

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 ASSOCIATED WITH MODERN CONTRACEPTIVE USE BY
SEXUALLY ACTIVE PERSONS OF REPRODUCTIVE AGE IN NEW TAKORADI,
A COMMUNITY IN THE SEKONDI TAKORADI METROPOLIS, WESTERN
REGION, GHANA**

BY

VIVIAN ZORMELO

JUNE 2019

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI,
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A COMMUNITY IN THE SEKONDI TAKORADI METROPOLIS, WESTERN
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BY

VIVIAN ZORMELO (BSc. NURSING)

**A THESIS SUBMITTED TO THE DEPARTMENT OF POPULATION, FAMILY
AND REPRODUCTIVE HEALTH, SCHOOL OF PUBLIC HEALTH, COLLEGE OF
HEALTH SCIENCES, IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN POPULATION AND
REPRODUCTIVE HEALTH**

NOVEMBER 2018

DECLARATION

I declare that this thesis was an original work resulting from my personal effort. Literatures used from other scholars were cited and have been duly acknowledged. This study has not been submitted in this university or anywhere either in part or in full for the award of a Master's Degree or of a kind.

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Date.....

DR. SAMUEL K. NEWTON (Head of Department)

DEDICATION

I dedicate this write up to my husband Peter Zormelo for his encouragement and support throughout the time spent on this work to enable me further my education.

KNUST



ACKNOWLEDGEMENT

I acknowledge the Almighty God for how far he has brought me. I wish to acknowledge my head of department Dr. Samuel K. Newton for the knowledge imparted to me. I am sincerely grateful to my supervisor Dr. Yeetey Enuameh for his guidance, comments and suggestions at each stage of the work which has helped me to come out with this thesis. To all the lecturers of the School Of Public Health, I say thank you. I also thank all my friends who in divers' ways encouraged me to come out with this work. Finally, my sincere thanks go to Madam Joyce Bagina and the entire staff of the Sekondi Takoradi Metropolitan Health Directorate for their unflinching support. May God bless you all.



DEFINITION OF TERMS

Unmet need

The Percentage of married women who want to space their next birth or stop child bearing entirely but are not currently using contraception.

