

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,
KUMASI, GHANA**

COLLEGE OF HEALTH SCIENCES

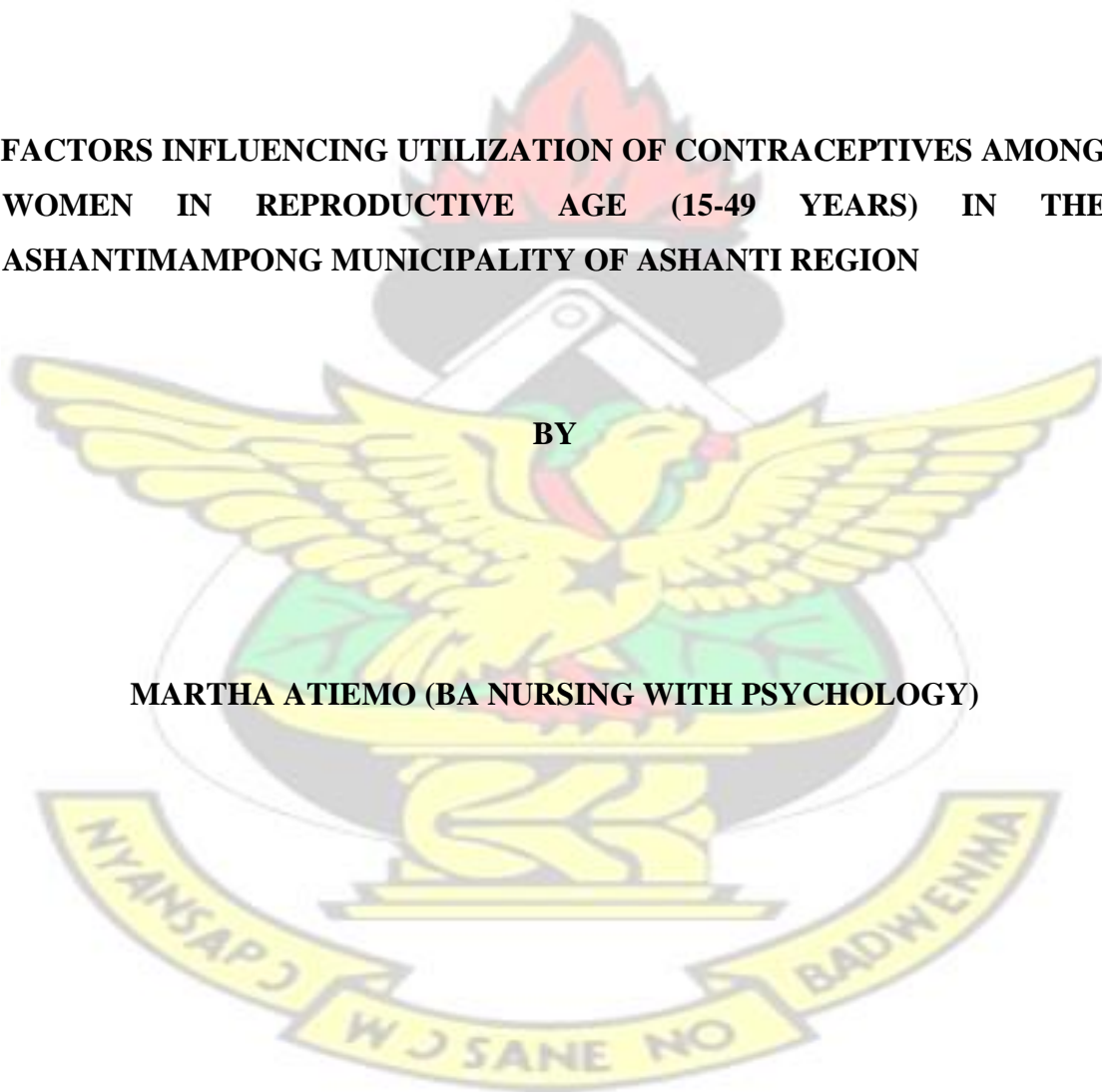
SCHOOL OF PUBLIC HEALTH

**DEPARTMENT OF POPULATION, FAMILY AND REPRODUCTIVE
HEALTH**

**FACTORS INFLUENCING UTILIZATION OF CONTRACEPTIVES AMONG
WOMEN IN REPRODUCTIVE AGE (15-49 YEARS) IN THE
ASHANTIMAMPONG MUNICIPALITY OF ASHANTI REGION**

BY

MARTHA ATIEMO (BA NURSING WITH PSYCHOLOGY)



NOVEMBER2015

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**A THESIS SUBMITTED TO THE DEPARTMENT OF POPULATION,
FAMILY AND REPRODUCTIVE HEALTH**

**COLLEGE OF HEALTH SCIENCES, SCHOOL OF PUBLIC HEALTH, IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF PUBLIC HEALTH IN POPULATION AND
REPRODUCTIVE HEALTH**

NOVEMBER 2015

DECLARATION

I hereby declare that except for the references to works by other authors, which have been duly acknowledged, this is my own work and that, it has neither in whole nor in part been presented for a degree in this university or elsewhere.

Martha Atiemo
(PG9905713)

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Signature

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Date

Certified by:

Dr. Harry Tagbor
(Supervisor)

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Signature

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Date

Certified by:
Emmanuel Nakua

.....

(Head of Department)

Signature

Date



DEDICATION

This work is dedicated to all health providers who offer family planning services.

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ACKNOWLEDGEMENT

I am grateful to God for the strength and knowledge to undertake this study. My sincerest thanks go to my academic supervisor; Dr. Harry Tagbor of School of Public Health, KNUST, for his invaluable guidance and supervision during the study.

I will also like to thank Mr. Jacob Amoa, the Ashanti-Mampong Municipal Director of Health Services, who was my field supervisor for his immense support during the study.

To the other Municipal Health Management Team members I say thank you for accepting me gladly and working with me during the period for the study. I also thank the staff of the family planning centres and the child welfare clinics used for the study for providing all the support I needed during the data collection. My heartfelt appreciation goes to the respondents for providing the required responses during the study.

Finally, I am grateful to all my colleagues and family for their support during the period of my masters' programme.

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ABBREVIATIONS

ACOG	America College of Obstetricians and Gynecologists
ARHP	Association of Reproductive Health Professionals
CCP	Center for Communication Programmes
CHCs	Combined Hormonal Contraceptives
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Survey
EECARO	Eastern Europe and Central Asia Regional Office
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
IPPF	International Planned Parenthood Federation
IUD	Intrauterine Contraceptive Device
LAM	Lactational Amenorrhoea Method
LAPMs	Long Acting and Permanent Methods
LARC	Long-Acting Reversible Contraception
LTRC	Long-Term Reversible Contraceptives
MDG5	Millennium Development Goal 5
MHD	Municipal Health Directorate
MHMT	Municipal Health Management Team
MMHD	Mampong Municipal Health Directorate
RHR	Reproductive Health and Research

STIs	Sexually Transmitted Infections
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WHO	World Health Organization

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TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT	iv
ABBREVIATIONS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF APPENDICES	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background	1
1.2 Problem Statement	3
1.3 Justification for the study	5
1.4 Conceptual framework	5
1.5 Research question	7
1.6 General objective	7
1.7 Specific objectives	7

1.8 Organization of the study	7
CHAPTER TWO	9
LITERATURE REVIEW	9
2.0 Introduction	9
2.1 Knowledge level of women about contraceptives	9
2.2 Socio-demographic characteristics and practices influencing the use of contraceptives	13
2.2.1 Socio-demographic characteristics	13
2.2.2 Practices regarding use of contraceptives	16
2.3 Availability and use of LTRC (implant and IUD)	20
2.3.1 Availability of LTRC	20
2.3.2 Use of LTRC	22
2.4 Service area factors related to provision of implant and IUD	24
CHAPTER THREE	27
METHODOLOGY	27
3.1 Study Area and Setting	27
3.2 Study population	28
3.3 Study methods and design	28
3.4 Data Collection techniques and tools	28
3.5 Study variables	29
3.6 Sample size	30
3.7 Sampling technique	31
3.8 Pretesting.....	32
3.9 Data handling	32
3.10 Data analysis	32
3.11 Ethical consideration	33
3.12 Limitation of the study	33

3.13 Assumptions	33
CHAPTER FOUR	34
34 RESULT.....	34
4.1 Knowledge and use of contraceptive	34
4.2 Socio-demographic characteristics and use of contraceptive	34
4.3 Social characteristics and practices, and use of contraceptives	37
4.4 Effects of socio-demographic characteristics and level of awareness on use of contraceptives	39
4.5 Contraceptives being use by participants	41
4.6 Characteristics of implant users	41
4.7 Availability of implant and IUD	43
4.8 Service level factors concerning provision of implant and IUD services	43
CHAPTER FIVE	45
DISCUSSION	45
5.1 Introduction	45
5.2 Usage of contraceptive	45
5.3 Knowledge of women	47
5.4 Socio-demographic characteristics and use of contraceptives	49
5.5 Social characteristics and practices, and use of contraceptives	49
5.6 Characteristics of users of LTRC (IUD and implant)	50
5.7 Availability of implant and IUD	52
5.8 Service level factors related to provision of implant and IUD observed	52
CHAPTER SIX	54
CONCLUSION AND RECOMMENDATIONS	54
6.1 Conclusion	54
6.2 Recommendations	54
6.2.1 Health Ministry	55
6.2.2 Municipal Health Management Team	55

6.2.3 Municipal Assembly	55
6.2.4 Heads of the Health Facilities	56
REFERENCE	57
APPENDICES	65
 LIST OF TABLES	
Table 3.1 Sample size for the study	31
Table 4.1 Knowledge and use of contraceptives	35
Table 4.2 Socio-demographic characteristics and use of contraceptives	36
Table 4.3 Social characteristics and practices and use of contraceptives	38
Table 4.4 Effects of socio-demographic background and level of awareness on use of contraceptives using logistic regression.....	40
Table 4.5 Characteristics of implant users (n=15)	42
Table 4.6 Provision of implant practice observed	44
 LIST OF FIGURES	
Figure 1.1 Conceptual framework for utilization of contraceptive	6
Figure 4:1 Percentage of current contraceptive users using the specific methods	41
 LIST OF APPENDICES	
APPENDIX 1: RSEARCH QUESTIONNAIRE	65
APPENDIX 2: RESEARCH CHECKLIST	75

ABSTRACT

Background

Contraception is an important component of reproductive health due to its contribution to maternal health. Contraception helps to prevent unplanned pregnancy and unsafe abortion, and their related risks thus reducing the number of deaths related to pregnancy. Apart from this family planning which includes the use of contraceptives is said to contribute either directly or indirectly to realization of the millennium development goals as such contraceptive prevalence rate (CPR) was set as one of the indicators for measuring the success of target 5B (achieving universal access to reproductive health by 2015) of the Millennium Development Goal 5 (MDG5). However, the CPR in some parts of the world, especially Sub-Saharan Africa where Ghana is found is still low. The main objective of this study was to determine factors that influence the utilization of contraceptives, and also determine the use of LTRC among women within the reproductive age group in the AshantiMampong Municipality of Ashanti Region, Ghana.

