DETERMINANTS OF CONTRACEPTIVE USE AMONG POSTPARTUM WOMEN IN KISII LEVEL 5 HOSPITAL, KISII COUNTY

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Dedication

To my dear son Joshua Samba for being my inspiration, and to my parents and siblings for believing in me.

To Arthur my friend, for your support and encouragement throughout the journey.

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God bless you

Abstract

Introduction: The high unmet need for family planning in the postpartum period adversely affects the child and motherôs health due to short birth intervals. Unintended pregnancies following child birth are associated with increased risk of maternal mortality, morbidity and poor pregnancy outcomes. Adoption of postpartum family planning is a cost effective way that would reduce maternal and child mortality by 75 percent.

Objective: To establish the determinants of contraceptive uptake among postpartum women in Kisii level 5 hospital, Kisii county.

Design: This was a cross sectional study carried out in the maternal and child health clinics.

Materials and methods: A sample of 365 women who had brought their children for the 2nd dose of measles vaccine was selected. Quantitative data was collected using structured questionnaires and analysis was conducted using SPSS version 20 to determine the relationship between the dependent and the independent variables. Qualitative data collection included Focused group discussions with mothers and in-depth interviews with providers. Key themes were identified.

Findings: There prevalence of contraceptive use among postpartum women was 86.3%. Contraceptive use was high among women below 25 years. The significant predictors of contraceptive use were the nature of employment, age and marital status. A womanôs perception of the quality of health influences the adoption of contraceptives. The government facilities in postpartum services are the most reliable providers of contraception in Kisii.

Conclusion: Education and economic empowerment of women enables them to be involved in decisions to plan their families.

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List of Abbreviations and Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
CPR	Contraceptive Prevalence Rate
FP	Family Planning
HIV	Human Immunodeficiency Virus
IUCDs	Intrauterine Contraceptive Devices
KDHS	Kenya Demographic Health Survey
KMTC	Kenya Medical Training College
KUC	Kisii University College
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MOH	Ministry of Health
NUHDSS	Nairobi Urban Health and demographic Surveillance System
KDHS	Kenya Data Health Survey
KUC	Kisii University College
KNH/UoN	Kenyatta National Hospital/University of Nairobi
LARC	Long-acting Intrauterine reversible contraceptives
ERC	Ethics Research Committee
NRHP	National Reproductive Health Programme

PNC	Post natal care
PPFP	Postpartum family planning
UN	United Nations
UoN	University of Nairobi
WHO	World Health Organization

Definition of Terms used

Unmet need for family planning: is the percentage of married women of reproductive age who are not using any family planning method but would like to postpone the next pregnancy.

Contraceptive Prevalence Rate: The percentage of currently married women aged 15 -49, using family planning.

Formal employment: Refers to skilled labor where people work to receive a regular wage and are assured certain rights.

Postpartum contraception: Initiation and use of family planning methods within one year of delivery

Infant mortality rate: Is the ratio of the number of deaths among children less than one year old during a given year to the number of live births during the same year.

Neonatal mortality rate: The ratio of the number of deaths in the first 28 days of life to the number of live births occuring in the same population during the same period of time.

Contraceptive: A device, drug, or chemical agent that prevents conception.

Family Planning: It is the ability of a woman or couple to determine when and how many children they are going to have by practicing safe sexual practices.

CHAPTER ONE: INTRODUCTION

1.1 Background information

Addressing the unmet need for family planning during the postpartum period is critical in maternal and child health. Studies have shown the existence of an inverse relationship between family planning use within a year following birth, and child and maternal mortality risk. There is increased neonatal and child mortalities with reduced birth intervals (Yeakey et al., 2009). Family planning plays a central role in achieving national and international goals including MDGs. Consistent postpartum care plays a critical role in reducing the morbidity and mortality of mothers and their babies (Warren et al., 2010a).

Adoption of family planning postpartum represents one of the avenues to address high maternal and child mortalities, as well as population growth in sub-Saharan Africa. The promotion of family planning as part of comprehensive public health approach that is complemented by economic development, may lead to a reduction in the number of people living in poverty, improved maternal and child mortality figures, create empowerment of women and better environmental sustainability (Cleland et al., 2006).

Postpartum contraception aims at prevention of unintended and closely spaced pregnancies throughout the first twelve months following child birth (Bakamjian et al., 1998). Unmet need for spacing among the postpartum women is high. Worldwide 95 percent to 98 percent of women, who are sexually active, would prefer to avoid becoming pregnant within two years after delivery, yet only 40 percent are using a family planning method (Mehdi-S, 2008). Analysis of 27 Demographic and Health Surveys carried out by (Ross and Winfrey, 2001)

showed that the unmet need for contraception during the first year postpartum in the sub Saharan Africa was 74 percent, of which about three quarter was for spacing births. The postpartum mothers using a method were 18 percent, and only 5 percent reported to have the intention of conceiving again. Unmet need for family planning among postpartum women in Kenya is 68 percent (Access-FP, 2008).

(Shaaban and Glasier, 2008) revealed that consequences of the high unmet need for postpartum family planning in sub-Saharan Africa include millions of unintended/unplanned pregnancies and short inter-pregnancy spacing; with poor maternal and infant health outcomes. In Kenya, 50 percent of all pregnancies are unintended (Moreland and Talbird, 2006). Adoption of family planning reduces unintended pregnancies and unsafe abortions, averts maternal and neonatal deaths, and leads to a decline of women facing complications due to unsafe pregnancy (Rutstein, 2005), (DaVanzo et al., 2007). Use of postpartum family planning could greatly reduce maternal mortality and morbidity by 75 percent, reduce unwanted and mistimed pregnancies by two thirds and reduce the risks of abortion by 73 percent (Singh and Darroch, 2012). Selecting the appropriate contraceptive during the postpartum period is a major concern among the women. Pregnancy and child bearing may change a womanôs sexual behaviour and choice of contraceptives (Ndugwa et al., 2011).

According to WHO guidelines on birth spacing, the recommended interval before attempting next pregnancy is at least twenty four months after a normal or caesarian delivery. After a miscarriage or abortion, the recommended interval before next pregnancy is at least six months. National Family Planning Guidelines for service providers 2010, outlines the various types of family planning methods available for postpartum women depending on mode of

delivery. For progestin only containing pills, injections and implants, they can be started from four weeks after delivery because they do not interfere with breast milk production, and five days following pregnancy termination. The intra uterine devices are implanted immediately following a caesarian delivery or post abortion, within forty eight hours after normal delivery, or from four weeks postpartum for all deliveries. The combined estrogen and progestin pills are used from six months postpartum and within six days after abortion. For female sterilization, it can be done during caesarian delivery or from six weeks following any delivery.

The contraceptive prevalence rate (CPR) in Kenya is 58 percent with considerable differences across counties (KDHS, 2014). The most widely used contraceptives were modern methods compared to the traditional methods. The contraceptive prevalence peaked among married women in 30-34 age groups and lowest for 15-19 age groups. Contraceptive use increases with education and number of living children. The uptake is more in the educated women living in the urban areas compared to their rural counterparts. The most popular source of contraceptives was the government facilities which provided more than 50 percent of family planning methods (KDHS, 2008). Some of the factors that limited contraceptive uptake included: religion, opposition to use by spouses and in laws, health concerns, lack of information and fear of side effects (Naanyu et al., 2013). The survey revealed that health workers did not discuss family planning with 9 percent of women who visited the health facility, indicating missed opportunities for taking up family planning. Postpartum period is an appropriate time to avert missed opportunities for contraceptive uptake. This study aims at assessing the determinants of contraceptive uptake among postpartum women in Kisii level 5 Hospital, Kisii County.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Postpartum family planning is the prevention of unintended and closely spaced pregnancies during the first twelve months following childbirth (Access-FP, 2008). Postpartum women are among those with high unmet need for family planning, yet they do not receive the service they need to support longer birth intervals or reduce unintended pregnancy (Ross and Winfrey, 2001). The purpose of postpartum family planning is to help a woman decide on the contraceptive they want to use, initiate it, and ensure they continue using it up to two years or longer depending on the womanôs intentions.

It also helps to avert short spacing pregnancy intervals. Analysis of Demographic Health Survey of 27 countries revealed that many postpartum women have a high unmet need for FP during the first year after delivery. It was estimated that Sub Sahara Africa had 74 percent unmet need for contraception in the first year compared to 54 percent Latin America and 62 percent in Asia (Ross and Winfrey, 2001).

Unmet need for PPFP exposes the mother to increased risk for poor pregnancy outcomes (DaVanzo et al., 2007), increased infant and child mortality rates (Rutstein, 2005) and maternal mortality and morbidity (Yeakey et al., 2009). PPFP plays a vital role in preventing unintended pregnancies and reducing maternal mortality and morbidity (Vernon, 2009). It also averts maternal depletion syndrome by providing the mother with the opportunity to nurture herself and the baby. Some of the advantages of LAM include: prevention of pneumonia and diarrheal diseases in children

However, many factors such as fear of side effects, misinformation, limited choices of methods, provider factors and womenôs status act as barriers to uptake (Campbell et al., 2006).

2.2 Socio demographic factors

2.2.1 Education

Uptake of contraceptive methods among postpartum women is influenced by the socio demographic characteristics of the women. Studies have shown that a womanôs education is a strong predictor of contraceptive use. According to KDHS 2008-2009, contraceptive use increased dramatically with increase in level of education with at least 60 percent of women with secondary education using family planning, compared to 40 percent of women who had not completed primary school. However a study done in Bangladesh and Bhutan Philippines showed no significant relationship between education and use of contraceptives. Women with less education used more contraceptives than their more educated counterparts. This was attributed to the fact that educated women are exposed to media and therefore, they are misinformed about side effects of contraceptives. The less educated women on the other hand are receptive to the extensive family planning programmes in Bangladesh (Nidup and Choda, 2012).

2.2.2 Knowledge of family planning methods and use

Knowledge of family planning was found to be a determinant of using family planning by Okech et al., 2011a. The study conducted in the Kenyaôs cityôs slums, revealed that likelihood of using family planning was 26 percent higher in a woman with knowledge of FP. Therefore

promotion of family planning that facilitates awareness about side effects and benefits is paramount for increased uptake (Barber, 2007). Other studies conducted in Kenya and South Africa observed increased utilization of family planning postpartum following interventions to increase awareness (Hani et al., 2003, Warren et al., 2010a).

In Malawi, the outcome of a study showed that women had knowledge of different family planning methods. Use of FP services was however associated with duration of amenorrhea and resumption of postpartum sexual activity. Women who had started their menses or resumed sexual activity, utilization of PPFP was high (Bwazi et al., 2014). In Kenya, (Naanyu et al., 2013) noted that women in Port Victoria had knowledge of different family planning methods and their benefits, but were still not taking up the methods citing reasons like fear of side effects, lack of spouse support, religious beliefs, myths and misconceptions about family planning methods. When a woman has access to correct information, family planning uptake goes up (Warren et al., 2010b).

Other studies (Beekle and McCabe, 2006a, Indongo and Naidoo, 2008) done in Namibia and Ethiopia have shown a significant relationship between womenôs education, occupation and house hold income.

2.2.3 Marital status

Marriage is an indication for regular exposure of women to risk of pregnancy. This is because married women have high incidences of sexual activity. A study conducted across Kenyaôs main cities revealed that married women used contraceptives more often than their single counterparts. Postpartum women living with their partners were likely to use a contraceptive

method than those living without a partner (Okech et al., 2011b). The results compare to a similar study done in Malawi which showed that unmarried women were at risk of unplanned and unwanted pregnancies due to less utilization of FP services (Bwazi et al., 2014).

2.2.4 Residence

There is geographical variation in contraceptive use between the rural and urban areas. Thereôs more uptake in the urban areas because the educated and employed women are likely to be in the urban areas, coupled with exposure to media and information (Nidup and Choda, 2012). However, a study done in Tajikistan cited no difference in contraceptive use between rural women and their urban counterparts. The same study showed that geographic division has significant difference in choice of contraception (Toirov, 2004). In Kenya, there is regional variation in contraceptive uptake. Use of contraceptives is more in the urban areas than rural areas (Ojakaa, 2008a).

2.2.5 Age and Parity

As the parity of a woman increases, they are more likely to use contraceptives. Generally, contraceptive use is more in women whose parity is greater than three (Westoff and Cross, 2006). The KDHS 2008 revealed that Kenyan women were adopting FP at lower parities. Among younger women aged (20-24), twenty two percent used contraception before having children and twenty five percent started using contraception when they had one child. Among the older women aged (45-49), only five percent used contraception before having children and 11 percent used contraception by parity one.

The uptake of contraceptives increases with age. Older women are more likely to use contraceptives than younger women with a peak at 20-29 years. Uptake of contraceptives was reduced in women less than 20 years and above 40 years (Nidup and Choda, 2012). In Kenya, (Okech et al., 2011b) revealed that there was increased utilization of PPFP with advancement in age and parity. Older women with more children were more likely to use FP methods. However, maternal age and parity was not significantly associated with contraceptive uptake as revealed in a study done in rural Bailey (Mahmood et al., 2012).

2.3 Socio cultural factors

Womenôs decision about use, non-use or discontinuation of contraceptive methods can be affected by: their perceptions of contraceptive risks and benefits, concerns about how side effects may influence their daily lives and their assessment of how particular methods may affect relationships with partners or other family members (Magadi and Curtis, 2003). A study done in Jimma Ethiopia by (Beekle and McCabe, 2006) showed that opposition from husbands and spousal communication had influence in the use of contraceptives. (Yilmazel and Balci, 2013) did a study in Turkey and observed that husbandsô attitude towards contraception impacts on the choice and use of contraceptives among postpartum women. This is because women had no full control over their reproductive and sexual lives. However, results of a study done in Malawi showed no significant association between utilization of PPFP and religion or traditional beliefs. The catholic women in the study were on family planning.

2.4 Health system factors

2.4.1 Quality of service offered

The quality of any health system is determined by an array of interdependent factors which consists of: infrastructure, standards and guidelines, supplies and drugs and health care personnel. However, health care providers play a critical role in quality of services offered to the postpartum women. The quality of services offered directly affects the utilization of family planning methods (Barber, 2007). Studies have shown that health care providers influence the uptake of postpartum contraceptives. An observational study done in Burkina Faso showed that women were more likely to take up postpartum contraceptives, if health care workers routinely discussed family planning choices with them in a confidential and friendly manner. The same study revealed that women knew about contraceptive methods but were not using them because they were unclear about the side effects of the contraceptives (Askew etal., 1993). Similar study done in Mexico showed the correlation between uptake of postpartum family planning and health care providers. Women who use health facilities are more likely to take up contraceptives in the postpartum period if they perceive that quality of service offered is good (Barber, 2007).

