UTILIZATION OF LONG-TERM AND PERMANENT FAMILY PLANNING METHODS AMONG FAMILY PLANNING CLIENTS AT WESTLANDS HEALTH FACILITIES, NAIROBI COUNTY, KENYA

MUTHEE JUSTUS MAITETHIA (BSNPH)
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NOVEMBER 2016
DECLARATION

This project is my original work and has not been presented for a degree in any other University or for any other award.

Signature ………………………………………… Date……………………

Muthee Justus Maitethia - P57/CTY/PT/23708/2011
Department of Community Health

SUPERVISORS

We confirm that the work reported in this thesis was carried out by the candidate under our supervision and submitted with our approval as University supervisors.

Signature ………………………………………… Date……………………

Dr. Harun Kimani
Department of Community Health
Kenyatta University

Signature ………………………………………… Date……………………

Dr. Tom Were
Department of Medical Laboratory Sciences
Masinde Muliro University of Science & Technology
DEDICATION

I dedicate this thesis to my dear wife Caroline Muendi and my lovely daughters Samantha and Jessica.
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OPERATIONAL DEFINITIONS

**Contraceptive prevalence rate:** This is the percentage of currently married women age 15-49 that are using any method of family planning.

**Contraceptive implants:** They are small rods that are inserted under the skin of a woman’s upper arm to release the hormone progestin slowly and prevent pregnancy for 3-5 years.

**Depo-Provera:** This is a short acting progesterone only contraceptive injectable effective for 1-3 months depending on the type.

**Family planning:** According to WHO, “family planning is allowing individuals and couples to anticipate and attain the desired number of children and the spacing and timing of their children through contraception and treatment of involuntary infertility.”

**Family planning utilization:** Refers to using any form of family planning method.

**Intrauterine contraceptive device:** This is a flexible device (copper based or hormone-releasing device) that is inserted into the uterine cavity by a trained service provider. It is a safe and highly effective long-acting (3-12 years depending with type) contraceptive method.

**Long term/acting family planning method:** These are irreversible family planning methods that prevent contraception for a longer period exceeding three years. This includes contraceptive implants, IUCD/coil

**Permanent family planning method:** This is permanent and irreversible voluntary surgical contraception family planning methods. They include tubal ligation (TL) for women and vasectomy for men.
**Tubal ligation**: a minor surgical operation that involves cutting and tying of fallopian tubes to prevent the sperm from fertilizing the ovum that was released from the ovary, and reaching the uterine cavity.

**Unmet need**: Defined by Westoff (1988) as “the percentage of married women of reproductive age who are not using any FP, but who would like to postpone the next pregnancy (unmet need for spacing) or do not want any more children (unmet need for limiting)”

**Unwanted pregnancy**: Pregnancy that is unplanned for and thus not needed.

**Vasectomy**: The surgical process of cutting and tying the vas deferens to prevent spermatozoa from mixing with semen.

**Voluntary surgical contraception**: They include female (Bilateral tubal ligation) and male (vasectomy) sterilization procedures that are intended to provide permanent contraception. The methods are irreversible.
ABBREVIATION AND ACRONYMS

AQUIRE: Access, quality, and use in reproductive health

CBS: Central Bureau of Statistics

CPR: Contraceptive Prevalence Rate

FP: Family Planning

HCW: Health care worker

HCP: Health care provider

IMR: Infant Mortality Rate

IUCD: Intra Uterine Contraceptive Device

KDHS: Kenya Demographic Health Survey

KNBS: Kenya National Bureau of Statistics

LAPM: Long Term and Permanent Methods of Family Planning

LARC: Long acting and reversible contraceptives

MEC: Medical Eligibility Criteria

MMR: Maternal Mortality Rate

MoH: Ministry of Health

SDP: Service Delivery Point

TFR: Total Fertility Rate

TL: Tubal Ligation

UNPD: United Nation population division

UNDESA: United Nations Department of Economic and Social Affairs

UNFPA: United Nation Family Planning Association

US: United States

WHO: World Health Organization
ABSTRACT
Access to family planning services and contraception is critical with the world’s population currently at seven billion inhabitants. Unfortunately close to 250 million people do not have the means to control their fertility. According to KDHS of 2014, Kenya has a total fertility rate of 3.9%, the Contraceptive prevalence rate of 58 % and unmet need for family planning of 18 %. A discrepancy exists between the proportion of women who know about long-term and permanent family planning methods which are effective for 3 to 12 years or permanent contraception depending with the method of choice and those who utilize them as a choice of contraception. The objective of this study, therefore, was to assess the utilization of long-term/acting and permanent methods of family planning among women of reproductive age seeking birth control from Westlands Sub-county health facilities. The research design employed was a facility based cross-sectional service exit survey and Proportionate sampling technique used to collect data from eight service delivery points (health facilities) owned by the city-county government of Nairobi. 381 women of reproductive age who utilized contraceptives and met the eligibility criteria were identified through systematic sampling. Structured interview questionnaires for family planning clients and focused group discussion guide for service providers were used to collect data. Data was analyzed by SPSS version 19. Bivariate analysis was done to determine factors influencing use of long-term and permanent methods of contraceptives and variables which were found to be significant at p values of <0.05 in bivariate analysis were taken to multivariate regression to test effect of independent variables on dependent variable. The usage of the long-term and permanent method was found to be 33% while that of short-term contraceptives was 67%. Implants (22.6%) were the highly used among the long-acting reversible contraceptives. The factors found to influence use of long-acting and permanent contraceptives among women seeking birth control in Westlands health centres were; Help to client in choosing contraceptive method to use at P = 0.01 (client own choice 39%, health care provider choice 23%), partners/spouse opinion on contraceptives at P= 0.04, unsatisfactory management of contraceptive side effects (45%), P= 0.01 and long waiting time before FP service (56% waited for ¼ to ½ hour), P= 0.01. Altogether the role of health care providers during contraceptives method counseling could not be ignored as the client felt being greeted and welcomed to the clinic (85%) and being handled well during service delivery (24%) influences their method choice and subsequent use (P= 0.001). In conclusion, the utilization of LAPMs in Westland’s sub-county is higher than the national figures though tubal ligation is less by 0.8%. It is of essence to recommend to the city-county government of Nairobi through the Department of health to readdress those negative factors that slow uptake of LAPMs through reorientation of contraceptive services and as well motivate contraceptive providers to encourage the eligible client to switch over from short-term methods of contraception to long-acting reversible methods which have a minimal failure rate.
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Access to family planning services and contraception is critical with the world population currently at seven billion inhabitants, and unfortunately, too many people (250 million) do not have the means to control their fertility (UNFPA, 2011). The health of women is closely related to their reproductive role and pregnancies which are either too early, too close, too many or too late, exposing mothers to high morbidity and mortality during pregnancy and childbirth (Gebremedhin, 2002). Child survival is also influenced by the mother's parity, birth interval, and birth order in addition to duration of breastfeeding (Sebastian, 2010; WHO, 2011).

Among adolescents and young adults, the major health problems include complications related to abortions and childbirth. For instance, an estimated 358 000 maternal deaths occurred worldwide in 2008, a 34% decline from the levels of 1990. Despite this decline, developing countries continued to account for 99% (355,000) of the deaths. Sub-Saharan Africa and South Asia accounted for 87% (313,000) of global maternal deaths (WHO, 2010). Fortunately, the vast majority of maternal and newborn deaths can be prevented with proven interventions to ensure that every pregnancy is wanted using modern contraceptive and every birth is safe (Jacobs, 2008).

Women and couples who want safe and effective protection against pregnancy would benefit from access to many contraceptive choices, including long-acting and permanent contraceptive methods (LAPMs). Despite these advantages, Long term
and permanent methods are given in few areas and sometimes are missing in many national reproductive health and family planning programs with more than 350 million couples worldwide having limited or no access to effective and affordable FP, especially to LAPMs (USAID, 2007). In developing countries, 20 to 30% of women who use oral contraceptives or injectable stop within two years of starting because of side effects or other health concerns (USAID, 2007). These women could benefit by switching to LAPMs.

Sub-Saharan Africa, has an average total fertility rate of 5.1, the highest average in the world; which is twice that of South Asia (2.8) (World Bank, 2009). The average contraceptive prevalence rate of 22% is half of South Asia (53%) due to low acceptance and high cultural resistance to family planning (UNPD, 2009). The total fertility rate of Kenya as reported in KDHS (2014) is 3.9 children per woman down from 8.1 in 1978, population growth rate is estimated at 2.6% per year, contraceptive prevalence rate (CPR) is only 58% (a marked increase from 46% in 2008-09 demographic survey) and an unmet need for family planning is 25%. Consequently, the maternal mortality ratio of 500/100,000 live births is high, and most SSA countries are not on track to achieve MDG5 (WHO, 2012).

According to previous KDHS of 2014, among all currently married women in Kenya (almost half, 47%) do not want to have another child and further 32% of the rest would like to wait for two years or more for their next birth. Slightly less than half of the married women (46%) in Kenya are using a family planning method. Most are using a modern method (39%), but 6% use a traditional method such as
withdrawal, lactational amenorrhea, and fertility awareness-based methods. Injectable (Depo-Provera) is by far the most commonly used contraceptive method; they are used by 22% of married women, while 7% of women uses pills. However, the prevalence of long-term/acting and permanent family planning method is very low and includes female sterilization 5%, IUCD and implants 2% among all married women (KDHS, 2008/09).

The contraceptive prevalence rate of Nairobi was estimated by Kenya demographic health survey of 08/09 to be 55% and notably, TFR had increased slightly from 2.7 in 2003 to 2.8 in 2008. The majority of married women rely on short-term contraceptives in Nairobi which include; injectable (18.2%), pills (13.2%) and 4.4% condom. The long-term methods are least used with implants being the preferred method at 4.4%, IUCD 3.9 % and female sterilization 2.7%. To attain a balance between resources and population, the Kenyan population policy promotes family planning as an entitlement that is based on informed and voluntary choice (Musyoka & Ogola, 2009). Therefore this study aimed at assessing the utilization of long-term/acting and permanent methods of family planning.

1.2 Problem statement

Family planning is fundamental in the effort to reduce the Fertility Rate (human population) and the consequential maternal mortality and morbidity as well as contributing to improvement in infant welfare. Notably, Kenya’s MMR stands at 360 per 100,000 live births (while globally it is 216) and Neonatal mortality of 31 per
1000 (KDHS, 2014) and the population growth keeps on increasing by one million people yearly. According to the Kenya 2009 population and household census result, there were 38.6 million people compared to 28.7 million and 21.4 million of 1999 and 1989 respectively (KNBS, 2010). The Kenya population is projected to reach 83 million by the year 2050 (KNBS, 2010). It will further strain the reproductive health services and increase the unmet need for contraception.

Over time the use of LAPMs has not kept pace with that of short-acting methods such as oral contraceptives (pills) and injectable. Data from demographic and health surveys from four Sub-Saharan countries (Ghana, Kenya, Senegal, and Tanzania) show that the proportion of women currently using LAPM is significantly lower than the proportion using short-acting methods. In each of the country, it has stagnated or declined over the past two decades with fewer than 5% of the women on contraception using LAPM (Janowitz, Gmach & Otterness, 2006)

It is known that despite women requiring long-term child spacing needs of more than two years, most still opt for short term methods of contraception hence under use of LAPMs. The later are unreliable with high failure rates, health concerns, and high discontinuation rate of the methods.

In Westlands sub-county study sites, short-acting contraceptives are the most preferred method of birth control by women of reproductive age compared to long term and permanent method which are user dependent and most effective for three to 12 years depending on which method is chosen. The method mix identified from the
sub-county health records were; injectable (47%), oral pills (26%), IUCD (2.4%), implants (2%), tubal ligation (0.05%) and vasectomy not utilized at all. However, the reasons responsible for this low uptake of long-acting and permanent methods in Westlands remain undefined.

1.3 Justification

The uptake of LAPM is very low not only in Westland's sub-county of Nairobi but also in the entire country with short-acting reversible methods like Depo-Provera and oral pills being the most preferred modern contraceptives. Repeated health facility attendance of clients on short term FP methods poses a challenge to the already strained health care providers as well as increasing the risk of contraceptive failure.

Kenya still has a large unmet need for FP services estimated at around 18% in 2014, with nearly 42% of Kenya’s population (16.5M) being under 15 years of age and an estimated 100,000 young people turning 16 every year. This pattern according to KDHS (2014), is expected to continue for more than a decade, and it is likely to put a heavy demand on reproductive health services including FP. This need could be met adequately by LAPMs which are cost effective option for users over time.

More than half of all pregnancies are unintended and globally large disparities exist in access to the most effective methods of contraception (Singh, 2012). The Kenya Demographic health survey of 2008/09 identified 17% of births in Kenya as being unwanted and a further 26% being mistimed (wanted later).
that increases the need for an effective and longer family planning method, which could be the choice of LAPMs.

Westlands Sub County in Nairobi typifies the rapid urbanization and population explosions with the proliferation of informal settlement which is posing a health service challenge to already strained facilities especially reproductive health. The World Bank projects that by 2033 the country (Kenya) will likely have half of the population living in the city. Nairobi will be hardly affected (World Bank, 2011).

1.4 Research questions

1) What is the level of usage of long-term and permanent family planning methods among family planning clients in Westlands sub-county health facilities?

2) What are the (socio-economic, socio-demographic, behavioral, logistical and service quality) factors influencing family planning choice regarding LAPMs among family planning clients in Westlands sub-county health facilities?

3) What are the roles of health care providers’ on the uptake of long-term and permanent family planning method to eligible women of reproductive age seeking FP services in Westlands sub-county health facilities?
1.5 Hypothesis

Null hypothesis

There was no significant relationship between socio-economic, demographic, logistical, service quality characteristics and utilization of LAPMs among family planning clients in Westlands Sub County.

There was no relationship between family planning service provider’s knowledge and skills and utilization of long-term and permanent family methods among family planning clients.

1.6 Objectives

1.6.1 Broad objectives

To assess the utilization of long-term and permanent methods of family planning among family planning clients in Westlands Sub-county health facilities.

1.6.2 Specific objectives

1) To establish the level of uptake of long-term and permanent family planning methods among family planning clients in Westlands sub-county health facilities.

2) To identify factors (socio-economic, socio-demographic, behavioral, logistical and service quality) influencing uptake of LAPM contraceptives among family planning clients in Westlands sub-county health facilities.
3) To determine health care providers’ role in the uptake of the long-term and permanent family planning methods to eligible women of reproductive age seeking FP services in Westlands sub-county health facilities.

1.7 Significance and anticipated output of the study

The study findings would be used to advise the MOH through the division of reproductive health on strategies/approaches to enhance positive factors and remove negative factors that influence LAPM (IUCDs, implants, and male/female sterilization) use so as to increase contraceptive prevalence and lower the unmet need of birth control.

The study findings would as well help the division of reproductive health and other key stakeholders in making decisions on how to initiate/proceed with LAPM skills training programs for health care workers in FP clinics and as well engage health care services to make full use of opportunities to provide family planning information and services. Family planning has been identified as a key priority component in the National Reproductive Health Policy (MOH, 2012) and has a high impact intervention to lower maternal and infant mortality by the maternal, infant and adolescent reproductive policy group (MOH, 2016).