Methods

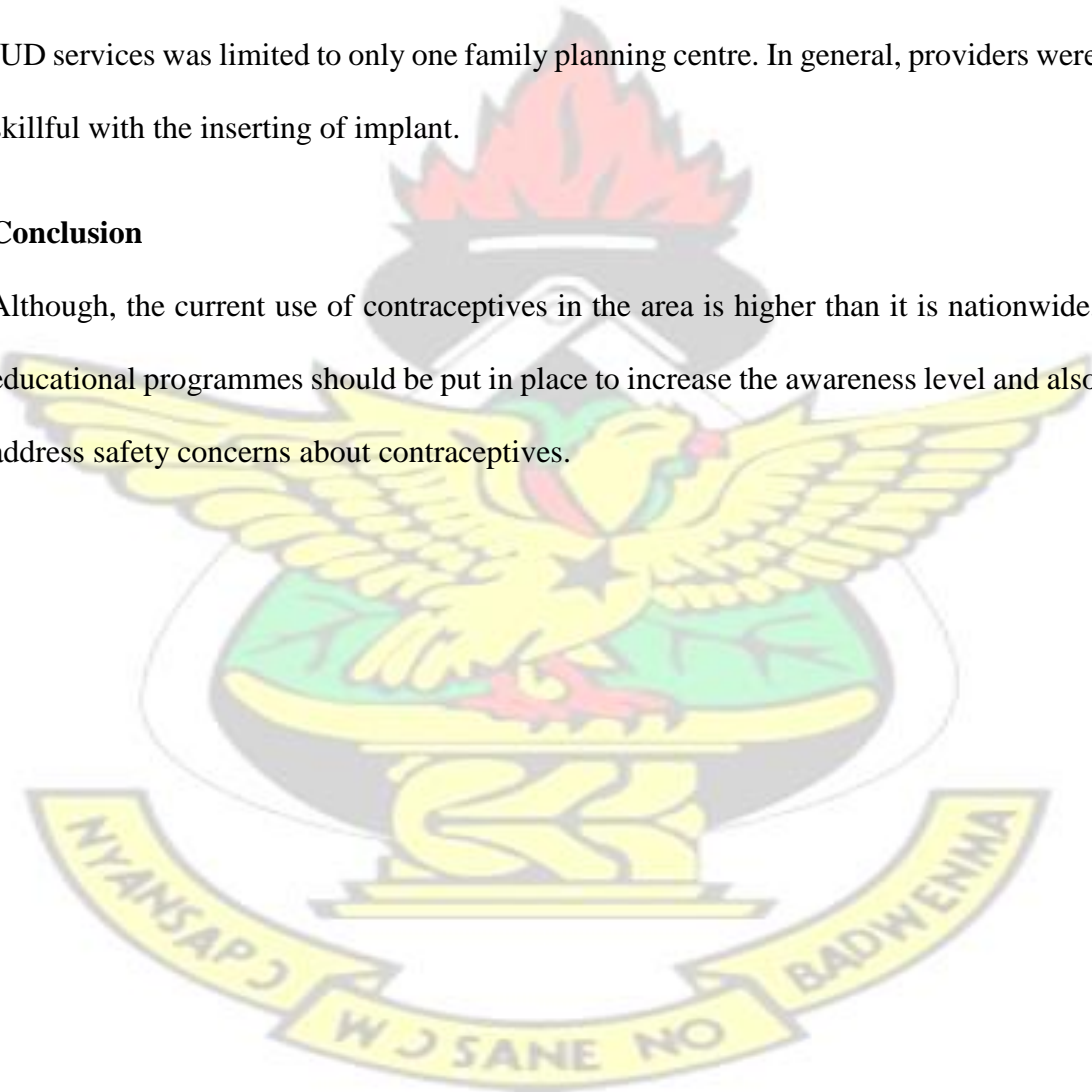
A cross sectional study was carried out between August and October, 2014 atAshanti-Mampong Municipality. Pretested questionnaires were administered through interview to 420 postpartum women who were more than six month post-delivery and were accessing CWC services in the Ashanti-Mampong Municipality. These women were randomly selected from 20 CWC which were also selected randomly from the Ashanti-Mampong Municipality. Checklist was used to obtain information from the family planning centres in the municipality.

Results

The current use of a contraceptive method in the Ashanti-Mampong municipality was 38.6%. However, only 0.6% and 9.3% of the contraceptive users were using IUD and implant respectively. The only factor found statistically to be associated with the use of a contraceptive method was the level of awareness about contraceptive methods ($p=0.001$). Although not statistically significant, the commonest reasons why women do not use contraceptives were fear of side effect and refusal by partner. Provision of IUD services was limited to only one family planning centre. In general, providers were skillful with the inserting of implant.

Conclusion

Although, the current use of contraceptives in the area is higher than it is nationwide, educational programmes should be put in place to increase the awareness level and also address safety concerns about contraceptives.



CHAPTER ONE

INTRODUCTION

1.1 Background

Family planning is the processes and actions taken by individuals to either prevent, delay or achieve pregnancy. Family planning services include counselling and education on sexuality, prevention and management of sexually transmitted infections, screening and laboratory tests, pre-conception care, contraception and infertility management. Contraception is any means; traditional or modern used to prevent pregnancy. The traditional methods are those that do not require the individual to obtain any supply from a provider before using it. Examples are rhythm/periodic abstinence, withdrawal, lactational amenorrhoea method (LAM). On the other hand, the usage of the modern methods depends on obtaining supply from a provider.

Modern contraceptives can be grouped into short-term, long-term reversible and permanent methods. This is based on the duration of the effect of the method and whether the effect can be reversed or not. The effect of the short-term methods is short with the longest being three months. The short-term methods; oral contraceptive pills, injectables, condoms and vaginal barrier methods are mostly used for spacing of pregnancy. Condom has an additional benefit of protecting against sexually transmitted infections (STIs) and HIV. The pills and injectables contain either the hormones oestrogen and progesterone or only progesterone. The effectiveness of short-term methods depend on it being used correctly and consistently, in which case it can be as high as 99%. However, inconsistent or incorrect use of these methods can lead to unintended pregnancy (World Health Organization , 2013).

Permanent methods - bilateral tubal ligation and vasectomy- are mostly for persons who want to limit their pregnancy. It is an operation that is performed on a woman; tubal ligation, or a man; vasectomy, who desires not to have children in future. It is more than 99% effective in preventing pregnancy. It can be reversed later if she or he wishes to become pregnant, however the success rate is very slim. Therefore, clients opting for this method are counselled and made to sign consent form.

Long-term reversible contraceptives can be used to either space, delay or limit pregnancy. Examples are implants and intrauterine contraceptive device (IUD). It is more than 99% effective, convenient to use, easily reversible and offers 3-10 years protection against pregnancy. They either do not contain hormones or contain only progestin, and so most women are eligible to use them (World Health Organization , 2010; World Health Organization Department of Reproductive Health and Research (WHO/RHR) and Johns Hopkins Bloomberg School of Public Health/ Center for Communication Programmes (CCP), Knowledge for Health Project, 2011).

However, the type of contraceptive methods that may be most appropriate for an individual depends on the person's reproductive history, fertility intentions, medical history, health risks and benefits. Contraceptive usage helps prevent unplanned pregnancy and its related risks, HIV/AIDS and closely spaced births. It also enables women have time to enhance their education, engage in paid employment. Thus, it leads to economic development and empowerment of individuals, which also leads to improvements in the health of women and children.

Family planning, and for that matter use of contraceptives is seen to contribute either directly or indirectly to the achievement of the Millennium Development Goals. Use of contraceptives help individuals plan and adequately space their pregnancies in order to

prevent unplanned and closely spaced deliveries that contribute to infant and maternal morbidity and mortality. Again, contraception enables individual limit birth there by helping control the population, improves on sanitation, and prevents poverty associated with over population. The other benefit of contraception is that it gives women the opportunity to enhance their education in order to become gainfully employed and empowered economically. This also enables them to invest more in their children's education. The use of condom offer dual protection which is preventing unplanned pregnancy and transmission of STIs / HIV. The prevention of unplanned pregnancy in women living with HIV results in reduction of delivery of infected babies there by reducing new HIV cases.

Hence apart from improving maternal health, reducing child mortality and promoting gender equality, family planning is crucial in achieving the other millennium development goals; eradicating extreme poverty and hunger, achieving universal primary education, combating HIV/AIDS, and ensuring environmental sustainability (WHO Regional Office for Africa and United States Agency for International Development (USAID), 2008; WHO Department of Reproductive Health and Research, 2009).

1.2 Problem Statement

Contraception is an important component of reproductive health because of its contribution towards prevention of unplanned pregnancy and unsafe abortion, and improvement in maternal health. The use of modern methods of contraception has been surrounded by various myths and misconception, which often deter people from using it. World Health Organization (WHO) in 2013 indicated that the use of modern contraceptive methods has increased in many parts of the world though the increase

globally is not as projected. Globally the use of modern contraceptive method rose from 54% in 1990 to 57.4% in 2014. Regionally the use varies, ranging from 27.6% in Africa to 66.7% in the Caribbean in 2014. Its usage in some parts of the world is very low; for instance in 2012, it was 24% in Africa, 15% in West Africa and 23% in Ghana, compared to 67% in the Caribbean and 57% globally (Population Reference Bureau, 2013; World Health Organization, 2013; World Health Organization, 2015).

Findings from various studies revealed even a lower prevalence rate of utilization of long-term reversible methods. For instance, the Ghana Demographic and Health Survey (GDHS) (2008) states that all women within age group 15-49 years currently using IUD and implant in Ghana were 0.2% and 0.7% respectively. In Ashanti Region, it was 0.0% and 1.0% respectively. The Mampong Municipal Health Directorate's 2013 annual report also states that only 1% of women within age 15-49 years in the municipality accepted long-term contraceptives in 2013 (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009; Mampong Municipal Health Directorate (MMHD), 2013).

Factors found to be associated with utilization of contraceptives vary. These include educational level, socio-cultural beliefs and practices, level of knowledge, myths, fear of side effects, partner's objection, convenience, fertility intentions, accessibility, providers' skill and competence, and other factors at the service area. These factors go a long way to influence the type of contraceptive one decides to use and actually use.

Studies have revealed a substantial increase in the usage of modern contraceptives when they were made available to a greater proportion of the population. Again, increase competence of providers increases their confidence in offering contraceptive services.

However, not much study has been carried out on this in the AshantiMampong Municipality.

This study therefore sought to determine the utilization of contraceptives and also assess factors such as level of knowledge, socio-demographic characteristics and practices, availability and factors at the service area that influence the use of contraceptives in the Municipality.

1.3 Justification for the study

With a lot of evidence associated with use of contraceptives and improvement in maternal health, it will be very important for the health sector to have policies and programmes that will help increase utilization of contraceptives in the country. Understanding of the factors that influence decision-making, provision and utilization of contraceptives will therefore inform policy makers to develop appropriate interventions to improve the uptake of modern contraceptives. Again, this information may vary between population groups, and also from one setting to the other, and so this study will help providers at the local level to design strategies that are more acceptable to individuals and also help to promote the acceptance of various types of contraceptive in the area.

1.4 Conceptual framework

The conceptual framework depicted in figure 1 below is an overview of some of the factors that may influence the use of contraceptives in the municipality, and it gives a framework within which this study was conducted.

The socio-demographic factors of the respondents give their general characteristics such as the age, educational level, their occupation, religion, marital status and their partners’

occupation. The framework also suggests that socio-demographic factors and practices influence attitudes towards the use of contraceptive. These factors influence understanding and ability to seek contraceptive services. Adequate knowledge helps to know alternate methods, and which ones are more effective and appropriate to use.

Availability of various methods and service conditions at the facilities play a role in the use of the contraceptive methods.

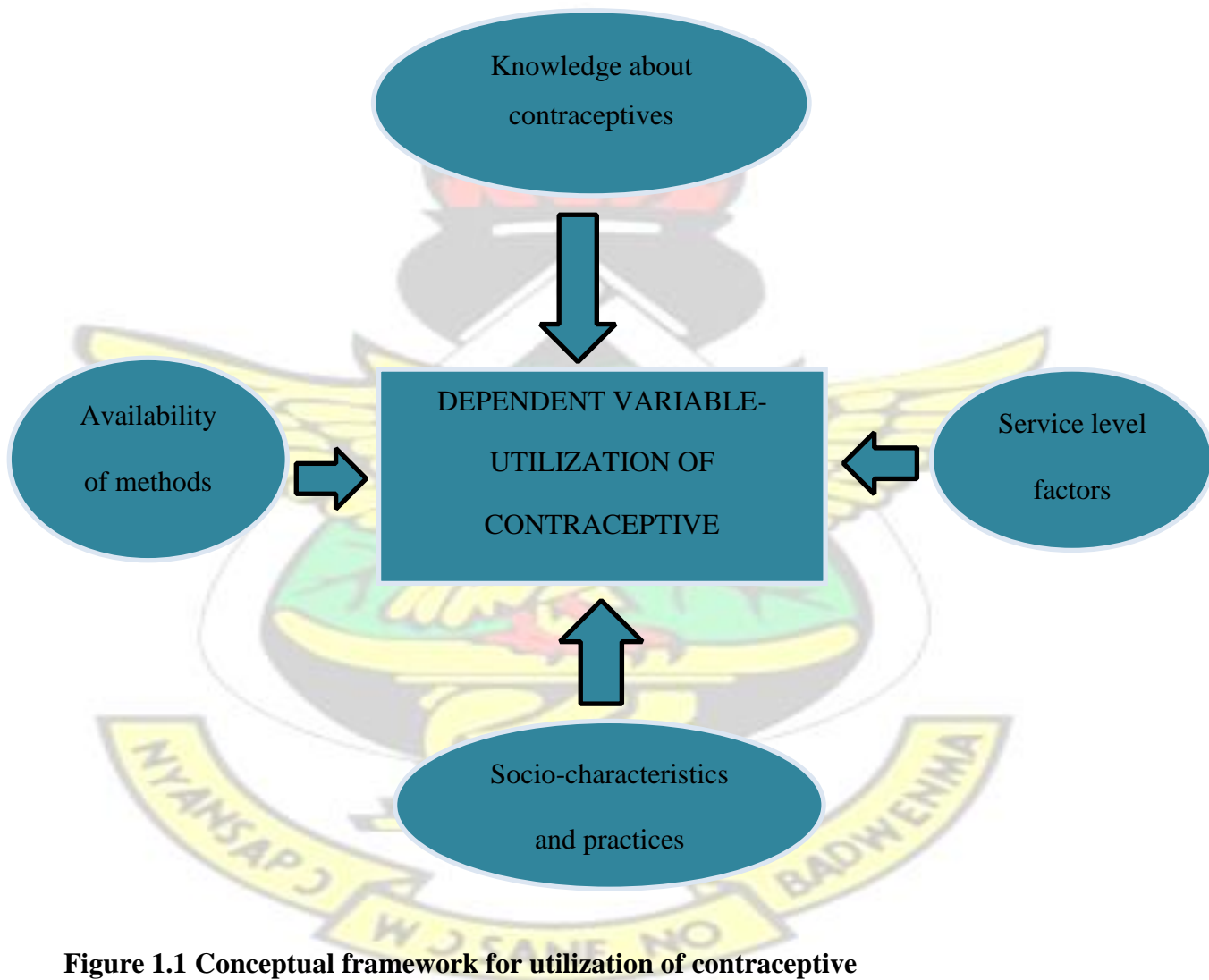


Figure 1.1 Conceptual framework for utilization of contraceptive

1.5 Research question

What are the factors that influence utilization of contraceptives among women within the reproductive age group (15-49 years) in the Ashanti-Mampong Municipality?

