

ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG EASTERN REGION, GHANA

**FACTORS INFLUENCING THE UTILIZATION OF MODERN CONTRACEPTIVES
AMONG WOMEN OF REPRODUCTIVE AGES: A SURVEY IN ST. FLORENCE
CLINIC IN ASHAIMAN MUNICIPALITY IN THE GREATER ACCRA REGION.**

BY

HENRY BERCHIE

(157100029)

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DECLARATION

I, Henry Berchie, hereby declare, that except for other person’s investigations which have been duly acknowledged, this work submitted to the Department of Community Health, Ensign College of Public Health, is the result of my own original research and that this dissertation, either in whole or part has not been presented elsewhere for another degree.

Henry Berchie (157100029)

(Student)

Signature

Date

Certified by

Dr. Stephen Manortey

(Supervisor)

Signature

Date

Certified by

Dr. Stephen Manortey

(Acting Head of Academic Programme)

Signature

Date

DEDICATION

This thesis is dedicated to God Almighty, my mum, wife, daughter and my supervisor Dr. Stephen Manortey.

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LIST OF ABBREVIATIONS/ACRONYMS MEANING

AIDS	Acquired Immune Deficiency Syndrome
CHPS	Community-Based Health Planning and Services
EDHS	Egypt Demographic and Health Survey
GDHS	Ghana Demographic and Health Survey
HIV	Human Immunodeficiency Virus
IUD	Intra Uterine Device
JHS	Junior High School
JSS	Junior Secondary School
MDGs	Millennium Development Goals
MMEIG	Maternal Mortality Estimation Inter-Agency Estimation
NHIS	National Health Insurance Scheme
OR	Odds Ratio
SADHS	South Africa Demographic and Health Survey
SDGs	Sustainable Development Goals
STIs	Sexually Transmitted Infections
UN	United Nations
UNDESA	United Nations Department for Economic and Social Affairs
UNFPA	United Nations Population Fund
WHO	World Health Organization
WIFA	Women in Fertile Age

ABSTRACT

Background

Modern contraceptives usage is instrumental in the realm of prevention of unwanted pregnancy, prevention of HIV/AIDS and other sexually transmitted diseases and overall reducing maternal mortality and improvement of child survival. But the contraceptive rate is very disproportionately low in most developing countries of which Ghana is not an exception. The Ashaiman Municipality in the Greater Accra Region is not alienated to this circumstance of low uptake of modern contraceptives.

Objectives

The aim of this study was to identify or assess the factors that determine the utilization of modern contraceptives among women in their reproductive ages in Ashaiman Municipality.

Methodology

This was a health facility based cross-sectional study involving 290 women in their reproductive ages of 20-49 years at the St Florence Clinic situated in Ashaiman Municipality from 3rd January 2017 to 25th January 2017. Study participants were recruited by systematic random sampling and trained field investigators interrogated them to elicit responses.

Results

A modern contraceptive prevalence rate of 66 out of 290 (22.76%) was measured. 100% of the study participants had heard of modern family methods before. 94.48% of them had knowledge of at least one modern contraceptive method. The most known contraceptive method was the

injectable identified by 94.48%, and second to this was the male condom recognized by 93.45% of the women.

The most utilized method was the injectable accounting for 49.96% among contraceptive users, and next to this was the implant adopted by 30.3% of users. Top most reasons cited for patronizing modern contraceptive among users included: birth spacing (45.5%), preventing unwanted pregnancy (34.8%), and limiting the number of children (21.2%). Conversely, reasons cited for non-utilization among the 224 non-users were: fear of side effects cited by 56.3%, religious belief (26.3%), desire for male child (8.5%) and spousal/partner disapproval (6.7%).

Parity was the only socio-demographic factor that was found to be significantly associated with contraceptive use.

Conclusion

Modern contraceptive utilization in the Ashaiman Municipality is low and similar to the national prevalence in spite of the universal knowledge. Parity was only the socio-demographic predictor of modern contraceptive use. Fear of side effects was the major reason found for non-utilization of modern contraceptives. Therefore, efforts should be taken by the various stakeholders to help improve or remedy this situation.

Key Words: Factors, Utilization, Modern Contraceptives, St Florence Clinic, Ashaiman Municipality, Family Planning.

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Chapter 1

1.0 Introduction

1.1 Background Information

Family planning is the process of spacing childbirth and limiting the number of children by couples or partners. It allows individuals and couples to anticipate and attain their desired number of children taking into consideration the spacing and timing of their births. This is achievable by use of contraceptive methods and treatment of involuntary infertility (WHO, 2015).

Modern contraceptives or family planning methods include pills, injectables, intra-uterine devices, implants, male and female condoms, combined contraceptive patch and combined contraceptive vaginal ring, vasectomy (male sterilization) and bilateral tubal ligation (female sterilization) (Hubacher and Trussel, 2015). Lactational amenorrhoea method and emergency contraceptive cannot be left out of this list (WHO, 2015). The effectiveness of these methods is such that they offer at least 95% protection against unwanted pregnancies. Traditional or Natural family planning methods include calendar or rhythm method, and the withdrawal method (coitus interruptus) (UNFPA, 2014).

The benefits of the usage of family planning methods are immeasurable in terms of its cost-benefit analysis, prevention of unwanted pregnancies and its consequential unsafe abortions, reduction of maternal mortality, improvement in child survival, prevention of HIV/AIDS and other sexually transmitted infections or diseases when it comes to the barrier methods, and many more (WHO, 2015).

Contraceptive prevalence is the percentage of women who are currently using, or whose sexual partner is currently using, at least one method of contraception, regardless of the method. It is usually reported for married or in-union women aged 15 to 49 years (World Health Organization, 2016a; United Nation, Department of Economic and Social Affairs, 2015). It is reported in 2015 according to the United Nations that 64% of married or in-union women world-wide were on a form of family planning method be it modern or traditional (United Nation, Department of Economic and Social Affairs, 2015). The global modern contraceptive rate is 57%, this proportion indicates that most married or in-union reproductive age women using a contraceptive method (90% of contraceptive users) adopt modern contraceptives (United Nation, Department of Economic and Social Affairs, 2015). A comparative quantitative analysis among inhabitants of five continents with regards to contraceptive usage rate revealed that Northern America has the highest rate of 75.4%, followed by Europe which is 70.0%, and then Asia and Oceania which are 67.0% and 59.4% respectively. Africa, on the other hand, has the lowest contraceptive usage rate of 31.3% (United Nations, 2013).

Within each of these continents, there are variations in modern contraceptive rates in the various countries located in their respective continents. For example for Africa, which has the lowest prevalence of 31.3%, Northern Africa and Southern Africa contraceptive prevalence are 53.6% and 62.6% respectively. Sub-Saharan Africa has a prevalence of 25.1%, Eastern Africa has 33.7% prevalence rate and that of West Africa and Middle Africa are 15.1% and 20.9% respectively (United Nations, 2013).

The unmet need for family planning is defined as the proportion or percentage of married women or women in union who are fecund and sexually active and want to prevent pregnancy or delay

childbirth but are not using a method of contraception. The concept of unmet need for family planning addresses the gap between women's reproductive intentions and their contraceptive behaviour (World Health Organization, 2016b). Globally it is estimated that 225 million women would want to prevent pregnancy or delay childbirth but due to a number of reasons they are unable to do so (United Nation, Department of Economic and Social Affairs, 2015).

Ghana, which happens to be a West African and Sub-Saharan country, has a modern contraceptive prevalence rate of 22% (GDHS, 2014). The Ashaiman Municipality, which is one of the districts in the Greater Accra Region of Ghana, is not spared of this challenge regarding the low prevalence rate. Thus, a research into the factors that contribute to this low prevalence rate is a step in the right direction. Findings from such study will add to the knowledge base in understanding the utilization of modern contraceptives among women. It will also contribute to policy-decision making so far as the provision and patronization of modern contraceptive services is concerned.

1.2 Problem Statement

Modern contraceptive prevalence rate is appallingly low in most developing countries. The unmet need for modern family methods is disproportionately high in Sub-Saharan Africa and South Asia. These are respectively 30% and 21% (United Nation, Department of Economic and Social Affairs, 2015). The data is obviously not different in Ghana, and with additional disparities in rural and urban setups and across geographical locations. The effects of these statistics are devastating in the sense that it leads to or has a direct relationship to high maternal mortality and child mortality in these regions of the world, as well as the economic status of couples and the country as a whole.

1.3 Rationale of Study

Despite a great deal of work that has been done by many researchers on assessing the determinants of modern contraceptive usage among women of reproductive ages and significant strides with regards to utilization in developing countries in the last two decades, there is still a strong need and urgency to deal with the issues of low patronage. Hence, the need to identify the factors that culminate to the low prevalence rate for modern contraceptive especially in developing countries. This will help direct policy-making decision and develop communication strategy to bridge the gap. This research will also add to the already existing knowledge.

1.4 Hypothesis/Conceptual Framework

The figure below describes the conceptual framework of this project which addresses the fact that modern contraceptive usage is influenced by the knowledge base of women with respect to modern contraceptives, socio-demographic characteristics of the women, experience of side effects, spousal disapproval, misconceptions regarding modern contraceptives and accessibility of modern contraceptives

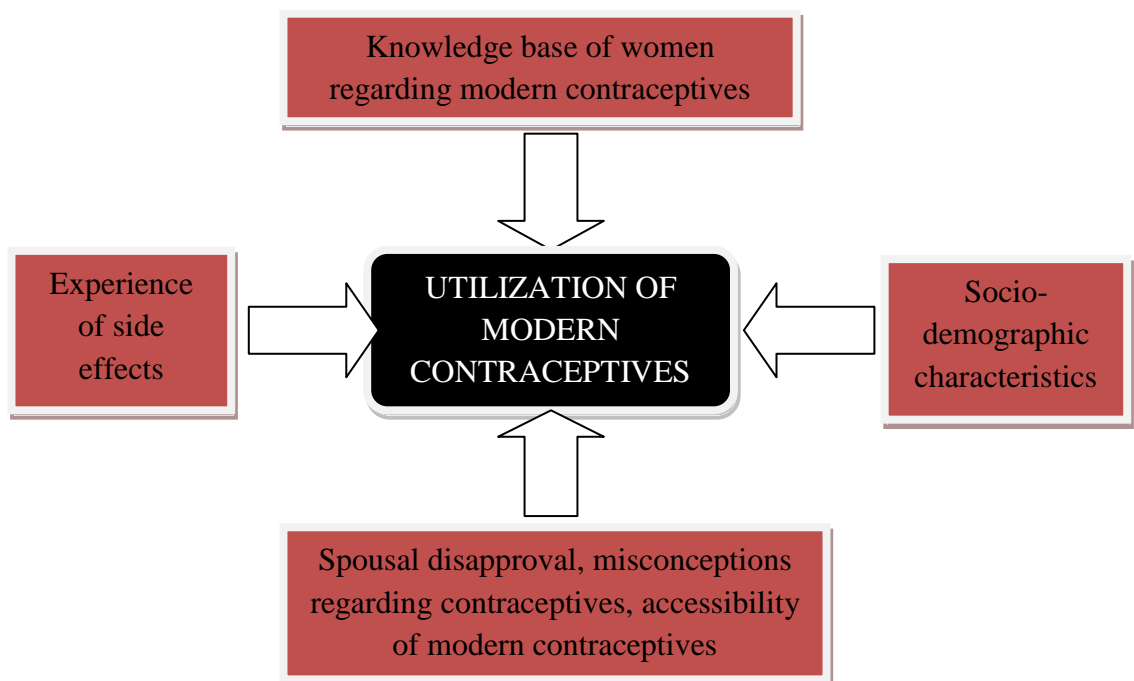


Fig. 1: A conceptual framework on Utilization of Modern Contraceptive

Source: Author's design

1.5 Research Questions

- a) What are the determinants that influence the utilization of modern contraceptives among reproductive age women in Ashaiman Municipality?
- b) What is the prevalence rate for modern contraceptive in Ashaiman Municipality?
- c) What is the level of awareness of the women with respect to modern contraceptives?