Modern Contraceptives

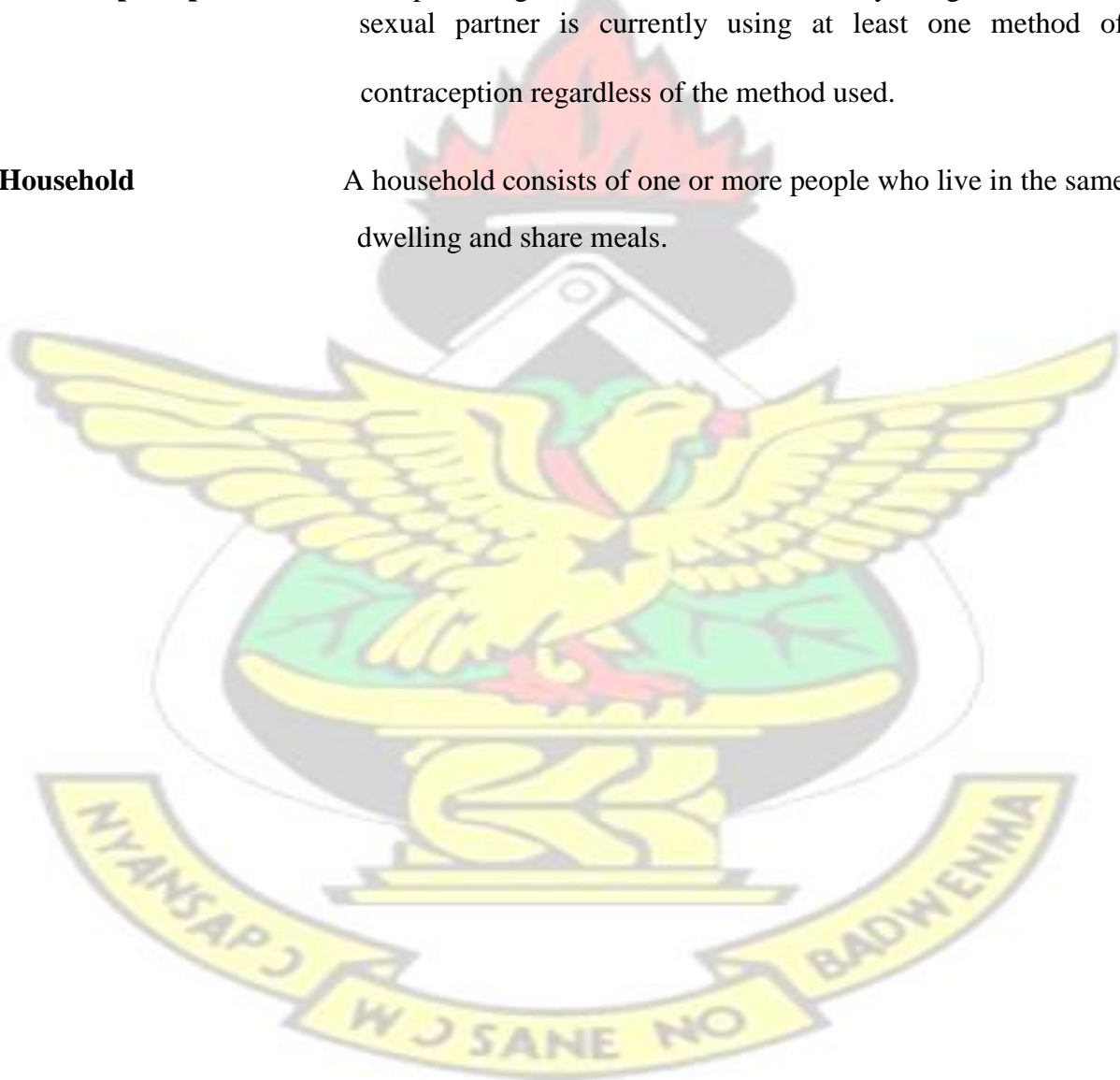
Products that interfere with reproduction from acts of sexual intercourse.

Contraceptive prevalence

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 used.

Household

A household consists of one or more people who live in the same dwelling and share meals.



ABBREVIATION/ ACRONYMS



GSS	Ghana Statistical Service
GNA	Ghana News Agency
GHS	Ghana Health Service
STMA	Sekondi Takoradi Metropolitan Assembly
IUD	Intra Uterine Device
UN	United Nations
GDHS	Ghana Demographic and Health Survey
COC	Combined Oral Contraceptive
CIC	Combined Injectable Contraceptive
EC	Emergency Contraception
AIDS	Acquired Immune Deficiency Syndrome
CHPS	Community – Based Health Planning and Services
WHO	World Health Organization
MDHS	Malawian Demographic and Health Survey
CHPRE	Committee on Health Publication and Research Ethics
STI	Sexually Transmitted Infection
PPAG	Planned Parenthood Association of Ghana
GHC	Ghana Cedi

ABSTRACT

Background: The uptake of modern contraceptives by sexually active persons of reproductive age (15 - 49) years was an important tool in family planning. It will enhance spacing of child birth thus preventing the risk of maternal mortality. The Sekondi-Takoradi metropolis continued to record low acceptor rates of contraceptive use. It was as low as 10% as at 2015.

Objective: The main objective of the study was to determine factors that influence the use of modern contraceptive methods in sexually active persons in their reproductive age, in New Takoradi community, in the Sekondi-Takoradi metropolis.

Method: Community based descriptive and observational analytical cross sectional study was conducted from September to November 2017. Primary data was collected by using community based interviewer structured questionnaires through simple random sampling. Data was analysed using STATA version 13.0 (Stata corp, college station, Texas, USA) to generate proportions/percentages for categorical variables by the use of frequency distribution tables. Continuous variables however were analysed by determining the relationship between each variable and modern contraceptive use. Associated factors were determined using chi-square by bivariate and multivariate logistic regression to generate ORs and 95% confidence interval at a significant level of 5%.