The study findings have also provided valuable information on uptake of LAPMs contraceptives that would support the country’s initiative to address the unmet needs for family planning services as well scale up of long-acting reversible contraceptives and permanent birth control method.
The study findings have identified the number of women in long-term and permanent birth control methods which informs the need for support services such as follow-up and as well community advocacy for acceptance of this methods.

1.8 Conceptual Framework

1.8.1 Narrative of conceptual framework

A conceptual framework is a schematic diagram that shows how independent and dependent variables interact and influence the outcome of the study. Several factors affect the demand and utilization of LAPMs contraceptives. Some of these factors are socio-economic, demographic characteristics, logistical factors, behavioral characteristics and service quality.
1.8.2 Diagram of conceptual framework

INDEPENDENT VARIABLES

- Socio-economic status
  - education
  - residence
  - Occupation
  - Social status
  - Religion

- Demographic characteristics
  - Age
  - Parity
  - Marital status

- Behavioural characteristics
  - Method awareness
  - Partner involvement
  - Myths and misconception

- Method factors
  - Ease of use
  - Side effects
  - Fear of the method

- Service quality
  - Technical competency
  - Method counselling
  - Fear of the method

- Logistics
  - Supplies of FP
  - Availability of commodities

INTERVENING VARIABLE

- Policy factors
- Staffing ratio
- Staff motivation and supervision
- Peer influence

DEPENDENT VARIABLE

Utilization of long term and permanent contraceptives among Family planning clients at Westland Sub-county Health Facilities

Figure 1.1: Conceptual framework (Adopted from literature review)
CHAPTER TWO: LITERATURE REVIEW

2.1 Global contraceptive use

The global contraceptive rate stands at 63%. It is higher in the developed countries at 70% than in the developing countries at 62%. The Sub-Saharan Africa region has lowest CPR at 21%. The United Nations, Division of Population Reports that the CPR in Asia is 67%, Latin America and the Caribbean 72%, North America 73%, Europe 71 and 72% in Oceania. Ninety percent of contraceptive users control birth with a modern method with short-acting and reversible methods being preferred in the developing countries. Female sterilization is the most commonly used long-term method globally at 20%, followed by IUCD at 14% with the pill third at 9%.The injectable and the implants are used by 3.7% of the world’s population (UNPD, 2009).

Despite annual increase in the prevalence of contraceptive use worldwide (UNDESA,2009) and advances in available contraceptive options millions of women who do not want a child or want to delay childbearing are not using contraception (UNDESA, 2009). USAID (2007), observed that there is a large unmet need for reproductive health and family planning services in Sub-Saharan Africa. Moreover, this need is even particularly high in rural areas where health care facilities are often scarce, difficult to access or unable to meet the needs of clients due to shortages of staff or resources.

According to USAID (2007), over the last 30 years, contraceptive provision in the region has focused mainly on short-term methods such as condoms and
contraceptive pills. For example, a study done on prevalence and factors affecting the use of LAPM in 2008 at Jinka Ethiopia, showed the prevalence of contraceptive among participants was 39.5% of which LAPM contributed 7.3%. Implants were the most widely used method (50%) by LAPM users (CSA, 2009). It is now recognized that increasing access to quality services for long-acting and permanent methods such as IUCD, implants, and tubal ligation is pivotal to widening women’s contraceptive choices (USAID, 2007).

Evidence suggests a substantial unmet need for LAPMs in Sub-Saharan Africa. A discrepancy exists between the proportion of women who wish to stop having children and the proportion using a LAPM. Data from DHS conducted in SSA between 2003 and 2005 show that more than 20% of women in nine out of 11 countries (Cameroon, Chad, Congo-Brazzaville, Ethiopia, Guinea, Lesotho, Madagascar, Malawi, Rwanda, Senegal, and Tanzania) surveyed do not want any more children. However in each of the nine countries fewer than 7% of the women are using a LAPM (Janowitz, Gmach & Otterness, 2006). A LAPM may be a good option for some of them given their reproductive intentions, but they may not be using one because of lack of knowledge or access (ESD, 2007).

2.2 Contraceptive Use in Kenya.

The practice of family planning (FP) in Kenya has increased steadily since the early 1980s, with the contraceptive prevalence rate (CPR) for all FP methods reaching 58% in 2014 (KDHS, 2014). Use of modern contraceptives among married women rose from 32 percent to 39 percent between 2003 and 2008. Kenya’s FP
program has been among the most successful in Sub-Saharan Africa (MOH, 2009). The method mix of contraceptives nationally is pills 8%, female sterilization 3.2%, Implants 9.9%, Injectable 26.4%, IUCD 3.4% and male condoms at 2.2% (KNBS, 2015). While that of Nairobi is 23.6% injectable, 12.1% Pills, 3.2% male condoms, 4.2% IUCD, 12.1% Implants and 7% being other methods (KDHS, 2014).

Fifty-five percent of married women in Kenya are not using contraception because of fear of side effects and health concerns. Other reasons for not using such as religious prohibitions, opposition to use, menopause, infecundity, desire for many children and infrequent sex were each cited by 6-9% of women as the main reason for not intending to use a family planning method in the future. In addition, the largest proportion (52%) of prospective users of family planning in KDHS 08/09 reported injectable as their preferred method, with 12% citing pills compared to 8% favoring female sterilization and implants.

2.3 Long term and permanent contraceptive method

Women who have more contraceptive choices are more likely to start using a method of family planning, be satisfied with their choice and continue using their method until they no longer wish to prevent pregnancy. LAPMs are vital to the overall success of reproductive health and family planning programmes (Pariani, Heer & Van Arsodol, 1991) and recent scientific findings and new understanding about long-term and permanent methods of contraception underscore their safety and effectiveness leading to development of medical eligibility criteria (MEC) by WHO (WHO, 2012) to improve providers confidence with the methods.
2.3.1 IUCD

In countries of Sub-Saharan Africa, IUCD utilization levels are generally amongst the lowest in the whole world, as are overall contraceptive use rates. IUCDs have been used for nearly 40 years and have become one of the most commonly used, most available methods of FP worldwide. More than 100 million women have used the IUCD so that it has become second only to voluntary sterilization as the most popular method in the world (Trieman et al., 1996; Liskin 1990). Sixteen percent of Africans rely on IUCD, but it’s influenced by relative dominance of IUCDs in North Africa where 37% of all users rely on the IUCD. For instance in Egypt and Tunisia one in two contraceptive users have an IUCD, but in Sub-Saharan Africa, the use of the IUCD is less common with only 2% of users relying on IUCD (WHO, 2010).

In Kenya, the most widely used copper bearing IUCD is ‘copper T380A’ which provides protection for as long as 12 years (WHO, 2008). In a study done in Guatemala showed that women with high school or higher education (5.2%) use coil than women with elementary education (1.4%) or without formal schooling (0.4%) (Montufar & Morales, 2005).

Intrauterine devices and implants have a proven record of long-term effectiveness, convenience, cost effectiveness and high user satisfaction (WHO, 2003). However, despite the many findings and evidence that confirm the IUCD’s high degree of safety and effectiveness as well as its suitability for most women, efforts to revitalize IUCD use in developing countries family planning programs have many challenges. Providers tend to overestimate the IUCDs association with
negative side effects and conditions. In addition myths and misconceptions at the client and community levels remain widespread (ACQUIRE, 2007).

### 2.3.2 Tubal ligation

A meta-analytical study carried out by United Nations in 2009, found out that among women aged 15-49 who were married or in union, female sterilization was used by 20.3% and IUCDs by 14.2%. Tubal ligation is a safe and effective permanent method for women who have completed their families or for individuals who do not wish to have children (WHO, 2012). In Kenya for example, nearly 4% of users of modern methods of contraception rely on female sterilization (CBS, 2014; KDHS, 2014) despite being a highly effective surgical non-reversal method of contraception with a pregnancy rate of less than 1% of women within one year after surgery and few women (0.4-2.0 %) experiencing side effects (WHO, 2009).

### 2.3.3 Vasectomy

According to KDHS of 2003 less than 1% of married women had ever relied on male sterilization (CBS, 2004) compared to 14% who rely on female sterilization. The option of a vasectomy would be a good solution when a woman has a medical condition that hinders use of all modern female contraception methods. Vasectomies are recommended and safe for men of reproductive age who have achieved their desired family size and who understands and voluntarily give informed consent for the procedure including men who are infected with or at risk for HIV or who have sickle cell disease (WHO, 2009). The findings of a study carried out in Ethiopia show that a significant number of participants had low knowledge on permanent
contraceptive particularly vasectomy. More than half of the married women had a negative attitude towards practicing of LAPMs particularly for female sterilization and vasectomy (Alemayehu, 2012).

2.3.4 Implants

Implants are small rods inserted under the skin of a woman’s upper arm to release the hormone progestin slowly, thus preventing pregnancy. There are three types of implants that have been approved for use in Kenya, which include Jadelle (effective for 5 years), Implanon (3 years) and sino-implant/Zarin which are effective for four years (MOPHS, 2010). Implants use increased from 0% in 1993 to 7.7% in 2008 and are more common in women of the age groups 15-29 years (KNBS, 2010).

2.4 Factors influencing LAPMs use

2.4.1 Myths and misconception

In a study carried out in East Shoa, Ethiopia to determine the demand for long-term and permanent methods and their associated factors reveal participants believed that use of implants and IUCD led to permanent sterility. Eleven point two percent (11.2%) of women had heard from the community IUCD could cause pain during intercourse, eat the uterus making it thin and even disappear in the uterus, while implants (24.6%) could cause mental illness, hypertension, anemia, fever and uterine mass (Haile, 2012).
2.4.2 Age

The Kenya demographic health survey (2008/09) identified the contraceptive peaks among married women to be 30-34 age groups and is lowest for women at 15-19. As expected female sterilization is used more commonly by women at age 40-49, while married women at the peak of childbearing age of 20-39 are most likely to use injectable and pills. Use of condoms is particularly high among sexually active unmarried women (KDHS, 2008/09).

2.4.2 Parity

IUCD along with other voluntary sterilization and implants are well suited to the needs of couples who have all the children they desire. However an interesting finding from a fourteen meta-analytical study found out that, about half of all IUCD users appears to be motivated by the wish to space or postpone childbearing (Mohammed et al., 2011). The proportion of married women using modern methods increases with the number of living children, peaking at three to four children and then dropping for those with five or more children (KDHS, 2009). This was further explained in another study carried out in Uganda by Maries Stopes International Outreach Stations who found that a higher proportion of women opting for tubal ligation services indicated to have had completed their family (30%) compared to those who opted for IUCD and implants for spacing (Nantayi, Ngo, Odong & Reiss, 2012).
2.4.3 Partner influence on family planning use

Use of family planning methods is facilitated when couples discuss and agree on the issue (KDHS, 2009). A retrospective study on vasectomy users in Uganda found that in only about one-half (44.4%) of the cases both partners had made the decision to opt for the vasectomy (Kakamade et al., 1993).

2.4.4 Service quality

The Kenya Demographic Health Survey of 2008/09 revealed that government sources supply a larger proportion of users of long-term methods such as female sterilization, implants (and injectable) than users of pills, IUCDs and male condoms. In a study carried out in Tanzania to explore and document factors affecting IUCD use, it found out that 42% of the rural health providers had not received training in IUCD skills and most of them expressed the need for the training. In addition, even those who had previously received training had largely suffered erosion of knowledge, skills and confidence and now needed refresher and update training (Ruminjo & Hiza, 2002).

2.4.5 Attitude of Health service providers

Ruminjo and Hiza (2002), identified that rural health providers (and their partners) attitude was very positive for using FP for child spacing and limiting, but the attitude was much less positive for IUCD as they harboured some misunderstandings and misconceptions about the IUCD. In the 2008-09 KDHS, married women who were not using any family planning method were asked if they had been visited by a field worker who talked to them about family planning method.
The results reveal only 9% discussed issues of FP with the health facility staff. This implies that many opportunities are lost when potential users can be educated on the benefits of family planning (KDHS, 2010).

Health care providers may help women at risk of unwanted pregnancies by informing them about the full range of reliable contraceptive options available, including LARC methods which greatly minimize the need for the user's dependence on the adherence to a routine (Blumenthal et al., 2010).

In a study carried out in Uganda by Kate et al. (2012), the main reasons that women gave for adopting LAPMs were child spacing (53%), not wanting children (23%) and completed families (13%). A higher percent of tubal ligation clients reported completed families 30% than IUCD and implants clients (7% and 3% respectively).

2.5 Summary of literature review

Globally female sterilization is the most used method of contraception followed by intrauterine contraceptive devise where as in Kenya Depo Provera injectable and pills are the most preferred birth control methods. The factors identified in Africa from literature review to influence the utilization of long term and permanent contraception were myths, beliefs, misconceptions, spouse opinion and parity of more than 3 children.

However, there is no known literature identifying such factors in Kenya. KDHS is the main source of quantitative data on utilization of family planning in Kenya, though less qualitative information touching on utilization of LAPM’s. Most
of the reviewed studies in Kenya have focused on short-term family in Kenya. Therefore, this study aimed at assessing the hindrances to the utilization of Long-term and permanent methods of contraception among women of reproductive age in Westlands Sub County and as well report the overall usage of such methods.
CHAPTER THREE: MATERIALS AND METHODS

3.1 Research design

It was a descriptive cross-sectional survey, which assessed the utilization of long-term methods of contraception among women of reproductive age, through an exit survey. This design allowed the researcher to solicit personal and self-reported information directly from respondents about family planning method they were utilizing.

3.2 Study variables

Dependent variable was utilization of long term/acting family planning method Independent variables were; a) Socio-economic (education, occupation, residence, social status), b) Demographic characteristics (marital status, age, religion, culture, and beliefs, parity), c) Behavioral characteristics (ease of use of FP methods, fear of side effects related to FP, partner involvement, FP awareness levels), d) Service quality and role of health care provider (technical competency, staffing ratio, staff motivation, method counseling, and follow-up).

3.3 Study area

The study was carried out in Westlandssub-county of Nairobi, Kenya. Westlands is located 3.1 km by road northwest of the central business district of Nairobi and its 1700m above sea level. Nairobi has a population of approximately 3,138,369 individuals distributed in four districts; that is Nairobi West, Nairobi East, Nairobi North and Westlands.
According to the census of 2010 Westlands Districts had a population of 247,102 (124,748 males and 122,354 females). It has six administrative Divisions (High Ridge, Kangemi, Kilimani, Kitisuru, Lavington, and Parklands). The study was carried out in 8 public health facilities owned by Nairobi County government (Karura, Kangemi, Westlands, Kabete approved, Kari, Lower Kabete, Mjiwa Huruma, and State House Clinic) distributed in those administrative areas.

3.4 Target Population

The target population was all women of reproductive age (15-49) years, who were using family planning services in different service delivery points in Westlands Sub County and all providers of FP services in those SDPs.

3.5 Sampling techniques and procedures

3.5.1 Sample size

The required sample size for client exit interview was determined by using the following assumption to estimate the sample size of single population proportion for prevalence studies by Kish Leslie (1965).

\[ n = \left( z_{1-\alpha} \right)^2 \left( p(1 - p) + d^2 \right) \]

Where \( z_{1-\alpha} = z_{0.95} = 1.96 \) (For a normal distribution table for a CI 95%)

\( P \) is the prevalence; in Kenya the CPR is 46% (KDHS, 2009)

(The absolute precision required is ±5%)

\( D = 5\% = 0.05 \)
Therefore \( n = 1.96^2 \times \left( \frac{0.46(1-0.46)}{0.05^2} \right) \)

\[ = 381 \]

10% (38) was added to cater for incompleteness of questionnaire. The total participants for the exit survey interview were 419. FGD had 6 to 8 service providers per site due to the constraint of health personnel within the facilities of study.