1.6 General objective

The main objective of this study was to determine factors that influence utilization of contraceptives among women within the reproductive age group in the Ashanti Mampong Municipality.

1.7 Specific objectives

The specific objectives of the study were:

1. To assess the knowledge level of women within the reproductive age group in the Ashanti-Mampong Municipality about contraceptives
2. To determine socio-demographic characteristics and practices influencing the use of contraceptives
3. To determine the availability and use of long term reversible contraceptives (implant and IUD) among women within the reproductive age group in the Municipality
4. To describe the service conditions related to provision of implant and IUD contraceptives in the Municipality

1.8 Organization of the study

Chapter one presents the introduction, which consists of the background to the study, the problem statement, justification for the study as well as the research question and objectives. Chapter two is the review of literature of the ideas of a number of authors whose findings are in relation to the topic under study. Chapter three describes the profile of the study area, the population chosen and the procedure followed during the study. Chapter four presents the analysis of the data, and the results are presented according to the study objectives and key variables. Chapter five consists of conclusion and recommendation.

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CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

There has been an increase in the use of modern contraceptives over the years. Globally, the use of modern contraceptives has increased from 54% to 57.4% between 1990 and 2014 (World Health Organization, 2015). In Ghana, similar development was observed. The use of modern contraceptives increased from 10% in 1993 to 17% in 2008 (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009). However, trends in the use of contraceptive methods over the years and all over the world reveal low usage of long-term reversible contraceptives (LTRC); intrauterine contraceptive device (IUD) and implant, although these contraceptives are highly effective. For instance though contraceptive use was virtually universal (99%) in the United States (U.S.), the leading method for “current use of contraception” during 2006–2008 was the oral contraceptive pill, followed by female sterilization. That for IUD was 5.5%. Mosher and Jones(2010) also found that about 80% of U.S. women using reversible methods mainly use three methods; namely the pill, condoms, and withdrawal. Studies conducted in different parts of Ethiopia and in Ghana also revealed low usage of LTRC (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009; Mosher & Jones, 2010; Alemayehu, et al., 2012; Megabiaw, 2012).

2.1 Knowledge level of women about contraceptives

Knowledge about contraceptive methods helps individuals to decide on the method to access and use as contraception. Knowledge about the usage, effectiveness, possible

side effects and its management, and alternate methods of contraception enable individuals make informed choice and use methods correctly. Often people acquire knowledge about contraceptive methods from various sources. Some of the information given may not be accurate or create false impression and this may influence the uptake of a method.

A study conducted in rural India village demonstrated lack of correct knowledge regarding mechanisms and side effects of temporary methods and this affected the risks they associated with the use of the temporary methods. Their main source of information was by the experiences other women shared with them. The women believed that IUDs require monthly check-ups that to them was expensive in terms of time spent away from the household and fields. Again, many of them thought that failure to remove the copper-T promptly at three years would result in complications, many mentioned the danger that an IUD would go “up inside the uterus”. The use of IUD was therefore low in the area. According to the study, “the women interviewed during the study demonstrated poor knowledge about the temporary methods of contraception” (Hall, et al., 2008). In connection with knowledge again, American College of Obstetricians and Gynaecologists (ACOG) in a document; “increasing use of contraceptive implants and intrauterine devices to reduce unintended pregnancy by patient” stated that barriers to use of LARC include a general lack of awareness of LARC methods, their safety and effectiveness (ACOG committee opinion No 450, December 2009). Again, in Mekelle town, north Ethiopia, knowledge was found to be associated with use of long acting and permanent contraceptive (Alemayehu, et al., 2012). Knowledge is therefore crucial when it comes to the use of contraceptives.

Lack of knowledge seems to affect the use of contraceptives in some parts of the world. A qualitative study conducted among married women in faculties of medicine and education in University Putra Malaysia to explore barriers to use of modern contraceptive methods in Malaysia found that the women are aware of numerous modern methods but lack specific knowledge about these methods, and how the methods work, particularly IUD. Because of this the women prefer the traditional methods of contraception to the modern ones. It was also found that fear of side effects was the main reason for discontinuing the use of modern methods (Najafi, et al., 2011).

A systematic review of qualitative research conducted in five developing countries to examine the limits to modern contraceptive use by young women revealed limited knowledge on how modern hormonal contraceptive methods work or how to use them well. This was due mainly to little education by health providers. For instance, there was a general perception that you only had to take the pill when having sex (Williamson, et al., 2009).

A study conducted among women attending three hospital/clinics in Accra, Ghana to explore reasons why women were not using contraceptives found that many women lacked specific knowledge about how the methods work or the correct use of the methods. For example some women thought the pills (secure) is taken 30 minutes before sexual intercourse to reduce the potency of sperms (Hindin, et al., 2014)

The effect of knowledge on use of contraceptive even becomes worse when the individuals think they know so much about contraceptives when in actual fact they do not. This is when they attribute all kinds of health conditions to the use of contraceptives and so may not choose the appropriate method. Krepelka et al., (2009) in a study to provide information on the knowledge and practices involving the use of contraceptive

methods employed by women of a fertile age, especially in the period of lactation in Prague came out with the following findings. In a self-evaluation on contraception methods, 61.6% of women evaluated their knowledge as good, but 77.6% of women did not know a suitable hormonal contraceptive for the period of lactation. What is even serious with the finding is that according to 80.7% of the women, their main source of expert information in the area of family planning was their gynaecologist. To my surprise their source of information is similar to findings in Pakistan where majority of the women (70%) who were knowledgeable about various methods of contraceptives received the information about family planning from health professionals, 9% from media, while 33% from family members or friends (Sonia, et al., 2011).

Regarding awareness about the various methods of contraceptives, Gizachew et al. (2014) found that 96.7% of their respondents in a study have heard of at least one method of modern family planning, which is in line with GDHS 2008 findings. Among the methods, Injectable was mentioned by 96.5% of the respondents followed by daily pills (80.3%). When it comes to LAPM, 81.5% of the respondents knew/mentioned at least one method of LAPMs contraception but 18.5% did not know any LAPMs. Health care professionals (63.8%) and television (61.5%) were the most commonly mentioned source of information (Gizachew, et al., 2014). In Nigeria, it was found that 84% of all women know of a modern method of contraception. The most commonly known methods were pill (71%), injectable (68%) and male condom (67%). On the whole the women know a mean of 5.6 methods (National population commission (NPC) (Nigeria) and ICF international, 2014).

2.2 Socio-demographic characteristics and practices influencing the use of

contraceptives

2.2.1 Socio-demographic characteristics

Utilization of modern methods of contraceptives varies with background characteristics such as age, marital status, education, religion, number of living children, desire for more children, ever use of modern contraceptive, urban-rural residence, and wealth or socio-economic status. These background characteristics determine the person's ability to understand the mechanism of action and effective use of the methods. They may also affect ability to access various types of contraceptive hence, the type of contraceptive the individual is likely to use. In California, a study to describe how Intrauterine Contraception (IUC) users differ from women using other contraceptives, and assess changes in IUC users' characteristics over time in California found higher IUC use among ever-married women and foreign-born women, and disproportionately low use among nulliparous women (Thompson, et al., 2011). A similar result was obtained in a study on the use of LARC among United States women using contraceptives. After adjusting for key characteristics, in comparison to non-long-acting reversible hormonal method users, married women and women over the age 35 were more likely to be LARC users. In addition, women who had ever experienced an unwanted pregnancy and women who had ever stopped using a short-term hormonal method due to dissatisfaction were all more likely to be LARC users (Kost, et al., 2008; Kavanaugh, et al., 2012).

A study was conducted in Debre Markos in North West Ethiopia to assess demand for long acting and permanent contraceptive methods (LAPMs) and associated factors among married women of reproductive age group. The study found a significant association between background characteristics such as age, desire for more children,

duration of desire to have a child, number of children ever born, ever heard of modern family planning method, ever use of modern contraceptive and spousal discussion in the past 6 months about contraception and demand for LAPMs. Women in age group 40–44years were almost three times more likely to have demand for LAPMs than women whose age was in between 15–19years (Bulto, et al., 2014).

In Kampala district of Uganda current use of LARC methods was about three times significantly higher among respondents who previously used LARC than those who did not previously use LARC. Even after adjusting for confounding at multivariable analysis factors that remained significantly associated with current use of LARC were previous use of LARC, knowledge of site of administration of implants and respondents agreeing that their partners should make decisions for their contraceptive to use (Anguzu, et al., 2012).

In Ghana, GDHS (2008) survey found that the use of modern contraception increases with age up to 44years after which it declines. With specific methods, the use of IUD and implant increase with age and number of living children. It was found in Ga East District of Ghana that marital status is significantly associated with use of contraceptives. In the study, married women are more than twice likely to have ever used modern contraceptive method (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009; Aryeetey, et al., 2010)

Again, a retrospective review of records of clients who opted for long-acting reversible contraceptives (LARCs) from 1st July 2003 to June 2008 at Komfo Anokye Teaching Hospital, Kumasi, Ghana, revealed that 71% of the clients chose LARCs and this was mainly by women with more living children who had previously used LARCs. Again, about 60% of clients who were previously not on any family planning method, and

27% of clients who were previously on shorter-acting birth control methods, switched to long-acting methods (Dassah et al., 2013).

Analysis of GDHS data from 1988 to 2008 to determine the trend in, and factors influencing the use of contraceptives across various socioeconomic characteristics and regions in Ghana found a strong association between educational level and contraceptive use. Women with higher educational attainments were more likely to use contraceptives. Concerning age, the analysis suggested that contraceptive use increases with increase in age and then falls after some age range; after 39 years. Women with higher number of living children were also more likely to use contraceptives (Nonvignon & Novignon, 2014). Frost et al. (2008) also found that in the United States, disadvantaged women and women with little education are less likely than others to use effective methods of contraceptive due to difficulties in accessing the needed services or information, being dissatisfied with providers and the methods and misperceptions about risk for pregnancy (Frost et al., 2008).

In Ethiopia, studies found a positive association between contraception and educational status of women, number of children and contraceptive use, as well as partner's educational status and contraception (Mekonnen & Worku, 2011; Tilahun, et al., 2013).

Other studies also found a relationship between the number of children a woman has, age and the use of contraceptive. In Uganda, women who wanted a child within two years reported the lowest levels of contraceptive use while, women who did not want any more children had the highest levels (Asiimwe, et al., 2013).

2.2.2 Practices regarding use of contraceptives

Many factors come together to influence individual's decision as to either use a particular contraceptive method or not. Factors such as socio-cultural beliefs and perception and practices may influence knowledge about contraceptives and conception, and use of contraceptives. For instance, people who perceive that they are at low risk for pregnancy may not use any contraceptive. A study by Nettleman et al. (2007) to find reasons for unprotected intercourse found that 33% of the respondents felt they could not get pregnant at the time of conception. Thirty percent did not really mind if they got pregnant, 22% stated their partner did not want to use contraception, 16% cited side effects, 10% felt they or their partner were sterile and 10% cited access problems.

Similarly, in 2008 Association of Reproductive Health Professionals (ARHP) in their work “breaking the contraceptive barrier: technique for effective contraceptive consultations” came out with the following findings. It was found that 42% of women who had unintended pregnancy ending in birth believed they could not become pregnant at the time of intercourse or that they, or their partners were sterile and so did not use any contraceptive. Reasons given by them for thinking they were at low risk for pregnancy included having infertility problems, breastfeeding, recent miscarriage, thought partner was sterile, being too old or too young and medical conditions eg. diabetes and endometriosis (Association of Reproductive Health Professionals, 2008).

A greater proportion of respondents in a study in New York City to explore primary care physician's experience, attitude and beliefs about counselling and provision of LARC to adolescents, did revealed that nulliparous women are not counselled for LARC because they were “trained not to offer IUD to people who do not have

children”. Again in a focus group discussion to explore provider and patient level perspectives regarding long-acting reversible contraceptive (LARC) for teens and young adults in United States, providers said teens, non-monogamous women, and women who have never given birth are traditionally ineligible for IUD. Providers said teenagers are ineligible not because of the age but “rather teenagers behaviour, such as having multiple partners, and their smaller reproductive anatomy”. The young women in the study also stated that the method is “more serious” and is for older women who are seeking to limit their family size. A few of the clients specifically acknowledged having given birth as a perceived necessary criterion for IUD candidacy (Kavanaugh, et al., 2013; Rubin, et al., 2013).

