

**FACTORS THAT AFFECT UPTAKE OF CONTRACEPTIVES AT GARISSA  
PROVINCIAL HOSPITAL IN KENYA**

**GERALD MUHORO CHEGE (BPHARM)**

**U56/69550/2013**

**A Research dissertation submitted in Partial Fulfillment of the Requirement for the award  
of Degree of Master of Clinical Pharmacy in the School of Pharmacy of the University of  
Nairobi**

## **DECLARATION**

1. I understand what Plagiarism is and I am aware of the University's policy in this regard
2. I declare that this dissertation is my original work and has not been submitted elsewhere for examination, award of a degree or publication. Where other people's work or my own work has been used, this has properly been acknowledged and referenced in accordance with the University of Nairobi's requirements.
3. I have not sought or used the services of any professional agencies to produce this work
4. I have not allowed, and will not allow anyone to copy my work with the intention of passing it off as his/her own work
5. I understand that any false claim in respect of this work will result in disciplinary action, in accordance with University Plagiarism Policy.

### **Investigator:**

Signature \_\_\_\_\_ Date \_\_\_\_\_

Gerald Muhoro Chege (BPharm), U56/69550/2013

### **Supervisors Approval:**

This dissertation was submitted for review with our approval as university supervisors:

1. Signature \_\_\_\_\_ Date \_\_\_\_\_

Dr Peter Karimi, MPharm, M.Sc., MBA.

Department of Pharmaceutics and Pharmacy Practice

University of Nairobi

2. Signature \_\_\_\_\_ Date \_\_\_\_\_

Dr Beatrice Amugune, PhD

Department of Pharmaceutical Chemistry

University of Nairobi

## **DEDICATION**

This dissertation is dedicated to my late sister and her husband for their love and support, gone too soon with enormous potential.

## **ACKNOWLEDGEMENT**

I would like to thank the Almighty God for the strength and guidance during this postgraduate Programme. Many thanks go to Dr. Njeri Mucheru, Deputy Chief Pharmacist, Ministry of Health for the study leave accorded to me to pursue the training.

I am very grateful to my supervisors Dr P. Karimi and Dr B. Amugune for their invaluable mentorship and guidance in both developing and writing up this dissertation.

I also wish to appreciate Garissa Provincial Hospital, for allowing me to carry the study in the institution.

Sincere thanks also go to PRIME-K Mental Health for the mentorship and financial support in developing and writing this document

Mr. George Khamati, PRIME-K research coordinator, is also appreciated for his assistance in data analysis.

To all the Lecturers University of Nairobi and pharmacy team at Kenyatta National Hospital I appreciate their unending guidance during the training. I also thank all my fellow students for the support they accorded me during the training.

Finally but not least, I thank my parents, family and church family for their support and prayers during the training.

## **ABBREVIATIONS**

ANC-Ante Natal Clinic  
CCs -conventional contraceptives  
CPR-Contraceptive prevalence rate  
COCs-Combined oral contraceptives  
CS-Caesarean section  
FP-Family planning  
GPH-Garissa Provincial Hospital  
CWC-Child welfare clinic  
IUCD-Intrauterine contraceptive device  
KDHS-Kenya demographic health survey  
KNH-Kenyatta National Hospital  
MMR-Maternal mortality rate  
NCPD-National council for population and development  
PID-Pelvic inflammatory disease  
PNC -Post natal clinic  
SEs-Side effects  
SPSS-Statistical package of social sciences  
SDG-sustainable development goals  
TFR-Total fertility rate  
UNFPA-United Nations Population Fund  
MCH-Maternal child health

## DEFINITION OF TERMS

**Contraceptive methods:** These are methods that prevent fertilization or implantation of ova. They are grouped into two categories modern methods and traditional methods. Modern methods include sterilization and contraceptives while traditional methods include periodic abstinence and withdrawal.

**Contraceptive prevalence rate:** Is the percentage of currently married women aged 15-49 years who are using a family planning method.

**Effectiveness of a drug:** The extent to which a drug works under real clinical practice.

**Efficacy of a drug:** the extent to which a drug works under ideal circumstances.

**Rational drug use:** use of medications according to appropriate clinical needs, in doses that meet individual requirements, for an adequate period of time and at the lowest cost to patients and the community.

**Safety of a drug:** A drug is free from harm to patient and if any harm present, the benefits of using it outweighs the risks.

**Unmet need for FP:** Occasions in which mothers in the reproductive age group seek health care and are in contact with a health care provider but lose the chance of receiving family planning services.

## TABLE OF CONTENTS

DECLARATION.....	i
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iii
ABBREVIATION.....	iii
DEFINITION OF TERMS .....	v
LIST OF FIGURES.....	x
LIST OF TABLES.....	xi
ABSTRACT.....	xi
CHAPTER ONE.....	1
INTRODUCTION .....	1
1.1 Background to the study.....	1
1.2 Problem statement.....	2
1.3 Purpose of the study .....	3
1.4 General objective.....	3
1.4.1 Specific objective.....	3
1.5 Research question.....	3
1.6 Delimitations .....	4
1.7 Limitation .....	4
1.8 Conceptual framework .....	4
CHAPTER TWO .....	7
LITERATURE REVIEW .....	7
2.1 Introduction .....	7
2.2 History of contraception.....	7
2.3 Drug related factors affecting use of contraceptives.....	8

2.4 Socialcultural factors affecting contraceptives use .....	9
2.5 Health system and policy factors affecting contraception use .....	11
2.6 Importance of contraceptives use .....	13
CHAPTER THREE .....	16
METHODOLOGY .....	16
3.1 Introduction .....	16
3.2 Research design.....	16
3.2.1 Independent variables .....	16
3.4 Target Population .....	17
3.5 Inclusion/Exclusion criteria.....	17
3.5.1 Inclusion criteria .....	17
3.5.2 Exclusion criteria .....	17
3.6 Sampling.....	17
3.6.1 Sampling techniques .....	17
3.6.2 Sample size .....	18
3.7 Research Instruments .....	19
3.8 Pilot Study/Pre-Testing .....	19
3.9 Validity.....	19
3.10 Reliability .....	19
3.11 Data Collection Techniques .....	19
3.12 Data analysis.....	20
3.13 Security of data.....	20
3.14 Ethical Consideration.....	20
CHAPTER FOUR .....	22
RESULTS .....	22



4.1 Introduction: .....	22
4.2 Sociodemographics characteristics .....	22
4.3 Contraceptive prevalence rate.....	24
4.4 Sociocultural factors affecting uptake of contraceptives.....	24
4.4.1 Relationship between contraceptives use and sociodemographic characteristics .....	24
4.4.2: Association between level of education and other sociodemographic characteristics	27
4.4.3 Association between religion and sociodemographic characteristics.....	28
4.4.4 Association between knowledge on contraceptives and other sociodemographic characteristics .....	29
4.5 Health care system and policy factors affecting uptake of contraceptives .....	30
4.5.1 Health facility factors .....	30
4.5.2 Health workers factors affecting uptake of contraceptives .....	32
4.6 Drug factors affecting uptake of contraceptives .....	32
4.6.1 Prevalence of use of various family planning methods.....	31
4.6.2 Availability of contraceptives.....	33
4.6.3 Prevalence of adverse effects of contraceptives .....	33
4.7 Qualitative analysis.....	31
CHAPTER FIVE .....	34
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS.....	35
5.1 Introduction .....	35
5.2 Discussion .....	35
5.3 Conclusion.....	<b>Error! Bookmark not defined.</b>
5.4 Recommendations .....	37
5.4.1 Recommendation for policy and practice .....	37
5.4.1 Recommendation for further studies .....	38

REFERENCES .....	35
APPENDICES .....	39
Appendix i: consent explanation for participants.....	43
Appendix ii: Questionnaire for participants .....	45
Appendix iii: Ridhaa: Maelezo kwa Washiriki.....	49
Appendix iv: Maswali ya washiriki .....	51
Appendix v: Consent explanation in Somali.....	51
Appendix vi: Questionnaire for participants in Somali.....	53
Appendix vii: Consent explanation for MCH nurse in charge.....	57
Appendix viii: Questionnaire for MCH nurse in charge.....	56
Appendix ix: Consent explanation for pharmacist in charge.....	60
Appendix x: Questionnaire for pharmacist in charge.....	61
Appendix xi: Table of available types of contraceptives.....	63
Appendix xii: ERC approval letter.....	65

## LIST OF FIGURES

Figure 1: Diagrammatic Conceptual framework.....	6
Figure 2: Age distribution.....	23
Figure 3: Contraceptive prevalence rate.....	25
Figure 4: Distribution of contraceptive use across levels of education.....	27
Figure 5: Perception about FP services.....	31
Figure 6: Distribution of side effects.....	33

## LIST OF TABLES

Table 1: Social demographic characteristics.....	24
Table 2: Use of contraceptives vs. Social demographic characteristics.....	26
Table 3: Level of education vs. Social demographic characteristics .....	28
Table 4: Religion vs. Social demographic characteristics .....	29
Table 5: Knowledge of contraceptives vs. Social demographic characteristics.....	30
Table 6: Health facility factors affecting uptake of contraceptives.....	31
Table 7: Prevalence of use of various family planning methods.....	31

## ABSTRACT

**Background:** Family planning is one of the great public health achievements of the 20th century. Worldwide acceptance has risen to three-fifths of exposed couples. In many countries however, uptake of modern contraception is constrained by limited access and weak service delivery and the burden of unintended pregnancy is still large. Family planning is achieved through use of contraceptive methods and treatment of involuntary infertility.

**Objective:** To determine factors that affect uptake of contraceptives by mothers attending Maternal Child Health clinic at Garissa Provincial Hospital.

**Methods:** A hospital based cross sectional design was used. Two hundred and ten mothers were conveniently selected and interviewed using a structured questionnaire.

**Data analysis:** Data was analyzed using statistical package of social sciences version 21, whereby descriptive analysis were determined and p value were used to determine statistical significance of the association between independent variables and contraceptive use determined at 0.05 level of significance. Qualitative data was analyzed using thematic content analysis.

**Results:** The uptake of contraceptives by women attending Maternal Child Health clinic at Garissa Provincial Hospital was found to be 49% in comparison with the national average which was 58%. The factors that were associated with contraceptives uptake were level of education, place of origin, partner support and comprehensive contraceptive counseling all statistically significant ( $p$  value $<0.0001$ ). Barriers to contraceptive uptake included culture, religion, distance to the hospital and failure to offer contraceptive counseling during pregnancy and discharge from maternity. Other barriers were lack of involvement of clinicians and pharmacists in family planning and contraceptives.

**Conclusion:** Contraceptive use is low in the study area compared to the current national average. Culture, lack of formal education, low empowerment of women, distance to the hospital and lack of multidisciplinary approach to contraceptive use counseling specifically low involvement by Pharmacist and clinicians were among the identified factors behind the low level of use.

**Recommendations for policy and practice:** The County Government to Incorporate mobile clinics offering family planning services among other Maternal Child Health services as part of the counties family planning services outreaches and to decongest Garissa Provincial Hospital, a multidisciplinary approach on FP service provision to include clinicians and pharmacist should be encouraged to improve uptake of FP, community outreaches to raise awareness of contraceptives targeting both men and women and clinical Pharmacist to come up with standard operating procedures for contraceptive services.

**Recommendation for further studies**

A study on perception of the local men and religious leaders on family planning matters will give more insight into some of the reasons behind their opposition to contraception.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Knowledge of family planning (FP) is nearly universal with 95% of all women ages 15 to 49 knowing at least one modern method of family planning [1]. Family planning is achieved through use of contraceptive methods and the treatment of involuntary infertility. The various conventional contraceptives (CCs) methods available are hormonal and non hormonal. Hormonal method includes combined oral contraceptives (COCs) and progestin only contraceptives, while non hormonal contraceptives include copper T intrauterine devices (IUD).

COCs are made up of a synthetic estrogen and a progestin such as ethinyl estradiol and levonorgestrel, and are formulated as either oral or transdermal patches. Progestin only oral contraceptives are formulated in three forms oral, injectable e.g medroxyprogesterone acetate (Depo-provera<sup>R</sup>), implants which contains ethonogestrel, the active metabolite of desogestrel such as Implanon<sup>R</sup>, Jadelle<sup>R</sup> and intrauterine system (IUS) which are levonorgestrel-releasing systems include Mirena<sup>R</sup> [2]. Non hormonal contraceptives consist mainly of intrauterine devices (IUD) which are flexible non medicated plastic devices that are inserted into the uterus, affecting the uterine environment [3]. Contraception prevents pregnancy by interfering with the normal process of ovulation, fertilization and implantation [2]

Contraceptive choices are important in that they not only provide birth control but have other non contraceptive benefits such as prevention of uterine and ovarian cancers, treatment of polycystic ovarian cysts and other ovarian cysts, relief from heavy menses and acne treatment. Additionally, contraceptives allow individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. A woman's ability to space and limit her pregnancy has a direct impact on her health and well-being as well as on the outcome of each pregnancy [4]. In addition, close birth spacing and larger family size have been linked with parents' decreased investment in their children. All of this in turn, may influence children's mental and behavioral development and educational achievement [5].

Contraceptives have different side-effects (SEs). Common reported SEs of COCs includes diminished quality and quantity of breast milk in breast-feeding women and venous thromboembolism. The SEs of oral progestin only contraceptives includes breast tenderness, weight gain, lipid abnormalities, hirsutism, hair loss, menstrual irregularities and effect on sexual desire and function. The SEs of progestin injectables are delayed return to fertility after discontinuation, weight gain, and menstrual irregularities. Use of IUDs may give increased risk of pelvic inflammatory disease (PID), irregular uterine bleeding/spotting or amenorrhea and uterine perforation as side effects [2].

The contraceptive classes provided in government health facilities includes one generic brand of COC, Depo-provera<sup>R</sup> injection, Jadelle<sup>R</sup> implant and copper T IUD [6]. Despite the relentless efforts by Government to promote FP, quarter of currently married women in Kenya have an unmet need for family planning. Unmet need is evenly split between women who want to wait two or more years before having their next child and those who want no more children [7]

The Pharmacists is the custodian of pharmaceuticals including contraceptives [8]. Their primary concern is safety, efficacy and effectiveness of contraceptives. This is ensured from the point of manufacturing to the point of dispensing and in between, all of which are under their direct supervision.