3.5.2 Sampling technique and procedure

Stratified proportionate sampling was used where eight strata (contraceptive service delivery points) were identified. Given the total monthly average attendance of 2045 clients for all service delivery points and that the estimated attendance for each SDP was; Kangemi 1177, Westlands 517, Kari 32, Kabete Approved 63, Kabete 36, Karura 92, State House 32 and Mjiwa Huruma 96. Then the proportionate sample size for each service centre was calculated as shown in Table 3.1 below:
Table 3.1 proportionate sampling for health facilities

<table>
<thead>
<tr>
<th>Study Site</th>
<th>Estimated Attendance</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kangemi</td>
<td>1177</td>
<td>240</td>
</tr>
<tr>
<td>Westlands</td>
<td>517</td>
<td>106</td>
</tr>
<tr>
<td>Karura</td>
<td>96</td>
<td>19</td>
</tr>
<tr>
<td>Kari</td>
<td>32</td>
<td>7</td>
</tr>
<tr>
<td>Kabete</td>
<td>63</td>
<td>13</td>
</tr>
<tr>
<td>Lower Kabete</td>
<td>36</td>
<td>7</td>
</tr>
<tr>
<td>Mjiwa Huruma</td>
<td>96</td>
<td>20</td>
</tr>
<tr>
<td>State House Clinic</td>
<td>32</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2045</strong></td>
<td><strong>419</strong></td>
</tr>
</tbody>
</table>

During the period of study the family planning clients were informed of the study as part of routine health talk and using the established current flow of client in each study site, a systematic interval was determined and participants for the study identified. Those who had consented (by signing or putting fingerprints were assigned special numbers) to participate in the study were confidentially given questionnaires by the research assistants as they exited the family planning
room. This was done until the required number was achieved as per the study site, throughout the study period.

For Qualitative data, four FGDs were conducted. They were given to family planning service provider identified conveniently at each service delivery point in Kangemi, Westlands, Mjiwa Huruma and Karura health centres. Each group consisted of six to eight nurses (depending on the study site) and the researcher coordinated the discussion.

3.6 Eligibility criteria

3.6.1 Family planning clients

Inclusion criteria

FP clients aged 15-49 years and who consented to participate in the study.

Exclusion criteria

FP clients < 15 years of age and those > 50 years. Those FP clients who did not consent to participate in the study.

3.7 Construction and research instruments

Data was collected using structured interview questionnaire for family planning clients and FGD guide for FP service providers (Appendix 5.4). They were constructed from research questions.
3.8 Pilot study

A pilot study intended to pretest the data collection instruments was carried out at a rural-semi urban government health center of Wangige, which shared similar characteristics with the study area. 42 (10% of the study sample) structured interview questionnaires and one FGD were pretested. The results of the pilot study were cleaned, coded and analyzed by SPSS to check for data quality control; amendment were done to the data collecting instruments guided by study objectives. Control of bias was done through appropriate selection and training of research assistants and piloting of data collection tools and procedures.

The recruitment of research assistant followed the understanding of the subject under study, dynamics of the study area and avoidance of bias. A second year nursing student with a better understanding of English, Swahili and Sheng’ were recruited and trained. Three of them assisted in data collection.

3.9 Data collection techniques

An exit structured interview questionnaires were given to clients by the researcher and trained research assistants. 4 FGDs were used to collect data from the health care workers identified in the busy service delivery points of Kangemi, Westlands, Mjiwa Huruma and Karura health centres.

3.10 Data quality control

The instruments were subjected to review from an expert in the community health department and School of Public Health. The validity and reliability of data was achieved through pre-testing and piloting of the study in a similar field before
the actual study. The research assistants were thoroughly trained and closely supervised by the investigator and data collection tools were checked in the field to ensure completeness and consistency.

3.11 Data management and analysis

Data collected was coded, entered and cleaned in the Microsoft Excel software 2010. All quantitative statistical analysis was performed using the statistical package for social sciences (SPSS) software version 2014 (SPSS Inc. USA). Descriptive statistics were computed to generate frequencies, mean, mode and standard deviation. Chi-square test was used to test the association between dependent and independent variables. A p-value of less than 0.05 was considered for all statistical analysis. Strength and direction of the relationship was established using multiple regression.

Qualitative data was transcribed, coded and analyzed using content, thematic analysis to support quantitative analysis and presented in the narrative.

3.12 Ethical and Logistical Issues

Ethical approval was obtained from Kenyatta University Ethical Committee, protocol number; PKU/219/1195 (Appendix 6) and permission from National Commission for Science, Technology and Innovation, NACOSTI/P/14/0383/2913, (Appendix 8) and from MOH Nairobi City-county government, NCC 1-8243, (Appendix 7) before the study was carried out.
Informed consent (Appendix 1) was also sought from the study participant and were informed of their rights to withdraw from the study any time by way of signature or thumbprint. Study numbers other than names were used to promote anonymity and confidentiality. There was no direct benefit to study participants. The final report of the project was disseminated to the participating institutions through the County Director of Medical Services.
CHAPTER FOUR: RESULTS

4.1 Baseline characteristics of the study participants

4.1.1 Age, Marital status, and Religion

Table 4.1 shows the baseline characteristics of women aged 15-49 years in the study. A total of 381 participants (FP clients) and 4 FGDs (FP service providers) were interviewed from the eight public health facilities within Westland’s sub-county, Nairobi County. This represents 92% response rate.

The mean age of the respondents was 26.4 years (SD=5.6) with those at the age group of 20-29 years being the majority of FP consumers. The majority of the respondents are married (93%) and are Protestants (72%) as represented in Table 4.1 below.

Table 4.1: Participants’ Age, Marital status, and Religion

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yrs.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-19</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>20-29</td>
<td>259</td>
<td>68</td>
</tr>
<tr>
<td>30-39</td>
<td>89</td>
<td>23</td>
</tr>
<tr>
<td>40-49</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single (Unmarried)</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Married</td>
<td>356</td>
<td>93</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Widowed</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>95</td>
<td>25</td>
</tr>
<tr>
<td>Protestant</td>
<td>275</td>
<td>72</td>
</tr>
<tr>
<td>Muslim</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Hindu</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
4.1.2 Education level, Occupation and Monthly Income

Thirty-four percent (34%) of the client had completed secondary school education and the majority (48%) of them are housewives. 50% of the respondent earned less 30 USD per month. This is shown in Table 4.2.

Table 4.2: Education level, Occupation and Monthly Income

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Level Of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Primary incomplete</td>
<td>35</td>
<td>9</td>
</tr>
<tr>
<td>Primary complete</td>
<td>110</td>
<td>29</td>
</tr>
<tr>
<td>Secondary incomplete</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Secondary complete</td>
<td>129</td>
<td>34</td>
</tr>
<tr>
<td>College</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>University</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Employed</td>
<td>67</td>
<td>18</td>
</tr>
<tr>
<td>Self Employed/Merchants</td>
<td>70</td>
<td>18</td>
</tr>
<tr>
<td>House wife</td>
<td>184</td>
<td>48</td>
</tr>
<tr>
<td>Casual Labourer</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>Student</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Income (USD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>&lt;30</td>
<td>191</td>
<td>50</td>
</tr>
<tr>
<td>31-55</td>
<td>84</td>
<td>22</td>
</tr>
<tr>
<td>56-111</td>
<td>51</td>
<td>13</td>
</tr>
<tr>
<td>112-167</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>168-223</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>224-279</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>&gt;280</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
4.1.3 Use of long term and permanent FP methods

Implant (22%) was the most used long term method amongst women of reproductive age seeking FP services at Westlands Health Facilities while 8% used coil. For permanent method, tubal ligation was used by 2% of the respondent compared to 1% whose partners had undergone vasectomy. Short-term contraceptives are by far the most preferred methods of family planning as presented in figure 4.1.

This is well supported by the findings of FGD, “Among the clients who use long terms, implants and coil is the most preferred method, a few chose tubal ligation where we link up with Tupange project and vasectomy is hardly mentioned or used as it is a man-method and few of them if any accompany their women to the clinic” (Participant 3, nurse Westlands health centre).
Figure 4.1: Usage of long term and permanent FP methods

4.2 Demographic and socio-economic factors versus LAPM use

4.2.1 Age

Among the LAPM’s users, those at 20-29 years age group are the highest at 63%. This is shown in Table 4.3.

Table 4.3: Relationship between age and LAPMs use

<table>
<thead>
<tr>
<th>LAPM used</th>
<th>Age</th>
<th>15-19</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implants</td>
<td>n(%)</td>
<td>4 (5)</td>
<td>53 (62)</td>
<td>26 (30)</td>
<td>3 (3)</td>
<td>86</td>
</tr>
<tr>
<td>IUCD</td>
<td>n(%)</td>
<td>1 (3)</td>
<td>20 (66)</td>
<td>9 (31)</td>
<td>0 (0)</td>
<td>30</td>
</tr>
<tr>
<td>BTL</td>
<td>n(%)</td>
<td>0 (0)</td>
<td>6 (67)</td>
<td>0 (0)</td>
<td>3 (33)</td>
<td>9</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>5</td>
<td>79</td>
<td>35</td>
<td>6</td>
<td>125 (100)</td>
</tr>
</tbody>
</table>

4.2.2 Marital status

Long term and permanent contraceptives are mostly used by the married women (93%) with implants being the most preferred (22%) among the respondent. This is shown in Table 4.4.

Table 4.4: Relationship between marital status and LAPM use

<table>
<thead>
<tr>
<th>LAPM used</th>
<th>Marital status</th>
<th>Single</th>
<th>Married</th>
<th>Divorced /separated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implant</td>
<td>n(%)</td>
<td>4 (5)</td>
<td>80 (93)</td>
<td>2 (2)</td>
<td>86</td>
</tr>
<tr>
<td>IUCD</td>
<td>n(%)</td>
<td>0 (0)</td>
<td>30 (100)</td>
<td>0 (0)</td>
<td>30</td>
</tr>
<tr>
<td>BTL</td>
<td>n(%)</td>
<td>1 (11)</td>
<td>8 (89)</td>
<td>0 (0)</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5</td>
<td>128</td>
<td>2</td>
<td>125</td>
</tr>
</tbody>
</table>
4.2.3 Religion

71% of the Protestant used LAPM contraceptives compared to 26% of the Catholics with implants being the most preferred method of contraception as shown in Table 4.5.

Table 4.5: Religion and use of LAPM’s contraceptives

<table>
<thead>
<tr>
<th>LAPM used</th>
<th>Religion</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Catholic</td>
<td>Protestant</td>
<td>Muslim</td>
<td>Hindu</td>
<td>Totals</td>
</tr>
<tr>
<td>Implants</td>
<td>n(%): 19 (22)</td>
<td>63 (73)</td>
<td>3 (4)</td>
<td>1 (1)</td>
<td>86</td>
</tr>
<tr>
<td>IUCD</td>
<td>18 (60)</td>
<td>12 (40)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>30</td>
</tr>
<tr>
<td>BTL</td>
<td>6 (67)</td>
<td>3 (33)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>9</td>
</tr>
<tr>
<td>Totals</td>
<td>43</td>
<td>88</td>
<td>3</td>
<td>0</td>
<td>125</td>
</tr>
</tbody>
</table>

4.2.4 Education

Among the respondents who used long term and permanent contraceptives, those who had attained secondary school education were the overall majority as shown in Table 4.6
Table 4.6: Education level and use of long term and permanent methods of FP

<table>
<thead>
<tr>
<th>Method of LAPM used</th>
<th>Level of education</th>
<th>No formal education</th>
<th>Primary incomplete</th>
<th>Primary complete</th>
<th>Secondary incomplete</th>
<th>Secondary complete</th>
<th>College</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implant</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3(27)</td>
<td>6(17)</td>
<td>18(16)</td>
<td>9(20)</td>
<td>36(28)</td>
<td>9(24)</td>
<td>5(38.5)</td>
<td></td>
</tr>
<tr>
<td>IUCD</td>
<td>1(9)</td>
<td>2(6)</td>
<td>8(7)</td>
<td>5(11)</td>
<td>6(5)</td>
<td>5(13)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BTL</td>
<td>1(9)</td>
<td>0(0)</td>
<td>3(3)</td>
<td>0(0)</td>
<td>4(3)</td>
<td>1(2)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>8</td>
<td>29</td>
<td>14</td>
<td>46</td>
<td>15</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

4.2.5 Occupation

Majority of the house wives use LAPM’s at 44% with implants being the most preferred method by them as shown in Table 4.7.

Table 4.7: Respondents occupation and use of long term and permanent methods of FP

<table>
<thead>
<tr>
<th>Method of LAPM used</th>
<th>Occupation</th>
<th>Unemployed</th>
<th>Employed</th>
<th>merchant</th>
<th>House wife</th>
<th>Casual labourer</th>
<th>Student</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
</tr>
<tr>
<td>Implant</td>
<td>0(0)</td>
<td>22(26)</td>
<td>15(17)</td>
<td>40(47)</td>
<td>7(8)</td>
<td>2(2)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>IUCD</td>
<td>0(0)</td>
<td>6(20)</td>
<td>7(23)</td>
<td>14(47)</td>
<td>0(0)</td>
<td>3(10)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>BTL</td>
<td>0(0)</td>
<td>3(33)</td>
<td>3(33)</td>
<td>0(0)</td>
<td>3(33)</td>
<td>0(0)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>31</td>
<td>25</td>
<td>54</td>
<td>10</td>
<td>5</td>
<td>125(100)</td>
<td></td>
</tr>
</tbody>
</table>
4.2.6: Income

Majority of the respondent in the category of LAPM users (45%) and users of other contraceptive method (53%) earn less than 1 US$ per day (<30USD per month) as indicated in Table 4.8.