Religious and cultural practices in some parts of the world also deter women from using contraceptives. For instance in Pakistan, Sonia et al.(2011) found that 65% of women believed that contraception is prohibited in religion while 35% believed that contraception is permitted in religion in view of providing better resources for the child. But with regard to health, 57% of the women thought contraceptive use affects their health considerably while health was not considered affected by contraceptive use in 43%. A study conducted in western Kenya also found a cultural belief that all modern contraceptives were a transgression against the “Luo Supreme Being”. Hence, several of the participants in the study stated that it was beyond their human power to make decisions concerning conception and childbirth, as decisions depended solely on the “Luo Supreme Being”. Furthermore, informants below 30 years of age were not using contraceptives because of the desire to give birth within culturally legitimate marital unions. Several of them were also fearful of modern contraceptives because they believed that some contraceptives were harmful to them and their spouses (Sonia, et al., 2011; Mangendo, 2012).

Again, beliefs about side effects of some contraceptives determine the type of contraceptive individuals would opt for. In rural India village, women said the use of an IUD often causes heavier, longer and more frequent menses, which is not healthy. This also makes them face exclusion from domestic and religious activities more frequently due to the prevailing menstrual taboo which considers women to be “ritually polluted” during the first three days of their menstrual cycle and so are prevented from taking part in domestic and religious activities (Hall, et al., 2008). In addition, a systematic review of qualitative researches from six sub-Saharan Africa countries (two from South Africa, two from Tanzania, and one each from Nigeria and Mali) and one from South-East Asia (Vietnam), to examine limits to modern contraceptive use identified by young women in developing countries demonstrated relationship between practices and contraceptive use. The review found that beliefs about side effects of hormonal contraceptives; menstrual disruption, limits its use by young women. Menstruation disruption is against the belief that menstruation represents “womb being cleared of dirt”. Hence, methods that interrupt menstruation were considered unhealthy and unacceptable. The review also found that condom use was limited by association of its use with disease and promiscuity, and greater male control. As a result the young women often relied on traditional methods or abortion (Williamson, et al., 2009).

Cultural practices also go a long way to influence the use of contraceptives. In the Limpopo Province of South Africa, cultural norms related to sexual health issues form a barrier to open discussions about issues related to sexual health and consequently contraception. Parents who talk to their children about contraceptives are considered to be promoting promiscuity. Adolescents are educated on sexual health issues at initiation schools; however, this does not include the use of contraceptives and prevention of unwanted pregnancy. There is disapproval for contraceptive use among adolescents.

Adolescents therefore do not seek family planning services but rely on older persons in their group to collect contraceptive pills from the clinics and then share with them (Lebese, et al., 2013). Williamson, et al. (2009) also come out with a similar finding in a review of qualitative researches in developing countries. In these societies, individual's social status and reputations depend on fertility and so people get pregnant to prove their childbearing potential and earn respect. The young people will not use modern contraceptives because they believe use of modern contraceptives affect fertility in future. They may not be able to get pregnant in future if they should use contraceptive, and this will affect their social status in the society.

Also sociocultural practice related to roles of males and females in decision making in families might play a crucial role in the use of contraceptive by women. Partners may influence women either to use or not to use contraceptive, and which type of contraceptive to use. A study to assess the reproductive aged women's knowledge, attitudes, and factors associated with use of LARC in Kampala district of Uganda found that approximately half (48.1%) of the respondents agreed that the contraceptive to use is their partners' decision (Anguzu, et al., 2012). In Malaysia, fear of side effects and husbands disapproval of male's contraceptive methods created a substantial barrier to continuing with modern contraceptive methods. All respondents mentioned that their husband disapproved of male contraceptive methods, and would not like to use condoms (Najafi, et al., 2011).

In Ghana, 48% of respondents in a study to explore factors limiting the use of contraceptives indicated that their partners influenced them not to use contraceptives, while 73% of contraceptive users were influenced by their partners to use contraceptives (Aryeetey, et al., 2010).

2.3 Availability and use of LTRC (implant and IUD)

2.3.1 Availability of LTRC

Lack of access to a contraceptive method could be a barrier to its use. The accessibility could be availability of methods or ability to pay for the method. Providers are most likely to counsel clients on methods available in their facility, and clients can only use what is available. A study by Ross and Stoverb (2013) indicated that there is significant potential to increase contraceptive use by expanding access to existing methods and by making new or modified methods widely available. Again, in New York City, a study found that unavailability of LARC commodities in the clinics was the main barrier to counselling and offering services on IUD and implant. In the study, only two out of seventeen clinics had implant, and few respondents had counselled about these methods mainly because of limited access and knowledge (Rubin, et al., 2013).

A qualitative study conducted in seven middle-income countries in Eastern Europe and Central Asia aimed at exploring the reasons for low use of modern contraceptives.

The study focused on clients' view and their reasons for not using modern methods of contraception. The study found that limited range of contraceptives available on the market and supply chain issues causing frequent stock outs were factors influencing non-use of modern contraception in several countries of the study. Again, "Key informants in Bulgaria strongly recommend that rather than increasing the range of methods available in the country, the focus be on increasing the number of service sites" (UNFPA EECARO, IPPF European network, 2012).

Regarding affordability, Frost et al. (2008) found that many women in United States had difficulty preventing unintended pregnancy because they could not afford the more effective methods of contraception (LARC). In the study, more than 20% of public

providers, and about 50% of private providers reported that majority of clients had payment problems.

However, findings from other studies did revealed that availability and affordability are not limiting factors to the use of a method, there could be other factors. Findings from a postpartum adolescent birth control study in Chicago revealed that for many postpartum women, the health care system posed obstacles to IUD uptake. The barriers included lack of insurance coverage, difficulty scheduling appointments, limited clinic hours, referral requirements, long waiting times, clinic closings, and lack of provider training (Chicago: section of family planning and contraceptive research, the university of Chicago, 2011). In Rural India village, access to contraceptive services and supplies was not a primary limiting factor in women's use of reversible modern methods. A wide range of temporary family-planning methods was available free of charge at health posts and at nominal cost at pharmacies. Instead, lack of public transportation, time, and privacy together with lack of knowledge were limiting willingness of women to access those resources (Hall, et al., 2008).

Among Zambian women, barriers to contraceptive use were mostly related to their ability to access them or their knowledge of the contraceptives. The access barriers included lack of access due to physical/geographical barriers between households and service providers (e.g., long distances between households and clinics, poor access to transportation). There was also poor access to contraceptives due to frequent shortages (stock outs) in clinics and health centers, long waiting times for service appointments or counselling, high costs of contraceptives and limited choice of contraceptive methods (Belohlav & Karra, 2013).

Biggs, et al.(2014) also found that although there has been significant expansion in access and understanding about LARC, clinicians beliefs and unfamiliarity of method was limiting provision of IUDs and implant respectively. In the study, factors such as training, beliefs and type of health care provider, and not availability rather determined whether a site provided LARC or not.

Another possible reason for not using contraceptives could be use of another method that they are more comfortable with. This was seen in a study conducted in Mekelle town of northern Ethiopia. In Ethiopia, participants (93.3%) involved in a study conducted to assess factors associated with utilization of LAPMs among married women of reproductive age in Mekelle town, north Ethiopia cited use of another method as the main reason for not using LAPMs. Only 1.6 and 1.3% cited refusal by husband and non-availability of service respectively as reasons for not using LAPMs (Alemayehu, et al., 2012).

2.3.2 Use of LTRC

The use of the various methods of contraception varies. A study aimed at comparing factors that influence women's choice in contraception and women's knowledge and attitudes towards the IUD and female sterilization by HIV-status in Cape Town, South Africa, found high usage of modern contraceptive methods with no difference by HIV status (89.8% HIV positive and 89% HIV negative). However, most of the women were using short acting methods, primarily the 3-monthly injectable (Depo Provera). Only 6.44% had sterilization and none of them were using IUD (Crede, et al., 2012).

Studies conducted in different parts of Ethiopia also revealed low usage of LTRC. A study conducted among street women in North-West Ethiopia revealed that about 74% of the subjects were using injectable while only 10% were on long acting or permanent

methods. Again, in Mekelle town in northern Ethiopia the prevalence of IUD and implants use among married women was 1.5 and 10.6% respectively (Alemayehu, et al., 2012; Megabiaw, 2012). Mekonnen and Worku(2011)also found current use of contraceptive in Butajira District of South Central Ethiopia to be 25.4%. However, they found that75% of women currently using family planning method prefer Depo-Provera followed by about 10% and 6.1% of women who choose pills and Norplant, respectively, and these were the methods mostly knew by the participants (Mekonnen & Worku, 2011). Similarly, in Jimma zone, Ethiopia current use of contraceptive was 43% at the time of the survey. The most commonly used methods were injectable (81%) and oral contraceptives (9%) (Tilahun, et al., 2013).

Creanga, et al.(2011) in a study to review trends in the use of short-term and longterm methods of contraception in thirteen developing countries in sub-Saharan Africa, analysed data collected between 1997 and 2006 by DHS in these countries. The study found substantial increases in the use of contraception, short-term methods, in five countries. The method increasingly relied upon was the injectable.

In Nigeria contraceptive prevalence increased from 6% in 1990 to 15% in 2013. While current use of condom was 10% in 2013 that of IUD was only 1% (National population commission (NPC) (Nigeria) and ICF international, 2014). In Ghana, the GDHS 2008 report gave the contraceptive prevalence rate for modern contraception to be 17%, out of this, IUD and implant accounted for only 0.2% and 0.9% respectively. In addition, the preference for IUD use in the future increased from 2% in 1998 to 4% in 2003 and then declined to 1.4% in 2008. That for implant also increased from 4% in 1998 to 11% in 2003, then declined to 9.8% in 2008 (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009).

Despite the fact that the use of contraceptives in general is on the increase, the use of the more effective and reversible methods; IUD and implant is quite low.

Comparing the long term reversible contraceptives, it seems utilization of implant is higher than that of IUD. For instance although the use of long acting and permanent methods (LAPMs) was low in Ethiopia, 38% of women in a study had the intention to use any of the four LAPMs in the future, and for these, implant was the method highly (91.7%) favoured for future use followed by IUD (5.7%) and then female sterilization by 3.2% women. In another study in the south-eastern part, the current utilization rate of LAPMs of contraceptives was 8.72%. Of these 6.5% were using Norplant, 1.5% IUD and 0.7% tubal ligation. Again, eighteen point five percent (18.5%) of the respondents had ever used LAPMs. The methods ever used were 12.8% Norplant, 5.0% IUD and 0.7% tubal ligation (Takele, et al., 2012; Meskele & Mekonnen, 2014).

2.4 Service area factors related to provision of implant and IUD

Knowledge, attitude, skills and experience, and logistics of providers are among factors that influence the provision of LARC services at health facilities. These factors can affect effective counselling and ability to offer contraceptive services. A number of physicians, in particular pediatricians, in New York City did not know that a nulliparous adolescent can be an appropriate IUD user and consequently reported that they never counsel them about this option. Those who knew, other factors such as ability to insert IUD and implant hindered the offering of that service (Rubin et al., 2013).

Similarly, in 2003-2004 a study was conducted in Lagos, Nigeria to assess the knowledge about, attitudes toward and provision of emergency contraceptives among health care providers because of limited awareness of this method among clients. The findings showed a lack of specific knowledge of the period for effective use, mechanism

of action, legal status and correct prescription of emergency contraceptive pills among respondents (Ebuehi et al., 2006). The implication is that there will be limited women using the methods that the providers have limited knowledge about and so do not provide counselling services.

Provider's skills and experience of offering a particular service may also determine which direction the counselling will be skewed towards. There was a study on patient and provider perspectives on long-acting reversible contraception for adolescents and young adults in the United States. In the study, providers felt the location and ease of insertion associated with the implant renders it a particularly appropriate method for young women than IUD. They also complained of difficulty in dilating the "cervical os" of nulliparous women, and logistical requirement for IUD insertion, hence IUD is not appropriate method for adolescents (Kavanaugh et al., 2013).

A study conducted in Tehsil Gujar Khan, Pakistan found that the women perceived that the family planning staffs in the centres or the lady doctors (general practitioners) were not trained in inserting IUD. They also perceived that the clinic environment in terms of the required space, privacy and facility to insert IUD was not suitable. This is because the providers did not offer counselling or were reluctant in offering this method. In addition, many of the health and family planning service providers, who were trained in IUD insertion, felt they did not have enough practical experience. Therefore, they avoid inserting the IUD and do not offer any counselling. However, if a woman accepts this method, they refer her to a suitably trained service provider (Khan and Shaikh, 2013).

It therefore means effective counselling on a method can change clients' perceptions, correct misconception and myths and then influence its use. This can be seen in "the

CHOICE study” (2012), in eleven European countries that aimed to encourage healthcare professionals to counsel women seeking combined hormonal contraceptives (CHCs) about alternative CHCs and to study the influence of counselling on women's selection of CHCs. Forty-seven percent of the women counselled selected another CHC method than originally planned. Nearly all women who were undecided prior to counselling selected a method after counselling. There was also an increase in the use of methods such as the patch and ring (Bitzer et al., 2012).