## **1.2 Problem statement**

Garissa County's low contraceptive prevalence rate (CPR) of 4% has direct consequence on the Maternal Child Health (MCH) as is evidenced by the regions maternal mortality rate (MMR) which is more than double the national MMR. The national MMR is 488 deaths per 10000 live births, while that of North Eastern region, including Garissa county is 1000/10000 live births . The low CPR has a direct relation to the regions high total fertility rate (TFR). The national TFR is 4.6 while that of North Eastern region is 5.9. The County population is rapidly growing and this will put more economic strains in a region that is currently ranked among the poorest counties in the country [9]. These regional consequences are transferred nationally, impacting the nation's economy and derailing achievements of the Sustainable development goals (SDGs).



Contraceptive use optimization can effectively halt the overwhelming population growth and improve MCH. Despite reports of low contraceptive use in Garissa, there are few studies showing the reasons behind the low uptake and the barriers to contraceptives uptake. A few studies have been done to investigate client barriers to uptake of contraceptives. However, studies on health provider role and other contributing factors to low uptake have not been investigated. Such factors may involve health care systems, service provider, drug related and policy factors. FP services are an important component of MCH as a strategy to reduce the high MMR. The MCH clinics provide a window of opportunity for service providers to promote contraceptive use among mothers.

### **1.3 Purpose of the study**

The aim of the study was to explore the factors affecting uptake of contraceptive services leading to low CPR, high TFR and MMR. These factors were studied from a client, sociocultural, health system and policy and drug perspectives. The study also looked at the client's enabling factors to contraceptive use. Identifying such factors may be used to inform policy and suggest context specific strategies to improve contraceptive service provision at the MCH. This group of clients was selected because FP services are an important component of MCH as a strategy to reduce maternal and infant morbidity and mortality.

### **1.4 General objective**

To determine factors that affect uptake of contraceptives at maternal child health clinic at Garissa Provincial Hospital

#### **1.4.1 Specific objective**

1. To identify the sociocultural factors affecting contraceptive uptake.
2. To determine the drug related factors affecting contraceptive uptake.
3. To identify healthcare system and policy factors affecting uptake of contraceptive.

### **1.5 Research question**

What are the barriers to uptake of contraceptives at Garissa provincial hospital?

## **1.6 Delimitations**

The study being carried in a hospital MCH clinic captured all mothers regardless of mode and place of delivery. The mothers having newborn have a heightened awareness of need for FP. As mothers come for their MCH clinic it provides a window of opportunity for health care workers to promote contraceptive use.

## **1.7 Limitation**

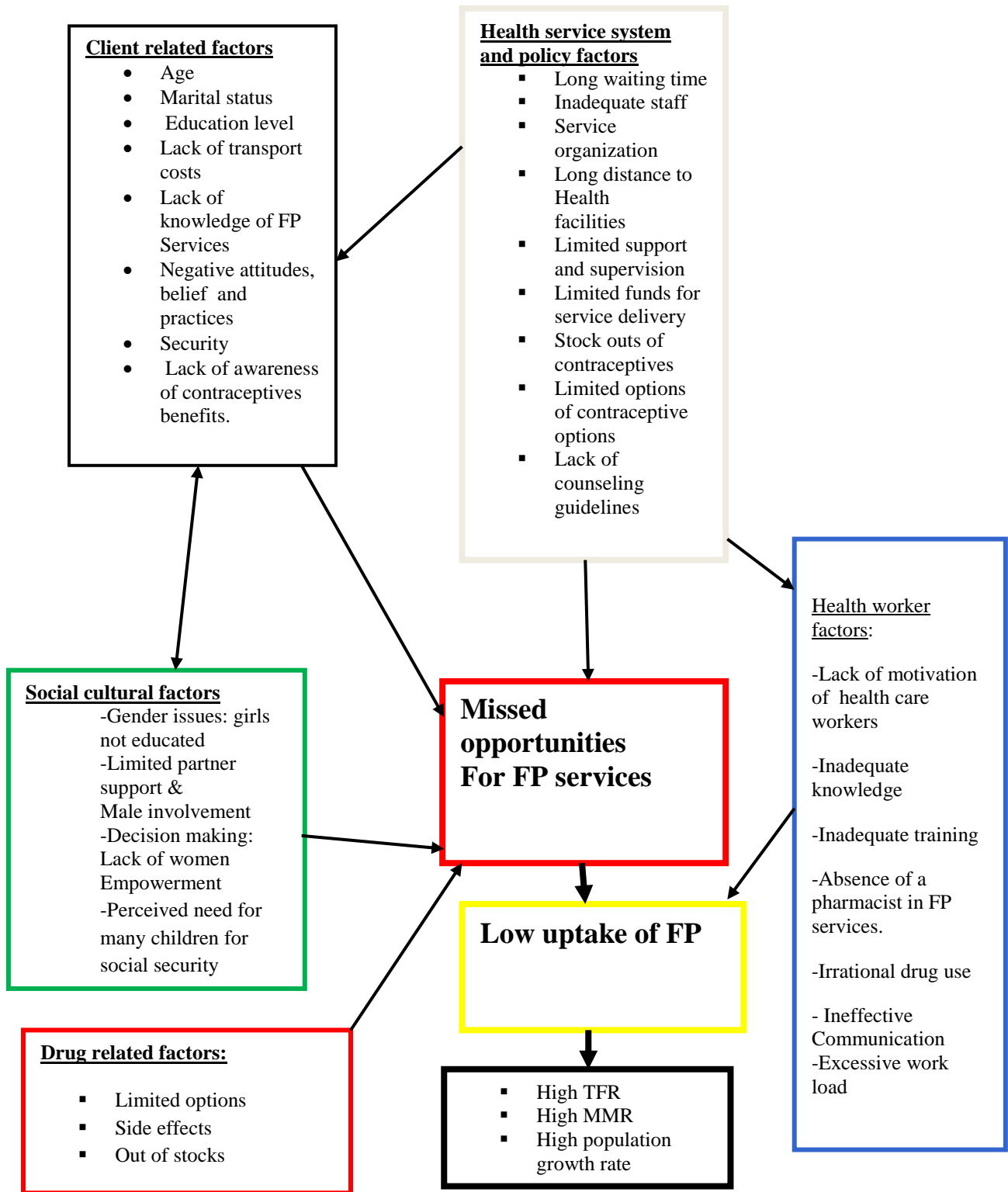
The study was subjected to selection bias. However, data collection was spread out for a period of three months in order to capture any variations in patients' population. In addition, the study did not capture women who choose not to attend MCH clinic at GPH (may opt for private hospital).

## **1.8 Conceptual framework**

The study was based on the interplay of several factors as illustrated in Figure 1. Some of the patient related factors that could influence use of contraceptives include age, marital status, lack of knowledge of FP services and negative attitudes towards hospital services. Sociocultural factors that could influence the use of contraceptives are education level of the mother, which may limit awareness of importance of contraceptives leading to low uptake, the need of many children for the purpose of social security, lack of male support and lack of female empowerment in decision making process in the study area.

Socioeconomic factors that might bar uptake of contraceptives includes poverty, low income of a mother or family that may lead to unmet needs such as lack of transport to a hospital.

Health worker related factors may also contribute to low uptake of contraceptives through lack of effective communication and counseling on contraceptives during the clinic visits and following delivery, excess workload, low motivated staff leading to loss of opportunities to promote contraceptives use and lack of adequate knowledge for rationale contraceptive prescribing.



**Fig. 1-Conceptual framework**

Health system and policy factors that include long waiting time, inadequate staff, service organization, long distance to health facilities, limited support, supervision , limited funds for service delivery, stock outs of contraceptives, and lack of guidelines on contraceptive counseling are possible variables.

Drug related factors that may cause low uptake of contraceptives include limited options of contraceptive methods, side effects, unavailability, price, and dissatisfaction with a particular method. All these factors in one way or another may lead to low uptake of contraceptives.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter describes the different components of the literature reviewed. They include the global, regional and local CPR, drug related factors, sociocultural factors and health system and policy factors affecting contraceptives uptake.

#### **2.2 History of contraception**

The modern birth control movement originated in 1912 out of concern about the health effects of high fertility on women and their children. But the fertility-control methods available around this time, were limited and were primarily coital dependent such as the condom and withdrawal. It was not until 1960 that the modern contraception including the birth control pill and the intrauterine device (IUD), both highly effective and not coital dependent, became available. These were followed by other highly effective methods later in the 20<sup>th</sup> century. Between 1960 and 2010, women had more options for birth control option methods than ever before [10].

Family planning is hailed as one of the great public health achievements of the last century and worldwide acceptance has risen to three-fifths of exposed couples. In many countries; however, uptake of modern contraception is constrained by limited access and weak service delivery and the burden of unintended pregnancy is still large [11]. Other constraints that may affect contraceptive uptake are drug related factors, sociocultural factors and health system and policy factors. The effects of these constraints are evidenced by various studies done globally, regionally and locally.

Contraceptive prevalence rate can be looked at from two perspectives. A report by Jones et al focused on the method(s), if any, that women were using at the date of interview, referred to as their current contraceptive use [12]. The report presented data on trends and differences in current use of contraception by various characteristics, whereas a report by national health statistics focused on ever-use and this perspective adds to knowledge of contraceptive behavior over women's lives in a number of ways. The methods women use vary over their reproductive life course; thus, this perspective provides more information on women's history of

contraceptive use and the number of methods women have ever used even if they are currently not using contraception for example, if they are seeking to conceive, are pregnant, or are postpartum at the time of the interview.

In 2011 an estimated 63% of women of reproductive age in the world who were married or in a union were using a contraceptive method, though contraceptive prevalence levels varied widely across major areas and sub-regions. Contraceptive prevalence was lowest in Africa (31%), and less than 25% in Middle Africa and Western Africa and 70% or higher in Europe, Latin America, the Caribbean and Northern America. In 2011, nine in ten contraceptive users worldwide relied on a modern method of contraception [13]. However, universal access to reproductive health is still far from being attained. At least one in five women of reproductive age who are married or in a union have an unmet need for family planning in the least developed countries. An estimated 143 million married or in-union women worldwide have an unmet need for family planning.

Regionally, the CPR is 62% as of 2005, and unmet need for FP is 24% [13]. In Kenya slightly less than half of married women are using family planning methods out of which 39 % are using CCs, while 6% use traditional methods. In Garissa county married women taking contraceptives are less than 4% [9]. The most recent government effort in promotion of one of the blocks of the population is the free issuance of contraception in government health facilities. Currently, more than half (57%) of modern method users are supplied in government hospitals, while 36% are supplied through private medical sources and 6% through other sources [15].

### **2.3 Drug related factors affecting use of contraceptives**

Drug related factors associated with not taking or discontinuations of contraceptives use include dissatisfaction with the available methods among others [16]. Of the women who had ever used and discontinued Depo-provera<sup>R</sup>, 74% cited side effects as a reason, especially changes in their menstrual cycles [16]. Another reason is use of limited options despite the availability of newer and effective methods such as contraceptive patch, contraceptive ring and the levonorgestrel intrauterine system. Newer methods are used by fewer women in Canada [17]. Raising awareness of newer methods which are also more effective can increase contraceptive use.

Regionally, drug factors identified include side effects, limited options of contraceptive methods, and improper use. Approximately 14 million unintended pregnancies occur and a sizeable proportion is due to poor use of short-term hormonal methods. Other drug related factors reported in Africa are fertility and method related [18].

Misinformation and misconceptions of contraceptives also affect their use. Many Kenyan women know at least one method of family planning, and many recognize the benefits of family planning, especially for the health of women and children. Others know about certain methods and are unaware of other methods, such as female condoms and implants. Despite a high awareness of some FP methods, Kenyan women have misconceptions about the use of family planning. These myths and misconceptions typically relate to potential side effects, such as pain, infertility or birth defects. In some cases, such beliefs are based on personal experiences, but most are based on reports from relatives or community members [19].

#### **2.4 Sociocultural factors affecting contraceptives use**

Globally, the sociocultural factors affecting contraceptive uptake have been reported. The main sociocultural factors are race, religion, and education level. A higher proportion of white women (89%) have used the pill compared with all other racial and ethnic groups. Use of the pill is lower among women with less education and about 76% of Catholic women use contraceptives, compared to 86% of the Protestant groups [20]. In a Canadian study, women residing in urban areas and those with at least some college or university education were more likely to always use contraception than their rural counterparts or women with high school education or less [21].

Sociocultural factors affecting contraceptive use in Africa include opposition from spouse, peers, and religion [22]. Other reasons include need to have more children for social security where more children are equated to amount of wealth, negative attitudes by couple and their beliefs and practices. Low literacy level has a direct relation to contraceptive knowledge and where to obtain the service contributes to non use [23].

Patriarchal, hierarchical, and polygamous organization of many African households tend to perpetuate the low status of women in African society. In such household, most women cannot exert much if any control over their lives in the family within which they live. Early marriages, patrilocal residence after marriage, and polygamous units are institutions that perpetuate

women's subordinate position and make them rather voiceless and powerless in matters affecting their reproduction. At marriage, women assume low status relative to all members of her extended family, which is usually elevated by attainment of high fertility [25].

The preferences for large families and for sons are deeply held beliefs among members of the community, not only among men. For some men, there is a competition within the community to have larger families as this is believed to be a sign of strength and virility of the man and also of the family's wealth, as well as a guarantee that the family lineage will continue. Women report that mothers-in law support the belief that wives are meant to bear children for their sons. Women also said that having many children, especially sons, is a way to ensure their position or authority within the family and to keep their husbands from taking on additional wives [26].

In general, there is limited communication about family planning between spouses. In urban areas, women who use contraceptives said they do so because they were motivated by friends or nurses, not by their husbands. Moreover, spousal opposition is one of the key barriers mentioned in several discussions. According to females, men oppose FP use because they think women will become promiscuous, men want to have sons, or they believe having more children will ultimately add to the wealth of the family. Women who use family planning might also be seen as challenging men's authority [26].

Poverty is the main socioeconomic cause of low contraceptive use in Africa due to lack of funds to obtain contraceptives or transport to health facilities where they may be free [27]. Locally, the sociocultural factors documented are level of education with majority of women using contraceptives having post primary education, while the least users of family planning have no formal education [28]. In terms of religion a Kenyan study observed that 52% of contraceptive users were Protestants, 35% Muslims while only 13% were Catholics indicating that use of contraceptives vary across religion with Catholics being the least users.