Table 4.8: Average monthly income and use of LAPM

<table>
<thead>
<tr>
<th>Monthly Income (USD)</th>
<th>Use of LAPM</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>&lt;30</td>
<td>57</td>
<td>45</td>
<td>134</td>
</tr>
<tr>
<td>31-55</td>
<td>28</td>
<td>22</td>
<td>56</td>
</tr>
<tr>
<td>56-111</td>
<td>14</td>
<td>11</td>
<td>37</td>
</tr>
<tr>
<td>112-167</td>
<td>11</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>168-223</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>224-279</td>
<td>7</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>&gt;289</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

4.2.7 Health care worker enquired on side effects and use of long-term and permanent methods of FP

Health care provider enquired about side effects from 38% of LAPM users compared to 62% of respondents who relied on other contraceptives as shown on Table 4.9.
This was also captured from the service provider FGD guide, where a participant had this to say, “It’s not possible to talk to all clients about contraceptive they are using as the clinic may be too busy, we also do postnatal follow up in the same clinic other times the clients are in a hurry so you offer the method” (Participant 4, nurse, Kangemi health centre)

Table 4. 9: Health care worker enquired on side effect and use of long-term and permanent methods of FP

<table>
<thead>
<tr>
<th>Enquiry by HCW on side effects</th>
<th>Used LAPM</th>
<th>Used Short term FP Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>118</td>
<td>38</td>
</tr>
<tr>
<td>NO</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>

4.2.8 Presence of Side effects and use of LAPM

Among the users of LAPM, the most side effects experienced were lack of menses (28%), heavy bleeding during menstrual periods (20%) and cramping/backache (13%) as shown in Table 4.10.
Table 4.10: Presence of side effects among users and non-users of LAPM

<table>
<thead>
<tr>
<th>Side effects reported</th>
<th>Used LAPM</th>
<th>Not used LAPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of menses</td>
<td>20%</td>
<td>8%</td>
</tr>
<tr>
<td>Heavy bleeding during menses</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Severe headache</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Spotting and Irregular menses</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>Weight gain/Weight loss</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>backache/cramping/limb swelling (Others)</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>No problem with method</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td>nausea, metallic taste in the mouth, forgetfulness</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Couldn't feel the method</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Dirty discharge from genitals</td>
<td>0%</td>
<td>1.50%</td>
</tr>
<tr>
<td>high blood pressure</td>
<td>1%</td>
<td>0%</td>
</tr>
</tbody>
</table>

4.2.9 Handling of the side effects by health care and clients use of LAPM

The health care provider understood and explained the contraceptive side effect to 42% of the respondents who use long term and permanent methods. The HCW further suggested the action of resolving the contraceptive problem to 41% of the LAPM user’s and 45% of them were satisfied with the advice/treatment given to resolve the problem. This is shown in Table 4.11.
Table 4.11: Action taken by health workers on side effects of LAPM

<table>
<thead>
<tr>
<th>Action taken by HCP</th>
<th>Users of LAPM (%)</th>
<th>Non-users of LAPM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCP explained problem to client</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td>Client had no problem</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td>HCP suggested action to resolve problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>41</td>
<td>59</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>Client had no problem</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td>Client satisfied with treatment/action offered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>Client had no problem</td>
<td>14</td>
<td>86</td>
</tr>
</tbody>
</table>

4.2.9 Help on choosing the LAPM contraceptives

Contraceptives service providers play a role in helping clients to choose contraceptives with that of long-term and permanent contraceptives standing at 22%. This is as shown in Figure 4.2. Others choose their own methods with preference being short term methods.

This is as well supported by a narrative from an FGD guide, where one service provider said, “The client might not have ever had a child (or secondary infertility) neither has adequate knowledge on contraceptives thus a short term method is chosen for her which will allow her to see her menses every month as follow up is being made” (Participant 5, nurse Westlands health center) and in another group HCP said, “We respect the choice of client, many seems to be knowing about
the method of their choice from their friends or internet, you can’t change
them” (participant 1, nurse, Karura health centre).

**Figure 4.2: People who helped choose FP method to client**

(On bivariate analysis there was a significant association between help in choosing contraceptive method and use of LAPM’s at $X^2(5) = 46.7, P<0.001$)

**4.2.10 Partner influence on use of LAPM**

Most of the respondent who used long term and permanent method of contraception had discussed with their spouses as shown in Figure 4.3.
Figure 4.3: Partner influence on use of LAPM

Among LAPM’s users, those who had discussed with their spouse the method to use tended to use more of the LAPMs (10%) compared to 2% whose partners were not aware they were using the method of contraception as shown in Figure 4.4
Figure 4. 4: Partner involvement in choice of LAPM

4.2.10 Myths, beliefs and misconception and use of LAPMs

The commonest myths and beliefs among long term and permanent contraceptives non users is that implants causes high blood pressure and sudden death (8%), coil hurts husband during intercourse and affects sex styles(7%), women become pregnant with coil(6%) as shown in Table 4.12.
FGD guide findings also revealed client were shunning the method because of perceived rumours which had created anxiety and fear even among those using the method while those not on it, refuse to take the method even after counseling as explained by one FGD participant, “Some clients come to discontinue implants and coil because they have been told by friends in the community they will acquire cancer of the breast, uterus and cervix. Others say the husband is complaining coil is hurting him during sex or another woman in the village became pregnant while using the methods thus can’t continue using it” (participant 5, nurse Kangemi.)
Table 4.12: Myths and beliefs about LAPM

<table>
<thead>
<tr>
<th>Myths and beliefs</th>
<th>Using LAPM N (126)</th>
<th>Not using LAPM N (255)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported no myths and beliefs</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>Coil causes cervical uterine cancer</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Women become pregnant with coil and child is born holding it</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>Coil causes HIV/AIDS</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Implant causes high blood pressure and sudden death</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>Implants causes breast cancer</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Implants makes a woman shapeless</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>With implant, woman cannot do manual work, hand becomes weak</td>
<td>1.5%</td>
<td>6%</td>
</tr>
<tr>
<td>Coil hurts husband during intercourse, affects sex styles</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>BTL makes menses to clot in woman abdomen causing diseases like fibroids</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>BTL requires major surgical operation and hospitalization</td>
<td>1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Vasectomy makes a man useless sexually</td>
<td>0.5%</td>
<td>1%</td>
</tr>
<tr>
<td>BTL is for older women</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**4.2.11 Culture and use of LAPM**

107(85%) of the respondents who used LAPM reported that, culture had no influence on their choice of FP compared to 219(86%) of them who don’t use and say culture has an influence on FP method as shown in Figure 4.5.
Figure 4.5: Influence of Culture on Choice of LAPM

4.2.12 Number of children and use of LAPM

Implants are mostly used by women with one child (42%) while coil was used by those with 2 children (40%) and BTL preferred by those with four children as shown in Table 4.13.

Table 4.13: Number of children per house and use of LAPM

<table>
<thead>
<tr>
<th>LAPM used</th>
<th>Number of children client Had</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 child (n(%)</td>
<td>2 children (n(%)</td>
<td>3 children (n(%)</td>
<td>4 children (n(%)</td>
<td>&gt;children (n(%)</td>
<td>none (n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implant</td>
<td>36 (42)</td>
<td>28 (32)</td>
<td>16 (19)</td>
<td>6 (7)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>IUCD</td>
<td>6 (20)</td>
<td>12 (40)</td>
<td>3 (10)</td>
<td>7 (24)</td>
<td>1 (3)</td>
<td>1 (3)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>BTL</td>
<td>3 (34)</td>
<td>1 (11)</td>
<td>0</td>
<td>4 (44)</td>
<td>1 (11)</td>
<td>0 (0)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Total LAPM</td>
<td>45</td>
<td>41</td>
<td>19</td>
<td>17</td>
<td>2</td>
<td>1</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>Short-term FP</td>
<td>89(34)</td>
<td>91(36)</td>
<td>38(15)</td>
<td>25(10)</td>
<td>10(4)</td>
<td>2(1)</td>
<td>255</td>
<td></td>
</tr>
</tbody>
</table>
4.2.13 Future child spacing and use of LAPM’s

Most of the respondents would wish to wait for more than five years (space) before getting another child. These respondents used mostly implants (49%) and coil (37%) compared to those who had enough children and mostly had undergone tubal ligation as shown in Table 4.14.

**Table 4. 14: Future child spacing and use of LAPM’s**

<table>
<thead>
<tr>
<th>LAPM used</th>
<th>Child space</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No plan</td>
<td>1-2 yrs</td>
<td>3-4 yrs</td>
<td>&gt;5yrs</td>
<td>Have enough</td>
<td></td>
</tr>
<tr>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
<td></td>
</tr>
<tr>
<td>Implant</td>
<td>4 (5)</td>
<td>11 (13)</td>
<td>9 (10)</td>
<td>42 (49)</td>
<td>20 (23)</td>
<td>86</td>
</tr>
<tr>
<td>IUCD</td>
<td>1 (3)</td>
<td>4 (13)</td>
<td>5 (17)</td>
<td>11 (37)</td>
<td>9 (30)</td>
<td>30</td>
</tr>
<tr>
<td>BTL</td>
<td>0 (0)</td>
<td>1 (11)</td>
<td>0 (0)</td>
<td>2 (22)</td>
<td>6 (67)</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>26</td>
<td>14</td>
<td>55</td>
<td>44</td>
<td>125</td>
</tr>
</tbody>
</table>

4.2.14 Future desire for contraceptives and use of LAPM’s

37% of the respondents who currently used short term methods would consider long term and permanent methods in future compared to 63% who would continue with the same method. A proportion of those using long term methods (15%) would consider reverting to short term methods compared to 85% who would still use them. This is as shown in Figure 4.6.
Figure 4.6: Desire to use LAPM in future

4.2.15 Client waiting time at the health facility

Most of the clients, 71 (56%) who used LAPM waited for 16-30 min before they were attended by the FP service provider compared to 16% who had waited for 31-45 minutes as shown in Figure 4.7

Figure 4.7: Waiting time before being attended by service provider
When asked about their feeling on waiting time before being attended by FP service provider, 64% of the respondents who used long term and permanent methods, said it was reasonably short while 2% of them felt it was too long as shown in Figure 4.8.

![Client opinion on waiting time](image)

**Figure 4.8: Client opinion on waiting time**

### 4.2.16 Missed FP method in a facility

19 (15%) of the respondents who used LAPM had missed a contraceptive method in any one of the facility at any given time compared to 95 (37%) who relied on other FP methods as shown on Table 4.15.

**Table 4.15: Incidence of missing FP method in a facility**

<table>
<thead>
<tr>
<th></th>
<th>Using LAPM</th>
<th></th>
<th>Not using LAPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have ever missed FP service in this facility</td>
<td>19 / 15%</td>
<td>95 / 37%</td>
<td></td>
</tr>
<tr>
<td>I have never missed FP service in this facility</td>
<td>103 / 82%</td>
<td>153 / 60%</td>
<td></td>
</tr>
<tr>
<td>It is my first time in this facility</td>
<td>4 / 3%</td>
<td>7 / 3%</td>
<td></td>
</tr>
</tbody>
</table>
The reasons given for missing the contraceptives method among LAPM users were lateness (5%) and stock out (1%) while among users of other methods it was lateness (22%), stock out (5%), wrong appointment dates (1%) and lack of the service provider (2%) as illustrated in Figure 4.9.

![Reasons for missing FP method in the facility](image)

**Figure 4.9: Reason for missing FP**

The actions taken by respondents who missed the contraceptive methods among non-LAPMs users included buying from the chemist (19%), waiting for the next day clinic (18%), visiting the nearby facility (3%) and appointment booking for the method when next it will be offered (2%) as shown in Table 4.16.
Table 4.16: Action taken by respondents who missed FP method

<table>
<thead>
<tr>
<th>Action taken after missing FP method</th>
<th>Among those using LAPM</th>
<th>Among those not using LAPM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Bought from Chemist</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Waited for the next clinic day</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Visited the nearby health facility</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Booked for the method another day</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Never missed the FP service</td>
<td>103</td>
<td>82</td>
</tr>
</tbody>
</table>

4.2.17 Socio-demographics and use of LAPM

There was no significant association between age and marital status and use of LAPM with p-values of 0.087 and 0.855 respectively. Likewise, the respondent’s income, religious beliefs and level of education had no significant relationship with use of long term/permanent FP methods with p-values of 0.21, 0.952 and 0.075 respectively. However there was significant relationship between occupation and use of long term and permanent methods at p value of 0.047 (Table 4.17).
Table 4.17: Correlation of Socio-demographics and use of LAPM

<table>
<thead>
<tr>
<th>Variable</th>
<th>LAPM use(n/%)</th>
<th>Non LAPM use (n/ %)</th>
<th>Total (100%)</th>
<th>Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yrs.)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 19</td>
<td>5 (22)</td>
<td>18 (78)</td>
<td>23</td>
<td>X² = 0.932</td>
</tr>
<tr>
<td>20-29</td>
<td>80 (31)</td>
<td>179 (69)</td>
<td>259</td>
<td>Df = 3</td>
</tr>
<tr>
<td>30-39</td>
<td>35 (39)</td>
<td>54 (61)</td>
<td>89</td>
<td>P = 0.087</td>
</tr>
<tr>
<td>40-49</td>
<td>6 (60)</td>
<td>4 (40)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>5 (28)</td>
<td>13 (72)</td>
<td>18</td>
<td>X² = 0.312</td>
</tr>
<tr>
<td>Married / Divorced/ Separated</td>
<td>119 (33)</td>
<td>237 (67)</td>
<td>356</td>
<td>Df = 2</td>
</tr>
<tr>
<td></td>
<td>2 (29)</td>
<td>5 (71)</td>
<td>7</td>
<td>P = 0.855</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>33 (35)</td>
<td>62 (65)</td>
<td>95</td>
<td>X² = 0.441</td>
</tr>
<tr>
<td>Protestant</td>
<td>89 (32)</td>
<td>186 (68)</td>
<td>275</td>
<td>Df = 3</td>
</tr>
<tr>
<td>Muslim</td>
<td>3 (33)</td>
<td>6 (67)</td>
<td>9</td>
<td>P = 0.952</td>
</tr>
<tr>
<td>Hindu</td>
<td>1 (50)</td>
<td>1 (50)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>0</td>
<td>3 (100)</td>
<td>3</td>
<td>X² = 11.247</td>
</tr>
<tr>
<td>Employed</td>
<td>31 (46)</td>
<td>36 (54)</td>
<td>67</td>
<td>Df = 5</td>
</tr>
<tr>
<td>Self-employed/ merchants</td>
<td>25 (36)</td>
<td>45 (64)</td>
<td>70</td>
<td>P = 0.047*</td>
</tr>
<tr>
<td>Housewife</td>
<td>55 (30)</td>
<td>129 (70)</td>
<td>184</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>5 (45)</td>
<td>6 (55)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td><strong>Average monthly Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>57 (30)</td>
<td>134 (70)</td>
<td>191</td>
<td>X² = 9.63</td>
</tr>
<tr>
<td>&lt;30USD</td>
<td>28 (33)</td>
<td>56 (67)</td>
<td>84</td>
<td>Df = 7</td>
</tr>
<tr>
<td>31-55</td>
<td>14 (27)</td>
<td>37 (73)</td>
<td>51</td>
<td>P = 0.21</td>
</tr>
<tr>
<td>56-111</td>
<td>11 (55)</td>
<td>10 (45)</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>112-167</td>
<td>2 (33)</td>
<td>4 (67)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>168-223</td>
<td>7 (55)</td>
<td>6 (45)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>224-279</td>
<td>2 (67)</td>
<td>1 (33)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>&gt;280</td>
<td>5 (42)</td>
<td>7 (58)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>5 (45)</td>
<td>6 (55)</td>
<td>11</td>
<td>X² = 11.465</td>
</tr>
<tr>
<td>Primary incomplete</td>
<td>8 (23)</td>
<td>27 (77)</td>
<td>35</td>
<td>Df = 6</td>
</tr>
<tr>
<td>Primary complete</td>
<td>29 (26)</td>
<td>81 (74)</td>
<td>110</td>
<td>P = 0.075</td>
</tr>
<tr>
<td>Secondary incomplete</td>
<td>13 (29)</td>
<td>30 (71)</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Secondary complete</td>
<td>48 (37)</td>
<td>81 (63)</td>
<td>129</td>
<td></td>
</tr>
<tr>
<td>College education</td>
<td>15 (39)</td>
<td>23 (61)</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>8 (62)</td>
<td>5 (38)</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of
freedom. **LAPM, long term and permanent methods of family planning. \( X^2 \), chi-square values. Values in bold are Significant \( P \)-values.**