Results: Modern contraceptive knowledge among respondents was found to be high as most (99.5%) have ever heard and knew at least one contraceptive method. More than half (53.8%) had ever used contraceptives and 35.9% believed the use of modern contraceptives help to space birth and prevent Sexually Transmitted Infections (STIs). About 34.5% perceived women who used contraceptives to have multiple sexual partners while 54.8% thought unmarried youth should not be allowed to use contraceptives. Sources of access to contraceptives were reported to include; family planning centres, PPAG clinics, chemical/drug stores, government/private hospital, and most the preferred sources of contraceptives access

were family planning centres, PPAG clinics and Pharmacy. Significant socio-demographic and economic factors that determine modern contraceptives used were gender (OR= 0.1; 95% CI 0.03-0.3; p=0.01), currently in school (OR = 12.5; 95% CI 0.5-99.5; p = 0.02); educational level (OR = 0.04; 95% CI 0.01-0.4; p=0.04), monthly income (OR = 3.8; 95% CI 0.4-36.4; p=0.01) and occupation (OR = 0.9; 95% CI 0.4-2.0; p = 0.01).

Conclusions: Overall, there was an increase in modern contraceptive knowledge among persons of reproductive age in New Takoradi, as well as contraceptives access with a marginal negative attitude and perceptions towards modern contraceptives used among women. Associated factors that determine modern contraceptive use among persons of reproductive age were gender, currently in school, educational level, monthly income earned and occupation.