Egarter et al.(2012) also came out with similar findings as Bitzer et al. Their study was conducted among women in Austria aged 15-40 years considering a short-acting reversible form of combined hormonal contraceptive. It assessed and compared 2478 women's original preferences with their post-counselling choices and evaluated their perceptions and criteria for their choice. Women who were undecided decreased from 18.1% pre-counselling to 3.2% post-counselling and there was significant increase in the use of ring (Egarter, et al., 2012).

In conclusion, there are varying factors affecting utilization of contraceptive and these factors again vary from setting to setting.

CHAPTER THREE

METHODOLOGY

3.1 Study Area and Setting

The study was carried out in the Ashanti-Mampong Municipality of Ashanti region. Ashanti-Mampong Municipality is one of the 30 municipal areas in Ashanti region following the splitting and upgrading of the former Sekyere West district into Ashanti-Mampong Municipal and Sekyere Central district by legislative Instrument

(L.I.) 1908 passed on the first day of November 2007 (Mampong Municipal Health Directorate (MMHD), 2013). It is bounded on the north by Brong Ahafo region, the south by Sekyere South, the east by Sekyere Central and the north west by Ejura Sekyeredumasi districts. The Municipality forms about 2.2% of the total land area of the Ashanti region. It has a total land area of 449km² with about 79 settlements. Sixtyone percent of the Municipality is rural. The rural areas are mostly found in the northern part of the Municipality where communities with less than fifty people are dispersed. About 61% of the population within the Municipality is into farming. The level of farming is mainly subsistence with a few households cultivating cash crops like cocoa, cashew and carrot. Settlements within the Municipality are made up of the various ethnic groups within the country. Christians constitute about 87.6% of the religious population whilst Moslems and traditionalists constitute about 10.9% and 1.1% respectively. Those belonging to other religions such as Buddhism, Hinduism and others constitute about 0.4% of the entire religious population.

In 2014, the population of the Ashanti-Mampong Municipality was projected to be about 97,953 out of which 26,153 were estimated to be women in fertility age (WIFA) (MMHD, 2013). The Municipality is made up of five sub-municipals namely Mampong, Adidwan, Kofiase, Krobo and Yonso. Health facilities in the Municipality are a hospital, a maternity home, a CHPS Compound, four private/mission clinics and five health centres. Also, there are five Maternal and Child Health/Family Planning points / centres, and 54 outreach points (where Child Welfare Clinics (CWC) are held) within the Municipality

3.2 Study population

The study population involved postpartum women who were more than six months post-delivery and were visiting the child welfare clinics in the Ashanti-Mampong Municipality at the time of the study. These women were used because it is expected that they should be using contraceptives during this period to help them prevent pregnancy and adequately space birth. The health providers at the family planning centres in the Municipality were also included.

3.3 Study methods and design

A cross sectional study was carried out to collect data at CWC outreach points and family planning centres in the Municipality. A probability sampling technique was used to obtain respondents. All the five family planning centres in the Municipality were visited and observation made on the practice of providing LTRC after obtaining consent from the head of the facility.

3.4 Data Collection techniques and tools

Questionnaire and checklist were the data collection tools used in the study. The researcher and the trained research assistants administered the questionnaire (appendix 1) to the participants through interview. The purpose of the study was explained to the participants and informed consent obtained before administering the questionnaires to the qualified participants. It sought to obtain information on the knowledge level and socio-demographic characteristics and practices of women that influence the use of contraceptives. It also explored utilization of contraceptives. The questionnaire consisted mostly of closed-ended questions.

Information on availability and conditions at the service area concerning provision of LTRC (implant and IUD contraceptives) were obtained from the service providers at the family planning centres using observation with the aid of checklist (Appendix 2). The GDHS (2008) service provision assessment checklist and Ministry of Health's guidelines for family planning services were adapted, modified and used as the checklist in this study. Observation was employed at the family planning centres for the availability and provision of LTRC services. Information was obtained on the following areas; interaction with client, performance of physical examination, the skills and required logistics for providing the services.

3.5 Study variables

The outcome variable was the utilization (current use) of contraceptive, and it was used in the analysis as binary; 0 for non-use of contraceptives and 1 for use of any contraceptives.

The explanatory variables were

- a. Knowledge level which was captured by awareness about contraceptive methods, and what they know about methods they are aware of (benefits, side effects, duration and where to obtain it). The awareness variable was categorized into low (0-3 methods), average (4-6 methods) and high (7-10 methods). Their source of information and whether health care provider discussed family planning with her during the last pregnancy were included in the analysis because it thought to play an important role in acquiring knowledge about and use of contraceptives.
- b. Socio-demographic characteristics and practices influencing contraceptive use. This included age, educational level, occupation, religion, marital status, and

partner's occupation. It also considered current number of children and desired number of children, decision-maker and factors hindering use of contraceptives.

- c. Availability and use of LTRC. Availability of LTRC commodities and the number of sites that offer the services were considered to be important determinants of contraceptive use. In the analysis this was captured as the number of facilities that offer the services and whether they run out of stock of the commodities. Use of LTRC was analysed as the proportion of modern contraceptive users that were using implant and IUD.
- d. Service level factors related to provision of LTRC. Variables considered were interaction with client, performance of physical examination, the skills and required logistics for providing the services.

3.6 Sample size

To calculate the sample size, the coverage of utilization of contraceptive should be used. However, this was not certain in the study area so the study assumed 50% utilization. This was used because using EPI INFO and various scenarios of coverage, 50% coverage gave the maximum sample size as shown in table 3.1 below. So whether the actual prevalence was less than or more than 50% the needed sample size would have been covered. To detect this coverage with 5% confidence limit, a sample size of 420 including 10% non-response rate was needed.

Table 3.1 Sample size for the study

Expected frequency (%) (Prevalence)	Sample size	Sample size with 10% non- response rate
80	244	269
70	319	351

60	364	401
50	379	417
40	364	401
30	319	351
20	244	269

3.7 Sampling technique

A multistage sampling technique was used to select the study participants. At the first stage, a random sampling technique was used to select two sub-municipals out of the five sub-municipals in the Ashanti-Mampong Municipality. After this, a simple random sampling was used to select ten outreach points (child welfare clinics) from each of the two selected sub-municipals to get a total of 20 outreach points. Now based on the sample size (which was 420), 21 participants were selected at each outreach point. Wherever the attendance at an outreach point is more than 21, a simple random sampling technique was used to get the 21 participants. On the other hand, when the attendance is 21 or less, all the attendants willing to participate in the study were sampled to participate in it.

All the five Family planning points / centres within the Municipality were sampled and information on availability and provision of IUD and implant services were obtained from them.

3.8 Pretesting

Pretesting of the questionnaire was done in one of the out-reach points (CWC) that was not included in the randomly selected points for the study. This helped determined the time needed for the completion of the questionnaire. All flaws and ambiguity identified

were corrected to ensure that the questionnaire is clear and well understood by participants. Also it allowed for accurate and uniform interpretation of the questions in the local language of the participants. It also helped to further train the research assistances.

3.9 Data handling

Five midwives were trained to assist with the data collection. The completed questionnaires were checked at the end of each day for completeness and all errors found discussed and corrected. After this they were put in an envelope and sealed.

3.10 Data analysis

The data was double entered in Microsoft Office Excel 2007. Any difference in the data sets was resolved by referring to the original entry on the questionnaires. After the cleaning, one of the cleaned data sets was selected as the master data for use. The data was then exported into Stata (version 11) for statistical analyses. All missing data were dropped in the analysis.

Chi-squared test was used to determine the association between the outcome and explanatory variables and p-values were obtained. Logistic regression model was used to determine the strength of the association between the socio-demographic variables, level of awareness (explanatory variables) and the utilization of contraceptive (outcome variable). Firstly, a univariable analysis of the various explanatory variables and utilization of contraceptive was done at 95% confidence interval (CI) and p-values were obtained. Variables found to be significantly associated with the outcome variable (utilization of contraceptive) were included in a multivariable logistic regression model to identify independent association with the outcome variable. Variables not significant but with previous evidence from literature review indicating possible association with

contraceptive use were also considered in the logistic regression model. A p-value less than 0.05 at a confidence interval of 95% was considered significant.

3.11 Ethical consideration

Ethical clearance was obtained from KNUST's Committee on Human Research, Publications and Ethics (CHRPE). Permission was also sought from the Municipal health directorate and the heads of the various facilities that were used for the study. Informed consent was obtained from participants by informing them of the purpose and process of the study, and the right to discontinue at any time. They were also assured of confidentiality and privacy. No names were written on the questionnaire.

3.12 Limitation of the study

The view of women who did not attend CWC was not sought however random sampling was done to get the participants at the CWC. Again, the knowledge and attitude of partners towards long-term methods of contraceptives and its influence on their WIFA will not be assessed in this study.

3.13 Assumptions

It was assumed that women with babies' age six months or more attend CWC. Again it was also assumed that irrespective of distance and attitude of health personnel these women accessed their services. It was also assumed that the respondents understood the questions asked and gave truthful answers.

CHAPTER FOUR

RESULT

4.1 Knowledge and use of contraceptive

On the whole the level of awareness of the participants was low. Only 12 (7.12%) of contraceptive users knew between seven to ten methods. About half (53.70%) of the users knew up to only three methods of contraceptive. The method most mentioned was the injectable.

However, majority of the users had a good knowledge about the benefits, side effects, duration and where the method can be obtained from. Again a greater proportion of the users; 141 (87.04%), had information on contraceptive from health provider (table 4.1 using Chi-squared test).

4.2 Socio-demographic characteristics and use of contraceptive

A total of 420 women within the fertility age were included in the study. The mean age of the participants was 28.7 years with a standard deviation (SD) of 5.9 years. Only 161 (38.33%) of the respondents were using contraceptive. Table 4.2 (Chisquared test) summarizes the socio-demographic characteristics of the respondents and use of contraceptive. Almost half (56.73%) of the respondents were in age category 25 to 34 years, and 64.38% of those using contraceptive were in this category of age. Again majority (75.31%) of the contraceptive users had education above primary level. With respect to occupation, 110 (67.90%) were artisan, and again 110 (67.90%) were protestant. One hundred and six (65.43%) of the contraceptive users were married, and the partners of 112 (69.14%) of them were artisan. A greater proportion (77.78%) of the users had a discussion on family planning during their last pregnancy.

Table 4.1 Knowledge and use of contraceptives

Variable	Use of contraceptive	Total (%)	pvalue
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	User N (%)	None-userN (%)		
Level of awareness				0.000
Low (0-3 methods)	87 (53.70)	187 (72.48)	274 (65.24)	
Average (4-6 methods)	63 (38.89)	66 (25.58)	129 (30.71)	
High (7-10 methods)	12 (7.12)	5 (1.94)	17 (4.05)	
Knowledge on methods (n=403)				0.002
Benefits				
No	22 (13.66)	64 (26.45)	86 (21.34)	
Yes	139 (86.34)	178 (73.55)	317 (78.66)	
Side effects				0.011
No	54 (33.54)	112 (46.28)	166 (41.19)	
Yes	107 (66.46)	130 (53.72)	237 (58.81)	
Duration				0.001
No	33 (20.50)	88 (36.36)	121 (30.02)	
Yes	128 (79.50)	154 (63.64)	282 (69.98)	
Where to obtain it				0.228
No	11 (6.83)	25 (10.33)	36 (8.93)	
Yes	150 (93.17)	217 (89.67)	367 (91.07)	
Source of information (n=395)				0.000
Media	4 (2.47)	17 (6.59)	21 (5.00)	
Relatives	2 (1.23)	6 (2.33)	8 (1.90)	
Friends	9 (5.56)	41 (15.89)	50 (11.90)	
Health provider	141 (87.04)	175 (67.83)	316 (75.24)	

Table 4.2 Socio-demographic characteristics and use of contraceptives

Variable	Use of contraceptive		Total (%)	pvalue
	UserN (%)	None-user N (%)		
Age (n=416)				0.002
15-24years	24 (15.00)	78 (30.47)	102 (24.52)	

25-34years	103 (64.38)	133 (51.95)	236 (56.73)	0.744
35-45years	33 (20.63)	45 (17.58)	78 (18.75)	
Educational level (n=420)				
None	16 (9.88)	27 (10.47)	43 (10.24)	0.001
Primary	24 (14.81)	45 (17.44)	69 (16.43)	
Post primary	122 (75.31)	186 (72.09)	308 (73.33)	
Occupation				0.028
Artisan	110 (67.90)	172 (66.67)	282 (67.14)	
Civil servant	40 (24.69)	37 (14.34)	77 (18.33)	
Unemployed	12 (7.41)	49 (18.99)	61 (14.52)	0.284
Religion (n=419)				
Catholic	39 (24.07)	38 (14.79)	77 (18.38)	
Moslem	13 (8.02)	15 (5.84)	28 (6.68)	0.262
Protestant	110 (67.90)	204 (79.38)	314 (74.94)	
Marital status				
Cohabitation	35 (21.60)	66 (25.58)	101 (24.05)	0.086
Married	106 (65.43)	149 (57.75)	255 (60.71)	
Single	21 (12.96)	43 (16.67)	64 (15.24)	
Partner's occupation (n=416)				0.086
Artisan	112 (69.14)	184 (72.44)	296 (71.15)	
Civil servant	48 (29.63)	62 (24.41)	110 (26.44)	
Unemployed	2 (1.23)	8 (3.15)	10 (2.40)	0.086
Family planning discussed in pregnancy				
No	36 (22.22)	77 (29.84)	113 (26.90)	
Yes	126 (77.78)	181 (70.16)	307 (73.10)	

4.3 Social characteristics and practices, and use of contraceptives

The average number of children had by the participants was three (SD=1.6). One hundred and fourteen (70.37%) of those using contraceptive had about one to three children. More than half (69.57%) of those using contraceptive intend to have more

children, and 86 (81.13%) desired to have about one to four children with four children being the average ($SD=1.9$). In 50% of the contraceptive users, partners determine the type of contraceptive to use. The two topmost factors hindering use of contraceptive were health effect (20.37%) and refusal by partner (16.05%) (table 4.3 using Chi-squared test).