### 4.2.18 Relationship between contraceptive side effects, side effects management and use of **LAPMs**

The service provider’s enquiry on contraceptive side effects, presence of those side effects were found to be significantly associated with use of long term and permanent methods at \( p \) values of 0.01. Likewise the handling of those side effects by the health provider (understanding the client, suggesting the action to resolve the problem) and client satisfaction on that management was found to be significantly associated with use of LAPMs at \( p \) values of 0.01 as shown in Table 4.18.
Table 4. 18: Relationship between contraceptive side effects, side effects management and use of LAPMs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Use of LAPM n (%)</th>
<th>No LAPM use n (%)</th>
<th>N=381 (100%)</th>
<th>Significance level (chi test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enquiry by HCW about side-effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>118 (38)</td>
<td>192 (62)</td>
<td>310</td>
<td>X² = 18.741</td>
</tr>
<tr>
<td>No</td>
<td>8 (11)</td>
<td>63 (89)</td>
<td>71</td>
<td>Df=1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P=0.01*</td>
</tr>
<tr>
<td>Ever had side-effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>114 (38)</td>
<td>188 (62)</td>
<td>302</td>
<td>X² = 14.397</td>
</tr>
<tr>
<td>No</td>
<td>12 (15)</td>
<td>67 (85)</td>
<td>79</td>
<td>Df=1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P=0.01*</td>
</tr>
<tr>
<td>HCW understood &amp; explained the problem to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>client</td>
<td>108 (42)</td>
<td>152 (58)</td>
<td>265</td>
<td>X² = 26.522</td>
</tr>
<tr>
<td>Yes</td>
<td>6 (11)</td>
<td>35 (89)</td>
<td>37</td>
<td>Df=2</td>
</tr>
<tr>
<td>No</td>
<td>12 (15)</td>
<td>67 (85)</td>
<td>79</td>
<td>P=0.01*</td>
</tr>
<tr>
<td>Had no problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCW suggested the action to resolve the problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>110 (41)</td>
<td>158 (59)</td>
<td>268</td>
<td>X² = 26.084</td>
</tr>
<tr>
<td>No</td>
<td>4 (12)</td>
<td>30 (88)</td>
<td>34</td>
<td>Df=2</td>
</tr>
<tr>
<td>Had no problem</td>
<td>12 (15)</td>
<td>67 (85)</td>
<td>79</td>
<td>P=0.01*</td>
</tr>
<tr>
<td>Client Satisfied with treatment/ action offered</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>107 (45)</td>
<td>131 (55)</td>
<td>238</td>
<td>X² = 40.774</td>
</tr>
<tr>
<td>No</td>
<td>7 (11)</td>
<td>57 (89)</td>
<td>64</td>
<td>Df=2</td>
</tr>
<tr>
<td>Had no problem</td>
<td>12 (15)</td>
<td>67 (85)</td>
<td>79</td>
<td>P=0.01*</td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. X², chi-square values. Values in bold are Significant P-values.
4.2.6.3 Relationship between help in choosing contraceptive method and of LAPMs FP

There was a significant relationship between help in choosing the contraceptive method and subsequent use of long term/permanent methods of family planning at $X^2 (5) = 23.294$, $P < 0.001$ (table 4.19)

Table 4. 19: Relationship between help in choosing contraceptive method and use of LAPMs FP

<table>
<thead>
<tr>
<th>Choice of FP</th>
<th>Use of LAPM n (%)</th>
<th>Non LAPM use n (%)</th>
<th>N=381(%) (100%)</th>
<th>Significance level (chi test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>50 (24)</td>
<td>160 (76)</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Relative</td>
<td>6 (35)</td>
<td>11 (65)</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Partner/spouse</td>
<td>10 (30)</td>
<td>23 (70)</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Friend</td>
<td>22 (51)</td>
<td>21 (49)</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Service provider</td>
<td>29 (49)</td>
<td>31 (51)</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Decided with partner</td>
<td>9 (50)</td>
<td>9 (50)</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. $X^2$, chi-square values. Values in bold are Significant P-values.

4.2.19 Relationship between partner influence and use of LAPM

The partner’s opinion on the method the spouse used was found to be significantly associated with use of long term and permanent methods of contraceptives at $X^2(6) = 19.6$, $P < 0.003$ as shown in Table 4.20.
Table 4. 20: Relationship between partner influence and use of LAPM

<table>
<thead>
<tr>
<th>Variable</th>
<th>LAPM Use n(%)</th>
<th>Short term FP use n(%)</th>
<th>Significance level(chi test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussed FP method to use with partner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>114 (35)</td>
<td>212 (65)</td>
<td>$X^2 = 3.677$ Df=1 P=0.055</td>
</tr>
<tr>
<td>No</td>
<td>12 (22)</td>
<td>43 (78)</td>
<td></td>
</tr>
<tr>
<td>Partner’s opinion on FP your using</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own choice</td>
<td>34 (27)</td>
<td>91 (73)</td>
<td>$X^2 = 19.607$ Df=6 P=0.003*</td>
</tr>
<tr>
<td>Forced me to his own method</td>
<td>4 (21)</td>
<td>15 (79)</td>
<td></td>
</tr>
<tr>
<td>Decided together</td>
<td>38 (48)</td>
<td>42 (52)</td>
<td></td>
</tr>
<tr>
<td>HCW to choose for us</td>
<td>22 (49)</td>
<td>23 (51)</td>
<td></td>
</tr>
<tr>
<td>Refused FP</td>
<td>17 (27)</td>
<td>47 (73)</td>
<td></td>
</tr>
<tr>
<td>Not aware am using FP</td>
<td>6 (27)</td>
<td>16 (73)</td>
<td></td>
</tr>
<tr>
<td>No partner</td>
<td>5 (19)</td>
<td>21 (81)</td>
<td></td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. $X^2$, chi-square values. Values in bold are Significant P-values.

4.2.20 Relationship between myths/beliefs, culture and use of LAPMs

There was no significant relationship between myths, belief or misconception about long term/permanent contraceptives and also respondents culture and use of LAPMs at p values of 0.701 and 0.721 respectively (P< 0.05) as shown in Table 4.21 below.
Table 4.21: Relationship between myths/beliefs, culture and use of LAPMs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Use LAPM n(%)</th>
<th>Not using LAPM n(%)</th>
<th>Chi test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heard myths/beliefs and misconception</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>79 (32)</td>
<td>165 (68)</td>
<td>X² = 0.148</td>
</tr>
<tr>
<td>No</td>
<td>47 (34)</td>
<td>90 (66)</td>
<td>Df = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P = 0.701</td>
</tr>
<tr>
<td>Culture influence FP method on use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>19 (35)</td>
<td>35 (65)</td>
<td>X² = 0.127</td>
</tr>
<tr>
<td>No</td>
<td>107 (33)</td>
<td>220 (67)</td>
<td>Df = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P = 0.721</td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. X², chi-square values. Values in bold are Significant P-values.

4.2.21 Association between number of living children, future child spacing, future desire to use FP and use of LAPM

There was no significant association between respondents’ number of living children, future child spacing and use of long term/permanent contraceptives at p values of 0.73 and 0.789 respectively. However when respondents asked whether they would consider using LAPM contraceptives as a future birth control method, an association at p value of 0.01 was found as illustrated in Table 4.22 below.
Table 4. 22: Association between number of living children, future child spacing, future desire to use FP and use of LAPM

<table>
<thead>
<tr>
<th>Variable</th>
<th>LAPM Use n(%)</th>
<th>Non-LAPM Use n(%)</th>
<th>N=381 (100%)</th>
<th>chi test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>1(33)</td>
<td>2 (67)</td>
<td>3</td>
<td>X² =2.804</td>
</tr>
<tr>
<td>1</td>
<td>46 (34)</td>
<td>89 (66)</td>
<td>135</td>
<td>Df=5</td>
</tr>
<tr>
<td>2</td>
<td>41 (31)</td>
<td>91(69)</td>
<td>132</td>
<td>P=0.73</td>
</tr>
<tr>
<td>3</td>
<td>19 (33)</td>
<td>38(67)</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>17(40)</td>
<td>25 (60)</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>&gt;5</td>
<td>2 (17)</td>
<td>10 (83)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Future child spacing (yrs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No plan</td>
<td>5 (38)</td>
<td>8 (62)</td>
<td>13</td>
<td>X² =1.711</td>
</tr>
<tr>
<td>1-2 yrs</td>
<td>15 (41)</td>
<td>22 (59)</td>
<td>37</td>
<td>Df=5</td>
</tr>
<tr>
<td>3-4yrs</td>
<td>15 (31)</td>
<td>34 (71)</td>
<td>49</td>
<td>P=0.789</td>
</tr>
<tr>
<td>&gt;5yrs</td>
<td>56 (34)</td>
<td>110 (66)</td>
<td>166</td>
<td></td>
</tr>
<tr>
<td>Have enough</td>
<td>35 (30)</td>
<td>81 (70)</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>Future Desire to use LAPM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>107 (53)</td>
<td>95 (47)</td>
<td>202</td>
<td>X² =76.921</td>
</tr>
<tr>
<td>No</td>
<td>19 (11)</td>
<td>160 (89)</td>
<td>179</td>
<td>Df=1</td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. X², chi-square values. Values in bold are Significant P-values.

4.2.22 Association between service quality and use of long-term and permanent contraceptives

   Respondent waiting time and feeling on that waiting time was significantly associated with use of long term and permanent contraceptives at p values of 0.018 and 0.002 respectively as shown in Table 4.23.
Table 4.23: Association between service quality and use of long-term and permanent contraceptives

<table>
<thead>
<tr>
<th>Respondent waiting time (min)</th>
<th>LAPM Use n (%)</th>
<th>Non LAPM Use n (%)</th>
<th>N=381 (100%)</th>
<th>Significance level (chi test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15</td>
<td>35 (26)</td>
<td>99 (74)</td>
<td>134</td>
<td>X² =11.95</td>
</tr>
<tr>
<td>16-30</td>
<td>70 (37)</td>
<td>120 (63)</td>
<td>190</td>
<td>Df=4</td>
</tr>
<tr>
<td>31-45</td>
<td>21 (45)</td>
<td>26 (55)</td>
<td>47</td>
<td>P=0.018*</td>
</tr>
<tr>
<td>46-60</td>
<td>0</td>
<td>7 (100)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>More than 1 hour</td>
<td>0</td>
<td>3 (100)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respondent feeling on waiting time</th>
<th>LAPM Use n (%)</th>
<th>Non LAPM Use n (%)</th>
<th>N=381 (100%)</th>
<th>Significance level (chi test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No waiting time</td>
<td>43 (28)</td>
<td>112 (72)</td>
<td>155</td>
<td>X² =12.442</td>
</tr>
<tr>
<td>Reasonable/short</td>
<td>80 (40)</td>
<td>119 (60)</td>
<td>199</td>
<td>Df=2</td>
</tr>
<tr>
<td>Too long</td>
<td>3 (11)</td>
<td>24 (89)</td>
<td>27</td>
<td>P=0.002*</td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson's chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. X², chi-square values. Values in bold are Significant P-values.

4.2.23 Relationship between missing of contraceptive service, reason for missing the service, the action taken and use of LAPM

Missing of the contraceptive service in the facility and the reason for missing that service was significantly associated with use of long term and permanent family planning methods at p value of 0.01. Similarly the action taken by respondents after
missing that particular FP service was also found to be significantly associated with usage of long term and permanent FP methods at P value of 0.01 as depicted in table 4.24.

**Table 4.24: Relationship between missing of contraceptive service, reason for missing the service, the action taken and use of LAPM**

<table>
<thead>
<tr>
<th>Variable</th>
<th>LAPM Use n(%)</th>
<th>Short term FP Use n(%)</th>
<th>Significance level (chi test)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ever missed fp service</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>19 (17)</td>
<td>95 (83)</td>
<td>X² =19.843 Df=2 P=0.01*</td>
</tr>
<tr>
<td>No</td>
<td>103 (40)</td>
<td>153 (60)</td>
<td></td>
</tr>
<tr>
<td>Never been here before</td>
<td>4 (36)</td>
<td>7 (64)</td>
<td></td>
</tr>
<tr>
<td><strong>Reason for missing FP service</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateness</td>
<td>18 (17)</td>
<td>85 (83)</td>
<td>X² =24.133 Df=4 P=0.01*</td>
</tr>
<tr>
<td>Stock out</td>
<td>5 (22)</td>
<td>18 (78)</td>
<td></td>
</tr>
<tr>
<td>No skilled FP provider</td>
<td>0</td>
<td>5 (100)</td>
<td></td>
</tr>
<tr>
<td>Wrong TCA</td>
<td>0</td>
<td>2 (100)</td>
<td></td>
</tr>
<tr>
<td>Never missed the service</td>
<td>103 (42)</td>
<td>145 (58)</td>
<td></td>
</tr>
<tr>
<td><strong>Action taken after missing the FP service</strong></td>
<td>13 (21)</td>
<td>49 (79)</td>
<td>X² =24.389 Df=4 P=0.01*</td>
</tr>
<tr>
<td>Bought from chemist</td>
<td>8 (15)</td>
<td>47 (85)</td>
<td></td>
</tr>
<tr>
<td>Waited next clinic day</td>
<td>2 (20)</td>
<td>8 (80)</td>
<td></td>
</tr>
<tr>
<td>Visited next facility</td>
<td>0</td>
<td>6 (100)</td>
<td></td>
</tr>
<tr>
<td>Booked for another day</td>
<td>103 (42)</td>
<td>145 (58)</td>
<td></td>
</tr>
</tbody>
</table>

*Foot note:* Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. X², chi-square values. Values in bold are Significant P-values.
4.2.8. Multiple regression analysis of factors found to influence usage of LAPM in Bivariate analysis

The variables which were found significant at bivariate analysis were further analyzed using multiple regressions to determine independent factors that influence use of long term and permanent contraceptives. Those further found significant are; Help in choosing contraceptive (p=0.001, OR=1.28), client satisfaction in handling of contraceptive side effects (p= 0.000, OR=0.1), future desire to use LAPMs (p=0.000, OR=.1) and waiting time before contraceptive service (p= 0.034, OR=1.48) as illustrated in table 4.25.