Use of contraceptives also varies across marital status with married women using the services more compared to single women. Another factor was spousal approval whereby 56% of the women sought approval before using contraceptives, while 23% did not bother. The high percentage of those who sought approval from a partner clearly indicates the importance of a partner's consent in making a final decision on use of family planning services [22].



The number of children in a family was also found to be a factor. Women with more living children were using family planning services more compared to those with fewer children. Out of the women that were using family planning services, 36% had 4-6 children, followed by those with between 1-3 living children 29% [8].

In general, women who had experienced unintended pregnancies were 40 times more likely to use modern contraceptives compared to those who had intended pregnancy after the unplanned pregnancy experience. Social status also has effect on contraceptive use whereby women from non-slum settlements are 1.47 times more likely to use modern contraceptives compared to those in slum settlements. Age is also a factor in contraceptive use whereby women aged 20-34 years were 3.69 times more likely to use modern contraception compared to younger women aged 15-19 years [8]. Marital status was positively associated with the use of modern contraceptives [29].

In Garissa county, cultural practices are the major drawback to contraceptive use. Strong religious and cultural beliefs advocates for non adherence to family planning. It also affects education with special interest in girl-education, which has direct relation to contraceptive use knowledge [9]. Furthermore this is a county with about 46.3% women and 53.7% men. Women head 16% of the households in the county. The basic gender concerns in the county are related to access to economic assets and cultural practices that act against the female population. Women do not participate in major areas of decision making. They are not involved fully in some of the development programmes most of which affect their lives. Men take the leading role in making most of the major decisions in terms of development activities and family [9].

## **2.5 Health system and policy factors affecting contraception use**

Health system factors impact on contraceptives uptake is evidenced by Colorado Family Planning Initiative (CFPI), which used private funds from an anonymous foundation providing long-acting, effective contraceptive methods Long Acting Reversible Contraceptives (LARC) at no cost through the state's Title X-funded family planning clinics. This population-based approach increased the accessibility of LARC methods in women at high risk of unintended pregnancy. The project showed before the initiative began, use of LARC methods was limited to fewer than 5% of women in the targeted age group, but by 2011 it had quadrupled to 19%, the

results were compared to those of the government sponsored programmes such as Medicaid, which provides for limited family planning options [30].

Locally, the health system and policy factors captured in the various studies include facility factors that affect the use of family planning services which includes family planning provider, quality of family planning services, availability of family planning services, user fees charged for family planning services and proximity of the family planning facility. In a Kenyan city slums study, out of the 51% that were using contraceptives, 49% obtained the services from health facilities, 15% obtained from private pharmacies, while the remainder 6% obtained from both workplace and mobile health facility. In the same study, out of the 41% of participants that agreed that quality of the services was good, 86% were using the services, while the remaining 14% were not using the services. Friendliness of staff also has effects on contraceptive use with 68% of the respondents who were using contraceptives perceiving the staff to be friendly while 19% perceived the staff to be unfriendly [15].

Provider behavior such as poor provider-client interactions, including limited counseling on available FP options and side effects as well as condescending or unfriendly language also affect the service. Providers overwhelming workloads brought about by staff shortage is also a factor. In such cases, a provider finds it easier to provide the method the client asks than to initiate a full counseling session. Urban areas generally report good provider-client interactions [26].

Equitable access to a range of contraceptive methods requires that barriers related to cadres be reduced by redefining legal scopes of practices, and that health worker who are then legally able to provide different types of contraception are appropriately trained, distributed and retained throughout the country according to population needs. Since the type of health worker needed to provide contraception varies by method, the differentials in contraceptive use by method between countries may reflect, in part, differentials in access to specific cadres of trained health workers, especially in rural and underserved periurban areas. Use of certain types of methods may also partly reflect differences in health worker training, qualifications and preferences, even within a given cadre [26]

In Garissa, the main health system and policy factor causing poor use of contraceptives is inadequate medical services in the County. The number of health facilities available and the services provided to the local populace are limited. The doctor patient ratio is 1:41,538. Furthermore, people are forced to travel long distances to access health services (average distance to the nearest health facility is 35 km). This coupled with poor road network causes many to forgo treatment [9].

## **2.6 Importance of contraceptives use**

Family planning is a pertinent component in achieving SDGs and general well being of citizen [29]. Studies have shown that family planning services can help address SDGs constraints and other public health challenges by providing education, counseling and medical services that permits individuals to influence the timing and the number of births, which is likely to save lives of children [32].

Promotion of family planning in countries with high birth rates has the potential of reducing poverty and hunger, while at the same time averting 32% of all maternal deaths and nearly 10% of child mortality. This would contribute substantially to women's empowerment, achievement of universal primary schooling and long-term environmental sustainability [7]. If access to family planning services was increased there would be slowing down of population growth rate and reduction in the costs of meeting SDGs in terms of universal primary education, which is influenced by the number of children in need of education [29].

From observation, family planning services offer various economic benefits to the household, country and the world at large [33]. By reducing unwanted pregnancies, family planning service can reduce injury, illness and death associated with child birth, abortions and sexually transmitted infections (STIs) including Human Immunodeficiency Virus/Acquired immunodeficiency syndrome (HIV/AIDS). Further, family planning contributes to reduction in population growth, poverty and preservation of the environment as well as demand for public goods and services [34].

Other substantial economic benefits could include demographic bonus or dividends. Demographic bonus exists when there is a shrinking share of the population consisting of

dependent children at the same time as a greater share consisting of working-age adults and when this occurs, it boosts productivity and allows added savings or investment [35]. Family planning helps to reduce the number of high-risk pregnancies that result in high levels of maternal and child illness and death. High population growth is associated with high illiteracy rates and low education level that make it difficult to implement government programmes, given their budgetary implications [15].

The use of family planning services is an important issue for a developing country like Kenya due to the benefits gained in terms of development through reductions in fertility levels [36]. Furthermore, the uptake of family planning widens choices available to people particularly women by allowing individuals and society more opportunities for social and economic development. High fertility rate impedes economic growth.

Countries with high “population pressure” or with rapidly growing populations may not be able to meet the large education, labour, health and infrastructure-related demands of the population [37]. Additionally, population growth affects the environment and raises concerns about food security and safe drinking water [38]. Reducing fertility can help alleviate poverty and stimulate economic growth [39]. Declining birth rates can result in an improved dependency ratio, with an increasing number of productive adults relative to the number of young and elderly dependents. This would be realized only if countries responded with appropriate family planning policies and the resources that would have been required to meet the needs of a larger number of dependents [40].

According to a United States Agency of International Development/Health Policy Initiative (USAID/HPI) report, family planning can slow population growth and reduce demographic pressure, which can in turn help countries to lift themselves out of poverty. Reduced population sizes mean a decreased burden on national expenditures for education, health and other social services, as well as less strain on the environment and natural resources. This further contributes directly to reduced infant and maternal mortality and morbidity [41].

While contraceptive use has grown in Kenya over the years, both unmet need for family planning and unintended pregnancy remains very high. This study aimed to identify factors associated with low uptake of contraceptives by mothers attending MCH clinic to inform policy review and formulation and establishing of systems that promote contraceptives uptake in the needy sections of the population.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the different components of the methodology. They include the research design, study area, target population, sampling technique, inclusion and exclusion criteria, data collection technique and analysis as well as ethical considerations of the study

#### **3.2 Research design**

The design was a hospital based cross sectional study. The study design chosen is the most appropriate to answer the study question since it involved direct contact with the respondents and therefore gathered adequate responses.

##### **3.2.1 Independent variables**

Sociocultural factors refer to communal practices that affect contraceptives uptake. Drug related factor are drug components of various forms that affect contraceptive use, while health system and policy factors are the factors associated with how health systems are run and the guiding frameworks.

##### **3.2.2 Dependent variables**

Use of contraceptive

#### **3.3 Location of the Study**

Garissa Provincial Hospital is located in Garissa County which has an area of 44,174.1Km<sup>2</sup> and lies between latitude 10<sup>0</sup> 58'N and 20<sup>0</sup> 1' S and longitude 38<sup>0</sup> 34'E and 41<sup>0</sup> 32'E. The county borders the Republic of Somalia to the east, Lamu County to the south, Tana River County to the west, Isiolo County to the northwest and Wajir County to the north. The County has six sub-counties which include: Fafi, Garissa, Ijara, Lagdera, Balambala and Dadaab. In 2012, the County had a total population of 699,534 persons consisting of 375,985 males and 323,549 females. The population is projected to increase to 785,976 and 849,457 persons in 2015 and 2017 respectively [27]. The county has the lowest contraceptive prevalence rate nationally which stands at 4 %. Garissa Provincial hospital is the regional referral hospital, with a bed capacity of

240, and weekly ANC visits of approximately 100 clients. Garissa Provincial Hospital was chosen due to the low County CPR and its central position economically and adequate transport system.

### **3.4 Target Population**

Mothers coming for their MCH clinic visit were targeted. The mothers included were both those who delivered at the hospital or at home. The choice of this population was selected because FP is an integral component of MCH whereby mothers are required to receive counseling on FP and make informed decisions on their preferred method of use.

### **3.5 Inclusion/exclusion criteria**

#### **3.5.1 Inclusion criteria**

1. Women 15 years and over who were attending MCH clinic irrespective of their place of delivery
2. Women 15 years and over who consented to participate in the study

#### **3.5.2 Exclusion criteria**

1. Women 15 years and over who declined to give informed consent

### **3.6 Sampling**

#### **3.6.1 Sampling techniques**

All mothers attending MCH were eligible. However, convenience sampling was used to sample the individual participants whereby every other woman was picked and approached. Women who fulfilled the inclusion criteria were recruited into the study by the principal investigator and two assistants who were women, one of whom was a fluent English and Swahili speaker and the other was fluent Swahili, English and Somali speaker.

The entry point was at exit point of the hospital MCH clinic where all mothers attending MCH were identified and an invitation to participate in the study on a voluntary basis made. Participants who got enrolled in the study were interviewed face to face guided by the questionnaire (appendix ii, iv, vi). Data collection period was spread over three months in order to capture the targeted sample size and cater for bias.

### 3.6.2 Sample size

#### Sample size for mothers

Sample size was determined using the single population formula for proportions [13]

$$n = \frac{Z^2 [P (1-P)]^*}{d^2}$$

Whereby:-

**n** is the required sample size

**z**= statistical score is the critical value associated with significance level of 95% confidence Interval, is 1.96

**p** is the Garissa provincial Hospital CPR which is 15% (0.15) [14]

**d**<sup>2</sup> the margin of error accepted for this study that at 95% confidence interval to give +/- 0.05.

Substituting the variables above: (n=sample; z=1.96; p=0.39; q=0.61; d=0.05)

$$n = \frac{(1.96)^2 [0.15 \times 0.85]}{0.05 \times 0.05} = 195.$$

Due to the small size of the target population i.e. only 400 mothers attends MCH clinic per month, and the sample was collected for three months, the highest total population possible to be sampled is 1200. Hence, finite population correction factor has been applied:

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Where n is the sample size

N is the population size.



$n_0$  is calculated sample size for infinite population

$$n = \frac{195}{1 + \frac{195-1}{1200}} = 168$$

168 Participants were recruited.

Nevertheless, 210 participants were sampled to cater for any issue that would arise such as incompletely filled forms.

### **3.7 Research Instruments**

Structured questionnaires were used (Appendices ii, iv, v, viii and ix) to capture study population. The patient questionnaire was administered by an interviewer, while the nurses and pharmacist questionnaires were self filled. The questionnaires had both open and closed ended questions on the various aspects of contraceptive use and availability of products.

### **3.8 Pilot Study or Pre-Testing**

Data collection tools were pretested on ten recruited participants and no ambiguity was noted.

### **3.9 Validity**

The tool was structured to ensure that same interview questions and procedure were applied on all participants hence internal validity was catered for. Internal validity was further achieved by ensuring an accurate questionnaire filling. The results were generalized to the northeastern region of Kenya because women in the region face same sociocultural and economic factors, and the hospital system and policy are the same. However, the results may not be generalized to other regions due to differences in sociocultural and economic factors.

### **3.10 Reliability**

This was achieved by repeatability ensuring that the study participants understood the questions the same way.

### **3.11 Data Collection Techniques**

Data was collected by the principal investigator and two assistants. Pretested structured questionnaires were used to interview the participants. Convenience sampling was used to recruit

patients until the required sample size was obtained while the MCH nurse and pharmacist in-charges or their representatives self filled their appropriate questionnaires. The principal investigator or the research assistant introduced themselves to the women, upon agreement by the participants; they were individually asked to give a written informed consent and assigned a study number by the researcher and the research assistants. The participants were then interviewed in a private room, about FP knowledge, attitude and practices. The nurse and pharmacist in charges were approached as per prior booked appointment for the questionnaire completion.

### **3.12 Data analysis**

A descriptive analysis of sociodemographic characteristics of the participants versus use of conventional contraceptives was done using statistical package of social sciences (SPSS) version 21 descriptive statistics were determined and p value set at 0.05 used to determine the statistical significance of any associations. Qualitative data was analyzed via thematic content analysis

### **3.13 Security of data**

All the completed forms were handed to the principal investigator on a daily basis who kept them safely until data entry into an excel spread sheet was done. All computer information was password protected.

### **3.14 Ethical Considerations**

Approval for the research was obtained from the KNH Ethics and Research Committee (Ref No. KNH-ERC/RR/15, appendix xii) and Garissa Provincial Hospital administration before the study was carried out. The principal investigator and the research assistants introduced themselves to respective participants, and informed them of the nature and purpose of the study. Informed consent was sought and the participant's fears were acknowledged and addressed. Those who consented were enrolled; the principal investigator obtained informed consent of the pharmacist in charge and MCH nurse in charge at their convenient time and issued each of them with a self administered questionnaire. Questionnaires were coded as opposed to the patient's name being used. No incentives were given to the study participants. Privacy and confidentiality was safeguarded throughout the course of the study. Women who desired to start conventional contraceptives or those who choose to change the current choice of contraceptive were referred

to the FP clinic for the service. The participants were engaged on a voluntary basis and were free to leave any time without any consequences.