1.6 General Objective

To assess the factors that influence the usage of modern contraceptives among the study participants.

1.7 Specific Objectives

- a) To measure the prevalence of modern contraceptive use among participants.
- b) To describe the knowledge base of the women with regards to modern contraceptives.
- c) To identify the preferred methods of modern contraceptive.

1.8 Profile of Study Area

The study was conducted at the St. Florence Clinic situated in the Ashaiman Municipality, in the Greater Accra Region of the Republic of Ghana. St. Florence Clinic is a private health facility, established in the year 1972 by Mrs. Florence Etwi-Barima, and located in the central market and just a few metres away from the main lorry station of the municipality. Due to its location in the central business area of the Municipality, as well as being the first private health facility, persons

from far and near within the Ashaiman Municipality and other Districts such as the Kpone-Katamanso and Ledzokuku-Krowor patronize the services of this facility. Services rendered at the clinic include outpatient services to both adults and children, antenatal, delivery and postnatal services, family planning services and child welfare clinic services in collaboration with the Ashaiman Municipal Health Directorate. A greater proportion of the persons (more than 90%) who assess the facility for health care pay by the National Health Insurance Scheme (NHIS). Family planning methods offered at the clinic include the oral contraceptives, injectables, male and female condoms, intra-uterine devices and implants.

The Ashaiman Municipality is one of the sixteen (16) Metropolitan/Municipal/District assemblies in the Greater Accra Region of Ghana. The municipality is bordered to the north and east by the Tema Metropolitan Area and to the south and west by Kpone-Katamanso District. It covers a total area of 45km². It had an estimated population as at the first quarter of 2017 of about 236,472 (See Table 1.1 below) projected from a population of 190,972 according to the 2010 national population and housing census data with an annual growth of 3.1% (Ghana Statistical Services, Population and Housing Census 2010). For the same timeline, it also has expected number of pregnancies to be 9,459 representing 4% of the population (Ashaiman Municipal Health Directorate Report).

The Ashaiman Municipal Health Directorate plans and coordinates all health activities in the municipality. In terms of government health delivery facilities within the municipality, there exists the Ashaiman Polyclinic which provides outpatient and inpatient services, antenatal, delivery and postnatal services as well as family planning services; and two Community-Based Health Planning and Services (CHPS) compounds. In addition to these are sixteen (16) private

clinics/hospitals and maternity homes that provide a variety of services and forty-one (41) pharmacies and licensed chemical shops. It is worth mentioning Marie-Stopes International has a branch in the municipality. This organization also plays a vital role in terms of providing family planning services.

Table 1.1 Population Distribution by Age-group 2017

Target Age Group	Target Population	Percentage
Children 0 – 11 months	9,459	4%
Children 12 – 23 months	8,300	3.51%
Children 24 – 59 months	29,535	12.49%
Children 5 – 14 years	52,024	22%
WIFA 15 – 49years	56,753	24%
Men 15 – 49 years	59,118	25%
Men & Women 50 – 60 years	10,168	4.3%
Men & Women 60 years+	11,114	4.7%
Total	236,472	100

Source: Ashaiman Municipal Health Directorate

1.9 Scope of Study

The extent of the study is such that it addresses the association of modern contraceptive use with respect to socio-demographic factors, reasons for both utilization and non-utilization of modern contraceptives, knowledge regarding modern contraceptives and experience of side effects following the use of modern contraceptive. The study is purely quantitative in nature.

1.10 Organization of Report

The report of this work begins with the introduction which consists of the background information, problem statement, rationale of study, conceptual framework, general and specific objectives, profile of study area, scope of study and lastly the organization of the report. The second chapter is on the literature review which has been written with the following parts as importance of modern contraceptives, prevalence of modern contraceptives, knowledge of modern contraceptives and usage of modern contraceptives. The third chapter describes the methodology of the research. Chapter four deals with the results of the study, chapter five focuses on the discussion of the results, and chapter six comprises of conclusion and recommendations. The project report however ends with references and appendices in supportive to the researcher's investigation.

Chapter 2

2.0 Literature Review

2.1 Importance of Modern Contraceptives

The utilization of modern family methods or contraceptives is the best and most effective way of spacing childbirth or limiting the number of children a couple would want to have in their lifetime (WHO, 2015). The usage of modern contraceptives was not only instrumental to the achievement of the Millennium Development Goals (MDGs) 4 and 5, which were to reduce maternal mortality by three-fourth by 2015 and improve children survival respectively (Cates *et al.*, 2010), but also plays a substantial role in the achievement of the Sustainable Development Goals (SDGs) (Osotimehin, 2015).

The advantages of the use of modern contraceptives are so enormous. It has economical implication or benefit to the couple and the society at large (Cleland *et al.*, 2006). It helps reduce the cost of managing the health system so far as reproductive health care is concerned; - for every additional dollar invested in the provision of modern contraceptives, 1.4 United State dollars would be saved in costs of medical care because fewer women will have unintended pregnancies (Singh *et al.*, 2009). A United State dollar expenditure made in the delivery of modern contraceptive service will save four United State dollars spent on aborting an unintended pregnancy (Speidel *et al.*, 2009). A dollar spent on family planning can save up to 31 dollars in health-care, water, education and housing and other costs (UNFPA, 2007). Evidence in Matlab showed at the macroeconomic level, that the patronage of modern contraceptives subsequently led to reductions in fertility thereby causing a diminution in the youth dependency ratio and also

increasing the number of women participating in paid employment which ultimately boosted economic growth (Canning and Schultz, 2012).

The utilization of modern contraceptive is very phenomenal to the reduction of maternal mortality. Data extraction from the Maternal Mortality Estimation Inter-Agency Group (MMEIG) database, the UN World Contraceptive Use 2010 database, and the UN World Population Prospects 2010 database, and applying a counterfactual modelling approach (model I), and replicating the MMEIG (WHO) maternal mortality estimation method, estimated that 342,203 maternal mortalities occurred in 2008, but following the use of contraceptive in 172 countries 272,040 maternal deaths (44% reduction) were averted, and that without the use of contraceptive the number of maternal deaths would have been 1.8 times higher than that of 2008 (Ahmed *et al.*, 2012).

A study done using data from 146 Demographic and Health Surveys on contraceptive use and the distribution of births by risk factor, as well as special country data on the Maternal Mortality Ratio (MMR) by parity and age; estimated that over 1 million maternal deaths were averted from 1990 to 2005, because the fertility rate in developing countries decreased a result of increment in the usage of family planning during this time period and therefore averted the number of births which in turn reduced maternal mortality (Stover and Ross, 2010).

The prevention and reduction of the transmission of HIV/AIDS and other sexually transmitted infections is a reality when it comes to the use of barrier methods of modern contraceptives such as the male and female condoms (WHO, 2015). An increment in the use of condoms for contraception would reduce the transmission of HIV and other sexually transmitted infections, thereby helping to curtail the AIDS pandemic (Singh and Darroch, 2012). HIV/AIDS, which

happens to be global pandemics and has affected many lives and families negatively, has had its incidence reduced by a number of interventions of which one of them is the regular use of condoms during sexual engagements (WHO, 2015)

The increase in the utilization of family planning methods helps regulate the total fertility rate—evidence in Ghana proved that an increase in the contraceptive prevalence rate from 5% in 1988 to 23% in 2014 has decreased total fertility rate from 6.4 in 1988 to 4.2 in 2014 (GDHS, 2014).

The use of modern contraceptive is critical in terms of empowering and enhancing the education of both girls and women and therefore leading to creation of gender equality (UNFPA, 2016). In that girls are more likely to remain in school and not drop out of school and also more women are able to get employment (Cates *et al.*, 2010).

Families are able to properly care for the well-being and education of children as a result of patronization of modern contraceptives— children in smaller families are more nourished and educated than their counterparts from larger families (UNFPA, 2016).

Modern contraceptive does not only reduce maternal mortality but is also instrumental in child survival (UNFPA, 2016). Modern contraceptives play this function by preventing the closely spaced and ill-timed pregnancies, which contribute to some of the world's highest infant mortality rates, and also by reducing maternal death it reduces the risk of poor health and mortality infants might experience if they were to lose their mothers at this tender age (WHO, 2015)

The conservation and sustainability of environmental resources such as lands, water bodies, plants, animals etc is possible if modern contraceptive is increased which will in turn decrease the pressure on the need to use these subsequent to the control of population growth (Cleland *et al.*, 2006).

2.2 Prevalence of Modern Contraceptives

Despite the invaluable merits of the utilization of modern contraceptives, the global modern contraceptive rate is 57.0%; this rate is disproportionately lower in most developing countries, which happens to be 40%; the modern contraceptive prevalence rate for the African continent is 33% and that of Sub-Saharan Africa is 28% (United Nation, Department of Economic and Social Affairs, 2015).

Ethiopia, on the other hand, has a higher contraceptive prevalence than that of Ghana which is 35% (Ethiopia Demographic and Health Survey, 2016). Nigeria has a very lower prevalence compared to Ghana, which is 10% (Nigeria Demographic and Health Survey, 2013). Egypt has a modern contraceptive prevalence of 59% (EDHS, 2014), and South Africa has a 65% modern contraceptive rate (SADHS, 2003). These latter two countries have theirs higher than the African continent as well as that of the world.

Evidence from Debre Birhan District, North Shoa Administrative Zone, Amhara Region of Ethiopia involving 851 women calculated a modern contraceptive rate of 46.9% (Mohammed *et al.*, 2014). Another study in Western Ethiopia, Nekemte Town, involving 1003 reproductive age married women reported a modern contraceptive prevalence of 71.9% (Tekelab *et al.*, 2015).

The national modern contraceptive prevalence for Ghana is 22% (GDHS, 2014). A cross-sectional study conducted in the Talensi District in the Upper East of Ghana involving 280 reproductive age women measured a prevalence rate of 18% which is slightly below the national prevalence (Apanga and Adam, 2015). A Women's Health Survey carried in Accra by Adanu *et al.*, (2009) came out with a prevalence rate of 21.2% for modern contraceptive.

2.3 Knowledge of Modern Contraceptives

Access to information on contraceptive services is a critical factor that influences the use of contraceptive. A study in Ikwuano Local Government Area in Abia State of Nigeria revealed that 56.4% of contraceptive users had access to information on contraceptive from primary health care centres within their locality and 33.7% of users did not receive any information from these respective health facilities (Ogbe and Okezie, 2010). Also in the same study, it was found that 100% of contraceptive users have had information on AIDS awareness (Ogbe and Okezie, 2010).

A community-based cross-sectional study involving 1,003 married women in Nekemte Town, Oromia Region, West Ethiopia discovered that there was an almost universal knowledge (99%) of at least one method of modern contraceptives; and also 99.9% of participants had heard of modern contraceptives before (Tekelab *et al.*, 2015). Tekelab *et al.*, (2015) also demonstrated that the most heard modern contraceptive was the injectable which was known by 90.7% of respondents, followed by pill (90.6%), implant (77.6%), IUD (77.1%), male condom (55.8%), female sterilization (31.4%) and the least known was the vasectomy (9.6%).