2.4.2 Commodities and supplies of family planning

An evaluation carried out in Eastern province to establish ways of strengthening postpartum services showed that erratic commodity supplies influenced uptake of contraceptives. Family planning supplies that were available for a short duration of time affected family planning use, as women were not able to obtain their method of choice (Access-FP, 2008). Study done in

the Nairobi slums showed that availability and accessibility of contraceptives was a predictor of its use. Availability of commodities in the health facilities would increase womenôs trust in the health system that led to an overall satisfaction of the services. This makes the women return for other services. The study noted that access and availability was a challenge in the informal settlements (Do and Hotchkiss, 2013).

2.4.3 Health worker knowledge and training in family planning

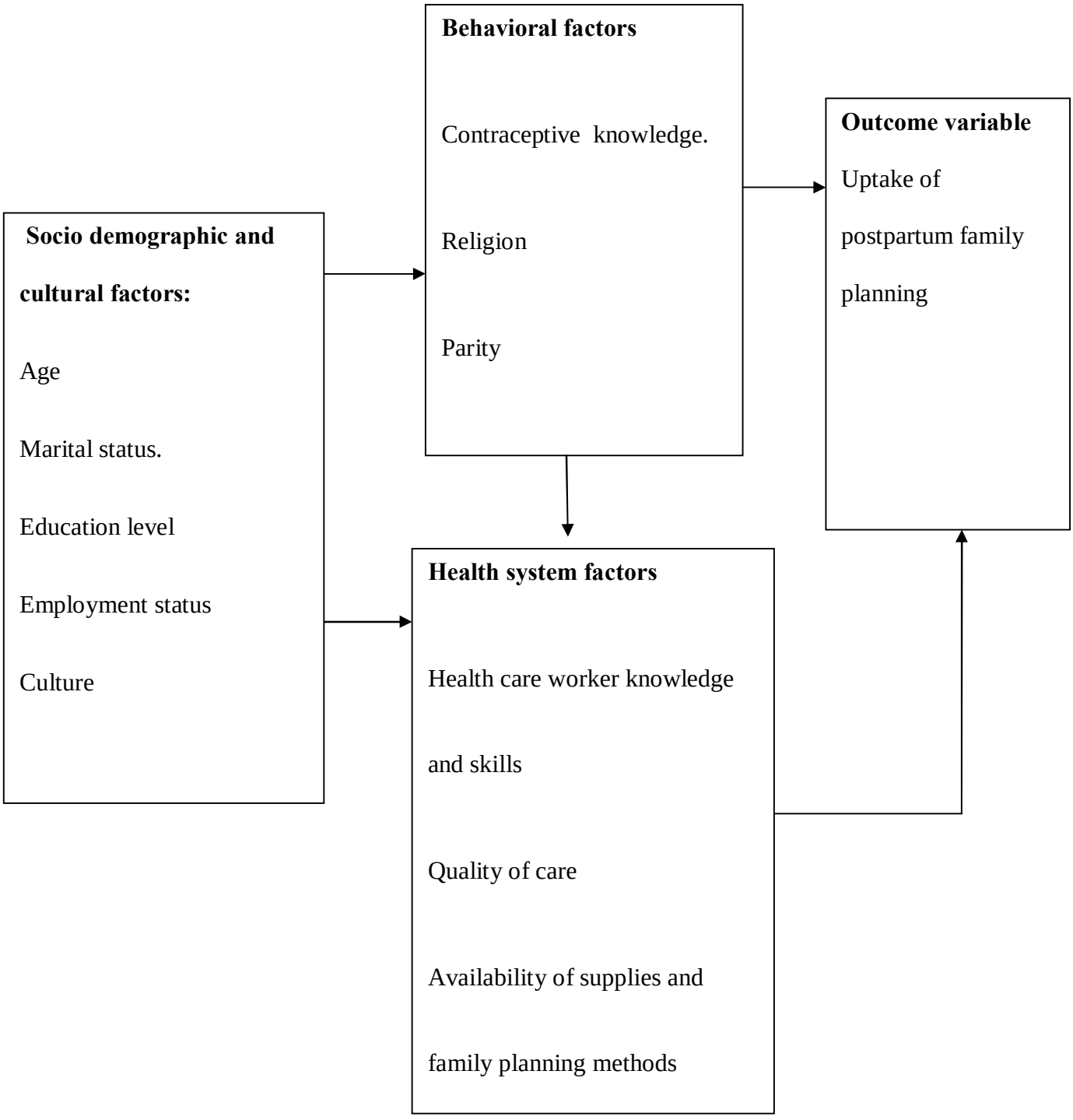
Integration of family planning services and reproductive health programmes is important in reducing the unmet need for family planning postpartum (Access-FP, 2008) but health care workers competence is critical in effective service delivery for improved uptake (Namazi, 2013). Training of health workers on family planning is key in family planning uptake, because it enables health care workers discuss family planning with women (Access-FP, 2008). A study conducted in Uganda revealed that although modern contraceptives were available in the facilities, the uptake of contraceptives was low because health workers had limited skills for family planning service provision (Namazi, 2013).

2.6 Conclusion

It is evident from studies conducted in various countries that use of contraceptive methods postpartum is influenced by multiple factors. The purpose of this study is to build on the recommendations from various researchers, in order to reduce the high unmet need for contraceptives in the postpartum women. (Naanyu et al., 2013), recommended that more research needs to be done to investigate providers and clients relations and how they impact postpartum family planning uptake. The study done provided perspectives of barriers to PPFP

uptake, with a focus on qualitative data collection. This study aims at identifying factors at the facility level that determine postpartum contraceptive use. This will go a long way not only in informing policy and current practices, but also in improving the health of women, their families and achieving the MDGs.

2.7 Conceptual framework



2.8 Theoretical framework

The conceptual framework shows how the independent variables interact to influence the uptake of postpartum family planning. The socio demographic and socio cultural factors variables operate through the intermediate variables to influence intention of uptake of postpartum family planning. However some of the socio demographic (marital status, age and education level) and socio cultural (religion and parity) variables may directly influence intention to use PPFP.

According to the KDHS 2008, it was demonstrated that education, marital status and income affect utilization of family planning services. Unmet need for PPFP reduces in more educated, working women residing in the urban areas (Ojakaa, 2008a). Age of the mother, parity and marital status have also been found to have an effect on contraceptive uptake (Okech et al., 2011c).

Social cultural factors will primarily influence decision making on whether to take up contraceptives or not (Naanyu et al., 2013). Religion is considered as a marker of cultural background and is thought to influence beliefs, norms in relation to service use (Bwazi et al., 2014).

The quality of family planning services is an important means of increasing knowledge about contraception and acceptance of effective methods as well as influencing method of choice (RamaRao and Mohanam, 2003). Providersô knowledge and skills affect how they provide services. Lack of up-to-date knowledge by providers is the other main reason that clients receive wrong information. Training of providers on updated guidelines and job aids offers an ideal opportunity to clarify their value judgments towards the clients. Too much workload and

few providers reduce the time spent to counsel family planning clients (Access-FP, 2008). Ensuring that providersô workloads are manageable and that their basic supplies are adequate promotes uptake of contraceptives (Do and Hotchkiss, 2013).

CHAPTER THREE: STATEMENT OF THE RESEARCH PROBLEM

Family planning practice has steadily increased in Kenya since the early 1980s, when a series of population policy guidelines was implemented (Ojakaa, 2008b). The current Contraceptive Prevalence Rate for all methods is at 46 percent (KDHS, 2009). Despite the milestones made, the unmet need for postpartum family planning in Kenya is still high at 68 percent, one year following delivery (Access-FP, 2008). The Unmet need for family planning during the postpartum period poses a risk of unwanted conception associated with increased neonatal and maternal mortality (Ross and Winfrey, 2001).

This is because closely spaced pregnancies are associated with higher risks of abortions and poor pregnancy outcomes like preterm babies, small for gestational ages babies (DaVanzo et al., 2007). Efforts have been made by the Kenyan government through the Ministry of Health and other stakeholders, to reduce the unmet need for family planning among the postpartum women. These efforts include integration of family planning with maternal and child health services, training health workers on family planning and updating them on new guidelines (Warren et al., 2010a).

Despite the efforts made by the government, the unmet need for postpartum family planning in Kenya is still high, ranging from 90 percent in the first 3 months to 68 percent by the end of first year after delivery (Borda and Winfrey, 2006). The problem needs to be addressed to help reach out to 68 percent of postpartum women with unmet need for family planning. Understanding the determinants of contraceptive use among postpartum women will provide insights on the obstacles that affect uptake of family planning in postpartum mothers.

3.1 Justification

The rationale for undertaking this study stems from the fact that, despite many studies undertaken on family planning, the unmet need for family planning among postpartum women still remains high. The postpartum period is a challenging time for women who have to take care of their new born infants and cope with a series of emotional and physical changes. This period poses a risk of unwanted conception associated with increased neonatal and maternal mortality. According to WHO report, 60 percent of maternal deaths occur during the postpartum period.

Studies have shown that adopting family planning during the postpartum period would reduce maternal mortalities by 75 percent, reduce unwanted and mistimed pregnancy by two thirds and reduce risk of abortions by 73 percent (Singh and Darroch, 2012, Yeakey et al., 2009). With the launch of ôbeyond zero campaignô championed in Kenya by the first lady in a bid to reduce the maternal deaths associated with pregnancy in the country, the findings from this study will complement efforts of this initiative in reducing maternal deaths.

This study will highlight factors that influence uptake of contraceptives among the postpartum women in Kisii County. The findings will contribute to enhanced understanding of the appropriate strategies and intervention measures to implement to reduce the unmet need for family planning among postpartum women. This has the potential to reduce the mortality and morbidity associated with closely spaced pregnancies.

3.2 Research Questions

This study intended to answer the following questions:

1. What is the prevalence of current use of contraceptive methods among postpartum women attending Kisii level 5 Hospital?

2. What are the determinants of postpartum family planning among women attending maternal and child health clinics in Kisii level 5 Hospital?

3. What is the association between socio demographic and socio cultural factors and use of contraceptive methods among postpartum women attending Kisii level 5 Hospital?

3.3 Objectives

3.3.1 Broad objective

The general objective of the study was to establish the determinants of contraceptives use among postpartum women in Kisii level 5 Hospital.

3.3.2 Specific Objectives

1. To establish the prevalence of contraceptive methods use among postpartum women attending Kisii level 5 Hospital.
2. To assess the socio demographic and socio cultural factors in relation to use of contraceptive methods among postpartum women attending Kisii level 5 Hospital.
3. To determine the influence of health system factors on contraceptive use among postpartum women attending Kisii level 5 Hospital.

4. To describe behavioral factors in relation to use of contraceptive methods among postpartum women attending Kisii level 5 Hospital.

CHAPTER FOUR: METHODOLOGY

4.0 Introduction

This chapter outlines the methods that were used in this study. The chapter is divided into eight main sections that describe the study design, study area, study population, inclusion and exclusion criteria, sampling techniques, research tools and instruments data analysis and presentation techniques.

4.1 Study design

This study used a mixed method approach that used both qualitative and quantitative techniques. Quantitative data was collected using structured questionnaires while qualitative data was collected from FGDs and KIIs.

4.2 Study area

The study was carried out in Kisii level 5 hospital, Kisii County. Kisii County is among the forty seven counties in Kenya. The county covers an approximate area of 1,302 sq Km². The county lies between latitude 00 30ô and 10^0 south and longitude 34^0 38ô and 35^0 East. It shares common borders with Nyamira County to the north east, Narok County to the south and Homabay and Migori counties to the west. The county has a population of about 1,161,269, with a population growth rate of 2.75 percent annually. 51 percent of the population lives below the poverty line.

Politically the county is divided into several constituencies namely: Bobasi, Bonchari, Bomachoge Chache, Bomachoge Borabu, Kitutu Chache North, Kitutu Chache South,

Nyaribari chace, Nyaribari Masaba and south Mugirango. Local administrative units are: Keumbu, Kisii town, Marani, Masaba, Mosocho and Suneka. Local authorities include: Suneka, Keroka, Masimba, Ogembo, Nyamarambe, Nyamache and Tabaka. The population is served by 32 community health units, 84 dispensaries, 28 health centers and 14 hospitals.

Kisii level 5 Hospital (KL5H) is a Regional Referral hospital in south western Kenya serving approximately 1 million inhabitants within its catchment area. The hospital offers curative, preventive, rehabilitative and research services to the community and promotes community training. KL5H has the workforce of 600 including 30 highly qualified medical staff. KL5H handles approximately 20,000 out-patients and 2,500 in-patients per month. The hospital has a bed capacity of 463 with 3 modern theaters and 5 delivery rooms. KL5H is a teaching hospital for Kisii University College (KUC) and the Kenya Medical training college (KMTC) Kisii branch and also an internship center for all cadres. Being a public facility, it serves clients from both the low and middle socioeconomic status. This will give a good diversity of the analysis of determinants of postpartum family planning uptake.

4.3 Study population

Women attending the maternal and child health clinics at the level 5 hospital in Kisii County. In particular, women who brought their children to the clinic for the eighteen months vaccine (2^{nd} dose of measles) were the target.

4.4 Inclusion and Exclusion Criteria

4.4.1 Inclusion Criteria

The criteria for participating in the study included:

1. Women who had brought their children for 2nd dose of measles vaccine.
2. Women who had children aged between eighteen and twenty four months.
3. Women who consented to participate in the study.

4.4.2 Exclusion criteria

The study did not include:

Women who did not consent to participate in the study.

Women whose children were aged more than twenty four months.

4.5 Study variables

4.5.1 Dependent variable

The dependent variable for this study was uptake of postpartum family planning.

4.5.2 Independent variable

The independent variables that were investigated in this study included: socio-demographic factors (age, level of education, marital and employment status) and knowledge of contraceptive methods: socio-cultural factors (religious and cultural beliefs); health system factors (personnel, guidelines and standards, commodities and supplies) and behavioral factors (parity and fertility preferences).

4.6 Sample size determination

Sample size was calculated using the following Cochranôs formula

$$n_o = \frac{Z^2 p q}{e^2}$$

Where:

n_o is the desired sample size (for target population greater than 10,000)

z is the standard normal Deviate at the required confidence interval set at 95 % (1.96)

p is the estimated proportion of the target population that has the characteristics being measured. The contraceptive prevalence rate of 39 percent was used

q is (q= 1-p).

e is the level of precision set at 5% (0.05)

Substituting thus; $\frac{1.96 \times 1.96 \times 0.39(1-0.39)}{0.05 \times 0.05} = 365$

The calculated sample size for the study was 365 postpartum women.

4.7 Sampling technique

4.7.1 Sampling frame.

The sampling frame consisted of mothers and key informants.