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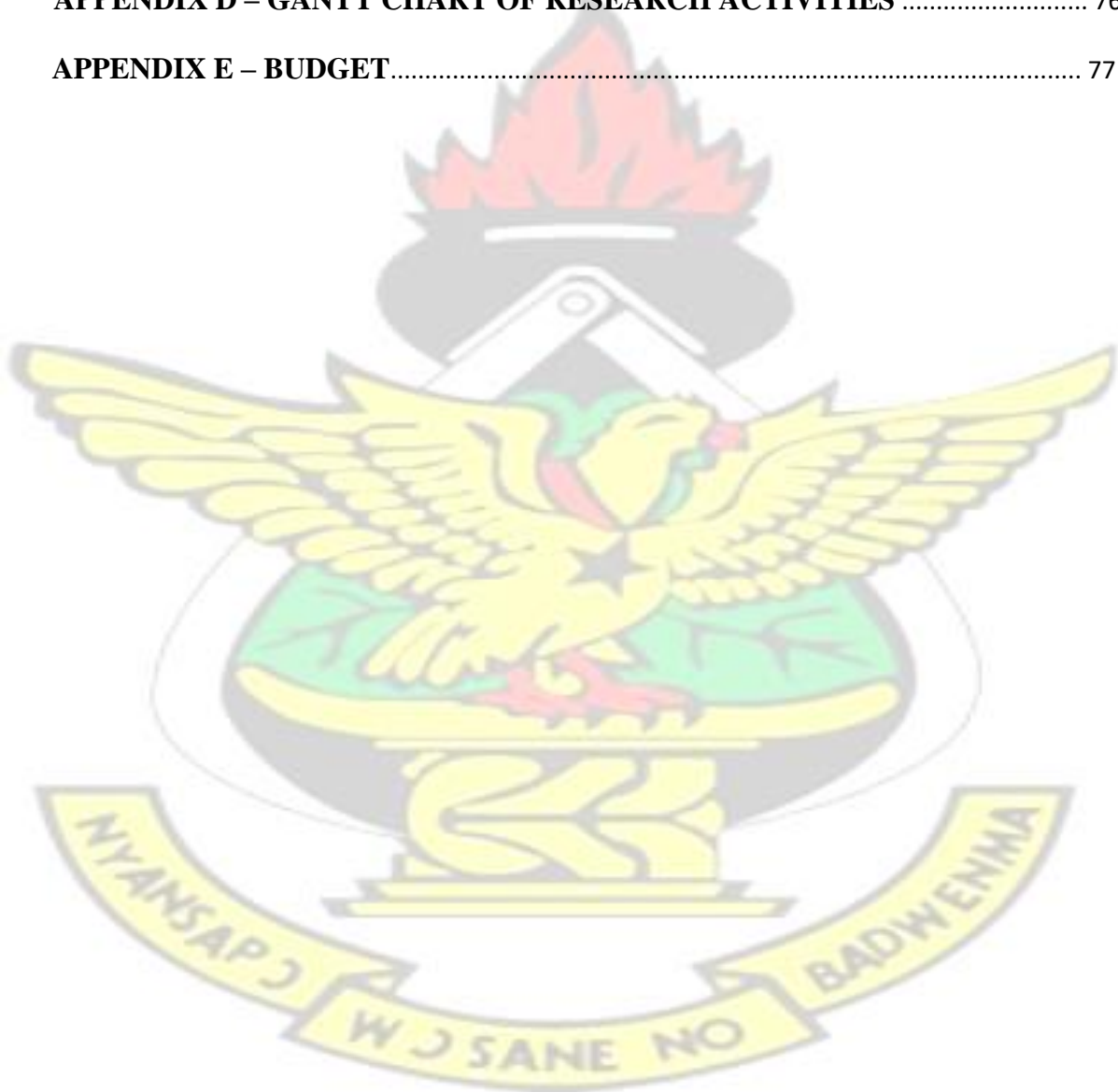
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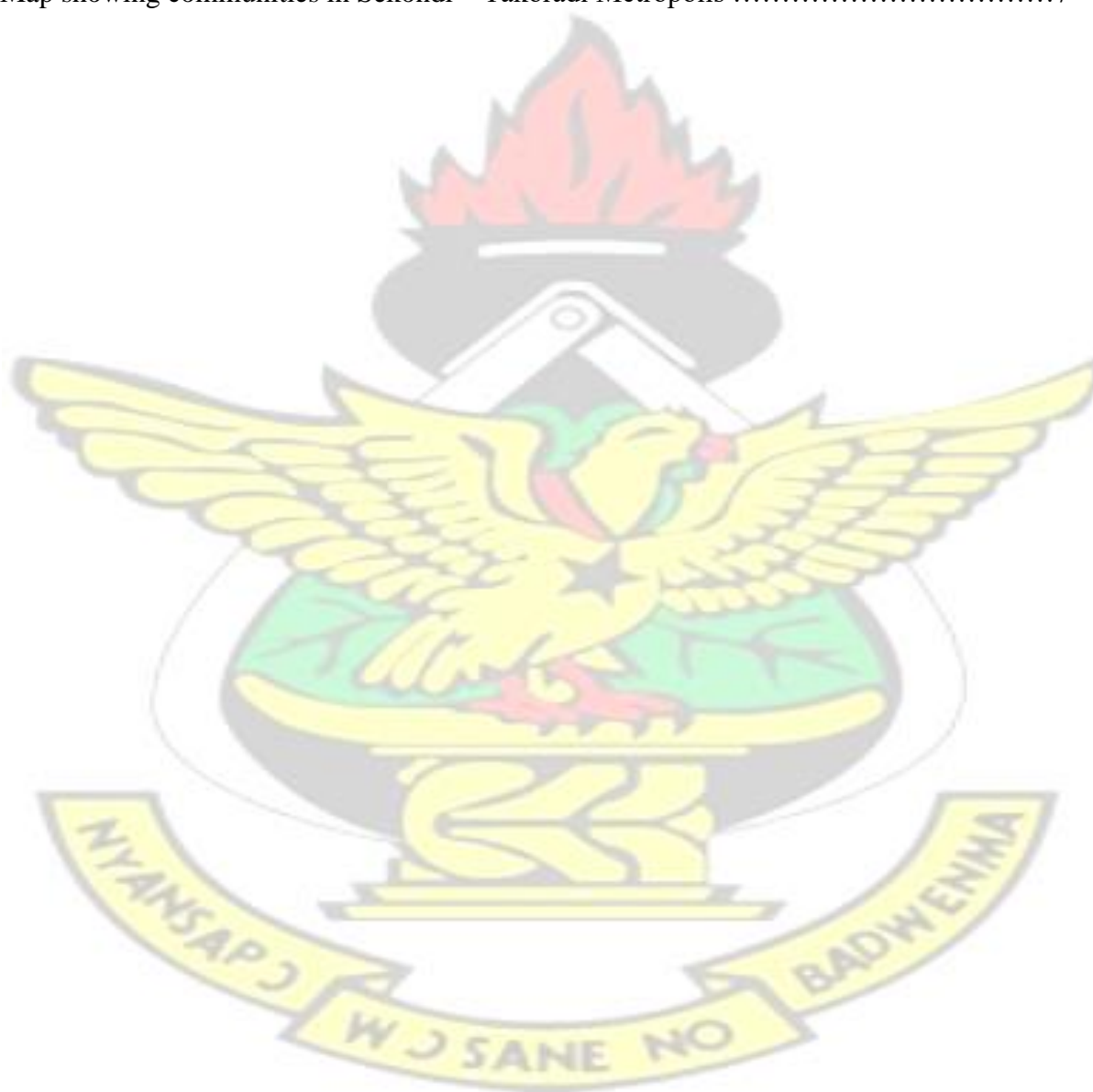
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CHAPTER ONE