Another evidence in Ethiopia, Debre Birhan District, North Shoa Zone, Amhara Region has it that, there is also almost universal knowledge of modern family planning where 98.5% of reproductive age women had heard of family planning and were able to mention at least one method, and the most known method was the injectable (98.9%), followed by pill (97.3%), implant (87.8%), male condom (74.8%), intra-uterine device (63.1%), female condom (31.7%), vasectomy (36.2%), tubal ligation (25.5%), and emergency contraceptive (23.9%) (Mohammed *et al.*, 2014).

The Ghana Demographic Health Survey showed that 98.7% of women were aware of modern family methods emphasizing the state of almost universal knowledge of modern contraceptives in Ghana and 99% knowledge of at least a method. The most known method was the male condom which was known by 96.4% followed by injectables (91.8%), pills (90.8%), female condoms (86.5%), implants (84.3%), bilateral tubal ligation (71.9%), emergency contraceptives (64.1%), intra-uterine device (59.7%), vasectomy (37.6%), and the least known method was lactational amenorrhoea known by 15.9% (GDHS, 2014). Whereas findings from a study in the Barekese sub-district in Atwima Nwabiagya district near Kumasi, in the Ashanti Region of Ghana showed that 95.3% of women had knowledge of male condoms which was the also most known method, 89.4% knew of injectables, 88.2% expressed recognition of female sterilization, 83.5% were aware of pills, implants were known by 75.3%, 71.4% had awareness on emergency contraceptives, female condoms were recognized by 69.4%, intra-uterine devices by 56.4%, lactational amenorrhoea by 41.2%, foam or jelly by 23.5%, male sterilization by 20.0%, and the least known method was the diaphragm (16.5%) (Krakowiak-Redd *et al.*, 2011).

Evidence from a research in the Ga East district of the Greater Accra Region of Ghana also revealed that nearly all women (99.7%) had knowledge of at least one modern family planning method. The most known contraceptive was the male condom known by 88.6%, followed by injectable (84.3%), pill (79.5%), female sterilization (79.2%), intra-uterine device (39.5%), emergency contraceptive (32.2%), male sterilization (31.6%), diaphragm (26.8%), spermicide (25.6%), lactational amenorrhoea (24.5%) and the least known method was the implant (8.5%) (Aryeetey *et al.*, 2010).

A case-control study in the Nkwanta District of the Volta Region also revealed a near universal awareness of modern contraceptive among both cases and controls, and the injectable was the most recognized method among both cases (93.1%) and controls (82.6%), followed by the pill with the distribution of 86.9% among users and 65.9% among non-users (Eliason *et al.*, 2014).

The source of message regarding modern contraceptives to the target populations cannot be overemphasized. Evidence in Ethiopia revealed that radio and television are important sources of information for conveying messages regarding modern contraceptive, contributing 73.7% and 69.4% respectively and 82% and 20% attributed to the health workers and friends respectively (Tekelab *et al.*, 2015). Findings in West Ethiopia showed that radio and television contributed 57.4% and 55.8% proportions respectively with respect to creating awareness on modern contraceptives, and health centres and health workers constituted 66.83% and 20.7% respectively (Mohammed *et al.*, 2014).

Eliason *et al.*, (2014) proved that health worker was the most conspicuous source of information regarding modern contraceptive in the Nkwanta District both among users and non-users accounting for 77.7% and 84.5% respectively. Evidence from urban Cameroon, Biyem-Assim Health District involving 721 women with a mean age of 27.5 years, out of 702 women responded to question regarding source of modern contraceptive, indicated that the health personnel was the main of source of information regarding cited by 47.7%, followed by school (23.6%), family, relations and friends (15.8%) and media (13.0%) (Ajong *et al.*, 2016).

2.4 Usage of Modern Contraceptives

On the global scale, the most dominantly used contraceptive is the female sterilization method attributing for 19%, second to that is the Intra-Uterine Device which constitutes a proportion of

14% (United Nations, 2013; United Nation, Department of Economic and Social Affairs, 2015). The third commonly used method of contraception worldwide is the pill accounting for 9%, followed by male condom (8%), injectable (4.1%), male sterilization (2.4%), implants (0.5%), female condom, diaphragm, spermicide emergency contraceptive and other modern contraceptives accounting for 0.4% (United Nations, 2013).

The most utilized contraceptive in Woreta, Ethiopia is the injectable (63.2%), the next preferred contraceptive is the pill (21.2%) (Weldegerima and Denekeew, 2008). Evidence from Uganda also corroborates the fact that injectable is the predominantly used contraceptive, accounting for 65% among young sexually active fecund women (15-24 years) and 60% among older sexually active fecund women (25-34 years)(Asiimwe *et al.*, 2014).

According to the Ghana Demographic and Health Survey report, the most widely used method of contraception in Ghana is the injectable constituting 8% (GDHS, 2014). Interestingly, (Aryeetey *et al.*, 2010) found that the most ever patronized modern contraceptive is the male condom (29.8%), followed by the injectable (16.0%), pill (15.1%), spermicide (5.1%), lactational amenorrhoea (3.9%), emergency contraceptive (3.3%), female condom (3.0%), IUD (2.7%), implant (2.7%), diaphragm (0.9%) female sterilization (0.6%), but among those currently married the most ever used contraceptive was the pill (30.8%), followed by male condom (25.9%), injectable (21.9%), spermicide (5.4%) lactational amenorrhoea (4.9%), IUD (3.6%), implant (3.1%), female condom (3.1%), diaphragm (0.9%) and female sterilization (0.9%).

There are a number of reasons accounting for non-use or low uptake of contraceptives. Common reasons why women do not use contraceptives include geographical accessible problems such as difficulty travelling to health facilities or supplies running out at health clinics; social barriers

such as opposition by partners, families or communities; lack of knowledge also plays a role, with many women not comprehending that they are able to become pregnant, not knowing what contraceptive methods are available, or having incorrect perceptions about the health risks of modern methods (UNFPA, 2016). Poorer women and those in rural areas often have less access to family planning services. Certain groups – including adolescents, unmarried people, the urban poor, rural populations, sex workers and people living with HIV – also face a variety of barriers to family planning (UNFPA, 2016).

Evidence from Osogbo, Nigeria involving 359 reproductive age women with an average of 28.6 years states that 39.8% were not using contraceptives because of fear of desire for more children, of side effects, 38.6% cited fear of side effects, 26.5% said they were unaware or ignorant of modern contraceptive methods, 15.3% cited that they had less risk of becoming pregnancy (because they were not having sex regularly/ were not sexually active), 9.6% gave reason of religious belief, 3.6% cited spousal or partner disapproval (Asekun-Olarinmoye *et al.*, 2013).

Research in the Ga East District of the Greater Accra Region indicated three categorical (3) reasons for non-use of modern contraceptives, which were service-related barriers stated by 22%, awareness-related barriers stated by 42%, spousal prevention by 48% and influence of partner/others by 40% (Aryeetey *et al.*, 2010). The main service-related barriers that were cited from the study include: receiving service from an opposite gender, the young age of the provider, and a long waiting time when assessing the service.

Reasons attributing to the low prevalence of modern contraceptive as found by Apanga and Adam (2015) are husband disapproval or opposition cited by 90% of respondents, misconceptions cited by 83%, against their religion pointed out by 30%, side effects cited by 14%, geographical accessibility by 12%, poor attitude of health staff by 8% and 6% cited fear of

sexual promiscuity. In Ethiopia reasons accounting for non-utilization of modern contraceptives include the need for more children cited by (63.1%) of study participants, fear of infertility (42.6%), fear of side effect (28.7%), rumors (17.7%), influence of others (13.1%), husband disapproval (7.4%), religious prohibition (2.8%) and others (1.1%) (Tekelab *et al.*, 2015).

Reasons for utilizing modern contraceptives are not too varied. Findings in a study involving university female students with an average age of 24.39 years from Kilimanjaro Region, Tanzania revealed reasons such as fear of becoming pregnant (72, 35.6%), fear of contracting sexually transmitted diseases (35, 17.3%) and spacing of pregnancy (35, 17.3%) (Sweya *et al.*, 2016). In Amhara Ethiopia among the 339 out of the 851 who were current users of modern contraceptives, 229 (57.4%) said they were using contraceptives to space birth and the remaining 172 (42.6%) opined that they were using contraceptives to limit the number of pregnancies or births (Mohammed *et al.*, 2014). Apanga and Adam (2015) found the following reasons contributing to the uptake among 50 users: spacing of children (47; 94%), fear of pregnancy (22; 44%), preventing pregnant and STIs (42; 84%) and to have intercourse without children (6; 12%). Reasons indicated by Aryeetey *et al.*, (2010) include birth spacing (57%), delay births (42%) and prevention of sexually transmitted infections (21%).

Aside the above reasons that either influence the utilization or non-utilization of modern contraceptives, evidence exist to suggest the association of modern contraceptive use with socio-demographic characteristics.

Female education and spousal education increase the odds of utilizing contraceptives (Ogbe and Okezie, 2010). It was also similarly reported in a study done in Talensi district of the Upper East Region of Ghana that, educational level of women was positively associated with contraceptive

utilization (Apanga and Adam, 2015). Adanu *et al.*, (2009) also revealed that educational status was significantly associated with current contraceptive and therefore concluded that government should formulate policies that will enhance the education of the girl child. Evidence from Ethiopia also proved that educated women had a higher odds of utilizing contraceptive compared to uneducated married (Lakew *et al.*, 2013).

Studies from Ethiopia indicated that being wealthy, more educated, being employed, higher number of living children, being in a monogamous relationship, attending community conversation, being visited by health worker at home strongly predicted use of modern contraception. However, living in rural areas, older age, being in polygamous relationship, and witnessing one's own child's death were found to negatively influence modern contraceptive use (Lakew *et al.*, 2013). Similarly findings from Nigeria also concluded that parity, fertility desire, maternal education, household wealth and geographic region significantly influenced modern contraceptive use however maternal age, parity, age at first birth, child mortality experience, fertility desire, ideal family size, maternal education, place of residence, employment status, geographic region and remarriage significantly influenced non-use of contraceptive (Solanke, 2017). Adanu *et al.*, (2009) found that wealth index, marital status, employment status, perception of health status were significantly associated with current modern contraceptive use. Apanga and Adam (2015) also brought to the fore that parity and educational status were significantly positively associated with current modern contraceptive use.

Side effects happen to be one reason why women discontinue or would not to adopt a contraceptive method. Some of the encountered side effects following the use of modern contraceptives include menstrual irregularity, cessation of menses (amenorrhea), breakthrough bleeding, dizziness, weight gain, headache, nausea, dose-related hypertension when it comes to

the oral contraceptives (Casey, 2016). Some perceived side effects by respondents from a study in Osogbo Nigeria are irregular menstruation abdominal pain, headache, infertility, weight gain, ectopic pregnancy, sexual dissatisfaction, failure rate, cancer, weight loss, leg pain, vomiting, irritation (Asekun-Olarinmoye *et al.*, 2013).

Chapter 3

3.0 Methodology

3.1 Study Method and Design

A health facility based cross-sectional study involving 290 women of childbearing age between the ages of 20-49 years. The study was conducted spanning a period of three weeks.