(LR X²(df12) = 156.023, P value 0.000*, -log likelihood 307.959, Pseudo R²=.336)
Table 4. 25: Multiple regression analysis of factors found to influence usage of LAPM

<table>
<thead>
<tr>
<th>Factor</th>
<th>B</th>
<th>SE</th>
<th>P value</th>
<th>OR(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.654</td>
<td>0.977</td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>Help choosing FP</td>
<td>0.243</td>
<td>0.080</td>
<td><strong>0.002</strong></td>
<td>1.275(1.090-1.492)</td>
</tr>
<tr>
<td>HCP enquiry on FP side-effects</td>
<td>-0.857</td>
<td>0.585</td>
<td><strong>0.143</strong></td>
<td>424(0.135-1.36)</td>
</tr>
<tr>
<td>Ever had FP side-effects (S/E)</td>
<td>0.664</td>
<td>0.812</td>
<td><strong>0.414</strong></td>
<td>1.942(0.395-9.543)</td>
</tr>
<tr>
<td>HCP suggested action to resolve s/e</td>
<td>0.739</td>
<td>0.736</td>
<td><strong>0.316</strong></td>
<td>2.093(0.494-8.860)</td>
</tr>
<tr>
<td>Type of side-effect</td>
<td>0.023</td>
<td>0.064</td>
<td><strong>0.724</strong></td>
<td>1.023(0.902-1.160)</td>
</tr>
<tr>
<td>HCP understood &amp; explained S/E</td>
<td>0.258</td>
<td>0.675</td>
<td><strong>0.703</strong></td>
<td>1.294(0.345-4.86)</td>
</tr>
<tr>
<td>Ever had FP side-effects (S/E)</td>
<td>0.664</td>
<td>0.812</td>
<td><strong>0.414</strong></td>
<td>1.942(0.395-9.543)</td>
</tr>
<tr>
<td>Client satisfied with S/E handling</td>
<td>-2.165</td>
<td>0.587</td>
<td><strong>0.001</strong></td>
<td>0.115(0.036-0.363)</td>
</tr>
<tr>
<td>Partner opinion on FP use</td>
<td>0.091</td>
<td>0.080</td>
<td><strong>0.254</strong></td>
<td>1.095(0.937-1.280)</td>
</tr>
<tr>
<td>Desire for Future LAPM use</td>
<td>-2.192</td>
<td>0.315</td>
<td><strong>0.001</strong></td>
<td>0.112(0.060-0.207)</td>
</tr>
<tr>
<td>Waiting time before FP service</td>
<td>0.393</td>
<td>0.183</td>
<td><strong>0.034</strong></td>
<td>1.482(1.030-2.131)</td>
</tr>
<tr>
<td>Missed FP from facility</td>
<td>0.810</td>
<td>0.456</td>
<td><strong>0.076</strong></td>
<td>2.247(0.919-5.497)</td>
</tr>
<tr>
<td>Reason for missing FP</td>
<td>0.134</td>
<td>0.161</td>
<td><strong>0.406</strong></td>
<td>1.142(0.833-1.569)</td>
</tr>
</tbody>
</table>

Foot note:* Significance at 0.05. ** Significance at 0.001. P value are shown in bold. Dependent variable is use of LAPM. S/E, side effects. FP, family planning. HCP, health service provider.
4.3 Role of health care workers in the use of LAPM

4.3.1 Method teaching/counseling

Depo-Provera was the most taught method by service providers (86%) followed by implants and IUCD at 61% and 60% respectively. Vasectomy was hardly taught by contraceptive providers at 1% and despite condoms leading the war against HIV and other sexually transmitted infections only 19% of the respondents were taught about them. This is shown in Figure 4.10.

Figure 4. 10: Level of method counselling done to FP clients
4.3.2 Client counseling sessions in the FP clinic and use of long term and permanent methods

The service provider greeted and welcomed 84% of the respondents who use LAPM to the FP clinic and addressed the contraceptive concerns of 78% of them. During the counseling session 15% of the respondent did not feel comfortable to ask questions and a further 35% of them felt the room privacy and confidentiality was not maintained during the consultations and counseling session as illustrated in Table 4.26.

Table 4. 26: Client counseling sessions in the FP clinic and use of long term and permanent methods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Using LAPM</th>
<th>Not using LAPM</th>
<th>X²; df</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP service provider greeted and welcomed client</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>106</td>
<td>38</td>
<td>171</td>
<td>62</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>19</td>
<td>84</td>
<td>81</td>
</tr>
<tr>
<td>Client FP concerns were addressed by service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>98</td>
<td>38</td>
<td>161</td>
<td>62</td>
</tr>
<tr>
<td>No</td>
<td>28</td>
<td>23</td>
<td>94</td>
<td>77</td>
</tr>
<tr>
<td>Client felt comfortable to ask questions during the session</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>107</td>
<td>37</td>
<td>181</td>
<td>63</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>20</td>
<td>74</td>
<td>80</td>
</tr>
<tr>
<td>Room privacy and confidentiality maintained during FP consultation session</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>82</td>
<td>31</td>
<td>179</td>
<td>69</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>20</td>
<td>74</td>
<td>80</td>
</tr>
</tbody>
</table>
4.3.3 Provision of client friendly FP service and use of longterm/permanent methods

Among the respondent who used LAPM, 2% of the client felt they were treated by FP providers poorly during service delivery, 8% of them were very well treated and 24% of them reputed good treatment. This is shown in Figure 4.11

Figure 4.11: Provision of client friendly FP service and use of long term/permanent methods

4.3.4 Booking clients for FP clinic appointment (return dates)

Four percent (4%) of the respondents were not given the return date/appointment for the next clinic visit compared to 96% of the respondent.
4.3.4 Bivariate analysis

4.3.4.1 Relationship between client counseling sessions in the FP clinic and use of long term and permanent methods

There was a significant relationship between contraceptive provider greeting and welcoming client to the clinic (p=0.001), clients FP concerns address (p=0.004), client feeling comfortable to ask questions during FP counseling at p value of 0.003 and use of long term and permanent methods. This suggests when clients are handled well during contraceptive method counseling they are likely to choose methods that are either long term or permanent. However, there is no relationship between maintaining of room privacy and confidentiality during counseling and use of long term and permanent methods at p value of 0.312. This is indicated in Table 4.27.
Table 4. 27: Relationship between Client counseling sessions in the FP clinic and use of long term and permanent methods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Using LAPM</th>
<th>Not using LAPM</th>
<th>X²; df</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>FP service provider greeted and welcomed client</td>
<td>Yes</td>
<td>106</td>
<td>38</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>20</td>
<td>19</td>
<td>84</td>
</tr>
<tr>
<td>Client FP concerns were addressed by service provider</td>
<td>Yes</td>
<td>98</td>
<td>38</td>
<td>161</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>28</td>
<td>23</td>
<td>94</td>
</tr>
<tr>
<td>Client felt comfortable to ask questions during the session</td>
<td>Yes</td>
<td>107</td>
<td>37</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>19</td>
<td>20</td>
<td>74</td>
</tr>
<tr>
<td>Room privacy and confidentiality maintained</td>
<td>Yes</td>
<td>82</td>
<td>31</td>
<td>179</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>40</td>
<td>33</td>
<td>76</td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. X², chi-square values. Significant P values are shown in bold.

4.3.4.2 Provision of client friendly FP service and use of long term/permanent methods

The analysis confirms there was a significant relationship between provision of friendly contraceptive service and use of long term and permanent methods at p value of 0.01. This suggests that if clients are handled well during delivery of contraceptive services they are likely to utilize long term/permanent FP methods. This is shown in Table 4.28.
Table 4.28: Provision of client friendly FP service and use of long term/permanent methods

<table>
<thead>
<tr>
<th>Client handling by FP provider</th>
<th>Those using LAPM</th>
<th>Those not using LAPM</th>
<th>$X^2$;Df</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Poor/ Not Well</td>
<td>3</td>
<td>7</td>
<td>40</td>
<td>93</td>
</tr>
<tr>
<td>Well</td>
<td>93</td>
<td>62</td>
<td>58</td>
<td>38</td>
</tr>
<tr>
<td>Very Well</td>
<td>30</td>
<td>34</td>
<td>57</td>
<td>66</td>
</tr>
</tbody>
</table>

Foot note: Data presented are subjects (n) & proportions (%) of LAPM use. Statistical analysis was conducted using Pearson’s chi-square test. df, degrees of freedom. LAPM, long term and permanent methods of family planning. $X^2$, chi-square values. $P, p$ values. $P$ values is shown in bold

4.3.5 Multivariate analysis of health care provider factors found significantly associated with use of LAPM

The variables which were significant in bivariate analysis were further analyzed using logistic regression to identify the role of health care workers in utilization of LAPMs. Greeting and welcoming the client in the clinic was still found significant at p value of 0.048. These clients were 1.8 times likely to use long term and permanent methods of contraception compared to clients who were not greeted and welcomed in the FP clinic by the service provider. In addition clients who were handled satisfactorily well during FP service delivery was 5.1 times more likely to use LAPM contraceptives at significant p value of 0.009 compared to those clients.
handled poorly. However addressing client FP concerns and making them comfortable during counseling were not found significant as shown in table 4.29

\[(LR \chi^2(df6) = 30.989, \text{ P value } 0.000^*, -\text{log likelihood } 89.642, \text{ Pseudo } R^2= .078)\]

Table 4. 29: Multivariate analysis of health care provider factors found significantly associated with use of LAPM

<table>
<thead>
<tr>
<th>Variable</th>
<th>`B</th>
<th>S.E</th>
<th>P value</th>
<th>OR(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeted and welcomed client</td>
<td>0.599</td>
<td>0.3</td>
<td><strong>0.048</strong></td>
<td>1.8(1.006-3.295)</td>
</tr>
<tr>
<td>Addressed client FP concerns</td>
<td>0.221</td>
<td>0.28</td>
<td>0.4</td>
<td>1.24(0.72-2.158)</td>
</tr>
<tr>
<td>Made client comfortable during counseling</td>
<td>0.473</td>
<td>0.313</td>
<td>0.13</td>
<td>1.6(0.84-2.96)</td>
</tr>
<tr>
<td>Handling of FP client</td>
<td>1.638</td>
<td>0.63</td>
<td><strong>0.009</strong></td>
<td>5.1(1.493-17.73)</td>
</tr>
</tbody>
</table>

*Foot note: Significant P-values showed in bold. *Significance at 0.05. **Significance at 0.01.*

This is a clear indication that service providers have a role in the usage of long term and permanent contraceptives during reception of client to the clinic and during service delivery.
4.3.6 Health care providers FGD guide findings

From the FP service providers FGD guide, five themes emerged on their roles in provision of family planning especially long terms and permanent methods. These are presented below in narrative form, though not in order of strength of perceived role;

4.3.6.1 Helping client choose FP method

Some health care providers advocate for certain methods of FP in the clinics and this as well came out clear in discussions

One participant said: “A health provider advises and assist the best depending on the client observations such as weight and blood pressure” (Participant 2, nurse Mji w/ Huruma)

Another echoed, “The client might not have ever had a child/delivered thus a short term method which will allow the client to see her menses might be prescribed for her by us”(Participant 5, nurse Mji w/ Huruma)

4.3.6.2 Removing myths and misconceptions about long terms

Myths, beliefs and misconceptions hinder client form using a given method and it’s a challenge in many FP programmes. One participant said, “There are bad rumours and myths about the long term methods which are making clients discontinue the implants or coil and others negatively discourage the potential clients. We hold regular education to remove these rumours.”(Participant 7, nurse Kangemi).
The other added, “We need frequent sensitization campaigns in the community to target myths and misconceptions that discourage use of long terms especially with the help of community health extension workers” (Participant 3, nurse Westlands health centre)

4.3.6.3 Counseling

Counseling is an integral part of FP provision and key to successful family planning programs. When asked about FP counseling one of the providers had this to say “Counseling helps the client to get information on all methods although sometimes clients are impatient and want to get the method and go. Other times the clinic is too busy so we can’t counsel all clients as expected” (participant 5, nurse, Westlands health centre)

The other said, “Counseling requires confidentiality which is hard to guarantee as the same FP room is used as postnatal checkup room, ANC and even for immunization....” (Participant 3, nurse Westlands health Centre)

4.3.6.4 Method provision and respecting client choice

Health care providers offer the method of choice to client. One participant had this to say, “You don’t argue with the client on the method they have chosen, you counsel and offer and when we don’t have the method of choice we refer the client to partner facilities. For instant we have partnered with Tupange project to offer long term methods and permanent ones every month in our facilities” (Participant 2, nurse Westlands health centre)
Another participant said; “We respect the choices made by clients, as most seem to know about the methods from internet, relatives or friends and thus come decided on the method. On the circumstance you are restricted to offer the method” (participant 1, nurse Karura health centre)

4.3.6.5 Partner involvement in FP issues

Male/partner/spouse involvement in reproductive health issues especially family planning will go a long way to meeting population control and better maternal and neonatal outcomes. It is a challenge as identified during service providers FGD where one respondent said, “some clients come to discontinue methods especially coil because their husbands are complaining it hurting them during intercourse and others implants is making the woman cold sexually thus the man can’t enjoy.” (Participant 8, nurse Kangemi health center)

Another complained, “We don’t have ways of making men attend clinic even though we encourage clients to bring their partners only a few come. Others have even refused their women to use FP. It’s a challenge” (participant 6, nurse Kangemi health centre)
CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

5.1.1 Baseline characteristics of study participants

The mean age of the respondents was 26.4 years with mode of women being at age group of 20-39 years (91%). As age increased use of family planning method among women of reproductive age was noted to decline. Contraceptive use varies by age peaking at age 20-29 years among women seeking birth control in Westland’s sub-county health facilities. These findings differ to those of KDHS (2014) which found the peak for all methods to be 25-34 years.

Nearly all study participants were married (93%) while 5% were single. The findings could be explained by the fact that there is high incidence of sexual activity among the married women compared to singles and majority of the married group need to space their family. Most were Protestants (72%) while 25% of them were Catholics, Muslim and Hindu formed 2 and 1% respectively. Use of contraceptives vary across religion with least among Hindus. That could possibly be explained by the fact that Kenya as country seems to have more Protestants who are not hindered by their faith or religious beliefs to use contraceptives.

The education level among the participants was found to be low with most of them (34%) having completed secondary school level of education (29%) primary education and a further 13% post-secondary education). Those with no formal education were 3%. This is an indication that the educated tend to use more modern contraceptives (especially implants) to plan their families and it’s in line with the
findings of KDHS 2014 which established that the contraceptive prevalence in Kenya to be increasing dramatically with education.

Most of the study participants (48%) were housewives compared to 36% who were either employed or self-employed and the monthly income for half of the respondents was found to be less than 30 US dollars (< 2700 Ksh). This meant the daily earning was less than or equal to one US dollar per day. This variations can possibly be explained by differences in socio-economic characteristics of Westland’s sub-county. Despite it being a high level income economy it’s also flanked by struggling citizens in the low income settlement areas (slums) of Kangemi, Kwaruku, Sodom, Mji wa Huruma, and Githogoro slums who provide cheap labour to residents of suburbs in Lavington, State house, Westlands, Parklands, Muthaiga and Runda. These populations may be the consumers of government free health services and family planning being a high impact package of lowering the maternal mortality rate there could be an over effort to reach this populations to space their families.

5.1.2 Usage of long term and permanent methods of family planning

The study findings revealed cumulatively 33% of the respondents relied on long term and permanent contraceptive methods to plan for their families compared to 67% who used short term methods. A figure that is almost double of Nairobi county (18.7%) and national (16.5%) from the findings of KDHS 2014. That is in contrast to previous facility study carried out in 2010 at Kenyatta national hospital among HIV female clients which found only 0.97% of the respondents were using long term family planning methods and another study in 2009 at Goba town, Ethiopia
found out that long term and permanent methods were utilized by 8.7% of the respondents (Takelle, 2012). That suggested more women at reproductive age were accepting long term and permanent methods of contraception which are effective for longer periods.

By far, implants seems to be the most preferred long term reversible method at 22% while coil is used by 8% of the respondents. Among permanent irreversible methods tubal ligation was used by 2% and vasectomy by other 1%. The findings differed from those conducted by KNBS (2014) which had shown the figures nationally to be implants (9.9%), coil (3.4%) and TL (3.2%). That showed a steady increase on the reliance of long term methods and a decline on the permanent method though that of tubal ligation (TL) tends to be at par with the predicted rate of use of female sterilization in Sub Saharan Africa. In comparison with that of Nairobi as per the demographic health study of the same year to be implants (12.1%), coil (4.5%), BTL (2%) and vasectomy (0.1). Vasectomy reliance as a family planning option tends to have stagnated at 1% which equates to global prevalence.