Table 4.3 Social characteristics and practices and use of contraceptives

Variable	Use of contraceptive		Total (%)	p-value
	UserN (%)	None-userN (%)		
Current number of children				0.544
1-3children	114 (70.37)	191 (74.03)	305 (72.62)	
4-6 children	46 (28.40)	62 (24.03)	108 (25.71)	
7-9 children	2 (1.23)	5 (1.94)	7 (1.67)	
Intend to have more children (n=418)				0.215
No	49 (30.43)	64 (24.90)	113 (27.03)	
Yes	112 (69.57)	193 (75.10)	305 (72.97)	
Desired number of children (n=294)				0.868
1-4 children	86 (81.13)	154 (81.91)	240 (81.63)	
5-10 children	20 (18.87)	34 (18.09)	54 (18.37)	
Who decides on type of contraceptive to use (n=408)				0.042
Myself	59 (36.42)	75 (29.07)	134 (31.90)	
Partner	81 (50.00)	127 (49.22)	208 (49.52)	
Close friend	4 (2.47)	6 (2.33)	10 (2.38)	
Parents	2 (1.23)	15 (5.81)	17 (4.05)	
Health provider	15 (9.26)	24 (9.30)	39 (9.29)	
Factors preventing contraceptive use (n=295)				0.066
Refusal by partner	26 (16.05)	69 (26.74)	95 (22.62)	
Religious beliefs	16 (9.88)	20 (7.75)	36 (8.57)	
Marital status	2 (1.23)	0 (0.00)	2 (0.48)	
Number of children	19 (11.73)	29 (11.24)	48 (11.43)	
Inadequate finance	15 (9.26)	13 (5.04)	28 (6.67)	
Age	5 (3.09)	4 (1.55)	9 (2.14)	
Health effect	33 (20.37)	44 (17.05)	77 (18.33)	

4.4 Effects of socio-demographic characteristics and level of awareness on use of contraceptives

The strength of association between the socio-demographic background and level of awareness on use of contraceptive using logistic regression is summarized in table 4.4 below. Factors that had association ($p < 0.05$) with use of contraceptive in a chisquared test were further analyzed using a logistic regression model. In an unadjusted analysis, age, occupation, religion and awareness level were found to be significantly associated with use of contraceptive ($p < 0.05$). However when other factors were adjusted for in a multi-variable analysis, only awareness level was found to be significantly associated with use of contraceptive ($p = 0.001$). People who knew four to six methods of contraceptive were almost twice likely to use contraceptive compared to those who knew zero to three methods of contraceptive (AOR = 1.83, 1.16-2.87).



Table 4.4 Effects of socio-demographic background and level of awareness on use of contraceptives using logistic regression

Variable	Use of contraceptive		Unadjusted odds ratio (95% CI)	p-value	Adjusted odds ratio (95% CI)	p-value
	No N (%)	Yes N (%)				
Age (years) 15-24	78 (30.47)	24 (15.00)	1.00	0.005	1.00	0.169
25-34	133 (51.95)	103 (64.38)	2.52 (1.49-4.25)		1.69 (0.91-3.11)	
35-45	45 (17.58)	33 (20.63)	2.38 (1.26-4.53)		1.69 (0.82-3.47)	
Educational level				0.518		0.686
None	27 (10.47)	16 (9.88)	1.00		1.00	
Primary	45 (17.44)	24 (14.81)	0.90 (0.41-1.99)		0.93 (0.40-2.14)	
Post primary	186 (72.09)	122 (75.31)	1.11 (0.57-2.14)		1.00 (0.49-2.07)	
Occupation				0.004		0.103
Artisan	172 (66.67)	110 (67.90)	1.00		1.00	
Civil servant	37 (14.34)	40 (24.69)	1.69 (1.02-2.81)		1.19 (0.66-2.16)	
Unemployed	49 (18.99)	12 (7.41)	0.38 (0.19-0.75)		0.60 (0.28-1.32)	
Religion Catholic				0.009		0.040
	38 (14.79)	39 (24.07)	1.00		1.00	
Moslem	15 (5.84)	13 (8.02)	0.84 (0.36-2.01)		1.00 (0.40-2.49)	
Protestant	204 (79.38)	110 (67.90)	0.53 (0.32-0.87)		0.59 (0.35-1.01)	
Awareness level				0.000		0.001
Low (0-3 methods)	187 (72.48)	87 (53.70)	1.00		1.00	
Average (4-6 methods)	66 (25.58)	63 (38.89)	2.05 (1.34-3.15)		1.83 (1.16-2.87)	
High (7-10 methods)	5 (1.94)	12 (7.41)	5.16 (1.76-15.10)		2.86 (0.87-9.37)	
FP discussed in pregnancy No				0.087		0.799
	77 (29.84)	36 (22.22)	1.00		1.00	
Yes	181 (70.16)	126 (77.78)	1.49 (0.94-2.350)		1.09 (0.66-1.80)	

4.5 Contraceptives being use by participants

Figure 4.1 below shows the methods commonly used by the contraceptive user in the study. The most widely used contraceptives were injectable (39.13%), pills (23.60%) and natural method (12.42%). Only 9.32% and 0.62% of the contraceptive users were using implant and IUD respectively.

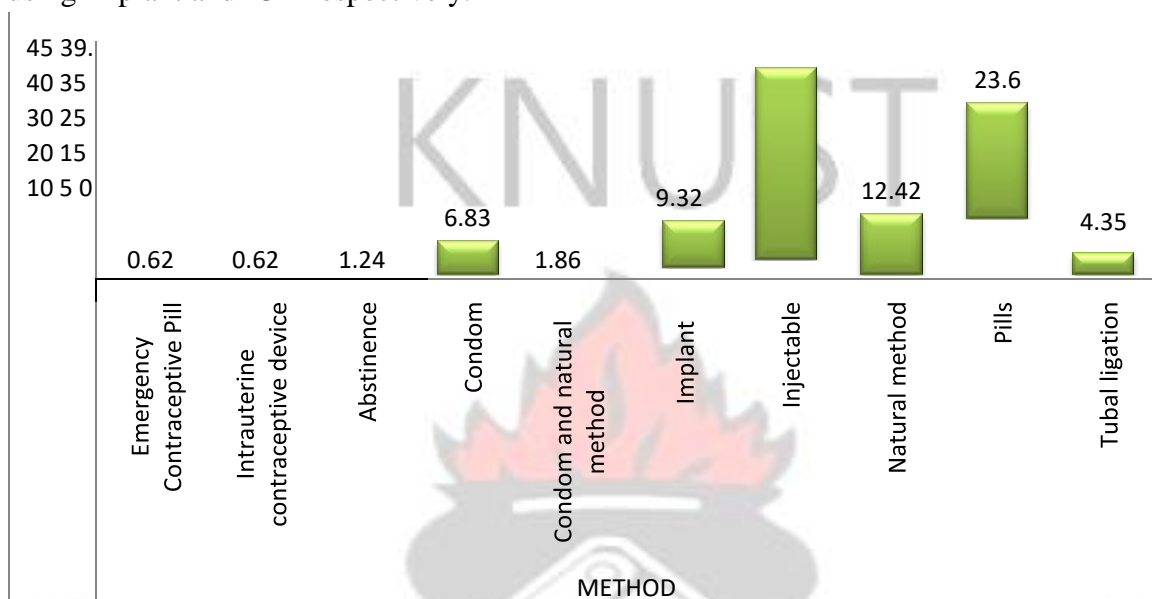


Figure 4:1 Percentage of current contraceptive users using the specific methods

4.6 Characteristics of implant users

Only 15 of the participants were using implant. Fourteen of the 15 users were using it for the first time, and 12 of them were using contraceptive for the first time. Again, 12 of them had it inserted within the last 12 months. All the users except two paid for the commodity, and 9 said it was affordable. Four of those who paid for the commodity said it was difficult paying for it. Concerning the users' knowledge about implant, all the users knew the effective duration period of the commodity but knew little about the advantages and disadvantages of the method. Only three of the users knew of three advantages, and four knew of two disadvantages. When asked to share their experience, seven said it was convenient to us, nine of them recommended that there should be more public education on implant.

Table 4.5 summarizes the characteristics of the implant users further. Majority of them (9) are in age group 25-34years and also had education further than primary level. Fourteen of them are protestant and 10 are married. Ten of the users as well as their partners are artisans. Eleven would want to have more children and they desired to have between one to four children.

Table 4.5 Characteristics of implant users (n=15)

Variable	Number
Age	
15-24	5
25-34	9
35-45	
Educational level	
None	2
Primary	4
Post primary	9
Occupation	
Artisan	10
Civil servant	1
Unemployed	4
Religion	
Catholic	1
Protestant	14
Marital status	
Cohabitation	3
Married	10
Single	2
Partner's occupation	
Artisan	10
Civil servant	4
Unemployed	1
Intend to have more children	
No	4
Yes	11
Desired number of children (n=11)	
1-4	9

4.7 Availability of implant and IUD

The five family planning centres visited provided implant services whilst for IUD, only one of the centres provided that service. The rest counselled and referred client who showed interest in IUD. The implant services were provided every working day of the year. The centres receive supply of implant from the Municipal Health Directorate stores. All the centres had stock of the implant commodity and they claimed they have never run out of stock.

4.8 Service level factors concerning provision of implant and IUD services

No observation was made for provision of IUD services during the period of the study.

The provision of implant practice observed in the five family planning centres was scored using the 11 areas of practice listed in table 4.6 below. For each of the areas of practice, a number of steps were expected to be carried out. A percentage for each area was computed by dividing number of steps carried out by the expected steps for the area multiply by 100.

On the average, centres where observation of the practice of provision of implant services was made were very good at actual insertion of the implant; the score was 81.3%. With the exception of areas such as provision of privacy and confidentiality, performance of appropriate physical examination and infection prevention practice, the average score for the various areas of practice looked at was 50% and above. However, with regard to individual centres verses areas of practice, the highest and lowest scores were 100% and 0% respectively (Table 4.7).

Table 4.6 Provision of implant practice observed

Observation	Facilities and their scores in percentage					
	CHS	KHC	PMH	FHU	AHC	Average
Establishment of rapport	37.5	N/P	N/P	62.5	100	66.67
Provision of privacy and confidentiality	16.7	N/P	N/P	50	66.7	44.47
Taking of necessary history	16.7	N/P	N/P	62.5	83.3	54.17
Provision of appropriate information on implant	35.7	N/P	N/P	57.1	85.7	59.50
Performed appropriate physical examination	14.3	N/P	N/P	28.6	28.6	23.83
Pre-insertion preparation	12.5	N/P	N/P	37.5	100	50.00
Insertion	62.5	N/P	N/P	81.3	100	81.27
Post insertion	71.4	N/P	N/P	57.1	100	76.17
Infection prevention practice	00.0	N/P	N/P	42.9	85.7	42.87
Logistics for infection prevention	88.9	88.9	88.9	66.7	61.1	78.90
Logistics for effective counseling	25	100	100	75	75	75.00

* N/P means no practice observed; these are facilities that had no client during the period of the study and so no observation was made on the provision of implant practice in these facilities.

** CHS represent Calvary Health Services,
KHC represent Kofiasse Health Centre
PMH represent Philipah Maternity Home
FHU represent Family Health Unit
AHC represent Asaam Health Centre

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This study was conducted to determine factors influencing utilization of contraceptives among women within fertility age group in the Ashanti-Mampong Municipality. The study discovered utilization of contraceptive in the study area to be 38.57%, 0.62% and 9.32% of the contraceptive users were using IUD and implant respectively. The only factor found to be significantly associated with use of contraceptive was level of awareness about the various contraceptive methods. The discussion of these findings, their limitations and implications for maternal health form the basis of this chapter.

5.2 Usage of contraceptive

This study found the current use of contraceptive among women within the reproductive age to be 38.57% and more than half; 64.38% of the users were in age category 25 to 34 years. The most commonly used methods were injectable (39.13%) and pills (23.60%). Only 0.62% and 9.32% were currently using IUD and implant respectively.