4.7.2 Units of study

The units of the study consisted of the following:

1. Women who brought their children for the eighteen months vaccine (2^{nd} dose of measles) at the maternal and child health clinics.

2. The nurse officer in charge of the maternal and child health department and Kisii sub county Reproductive health nurse.

4.7.3 Sampling Procedure

Respondents were identified through purposive sampling.

4.8 Research tools and instruments

A mixed method approach consisting of quantitative and qualitative methods was employed. In line with the foregoing, instruments administered to the targeted mothers contained several subsections. The first section contained socio demographic information: Age, marital status, employment status and level of education. The second section contained social-cultural information including: religious affiliation, knowledge of various types of contraceptives, source of information on FP, adoption of family planning within a year after delivery and source of FP method. In the third section, questions on health system factors were detailed. This included provision of information on FP by health workers, whether the motherôs opinion of FP method was sort, whether the health worker had any input on the final choice of FP, discussions on side effects, whether information was provided on appropriate responses to side effects and whether a date of return was provided. The last section contained questions on behavioral factors. This included questions on number of children, plans to have more children in future and how long a mother would like to wait before conceiving another baby.

4.9 Data Collection

4.9.1 Recruitment and training of research assistants

Four nursing students on placement at the maternal and child health clinics at the Kisii Level 5 hospital were recruited to serve as research assistants. They were trained for four days before the study, on the administration of the structured questionnaire to ensure common understanding of the questions using both English and Kiswahili. The tools were reviewed thoroughly section by section. In addition, the assistants were familiarized with the purpose of the study, data collection, and data handling procedures.

Pretesting was conducted at Oresi hospital, on eight mothers before the start of actual data collection to assess reliability and validity of the questionnaire. The Pretesting permitted an assessment of the relevance and completeness of the research questions. Appropriate amendments of the questionnaires were done.

4.9.2 Quantitative data collection

Research assistants trained before the study on the administration of the coded questionnaire were stationed in the maternal and child health clinics. They were instructed on how to approach prospective respondent, gain consent and administer the questionnaire. The tool had provision for socio demographic and socio cultural characteristics, knowledge on types of contraceptives, health system factors and behavioral factors. The assistants were supervised during the study and daily briefings were undertaken at the end of every fieldwork day to share experiences. The quantitative data collection lasted for three weeks from 22nd April to 15th May 2015.

4.9.3 Qualitative data collection

The principal investigator booked appointments with targeted key informants for the interviews. The purpose of the study was explained to prospective informants and written consent obtained before the interviews were conducted. The information obtained in this process included: Health workers training on FP methods, their experience with postpartum family planning and the challenges they face. The interviews, moderated by the principal investigator, lasted for about 15 Minutes. (See discussion guide).

To interview mothers, contacts of women who had met the study criteria, but had not participated in answering the questionnaire, were obtained from the nurse in charge of maternal and child health clinics. They were subsequently contacted for a Focused Group Discussion (FGD) at an agreed day, time and venue. Two groups each consisting of 8 to 12 women were targeted for the FGDs. The FDGs were moderated by the principal investigator. The purpose of the study was explained and written consent obtained from each participant. The information gathered included: Womenôs opinion on postpartum family planning, availability of family planning methods and barriers that hinder them from taking up family planning. Two trained research assistants audio taped the responses from each respondent. The discussions, which lasted for 45-60 minutes, were mainly conducted in English (See discussion guide).

4.10 Data management and Analysis

4.10.1 Quantitative data processing and analysis

Data analysis was conducted using a computer Statistical Package for Social Science (SPSS) version 20.0. Responses in the questionnaires were tabulated, coded and processed. Cross tabulations were used to analyze relationship between variables: socio-demographic factors and knowledge of contraceptive methods, socio cultural factors, health system factors and behavioral factors and dependent variable uptake of postpartum family planning. Frequency tables, percentages and graphs were used to present additional data. Chi square (χ^2) tests were subsequently conducted to evaluate the statistical significance of a set of dependent and independent variables. Level of confidence (CI) was set at 95%. Co relational analysis was undertaken where appropriate.

4.10.2 Qualitative data processing and analysis

Field notes taken by the principal investigator during the FGDs were counter checked with the recorded audio tapes. The qualitative data was transcribed and key themes identified.

4.11 Minimization of Biases and Errors

To minimize errors and biases in the study, the research assistants were trained on the objectives of the study, research methodology, and data handling. After the training, they participated in pretesting of the questionnaires so as to have them understand the questions and be able to identify gaps in the tool. The filled questionnaires were reviewed on a daily basis for completeness to minimize errors of omission.

4.12 Ethical considerations

Approval for the study was sought from the Ethical Review Committee of University of Nairobi and Kenyatta National Hospital (UoNKNH). Further approval was obtained from Kisii County Research Coordinating Committee. Informed written consent was sought from every participant before embarking on the interviews. Participants were also informed of their right to leave the study any time with no resultant consequence. Respect was accorded to the targeted respondents whether they had consented or declined to participate in the study. Confidentiality was maintained on any information obtained from the participants. Names were not included in the questionnaires and interview guides. Instead codes were used for identification. Data collected was treated as confidential and stored data was secured using passwords. However, notes and recordings of interviews were stored under lock and key and were destroyed at the end of the project.

4.13 Limitations of the Study

Recall bias could have been introduced since the participants had to recall information up to one year ago. This was mitigated by interviewing mothers who came to the clinic with children below two years. Sampling bias was introduced because of the purposive nature of the study.

CHAPTER FIVE: RESULTS

5.0 Introduction

In this section, findings of the study are detailed. Summary of the independent variables (socio-demographic, socio-cultural, health system and behavioral factors) are presented. Descriptive statistics are shown for selected predictors. Bivariate analyses (based on Pearson chi-square tests) were performed to examine the association between PPFP and each of the selected predictors. The chi-square tests were used to analyze differences between the dependent and independent variables. This data is complemented by information from FGDs and Key Informant interviews.

5.1 Sample Characteristics

A Shapiro ï Wilkôs test ($p<0.05$) and visual inspection of the histogram, normality, Q-Q plots and box plots showed that scores for the independent variables (socio-demographic, socio-cultural, health system and behavioral factors) were normally distributed with a skewness and kurtotic Z-scores within the -1.96 to +1.96 range.

5.2 Prevalence of contraceptive methods among postpartum women attending Kisii level 5 hospital

The results indicated that 86.30% of the respondents had used PPFP and 13.7% indicated that they had not used. These results were corroborated by data from FGDs where a majority of the women indicated that they had used FP. Information from FGDs suggested that most participants appreciated the essence of child spacing. They noted that itôs good for nurturing the baby, a development which may help in reducing child mortality. Others observed that FP allows for more investment in children and may improve the wellbeing of the mother.

Endorsing this point, some respondents indicated that child spacing may reduce maternal mortality by allowing for recovery after procedures such as caesarian section (CS).

On the question pertaining to the reasons for reduced access to FP, they cited that misinformation from peers especially on possible adverse effects was a concern. Others cited the lack of specific FP methods and supplies due to stock out and the costs associated with some methods. A majority of the respondents cited that culture and religious affiliations were not impediments to FP adoption in the area. Some respondents pointed out that some women in rural parts of the county subscribe to the notion that FP is prohibited by the bible. To improve uptake, the respondents cited that campaigns should be undertaken in rural parts of the country. In particular, they indicated that sensitization campaigns should target market days and women group meetings. Enhanced presence in the print and digital media was also advised. In addition, some respondents endorsed the idea that FP lessons should be introduced in schools as it may reduce risk of unintended pregnancies but some objected on the grounds that it may have unintended consequences.

The proportion of the postpartum mothers using the various methods of contraceptives was evaluated in the study. Results obtained indicated that 27.9% of the respondents used injections, 24.1% IUCD, 15.1% oral pills and 14.2% implants. The information from the in-depth interviews from the nurse in charge of maternal and child health clinic, suggested that most women preferred injections as a method of family planning. See Figure 5.1.

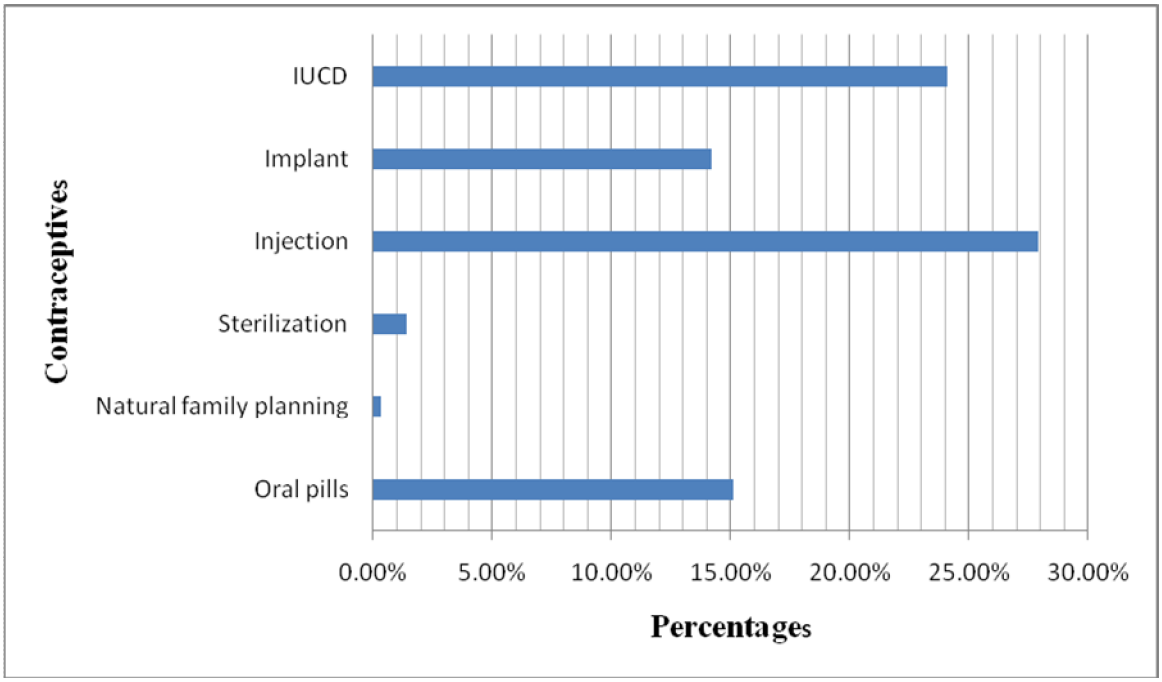


Figure 5.1: Prevalence of specific contraceptive methods amongst study participants

5.3 Summary of the independent variables

5.3.1 The socio demographic and socio cultural factors among postpartum women attending Kisii level 5 hospital

The socio-demographic characteristics of the respondents are summarized in Table 5.1. The sample population consisted of 365 respondents. When the data was disaggregated with respect to age, respondents between 20-24 years of age were 45% and those below 19 years were 4.7%.

In regard to marital status 78.6% of the women interviewed were in a union. The respondents interviewed, 50.5% had completed secondary level education while 39.8% had tertiary level education and above. In regard to the employment status, 42.1% of the respondents were not employed, whereas 22.7% were in salaried employment and 35% were self-employed.

Regarding religious characteristics of the respondents, 41.9% of the respondents were Seventh Day Adventists and 1.4% were Muslims. See table 5.1

Table 5.1: Socio demographic characteristics of study participants

Variable	Classification	Frequency n = 364	Percentage
Age (in years)	Ò19	17	4.7
	20-24	165	45
	25-29	130	36
	30-34	25	6.8
	35-39	12	3.2
	Above 39	14	3.8
Marital Status	Single	47	12.8
	Married	287	78.4
	Separated/Divorced	17	4.6
	Widowed	14	3.8
Level of Education	No Education	5	1.4
	Primary Level	29	7.9
	Secondary Level	185	50.5
	Tertiary Level	145	39.8
Employment Status	Not Employed	154	42.1
	Self Employed	128	35
	Salaried Employment	83	22.7
Religion	Catholic	100	27.4
	Protestant	107	29.2
	Muslim	5	1.4
	Seventh Day Adventist	153	41.9

5.3.2 Influence of health system factors on contraceptive use among postpartum women attending Kisii level 5 hospital.

Whereas the study did not attempt to link particular contraceptives with specific side effects, 45.1% of the respondents, had discussed heavy periods as a side effect of contraceptive use with their healthcare workers and 1.1% discussed neurological signs. See Figure 5.2

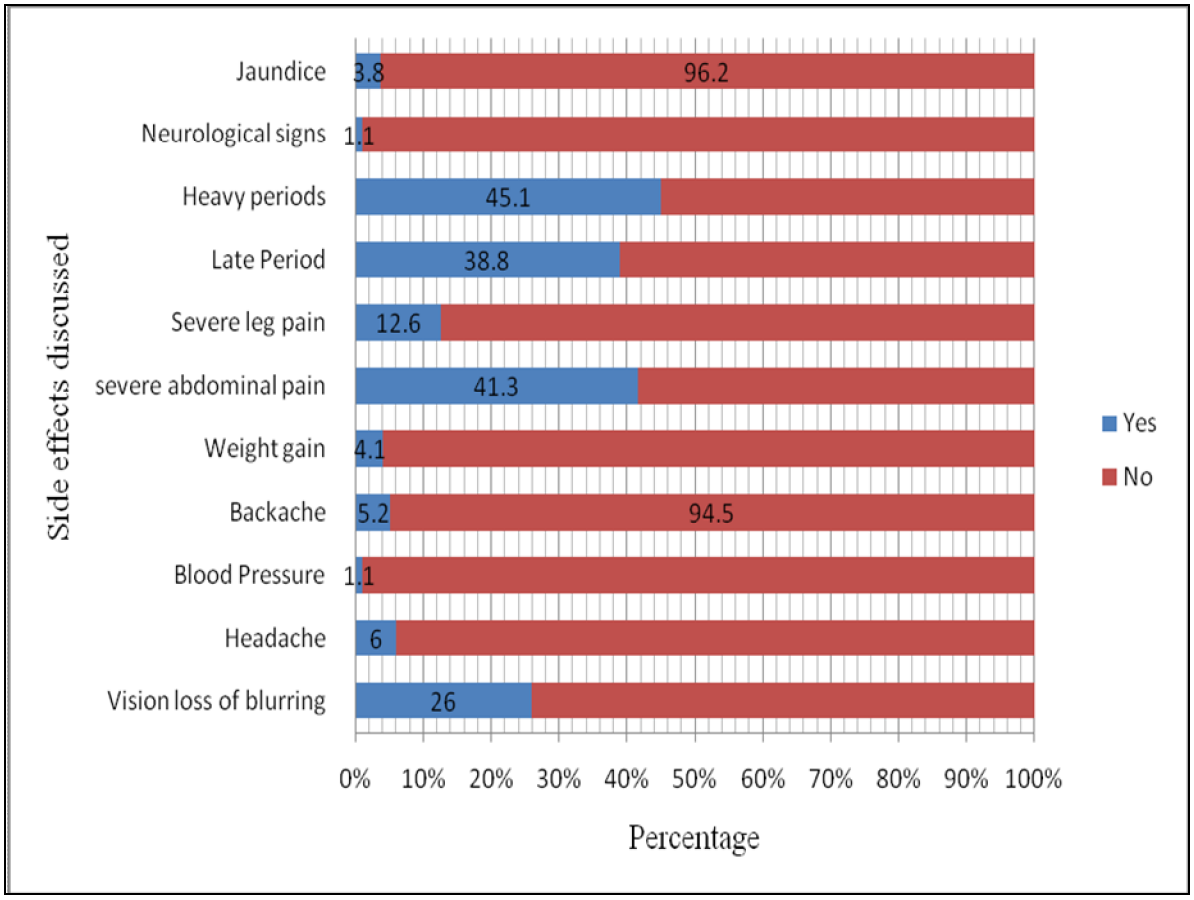


Figure 5. 2: The side effects discussed by health workers

As regards sources of information on contraceptives, 98.1% of the respondents got their contraceptive information from health care workers and 15.8% from their spouses. See Figure 5.3.