## CHAPTER FOUR

### RESULTS

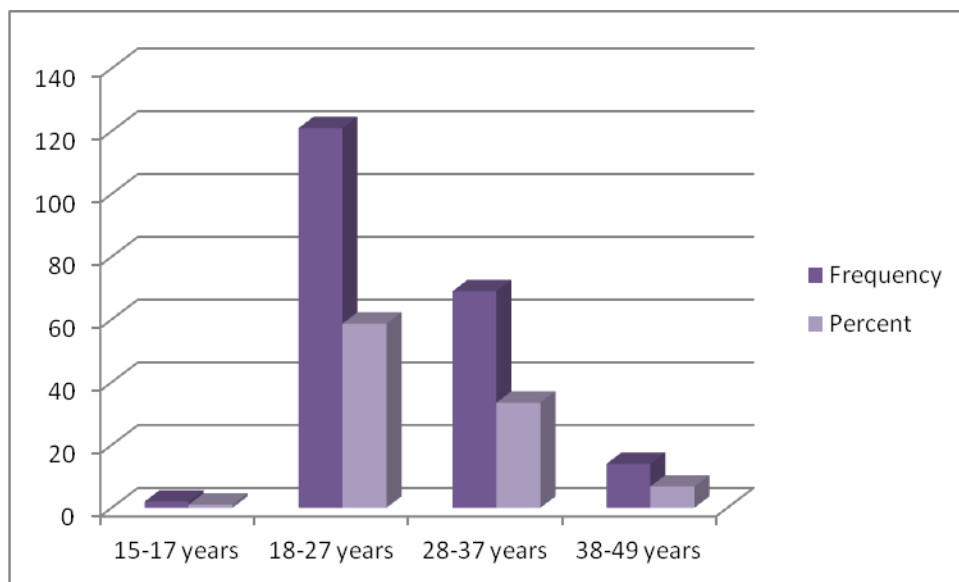
#### 4.1 Introduction:

This chapter portrays the results of the study. They include; sociodemographic characteristics sociocultural factors, drug related factors, healthcare system and policy factors affecting uptake of contraceptives.

#### 4.2 Sociodemographics characteristics

Two hundred and ten women were interviewed at the MCH with a 100% response rate. The participants' sociodemographic characteristics are outlined in Table 1.

The results revealed that 121 (58.7%) of the participants were aged between 18 and 27 years. The age distribution is captured graphically in Figure 2.



**Figure 2: Age distribution**

Most of the respondents 83 (39.5%) did not have any form of formal education while the rest had primary, secondary and tertiary level of education respectively. Majority, 193 (92.9%) of the participants were married, most of them (105, 50.2%) had 1-2 children while only 15 (7.1%) had more than 6 children.

**Table 1: Sociodemographic characteristics**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Age</b>		
15-17 years	2	1.0
18-27 years	121	58.7
28-37 years	69	33.5
38-49 years	14	6.8
<b>Level of education</b>		
None	83	39.5
Primary	62	29.5
Secondary	37	17.6
Tertiary	28	13.3
<b>Marital status</b>		
Single	7	3.4
Married	193	92.8
Divorced	6	2.9
Widowed	2	1.0
<b>Occupation</b>		
Housewife	142	68.2
Self employed	37	17.7
Formal employment	20	9.61
Informal employment	9	4.32
<b>Place of origin</b>		
Native	114	54.3
Non native	96	45.7
<b>Religion</b>		
Christianity	85	40.5
Muslim	125	59.5
<b>Place of delivery</b>		
Hospital	181	86.2
Home	29	13.8
<b>No. of children</b>		
1-2	105	50.2
3-4	56	26.7
5-6	33	15.7
>6	15	7.1
<b>Last pregnancy planned</b>		
Yes	139	69.8
No	56	28.1
<b>Partner support use of contraceptives</b>		
Yes	115	59.2
No	74	38.1

More than half of the mothers were house wives and the rest were either in formal or informal employment. About 54% were natives of Garissa County and 114 (59.5%) of the respondents were Muslims. Majority (86.2%) of the women reported to have had their last delivery in a hospital. Slightly over half (115, 59.2%) of the women had spouses supporting use of contraceptives.

### 4.3: Contraceptive prevalence rate

The use of contraceptive among the study population was found to be 49% as presented graphically in Figure 3.

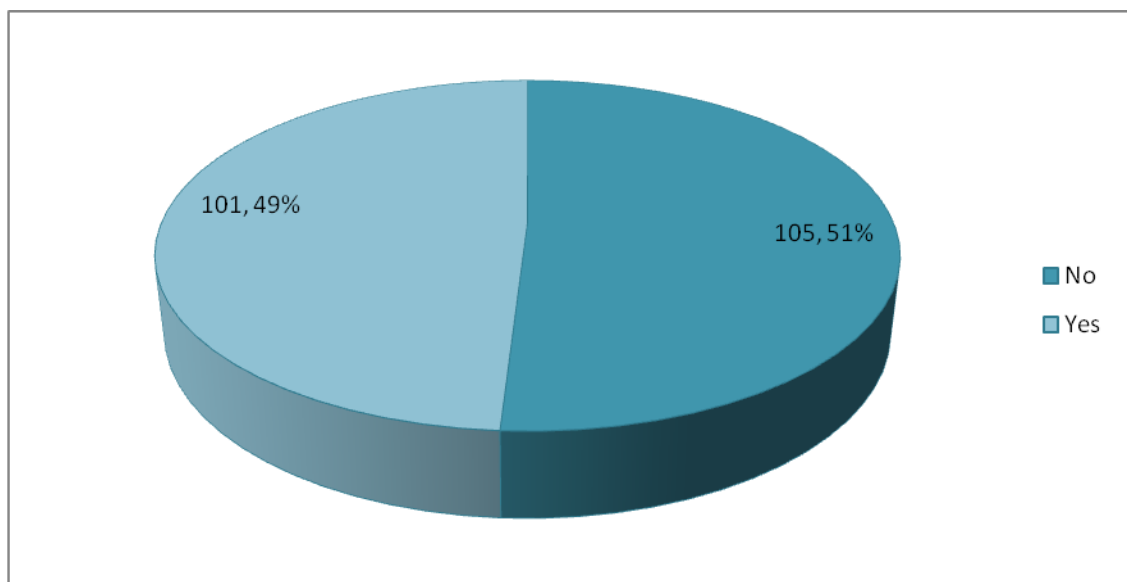


Figure 3: Contraceptive prevalence rate

## 4.4 Sociocultural factors affecting uptake of contraceptives

### 4.4.1 Relationship between contraceptives use and sociodemographic characteristics

The bivariate analysis between contraceptive use and sociodemographic characteristics was done in order to identify which of the sociodemographic characteristics had a statistical significant association. Identifying these associations helped in drawing inferences on the factors affecting use of contraceptives among the study participants.

A relationship between contraceptive use and sociodemographic characteristics is outlined in Table 2. Use of contraceptive was found to be highest in the women of ages 18-27. However, there was no association between contraceptive use and age ( $p = 0.518$ ). In the study, place of delivery and use of contraceptive were found not to be statistically significant ( $p = 0.374$ ), perhaps because at the time of hospital delivery, the promotion of use of contraceptives was not done adequately. Despite increased contraceptive education to patients and emphasis on the importance to deliver in hospital, the number of women who gave birth at home was large (13.8%) probably due to the culture promoting superiority of traditional midwives

**Table 2: Relationship between use of contraceptives and sociodemographic characteristics**

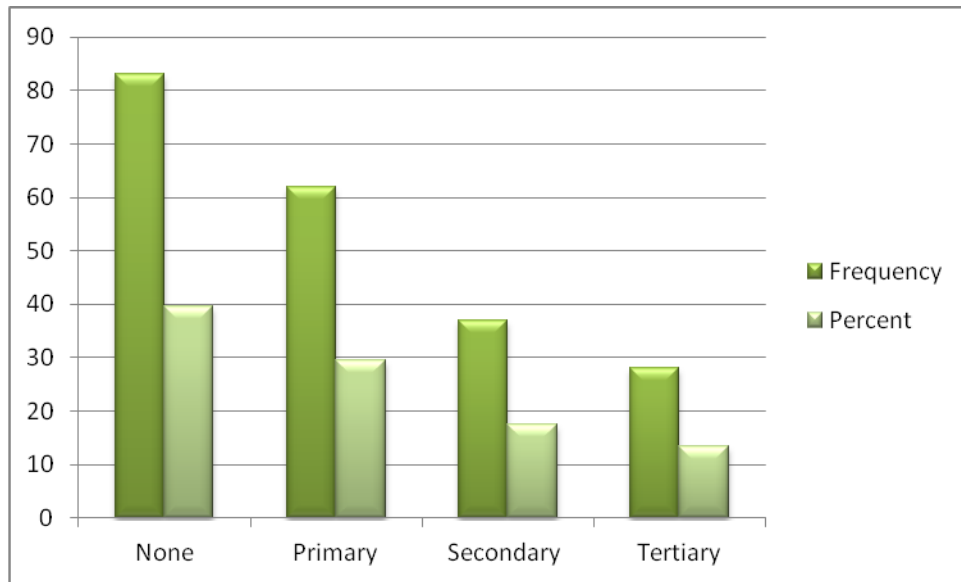
<b>Ever used contraceptives</b>			
	Yes	No	p value
<b>Level of edu.</b>	<b>n (%)</b>	<b>n (%)</b>	
None	21(10.2)	61(29.6)	<0.0001
Primary	38(18.4)	24(11.6)	
Secondary	22(10.67)	14(6.8)	
Tertiary	20(9.7)	6(2.9)	
<b>Marital status</b>			
Single	3(1.5)	4(2.0)	0.168
married	91(44.6)	98(48.0)	
Divorced	5(2.4)	1(0.5)	
Widowed	2(0.9)	0(0.0)	
<b>Place of Origin</b>			
Native	30(14.6)	82(39.8)	<0.0001
Non- native	71(34.5)	23(11.2)	
<b>Last pregnancy planned</b>			
Yes	84(43.5)	55(28.5)	<0.0001
No	16(8.3)	38(19.7)	
<b>Partner support</b>			
Yes	81(43.3)	32(17.1)	<0.0001
No	15(8.02)	59(31.55)	
<b>Ever received contraceptive counseling</b>			
yes	86(42.4)	43(21.2)	<0.0001
No	15(7.4)	59(29.1)	
<b>Cost of contraceptives</b>			
Free	83(79.0)	15(14.3)	<0.0001
Cheap	5(4.8)	2(1.9)	

There was no statistically significant association between parity and contraceptives use, suggesting that educating mothers on the importance of using contraceptives to space and limit number of children was not passed across or the culture promotes having many children. The latter can be supported by the fact there was no association found between number of intended children and contraceptives. Slightly less than half (48%) of the married women not having been on any family planning method perhaps is due to low level of women empowerment of the study participant. This might have to do with the study observation that most married women in the study were also fulltime housewives. The place of origin was statistically significant with the use of contraceptives ( $p < 0.0001$ ). This points out to the influence of culture on use of contraceptives more so in reference to the natives perhaps due to the strong embracing of cultural practices. This is further indicated by the study observation of low uptake of contraceptive use among the natives than non natives. Furthermore the study showed use was low among Muslims compared to Christians which had statistically significant association ( $p < 0.0001$ ). Majority of the natives were Muslims hence an indication that religion was a barrier to contraception.

The association between those who planned pregnancy and use of contraceptives was statistically significant. Women who received support from their husbands took contraceptive more readily. Counseling about family planning and cost of contraceptives were found to have a statistically significant association ( $p < 0.0001$ ).

An association was found between level of education and contraceptives use ( $p < 0.0001$ ), showing that perhaps educating women is essential in enhancing family planning and other health promoting habits. The distribution of contraceptive use across level of education is shown in Figure 4.





**Figure 4: Distribution of contraceptive use across level of education**

#### **4.4.2: Association between level of education and other sociodemographic characteristics**

The study revealed that level of education is a critical determinant for use of contraceptive as shown in Table 3. A statistically significant relationship existed between level of education with number of children, knowledge of contraceptives, and place of origin among others as shown in Table 3 below. However, whether the last pregnancy was planned or not was found not have a statistically significant association with level of education.

**Table 3: Association between level of education and sociodemographic characteristics**

<b>Level of education</b>					
	<b>None</b>	<b>Primary</b>	<b>Secondary</b>	<b>tertiary</b>	<b>P value</b>
<b>No. of children</b>	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	0.001
1-2	27(13.0)	30(14.5)	25(12.1)	23(11.1)	
3-4	21(10.1)	21(10.1)	9(4.3)	3(1.4)	
5-6	22(10.6)	8(3.9)	3(1.4)	0(0.0)	
>6	13(6.2)	2(0.9)	0(0.0)	0(0.0)	
<b>Knowledge of contraceptives</b>					
Yes	45(21.4)	55(26.2)	31(14.8)	27(12.9)	<0.0001
No	38(18.1)	7(3.3)	6(2.9)	1(0.5)	
<b>Place of origin</b>					
Native	71(34.6)	28(13.6)	6(2.9)	4(1.9)	<0.0001
Non-native	7(3.4)	34(16.6)	31(15.1)	24(11.7)	
<b>Use of contraceptive</b>					
Yes	21(10.2)	38(18.4)	22(10.7)	20(9.7)	<0.0001
No	61(29.6)	24(11.6)	14(6.7)	6(2.9)	
<b>Last pregnancy planned</b>					
Yes	45(23.1)	46(23.6)	28(14.3)	20(10.2)	0.119
No	28(14.3)	14(7.2)	6(3.1)	8(4.1)	
<b>Partner support</b>					
Yes	1(0.5)	109(58.3)	1(0.5)	2(1.1)	<0.0001
No	2(1.1)	70(37.4)	2(1.1)	0(0.0)	

#### 4.4.3 Association between religion and sociodemographic characteristics

The study revealed that religion is an important determinant of contraceptive use as shown in Table 4. There was a statistical significant association between religion and place of origin, desired number of children, use of contraceptives, planning of pregnancy as well as partner support.

**Table 4: Association between religion and sociodemographic characteristics**

	<b>Religion</b>		P value
	Christian n (%)	Muslim n (%)	
<b>Place of origin</b>			
Native	1(0.5)	113(53.8)	<0.0001
Non-native	84(40.0)	12(5.7)	
<b>No. of intended children</b>			
<6	81(59.5)	17(8.1)	<0.0001
>6	3(2.2)	35(16.7)	
<b>Ever used contraceptive</b>			
Yes	64(31.1)	37(17.9)	<0.0001
No	19(9.2)	86(41.7)	
<b>Last pregnancy planned</b>			
yes	67(34.3)	72(36.9)	0.004
No	15(7.7)	41(21.0)	
<b>Partner support use of contraceptive</b>			
yes	73(38.6)	42(22.2)	<0.0001
No	4(2.1)	70(37.0)	

#### **4.4.4 Association between knowledge on contraceptives and other sociodemographic characteristics**

Knowledge on contraceptives took into consideration the awareness that a respondent had about contraceptives regarding available methods, benefits and side effects. The sociodemographic characteristics considered were: age, number of children a respondent had level of education a woman had attained, the status of their marriage, place of origin, religion and use of contraceptives. A statistical significant association was noted between knowledge of contraceptives and parity, level of education, marital status and place of origin but not with age (Table 5). This indicates the low level of women's awareness of contraceptives resulting from missed opportunities by Clinicians and Pharmacist and lack of community outreaches on the same might have been hindering factors to uptake of contraceptives.