3.2 Data Collection Techniques and Tools

The research tool used for the study was a structured questionnaire with closed-ended questions assessing socio-demographic factors, knowledge level regarding modern contraceptives, reasons influencing the patronage and non-utilization of modern contraceptives and preference of methods of modern contraceptives.

Research investigators were trained over a period of three weeks to become conversant with the research tool. Before each interview was done, the investigator was required by courtesy to introduce herself to the prospective respondent, and further explained the objectives and the possible outcomes of the study. After which an informed consent was obtained either by respondent signing or thumb printing. Interviews were conducted in separate dedicated rooms, with one study participant and a respective interviewer in a room at a point in time to ensure privacy. Following this, questionnaire is checked for completeness and consistency. Where incompleteness, errors, and inconsistencies were observed, the necessary corrections were ensured before the women were allowed to leave

3.3 Study population

The study participants were women of childbearing age between the ages of 20-49 years who were attending the clinic during the period of the study. The lower limit age of 20 years was chosen to avoid issues with respect to assert consent.

3.3.1 Inclusion Criteria

- i. Non-pregnant women between the ages of 20 to 49 years
- ii. Resident in Ashaiman Municipality for at least six months

3.3.2 Exclusion Criteria

- i. Women within the stipulated age group who were seriously ill or not clinically stable
- ii. Pregnant Women

3.4 Study Variables

- ✓ Outcome Variable – current use of modern contraceptive
- ✓ Independent Variables- age, educational level, religion, occupation, marital status, parity.
- ✓ Knowledge regarding modern contraceptives
- ✓ Reasons for using modern contraceptives
- ✓ Reasons for not using modern contraceptives
- ✓ Methods of choice among contraceptive users
- ✓ Side effects experienced upon using modern contraceptives

3.5 Sample Size

The estimated sample size used for the study was 290 women in their reproductive ages. This was based on a 95% confidence level, 5% margin of error, and a non-response rate of 10%, using a national prevalence for modern contraceptive usage of about 22%.

This was calculated using the sample size formula for a single population shown below;

$$n = \frac{Z^2 p(1 - p)}{e^2}$$

where n is the required sample size, p = prevalence of modern contraceptive = 22% (0.22),

Z = score at 95% confidence level= 1.96, and e = margin of error 5% (0.05).

$n = [(1.96)^2 (0.22 \times 0.78)] / (0.05)^2 = 264$. With a 10% non-response rate, this gave 26.4 non-respondents and so adding it to 264, resulting in a total of 290.

3.6 Sampling Technique

Systematic random sampling method was used to recruit the subjects to constitute the study participants. The first participant was obtained by simple random sampling technique, and then every subsequent third eligible person was recruited.

3.7 Pretesting

Pretesting of the data collection tool was done among workers of the health facility and in an area farther away from the facility in the municipality. Following this, some changes were made to the research tool.

3.8 Data Handling

After each subject was interviewed, the questionnaires were checked for completeness and consistency. Where incompleteness, errors, and inconsistencies were observed, the necessary

corrections were ensured before the women were allowed to leave. Data collected were entered using Microsoft Excel 2007 and then exported to STATA statistical software package (*StataCorp.2007. Stata Statistical Software. Release 14.* StataCorp LP, College Station, TX, USA) for data cleaning and data analysis.

3.9 Data Analysis

Data Analysis was done using STATA statistical software package (*StataCorp.2007. Stata Statistical Software. Release 14.* StataCorp LP, College Station, TX, USA). The data was analyzed using various statistical techniques namely, descriptive, bivariate and multivariate analyses. Descriptive analysis of the various socio-demographic characteristics, knowledge base of modern contraceptives, contraceptive prevalence, reasons for using and not using modern contraceptives represented by frequency distribution and proportions. Bivariate and multivariate analyses were used to tease out potential association among the socio-demographic characteristics and predict factors that statistically influence modern contraceptive use respectively. A p-value of less than 0.05 or confidence interval at 95% confidence level was considered to be significant.

3.10 Ethical Considerations

Ethical clearance was obtained from Institutional Review Board of the Ensign College of Public Health, as well as administrative permission from the manager of the health facility. Informed consent was sought from study participants informing them of the purpose, benefits, and process of the study. It was also explained that the responses they gave were going to be kept confidential. Participants were also assured that the data obtained shall be made available to only persons connected with the study. Interviews were conducted in separate dedicated rooms to

ensure privacy and on an anonymity basis. Women identified with an unmet need for family planning were referred the family planning unit of the clinic.

3.11 Limitations of Study

This research was a preliminary or descriptive study and so did not make any causal inferences.

The findings of this study cannot be generalized to all metropolitan/municipal and districts in Ghana, most especially the rural ones.

This study was purely a quantitative study and so did not look into responses which otherwise can be elicited by a qualitative study.

3.12 Assumptions

It was assumed that the study participants understood the questions asked and gave the right answers. And also all quality control measures were strictly adhered to.

Chapter 4

4.0 Results

4.1 Background/Socio-Demographic Characteristics

A total of 290 women were recruited and interviewed without any dropping out, giving a response rate of 100%. The mean age of the study participants was 30.92 years with an associated standard deviation of 7.33 years. The median age was 30 years. The ages ranged from 20 to 49 years. Majority of the respondents (35.17%) had their highest attained educational status at the Middle/JSS/JHS level as at the time of the study. Christians were in the majority and constituted 80.69%, whereas Muslims constituted the remaining 19.31% of the total studied population.

With regards to the ethnic distribution of the respondents, Akans dominated the distribution, accounting for 34.83%, second to that were Ewes (19.31%), followed by Hausas (13.79%), Dangmes (12.42%), Gas (12.11%) and the rest. Regarding their occupation, most of them were actively employed, accounting for about 84%. A little above half of the interviewees (51.03%) were married, 36.21% were single women, 7.59% were co-habiting with their partner and the remaining 5.17% reported being either divorced/separated or widowed at the time the study was conducted. 63 out of 290 respondents reported not having any biological child of their own, 120 respondents had one to two children, 88 had three to four children and 19 had more than four children.

Table 4.1- Socio-Demographic Characteristics (n= 290)

CHARACTERISTICS		FREQUENCY	PERCENT
AGE (Years)	20-28	127	43.79
	29-38	112	38.62
	39-49	51	17.59
EDUCATIONAL STATUS	None	32	11.03
	Primary	62	21.38
	Middle/JSS/JHS	102	35.17
	SSS/SHS/Vocational	76	26.21
	Tertiary	18	6.21
ETHNICITY	Akan	101	34.83
	Ga	35	12.07
	Dangme	36	12.41
	Ewe	56	19.31
	Hausa	40	13.79
	Others	22	7.59
RELIGION	Christian	234	80.69
	Muslim	56	19.31
MARITAL STATUS	Married	148	51.03
	Single	105	36.21
	Co-habiting	22	7.59
	Divorced/Widowed	15	5.17
OCCUPATION	No employment	47	16.21
	Employed	243	83.79
NUMBER OF CHILDREN	None	63	21.72
	1-2	120	41.38
	3-4	88	30.34
	5-8	19	6.55
The distribution below addresses the 227 women who had children			
AGE OF LAST CHILD (years)	Less than 3	98	43.17
	3-8	75	33.04
	More than 8	54	23.79
SEX OF LAST CHILD	Male	129	56.83
	Female	98	43.17
CHILDREN SUPPORT	Single	52	22.91
	Husband and Wife	167	73.57
	Other	8	3.52

4.2 Knowledge of Modern Contraceptives

There was universal (100%) knowledge of having heard of modern contraceptives before, thus each study participant had heard of at least a kind of modern contraceptives before participating in the study. The television was the predominant source of information regarding modern contraceptives among all sampled respondents (70.69%), second to this was the health worker (51.03%) and social media played a very minimal role with respect to providing information on modern contraceptives constituting 0.34%. The most known modern contraceptive method was the injectable known by 94.48%, next to that was the male condom (93.45%), the third most known method was the pill (92.76%), and the least known method was diaphragm (12.76%).

Table 4.2 Heard of Modern Contraceptives

Have you heard of modern contraceptive	Number (Percent)
Yes	290 (100)
No	0 (0)

Table 4.3- Source of Information on Modern Contraceptives (n= 290)

SOURCE OF INFORMATION	NUMBER (%)
Television	205 (70.69)
Radio	141 (48.62)
Newspaper	8 (2.76)
Health Worker	148 (51.03)
Health Facility	118 (40.69)
Friends	144 (49.66)
Spouse/Partner	4 (1.38)
Work Colleague	5 (1.72)
Internet	12 (4.14)
Other (Social Media)	1 (0.34)

Table 4.4- Awareness of Modern Contraceptives by Methods (n= 290)

METHOD	PERCENTAGE
Pill	92.76
Injectable	94.48
Implant	85.86
Intra-Uterine Device (IUD)	62.76
Male Condom	93.45
Female Condom	81.72
Diaphragm	12.76
Foam or Jelly	15.52
Emergency Contraceptive	55.86
Lactational Amenorrhoea	32.07
Bilateral Tubal Ligation (Female Sterilization)	45.17
Vasectomy (Male Sterilization)	24.83

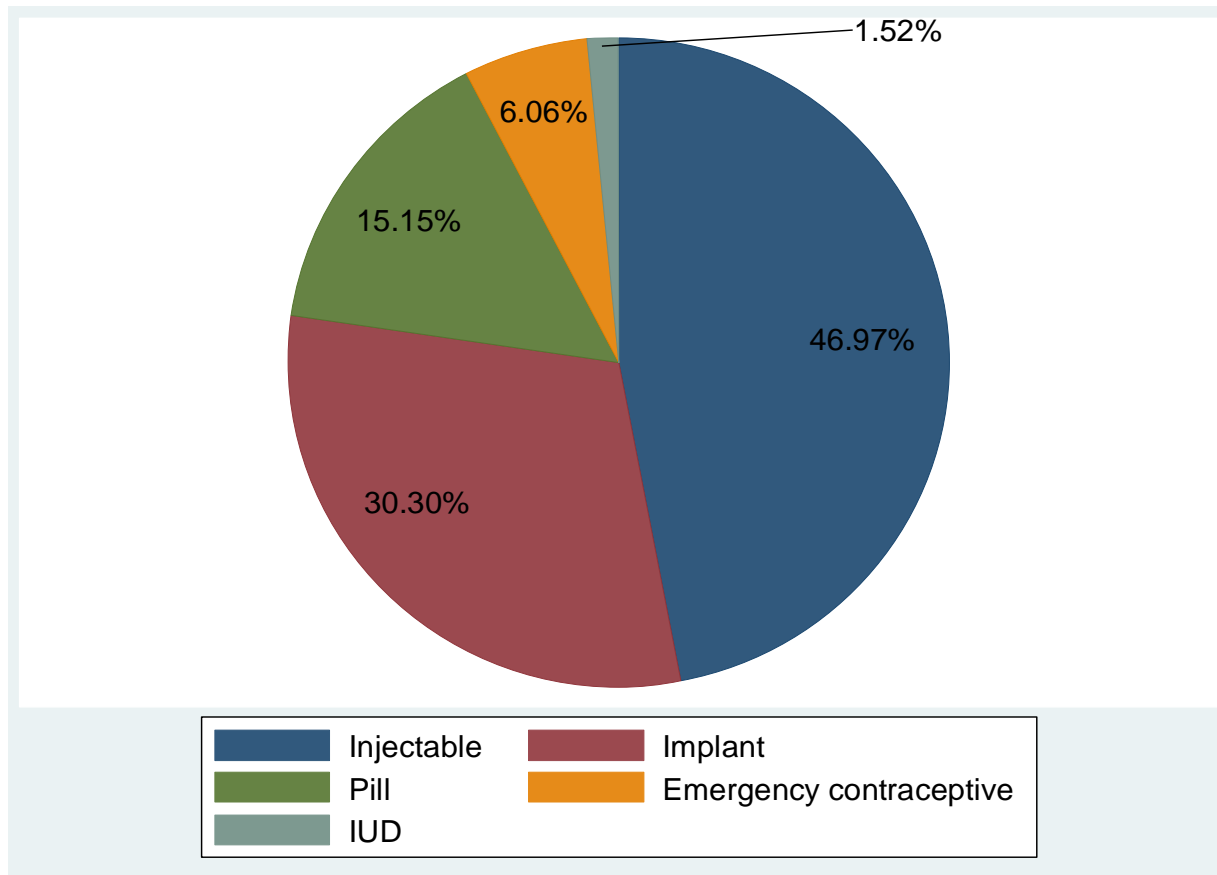
4.3 Usage of Modern Contraceptives

A modern contraceptive prevalence of 22.76% (66 out of 290) was measured. The most used modern contraceptive was the injectable accounting for 46.97% among users, followed by the implant (30.30%) and the least utilized method was intra-uterine device accounting for 1.52%.