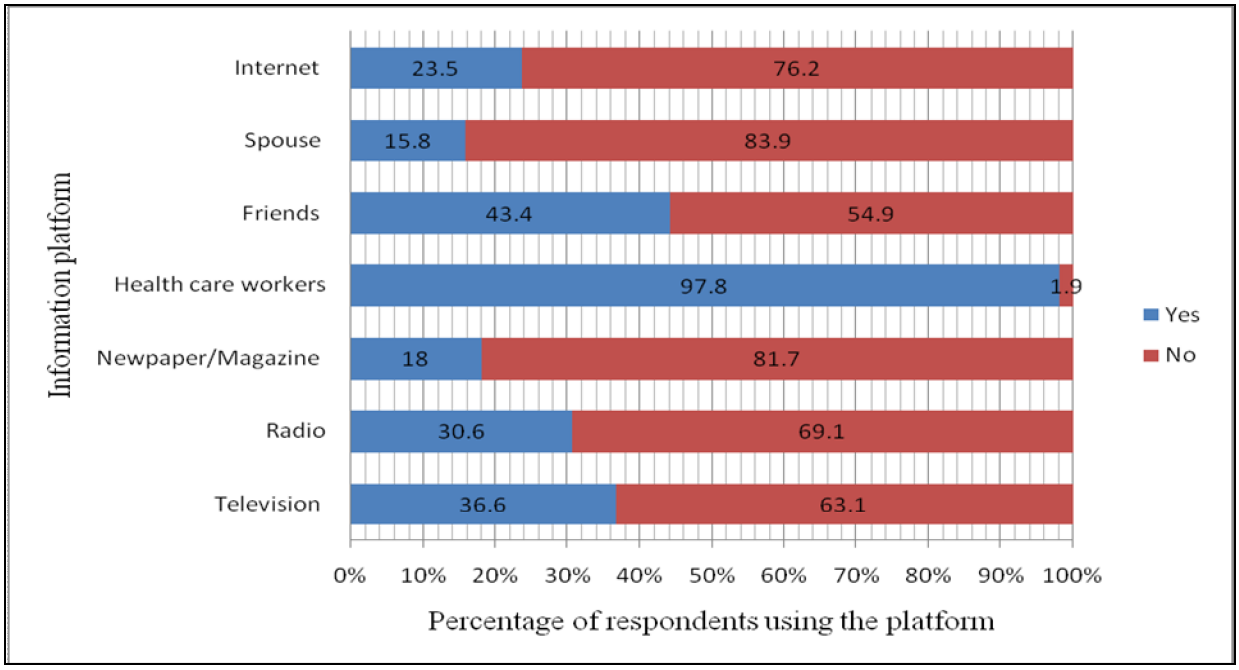


Figure 5.3: Source of information on family planning amongst study participants

5.3.4 Awareness of family planning methods among postpartum women attending Kisii level 5 hospital.

Regarding awareness amongst the respondents on the various contraceptives, 96.7% of the respondents were aware of oral pills and 25% were aware of natural family planning. See Figure 5.4.

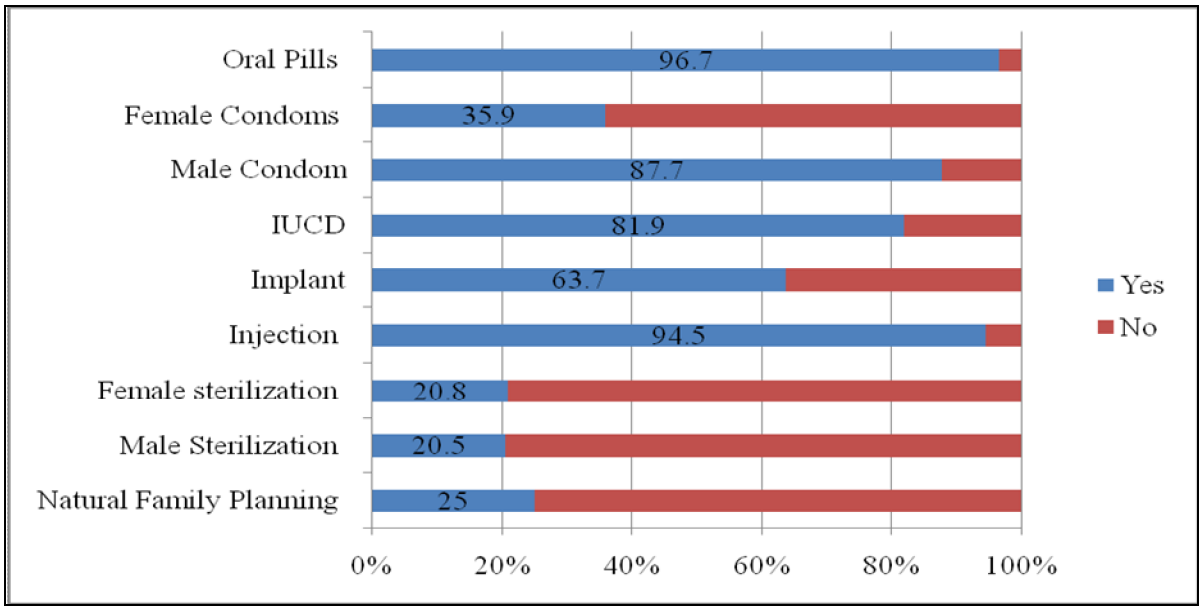


Figure 5.4: Awareness of family planning methods amongst study participants

5.4 Socio-demographic and socio cultural factors in relation to use of contraceptive methods among postpartum women attending Kisii level 5 hospital

The relationship between several socio-demographic factors and adoption of PPFP was assessed in this study. Among those who used contraceptives: 49.2% were below 25 years, 34.7% were between 26-30 years and the rest were more than 30 years. See Table 5.2. A significant difference was observed between age of participant and use of PPFP ($\chi^2 = 21$, df = 9, $p < 0.0023$). These findings are consisted with the key informant interviews where it was confirmed that most of the respondents attending maternal and child health clinics are the young women.

The association between marital status and adoption of FP was assessed. According to the data obtained, 81.7% of the respondents who adopted PPFP were married, while the rest were

not married. A significant difference was observed between marital status and adoption of PPFP ($G^2 = 24$, df = 3, $p < 0.000$).

Disaggregation of the data with respect to the level of education produced the following results: 49.5% had secondary education while 41.6% had tertiary education. The rest had primary level education or no education. The difference observed between educational level and adoption of PPFP was not significant ($G^2 = 98$, df = 9, $p < 0.103$). When data was analyzed with respect to employment status, 39.7% of the respondents indicated that they were not employed, 36% were self employed and 24.3% were in salaried employment. Of those who indicated that they had not adopted PPFP, 58.3% were unemployed. A significant difference was noted between employment status and adoption of PPFP. $G^2 = 52$, df = 9, $p < 0.000$)

Table 5.2 Relationship between socio-demographic factors and adoption of postpartum family planning amongst study participants

Factor		Used PPFP within a Year %		Total (n%) n=365	P value
		Yes	No		
Age	Ò25	49.2% (156)	70.8% (34)	52.1% (190)	0.023
	26-30	34.7% (110)	16.7% (8)	32.3% (118)	
	31-35	9.18% (29)	10.4% (5)	9.3% (34)	
	Ó36	6.9% (22)	2.1% (1)	6.3% (23)	
Total		**86.8% (317)**	**13.2% (48)**	**365 (100)**	
Marital status	Not in union	18.3% (58)	41.7% (20)	12.9% (47)	0.000
	In union	81.7% (259)	58.3% (28)	78.6% (287)	
	Total	**86.8% (317)**	**13.2% (48)**	**365 (100)**	
Highest level of education	No education	1.3% (4)	2.1% (1)	1.4% (5)	0.103
	Primary school	7.6% (24)	10.6% (5)	8.0% (29)	
	Secondary education	49.5% (157)	59.6% (28)	50.8% (185)	
	Tertiary education	41.6% (132)	27.7% (13)	39.8% (145)	
Total		**87.1% (316)**	**12.9% (47)**	**100% (363)**	
Employment status	Not employed	39.7% (126)	58.3% (28)	42.22% (154)	0.000
	Self employed	36% (114)	29.2% (14)	35.1%(128)	
	Salaried employment	24.3% (77)	12.5% (6)	22.7% (83)	
Total		**86.8% (317)**	**13.2% (48)**	**100% (365)**	

Exploring the relationship between age and adoption of specific methods of contraceptives is essential in understanding whether age is a determinant of contraceptive methods uptake. The data shows that among the respondents who used injections, 54.4% were below 25 years and 31.1% were between 26-30 years. The respondents on IUCDs, 46.6% were below 25 years and 46.6% were between 26-31 years. Implants and oral pills were used mainly by

respondents who were below 30 years. See figure 5.5. A significant association was observed across adoption of specific contraceptives and age (g^2=43.7, df =15 < 0.000).

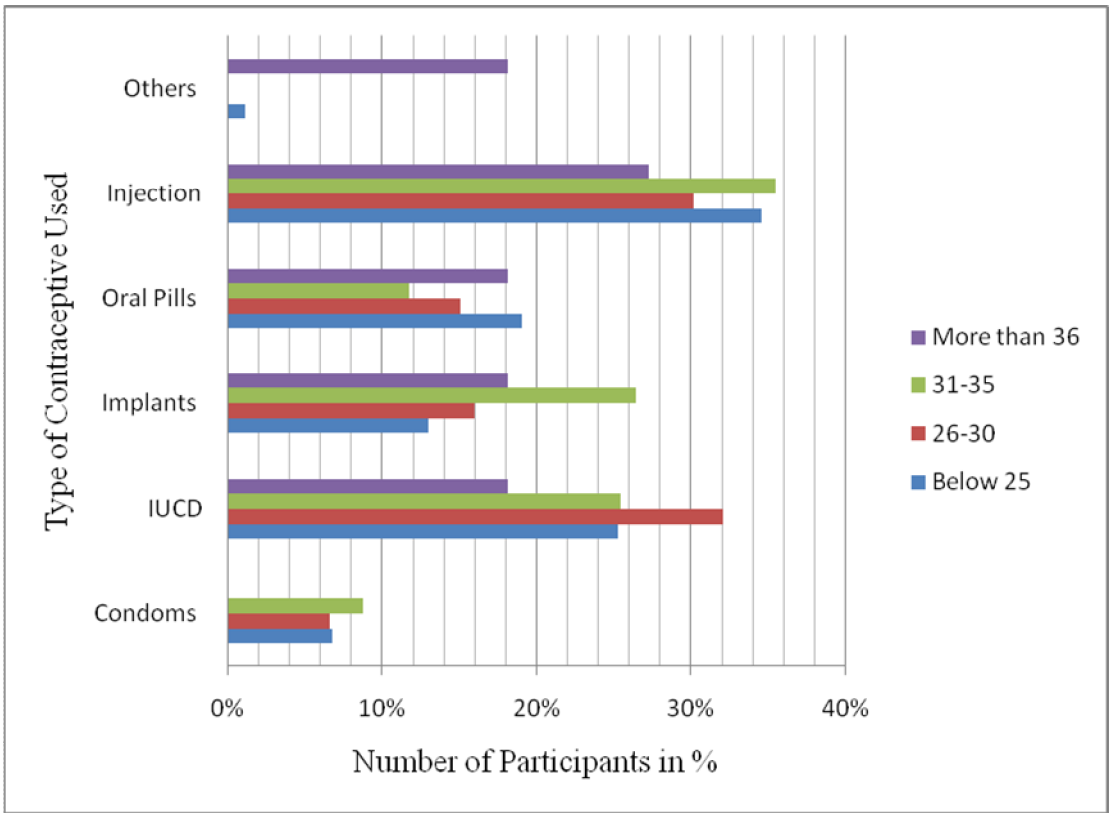


Figure 5.5: Relationship between age and use of specific family planning methods amongst study participants.

5.5.1 Relationship between adoption of specific contraceptives and educational level

Determining the influence of education on choice of contraceptive is critical in understanding how demographic factors influence choice of contraceptives. In this study, it was established that IUCDs were preferred by individuals who had secondary level education 42.0% and tertiary level education 43.1%. Similarly, implants were preferred by individuals with secondary and tertiary level education, 49% and 43.1% respectively. Condoms were preferred

by individuals with primary 28.6% and secondary level education 52.4%. Further, injections were preferred by respondents with secondary level education 52.1%. See figure 5.6. A significant association was observed across adoption of specific contraceptives and level of education (χ^2=26.9, df =15 < 0.029).