**Table 5: Knowledge of contraceptive and sociodemographic characteristics**

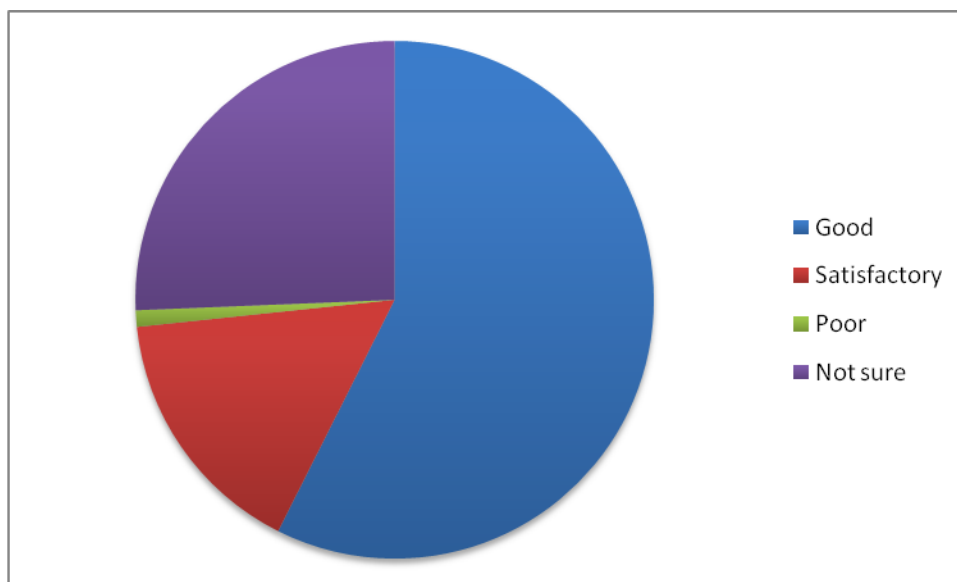
	Knowledge of contraceptives		P value
	Yes	No	
<b>Age</b>	<b>n (%)</b>	<b>n (%)</b>	
15-17	1(0.4)	1(0.4)	0.498
18-26	90(43.7)	31(15.0)	
27-36	55(26.7)	14(6.8)	
37-49	9(4.4)	5(2.4)	
<b>No. of children</b>			
1-2	86(41.1)	19(9.1)	0.025
3-4	42(20.1)	14(6.7)	
5-6	23(11.0)	10(4.8)	
>6	6(2.9)	9(4.4)	
<b>Level of education</b>			
None	45(21.4)	38(18.1)	0.025
Primary	55(26.2)	7(3.3)	
Secondary	31(14.8)	6(2.9)	
Tertiary	27(12.8)	1(0.5)	
<b>Marital status</b>			
Single	4(1.9)	3(1.4)	<0.0001
Married	145(69.7)	48(23.1)	
Divorced	6(2.9)	0(0.0)	
Widowed	2(0.9)	0(0.0)	
<b>Place of origin</b>			
Native	69(32.9)	45(21.4)	<0.0001
Non native	89(42.4)	7(3.3)	
<b>Religion</b>			
Christians	79(37.6)	6(2.8)	<0.0001
Muslims	79(37.6)	46(21.9)	
<b>Ever used contraceptives</b>			
Yes	92(44.6)	9(4.4)	<0.0001
No	64(31.1)	41(19.9)	

## 4.5 Health care system and policy factors affecting uptake of contraceptives

### 4.5.1 Health facility factors

Approximately 53% of the participants walked to the hospital for health care services, while 95 (46.3%) had to use some means of transport (Table 6). This clearly points out that distance account partly for the uptake of contraceptives amongst women in Garissa. Majority of the participants reported to have been served within 30 minutes. Regarding quality of the

contraceptives, 112 (57.4%) of the respondents rated the quality as good while 2 (1.025%) rated the service as poor as shown in Figure 5.



**Figure 5: Perception about FP services**

**Table 6: Health facility factors affecting uptake of contraceptives**

<b>Variables</b>	<b>Frequency (n)</b>	<b>Percent (%)</b>
<b>Distance to hospital</b>		
Walking distance	110	53.6
Requires means of transport	95	46.3
<b>Duration before being attended</b>		
Less than 30 minutes	182	89.2
Greater than 30 minutes	22	10.8
Good	112	57.4
Satisfactory	31	15.9
Poor	2	1.0
Not sure	50	25.6

#### 4.5.2 Health workers factors affecting uptake of contraceptives

Almost all the respondents (98%) regarded the hospital staff as friendly. One hundred and forty five (70.7%) of the women did not receive family planning counseling while pregnant and 123 (60.5%) were never offered counseling upon discharge from maternity. One hundred and seven (83.5%) of the counseling, was done by nurses, with 6(4.6%) and 15 (11.7%) done by midwives and doctors respectively. Eighty seven percent of the respondents had been counseled on all available family planning methods. The study reveals that there were many missed opportunities to promote contraceptive use during mothers visit at antenatal clinic and upon discharge from maternity. Also, it revealed that clinicians and pharmacists who had equal contact opportunities with patient as nurses offered the least contraceptives promotion.

#### 4.6 Drug factors affecting uptake of contraceptives

##### 4.6.1 Prevalence of use of various family planning methods

Majority of the participants (75.2%) had prior knowledge of contraceptives, 86% of them knowing more than one method of contraceptive (Table 7).

**Table 7: Prevalence of use of various family planning methods**

<b>Prevalence of contraceptives use by method</b>		
<b>Variables</b>	<b>Frequency (n)</b>	<b>Percent (%)</b>
<b>Know any contraceptives</b>		
Yes	158	75.2
No	52	24.7
<b>Methods Known</b>		
One	21	13.3
More than one	137	86.7
<b>Specific method used</b>		
Inject able	26	44.8
Implants	20	34.5
Oral contraceptives	10	17.2
Condoms	1	1.72
E-pill	1	1.72

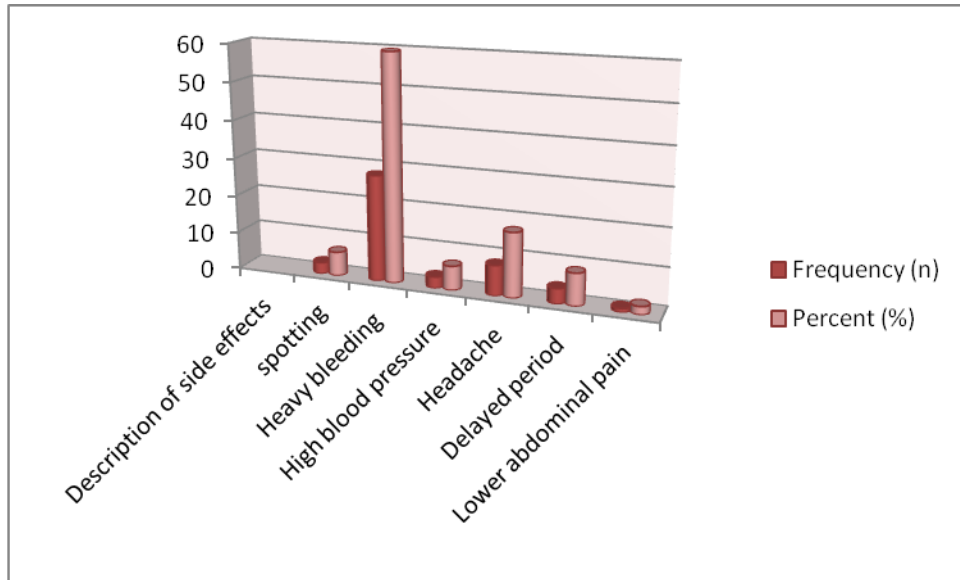
Of those using family planning at the time of the study the most preferred method was injectables (44.8%), 34.5% preferred implants, 17.2% were on oral combined contraceptives. The choice of contraceptive methods was found to have a statistically significant association with level of education ( $p < 0.0001$ ) and prior knowledge of contraceptive a woman had before making a choice of preference ( $p = 0.001$ ).

#### **4.6.2 Availability of contraceptives**

Majority (94.5%) of the participants obtained contraceptives from the hospital while the rest obtained them from community pharmacies. Similarly, 90% of the participants perceived the service to be free and hence cost could not be a hindrance to uptake of contraceptives. With regard to availability of a method of choice, only 9 (8.16%) reported to have missed their preferred choice. Five women reported that the preferred method was unavailable while one attributed distance as the reason for not getting their method of their choice. This reveals that drug factors, such as availability of a preferred method of choice is an important determinant of the uptake of contraceptives.

#### **4.6.3 Prevalence of adverse effects of contraceptives**

Over half of the respondents (47, 48.5%) reported not to have experienced side effects associated with contraceptive use but the rest reported to have experienced certain side effects. The most common side effect reported was heavy menstrual bleeding, followed by headache, spotting, high blood pressure, delayed menstruation and lower abdominal pain. The distribution of side effects experienced by the participants is presented in Figure 6. These are factors that may lower uptake of contraceptives especially if they are not addressed at the time of dispensing via comprehensive counselling. Most of the participants sought remedy for the side effects at the hospital that issued the contraceptives while 3(6.6%) did not.



**Figure 6: Distribution of side effects**

#### **4.7 Qualitative analysis**

The nurse incharge of the maternal child clinic reported to having adequate staff except that the staff turnover was high.

Pharmacist in charge reported not to have experienced any contraceptives out of stocks, but there were occasional contraceptives expiries. The contraceptives offered at the facility were implant (Jadelle<sup>R</sup>), Depo injection (Medoxyprogesterone acetate), combined oral contraceptive (Ethinyl estradiol/Levonogesterol), progesterone only oral contraceptive and intrauterine device (Copper T<sup>R</sup>).



## CHAPTER FIVE

### DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter discusses the study results. It also contains the conclusions and the recommendations, encompassing what ought to be done to improve uptake of contraceptives at MCH at GPH and what further research may be carried out.

#### 5.2 Discussion

Family planning (FP) is now acknowledged as one of the most successful development interventions, with potential benefits on maternal and child health outcomes, educational advances, economic development and women's empowerment [32].

The contraceptive prevalence rate in the study was found to be 49%, which is slightly lower than the national average of 58% [50]. This however is higher than the County's CPR of 5.5% [50]. The difference between the study CPR and that of the County could be due to the difference in the target population whereby the KDHS might have targeted the entire Northeastern population which is comprised of urban and rural settings, while in this study urban population was the primary target. The urban population is a mix of Somalis and non Somalis brought about by influx of college and university students among others. For example Garissa University College had the single largest non-Somali population in any one place in the entire region [42]. The findings are higher than findings from other countries such as Pakistan's CPR stands at 35%, Tanzania 34% but, lower than those of Muslim dominant countries Jordan 61% while Iran's 77% among others [43].

Being a native and hence Somali was found to be a barrier to contraception. This could be perhaps due to cultural practices of the study area. The identified cultural practices were among others low empowerment of women this can be attributed to the patriarchal nature of the Somali culture [44]. Women in this kind of setting are predominantly fulltime housewives as brought out by this study whereby 48% of the married women were housewives. Previous studies show that the patriarchal, hierarchical, and polygamous organization of many African households tends to

perpetuate the low social status of women. In such households, most women cannot exert much, if any, control over their lives in the family within which they live [25].

Low level of formal education was another factor arising from cultural practice. Majority of natives had no formal education. This finding is similar to a study conducted in the same study area whereby the findings showed preference for informal education for girls to formal education [45]. Study done among Muslims of Tanzania reported that the culture promotes informal schools to formal education for girls [46]. A study on sociocultural factors in North Eastern region of Kenya observed that Women with primary, secondary and higher education were more likely to use contraceptives and the magnitude of effect increased with increasing level of education [47]. Other study findings shows literacy level and availability of contraceptives have direct relationship to the level of contraceptive knowledge and use [27]. Education has also been document to be linked with contraception in the USA [12].

Religion was found to be a barrier to contraception particularly Islam. In a study conducted in North eastern region of Kenya, 37.76% of the women indicated that the Muslim religion prohibits the use of contraceptives and that Muslims were less likely to use contraceptives compared to Protestants counterparts [47]. A study on impact of women schooling and fertility found that social cultural factors affecting contraceptive use in Africa include opposition from spouse, peers, and religion (Stephenson et al., 2007). There is other substantial body of research on the association of religious affiliation with contraceptive use in USA [48 and [49].

The healthcare system and policy factors that were identified in this study were distance to the hospitals and lack of involvement of clinicians and pharmacist in family planning counseling and promotion. This is comparable to another study of Garissa County where people are forced to travel long distances to access health services which coupled with poor road network led many of them prefer to forgo FP services [9]. Proximity of the family planning facility was noted to affect the level of contraception use in a study conducted in Kenyan city slums [15].

Lack of multidisciplinary approach to family planning services whereby most of the FP counseling and promotion was done predominantly by the nurses was found also to be a hindrance to contraception uptake. Equitable access to a range of contraceptive methods requires that barriers related to which cadres can provide family planning methods be reduced by

redefining legal scopes of practices, and that health workers who are then legally able to provide different types of contraception are appropriately trained, distributed, and retained throughout the country according to population needs [26].

Friendliness of staff had no effect on contraception in this study. However, in a Kenyan study on contraception utilization staff friendliness was found to be associated with user [15]. In the same study, user fees were found to be a barrier but, in this current study user fee had no effect on contraception since the service was offered free of charge.

The most common method used by participants in this study was injectable followed by implants. The determining factor in choosing a method was the level of education and knowledge of contraception. In a study on the same region, the largest percentage of prospective users reported injectables as their preferred method (46.15%), with 42.3% citing pills, and 3.85% favoring IUD and Norplant each [47]. In a study conducted in USA nearly one-half of women with less than a high school education reported use of Depo-Provera (45%) compared with 18% of women with a master's degree or higher. Women with a high school diploma and those with some college attendance but no bachelor's degree had similar levels of ever-use of Depo-Provera at 27% [12]. This is in agreement with this study finding that level of education is a determinant of contraception choice.

