceed for a period of ONE year from 23rd May, 2016.

5. ADVICE/CONDITIONS

- i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
- ii. Serious and unexpected adverse events related to the conduct of the study are reported to this board immediately they occur.
- iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.
- iv. Submit an electronic copy of the protocol to KUERC.


When replying, kindly quote the application number above.

If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.



 DR. TITUS KAHIGA
 CHAIRMAN ETHICS REVIEW COMMITTEE

I, CLAIRE L. OTUNGA accept the advice given and will fulfill the conditions therein.

Signature:  Dated this day of 23RD MAY 2016.

cc. Vice-Chancellor
DVC-Research Innovation and outreach

Appendix VIII: Authorization from National Commission for Science, Technology and Innovation



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/16/95316/11645**

Date:
13th July, 2016

Claire Luseno Otunga
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “*Assessment of utilization of postpartum care services among Women in Webuye West Bungoma County, Kenya*,” I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **13th July, 2017**.

You are advised to report to **the County Commissioner, the County Director of Education and the County Coordinator of Health, Bungoma County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.

The County Coordinator of Health
Bungoma County.

Appendix VIX: Authorization from Bungoma County Commissioner



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241319,3510571,2719470
Fax: +254-20-518245,318249
Email: info@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Uhali House
Uhuru Highway
P.O. Box 50623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/16/95316/11645**

Date:
13th July, 2016

Claire Luseno Otunga
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Assessment of utilization of postpartum care services among Women in Webuye West Bungoma County, Kenya*," I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **13th July, 2017**.

You are advised to report to **the County Commissioner, the County Director of Education and the County Coordinator of Health, Bungoma County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


DR. STEPHEN K. KIBIRU, PhD,
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.

The County Coordinator of Health
Bungoma County.

*Kindly facilitate
the Student/Researcher
achieve her target
Thank you for
your cooperation*


**COUNTY COMMISSIONER
BUNGOMA COUNTY
P.O. Box 550-50200
BUNGOMA**
23/7/2016

Appendix IX: Authorization from Bungoma County Ministry of Education



REPUBLIC OF KENYA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
State Department of Education - Bungoma County

When Replying please quote
e-mail: bungomacde@gmail.com

County Director of Education
P.O. Box 1620-50200

RefNo: BCE/DIR/19 VOL 1/219

BUNGOMA
Dates: 21st July, 2016

The Sub – County Directors of Education
WEBUYE WEST

**RE: AUTHORITY TO CARRY OUT RESEARCH – CLAIRE LESENO OTUNGA –
REG. NO. Q139/CTY/PT/25818/2013**

The bearer of this letter, Claire Luseno is a student of Kenyatta University. She has been authorized to carry out research on *"Assessment of utilization of postpartum care services among Women in Webuye West, Bungoma County, Kenya,"* for the period ending 13th July, 2017.

Kindly accord her the necessary assistance.

**CHARLES ANYIKA
COUNTY DIRECTOR OF BUNGOMA
BUNGOMA COUNTY**



Appendix XI: Authorization from Bungoma County Ministry of Health

COUNTY GOVERNMENT OF BUNGOMA



MINISTRY OF HEALTH

Telegrams: "MEDICAL", BUNGOMA
Telephone: (055) 30230 Fax: (055) 30650
E-mail: sylvestermutoro@gmail.com
When replying please quote

COUNTY DIRECTOR OF HEALTH,
BUNGOMA COUNTY
P O BOX 18-50200
BUNGOMA


DATE: 22nd August, 2016

The sub county MOH
Webuye west
P.O BOX 25
Webuye.

RE: AUTHORITY TO CARRY OUT HEALTH RESEARCH
CLAIRE LUSENO OTUNGA – REG. 0139/CTY/ 25818/2013

Kindly allow Claire Luseno, a student from Kenyatta University to undertake Research on 'Assessment of utilization of post partum care services among women in webuye west , bungoma county, kenya.

Accord her the necessary support.

For: 

DR. SYLVESTER MUTORO
COUNTY DIRECTOR HEALTH
BUNGOMA COUNTY.



Appendix XII: Map of Study Area



Figure 3: Map of Webuye West