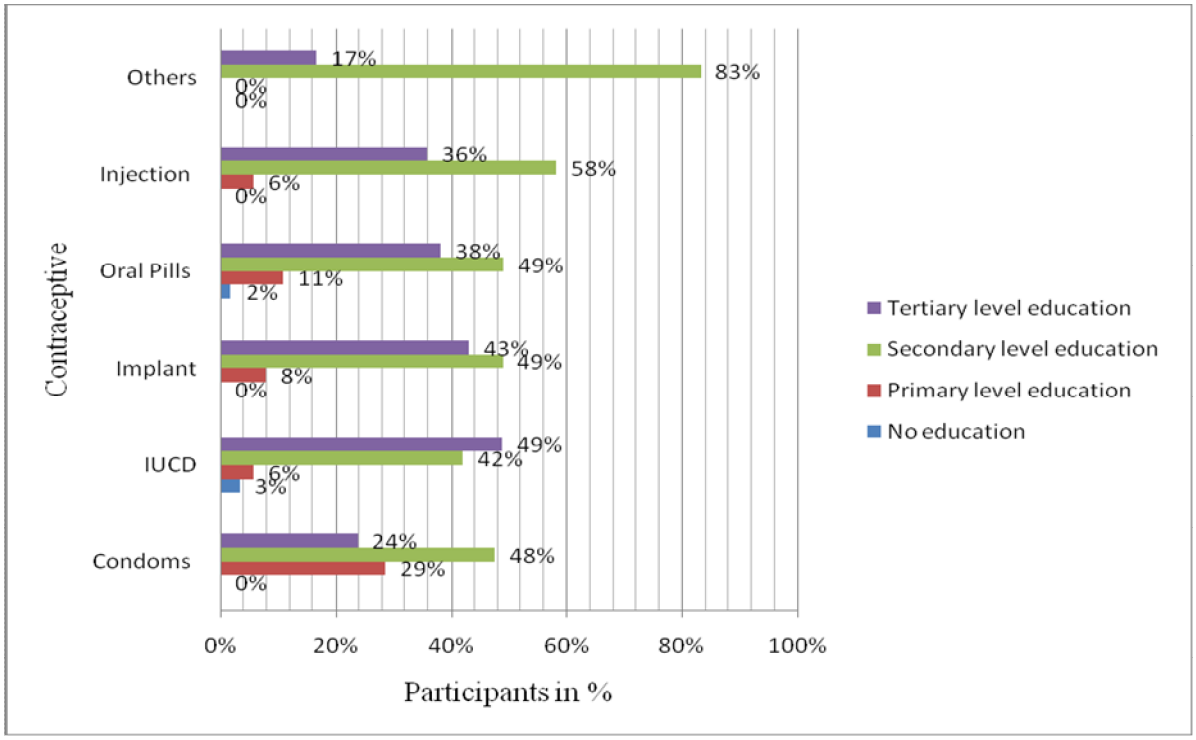


Figure 5.6: Relationship between level of education and family planning methods amongst study participants

5.5.2 Relationship between adoption of specific contraceptives and employment status

Another analysis that is essential in identifying how specific socio-demographic factors influence choice of contraceptives is the link between employment status and contraceptives used. According to the data generated, condoms and oral pills were mostly used by non-employed women: 57.1% and 49.1% respectively. Among women using IUCDs, 39.8% were

women with no employment, 28.4% were self-employed and 31.8% had salaried employment. Injections were mostly used by women in self employment. See figure 5.7. The variation observed across adoption of specific contraceptives and employment status was not significant (g^2=17.7, df =10 > 0.061).

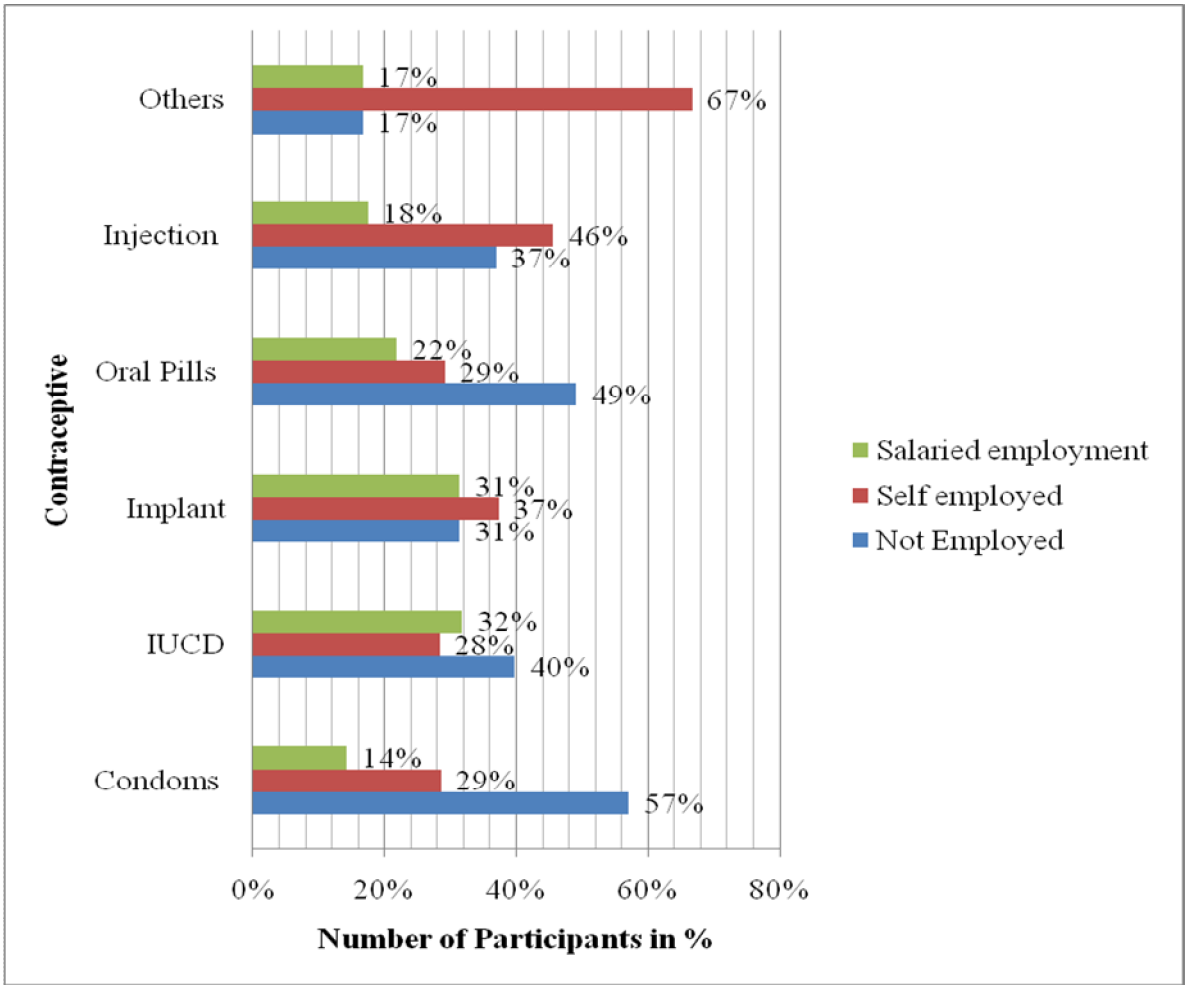


Figure 5.7: Relationship between employment status and family planning methods amongst study participants

5.5.3 Relationship between adoption of contraceptives and religion

The relationship between the adoption of PPFP and socio-cultural factors was evaluated in this study. According to this study, 90% of respondents who professed catholic faith adopted PPFP and 40% of Muslims. Similarly, 86% and 86.9% of those who characterized themselves as Protestants and Seventh Day Adventists adopted FP. There was a significant difference among the different faiths in relation to adoption of PPFP ($\chi^2 = 11$, df = 9, $p < 0.014$).

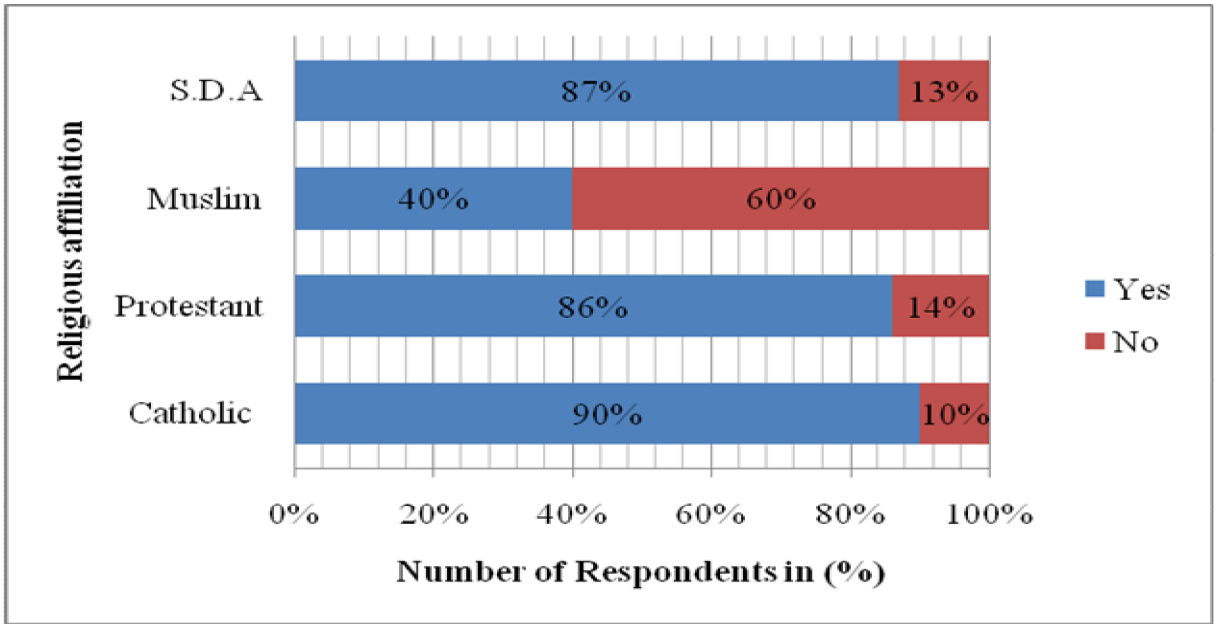


Figure 5.8: Relationship between religious affiliation and adoption of postpartum family planning amongst study participants.

5.5.4 Relationship between adoption of specific contraceptives and spouse involvement in selection of FP method

To evaluate the level of autonomy in womenôs choice of contraceptives, the influence of spouses on choice of contraceptives was explored. The data obtained demonstrates that 70.5% of the women using IUCDs, 63.5% on implants and 60% on oral pills consulted their spouses.

The variation observed across adoption of specific contraceptives and spouse involvement was not significant (χ^2=16, df =10 < 0.110).

Table 5.3: Relationship between spouse involvement in selection of FP method and family planning uptake amongst study participants.

		Spouse involvement in selection of FP method			Total
		Yes	No	Not Applicable	
Condoms	Count	20	0	1	21
	% FP Method	95.2%	0%	4.8%	100.0%
IUCD	Count	62	15	11	88
	% FP Method	70.5%	17.0%	12.5%	100.0%
Implant	Count	33	17	2	52
	% FP Method	63.5%	32.7%	3.8%	100.0%
Injection	Count	52	40	10	102
	% FP Method	51.0%	39.2%	9.8%	100.0%
Oral pills	Count	33	17	5	55
	% FP Method	60.0%	30.9%	9.1%	100.0%
Others	% Count	5	1	0	6
	% FP Method	83.3%	16.7%	0.0%	100%
	Count	197	98	29	324
	% FP Method	60.8%	30.2%	9%	100.0%

5.6 The influence of health system factors on contraceptive use among postpartum women attending Kisii level 5 hospital

5.6.1 Relationship between adoption of specific contraceptives and source of contraceptives

The relationship between source of contraceptives and choice of contraceptive may help in identifying facilities which provide inadequate counseling services. The data shows that

IUCDs, implants, oral pills and injections were mostly sourced from government hospitals. See Figure 5.9.

Similarly, injections were obtained from private hospitals and chemists: 19.6% and 20.6% respectively. At least 8% of the respondents using implants said that they had received them from chemists. There was a significant association between adoption of specific contraceptives and contraceptive source (χ^2=452, df =14 < 0.00)

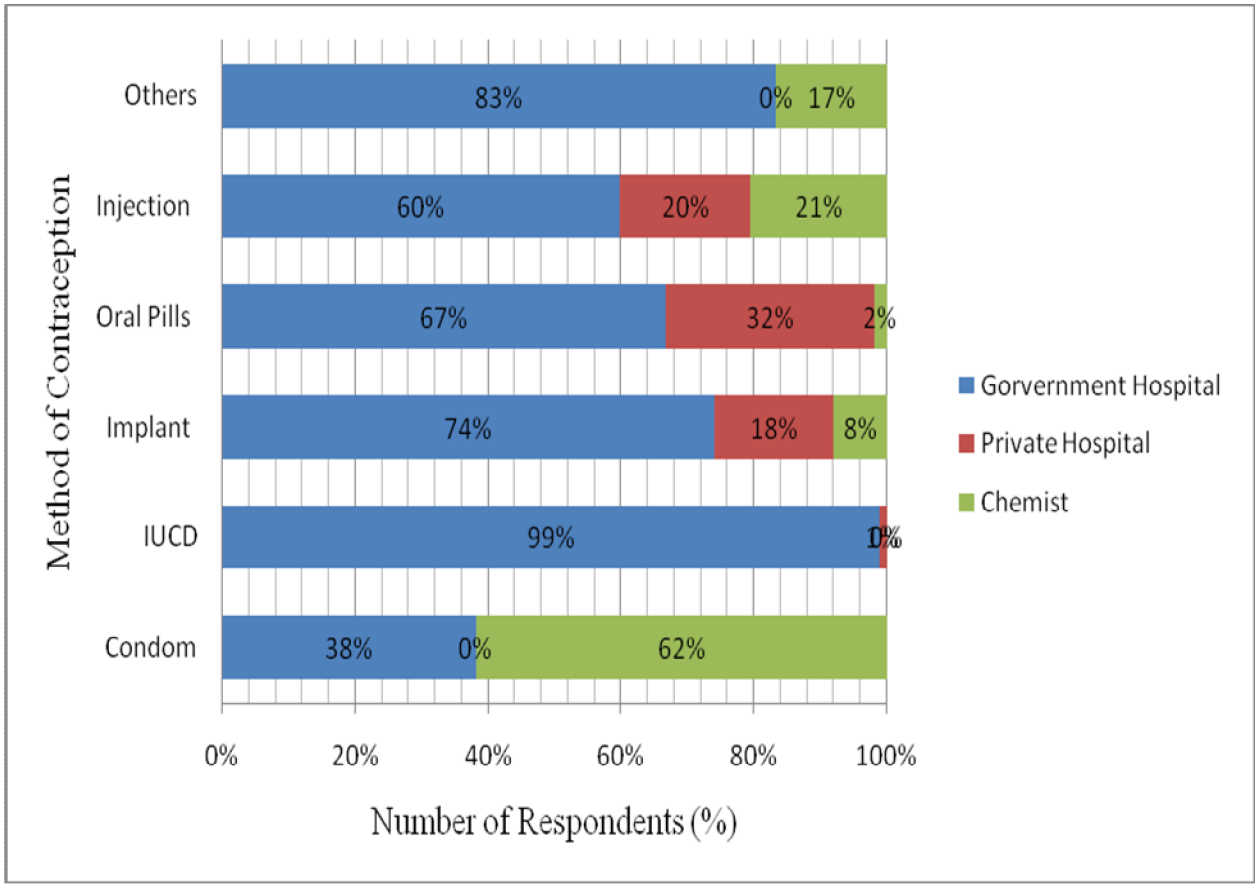


Figure 5.9: Relationship between source of family planning method and selection of FP method amongst study participants

The relationship between the adoption of PPFP and specific health system factors is critical in understanding the quality of family planning delivery at the Kisii level 5 hospital. In this study, 89.9% of the mothers who were provided with information on the different family planning methods adopted PPFP within a year of delivery. A significant association was observed between provision of FP information by H/Ws and adoption of PPFP ($\chi^2 = 120$, df = 14, $p < 0.000$).