### **5.3 Conclusion**

Despite contraceptives being provided free of charge in government hospitals, their use in the study area was below the national average. Among the key factors that were identified as barriers were low empowerment of women, lack of girl child education, religion, long distances to hospitals and lack of multidisciplinary approach in contraception services.

### **5.4 Recommendations**

#### **5.4.1 Recommendation for policy and practice**

1. Incorporate Mobile clinics offering family planning services among other Maternal Child Health services as part of the County's effort to take healthcare services closer to its citizens and decongest Garissa Provincial Hospital.

2. A multidisciplinary approach on FP service provision to include clinicians and pharmacist should be encouraged to improve uptake of FP.
3. Community outreaches to raise awareness of contraceptives targeting both men and women.
4. Clinical Pharmacist to come up with standard operating procedures for contraceptive services.

#### **5.4.1 Recommendation for further studies**

A study on perception of the local men and religious leaders in family planning matters will give more insight into some of the reasons behind their opposition to contraception.

## REFERENCES

1. Ngatia K, Zipora Z, Ogola S. Fertility regulation. *Calverton 1999*; 4: 39.
2. Malone P, Kolesar J, Rotschafer, Dipiro J. Pharmacotherapy principles & practice. *McGraw Hill Medical 2010*;(2)7:1313-1328.
3. Rivera R, Yacobson I, Grimes D. The mechanism of action of hormonal contraceptives and intrauterine contraceptive devices. *American journal of obstetrics 1999*; 181 (5):1263-1269.
4. Black A, Yang Q, Wen SW, Lalonde AB Guilbert E. Contraceptive use among Canadian women of reproductive age: results of a national survey. *J Obstet Gynaecol 2009*:627-640.
5. Sonfield A., Hassted K., Kavanaugh M., Anderson R. The Social and Economic Benefits of Women's Ability To Determine Whether and When to Have Children. *Guttmarker institute 2013*:1-48.
6. Ministry of Medical Services. Kenya National Formulary for Primary Care Level - *KNF-PCL 2008. A Pilot Edition for Limited Distribution 2008*: 256-287.
7. Miller K, Miller R, Askew I, Horn MC, Ndhlovu L. Clinic-Based Family Planning and Reproductive Health Services in Africa: Findings from Situation Analysis Studies. *Population council 1998*; 366:107.
8. The laws of Kenya. Pharmacy and Poisons Act: Chapter 244: National council for law reporting 1989; 1:1-37.
9. Republic of Kenya, Kenya vision 2030. Garissa county integrated development plan; 2013: 57
10. Kenya National Bureau of Statistics and ICF Macro. Kenya Demographic and Health Survey 2008-2009; 2010:89
11. Tsui AO, McDonald-Mosley R. Family planning and the burden of unintended pregnancies. *Epidemiologic reviews London: Population Matters 2012*; 6738
12. Daniels K, Mosher W, Jone J, Contraceptive methods women have ever used: United States, 1982-2010. *National health statistics report, 2013*:1;22-56
13. Alkema L, Kantorova v, Menozzi C, Biddlecom A. National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis. *The lancet 2013*;381(9878):1642-1652

14. WHO. World health statistics 2010. WHO press: 15.1-177.
15. Okech TC, Wawire NW, Mburu T K. Contraceptive Use among women of reproductive Age in Kenya's city slums: *International Journal of Business and Social Sciences* 2011; 2(1):22-43
16. Frost , Singh S. US Women's One-Year Contraceptive Use Patterns, Perspectives on Sexual and Reproductive Health 2004;39(1):48-55.
17. Black A, Yang Q, Lalonde AB, Guilbert E, Fisher W. Contraceptive use among Canadian women of reproductive age: results of a national survey *J Obstet Gynaecol Canada* 2009 ;31(1): 627–640.
18. Hubacher D, Mavranouzouli I, McGinn E Unintended pregnancy in sub-Saharan Africa: magnitude of the problem and potential role of contraceptive implants to alleviate it *Contraception* 2008; 78(1): 73-79.
19. Obare F, Birungi H, Undie C, Wanjiru M, Liambila W, Askew I. Levels, trends and determinants of contraceptive use among adolescent girls in Kenya. APHIA II Operations Research Project/ Population Council 2011.1-30.
20. The World Bank Economic Review. The impact of women's schooling on fertility and contraceptive use 1996; 10(1):85-122.
21. CDC. Providing Quality Family Planning Services; Atlanta G: U.S. Office of Population Affairs, CDC; 2014. 63(4):1.
22. Fisher w, Lasee A, Becker S. Husband-wife communication about family planning and contraceptive use in Kenya. *International family planning perspectives* 1997;15-33.
23. Stephenson R, Baschieri A, Clements S. Contextual influences on modern contraceptives use in sub-Saharan Africa. *American Journal of Public Health* 2007; 97(7): 1233–1240.
24. Ainsworth m, Beegle K, Nyamete A. Family Planning Services; Atlanta G: U.S. Office of Population Affairs, CDC; 2014.
25. Makinwa-adebusoye P. Social cultural factors affecting fertility in sub Saharan family: UN/POP; 2001.2:1-15.

26. Pacqué-Margolis S, Cox C, Puckett A, Intra Health International; and Lois Schaefer, Exploring Contraceptive Use Differentials in Sub-Saharan Africa through a Health Workforce Lens: USAID; 2013.11:1-8.
27. Ainsworth M, Beegle K, Nyamete A. The impact of women's schooling on fertility and contraceptive use: A study of fourteen sub-Saharan African countries. *The World Bank Economic Review*; 1996.10:85-122.
28. Obare F, Birungi H, Undie C, Wanjiru M, Liambila W, Askew I. Levels, trends and determinants of contraceptive use among adolescent girls in Kenya: APHIA II Operations Research Project/ Population Council,;2011:1-30.
29. Magadi MA, Curtis SL. Trends and determinants of contraceptive method choice in Kenya. *Studies in family planning*, 2003; 34(3):149-159.
30. Ricketts S, Klingler G , Schwalberg R. Game Change in Colorado: Widespread Use Of long-Acting Reversible Contraceptives and Rapid Decline in Births Among Young, Low- Income Women 2014;46(3).
31. Moreland S, Talbird S. Achieving the Millennium Development Goals: The Contribution of Fulfilling the Unmet Need for Family Planning. Policy project; 2006.
32. Bongaarts J, Cleland J, Townsend JW. Family Planning Programs For the 21ST Century. Population council; 2012.
33. Hawkins J, Matteson PS, Tabek E. A Fertility Control A Comprehensive Handbook.: London, UK, Sage Publishers Inc;1995.
34. Crichton J. Changing Fortunes: Analysis of Fluctuating Policy Space for Family Planning in Kenya: *Health Policy and Planning*. 23(5): 339-350.
35. David E, David C, Jaypee S. Demographic Dividend. A new perspective on the economic perspective of population change: New York; 2002.
36. World Bank (2003), World Development Report 2004: Making Services Work for Poor People, Washington, DC: World Bank.
37. Singh S, , Darroch J, Vlassof M, Nadeau J. Adding It Up: The Benefits of Investing in Sexual and Reproductive Health Care. New York: UNFPA.

38. Lewis M. A. Do Contraceptive Prices Affect Demand, *Studies in Family Planning*.1986:17(3):126-135.
39. Esther M, Charlotte E, Moses I, Baya E, Joyce O, Eigabeth W. What do Family Planning Clients and University Students in Nairobi, Kenya, Know and Think about Emergency, *African Journal of Reproductive Health, 2000 (4) 1: 77-87*.
40. Mensch, B, Arends-Kuenning M, Jain A. Assessing the Impact of the Quality of Family Planning Services on Contraceptive Use in Peru: A Case Study Linking Situation Analysis Data to the DHS: The Population Council Programs Division Working Papers, No. 67, New York, The Population Council.
41. Health policy initiative. Achieving Equity for the Poor in Kenya: Understanding Level of Inequities and Barriers to Family Planning Services, *urban reproductive health, 2009(1247):1-8*.
42. Africafocus. Garissa University College had the single largest non-Somali population in any one place in the entire region; 2014.
43. World Bank (2015), *World Population Report 2015: Reproductive health*, Washington, DC: World Bank.
44. Maalim AD. Participatory rural appraisal techniques in disenfranchised communities: a Kenyan case study. *International Nursing Review; 2006*.
45. Aluko J, Ndirangu P, Getage K, Miriti J. Progress towards attainment of Education for All (EFA) among Nomadic Pastoralist: Do Home-based Variables make a Difference in Kenya 2013;3(21)
46. Chande A. Muslims and Modern education in Tanzania. *J inst of Muslim Minority affairs 1994;14(1)*.
47. Anguko aa. Determinants of contraceptive use among women of reproductive age in north eastern kenya. university of nairobi ;2014.
48. Goldscheider C, Mosher WD. Patterns of contraceptive use in the United States: The importance of religious factors. *Stud Fam Plann 22(2):102–15. 1991*.
49. Jones RK, Dreweke J. Countering conventional wisdom: New evidence on religion and contraceptive use. New York: Guttmacher Institute. 2011.
50. Kenya National Bureau of Statistics. Kenya Demographic and Health Survey 2013-2014.



## APPENDICES

### **Appendix i: consent explanation for participants**

**Introduction:** My name is Dr Gerald Chege a postgraduate student in clinical pharmacy at the University of Nairobi. I am carrying out a research to determine the factors associated with uptake of contraceptives among mothers, attending the maternal child health clinic at Garissa Provincial hospital. You are hereby invited to participate in the study.

Note that it is your right to decide to participate in the study or not. Your refusal to participate in the study will not interfere with the services you are getting currently at the Garissa Provincial Hospital

**Objectives of the study:** The broad objective of the study is to find out barriers to uptake of Contraceptives among postnatal mothers at Garissa Provincial Hospital

**What the study entails:** If you accept to take part, you will be asked some questions on use and non use of any form of contraceptive. There will be no procedures or tests done on you.

**Benefits of the research:** There will be no direct benefit but you will be counseled on any concern or question on FP will be answered. Information obtained will assist us to improve future services in hospital.

**Potential risks:** there are no risks anticipated in this study. However, the interview will take a few of your minutes and may involve asking about some personal information.

You are assured that the information you will provide was not be linked to you directly and your Personal details will not be revealed to any person

**Voluntarism:** It is your right to decide if you want to participate in the study or not. Your decision will not interfere with the services you are provided with at Garissa Provincial Hospital.

**Follow up schedule:** No follow up is required after participating in the study.

**Further information:** For more information, you can contact the researcher through Telephone 0724672840. This study has been approved by the Kenyatta National Hospital/UON ethics Committee which protects your rights as a study participant. For any further enquiries on your rights as a participant, please contact Prof.M Chindia on Telephone 2726300 ext.44102

**Consent form**

**Researcher's statement:** I confirm that I have exhaustively explained the study to the Participant and sought voluntary informed consent from her

Signed.....Date...../...../20.....

**Respondent's Statement:** I conform that this study has been explained to me and all the questions satisfactorily answered to me by the interviewer.

Sign/Thumb Print.....Date...../...../20.....

**Appendix ii: Questionnaire for participants**

**Section 1: Biodata**

SERIAL NUMBER.....

1. Age.....

1.15-17....

2.18-27....

3. 28-38....

4. 37-49....

2. Where do you live.....

3. Where did you deliver at?

1. Hospital... 2. Home.....

4. How many children do you have.....?

5, Level of education.....

1. None... 2. Primary .... 3. Secondary..... 4. College... 5. Masters 6 PHD.....

6. Marital status.

1. single... 2. married...3. divorced ... 4. widowed.... 5. separated...

7. Occupation.....

8. Partners' occupation.....

**Section 2: social cultural and economic data**

9. Place of Origin

1. Native (Somali)..... 2.non native.....Please specify.....

10. Religion.

1. Christianity... 2.Muslim... 3.Others.....specify.....

11. How many children do you intend to have.....Reason.....

12. Are there times when you have ever missed coming to clinic/hospital?

1. Yes...2.No...

13.If yes (in 12) what were the reasons.....

14. Do you know any contraceptive method?

1. Yes.... 2.No.....

15 If yes (in 14) specify the methods you know of

i.....

- ii.....
- iii.....
- iv.....

16. Have you ever used any of the contraceptive method?

- 1. No...2. Yes.....If yes specify which.....

17. Was your last pregnancy planned for?

- 1. Yes... 2. No... 3. Not Sure...If no explain reason.....

18. Does your partner support the use of family planning to prevent pregnancy?

- 1. Yes... 2. No.... 3. Not Sure

**Section 3: Health system and policy data**

19. How long do you have to travel to get here at the hospital

- 1. Short.....specify in Km. 2. Long....Specify in Km.....

20. How long does it take before you get attended?

- 1. Short.....specify in minutes.....2. Long.....specify in minutes.....

21. Are the hospital staff friendly and welcoming?

- 1. Yes...2. No.....Explain.....

22. Was FP discussed during pregnancy?

- 1. Yes... 2. No....3. Cannot Remember....

23 Was FP discussed at discharge point of maternity?

- 1. Yes... 2. No... 3. Not Sure

24. Have you ever received prior counseling for FP?

- 1. Yes... 2. No... If yes, by whom...

- 1. Nurses... 2 Midwives... 3 Doctor... 4. Pharmacists... 5.Other patients others (Specify).....

25 Did the counselor inform you of all the available contraceptive methods

- 1. Yes.....2. No....

26. Were you informed of possible side effects and benefits of the various contraceptive methods

- 1. Yes...2.No.....

27 How would you rate FP service at the hospital?

- 1. Good.....2. Satisfactory.....3.Poor.....4. Not sure.....

**Section 4: contraceptives related factors**

28. What was the source of the contraceptives?

- 1. Public facility... 2. Private facility... 3.Others... (Specify).....

29 What was the cost of the contraceptive method?

- 1. Free... 2. Cheap... 3. Expensive ....

30. Are there times when you could not get your method of choice?

- 1. Yes... 2. No.....

If yes specify reason.1. Out of stock..... 2.Could not afford..... 3.Far distance.....  
4.Other (Specify).....