Table 4.5- Contraceptive Prevalence Rate

CURRENT USER OF MODERN CONTRACEPTIVES	NUMBER	PERCENT
Yes	66	22.76
No	224	77.24
TOTAL	290	100

Figure 4.1: Pie Chart showing Proportion of Contraceptive Users by Methods (n = 66)



4.4 Contraceptive Use with respect to Socio-demographic Factors

More than half (56%) of contraceptive users were within the age category 29-38 years. Regarding the educational status of contraceptive users, 9.09% of them had no formal education, 30.30% had attained primary education, 37.88% had attained Middle/JSS/JHS level of education, 18.18% had had secondary/vocational education, and less than 5% had acquired tertiary education. Akans dominated the ethnic group distribution of contraceptive users constituting 36.36%, followed by the Ewes accounting for 16.67%, then the Hausas (15.15%), Dangme (13.64%), Ga (12.12%) and others (6.06%).

With respect to their religious affiliation, 80.30% of contraceptive users were Christians and 19.70% of them were Moslems. Concerning the occupation status of contraceptive adopters, 90.91% were employed and 9.09% were unemployed. 65.15% and 19.70% of contraceptive users were married and single respectively, but none of them was divorced or widowed. A little less than half of users (46.97%) had between one to two children, 5 out of 66 contraceptive users (7.58%) had no child, and the remaining 45.45% had between three to eight children.

Out of the 61 contraceptive users who had children, the age distribution of their last child was such that: 28 out of 61 users (45.90%) had their last child to be less than three years old, 24 out of 61 users (39.34%) had their last child to be between the ages of 3-8 years, and the age range of 9-26 years constituted the ages of last child of the remaining 9 out of 61 users (14.75%). A greater proportion (88.52%) of the contraceptive users with children had children support from both partners.

The association of current contraceptive use with the various socio-demographic factors following a bivariate analysis showed that: the age of study participants, marital status of study participants, number of children and children support of study participants were significantly associated with current contraceptive use, thus the p-values of their respective associations with current contraceptive use were less than 0.05 using a confidence interval of 95%. While educational level, ethnicity, religion, occupation, age of last child, and sex of last children were not significantly associated with current contraceptive use, because the p-values of their respective associations with current contraceptive use were greater than 0.05 based on a 95% confidence interval. The detail of the association between current contraceptive use and socio-demographic factors is described in Table 4.6 below.

Table 4.6 Bivariate Analysis of Current Contraceptive Use on Socio-demographic indicators

Characteristics	Categories	Modern Contraceptive		p-value
		Users (%)	Non-users (%)	
Age (years)	<i>20-28</i>	22 (33.33)	105 (46.88)	0.004
	<i>29-38</i>	37 (56.06)	75 (33.48)	
	<i>39-49</i>	7 (10.61)	44 (19.64)	
Educational level	<i>None</i>	6 (9.09)	26 (11.61)	0.207
	<i>Primary</i>	20 (30.30)	42 (18.75)	
	<i>Middle/JSS/JHS</i>	25 (37.88)	77 (34.88)	
	<i>Secondary/Vocational</i>	12 (18.18)	64 (28.57)	
	<i>Tertiary</i>	3 (4.55)	15 (6.70)	
Ethnicity	<i>Akan</i>	24 (36.36)	77 (34.38)	0.997
	<i>Ga</i>	8 (12.12)	27 (12.05)	
	<i>Dangme</i>	9 (13.64)	27 (12.05)	
	<i>Ewe</i>	11 (16.67)	45 (20.09)	
	<i>Hausa</i>	10 (15.15)	30 (13.39)	
	<i>Others</i>	4 (6.06)	18 (8.04)	
Religion	<i>Christian</i>	53 (80.30)	181 (80.80)	0.927
	<i>Moslem</i>	13 (19.70)	43 (19.20)	
Occupation	<i>Not Employed</i>	6 (9.09)	41 (18.30)	0.074
	<i>Employed</i>	60 (90.91)	183 (81.70)	
Marital Status	<i>Single</i>	43 (65.15)	105 (46.88)	0.000
	<i>Married</i>	13 (19.70)	92 (41.07)	
	<i>Co-habiting</i>	10 (15.15)	12 (5.36)	
	<i>Divorced/Widowed</i>	0 (0.00)	15 (16.70)	
Number of Children	<i>None</i>	5 (7.58)	58 (25.89)	0.016
	<i>1-2</i>	31 (46.97)	89 (39.73)	
	<i>3-4</i>	24 (36.36)	64 (28.57)	
	<i>5-8</i>	6 (9.09)	13 (5.80)	
Age of last Child (years)	<i>Less than 3</i>	28 (45.90)	70 (42.17)	0.135
	<i>3-8</i>	24 (39.84)	51 (30.72)	
	<i>9-26</i>	9 (14.75)	45 (27.11)	
Sex of Last Child	<i>Male</i>	30 (49.18)	99 (59.64)	0.158
	<i>Female</i>	31 (50.82)	67 (40.36)	
Children Support	<i>Single</i>	5 (8.20)	47 (28.31)	0.005
	<i>Wife and Husband</i>	54 (88.52)	113 (68.07)	
	<i>Others</i>	2 (3.28)	6 (3.61)	

The strength of association between the socio-demographic factors and current contraceptive use using logistic regression is illustrated in the Table 4.7.

The unadjusted odds ratio (OR) for some of the categories of the independent variables (socio-demographic characteristics) compared to their respective references were significant, however, none of the adjusted odd ratios of the categories of the variables were significant, apart from parity. For example, the unadjusted odds of current contraceptive use among the 29-38 years study participants being 2.36 times more likely compared to the 20-28 years study participants was significant (p-value = 0.006), but the unadjusted odds of current contraceptive use among the 39-49 years study participants with 0.76 times lower odds compared to 20-28 years participants was not significant (p-value = 0.558). The adjusted odds of current contraceptive use among the 29-38 years participants being 1.38 more times likely compared to the 20-28 years was not significant (p-value = 0.367), and also the adjusted odds of current contraceptive use among the 39-49 years study participants being 0.36 times less likely compared to 20-28 years participants was not significant (p-value = 0.062).

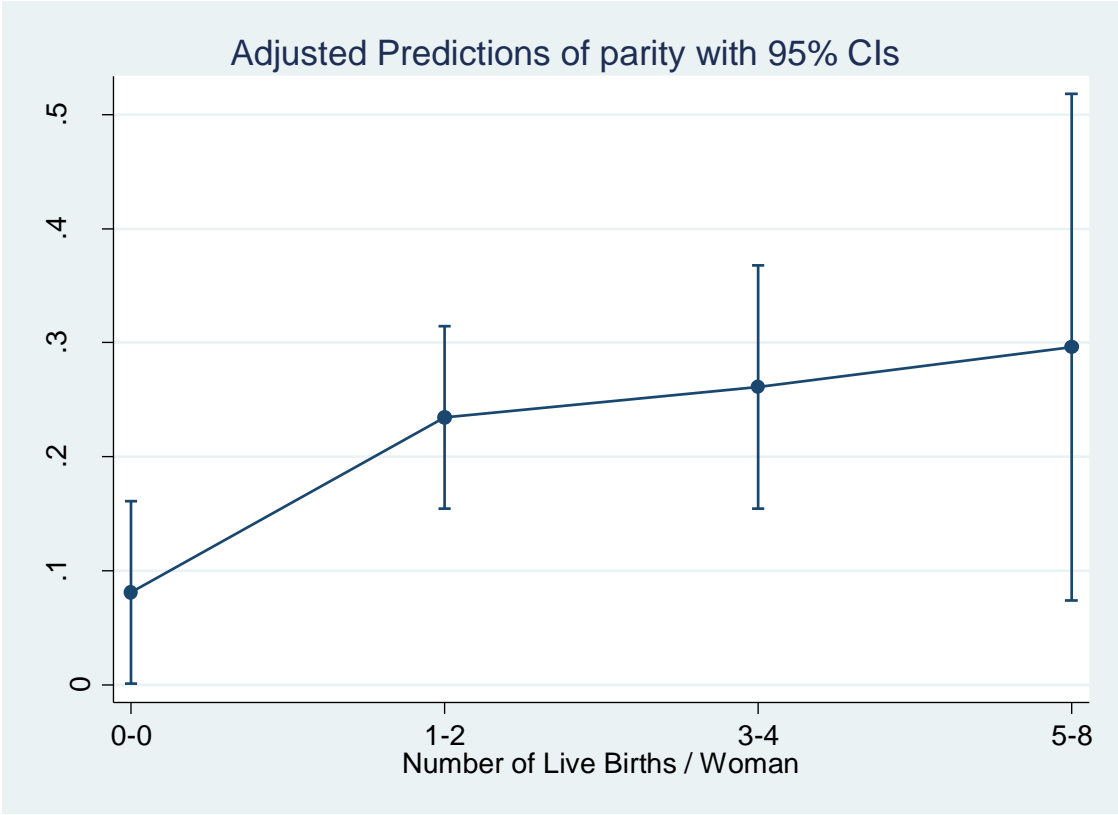
With respect to educational status, the unadjusted odds ratio of current contraceptive use among women who had attained primary education was 2.06. This finding was not significant because the p-value was greater than 0.05 (p-value = 0.170). The adjusted odd ratio of current contraceptive use among this same category was 1.78 and was also not significant (p-value = 0.294). This was the same picture among study participants who had attained tertiary education, in that there was an insignificant odds ratio of 0.87, and when parity, age of participants, religion and occupation were adjusted for, the odds ratio for current contraceptive use among this same group was also not significant, though it had increased to 2.01.