The issue whether a respondentôs preference of a specific FP method was taken into account by the H/W prior to prescription was evaluated. According to the data obtained, 89.9% of those whose FP preference was evaluated adopted family planning method within a year. On the other hand, 56.2% of those whose FP preference was not assessed did not adopt any method. A significant association was observed between the prescription of the respondents preferred FP method and the adoption of that method ($\chi^2 = 120$, df = 14, $p < 0.000$).

Further, the association between help to select FP methods and adoption of PPFP was also evaluated. According to the data obtained, 61.5% of the respondent who sought the H/Ws help in selecting FP method adopted PPFP. On the other hand, 54.2% of the mothers who did not receive any help did not adopt any method. The association between seeking the help of H/Ws on FP preference and adoption of PPFP was not significant ($\chi^2 = 98$, df = 14, $p < 0.104$).

The relationship between discussion of side effects and adoption of PPFP was also evaluated. The data shows that 86.4% of the respondents who had a discussion on side effects adopted a family planning method. A significant association was observed between discussion of side effects and adoption of PPFP ($\chi^2 = 76$, df = 14, $p < 0.000$).

Among the respondents who were informed on what to do if they had side effects, 86.4% adopted a method, while 66% who did not receive information on what to do if they had side effects did not take up any method. A significant association was observed between discussion of side effects and adoption of PPFP ($\chi^2 = 74$, df = 14, $p < 0.000$).

The relationship between return date scheduling and adoption of PPFP was also evaluated. According to the data obtained; 91.8% of the respondents who received a date of return adopted family planning method. A significant association was observed between scheduling of a return date and adoption of PPFP ($\chi^2 = 76$, df = 14, $p < 0.000$).

This data was corroborated by information from the Key Informants. The nurse in charge of MCH clinic interviewed indicated that counseling on FP methods was promptly provided at the facility within six months after delivery. It was their opinion that adequate information on intrauterine contraceptive devices (IUCDs), oral pills, injections (Depo-Provera), implants are provided to mothers. They also cited that most nurses at the facility are well versed on FP. The high level of training on FP is attained thorough continuous in-service training on new technologies. Continuous Medical Education (CME) held at the department was identified as a critical component of these efforts.

While endorsing the quality of services offered, the respondents acknowledged the presence of several challenges. According to the respondents, a majority of the women have preformed opinions about specific methods of FP. In their opinion, some women have a hard time accepting specific methods due to misinformation. For example, some women were of the opinion that IUCD may be displaced to the heart or into other critical internal organs. Stock-outs and lack of essential accessories used in FP clinics were also mentioned in this regard. To

address some of these challenges, they said that access to FP methods can be improved by availing FP methods in all facilities and conducting public awareness campaigns on FP.

5.6.2 Relationship between adoption of specific contraceptives and provision of information on the contraceptives

Evaluating the relationship between provision of information on specific contraceptives and use may help in gauging the impact of that information and adoption. The data obtained in this study demonstrates that 100% of the women using IUCDs were provided with information on this method. Similarly, 88.5% of those receiving implants, 96.4% of those receiving oral pills and 87.35% of respondents receiving injections were provided with information on the methods. A significant variation was observed across adoption of specific contraceptives and provision of information on these contraceptives (σ^2=38, df =10 < 0.000).

The data from the survey was corroborated by information from the FGDs. A majority of the women cited that information on contraceptives is normally available in postnatal and prenatal clinics in private and government hospitals. Additional areas of concurrence included the fact that most women at the facility consulted their spouses and that they were generally treated well by the health workers. Others said that they obtained FP information from friends, radio and television. Further, the respondents were able to identify the different FP methods including injections, IUCDs, implants, condoms among others. However, they were not familiar with several FP methods including: natural family planning methods, sterilization and lactational amenorrhea method (LAM) See Figure 5.10.

5.6.3 Relationship between adoption of specific contraceptives and being asked about family planning preference.

Evaluating the relationship between patientôs preference and method of contraceptive adopted may indicate whether specific methods are being imposed on patients. In this study, 100% of the patients on IUCDs were asked about their preferred method of contraception. Similarly, 90% of those receiving implants, 96% of those using oral pills and 87% of women receiving injections were asked about their preferred method. See Figure 5.10. A significant variation was observed across adoption of specific contraceptives and being asked about FP preference. (G^2=80, df =10 < 0.000).

5.6.4 Relationship between adoption of specific contraceptives and discussion of side effects

Evaluating the relationship between discussion of side effects and adoption of specific contraceptives may help in assessing whether women were making well informed choices. According to the data obtained, 97% of women using IUCDs were informed about the side effects of specific contraceptives. Similarly, 62% of those using condoms, 12% of those using implants and 18.4% of those using injections were not informed about the side effects. In the FDGs, a high proportion of the respondents were able to identify several side effects including back ache, heavy bleeding, nausea, lethargy, weight gain, possible sterility among others. Irrespective of these concerns, a large proportion of the mothers appreciated the essence of FP and child spacing. A significant correlation was also observed between awareness of the various side effects of contraceptives and adoption. See Figure 5.10.

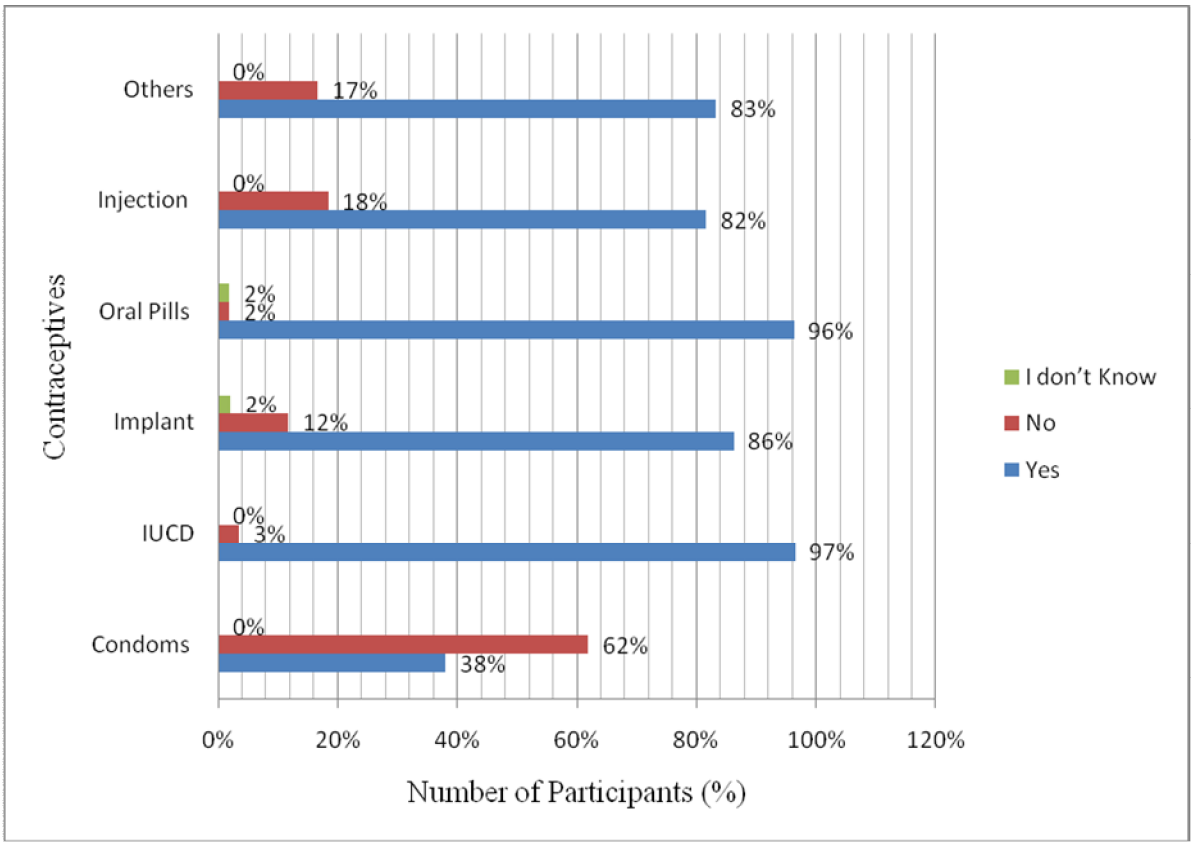


Figure 5.10: Use of specific contraceptive and enquiry by health workers about family planning preference amongst study participants

5.7 Behavioral factors in relation to use of contraceptive methods among postpartum women attending Kisii level 5 hospital.

5.7.1 Relationship between use of postpartum contraception and specific behavioral factors

Percentage of respondents who had used some form of family planning within a year of delivery was 86.8%. Conversely, 13.2% did not use any form of contraceptive within a year after delivery. The data on the use of FP method within a year after delivery was further

disaggregated with respect to the number of children, plans to have more children and how long the mother would like to wait before conception of another child. According to the results obtained; 86.4% of respondents who used FP within a year after conception had less than 2 children. Further, 84.8% of the respondents with 3-4 children had used contraception within a year after delivery. See Table 5.3. The association between the number of children and the use of family planning was not significant ($\chi^2 = 4.2$, df = 2, $p < 0.12$).

When the data was disaggregated with respect to plans to have more children in future, the results were as follows: 92% of respondents reporting a desire to have more children in future indicated that they had used contraceptive within a year following delivery. On the contrary, 8% of the respondents who had not used family planning within a year after delivery planned to have more children in future. Further, 80.6% of the respondents who indicated that the decision to have more children in future depended on their husbands said that they used FP within a year after delivery. Similarly, 72.2% of the respondents who were ambivalent on plans to have more children in future used FP. The association between plans to have more children in future and the use of FP methods was significant ($\chi^2 = 7.14$, df = 3, $p < 0.004$).

On the issue pertaining to the waiting duration before conception of another child, 80% of those who indicated they would like to wait for one to two years had used FP. At the same time, 95.9% of the respondents who indicated they would like to wait for more than 2 years used FP. However, 76.1% of the respondents who were ambivalent waiting duration before the conception of another child said they used FP within a year after delivery while 4.1% cited the converse. A significant association was observed between waiting duration before conception and use of PPFP ($\chi^2 = 19.3$, df = 3, $p < 0.000$)

Table 5.4: Behavioral factors in relation to use of contraceptives amongst study participants

Factor	Item	Used FP with a year after delivery %		P value
		Yes	No	
Number of children	1-2 Years	86.4% (153)	13.6% (24)	0.120
	3-4 Years	84.8% (28)	15.2% (5)	
	5 Years and above	63.6% (7)	36.4% (4)	
	Total (365)	**86.8% (317)**	**13.2% (48)**	
Planning to have more children in future	Yes	92% (183)	8% (16)	0.004
	No	84% (79)	16% (15)	
	Depends on my husband	80.6% (29)	19.4% (7)	
	I donôt Know	72.2% (26)	27.8% (10)	
	Total (365)	**86.8%**	**13.2%**	
Waiting duration before the conception of another child	< 2 years (45)	80% (36)	20% (9)	0.000
	2 to 4 years (148)	95.9% (142)	4.1% (6)	
	I donôt know (88)	76.1% (67)	23.9% (21)	
	Not applicable (84)	85.7% (72)	14.3% (12)	
	Total (365)	**86.8 %**	**13.2%**	

5.7.2 Relationship between plans to have more children in future and contraception methods

Matching the proportion of mothers who are not planning to have children in future and contraceptives used is paramount in identifying the quality of family planning information given at the facility. According to the results obtained 9.5% of the respondents using male condoms would not like to have more children in future. Similarly, 20% of mothers on injections and 31% on oral pills are not planning to have more children in future. A significant variation was observed across intention to have more children in future and type of contraceptive used (G^2=54, df =15 < 0.000).

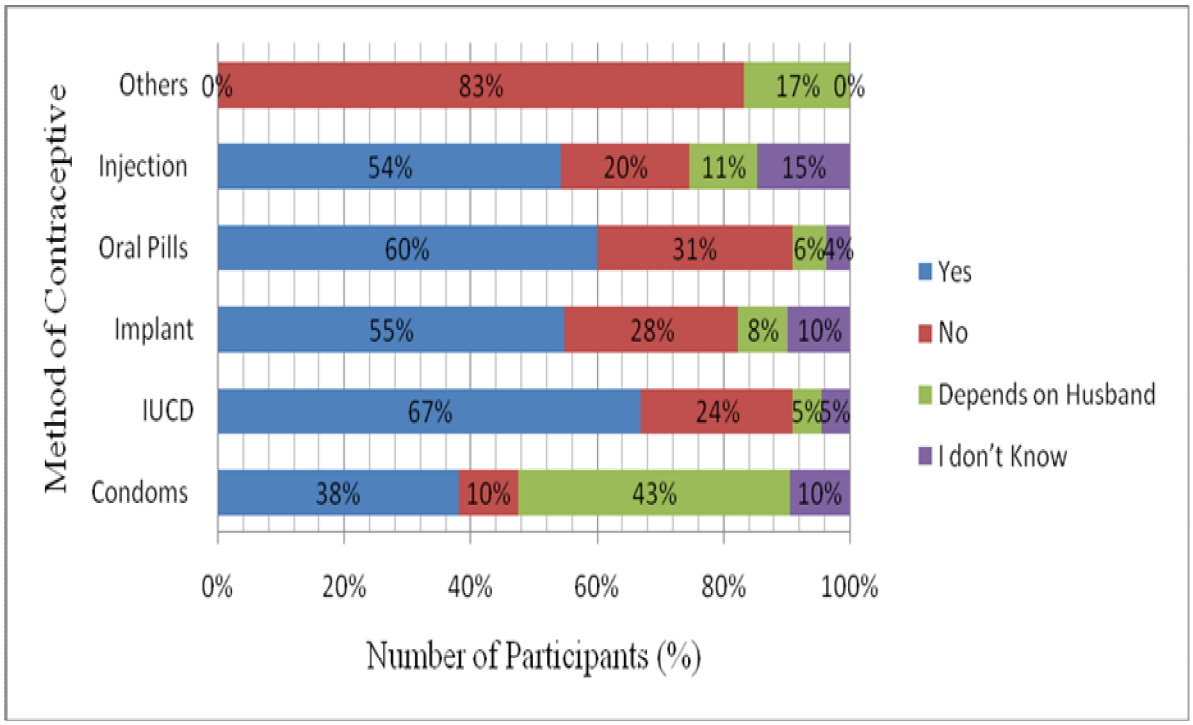


Figure 5.11: Plans to have children in future and specific contraceptives used amongst study participants

5.7.3 Relationship between waiting duration before conception of another child and contraception methods

The relationship between child spacing plans and method of contraception adopted can also be used to evaluate the quality of family planning information given at the facility. According to the results 57% of the respondents using condoms were noncommittal on child spacing plans. Similarly, 27% of those using injections and 16% of those using oral pills were non-committal. A significant variation was observed across intention to have more children in future and type of contraceptive used (χ^2=54, df =15 < 0.000).