31. Ever heard of other FP methods apart from the one you are on?

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

32. Have you ever experienced side effects associated with contraceptives?

If yes give a brief description.....

33. What medical assistance did you seek

- 1. Non.....2. Went back to hospital where obtained.....3. local pharmacy.....

34. If not on any method, why not?

- 1. Fertility related reasons... give details.....
- 2. Opposition to use....specify.....
- 3. Lack of knowledge...
- 4. Method related reasons...give details.....
- 5. Don't know...
- 6. Other... Specify.....

35. Would you like to start a family planning method?

- 1. Yes... 2. No...IF Yes, ask the preferred method and state the reason for the Choice.....

36. If no what is the reason for refusing?

- 1. Fertility related reasons...give details.....
- 2. Opposition to use...specify.....
- 3. Method related reasons...give details.....
- 4. Don't know...
- 5. Other...Specify.....

37. Why in your opinion do women not use family planning

?.....

.....

Thank you for participating in the study

### **Appendix iii: Ridhaa: Maelezo kwa Washiriki**

**Utangulizi:** Jina langu ni Dr. Gerald Chege, Mimi ni mwanafunzi katika kitengo cha uzamili katika taaluma ya madawa, chuo kikuu cha Nairobi. Nafanya utafiti kuchunguza mambo yanayohusiana na matumizi ya dawa za upangaji wa uzazi kati ya akina mama wanaowaleta watoto kliniki ya malezi bora ya watoto katika hospitali ya Mkoa ya Garissa. Nigependa kukualika kushiriki katika utafiti huu.

Kumbuka kwamba ni haki yako kuamua kama utashiriki katika utafiti huu au la. Kukataa kwako kushiriki katika utafiti hautaathiri kwa vyovyote jinsi utakavyo pata huduma katika Hospitali ya Mkoa ya Garissa.

**Malengo ya utafiti:** Lengo kuu la utafiti huu ni kujua vikwazo katika kupata huduma ya upangaji

wa uzazi kati ya akina mama katika Hospitali ya Mkoa ya Garissa

**Utafiti unahusu nini:** Ukikubali kushiriki, utaulizwa maswali juu ya matumizi ya aina yoyote ya upangaji wa uzazi. Hakutakuwa na taratibu au vipimo vitakavyofanywa juu yako.

**Faida ya utafiti:** Hakutakuwa na faida ya moja kwa moja lakini utapewa ushauri juu ya mambo yoyote yanayohusiana na upangaji wa uzazi (FP) na maswali yako yote yatajibiwa. Habari tutakayopata itatusaidia kuboresha huduma katika hospitali.

**Uwezekano wa hatari:** Hakuna hatari yoyote inayotarajiwa katika utafiti huu. Hata hivyo, mahojiano yatachukua dakika zako kadhaa na yanaweza kuhusisha kuuliza baadhi ya habari za kibinafsi. Unahakikishiwa kwamba taarifa utakayotoa haitahusishwa kwako moja kwa moja na Maelezo yako

ya kibinafsi hayatatolewa kwa mtu yeyote

**Hiari:** Ni haki yako kuamua ikiwa unataka kushiriki katika utafiti huu au la. Uamuzi wako hauta athiri jinsi utakavyopokea huduma katika Hospitali ya Mkoa ya Garissa. Kufuatilia ratiba: Hatuhitaji ukufuatilia zaidi baada ya kushiriki katika utafiti huu.

**Taarifa zaidi:** Kwa habari zaidi, unaweza kuwasiliana na mtafiti kupitia Namba 0724672840.

Utafiti huu umeidhinishwa na Kenyatta National Hospital/UON Kamati ya maadili ambayo inalinda haki yako kama mshiriki katika utafiti. Kwa maswali yoyote zaidi juu ya haki zako kama mshiriki, tafadhali wasiliana na Prof.M Chindia Namba 2726300 ext.44102.

**Fomu ya Idhini**

**Taarifa Mtafiti:** Nathibitisha kwamba nimemweleza vyema mshiriki kuhusu utafiti huu Na nimepata ridhaa ya hiari kutoka kwake

Sahihi.....Tarehe...../...../20.....

**Taarifa ya mshiriki:** Nathibitisha kwamba nime elezwa vyema kuhusu utafiti huu na maswali yangu yote yamejibiwa

Sahihi/Alama ya kudole cha gumba .....Tarehe..... / ..... / 20 .....



## **Appendix iv: Maswali ya washiriki**

### **Section 1: Taarifa ya kibinafsi**

SERIAL NUMBER.....

1. Umri (miaka).....

1.15-17....

2.18-27....

3. 28-38....

4. 37-49....

2. Unaishi wapi.....

3. Ulijifungua mototo wako wapi?

1. Hospitalini... 2. Nyumbani.....

4. Una watoto wangapi.....?

5, Kimo cha elimu.....

1. Hakuna... 2. Msingi .... 3. Sekondari (upili)..... 4. Chuo... 5. Masters 6 PHD.....

6. Hali ya Ndoa.

1. Bado kuolewa... 2. Nimeolewa...3. Talaka ... 4. Mjane.... 5. Kutengana...

7. Kazi yako.....

8. Kazi ya mpenzi wako.....

### **Section 2: Taarifa ya Kijamii, kitamaduni na kiuchumi**

9. Mahali ulikotoka

1. Mwenyeji (Somali)..... 2.Sio mwenyeji.....Tafadhali eleza.....

10. Dini.

1. Mkristo... 2.Muislamu... 3.Nyingine..... Tafadhali eleza .....

11. Unatarajia kuwa na watoto wangapi.....

12. Je, kuna wakati ambao umekosa kufika kwenye kliniki/hospitali?

1. Ndio...2.La...

13. Ikiwa ni ndio (katika 12), sababu zilikuwa ni zipi?

14. Je, unajua njia zozote za upangaji wa uzazi?

1. Ndio.... 2.La.....

15 Ikiwa ni ndio (katika 14) eleza njia unazojua

i.....

- ii.....
- iii.....
- iv.....

16. Je, umewahi kuitumia njia yoyote ya upangaji wa uzazi?

- 1. La...2. Ndio.....

Ikiwa ndio, eleza ni ipi.....

17. Je, ulipanga kupata mimba yako ya mwisho?

- 1. Ndio... 2. La... 3. Sina uhakika...Ikiwa la, eleza.....

18. Je mpenzi wako anakupa msaada katika matumizi ya mpango wa uzazi ili kuzuia mimba?

- 1. Ndio... 2. La.... 3. Sina uhakika

### **Section 3: Taarifa ya Mfumo wa Afya na Sera**

19. Je, wewe husafiri mwendo gani hadi hapa hospitalini?

- 1. Mfupi.....(eleza urefu wa kilomita)..... 2. Mrefu.....(eleza urefu wa kilomita).....

20. Je, inachukua muda gani kabla uhudumiwe unapofika hapa hospitalini?

- 1. Mfupi.....(eleza dakika ngapi)..... 2. Mrefu.....(eleza dakika ngapi).....

21. Je, wafanyakazi wa hospitali wana urafiki na wakaribishaji?

- 1.Ndio...2. La.....Eleza.....

22. Je, ulipokuwa nja mzito, ulielezwa kuhusu upangaji wa uzazi?

- 1. Ndio... 2. La....3. Siwezi kukumbuka....

23. Je, uliporuhusiwa kuenda nyumbani baada ya kujifungua, ulielezwa kuhusu upangaji wa uzazi?

- 1. Ndio... 2. La... 3. Sina hakika

24. Je, umewahipata maelezo kuhusu upangaji wa uzazi?

- 1. Ndio... 2. La... Ikiwa ndio, kutoka kwa nani?...

1. Wauguzi ... 2 Wakunga ... 3 Daktari ... 4. Wafamasia ... 5.Wagonjwa wengine  
(Eleza).....

25. Je mshauri alikujulisha njia zote zilizopo za upangaji wa uzazi?

- 1. Ndio.....2. La....

26. Je, ulielezwa kuhusu athari na faida mbalimbali za mbinu za kuzuia mimba?

- 1.Ndio....2.La.....

27. Je, unadhani huduma ya upangaji wa uzazi katika hospitali hii iko katika kiwango gani.?

1.Nzuri.....2. Inaridhisha.....3.Mbaya.....4. Sina hakika.....

#### **Section 4: Taarifa kuhusu kupanga uzazi**

28. Ulipata wapi huduma ya kupanga uzazi?

1. Hospitali ya uma... 2. Hospitali ya kibinafsi... 3. Nyingine (Eleza).....

29. Je, gharama ya huduma ya kupanga uzazi ilikuwa gani??

1. Bure... 2. Rahisi (Chini)... 3. Ghali (Juu) ....

30. Je, kuna wakati ambao hukuweza kupata njia ya upanganji uzazi uliyochagua?

1. Ndio... 2. La.....

Ikiwa Ndio, eleza sababu.

1. Ilikuwa imekwisha..... 2.Gharama yake ilikuwa juu..... 3.Ilikuwa

mbali..... 4.Nyingine (Eleza).....

31 Je, umesikia kuhusu njia nyingine za kupanga uzazi mbali na ile ambayo wewe hutumia?

1. Ndio... 2. La.... 3. Hainihusu

32. Je, umepata madhara yoyote yanayohusiana na dawa za upangoaji wa uzazi? ... Ikiwa ndio, eleza kwa

ufupi .....

33. Ulipata usaidizi gani wa kimatibabu?

1. Hakuna.....2. Nilirudi katika hospitali niliyopata.....3. Duka la dawa karibu na nyumbani.....

34. Ikiwa sivyo kwa njia yoyote, kwa nini?

1. Sababu za kiuzazi... eleza.....

2. Upinzani katika matumizi...eleza.....

3. Kukosa ufahamu...

4. Sababu zinazohusiana na mpango wa uzazi...eleza.....

5. Sijui...

6. Nyingine... Eleza.....

35. Je, ungependa kuanza kupanga uzazi?

1. Ndio... 2. La...Ikiwa ndio, ungependa njia gani na sababu ya kuchagua njia hiyo

.....

36. Ikiwa la, eleza sababu ya kukataa?

1. Sababu za kiuzazi... eleza.....

2. Upinzani katika matumizi...eleza.....
3. Sababu zinazohusiana na mpango wa uzazi...eleza.....
4. Sijui...
5. Nyingine... Eleza.....
37. Kwa maoni yako, je, kwa nini wanawake hawatumii njia za kupanga uzazi?

.....

.....

Asante kwa kushiriki katika utafiti huu

**Appendix v: Lifaaqa kowaad: sharaxaad ogalaansho ee ka qeeb galayaasha**  
Hordhac: Magaceeygu waa Dr Gerald Chege arday takhasuska ee Clinical Pharmacy ee jaamacad Nairobi. Waxaan sameynaya cilmi baaris ah si loo ogaado arimaha la xariira qaadashada ka hor taga uurka kamid ah Hooyoyinka kusoo noqda xarunta cafimaadka Umulaha ee isbitaalka Degmada Gaarissa. Halkaan waxaad ugumartigaadantihiin inaad kaqeebqadataan cilmi baaristaan. Ogsoonow ineeytahay xaqaada inaad kaqeebqaadatid cilmi baaristaan ama aadankaqeebqaadanin. Diiddashadha kaqeebqaadashada cilmi baaristaan saameeyn kumayeelandoonto adeega aad kahesho isbitaalka Degmada Gaarissa. Ujeedada cilmi baaristaan:

**Ujeedada balaaran ee cilmi baaristaan waa in la ogaado caqabadadaha hortaagan kahortaga Uurka ee hooyoyinka umusha ah ee isbitaalka degmada Gaarissa.**

Waxeey tahay cilmi baaristaan baahinteedu:

**Hadaad aqbasho inaad kaqeebqaadato cilmi baaristaan waxaa lagu weeydiidnaa qaarka mid ah su'aalaha kusaabsan isticmaalka ama isticmaalla'aanta ee qaabkasta oo lagagahortago Uurqaadashada. Magiridoono hawlama baaristaan lagugusameydoono. Fa'iidada cilmi baaristaan:**

**Ma jiridoonto faa'iido toosalaakin waxaa lagaala talindoonaa lagaagana jawaabidoona su'aalo kasta oo aad qabto oo kusaabsan qorsheeynta qoyska. Macluumaadkii lagahelay waxeey inagacaawindoonaa inaan hagaajino adeega mustaqbaleed ee isbitaalka.**

Khatarta ka imaankarta:

**Majiridoonaan wax khatara ah oo la filanaayo ineey kaimaanayaan cilmi baaristaan, sikastaba ha ahaate wareysigu wuxuu qaadan doona daqiiqadaka mid ah wakhti giina iyo in la'idinweeydiyo macluamad kusaabsan shakhsiyadiina. Waxaan kuuxaqiijineeynaa macluumaadka aad bixindoonto kumaxirnaandoonto kumana wajahnaandoonto faahfaahintaada shakhsiyadeed loomana shaacindoono qofna.**

Tabarucnimo:

**Waxaadxaq u leedahay inaad go'aansato inaad kaqeebqaadato cilmi baaristaan iyo inaad kaqeebqaadan. Go'aankaaga kamahoristaagidoono adeega caafimaad aad kahesho isbitaalka.**

Raacidda jadwalka:

**Wax dabagal ah looma baahna cilmibaaristaan kadib.**

Macluumaad dheerad ah:

**Wixii macluamad dheerada waxaad kalasooxiriiri kartaa cilmibaaraha oodna kalaxiriiri kartid nambarkaan 0724672840. Cilmi baaristaan waxaa lagaansixiyey Isbitaalka qaranka wadanka/Qaramada midoobeed ilaaliyaasha anshaxa oo ilaaliya xuquuqda kaqeebgalayaasha. Wixii macluamad dheerad ah oo kusaabsan xuquuqda kaqeeb galayaasha fadlan la sooxiriir Prof M Chindia ood kahelikarta nambarka telefonka ee 2726300 ext.44102, Dr P. Karimi telefon nambar 0722436019, Dr B. Amugune telefon nambar 0722802074.**

**Foomka ogalaanshaha:**

**Qoraalka cilmi baaraha:** Waxaan xaqiijinaaya inaan sidhameystiran ugusharaxay kaqeeyb galayaasha cilmi barista aan ogaansho ugahelay si tabarucnimo ah.

Saxiix.....

Taarihkda...../...../20.....

**warbixinta jawaab celiyaha:** Waxaan qirayaa in cilmi baaristan wareystaha si fiican iigusharaxay su'aalihi aan kaqabay cilmi baaristaan.