Table 4.7 Effects of Socio-demographic factors on Current Use of Modern Contraceptives (Logistic Regression)

Characteristics	Categories	Crude OR (95% CI)	p-value	Adjusted (95% CI)	p-value
Age (years)	<i>20-28</i>	1.00		1.00	
	<i>29-38</i>	2.36 (1.29 – 4.31)	0.006	1.38 (0.68 – 2.79)	0.367
	<i>39-49</i>	0.76 (0.30 – 1.91)	0.558	0.36 (0.13 – 1.05)	0.062
Educational level	<i>None</i>	1.00		1.00	
	<i>Primary</i>	2.06 (0.73 – 5.80)	0.170	1.78 (0.61 – 5.20)	0.294
	<i>Middle/JSS/JHS</i>	1.41 (0.52 – 3.81)	0.502	1.15 (0.40 – 3.34)	0.797
	<i>Secondary/Vocational</i>	0.81 (0.28 – 2.40)	0.707	0.84 (0.26 – 2.75)	0.777
	<i>Tertiary</i>	0.87 (0.19 – 3.98)	0.854	2.01 (0.35 – 11.73)	0.436
Ethnicity	<i>Others</i>	1.00			
	<i>Akan</i>	1.40 (0.43 – 4.55)	0.573		
	<i>Ga</i>	1.33 (0.35 – 5.09)	0.674		
	<i>Dangme</i>	1.50 (0.44 – 5.62)	0.547		
	<i>Ewe</i>	1.10 (0.31 – 3.39)	0.883		
	<i>Hausa</i>	1.50 (0.41 – 5.50)	0.541		
Religion	<i>Moslem</i>	1.00		1.00	
	<i>Christian</i>	0.97 (0.49 – 1.93)	0.928	1.15 (0.54 – 2.45)	0.714
Occupation	<i>Not Employed</i>	1.00		1.00	
	<i>Employed</i>	2.24 (0.91 – 5.54)	0.081	1.56 (0.57 – 4.26)	0.385
Marital Status	<i>Single</i>	1.00			
	<i>Married</i>	2.90 (1.47 – 5.72)	0.002		
	<i>Co-habiting</i>	5.90 (2.13 – 16.36)	0.001		
	<i>Divorced/Widowed</i>	1.00			
Number of Children	<i>None</i>	1.00		1.00	
	<i>1-2</i>	4.04 (1.48 – 10.99)	0.006	3.47 (1.07 – 11.27)	0.038
	<i>3-4</i>	4.35 (1.56 – 12.15)	0.005	4.00 (1.09 – 14.68)	0.036

	5-8	5.35 (1.42 – 20.25)	0.013	4.77 (0.97 – 23.48)	0.055
Children Support	<i>Others</i>	1.00			
	<i>Wife and Husband</i>	1.43 (0.28 – 7.34)	0.665		
	<i>Single</i>	0.32 (0.05 – 2.02)	0.226		

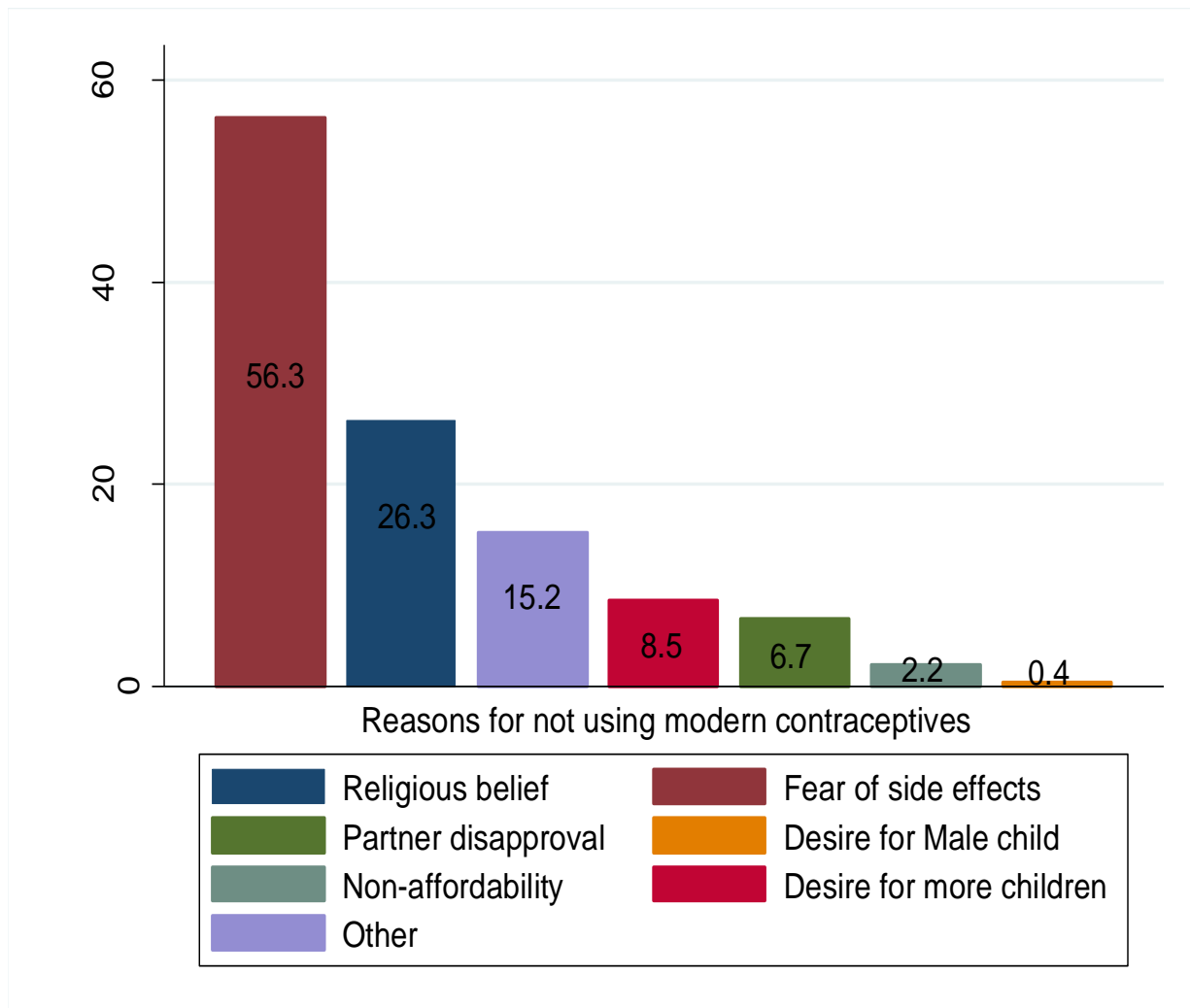
Figure 4.2 Margins plot for Number of Live Births per Woman



From the margins plot for parity above, it can be seen that the probability of a woman with no child using a modern contraceptive is 0.08, thus the lowest compared to the others. Study participant with one to two children had a higher likelihood of using modern contraceptives compared to those with no children (probability of 0.24). Those with three to four children and five to eight children had probabilities of 0.26 and 0.29 respectively with regards to utilizing modern contraceptives.

The bar graph below shows the distribution of the reasons for not using modern contraceptives cited by the 224 non-users as that the time of the study.

Figure 4.3: Bar Graph showing the distribution of Reasons for not using modern contraceptives (n = 224)



From the Fig 4.3 above, the fear of side effects was the most conspicuous reason cited by 56.3%; next to it was religious beliefs cited by 26.3%, other reasons constituted 15.2%; 8.5% and 6.7% of non-users cited desire for more children and partner disapproval, 2.2% cited non-affordability of modern contraceptives; and 0.4% cited the desire for a male child.

Coincidentally, the fear of side effects was the topmost reason cited among non-users, a further interrogation of contraceptive users with respect to the experience of side effects, revealed the following the distribution in table 4.8.

Table 4.8: Distribution showing the numbers and proportion of Contraceptive Users experiencing upon using contraceptives (n = 66)

Experience of Side Effects	Frequency	Percentage
Never	29	43.94
Seldom	22	33.33
Often	15	22.73
Total	66	100

Table 4.8 above shows the distribution of the 66 contraceptive users with respect to the experience of side effects. 29 out of the 66 contraceptive users (43.94%) had never experienced any side effects while using modern contraceptives, 22 out of the 66 contraceptive users (33.33%) seldom experienced side effects upon utilizing modern contraceptives and 15 out of the 66 contraceptive users (22.73%) often experienced side effects

The various side effects experienced by the 37 contraceptive users include the following: irregularity in menses cited by 29.8%, dizziness cited by 24.3% of respondents, cessation of menses (21.6%), lower abdominal pain (10.8%), headache (10.8%), skin rash (5.4%), feeling of uneasiness (5.4%) and painful hands (2.7%). This is illustrated in figure 4.4 below.

Figure 4.4 Bar chart showing the various side effects experienced by Contraceptive Users (n= 37)