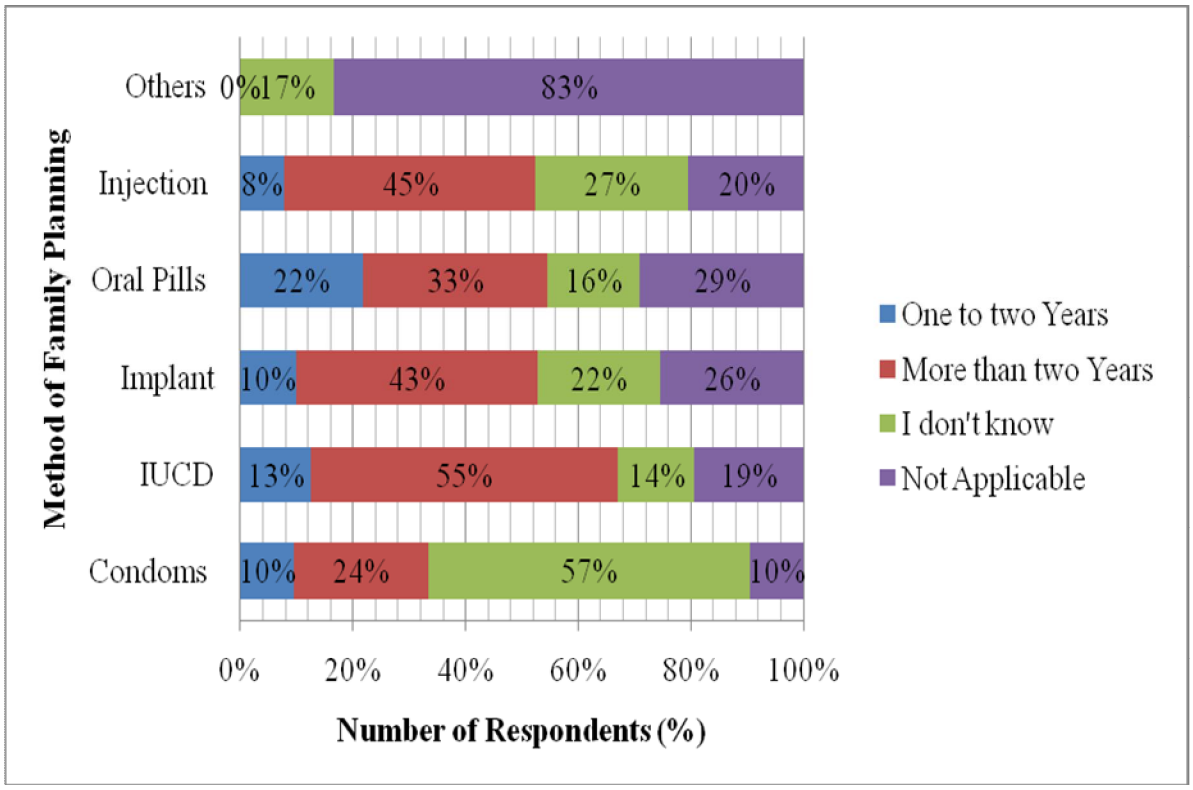


Figure 5.12: Waiting duration before conception of another child amongst study participants

CHAPTER SIX: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

Maternal health problems remain a major global concern since pregnancy and childbirth are the leading causes of morbidity and mortality among reproductive age women. According to 2013 maternal mortality estimate in Ethiopia, 292, 982 maternal deaths occurred during 2013 and almost 99% of these deaths happened in the developing countries (Tarekegn et al, 2014). However, it has been shown that encouraging early antenatal care visits, institutional deliveries, postnatal care, and contraceptive adoption are the key elements in improving safe motherhood (Ndugwa et al, 2010). As the first pillar of safe motherhood and an essential component of primary health care, contraceptive plays a key role in reducing maternal and newborn morbidity and mortality by preventing unintended pregnancy and close birth intervals. Despite the progress made in recent decades in fertility reduction in developing countries, up to 120 million (10ï 12%) married women in most regions and more than 24% in sub-Saharan Africa, continue to report an unmet need for contraception (Sharan et al., 2010). The MDG target of universal access to reproductive health reaffirms the need for contraceptive options as well as access to other key reproductive health services, including safe abortion, to reduce maternal mortality (MDG 5) and achieve gender equity (Ndugwa et al, 2010). In this study, PPFP was evaluated among women in Kisii Level 5 hospital. The results generated are discussed below under several sub-sections including prevalence of PPFP adoption within a year following delivery. In the subsequent section, the conclusion and recommendation will be presented.

6.1 Discussion

6.1.1 Prevalence of contraceptive methods use among post-partum women attending Kisii Level 5 hospital

As highlighted in the foregoing section maternal health remains a major global concern since pregnancy and childbirth are the leading causes of death, disease, and disability among women 15-49 years of age. This concern has been re-emphasized in the fifth MDG that aims to reduce maternal deaths and provide universal access to sexual and reproductive health services by 2015 (Shankar et al, 2008). This concern also underpinned the first objective of this study which sought to evaluate the prevalence of contraceptive method use among postpartum women attending Kisii Level 5 hospital. In this study, 86.3% of the respondents reported that they had adopted postpartum contraceptive. The high prevalence of contraceptive use reported appears to contrast previous studies conducted elsewhere in Kenya. For instance, The Nairobi Urban Health and Demographic Surveillance System (NUHDSS) indicated that while resumption of sex occurs quite early (50% by the third month) relatively few women initiate contraceptive use during the first six postpartum months (Ndugwa et al, 2010). The findings are slightly higher than those of studies which indicate that in sub-Saharan Africa, the proportion of postpartum women who are exposed to the risk of pregnancy by having sex while using no contraceptive method within a year after childbirth is nearly one third (Omrana et al., 2015). The observed variation maybe explained by the difference in methodologies adopted in the highlighted studies. The NUHDSS was a longitudinal study which recruited participants at the household level. As such, even women who are not regular attendees of postpartum clinics participated.

The frequency of use of particular contraceptives was also evaluated in the study. The results suggest that the use of short acting contraceptives such as oral pills, injections and condoms was relatively high. This finding is in line with studies which indicate that even women who adopt modern contraceptive methods postpartum are likely to opt for short term hormonal methods (Gebreselassie et al., 2008). This finding should raise some concerns given the fact that in developing countries, many couples have difficulty using these methods correctly or consistently, which may lead to unintended pregnancies (Omrana et al., 2015).

6.1.2 Socio-demographic and socio-cultural factors in relation to use of contraceptive methods among postpartum women attending Kisii Level 5 Hospital

To identify the determinants of contraceptive use among women, the relationship between contraceptives and several variables was evaluated. The study findings suggest that a high frequency of married women were more likely to adopt family planning compared to their unmarried counterparts. The results compare to a similar study done in Malawi which showed that unmarried women were at risk of unplanned and unwanted pregnancies due to less utilization of FP services (Bwazi et al., 2014). Utilization of modern contraceptive was also high among women with high educational level (post primary education) due to frequent exposure to media and contact with health workers.

The finding that women with high education level are more likely to use contraception is consistent with findings from a study done in Uganda (Rutaremwa et al, 2015). Higher education level attainment invariably gives postpartum women a better understanding of the available modern contraceptive methods and the benefits of fertility regulation and hence the need for contraception during the postpartum period. The suggestion is corroborated by

findings in this study which suggested an association between education and level of awareness of the various types of contraceptive and associated side effects. This finding is concurs with a study done in Ethiopia, where it was observed that high education increases awareness of the side effects of contraceptive methods and preference for the most convenient ones (Worku et al., 2011). It should also be noted that a high proportion of women attending the clinic had post-primary school level education. This fact suggests two things: most women in the area have post primary school level education or most women with primary school level education are not attending postpartum clinics.

The high correlation between exposure to media and educational level is also significant. Indeed, some studies have established that womenôs exposure to family planning messages on the media increased use of PPFP. Exposure to media content is known to increase demand for services and in the long run, causing behavior change through information, education and communication (IEC) campaigns (Wakefield et al, 2010).

In addition, the study established that condoms were popular among women with no education or primary school drop outs whereas implants, IUCDs and oral pills were common among women with secondary level education and above. The inference that can be drawn from this is that: The respondents with primary level of education and below, left the choice of family planning method to their spouses. However, those with secondary school education and above were involved in the choice of family planning method.

Employment status is a more significant predictor of the use of contraceptives in the postpartum period than the level of education or religion. The respondents in formal employment are more likely to use contraception than those respondents who are unemployed.

Similar studies (Beekle and McCabe, 2006a, Indongo and Naidoo, 2008) done in Namibia and Ethiopia have shown a significant relationship between womenôs occupation and uptake of family planning.

The results in this study showed that most of the mothers who adopted PPFP were aged between 19-31 years of age. Women in the oldest category (31-45) were least likely to report contraceptive use. This finding is consistent with studies which have indicated that increment in age is generally associated with significantly reduced use of PPFP (Rutaremwa et al, 2015). In a study on use of long acting reversible contraceptives at a military facility in the US, the study revealed that women younger than 25 years were more likely to use these methods (Dahlke et al, 2012). Another study among low income women in America reported that use of Depot Medroxyprogesterone Acetate (DMPA) reduced with increasing age of woman (Dozier et al, 2014). Similar results were also reported in Malawi, where younger women were more likely to use contraceptives compared to older women (Adebowale et al., 2014). The explanation for this finding is not clear, however, one possible explanation is the fact that respondents in the high age groups may assume that they are not fecund and therefore, have no need for contraception. This finding should raise concern.

The study also indicated that where spouses were involved in the selection of family planning method, women were more likely to adopt a method. This finding is consistent with the results of a study done in Ethiopia whose results revealed that married women who discussed contraceptives with their partners were likely to adopt a family planning method (Mekonnen and Worku, 2011).

6.1.3 Influence of Health System factors on contraceptive use among postpartum women attending Kisii level 5 Hospital

The influence of health system factors was also evaluated in the study. Findings indicate that the quality of postpartum care provided at Kisii level 5 Hospital is relatively good. Indeed, the nurse in-charge at the facility cited that counseling on FP methods is promptly provided at the facility within six months after delivery. She also added that adequate information on intrauterine contraceptive devices (IUCDs); oral pills, injections (Depo-Provera), implants are provided to mothers. It was also reported that the nurses at the facility are well versed on FP. This finding is significant given the reported link between availability of quality information on contraceptives and uptake (Barber, 2007; Warren et al., 2010a). This study established that adoption of contraceptives such as IUCD, implants, oral pills and injections was well informed. Women were provided with information about side-effects and what to do in case they experienced them.

This finding suggests that a womanôs decision to adopt a family planning method is strongly influenced by how she perceives the quality of health care service provided. This conclusion has been corroborated by studies in Nigeria, which revealed that family planning counseling by health care workers increased the intention to use postpartum family planning (Adegbola and Okunowo, 2009). On the other hand, it was also established that women who got their methods from chemists were not familiar with various family planning methods and their side effects as compared to those who obtained their contraceptives from government facilities. This finding raises concern relating to counseling services for family planning in chemists outlets.

6.1.4 Behavorial factors in relation to use of contraceptive methods among postpartum women attending Kisii level 5 Hospital

Another significant relationship analyzed was the relationship between behavioral factors and contraception. On the link between the number of children and use of PPFP, the association was not significant. This varies with other studies which have demonstrated that there is a direct relationship between a womanôs number of living children and her likelihood of using PPFP (Rutaremwa et al., 2015). This study also demonstrated that a high proportion of women expressing no intention to have more children or with specific child spacing plans were on contraceptives. However, it was also established that a relatively large number of women expressing no intention to have more children or those with spacing plans of more than two years were opting for short term hormonal methods. This finding should raise some concern about the content of advice some of these women are receiving at the facility.

6.2 Conclusion

Arising from the results, the following conclusions can be drawn: That a significant proportion of mothers attending postpartum clinics in Kisii level 5 have adopted PPFP. However, a sizable proportion of women at the facility have not adopted PPFP. The unmet need for postpartum FP was 34.1% while a majority of the respondents who expressed a desire to delay or not have any more children were on short term methods of contraception.

The level of education did not have a direct correlation in uptake, but it had a significant effect on the choice of method of contraception. Respondents with a level of education above secondary level chose long term methods of contraception compared to their counterparts with lower levels of education. The conclusion drawn from this result is that, the respondents are better informed and can afford the cost of using these methods.

It would appear that the respondents are delaying having children until later on in life as can be deduced from the sharp decline in use of contraception among the respondents over the age of 30. Alternatively, these respondents have achieved their desired family size and are not attending the clinic as can be deduced by their relatively low numbers. This latter conclusion is however improbable as there is a markedly significant variation between use of contraception within the selected sample.

A majority of women at the clinic obtained contraceptives from government hospitals. In this facility, it was established that the quality of care is relatively good. However, the counseling services received by the women who obtained contraceptives from chemists were inadequate. In addition some of the respondents had their implants and injections administered by

chemists contrary to the National Family Planning Guidelines for Service Providers (2010). Furthermore, it was established that some women expressing no desire to have children in future were on short term methods of contraceptives. This suggests that there is room for improvement for counseling services even in government facilities. The demand for contraception among the respondents driven by information disseminated by H/W is not matched by efficient supply which results in frequent stock outs. The level of education, exposure to specific media outlets and age are important determinants of PPFP. The findings of the study show the importance of educating women. In general, the study findings show that the determinants of PPFP adoption are diverse signifying a complex approach to tackle it.

There is an association between most of the selected independent study variables and uptake of contraceptives among postpartum women. Specifically the age of the respondents, their level of education, marital status, employment status and knowledge of contraceptive method had a direct impact on their uptake. It is also noted that a womanôs decision to adopt a family planning method is strongly influenced by how she perceives the quality of health care service provided. Parity was not a significant predictor of PPFP uptake.