5.1.3 Factors influencing usage of long term and permanent methods

5.1.3.1 Socioeconomic and demographic factors

The study shown that most of the LAPM users were in age bracket of 20-30 years (63%) and 68% for all methods. That could be explained by the fact that it’s the peak reproductive age where majority of the women are sexually active. However, age was not a significant factor in the use of LAPM. That is similar to
studies carried out in Ethiopia which found the peak age of using LAPM to be between 25-29 years (Gebremichael etal., 2013 & Mengistu, 2013).

Majority of women were house wives. It was also comparatively high among married group at 93% which is consistent with what was found in Nigeria (Adeyemi, 2008) and Bangladesh (Akter, 2004) that acceptors of LAPM are married women. Globally a similar trend was observed in US and Australia, where long acting methods were prevalent among the married and cohabiting populations and sterilization among married group (Eeckhaut etal., 2014).

Most of the respondents who used long term and permanent methods have attained secondary school education. These findings are in line with those of studies in Bulgaria where women who had attained high school education were likely to use long acting methods however they could not rely on sterilization compared to those without high school education. A similar trend of LARC use was reported in United States in a cohort study carried out in 2006 to 2010 involving 10 European countries (Eeckhaut etal., 2014)

5.1.3.2 Contraceptives side effects

High side effects were found to be significantly associated with use of long acting and permanent contraceptives with 30% of the respondent reporting to have experienced them at any given time. The findings agreed with those of Kenya demographic health survey (2014) which cited side effects and health concerns as the main reason for discontinuing implants (52%) and IUCD (43%).
Lynn(2014), as well found fear of side-effect and health concern to be a continued major barrier to contraceptive use in sub-Saharan Africa especially LAPM. Among the users of LAPM in Westlands Sub County, the most side effects experienced were lack of menses (28%), heavy bleeding during menstrual periods (20%) and cramping/backache (13%). That is consistent with a systematic review studies that’s were conducted to compare the contraceptive effectiveness, tolerance and acceptability of sub dermal implants (Power et al., 2009) which found out that changes in bleeding pattern were the most common adverse events with implants but bleeding became less frequent over time with amenorrhea being significantly higher after 2 years of use. While some women report increases in menstrual bleeding with copper IUCD(coil), no significant changes in hemoglobin levels have been found and WHO recommends its use among women with iron deficiency anemia (WHO, 2010).

5.1.3.3 Help on choosing contraceptives

Choosing a contraceptive method is complex situation for some clients and WHO observed that client’s needs to be counseled on the range of contraceptive options and methods available at all levels of care, with provision of accurate and complete information to facilitate informed choice. However, in some instances providers end up choosing the method for client or worse still some client insist on a method against the advice provided by contraceptive provider. The study found out that among LAPM users 39% made personal decisions, 23% and 17% were helped by service provider and friends respectively. The findings concurred with those of Rwanda, that noted clients often had already chosen a method before visiting the FP
provider and providers may also sometime have offered firm advice on method choice (INSR, 2008) and in another study in Nyanza by Ochaka et al. (2015), evidence suggest that women do not make the decision to use contraceptives in isolation but in consultation with others in their social network and thus making it difficult to change their mind.

That was further confirmed during service providers focused group discussion where one participant said; “We respect the choices of clients, many seem to know about the methods from internet, relatives and friends and thus come decided on the method. On the circumstance you are restricted to offer the method” (Participant 1, nurse, Karura health centre) That meant some times the hands of the service provider were tied between offering the contraceptive method the client had chosen and offering an alternative FP which possibly could be the best for her. In other instances the health provider made a deliberated decision to offer the method he/she felt best suited the client as it came out in FGD guide... “The client might not have ever had a child/delivered thus a short term method which will allow the client to see her menses might be prescribed for her by us” (Participant 5, nurse, Westlands health centre)

5.1.3.4 Partner influence

According to WHO (2009), ‘If a woman is able to make an informed choice (preferably with her partner), she is more likely to be satisfied with the method she has chosen and continue to use it’. Nearly all (90%) women who participated in the study had discussed with their partners about contraception and among LAPM’s
users, those who had discussed with their spouse the contraceptive method to use tended to utilize more of the LAPMs (10%) compared to 2% whose partners were not aware they were using the method of contraception. That could be interpreted as a pointer to partner’s/husband desire to exert influence on childbearing.

These findings agreed with a study carried out in Uganda to assess the women’s knowledge and attitude towards LARC, where women reported, that their male partners should decide what contraceptive to be used (Lubanga, 2013) and in Ethiopia it was found 38% of the Men disapproved use of the LARC (Alemayehu, 2012). A point further explained by studies from Rwanda, Ghana and Nigeria that partner approval, objection and support towards contraceptive choice influences use of contraception, suggesting the role played by men/spouses and socio cultural perception towards contraception even though merely 15% of the respondent in Westland’s sub county felt culture influences on their choice of contraception.

That was further identified as a challenge by family planning service providers during the focused group discussion where one participant said; “We don’t have ways of making men attend clinic even though we encourage clients to bring their partners only a few come. Others have even refused their women to use FP. It’s a challenge” (Participant 6, nurse, Kangemi health centre)

### 5.1.3.5 Myths and misconceptions

Myths, attitude, opinions and beliefs (including misconceptions among health service providers) can affect the way providers interact with clients (MEC, 2004). The study found the commonest myths, misconceptions and beliefs among women
who did not use long term and permanent contraceptives to be; implants causes high blood pressure and sudden death (8%), coil hurts husband during intercourse and affects sex styles (7%), women become pregnant with coil (6%). Though these were not found to significantly influence the use of LAPMs in Westland’s sub county at p value of 0.05, they indicate the activeness of community social networks approval or disapproval of given methods of contraception.

That is in contrast to studies done in Ethiopia which identified myths, beliefs and misconception to be a hindrance to utilization of long acting and permanent methods. However the misconceptions identified are almost similar with the population in Mekelle, Ethiopia misconceiving coil to cause cancer, delay pregnancy, interfere with sexual intercourse and implant affect normal activity and its insertion is very painful (Alemayehu, 2014). That difference in influence could possibly be explained by variation in rural-urban socio economic and demographic characteristics between the two populations in Kenya and Ethiopia, given Westland is within the Kenyan capital city.

5.1.3.6 Parity, child spacing and future desire to use LAPM contraceptives

Implants were mostly used by women with one child (42%) while coil was used by those with 2 children (40%) and BTL preferred by those with four children and most of the respondents who wanted another child felt they would prefer waiting for more than 5 years before getting that child. Though the number of children the participant had and future spacing were not significant with use of LAPM at p-value of 0.78. The KDHS of 2014 also found that the interest in controlling number of
births to be rapidly growing as the number of children increases with more than half of the currently married women with three or more children being sterilized in Nairobi while those with 1 to 2 children tending to oscillate use between implants and coil. Likewise a study carried out in Tigray, Ethiopia 2012 (Alemayehu) found out that a large proportion of women use contraception for child spacing (65%) than permanent limitation for number of children (17%) thus rely on either short or long acting methods. This is comparable also to the study carried out involving US and European countries between 2004 to 2010 that found out that the level of long acting and reversible methods was low(7%) among the women who had 3 or more children in US and less (2%) among nulliparous women. However in Australia and Austria sterilization is common among women with 3 or more children and LARC substantially less (Eeckhaut et.al, 2014).

The study findings revealed 37% of the respondents who currently used short term methods would consider long term and permanent methods in future compared to 63% who would continue with the same methods. A further proportion of those using long term methods (15%) would consider reverting to short term methods compared to 85% who would still use them. This agrees with what was found in a similar study in Ethiopia in 2013 where 53.5% of the respondents had the future intention to utilize long acting and reversible contraceptives especially implants and coil (Gebremichael et.al, 2014). However, that seemed to have improved from the previous prediction from the 2008/09 KDHS which had pegged it at 18% for LAPMs.
5.1.3.7 Service quality and provision of contraceptives

The service providers must keep in mind that provision of FP services involves both financial and opportunity cost. The cost to the clients may include the time taken off work to visit the SDP, transport cost and the direct cost of service (MOH, 2010). From the study findings 16% of the LAPM users waited for 31-45 minutes before being attended and 2% of them felt the waiting was too long. Its’ on this onslaught that the Kenya Ministry of Health advises for flexibility of opening and operating hours of FP clinics which are convenient to meet the clients demand (National FP guidelines for service providers, 2010).

In addition 15% of the respondents missed the service from the facility due to lateness (5%) and stock out (1%). This findings are similar to the study by Morse et.al (2013) who found lack of sufficient supplies in FP clinic complicates the ability of clinicians to offer LARC contraceptives. That is a contra-practice to the enigma of contraceptive provision standard operating procedure, where service providers are expected to have a consistent supply of methods available in order to offer a choice to clients, because poor quality services result to fewer people using the services, less benefit to client and wasted health resources (MOH, 2004).

5.1.4 Role of health care providers in offering the long term and permanent methods to potential women of reproductive age

FP clinics provide an opportunity for health care provider to share contraceptives information to clients on routine basis. That information is useful to clients when choosing the method to use or to switch to incase one fails. In spite of
this the FP providers seems to be sharing more information on some methods than others. For instance 86% of the participants agreed to have been taught about Depo-Provera, 61% on implants, 60% on coil/IUCD compared to 13% of the women who were informed on tubal ligation and worse only 19% of them were informed on condoms giving dual protection (of pregnancy and sexually transmitted infections including HIV) a big blow. This in line with a study carried out in Rwanda which established that service providers rarely supplemented the knowledge gap of client especially of tubal ligation (INSR, 2008)

Effective counseling is an important prerequisite for the initiation and continuation of an FP method. It’s an interactive process between the service provider and client allowing information exchange and support so that clients can make decisions, design a plan and take action to improve their health (WHO, 2009). The study findings reveal the health care providers did not greet and welcome 27% of the respondents to the FP clinic as is the norm, hence losing the opportunity to address the health concern emanating from use of contraceptives. That way 11% of them felt they were handled poorly in the FP clinic. James and Burke (2016) had observed in their study that LARC providers must not only be technically competent but also motivated to provide the FP service satisfactorily again and again.

Among the LAPM users, the FP service provider did not greet and welcome 16% of the respondent and neither addressed the contraceptives concerns of a further 22% of them and possibly to explain how counseling was conducted only 85% of the
respondent felt comfortable to ask questions. Room privacy was provided to 69% of the respondents.

The findings were complemented by Blumenthal et.al (2010) who noted that, women who were considering use of long term contraceptives methods should receive comprehensive contraceptive counseling as those who received counseling before use demonstrated higher rates of after use method satisfaction, continuation and satisfaction than those who do not. That is ,as well reflected at the national guidelines for FP service providers for 2009,which observed, a friendly and unbiased service provider who listens to clients concerns and gives clear and practical information about proper method use and known side effects will help the clients practice contraception with success and satisfaction.

5.2 Conclusion

From the study findings as per the study objectives it can be concluded that;

1. The utilization level of long term and permanent methods (33%) in Westland’s sub-county is lower than short term methods (67%). The usage of long term reversible method was considerably higher (implants, 22%, coil 8%) than permanent irreversible method (tubal ligation, 2.4%). TL as marginally dropped by0.8% in comparison to national figures(3.2%).

2. The factors found to be significantly associated with usage of long term and permanent methods at p<0.05 were; help in choosing contraceptive method (P = 0.001), presence of side effect and side effects management (P =0.01), partner/spouse opinion on contraceptive method (P = 0.003), service quality
(longer waiting time before FP service (P = 0.01), methodmiss/ out of stock from the facility (P = 0.01)). Other than occupation (P = 0.04), the rest of socio economic and demographic factors were not found to influence the use of LAPMs.

3. The health care provider individual factors like greeting and welcoming the client in the FP clinic cannot be underestimated in provision of satisfactory and friendly contraceptive services as it was found to 1.8 times likely to influence use of long term and permanent FP methods (P = 0.048, OR, 1.8) while addressing the client health concerns resulting from contraceptive use were 5.1 times likely to influence use of LAPM contraceptives (P = 0.009, OR, 5.1).

5.3 Recommendations

From the study it can be recommended that:

The national government through the Ministry of Health, Division of reproductive health to consider policy framework with a skew to promote long term and permanent method of birth control. That would further satisfactorily reduce the unmet need for FP at a lower cost (LAPMs reduces repetitive clinic visits for client and with high contraception rate).

The county government of Nairobi through the department of reproductive health and sub county medical teams to motivate health staff to encourage FP clients to switch over methods from short term to long acting and permanent
contraceptives. The later are cost effective in the long run and as well reduces the strain on county health resources (staff, supplies and commodities).

Utilization of sterilization (BTL) as a contraceptive choice for women who have met their family planning goal is declining and therefore the national government, county government of Nairobi and stakeholders in family matters need to relook at the issue and reverse the downward trend. This could be achieved through mass sensitization campaigns.

Family planning service providers should enquire more from clients about contraceptive method related side effects and satisfactorily manage them to promote method adherence.

The contraceptive service providers should endeavor to offer comprehensive contraceptive counseling by applying the recommended WHO checklist/ job aids that has all the steps as well the national guidelines. Continuous medical education on GATHER process will

The county government health facility management team needs to increase the clinic hours from 8 am to possibly 4.p.m (previously 8a.m to 1 p.m.) to ensure they avoid missed opportunities of offering contraceptives and in addition to train more F.P healthcare workers to offer all methods other than rely only on partners like Tupange project. This enabling environment is likely to increase the CPR especially of LAPMs.

Male partners/spouses have an influence on FP method use. The government through the division of reproductive health and the county government to consider
looking at ways of improving/increasing male involvement on matters of reproductive health especially family planning where they are the major decision makers behind the curtains by orienting the FP services towards men. The clinic hours, room and service itself should be attractive to men.

5.4 Recommendations for further research studies

i. A qualitative study to determine how best men can be involved in reproductive health matters especially in family planning

ii. The study findings indicated side-effects could be hindering utilization of long acting methods. Therefore a study to assess the prevalence of these side effects and how to minimize their occurrence

iii. A study to be carried out to determine why women prefer short term methods of family planning despite their desire to space their children for more than 2 years yet long acting reversible methods are effective for longer periods with high success rate.

iv. A more intense qualitative studies especially in the community settings are needed to gain further insight on acceptance of Long term/acting and permanent methods of family planning by women of reproductive age.
REFERENCES


National Institute of Rwanda (INSR) and ORC Macro (2010). *Rwanda Demographic Health survey 2007/08*. ICF International Calveton


APPENDICES

APPENDIX 1: CONSENT FORM

My name is Muthee Justus Maitethia an MPH student at Kenyatta University currently undertaking a research on “Utilization of Long term and Permanent methods of Family planning among women of reproductive age in Westland’s Sub-county, Nairobi County, Kenya”. The information gathered will be used to improve the provision of the long-term and permanent contraceptive method in this health facility as well as other facilities in Kenya.

Procedures to be followed

Participation in this study requires I ask you some questions which I will record the answers in the questionnaire. You have the right to refuse to participate in this study. You will receive the same care whether you agree to join the study or not and your decision will not change the care you will receive from the facility today/later or that you will get from any other facility at any other time.

Participation is voluntary and you may ask questions related to the study at any time. You may refuse to respond to any question and you may also stop the interview at any time without any consequences to the services you receive from this health facility or any other organization now or in the future.

Discomfort and risks

Some of the questions you will be asked may make you uncomfortable. As such, you may refuse to answer these questions if you choose. The interview may add
approximately half an hour to the time you wait before you receive your routine services.