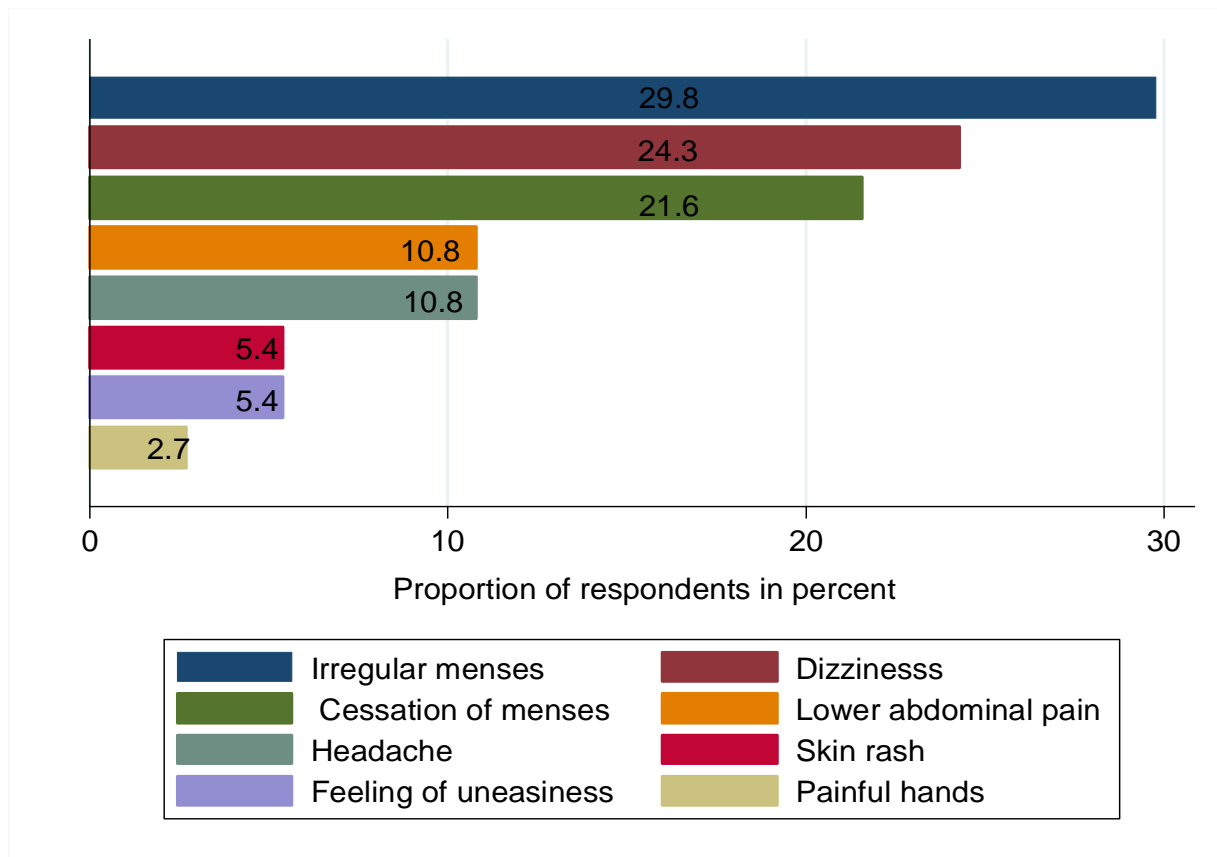
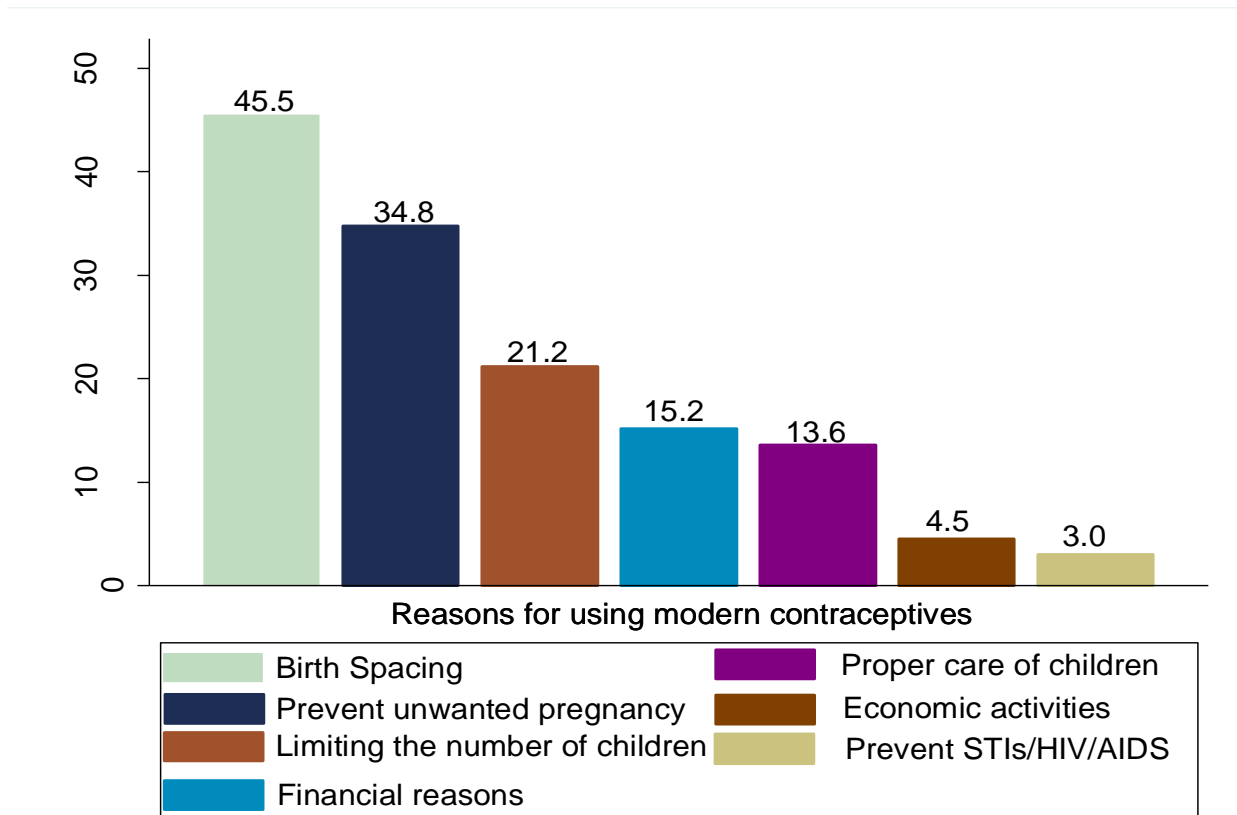


Figure 4.5 below shows the various reasons why the 66 contraceptive users adopt modern contraceptives. Among those who were users of modern contraceptives, the following reasons were cited for the utilization of modern contraceptives: birth spacing (45.5%), preventing unwanted pregnancy (34.8%), limiting the number of children (21.2%), financial reasons (15.2%), proper care of children (13.6%), economic activities (4.5%) and prevention of STIs/HIV/AIDS (3.0%).

Figure 4.5 Bar Chart illustrating Reasons for utilizing modern contraceptives by Users (n= 66)



Chapter 5

5.0 Discussion

5.1 Knowledge of Modern Contraceptive

From this study, 100% of the subjects had heard of modern contraceptives at the time of participation indicating a universal awareness of modern contraceptives. This finding corroborates the findings of the Ghana Demographic and Health Survey 2015, which found a near universal awareness of modern contraceptives of 98.7%. This is also similar to the work done by Mohammed *et al.*, (2014), that indicated an almost universal knowledge of modern contraceptives of 98.5%. Consistent with this result is the study done by Tekelab *et al.*, (2015), that also demonstrated a near universal knowledge of modern contraceptives of 99.9%. Study done by Aryeetey *et al.*, (2010) also showed an almost universal knowledge of modern contraceptive of 99.7%.

This is possibly so because the Ashaiman Municipality is in the urban part of the Greater Accra Region with a number of licensed chemical shops, pharmacies, health facilities- both governmental and private institutions in the Municipality, that offer the services and/or have posters with inscriptions or pictures in these facilities.

When it comes to the source of information regarding modern contraceptives, the television was the pre-dominant source of information regarding modern contraceptive. This finding contrasts that of Mohammed *et al.*, (2014), who found that the health worker was the dominant source of information with respect to modern contraceptives. Next to the television as the dominant source of information with respect to modern contraceptive was the health worker.

The most widely known method of modern contraceptive in this study was the injectable acknowledged by 94.8%. This is similar to the observation that Mohammed *et al.*, (2014) made in Debre Birhan District, North Shoa Zone, Amhara Region Ethiopia which revealed the injectable was the predominantly known method recognized by 98.9%. Also, the injectable was demonstrated to be the most recognized or known method of modern contraceptive in Nekemte Town, Oromia Region, West Ethiopia according to Tekelab *et al.*, (2015). However, this is different from the findings of the Ghana Demographic Health Survey which brought to the fore that the condom was most widely known modern contraceptive in Ghana. Besides this, Aryeetey *et al.*, (2010) also revealed that the condom was the most known modern contraceptive in the Ga East District of the Greater Accra Region as well as (Krakowiak-Redd *et al.*, 2011) also stating the condom as the famously identifiable modern contraceptive in the Berekese District of the Ashanti Region. The male condom played second fiddle to the injectable when it came to awareness of the various methods in this study, which was identified by 93.45% of respondents. The pill was the third populous method among the study participants, and such was the case in the findings of the Ghana Demographic and Health Survey for 2014, Krakowiak-Redd *et al.*, (2011) and Aryeetey *et al.*, (2010)

The least popular contraceptive among the study participants was the diaphragm known by 12.76%. According to the Ghana Demographic and Health Survey, the least known method of contraceptive was lactational amenorrhoea which was attributed to 15.9% of respondents. Krakowiak-Redd *et al.*, (2011) did come out with a parallel finding, also indicating the diaphragm as the least known method which was known by 16.5% of study participants. Aryeetey *et al.*, (2010) showed that implant was the least famous among the method accounting for 8.5% of respondents.

5.2 Prevalence of Modern Contraceptives

A modern contraceptive prevalence of 22.76% was measured in this study. This is similar to that of the national prevalence of 22% according to the Ghana Demographic and Health Survey 2014 report. But this value is less than the global prevalence of 57% (United Nation, Department of Economic and Social Affairs, 2015). This measurement is, however, a little above twice of the national prevalence for Nigeria of 10% (Nigeria Demographic and Health Survey, 2013). Egypt and South Africa have their respective prevalence of 59% and 65% to be more than twice this proportion (EDHS, 2014; SADHS, 2003). Apanga and Adam, (2015) recorded a prevalence of 18% in the Talensi District, which happens to be a semi-urban district. Adanu et al., (2009) came out with a modern contraceptive prevalence rate of 21.2% for modern contraceptive in the Accra Women Survey which is quite similar to the findings of this study. Furthermore, Mohammed *et al.*, (2014) measured a contraceptive of 46.9% in the Debre Birhan District, North Shoa Zone, Amhara Region Ethiopia and Tekelab, Melka and Wirtu, (2015) also came out with a prevalence of 71.9% in Nekemte Town, West Ethiopia. The national prevalence for Ethiopia of 35% according to the Demographic and Survey is 12% higher than the finding of this study.

5.3 Usage of Modern Contraceptives

Reasons accounting for this low uptake of modern contraceptives among the studied participants in the municipality included the following: fear of side effects cited by 56.3%, religious belief (26.3%), desire for more children (8.5%) spousal disapproval (6.7%), non-affordability (2.2%). The least mentioned reason for not using modern contraceptives was desire for a male child which accounted for a minimum of 0.4% of respondents. Other reasons than the above

(misconceptions, lack of interest, desire for female child, not married and so not sexually active) contributed to 15.2% of responses of the 224 non-users of contraceptives.

In Ethiopia, according to the findings of Tekelab *et al.*, (2015), the three top most reasons were the desire for more children attributed to 63.1% of the study participants, fear of infertility and fear of side effects cited by 42.6 % and 28.7% of the study participants respectively. Religious prohibition was a not major reason for non-utilization of modern contraceptives in Ethiopia as compared to this study (Tekelab *et al.*, 2015). Spousal/Partner disapproval was the major reason cited for non-use of modern contraceptives among non-users mentioned by 90%, followed by misconceptions cited by 83% of respondents, religious prohibition (30%) and fear of side effects (14%) were the third and fourth commonest reasons respectively; geographical accessibility related problems contributed to 12% of responses (Apanga and Adam, 2015). In comparison to the findings of Apanga and Adam, (2015), geographically accessible problem was not a reason cited by participants in this study. This could be attributed to the location of the Municipality and the heavy presence of facilities that provide the services for family planning.

Among the 66 study participants who were users of modern contraceptives, the following reasons were cited for the utilization of modern contraceptives: birth spacing (45.5%), preventing unwanted pregnancy (34.8%), limiting the number of children (21.2%), financial reasons (15.2%), proper care of children (13.6%), economic activities (4.5%) and prevention of STIs/HIV/AIDS (3.0%).

These findings corroborate the findings of a number of studies with a few variations in some cases. Apanga and Adam, (2015) mentioned the following reasons and its respective proportions among 50 users of modern contraceptive: spacing of children (47; 94%), fear of pregnancy (22;

44%), preventing pregnant and STIs (42; 84%) and to have intercourse without children (6; 12%). Mohammed *et al.*, (2014) observed in Amhara Ethiopia that, among the 339 out of the 851 who were current users of modern contraceptives, 229 (57.4%) said they were using contraceptives to space birth and the remaining 172 (42.6%) opined that they were using contraceptives to limit the number of pregnancies or births. Observations made by Aryeetey *et al.*, (2010) included birth spacing (57%), delay births (42%) and prevention of sexually transmitted infections (21%).

Finally, with regards to the effects of socio-demographic characteristics of study participants to the utilization of modern contraceptives, it was observed that none of them were significantly associated with the use of modern contraceptives apart from parity (number of children).

Regarding the association of educational status of participants with current contraceptive use in this study, it was found that there was no significant association between these variables when the other socio-demographic factors are held constant.

This finding is contrary to the finding of Adanu *et al.*, (2009) who observed that educational status was significantly associated with contraceptive use. Evidence from Talensi District in the Upper East Region by Apanga and Adam, (2015) also showed a significant positive association between educational status and contraceptive use. Lakew *et al.*, (2013) also revealed a significant association between educational status and current contraceptive use in a study in Ethiopia.