6.3 Recommendations

Based on the findings in this study, the recommendations below would increase uptake of contraceptives among postpartum women in Kisii Level 5 Hospital.

1. Women with low levels of education have a disproportionately high use of short term contraceptives as compared to their highly educated counterparts. They also are more predisposed to leaving the decision on use of contraception to their spouses. To address this scenario, the postpartum women with primary level education and below should be identified by the attending MCH nurse when they attend the clinics and allocated more time in discussing FP methods to bridge the information gap. These women should also be encouraged to bring their spouses to the clinics so as to share information on available FP methods.

2. There is a significant unmet need for FP. To address this situation the nurses at the family planning clinic at Kisii level 5 should identify women who have reached their desired family size and encourage them to take up long acting methods of contraceptives.

3. Some of the respondents had their implants and injections administered by chemists contrary to the National Family Planning Guidelines for Service Providers (2010). The county pharmacist should work in collaboration with Kisii Sub-county Reproductive Health Nurse to ensure the chemists sell the FP methods that they are allowed to by the guidelines.

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APPENDIX I

Consent Form for Respondents

How are you? I am a student from the University of Nairobi, School of Public Health, and I am undertaking a study to establish the determinants of contraceptive use among postpartum women. I have chosen this hospital to conduct my study. The Kenyatta National Hospital-University of Nairobi Ethics Committee has allowed me to proceed. I also have permission from the University of Nairobi, School of Public Health who are supervising me.

Objectives of the study

The objective is to establish the factors that influence contraceptive uptake among postpartum women attending MCH clinics.

Research procedure

I am requesting you to participate, which if you agree I will take you through a series of questions in a questionnaire that will take around 45 minutes. The questions range from personal information to services offered in this clinic.

Risk/benefits

There is no physical harm from this study. The study will just involve filling in questionnaires and no procedures will be involved. This research is to identify factors that influence postpartum family planning. This will inform the county health management team on ways of reducing unmet need for contraceptives in postpartum women.

Rights

Participation is voluntary. You can agree or refuse to participate. When you decide to assist me in this study by participating, you may choose not to answer questions that you are not comfortable with. You are also free to withdraw from the study at any point if you so wish, though I would very much appreciate if you can participate till the end. You can ask any questions related to the study before signing the consent form or at any point during the interview when you need clarification.

Confidentiality

All the information that you give in this questionnaire is very confidential. It will only be used for the purposes of the study by the principal investigator. The filled questionnaire will be kept safely, and your name will not appear on it.

Contact information

If you have any questions you can contact the principal investigator or the secretary of KNH/UoN-ERC on:-

Rose Jalangô

(Principal investigator)

0722702898

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Prof. M. I. Chindia

Secretary, KNH/UoN-ERC

(254-020) 2726300 Ext 44355 OR 726300-9

FAX: 725272

uonknh_erc@uonbi.ac.ke

Consent

Patient numberé é é é .

Ié hereby give consent to be included in the study. The nature of the study has been explained to me byé é é é é é é é é é é ...

He has neither coerced me nor has he forced me to be part of this study. I understand that there is no monetary gain in return.

Dateé é é é é é é é é é é Signed/Thumb print é é é é é é é é é é é é .

I é é é é é é é é é é é é é . confirm that I have explained to the patient the nature of the study.

Dateé é é é é é é é é é .. Signedé é é é é é é é é é é é é é é é ..

APPENDIX II

Consent Form for the Key Informant Interview

How are you? I am a student from the University of Nairobi, School of Public Health, and I am undertaking a study to establish the determinants of contraceptive use among postpartum women. I have chosen this hospital to conduct my study. The Kenyatta National Hospital-University of Nairobi Ethics Committee has allowed me to proceed. I also have permission from the University of Nairobi, School of Public Health who are supervising me.

Objectives of the study

The objective is to establish the factors that influence contraceptive uptake among postpartum women attending MCH clinics.

Research procedure

I am requesting you to participate, which if you agree I will take you through a series of questions in a Key Informant Interview (KII) that will take around 15 minutes. The questions range from your experience in this clinic to challenges you face when offering services in this clinic.

Risk/benefits

There is no physical harm from this study. The study will involve asking questions. There are no procedures involved. This research is to identify factors that influence postpartum family planning. This will inform the county health management team on ways of reducing unmet need for contraceptives in postpartum women.

Rights

Participation is voluntary. You can agree or refuse to participate. When you decide to assist me in this study by participating, you may choose not to answer questions that you are not comfortable with. You are also free to withdraw from the study at any point if you so wish, though I would very much appreciate if you can participate till the end. You can ask any questions related to the study before signing the consent form or at any point during the interview when you need clarification.

Confidentiality

All the information that you give in this interview is very confidential. It will only be used for the purposes of the study by the principal investigator. The recorded information will be kept safely, and your name will not appear on it.

Contact information

If you have any questions you can contact the principal investigator or the secretary of KNH/UoN-ERC on:-

Rose Jalangô

(Principal investigator)

0722702898

roseddah@yahoo.com

Prof. M. I. Chindia

Secretary, KNH/UoN-ERC

(254-020) 2726300 Ext 44355 OR 726300-9

FAX: 725272

uonknh_erc@uonbi.ac.ke

Consent

Cadreé é é é .

Ié hereby give consent to be included in the study. The nature of the study has been explained to me byé é é é é é é é é é é ...

He has neither coerced me nor has he forced me to be part of this study. I understand that there is no monetary gain in return.

Dateé é é é é é é é é é é Signed/Thumb print é é é é é é é é é é é é .

I é é é é é é é é é é é é é . confirm that I have explained to the patient the nature of the study.

Dateé é é é é é é é é é .. Signedé é é é é é é é é é é é é é é é ..

APPENDIX III

Consent Form for Focused Group Discussion Participants

How are you? I am a student from the University of Nairobi, School of Public Health, and I am undertaking a study to establish the determinants of contraceptive use among postpartum women. I have chosen this hospital to conduct my study. The Kenyatta National Hospital-University of Nairobi Ethics Committee has allowed me to proceed. I also have permission from the University of Nairobi, School of Public Health who are supervising me.

Objectives of the study

The objective is to establish the factors that influence contraceptive uptake among postpartum women attending MCH clinics.

Research procedure

I am requesting you to participate, which if you agree I will take you through a series of questions that will take around 45 to 60 minutes. I will ask you to share your knowledge on postpartum family planning. The meeting will take place in a private room and if you allow me, I would like to record the interview using a digital recorder.

Risk/benefits

There is no physical harm from this study. The study will involve asking questions and no procedures will be involved. This research is to identify factors that influence postpartum family planning. This will inform the county health management team on ways of reducing unmet need for contraceptives in postpartum women.

Rights

Participation is voluntary. You can agree or refuse to participate. When you decide to assist me in this study by participating, you may choose not to answer questions that you are not comfortable with. You are also free to withdraw from the study at any point if you so wish, though I would very much appreciate if you can participate till the end. You can ask any questions related to the study before signing the consent form or at any point during the interview when you need clarification.

Confidentiality

All the information that you give will be confidential. It will only be used for the purposes of the study by the principal investigator. The recorded information will be kept safely, and your name will not appear on it.

Contact information

If you have any questions you can contact the principal investigator or the secretary of KNH/UoN-ERC on:-

Rose Jalangô Prof. M. I. Chindia

(Principal investigator) Secretary, KNH/UoN-ERC

0722702898 (254-020) 2726300 Ext 44355 OR 726300-9

roseddah@yahoo.com FAX: 725272

uonknh_erc@uonbi.ac.ke

Consent

Patient numberé é é é .

Ié hereby give consent to be included in the study. The nature of the study has been explained to me byé é é é é é é é é é é ...

He has neither coerced me nor has he forced me to be part of this study. I understand that there is no monetary gain in return.

Dateé é é é é é é é é é é Signed/Thumb print é é é é é é é é é é é é .

I é é é é é é é é é é é é é . confirm that I have explained to the patient the nature of the study.

Dateé é é é é é é é é é .. Signedé é é é é é é é é é é é é é é ..

APPENDIX IV

Respondents' Questionnaire

Interviewer:

Participantôs Identification number:

Date: Time:

Thank you very much for agreeing to participate. Am going to start asking the questions:-

Socio-demographic Information

1. How old are you?..... years
2. How old is your child?.....(in months)
3. What is your current marital status? (Circle one answer only)
    1. Married
    2. Living with partner
    3. Separated
    4. Divorced
    5. Widowed
    6. Single
4. If yes, how long?.....(in years)
5. What is the highest level of your education? (Circle one answer only)

1. No education
2. Primary school dropout.
3 Primary school completed
4 Secondary school drop out
5 Secondary school completed
6 College/University dropout
7 College/University completed
8 Post graduate degree
9 Refused

6. Which of the following best describes your employment status over the past 12 months? (Circle one response)

1 Government employee
2 Non-government employee
3 Self-employed
4 Non-paid
5 Student
6 Housewife
7 Casual worker

Social cultural information

7. What is your religion? (Circle one answer only)

1 Catholic
2 Protestant

3 Muslim

4 Seventh Day Adventist

5 Othersé é é é é é ..(Specify)

8. Which family planning methods do you know? (Circle all those mentioned)

    1. Oral pills
    2. Female condom
    3. Male condom
    4. IUCD
    5. Implant
    6. Injection
    7. Female Sterilization
    8. Male sterilization
    9. Natural family planning
    10. Lactational Amenorrhoea (LAM)

9. Where did you get information on family planning? (Circle all those mentioned)

    1 Television

    2 Radio

    3 Newspaper/magazines

    4 Health care workers

    5 Friends

    6 Spouse

    7 Internet

    8 Othersé é é é é é é .é (please specify)

10. Did you use any form of family planning within one year of delivery?

1 Yes

2 No

11. If yes, at how many months did you start using?

1 Record monthsé é é

2 I donôt know

3 Not applicable

12. Which method of family planning did you use? (Circle all those mentioned)

1. Oral pills
2. Female condom
3. Male condom
4. IUCD
5. Implant
6. Injection
7. Female Sterilization
8. Male sterilization
9. Natural family planning
10. Lactational Amenorrhoea (LAM)
11. None

13. Was your spouse involved in the selection of family planning method?

1. Yes.
2. No.
3. Not applicable

14. Where did you get the family planning method you were using? (Circle one answer)

1. Private facility
2. Government health facility
3. Faith based organization
4. Chemists / Pharmacy
5. Othersé é é é é é .(please specify)
6. None

Health system factors

During your visits to the hospital within one year of delivery, did the health care worker

15. Provide information on different methods of family planning?

1 Yes

2 No

3 I donôt know

16. Ask about your family planning preference?

1 Yes

2 No

3 I donôt know

17. Help you select a family planning method?

1 Yes

2 No

3 I donôt know

18. Talk about possible side effects?

1 Yes

2 No

3 I donôt know.

19. What are some of the side effects discussed with you? (Circle all those mentioned)

1. Vision loss or blurring
2. Severe abdominal pain
3. Severe leg pain
4. Late period
5. Heavy periods
6. Jaundice
7. Neurological signs
8. None
9. Others é é é é é é é é é é

20. Tell you what to do if you had side effects with family planning

1 Yes

2 No

3 I donôt know

21. Did they give you a return date?

1 Yes

2 No

3 I donôt know

Behavioral Factors

22. How many living children of your own do you have?

1 Record numberé é .

2 Donôt know

23. Would you like to have more children in the future? (Circle one answer)

1 Yes

2 No

3 Depends on husband

4 I don't know

24. How long would you like to wait from now before the conception of another child? (Circle one response)

1 Less than one year.

2 One to two years

3 More than two years

4 I donôt know

THANK YOU FOR YOUR TIME

APPENDIX V

Dummy Tables for Quantitative Questionnaire Variables

Social demographic and social cultural information

Marital Status

Married		
Living with someone		
Separated		
Divorced		
Widowed Never married		

Level of education

Level of education	Frequency	Percentage
No education		
Incomplete primary school		
Primary school completed		
Incomplete Secondary school		
Secondary school completed.		
University/college incomplete		
Complete college/University		

Occupation

	Frequency	Percentage
Government employee		
Non-government employee		
Self employed		
Non-paid		
Student		
Homemaker		

Religion

	Frequency	Percentage
Christian		
Muslim		
Others		

Use of family planning postpartum

	Frequency	Percentage
Yes		
No		

Types of family planning known and used

	Frequency	Percentage
IUCD		
Implants		
Sterilization		
Pills		
Male condom		
Female Condom		
Natural family planning		
Injectables		
Barrier method		

Health seeking behavior

Source of family planning facilities

	Frequency	Percentage
Private facility		
Government facility		
Faith Based organization		
Over the counter		
Refused		
None		

Source of family planning information

	Frequency	Percentage
Television		
Radio Newspapers/magazines Health care workers Friends Spouse Internet Others		

Health system factors

Friendly reception

	Frequency	Percentage
Yes		
No I donât know		

Respondent satisfaction with FP method

	Frequency	Percentage
Yes		
No I donât know		

Was the counseling on FP understood

	Frequency	Percentage
Yes No No information given Difficult to understand I donât know		

Turned away from FP clinic

	Frequency	Percentage
Yes		
No		

Reasons for being turned away (will be coded)

	Frequency	Percentage

Number of living children (will be coded)

Number of children	Frequency	Percentage

Desire to have more children

	Frequency	Percentage
Yes		
No I donôt know		

Were you offered FP in the clinic

	Frequency	Percentage
Yes		
No		

Reasons why FP method wasnôt taken up (will be coded)

	Frequency	Percentage

Side effects of FP discussed (will be coded)

	Frequency	Percentage

APPENDIX VI

Key Informant Interview Discussion Guide

1. How many é é é é é . (Name of cadre which the interviewee is in-charge of) are deployed in this clinic?(MCH)

Qualification	Number

2. How many é é é é have been trained on family planning guidelines as per the National Family Planning Guidelines for Service Providers?

Number:

3. How many é é é é are on duty at any given clinic day?

   Number:

4. What are your experiences in family planning in postpartum women?

5. What challenges do you face when it comes to uptake of postpartum family planning?

6. What are your experiences with family planning counseling practices?

APPENDIX VII

Dummy Tables for Key Informant Interview Questionnaire

Staffing

Cadre	Actual Number	Recommended	Comment(Deficit/Surplus)

Training on family planning provision

Cadre	Actual Number	Number trained	Percentage trained

Experiences

Coded Reponses	Frequency	Percentage

Challenges

Coded Responses	Frequency	Percentage

APPENDIX VIII

Focused Group Discussion Guide

1. What consideration do you make when choosing family planning?
2. What are your opinions on family planning postpartum?
3. What are the barriers that hinder you from taking family planning?
4. What do you think can be done to remove these barriers?
5. What is the availability of family planning methods?