**Benefits**
Participation in this study will enable us learn more about the family planning methods effectiveness in enabling users fulfill their reproductive goals. There will be no direct benefits by participating in the study.

**Confidentiality**
The interview will be conducted in private and your name will not be recorded in the questionnaire. The questionnaire will be kept in a locked cabinet for safe keeping.

**Contact information**
If you have any questions feel free to contact the principal investigator Justus Muthee on 0725823229, Dr. Harun Kimani on 0725552475 or the Kenyatta University Ethical Review Committee Secretariat on kuerc@ku.ac.ke.

**Participant’s statement**
The above information regarding my participation in the study is clear to me. I have been given a chance to ask any questions and my questions have been answered to my satisfaction. My participation in the study is entirely voluntary. I understand that my records will be kept private and I can leave the study at any time. I understand that I will receive the same care whether I decide to participate in the study or not and my decision will not change the care I receive from the health facility today or that I will get from any other facility at any other time.

Name of participant…………………………………………………………………
Signature/thumbprint........................................Date........................................

**Investigators statement**

I, the undersigned have explained to the volunteer in a language she understands the procedures to be followed in the study and any risks/benefits that may be involved.

Name of interviewer.................................................................

Interviewer signature........................................Date.................................
APPENDIX 2: QUESTIONNAIRE FOR CLIENT EXIT SURVEY

STUDY TITLE: UTILIZATION OF LONG TERM AND PERMANENT FAMILY PLANNING METHODS AMONG WOMEN OF REPRODUCTIVE AGE IN WESTLANDS SUB COUNTY.

Questionnaire number ……………

Name of interviewer ……………… Date ……………..

Service delivery point ……………..

Introduction

Hallo my name is Muthee Justus Maitethia from Kenyatta University School of Public Health and I am interested to know the utilization of long term and permanent family planning methods among women of reproductive age. The information you will give is very important and thus your cooperation and sincerity will be highly appreciated. I assure you the information shall be held with utmost confidentiality.

Instruction: Kindly provide all the information required by ticking appropriately in the spaces provided and fill in the spaces provided where necessary. Thank you in advance

Section I: Socio-demographic characteristics

1. How old are you? ………………..

2. How is your marital status?

1[] Single 2[] Married 3[] Divorced 4[] Widowed
3. What is your religion?

1[ ] Catholic      2[ ] Protestant    3[ ] Muslim    4[ ] Hindu    88[ ] Others

4. What is your Occupation?

1[ ] Employee        2[ ] House wife         3[ ] Casual Laborer

4[ ] Merchant       5[ ] Unemployed       6[ ] Student

3.0 What is your average monthly income in Kenya shillings?

1 none  []  2[ ] < 2700       3[ ] 2701 – 5000

4[ ] 5001 – 10,000  5[ ] 10001- 15000  6[ ] 15001 – 20000

7[ ] 20001 – 25000  8[ ] > 25001

7. What is your highest level of education attained?

1[ ] No education                 2[ ] Primary Incomplete      3[ ] Primary Complete

4[ ] Secondary Incomplete  5[ ] Secondary Complete      6[ ] College

7[ ] University

Section II: family planning use

8. Have you ever visited this site for family planning service before today?

Yes    1[ ]        No 2[ ]

9. What is the reason for your visit today?

Get FP method (Continued client)       1[ ]

Start new FP method (Initial visit) 2[ ]
Restart same FP method 3[]
Get information/counseling on FP methods 4[]
Discuss a problem about contraceptive 5[]
Switch contraceptive method 6[]
Discontinue FP method 7[]
Referral from another health facility 8[]

10. Have you been using any FP method? Yes 1[] No 2[]
If yes for how long (Specify) ..................

11. Which contraceptive method have you been using?
- Pills 1[]
- Injectable (Depo) 2[]
- IUCD/Coil 3[]
- Implant (Implanon/Norplant/Jadelle) 4[]
- Condom 5[]
- Female sterilization/BTL 6[]
- Abstinence 7[]
- Natural 8[]

12. Who chose the Family planning method for you?
- Self 1[]
- Relative 2[]
- Partner/Husband 3[]
- Friend suggested 4[]
- Health care provider 5[]

13. Did you come here today to obtain a specific method?
- Yes 1[] No 2[]
If yes which one?..............................

Section III: Method Related factors

14. Did the FP service provider ask you whether you had a problem with the method?

Yes 1 []   No 2[]

15. Have you ever had a problem with the method?

Yes1 []   No 2[]

If Yes above, which one?

Lack of Menses  1[]   Over bleeding  2[]

Severe Headache 3[]   Spotting  4[]

Weight Gain 5[]   Others  88[]

16. Did the service provider try to understand and explain your problem?

Yes 1[]   No 2[]

17. Did the provider suggest to you the action you should take to resolve the problem?

Yes 1[]   No 2[]

18. Were you satisfied with the advice /treatment the service provider offered for the problem?

Yes 1[]   No 2[]
Section IV: Partner influence on FP method

19. Have you discussed with your partner about which method to use?
   Yes 1[]   No 2[]

20. What was your partner/husband opinion on FP method you are using?
   1[] My own choice
   2 [] Forced me into his method of choice
   3 [] Decided the method together
   4 [] Health care provider chose for us

21. Which of this method/s the health service provider discussed with you? (tick more than one if it applies)
   None     []       pills     []          condoms    []           IUCD/Coil []
   Implants [] BTL     []   vasectomy for partner []   natural methods[]

Section v: LAPMs

22. Do you know about LAPMs contraceptive methods?
   Yes 1 []      No 2[]

   Which LAPM do you know?

   1[] Implants       2[] IUCD
   3[] Vasectomy      3[] Female sterilization
23. How did you learn about the method?

Media (TV, radio, newspaper, internet) 1[ ] 2[ ] Literature (books)

Health service provider 3[ ] 4[ ] Friends 88[ ] Others

(Specify)………

24. Do you use LAPM as a contraceptive method?

Yes 1[ ] No 2[ ]

If yes which one?

Implant 1[ ] 2[ ] IUCD

BTL 3[ ] 4[ ] Vasectomy for partner 5[ ] None

25. Would you like to use one in future? Yes 1[ ] 2[ ] No

26. Have you heard myths and beliefs in the community about LAPMs? Yes 1[ ] 2[ ] No

If yes above, what are some of the myths and beliefs in the community?

27. Does your culture influence the FP method choice? Yes 1[ ] No 2[ ]

28. Does your religion influence the FP method choice? Yes 1[ ] No 3[ ]

Section VI: Future fertility

29. Do you have any child/ren of your own? Yes 1[ ] No 2[ ]

If yes above how many?………

30. Would you like to have a/another child in future? Yes 1[ ] No 2[ ] 3[ ] Depends on Husband/partner
Depends on God’s will 4[] 99[] Don’t Know

31. After how long would you like to wait before the birth of another child?
   1[] 1-2 years  2[] 3-4 years  3[] Above 5 years
   4[] Have enough children  99[] Don’t know

32. Are you currently doing anything to delay or avoid pregnancy?
   1[] Yes  2[] No

If yes what contraceptive method are you utilizing?

   Modern contraceptive (specify)…………

   Traditional method (Specify)…………

33. Do you desire to continue using FP method to avoid children in future?
   Yes 1[]  No 2[]

Section VII: Service Quality/Role of service provider

34. Did the service provider greet and welcome you to the clinic)  1[] Yes
   2[] No

35. Did the provider answer/address all your concerns?  1[] Yes
   2[] No

36. Did you feel comfortable to ask questions during the session?  1[] Yes
   2[] No

37. When meeting with the service provider were you worried other clients may hear what you said?
   Yes 1[]  No 2[]

38. About how long did you wait since you arrived before being attended by a FP service provider?
   1[] Less than 15 min  2[] 16-30 min  3[] 31-45
   4[] 46-60  5[] More than 1 hour

39. Do you feel that your waiting time was reasonable or too long?
No waiting time 1[]  2[] Reasonable/short  3[] Too short

40. Have you ever missed a family planning service in this facility?
   Yes 1[]  2[] No  3[] Never been Here before

41. What was the reason for missing FP service?
   Was late 1[]  Stock out 2[]  Don’t know 3[]
   No service provider 4[]  Never missed 5[]

42. What did you do after missing the service in 41 above?
   Bought from the chemist 1[]  Waited for the next clinic day 2[]
   Visited the next nearby public facility 3[]  Never missed the service 4[]
   Booked next time 5[]

43. During your visit to the FP clinic, how were you treated by the service provider?
   Very well 1[]  Well 2[]  Not well/poor 3[]

44. During your visit to the FP clinic, how were you treated by other staff in the facility?
   There were no other staff 1[]  Very well 2[]  Well 3[]  Not well/poor 4[]

45. Were you given a return date/day to the clinic?
   Yes 1[]  No 2[]
APPENDIX 3: FGD GUIDE FOR FAMILY PLANNING SERVICE PROVIDERS

STUDY TITLE: UTILIZATION OF LONG TERM AND PERMANENT FAMILY PLANNING METHODS (LAPMS) AMONG WOMEN OF REPRODUCTIVE AGE IN WESTLANDS SUB COUNTY.

SDP NAME.................

What are some of the long term (acting) family planning methods you know?
..........................................................................................................................................................

Do you often attend to client requiring LAPMs? ....................

Among LAPMs which one is more preferred by FP users? .................
............................................................................

Do you think the knowledge and skills of the FP service providers in this facility are adequate to offer LAPM contraceptives to clients?
......................................................................................................................................................
..........................................................................................................................................................

What are some of the key hindrances to effective utilization of LAPMs by client?
.....
..........................................................................................................................................................
..........................................................................................................................................................

What is the role of health care providers in the provision of long term and permanent contraceptives
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................

Suggest ways of increasing the re uptake/ utilization of LAPMs in our facilities
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................

Many critics feel health care FP service providers encourage clients to use short term methods of contraceptives at the expense of LAPMs. How do you agree or disagree with this statement?
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................
APPENDIX 4: GRADUATE SCHOOL RESEARCH AUTHORIZATION

KENYATTA UNIVERSITY
GRADUATE SCHOOL

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

P.O. Box 48844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

DATE: 19th January, 2014

The Permanent Secretary,
Ministry of Higher Education, Science & Technology,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MR. MUTHEJ J. MAITEHIA REG. NO. P57/CTY/PT/23708/11

I write to introduce Mr. Maitehia who is a Postgraduate Student of this University. He is registered for M.P.H. Degree programme in the Department of Community Health in the School of Public Health.

Mr. Maitehia intends to conduct research for a proposal entitled, “Utilization of Longterm and Permanent Family Planning Methods among Women of Reproductive Age in Westlands Sub-County, Nairobi County.”

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MIABA
DEAN, GRADUATE SCHOOL

Committed to Creativity, Excellence & Self-Reliance
APPENDIX 5: APPROVAL LETTER OF RESEARCH PROPOSAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@kenu.ac.ke
Website: www.ku.ac.ke
P.O. Box 48844, 00100
NAIROBI, KENYA
Tel. 812901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School
TO: Mr. Muthee Justus Maithia
    C/o Community Health Dept.
    Kenyatta University

DATE: 19th January, 2014

REF: P57/CTY/PT/23708/11

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board at its meeting of 19th January, 2014 approved your Research Proposal for the M. P. H. Degree, entitled “Utilization of Long-term and Permanent Family Planning Methods among Women of Reproductive Age in Westlands Sub-County, Nairobi County.”

You may now proceed with your data collection.

Thank you.

REUPEN MURIUKI
FOR DEAN, GRADUATE SCHOOL

cc. Chairman, Community Health Dept.

Supervisors:

1. Dr. Tom Were
   C/o Pathology Dept.
   KENYATTA UNIVERSITY

2. Dr. Harun Kimani
   C/o Community Health Dept.
   KENYATTA UNIVERSITY

RM/cao

Committed to Creativity, Excellence & Self-Reliance
APPENDIX 6: KUERC ETHICS APPROVAL

KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

Email: chairman.kuerc@ku.ac.ke
secretary.kuerc@ku.ac.ke
eerc15MN@gmail.com
Website: www.ku.ac.ke

P. O. Box 43844 - 00100 Nairobi
Tel: 8710901/12
Fax: 8711242/8711575

Dear Ref: KU/R/COMM/51/345

Muthee Justus Maitethia,
Kenyatta University,
P.O Box 45844, Nairobi

RE APPLICATION NUMBER PKU/219/1195 – “UTILIZATION OF LONG-TERM AND PERMANENT FAMILY PLANNING METHODS AMONG WOMEN OF REPRODUCTIVE AGE IN WESTLANDS SUB-COUNTY, NAIROBI COUNTY”

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic “Utilization of long-term and permanent family planning methods among women of reproductive age in Westlands sub-county, Nairobi County” - Version 1 received on 21st May, 2014.

2. APPLICANT
Muthee Justus Maitethia, Department of Community Health

3. STUDY SITE
Westland, Kenya

4. DECISION
The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines AND APPROVED that the research may proceed for a period of ONE year from 9th July, 2014.

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

When replying, kindly quote the application number above.
If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

PROF. NICHOLAS K. GIKONYO
CHAIRMAN ETHICS REVIEW COMMITTEE

Accept the advice given and will fulfill the conditions thereof.

Signature

cc. Vice-Chancellor
Director: Institute for Research Science and Technology
APPENDIX 7: COUNTY HEALTH OFFICER PERMIT

NAIROBI CITY COUNTY

Telephone 020 344194
web: www.nairobi.go.ke

COUNTY HEALTH SERVICES

PHD/1/13/2/1ac
5th AUGUST, 2014

MUTHEE JUSTUS MAITETHIA
P. O. BOX 33035 – 00600
NAIROBI

RE: PERMISSION TO CARRY OUT RESEARCH STUDY IN WESTLANDS SUB COUNTY HEALTH FACILITIES

Thank you for your letter dated 1st August, 2014.

This is to inform you that the Nairobi City County, Public Health Departments/County Health Services has reviewed and approved you to do the research, subject to compliance with the following requirements:

- Payment of Kshs. 5,000/- (Five thousand shillings only) research fee.
- You will be expected to adhere to the rules and regulations pertaining to the Nairobi City County.
- That during your research there will be no cost devolving to the County.
- That you undertake to indemnify the Nairobi City County against any claim that may arise from the research.
- A copy of the findings must be submitted to the office of the undersigned.

We look forward to continued collaboration to improve the health of the Kenyan people.

By a copy of this letter the Sub County MOH and facility in charges of Westland’s Sub County Health Facilities are requested to give you the necessary support.

DR. ROBERT K. AYISI, OGW
FOR: COUNTY SECRETARY & HEAD OF COUNTY PUBLIC SERVICE

CC: Sub County MOH and Facility in charges Westland’s
APPENDIX 8: NACOSTI AUTHORITY

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 22/1420
Fax: +254-20-318295, 310249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote Ref. No.

NACOSTI/P/14/0383/2913

Justus Maitheia Muthee
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Utilization of long term and permanent family planning methods among women of reproductive age in Westlands Sub County, Nairobi County,” I am pleased to inform you that you have been authorized to undertake research in Nairobi County for a period ending 31st August, 2015.

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

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

DR. S. K. LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
The County Coordinator of Health
Nairobi County.
APPENDIX 9: MAP OF STUDY AREA

Map of Westlands sub-county