Parity, marital status, age of participants and children support were found to be significantly associated with current contraceptive use in this study following bivariate association, but as a result of multiple logistic regression, these variables were not significantly associated with

current contraceptive use, apart from parity being the only significant variable. These findings are contrary to that of Solanke, (2017) which revealed fertility desire, maternal education, household wealth and geographic region significantly influenced modern contraceptive use, nonetheless, Solanke, (2017) also demonstrated that parity significantly influenced modern contraceptive use.

The margins plot for parity (number of live children) with regards to current contraceptive use showed an increasing likelihood of utilizing modern contraceptives when the number of children of study participants increases. Therefore, in communities where women have more children interventions regarding the uptake of contraceptives is likely to be feasible since these women have a higher probability of using modern contraceptives probably because they want to limit the family size. Also based on the margins plot, since the likelihood of utilizing contraceptive was higher among study participants with one to two children compared to those with no children, interventions regarding uptake of contraceptives can be tailored to target women with fewer number of children.

Chapter 6

6.0 Conclusions and Recommendations

6.1 Conclusions

There was universal (100%) knowledge of having heard of modern contraceptives among the study participants. The first three popularly known contraceptives were the injectable, male condom and pill recognized by 94.48%, 93.45%, and 92.76% respectively. The least known methods were the foam/jelly and diaphragm acknowledged by 15.2 % and 12.76% respectively.

The modern contraceptive prevalence was 22.76%. The most used modern contraceptive was the injectable utilized by 49.6% of contraceptive users, followed by the implant used by 30.3% of users and the least patronized method was the intra-uterine device by 1.52 % of users. The most occurring reasons attributed to the usage of modern contraceptives among users were birth spacing and limiting the number of children cited by 45.5% and 32.8% respectively. Two commonest reasons cited for not using modern among non-users included fear of side effects and religious beliefs and practices.

The following socio-demographic factors: age of the women, marital status, parity (number of children), and children support were following were found to be significantly associated with current use of modern contraceptive following bivariate analysis. As a result of multivariate analysis, it was shown that none of the socio-demographic characteristics were significantly associated with current utilization of modern contraceptives with the exception of parity.

6.2 Recommendations

Drawing from the findings of this study, I would like to make these respective recommendations to the following stakeholders:

6.2.1 Ministry of Health

The Ministry of Health in collaboration with the National Population Council, the various Ministries, Departments and Agencies and developmental partners that matters when it comes to fertility control, should conduct a regular awareness creation on the relevance of the uptake of modern contraceptives and its impact on the national development and prosperity, which is likely to translate into an increment of the utilization.

6.2.2 Ashaiman Municipal Assembly

The Municipal Assembly should introduce or increase funds pertaining to both outreach programmes on family planning, and training of human resources in the provision of family planning services most especially in the area of communication; which will go a long way to increasing the uptake of modern contraceptives in the Municipality. The Assembly should demonstrate an unflinching political commitment towards this.

6.2.3 Ashaiman Municipal Health Directorate

The gap between the knowledge and the use of modern contraceptive is so far apart. As a result, strategies should be developed to bridge this gap. Effective information, counseling, and education on the side effects of modern contraceptives should be provided to the women since it was the most occurring reason cited for non-utilization of modern contraceptives. There should be a dialogue between the health authority and the various religious leaders, so as to educate

these leaders on the importance of modern contraceptives, so as to encourage their members to patronize the services when there is the need to do so.

6.2.4 Religious Leaders

The various religious leaders should use the various platforms that they have, to convey messages concerning the relevance of modern contraceptives and encourage their members to utilize modern contraceptives.

6.2.5 Pharmaceutical Companies

Pharmaceutical companies should research into other methods of contraceptives or improve available methods of modern contraceptives such that they have fewer or no side effects. This will immensely increase the use of modern contraceptives.

6.2.6 The Male Partner

The male partner should give the subject matter on the need to utilize modern contraceptives for either limiting the family size or spacing births the utmost importance, and encourage their partners to adopt a method or they should adopt a method as well. Every practical step must be engaged to get the male partner involved in this life-saving matter.

6.2.7 Research Institutions

Future graduate researchers should be directed towards using qualitative research methodology to tease out from potential study populations more detailed reason for non-utilization to help really understand the best public health interventions that must be set in place to address the identified challenges.

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APPENDIX 1:

Informed Consent Form

Subject number:

Project Title: Factors influencing the utilization of modern contraceptives among women of reproductive ages. A Survey in St. Florence Clinic in Ashaiman Municipality in the Greater Accra Region.

Background

Dear Participant, my name is Henry Berchie. I am a student from Ensign College of Public Health, Kpong, Eastern Region. I am conducting a study on Factors influencing the utilization of modern contraceptives among women of reproductive ages. A Survey in St. Florence Clinic in Ashaiman Municipality.

Procedures

The study will involve answering questions from a questionnaire regarding demographic information, knowledge and usage of modern contraceptives, which will last for about 10 to 15 minutes. This is purely an academic research that forms part of my work for the award of a Masters Degree.

Benefits

The results of this study would help inform policy-makers how to develop strategies so as to increase the uptake of modern contraceptives and also add to existing knowledge.

Anonymity and Confidentiality

I would like to assure you that whatever information you will provide will be handled with strict confidentiality and will be used purely for research purposes. Your responses will not be shared with anybody who is not part of the study team.

Right to refuse

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate since your opinions are important to help us to assess factors that influence the utilization of modern contraceptives.

Dissemination of Results

The results of this study will be mailed to you, if you provide your address below.

.....
.....
.....

In case you need more information about the survey, you may contact me on this number 0560320058

Costs and/or Payments to Subject for Participation in Research

There will be no costs for participating in the research. Also, you will not also be paid to participate in this research project.

CONSENT

I declare that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me in a language I am comfortable with and I have understood.

I hereby agree to answer the questionnaire

Signature/Thumbprint of participant

Date..... / /

Interviewer's statement:

I, the undersigned, have explained this consent form to the subject in a language that she understands and the subject has freely agreed to participate in the study.

Signature of interviewer:

Date: / /

Address

Witness' statement:

I, the undersigned, have witnessed the subject's willingness to participate in this study after due explanations given her.

Signature/Thumb Print of Witness:

Date: / /

Address

APPENDIX 2

QUESTIONNAIRE

DATE: _____

FORM ID: _____

TIME OF INTERVIEW: _____

I am a student of ENSIGN College of Public Health pursuing a Master of Public Health degree. I am researching into **“Factors influencing the utilization of modern contraceptive methods among women of reproductive age in Ashaiman Municipality”** as a partial fulfillment for the award of the degree. In this regard, I will be grateful if you could respond to the following questions to enable me achieve my objectives. You are assured of maximum confidentiality and all information provided will strictly be used for academic purposes. Therefore, please feel free to answer the questions. Thanks.

INSTRUCTIONS: Tick or circle your choice(s) from the options given.

SECTION A: SOCIO-DEMOGRAPHIC OR BACKGROUND INFORMATION

1	Age		____ ____	AGE
2	Highest completed education level	<ol style="list-style-type: none"> 1. None 2. Primary 3. Middle/JSS/JHS 4. SSS/SHS/Vocational 5. Tertiary 6. Other: _____ 	_____	EDU
3	Ethnic group	<ol style="list-style-type: none"> 1. Akan 2. Ga 3. Dangme 4. Ewe 5. Hausa 6. Other : _____ 	_____	ETHI
4	Religion	<ol style="list-style-type: none"> 1. Christian 2. Muslim 3. Traditionalist 		RELI

		4. Other: _____	_____	
5	Occupation	1. Not Employed 2. Employed	_____	OCU
6	Number of children		_ _	CHIL
7	How old is the last child?		_ _	CHIT
8	Sex of the last child	1. Male 3. Not Applicable 2. Female	_____	CHILS
9	Marital Status	1. Married 2. Single 3. Co-habitation(living together) 4. Divorced/Separated/Widowed 5. Other: _____	_____	MAS
10	Children support	1. Single 2. Wife and Husband 3. Guardian 4. Not Applicable	_____	CHISP

SECTION B: KNOWLEDGE OF MODERN CONTRACEPTIVES

Have you heard of modern contraceptives or family planning methods? 1. YES I___I 2.

NO I___I

Source of information- Where/Who did you it hear from? (**MORE THAN ONE ANSWER PERMITTED**)

1. Television 2. Radio 3. Newspaper 4. Health Worker 5. Health Facility

6. Friends 7. Spouse/Partner 8. Work Colleague 9. Internet

10. Other..... (Please specify)

	METHOD	AWARENESS	
1	PILL -Women can take a pill every day to avoid becoming pregnant	1. YES I___I 2. NO I___I	PILL
2	INJECTABLE -Women can have an injection by a health provider that stops them from becoming pregnant for one or more months	1. YES I___I 2. NO I___I	INJ
3	IMPLANT -Women can have one or several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years	1. YES I___I 2. NO I___I	IMP
4	IUD -Women can have a loop or coil placed inside the womb by a doctor or nurse	1. YES I___I 2. NO I___I	IUD
5	CONDOM -Men can put a rubber sheath on their penis before sexual intercourse	1. YES I___I 2. NO I___I	CON
6	FEMALE CONDOM -Women can place a sheath in their vagina before sexual	1. YES I___I	CON

	intercourse.	2. NO	I__I	
7	DIAPHRAGM- Women can place a thin flexible disk in their vagina before sexual intercourse	1. YES 2. NO	I__I I__I	DIA
8	FOAM OR JELLY- Women can place a suppository, jelly, cream in their vagina before sexual intercourse	1. YES 2. NO	I__I I__I	FOM
9	EMERGENCY CONTRACEPTIVE- As an emergency measure after unprotected sexual intercourse, women can take special pills at any time within five days to prevent pregnancy	1. YES 2. NO	I__I I__I	EME
11	LACTATIONAL AMENORRHEA- Contraceptive in the first six months of delivery/birth based on exclusive breastfeeding and when the menses has not returned	1. YES 2. NO	I__I I__I	LAM
12	BILATERAL TUBAL LIGATION- A permanent method of contraception where both tubes that transport eggs from the ovary to the womb are tied	1. YES 2. NO	I__I I__I	BTL
13	VASECTOMY- A permanent method of contraception in males where the tubes that transport sperms from the testes to the urethra are tied	1. YES 2. NO	I__I I__I	VAS

SECTION C: MODERN CONTRACEPTIVE METHODS USE

1	Are you currently using any modern contraceptive methods? (if no, go to question 5 and 6)	1. Yes I___I 2. No I___I	USE
2	What is your reason for the adoption of modern contraceptive methods? (MORE THAN ONE ANSWER PERMITTED)	1. Birth spacing 2. Limiting the number of children 3. Prevent unwanted pregnancy 4. prevent STIs including HIV/AIDS 5. Proper care of children 6. Financial reasons 7. Economic activities 8. Maternal health 9. Other_____	ADOPT
3	Which methods are you currently using or is your partner using?	1. Pills 2. Injectables 3. IUD 4. Implants 5. Female condom 6. Diaphragm 7. Foam/Jelly 8. Emergency contraceptives 9. Male condom 10. Other_____	METH

4	Do you experience any side effect following the use of contraceptives	1. often 2. seldom 3. never	Examples of side effects	EXP 1 EXP 2
5	If you are not using any modern methods, what are the reasons?	1. Due to religious belief 2. Due to fear of side effects 3. Due to disapproval of husband 4. Due to desire of male child 5. Due to non-affordability 6. Due to desire for more children 7. Other: _____		NOUSE