Calaamad/suulsaarka.....Taarihkada...../.....20

.....

## **Qeeybtakowaad: Xogtanoolaha**

Nambaradataxan.....

1. Da'ada.....

1.15-17....

2. 18-27.....

3. 28-34.....

4. 37-49.....

2. Xageed kunooshahay?.....

3. Xageed kudhashay?

1. Isbitaal.....2. Guriga.....

4.Meeqa ciyaal ayaad heesataa?

5. Heerka waxbarasho.....

1.Waxna.....2. Dugsi hose dhexe.....3. Dugsi sare.....4.Heer Master..... 5.Heer

PHD.....

6. Xaalada guureed...

1. Kali.....2. La qabo/wax qabo... 3. Furniin.... 4.Laga dhintay..... 5. Kala tagtay....

7. Shaqo.....

8. Shaqada lamaanaha.....

## **Qeebta labaad: bulsho dhaqmeed iyo warbixinta dhaqaalaha.**

9. Meeshadhaladka aad u tahay.

1. Dhalad (Somali).....2. Dhalad aan aheen..... Fadlan

qeex.....

10.Diinta.

1. Masiixi.....2. Muslim.....3.Diimo kale.....

qeex.....

11.Meeqa caruur ayaad dooneeysa inaad

heesato.....Sabab.....

12. Ma jirtaa marar aad u goysay inaad isbitaalka timaadid?

1.Haa.....2. Mayya.....

13. Hadeey tahay haa (su'aashi 11) sababtu maxeey tahay?.....

14. Aqoon ma uleedahay hababka looga hortago Uurka?

1.Haa.....2. Mayya.....

15. Hadeey tahay haa (Su'ashi 14) qeex hababka aad taqaanid.

- 1.....
- 2.....
- 3.....
- 4.....

16.Waligaa ma isticmaashay hababka looga hortago uurqaadidda?

1. Mayya..... 2. Haa..... hadeey tahay haa fadlan qeeb habka aad isticmaashay.....

17. Miyaad qorsheesay uurkaagi ugudanbeeyay?

1. Haa..... 2. Mayya..... 3. Lamahubo..... Hadeey tahay mayya fadlan qeex.....

18. Lamanahaagu miyuu taageera qorsheynta qoyska sifo looga hortago uurqaadista?

1. Haa..... 2. Mayya..... 3. Ma hubo.....

**Qeebta sadaxaad: nidaamka cafimadeed iyo xogta xeerarka.**

19. Intee baad u soosocotaa isbitaalka

1. Wakhtigaaban..... Qeex intee kiilomitir..... 2. Wakhtidheer.....  
Qeex intee kiilomitir.....

20. Mudo intee la'egayee qaadataa kahor intaan laguqidmeeyn?

1. Wakhti gaaban..... Qeex intee daqiiqo..... 2. Wakhti dheer.....  
Qeex intee daqiiqo.....

21. Shaqaalaha isbitaalka maleeyihiin wajifurnaan iyo soodhaweeyn?

1. Haa..... 2. Mayya.....

Sharax.....

22.Miyaa lagawadahadlay qorsheynta qoyska xiliga uurka?

1.Haa..... 2. Mayya..... 3. Ma xasusto.....

23. Miyaa lagawadahadlay qorsheynta qoyska xiliga siideeynta qeebta dhalmada?

1. Haa..... 2. Mayya..... 3. Ma hubo.....

24.Waligaa maheshay latalinka horqorsheeynta qoyska?

1. Haa..... 2. Mayya..... Hadeeytahay haa, yaakusiiyay.....

a. Kalkaaliso..... b. Umuliso..... c.



Dhakhtar..... d. Farmashiistaha..... e. Buukaan kale..... f.  
Dad kale.....(Qeex).....

25. La taliyaha miyuu kulasocodsiiyay hababka diyaarka ah ee looga hortago uurka?

1. Haa..... 2. Mayya.....

26. Miyaa lagu ogeeysiiyay suurtagalka kaimaan kara xasaasiyada daawada iyo fa'iidadeeda ?

1. Haa..... 2. Mayya.....

27. Sidee kuqiimeynlaheed adeega qorsheeynta qoyska ee isbitaalka?

1. Fiican..... 2. Lagu qancikaro..... 3. Liito..... 4. Lama  
hubo.....

**Qeebta afaraad: waxyaalaha la xiriiraka hortaga uurka.**

28. Ileadka hababka kahortaga uurka.

1. Xarunta dadweynaha..... 2. Xarungaar loo leyahay..... 3.

Kuwa kale...(Qeex).....

29. Qarashka hababka kahortaga Uurka.

1. Bilaash..... 2. Rakhiis..... 3. Qaali.....

30. Ma jirta mararka qaar aadan helin habkaka hortaga uurka eey dookhada ah?

1. Haa..... 2. Mayya.....

Hadeeytahay jawaabtada haa qeex 1. Laheli Karin.....

2. Maanawoodin..... 3. Iga fog..... 4. Sababa kale

(Qeex).....

31. Ma maqashay habab kale ee qorsheeynta qoyska aan aheen kaad isticmaasho?

1. Haa..... 2. Mayya..... 3. Ma khuseeyso.....

32. Miyaad la kulantay xasaasiyada dawadeed ee la xariirta kahortaga uurka?

Hadeey tahay haa kabixi faahfaahin

kooban.....

33. Gargaar cafimadeed oo nocmee ah ayaad raadsatay?

1. Midna..... 2. Ku noqosho isbitaalka aad adeega kaheshay.....

3. Farmashiyo maxali ah.....

34. Hadaadan isticmaalin hababka kahortaga uurka, maxaa sabab u ah?

1. Waxyaalo la xariira taranka, sabab..... faahfaahi.....

2. Kahorimaad isticmaalidda..... Qeex.....

- 3. Aqoonla'aan.....
- 4. Waxyaalo la xariira hababka..... Faahfaahi.....
- 5. Ma aqaan.....
- 6. Waxyaalo kale..... Qeex.....

35. Ma jeceshahay inaad bilawdid hababka kahortaga uurka?

1. Haa..... 2. Mayya..... Hadeeytahay haa, weeydi habka dookha qofka, qeexna sababta dookhaas.....

36. Hadeeytahay mayya qeex sababta diidmada keentay?

- 1. Waxyaala la xariira taranka..... Qeex sababta.....
- 2. Kahorimaad isticmaalka..... Qeex.....
- 3. Waxyaalo la xariira hababka..... Qeex.....
- 4. Ma aqaan.....
- 5. Waxyaalo kale..... Qeex.....

37. Fikirkaada maxeey kulatahay sababta eey dumarka eeysan uisticmaalin hababka kahortaga uurka?

.....

.....

.....

.....

.....

Waad kumahadsantahay kaqeebyqadashaadada ee cilmi baaristaan.

**Appendix vii: Consent explanation for MCH nurse in charge**

**Introduction:** My name is Dr Gerald Chege a postgraduate student at the University of Nairobi, department of Clinical Pharmacy. I am carrying out a research to determine the factors associated with uptake of contraceptives among mothers, attending the maternal child health clinic at Garissa Provincial hospital. I hereby invite you to participate in the study.

Note that you have a right to decline to participate.

**Objectives of the study:** The broad objective of the study is to find out possible barriers to uptake of contraceptives among postnatal mothers at Garissa Provincial Hospital

**What the study entails:** If you accept to take part, you will be asked to self fill a questionnaire on family planning service provision and products. There will be no procedures or tests done on you.

**Benefits of the research:** Some of the benefits of the study was guide in policy revision and development of optimized family planning interventions.

**Potential risks:** there are no potential threats to your job security associated with this study. However, it was take a few of your minutes to fill the questionnaire.

You are assured that the information you was provide was not be linked to you directly and your Personal details was not be revealed to any other person

**Voluntarism:** It is your right to decide if you want to participate in the study or not. Your decision was not lead to victimization.

**Follow up schedule:** No follow up is required after participating in the study.

**Further information:** For more information, you can contact the researcher through Telephone 0724672840. This study has been approved by the Kenyatta National Hospital/UON ethics Committee which protects your rights as a study participant. For any further enquiries on your rights as a participant, please contact Prof.M Chindia on Telephone 2726300 Ext.44102

**Consent form**

**Researcher’s statement:** I confirm that I have exhaustively explained the study to the Participant and sought voluntary informed consent from her/him

Signed.....Date...../...../20.....

**Respondent’s Statement:** I conform that this study has been explained to me and all the Questions satisfactorily answered to me by the interviewer.

Sign/Thumb Print.....Date...../...../20.....

**Appendix viii: Questionnaire for MCH nurse in charge**

Serial number.....

Cadre.....

1. What is level of your education
  1. Certificate.... 2. Diploma...3. Degree... 4 . Post graduate degree...
2. Have you ever attended training(s) on family planning
  1. No... 2. Yes...If yes Specify.....
3. How many patients does one nurse serve per day
  1. slow day....2. busy day.....
4. What criteria do you use to determine which mother requires or does not require FP Counseling
  1. pregnant mothers...2. Post natal number visit.....3. Other.....
5. How many modes of family planning methods do you know.....Indicate
  - 1.....
  - 2.....
  - 3.....
  - 4.....
  - 5.....
  - 6.....
6. Which FP method do you prefer as first choice recommendation to your patients..... and why.....
7. What contraceptives products related hindrances issues do you encounter?
  - i .Out of stocks...1. No... 2.Yes....If yes for what duration.....
  - ii. Expired products.....1.No... 2. Yes.....If yes what measures do you take.....
  - iii. Defective products...1. No...2. yes.....If yes what measures do you take.....
8. Apart from the contraceptive products in the hospital, are you aware of other products in the market No.... 2.Yes..... If yes specify
9. What drug related complains do you often receive from patients.....
  1. side effects...2. Compliance....3. Price...4. Distance to hospital.....Specify.....
  5. Others.....
10. What staff related problems do you encounter
  1. Few staff.....

- 2. Not adequately trained staff.....
- 3. Rude/Not motivated staff.....
- 4. Others.....Specify.....

11. What patient related problems do you encounter?

- 1. Cultural.....
- 2. Religion.....
- 3. Poverty.....
- 4. Non adherence.....
- 5. Myths.....

12. What hospital system and/or policy hinder your FP service provision.....

13. Are there any counseling guidelines you follow while counseling patients on FP?

- 1.No.... 2.Yes.....If yes please show a copy of guideline.....

14. What recommendation would make to improve family planning service?

Provision at Garissa provincial hospital.....

Thank you for participating in the study.

**Appendix ix: Consent explanation for pharmacist in charge**

**Introduction:** My name is Dr Gerald Chege a postgraduate student at the University of Nairobi, department of Clinical Pharmacy. I am carrying out a research to determine the factors associated with uptake of contraceptives among mothers, attending the maternal child health clinic at Garissa Provincial hospital. I hereby invite you to participate in the study. Note that you have a right to decline to participate.

**Objectives of the study:** The broad objective of the study is to find out possible barriers to uptake of Contraceptives among postnatal mothers at Garissa Provincial Hospital

**What the study entails:** If you accept to take part, you will be asked to self fill a questionnaire on family planning service provision.

**Benefits of the research:** Some of the benefits of the study will be to guide policy revision and development of optimized family planning interventions which will improve contraceptive use in the hospital.

**Potential risks:** there are no potential threats to your job security. However, it will take a few of your minutes to fill the questionnaire.

You are assured that the information you was provide was not be linked to you directly and your Personal details was not be revealed to any other person

**Voluntarism:** It is your right to decide if you want to participate in the study or not. Your decision to not participate was not lead to victimization.

**Follow up schedule:** No follow up is required after participating in the study.

**Further information:** For more information, you can contact the researcher through Telephone 0724672840. This study has been approved by the Kenyatta National Hospital/UON ethics Committee which protects your rights as a study participant. For any further enquiries on your rights as a participant, please contact Prof.M Chindia on Telephone 2726300 Ext. 44102.

**Consent form**

**Researcher’s statement:** I confirm that I have exhaustively explained the study to the Participant and sought voluntary informed consent from her/him

Signed.....Date...../...../20.....

**Respondent’s Statement:** I conform that this study has been explained to me and all the Questions satisfactorily answered to me by the interviewer.

Sign/Thumb Print.....Date...../...../20.....

**Appendix x: Questionnaire for Pharmacist in charge**

Serial number.....

Cadre.....

1. How often do you encounter patients in need of contraceptive counseling while working in the hospital  
1. Never....2.Sometimes.... specify number of pts per .....
2. How often do you get consulted by family planning nurses on contraceptive issues?  
1. Never.... 2. Sometimes.....Please specify.....
3. Apart from procuring family planning products, how do you ensure rational use of the Contraceptive products  
1. Never concerned.....Reason..... 2. Lack of opportunity.....specify.....
4. How often do you receive contraceptive drugs order request from FP clinic  
1. Weekly....2.Monthly..... 3. Quarterly.....4. As needed
5. How do you track contraceptive products use at the FP clinic  
1. Order book... 2. Other methods...
6. What contraceptives complains do you often receive from patients?  
1 Non... 2. O/S... 3. S/Es... 4.Others.....specify.....
7. How often do you order for contraceptive products from supplier/Depot?  
1. Monthly...2. Quarterly...3 others...specify.....
8. Are all the ordered contraceptives products procured as per the order?  
1. No... Specify.....2. Yes.....
9. How long does it take to get procurement of contraceptives products?  
1. Weeks..... Specify exact no..... 2. Months.....specify exact no.....
10. How do you monitor contraceptives stocks?  
1. Bin cards.....2. stock charts.....3. Others.....
11. Do you ever receive defective contraceptive products?  
1. No...2. Yes.....how do you handle them.....
12. Do you have any expired contraceptive products?  
1. No..... 2. Yes.... How many.....
13. What are you stock levels.....Any stock out in the last year.....
14. What hormonal contraceptives classes do you stock? Please specify generic names

and Brand names where applicable

- i.....
- ii.....
- iii.....
- iv.....
- v.....
- vi.....

15. What recommendation would give to improve family planning services?

Thank you for answering the questionnaire.



**Appendix xi: Table 1: Contraceptive data**

	Contraceptive type	Quantities ordered	Quantities dispensed to MCH.	Quantities expired
1.	COCs			
2.	Progestin only pills			
3.	Injectables			
4.	Implants			
5.	IUCD			
6.				
7.				
8.				
9.				
10.				

**Appendix xii: ERC approval letter**