GDHS (2008) also stated contraceptive prevalence rate (CPR); which is usually defined as the percentage of currently married women who are currently using a method of contraception as 24%, 17% of which was modern methods. Again, current use of modern method of contraception among women within the reproductive age was 14%. These are quite lower than what this study found. Again, the contraceptive usage in this study is also higher than what Population Reference Bureau found in

2012 in Africa (24%) and Ghana (23%). However, the proportion of participants using contraceptive was lower than contraceptive usage globally (57%) and in the Caribbean (67%) (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009; Population Reference Bureau, 2013; World Health Organization , 2013). These differences may be due to the differences in time and the study settings and difference in access to information on contraceptivein which those studies were conducted.

The wide use of the injectable follow by the pills contraceptive methods is in line with studies in South Africa and different parts of Ethiopia and some sub-Saharan Africa countries where the injectable and pills were the widely used methods of contraception (Creanga, et al., 2011; Mekonnen & Worku, 2011; Crede, et al., 2012; Tilahun, et al., 2013). GDHS(2008) also found that except for women in age 45-49 in the general population, injectable and pill are the two most commonly used methods among currently married women in every age group. This might be because the injectable and pills are widely available and known methods of contraception. It also does not require specialist skills for their provision. Unlike the IUD and implant, these methods can be obtained easily from other areas apart from the health facility.

The use of LTRC; IUD and implant in this study is low (0.62% and 9.32% respectively) and this is comparable to findings all over the world. Even in the Ashanti-Mampong Municipality, the Municipal Health Directorate's 2013 annual report stated that only 1% of women within age 15-49 years in the Municipality accepted long-term contraceptives in 2013. This shows what the desire of the women within the reproductive age in terms of wanting to delay birth for a shorter or longer period or limit birth is. It may also be due to unavailability of these methods of

contraceptives. When it comes to the type of LTRC, the use of implant (9.32%) was higher than IUD (0.62%). This may be due to the logistical requirement for IUD insertion, required skill for inserting IUD or perceived complications associated with use of IUD. It seems it is easier to insert implant than IUD as was found by Kavanaugh et al., (2013) in patient and provider perspectives of long-acting reversible contraception for adolescents and young adults. Providers may therefore incline to counsel women on methods that are easier to offer, and individuals may opt for methods they perceive to be safer.

The pattern of the current use of implant and IUD found by this study is similar to findings in different parts of Ethiopia (Takele, et al., 2012; Meskele & Mekonnen, 2014).

5.3 Knowledge of women

The overall level of awareness about the various methods of contraceptive among all participants in this study was low. Seventeen (4.05%) could not mention any contraceptive method and 257 (61.19%) did not know more than three contraceptive method. This is in sharp contrast to a situation where it was found that averagely, women in Ghana knew of at least eight contraceptive methods (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009).

Awareness level was significantly associated with use of contraceptives. Women who knew of four to six methods were about twice likely to use contraceptive compare to those who knew zero to three contraceptive methods. However, about half (53.70%) of those currently using contraceptive did not know more than three methods of contraceptive. The method most knew was the injectable. This could account for the wide use of injectable contraceptive method (39.13%) in this study. It is not possible

for people to be using methods they do not know. ACOG committee opinion No 450 (December 2009) also mentioned lack of awareness of LARC as barrier to use of LARC. However, it would have been assumed that people using contraceptive will know of many other contraceptive methods but this was not so in this study. Only 7.41% of current contraceptive users in this study knew of about seven to ten methods while 2008 GDHS states that on the average all women know of eight contraceptive method. Could it be that they were counselled on few methods?

Assessing what users knew about the methods they mentioned, more than half of them were knowledgeable about the benefits, side effects, duration and where the method can be obtained, and 87.04% said they had this information from health providers. This was not the situation in rural India where there was lack of correct knowledge about the mechanisms and side effect of temporary methods because their main source of information was other women and this was a barrier to the use of IUD (Hall, et al., 2008). Williamson et al., (2009) also found limited knowledge among young women due to little education by health services. This study shown that the user were knowledgeable about the methods they were aware of. Most of them had the information from health providers and it is in line with findings in Pakistan where the women who were knowledgeable about the contraceptive methods had the information from health professionals (Sonia, et al., 2011).

However, the women knew few methods. It could be that the current users were counselled on few contraceptive methods. It could probably also be that providers offered counselling on methods that they were comfortable with as was found by (Rubin, et al., 2013). They found that inability to insert IUD and implant hindered physicians in New York City from providing counselling on these methods.

5.4 Socio-demographic characteristics and use of contraceptives

Socio-demographic variables age, occupation and religion had association with use of contraceptive in an unadjusted logistic regression analysis. However, when other factors were adjusted for in a multi-variable analysis none remained significant. Surprisingly education was also not predictive of using contraceptive although 75% of contraceptive users in this study were women with educational level above primary level. Usually it is assumed that the educated are more advantageous in accessing and understanding information on contraception. It is also because the educated women have more access to information from different sources, like school, leaflet, newspaper, media and internet. Again, they often will want to delay delivery and so tend to use contraceptive.

More than half (57.75%) of the contraceptive users were married but it also did not have any association with use of contraceptives unlike Megabiaw (2012) where marital status of street women in North-West Ethiopia was associated with current contraceptive use. None of the socio-demographic variables in this study had a significant association with use of contraceptive. Probably these factors are no longer crucial in the use of contraceptive; there may be other factors outside sociodemographic factors influencing the use of contraceptive.

5.5 Social characteristics and practices, and use of contraceptives

The number of children one has, and ones intention to have more children is believed to play a crucial role in the use of contraceptives. The more children one has the more likely it is that the fellow will use contraceptives especially to limit birth if she has the desired number of children. Hence, the proportion of women currently using contraceptive turn to increase with increasing number of children (Ghana Statistical

Service (GSS), Ghana Health Service (GHS), and ICF Macro, 2009). The average number of children the participants in this study had was three. A greater proportion (70.37%) of those currently using contraceptive had about one to three children while the rest (29.63%) had between four to nine children. Again, more than half (69.57%) of the current contraceptive users had the intention to deliver again. It could be that these women have not had their desired number of children and so are using the shortterm contraceptives to help them space their birth and not to limit delivery. This may have contributed to the low usage of long-term contraceptives, which is mostly intended to limit delivery.

The study also found that male partners play a role in decision-making process about contraceptive use. The study shown that in 50% of the contraceptive users, partner decides on the type of contraceptive to use. Again, refusal by partner was the second topmost factor mentioned to be hindering use of contraceptive. It is therefore suggestive that partners are crucial in contraceptive uptake, however, not statistical association was found. This finding is in line with sociocultural perceptions in Kampala district of Uganda where approximately half (48.1%) of the respondents agreed that the contraceptive to use is their partners' decision (Anguzu, et al., 2012).

5.6 Characteristics of users of LTRC (IUD and implant)

The study found low use of LTRC, only one (0.62%) and 15 (9.32%) of participants using contraceptive were using IUD and implant respectively. Twelve of the implant users were using contraceptive for the first time. On the other hand, Anguzu et al., (2012) found in Kampala district of Uganda that current use of LARC methods issignificantly associated with previous use of LARC. Dassah et al., (2013), also found thatthe “strongest predictor of LARC uptake was previous experience with such a

method” after a retrospective review of records of clients who opted for LARC methods at Komfo Anokye Teaching Hospital, Kumasi, Ghana. However, this study’s finding that almost all (14) of the implant users were using it for the first time is in line with their findings that about 60% of clients who were previously not on any family planning method opt for LARC. This can not be attributed to being unsatisfied with previous methods. It could be that they just want a more effective method of contraceptive, but not that they have had previous experience with it.

Regarding age this study found that majority (9) of the implant users were in age group 25-34 years unlike findings in the United States where women over the age 35 were more likely to be LARC users (Kost et al., 2008; Kavanaugh et al., 2012). It would have been expected that those in age group 35-45 would have completed delivery and so will be using more effective type of contraceptive such as implant or IUD to prevent pregnancy, but this was not so. Eleven out of the 15 users have the intention to deliver again. It may mean that even though these people will want to deliver again, they are using an effective method of contraception to help them prevent any unwanted pregnancy. This may even be supported by the fact that majority (9) of them are educated above the primary level and so are able to access, and understand information on contraceptive and so opted for the more effective method.

Two-third of the implant users are married possibly because it is seen as a more serious method reserved for married women as was stated for IUD use in the United States (Kavanaugh et al., 2013).

5.7 Availability of implant and IUD

The study looked at the availability of these family planning commodities and services in the Municipality. It also assessed the affordability of these services. Only one out of the five family planning centres visited had the IUD commodity and provided its services. According to the health providers in the rest of the centres, they only counsel and refer clients who show interest in it. However, the unavailability of the IUD commodity could lower the probability of offering counselling on that method hence the low uptake of this method of contraception in the municipality. In New York, it was found that unavailability of LARC was the main barrier to counselling and offering of that service (Rubin et al., 2013).

The implant commodity was however available in all the family planning centres visited during the study. The heads in the family planning centres claimed that they have never run out of stock and provide implant services every working day. About two-third of those who paid to have the implant inserted said it was affordable. Availability and affordability could therefore not be a barrier to the use of implant. Rather they may be a contributory factor to the relatively high uptake of implant compare to IUD in the Municipality.

5.8 Service level factors related to provision of implant and IUD observed No observation was made on how an IUD service is provided during the period of the study because no client opted for the method. Two of the family planning centres also did not get a client opting for implant during the study hence no observation was made on how the service is offered in those centres. In all five clients were observed receiving implant services during the study. Observation on logistics for effective counselling made at all the centres did revealed that all the centres except one had what it takes to counsel

clients effectively on the various contraceptive methods including implant. However, the practice of counselling especially concerning areas such as establishing rapport, provision of privacy and confidentiality and provision of appropriate information on implant was not effective in most of the centres. The effect of counselling on contraceptive use is quite important in correction of myths and misconceptions related to contraceptive use, creating awareness of the various contraceptive options available to make preferred choices, and in addressing other family planning related barriers. This study found that the information mostly given about implant was the effective duration of the method and the possibility of having it removed before the end of that period. It could be that the providers have limited knowledge about implant as was found in Lagos, Nigeria regarding provision of emergency contraceptives (Ebuehi, et al., 2006). Because of the limited information given about implant, all the users knew about the effective duration period. They however knew little about the advantages, side effects; and what to do if any should occur. It has been demonstrated in studies in European countries and Austria that effective counselling can increase the use of contraceptive methods (Bitzer et al., 2012; Egarter et al., 2012).

The study also found that the performance of the necessary physical examination required to be carried out on client before inserting the implant was below average at all the centres where the observation was carried out. Providers on the other hand were good with the actual insertion of the implant, and this was attributed to a recent training they had on it. This suggests that training in the other areas; especially counselling and infection prevention practice, will help raise the standard of the practice.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The findings indicated that the current use of contraceptives among women within reproductive group in the Ashanti-Mampong Municipality was higher than the national figure of 24%. However it was far lower than contraceptive usage globally and in developed countries. The use was higher in women who were better educated and married. There was low utilization of LTRC with that of the implant being higher than that of the IUD, and this was similar to findings in other parts of the world. Availability of IUD was limited in the area. Providers were good at the insertion of implant. Awareness of the various methods of contraceptive was the only factor significantly associated with use of contraceptives. Factors such as fear of effect on health and refusal by partner were seen to be hindering the use of contraceptive; however they were not statistically significantly. Again, partners decide they type of contraceptive to use in 50% of contraceptive user. None of the socio-demographic factors was associated with use of contraceptive after adjusting for possible confounding.

6.2 Recommendations

In view of this study's findings, the following recommendations are made to the various stakeholders.

6.2.1 Health Ministry

None of the socio-demographic characteristics, not even education, was significantly associated with use of contraceptive although it has been found to influence the use of contraceptive in other areas. I would like to recommend to the Ministry of health and Ghana health service to further conduct studies to explore other factors that may be

associated with use of contraceptives. Example is partner's role in the uptake of contraceptive, knowledge about LTRC methods.

6.2.2 Municipal Health Management Team

It was realized that awareness was significantly influencing contraceptive use but participant knew few of the methods. The Municipal Health Management Team (MHMT) could therefore help the various facilities to draw health education programmes concerning contraceptives to help raise the awareness level. Again the MHMT could intensify education about contraceptive in the communities. The educational programme could aim at sensitizing the public, demystifying misconceptions and myths and address safety concerns. The MHMT can collaborate with the local FM stations so that they could broadcast pre-recorded messages about contraceptives. Mobile health services vans can also be used to help in educating the community members.

6.2.3 Municipal Assembly

To address the issue of limited availability of IUD, I would recommend that the Municipal Assembly should assist the MHMT to equip the other family planning centres to provide IUD services. The assistance could be required logistics and financial assistance to train the health providers in the provision of the service.

6.2.4 Heads of the Health Facilities

The health providers at the facilities could have a well-planned education programmes or schedules concerning family planning and use of contraceptive. These programmes can be integrated into existing service areas such as antenatal, postnatal, child welfare, out patients, inpatients and other outreach services. This would help widen the coverage

without incurring extra cost. Interaction with the service providers revealed that they had training on insertion of implant recently. This has helped them better acquire the skill of insertion. It will therefore be necessary for the MHMT and the heads of the various health facilities to organise training sessions on counselling to help providers counsel effectively since effective counselling has been seen to increase uptake of contraceptives in other places.



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APPENDICES

APPENDIX 1: RESEARCH QUESTIONNAIRE

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,

KUMASI

SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF COMMUNITY HEALTH
RESEARCH QUESTIONNAIRE

This questionnaire is meant to obtain your response on utilization of contraceptives among women within the fertility age (15-49). The interviewer will explain all the questions to you, and everything discussed with you will remain confidential and will be used solely for what it is meant for. Your participation is voluntary.

Name of outreach point Date of interview//(dd/mm/yyyy)

Name of interviewer

SECTION A: SOCIO-DEMOGRAPHIC DATA

Q1. What is your age? (in completed years).

Q2. Highest level of education attained by respondent

1. None
2. Primary
3. Middle/JSS
4. Secondary
5. Tertiary

Q3. What is your occupation?

1. Artisan
2. Civil servant
3. Farming
4. Trading
5. Unemployed
6. Other (specify)

Q4. What is your religious affiliation?

1. Catholic

2. Protestant
3. Moslem
4. Traditionalist
5. Other (Specify)

Q5. What is your marital status?

1. Single
2. Married
3. Divorced/Separated
4. Cohabitation
5. Widow

Q6. What is your partner's occupation?

1. Artisan
2. Civil servant
3. Farming
4. Trading
5. Unemployed
6. Other (specify)

SECTION B: KNOWLEDGE ON CONTRACEPTIVES

Q7. Can you please name types of contraceptives you know? (*Tick as many as you know*).

- ☐ Breastfeeding
- ☐ Condom
- ☐ Implant
- ☐ Injectable
- ☐ Intrauterine device (IUD)
- ☐ Natural methods

☐ Periodic abstinence

☐ Pills

☐ Tubal ligation

☐ Vasectomy

☐ Others (Specify).....

Q8. What type of information do you have regarding contraceptives?

Method	Side effects	Benefit/uses	Duration	Where it can be obtained
1.Abstinence				
2.Breastfeeding				
3.Condom				
4.Implant				
5.Injectable				
6. IUD				
7.Pill				
8.Natural method				
9.Tubal ligation				
10.Vasectomy				

Q9. What is your source of information on contraceptives? (*You can tick as many as apply to you*)

1. Media
2. Relatives
3. Friends
4. Health provider

Q10. Did your health provider discussed family planning with you during pregnancy?

1. Yes
2. No

SECTION C: SOCIAL CHARACTERISTICS AND PRACTICES Q11. How

many children do you have?

Q12. Do you intend to have more children?

1. Yes
2. No

Q13. If your answer to Q12 is yes, why?

1. Have new partner
2. Wants a particular sex
3. Pressure from partner
4. Have not had the desired number of children

Q14. How many children do you want to have?

Specify the number

Q15. Who decides on the type of contraceptive you use? (*You can tick as many as apply to you*).

1. My self
2. My partner
3. Close friend
4. Parents
5. Health provider

Q16. What would you regard as factors that will hinder you from using a method of family planning? (*You can tick as many as apply to you*).

1. Refusal by partner
2. Religious beliefs
3. Marital status
4. Number of children
5. Inadequate finance
6. Age

7. Other (specify)

Q17. Are you currently using any family planning method?

1. Yes
2. No

Q18. If your answer to Q17 is yes, what type are you using?

1. Breastfeeding	2. Condom	3. Implant	4. Injectable
5. IUD	6. Natural methods	7. Abstinence	8. Pills
9. Tubal ligation	10. Vasectomy	11. Others	



SECTION D: TO BE COMPLETED BY USERS OF IUD OR IMPLANT (THE USE AND CHARACTERISTICS OF THE USERS)

Q19. Is this your first time of using contraceptive?

1. Yes
2. No

Q20. If your answer to Q19 is **NO**, state any method(s) you used in the past

□

Q21. If the method in Q20 is different from your current method, why did you change the method?

1. Base on advice from health provider
2. Because of side effect of previous method
3. Pressure from partner
4. Because of religious reasons
5. Inconvenience of using the method
6. Any other (specify) **Q22.**

SECTION D PART I TO BE COMPLETED BY USERS OF IUD

Q22.1. Is this your first time of using IUD?

1. Yes
2. No

Q22.2. How long have you had it?

Q22.3. How long can one keep IUD?

1. 5years
2. 7years
3. 10years
4. I don't know

Q22.4. How much did you pay for it? **Q22.5.**
How do you find the cost, was it affordable?

1. Yes
2. Yes but difficult
3. No

Q22.6. What are some of the advantages associated with the use of IUD? (*You can tick more than one*)

1. There is no need to visit provider frequently for re-supply / convenient to use
2. No need to remember to carry out a task regularly or before sexual act
3. Provides protection for a long period
4. Protection against endometrial cancer
5. Good for women who cannot use hormonal methods
6. Rapid return to fertility when remove

Q22.7. What are some of the disadvantages of using IUD? (*You can tick more than one*)

1. Cannot protect against STIs/HIV
2. Increase menstrual flow
3. Inter-menstrual bleeding / spotting
4. Increase pain/ cramps during menstruation
5. It can be expelled spontaneously placing the woman at risk for pregnancy

Q22.8. What is your own experience with IUD?

.....
.....

Q22.9. Please suggest ways to increase uptake of IUD

.....

..... **Q23.**
SECTION D PART II TO BE COMPLETED BY USERS OF IMPLANT

Q23.1. Is this your first time of using implant?

1. Yes
2. No

Q23.2. How long have you had it?

Q23.3. How long can one keep implant?

1. 1-2years
2. 3-5years
3. 7-10years
4. I don't know

Q23.4. How much did you pay for it?

Q23.5. Is the cost affordable?

1. Yes
2. Yes but difficult
3. No

Q23.6. What are some of the advantages of using of implant? (*You can tick more than one*)

1. There is no need to visit provider frequently for re-supply / convenient to use
2. No need to remember to carry out a task regularly or before sexual act
3. Provides protection for a long period
4. Decrease menstrual flow and pain
5. Good for women who cannot use oestrogen containing methods
6. Rapid return to fertility when remove

Q23.7. What are some of the disadvantages of using implant? (*You can tick more than one*)

1. Cannot protect against STIs/HIV
2. Amenorrhoea
3. Irregular bleeding
4. Removal may be difficult

Q23.8. What is your own experience with implant?

.....
.....

Q23.9. Please suggest ways to increase uptake of implant

.....

.....

KNUST

Thank you



APPENDIX 2: RESEARCH CHECKLIST

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,

KUMASI

SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF COMMUNITY HEALTH

RESEARCH CHECKLIST

This checklist is meant to obtain information on provision of intrauterine contraceptive device (IUD) and implant, and other related factors in health facilities in the Municipality. Information obtained will remain confidential and will be used solely for what it is meant for.

The researcher should ask to be shown the location in the facility where family planning services are provided. Find the head of the family planning unit, introduce yourself, explain the purpose of the study and ask the following questions.

Name of facility.....Sub-municipal.....

Name of interviewer Date of interview//

Total number of clients observed

SECTION A: INTERACTION WITH CLIENT				
Nº	Activity / Item	Yes	No	If yes Nº observed
1	Provision of privacy and confidentiality			
	Ensured visual privacy			
	Ensured auditory privacy			
	Assured client of confidentiality			

Nº	Activity / Item	Yes	No	If yes Nº observed

2	Establishment of rapport			
	Welcomed client			
	Greeted / responded to greetings respectfully			
	Offered client seat			
	Asked how she may help			
3	Taking of necessary history			
	Age of client			
	Number of living children			
	Last delivery date			
	Breastfeeding status			
	Desire for more children			
	Desired timing for next birth			
	Last menstrual period/assessed if client is currently pregnant			
	Regularity of menstrual cycle			
	Smoking habit			
	Asked about symptoms of STIs			
	Assessed client's risk of contracting STIs/HIV			
	Asked about chronic illness (heart disease, hypertension, diabetes, breast cancer etc.			
4	Provision of appropriate information on			
	Client informed of effective duration of method			
	Advantages of using the method given			
	Client informed of side effects of method			
	Discussed use of condom to protect against STIs/HIV			
	Client informed of required physical examination before provision of method			
	Informed client of review / follow-up visits			
	Asked client about concerns and addressed it appropriately			

SECTION B: APPROPRIATE PHYSICAL EXAMINATION

	Performed appropriate physical examination	Yes	No	If yes № observed
	Took client's blood pressure			
	Weighed client			
	Examined client's breasts			
	Examined client's abdomen			
	Inspected external genitalia			
	Inserted vaginal speculum and inspected cervix and vagina (for IUD)			
	Performed bimanual examination (for IUD)			

SECTION C: SKILL OF PROVIDER

№	Check whether the following was done	Yes	No	If yes № observed
1	Pre-insertion preparation for IUD			
	Explained procedure to client before starting			
	Prepared all equipment and supplies before starting			
	Asked client to empty her bladder (for IUD)			
	Assisted client onto examination couch and draped her			
	Washed hands with soap and water before starting procedure			

2	Check whether the following was done	Yes	No	If yes № observed
	Insertion of IUD			
	Inserted vaginal speculum and grasped cervix with tenaculum			
	Sounded uterus using "no touch" technique			
	Loaded IUD in its sterile pack			
	Washed hands and putted on sterile gloves			
	Used "no touch" technique, placed loaded IUD into uterine cavity			

	Removed plunger, pushed insertion tube before withdrawing it			
	Removed tenaculum, inspected cervix for bleeding and applied pressure to bleeding points			
	Removed speculum			
	Digitally tucked strings into posterior fornix			
3	Post insertion of IUD			
	Observed client for 15-30 minutes			
	Explained checking of IUD strings			
	Gave information on side effects again			
	Informed to return to clinic if side effects persist			
	Informed client of follow-up visits			
	Recorded all information in client card and register			
	Provided client with card stating date of insertion and review			
4	Pre-insertion preparation for Implant			
	Explained procedure to client before starting			
	Prepared all equipment and supplies before starting			
	Assisted client onto examination couch and draped her			
	Washed hands with soap and water before starting procedure			
Nº	Check whether the following was done	Yes	No	If yes Nº observed
5	Insertion of implant			
	Asked of non-dominant hand			
	Positioned arm and marked site for insertion			
	Cleansed site with antiseptic			
	Draped insertion site			

	Anaesthetized the area			
	Inserted implant using trocar and cannula			
	Palpated to check for release of the implant			
	Pressed incision site to close incision and applied pressure dressing			
6	Post insertion of Implant			
	Observed client for 15-30 minutes			
	Explained care of incision site			
	Gave information on side effects again			
	Informed to return to clinic if side effects persist			
	Informed client of follow-up visits			
	Recorded all information in client card and register			
	Provided client with card stating date of insertion and review			

SECTION D: INFECTION PREVENTION PRACTICE

Nº	Check whether the following was done	Yes	No	If yes Nº observed
1.	Infection prevention practice			
	Washed hands before starting a procedure			
	Used appropriate protective clothing			
	Wiped contaminated surfaces with 0.5% chlorine solution			
	Immersed all used instrument into 0.5% chlorine solution and timed it for 10minutes			
	Washed hands with soap and water after removing gloves			
	Used utility glove for processing instrument			
	What is the final processing method of instrument			
2.	Logistics for infection prevention	Yes	No	

	Different types of gloves			
	1. Sterile gloves			
	2. Examination gloves			
	3. Utility gloves			
	Sterile gauze and cotton wool			
	Antiseptic solution(Iodine, Savlon, Methylated spirit)			
	Chlorine solution			
	Running water			
	Hand washing soap			
	Alcohol-based hand rub			
	Waste bin with liner and lid			
	Safety box for sharps			
	Medical masks			
	Gowns			
	Goggles for eyes protection			
	Mackintosh apron			
	Logistics for infection prevention	Yes	No	
	Clock			
	Drum for sterile items			
	Brush for cleaning instruments			

SECTION E: OTHER RELATED FACTORS

1	NECESSARY EQUIPMENT / ITEM	Yes	No	Number
	Vaginal speculum			
	Tenaculum / Volsellum forceps			
	Uterine sound			
	Sponge holding forceps			
	Trocar and cannula			
	Mosquito artery forceps			
	Examination couch			
2	LOGISTICS FOR EFFECTIVE COUNSELLING			

	Visual aids			
	Samples of commodities			
	Pelvic / Uterus model for demonstration			
	Arm model for demonstration			
	Private room for privacy during counselling			
3	AVAILABILITY OF SERVICE			
	How many days in a month are services offered			
	Do you provide the method			
	You counsel and refer			
	Seen stock of the FP commodities			
	Note minimum stock level			
	How are stock replaced			