INTRODUCTION

This chapter presents the background of the study, the problem statement, the study rational, the conceptual framework and the objectives.

1.1 Background Information

Modern contraceptives are products or medical procedures that interfere with reproduction from acts of sexual intercourse. There are however some methods that do not fall under modern contraceptives called non-modern methods. Example of these methods are fertility awareness, withdrawal, lactational amenorrhoea and abstinence (Hubacher & Trussell 2015). The use of modern contraceptives in persons of reproductive age is a vital tool that helps in controlling births through child spacing. Modern contraceptive use also serves as a protection against sexually transmitted infections through the use of both male and female condoms (Widdice et al., 2006). According to the 2008 Ghana Demographic and Health Survey, women in the fertility age or reproductive age were classified between the ages of 15 - 49 years (Ghana Statistical Service [GSS], 2008). Women in reproductive age will benefit greatly from contraceptive use. This is because it will among others enable them to recover fully from the stress of pregnancy and labour before getting pregnant again. Men however are the decision makers in families with regard to the number of children to have in Ghana and most West African countries.

According to Ezeh and colleagues (2012) rapid population growth in the poorest countries in the world does not enhance their wellbeing, whereas very low fertility also threatens the future welfare of many developed countries. Global trends in population growth from 2005 – 2010 shows four distinct patterns. In sub-Saharan Africa, most of the poorest countries experienced rapid growth of more than 2% a year. However advanced countries and large middle-income countries such as China and Brazil are characterized by low or no growth (0 - 1%) per year.

Japan and a few Western Europe countries are faced with a decrease in their population. Population growth is also controlled through the use of contraception leading to improved infrastructure and reduction of the burden on the national budget (Nonvignon & Novignon 2014). Households with a smaller family size will be able to provide basic quality needs such as education as compared to larger households (Nonvignon & Novignon 2014). The perception of contraceptive use according to a study done in the Kintampo districts of Ghana revealed that majority of males compared with the females thought that contraception leads to female promiscuity. It was also perceived that the use of contraceptives was the responsibility of women and so men should not be bothered about it. These perceptions of people did not enhance the use of contraceptives (Nettey et al., 2015). Modern contraceptive use in persons of reproductive age is an important tool in family planning. The use and awareness creation of modern contraceptives is targeted at improving the lives of women. This is because women will be able to plan and space child birth thus avoiding the risk of maternal mortality (Cleland et al., 2012).

The health and quality of life of individuals of reproductive age in New Takoradi in the Western region of Ghana will be enhanced through modern contraceptive use.

1.2 Problem Statement

A report by the Ghana News Agency (GNA) on January 30th 2015, stated that the Sekondi-Takoradi metropolis in the Western Region continues to record low acceptor rates of contraceptive use (10%). According to the Metropolitan Health Director, the Sekondi-Takoradi Metropolitan Assembly continued to record low figures in terms of family planning patronage among both men and women GNA (2015).

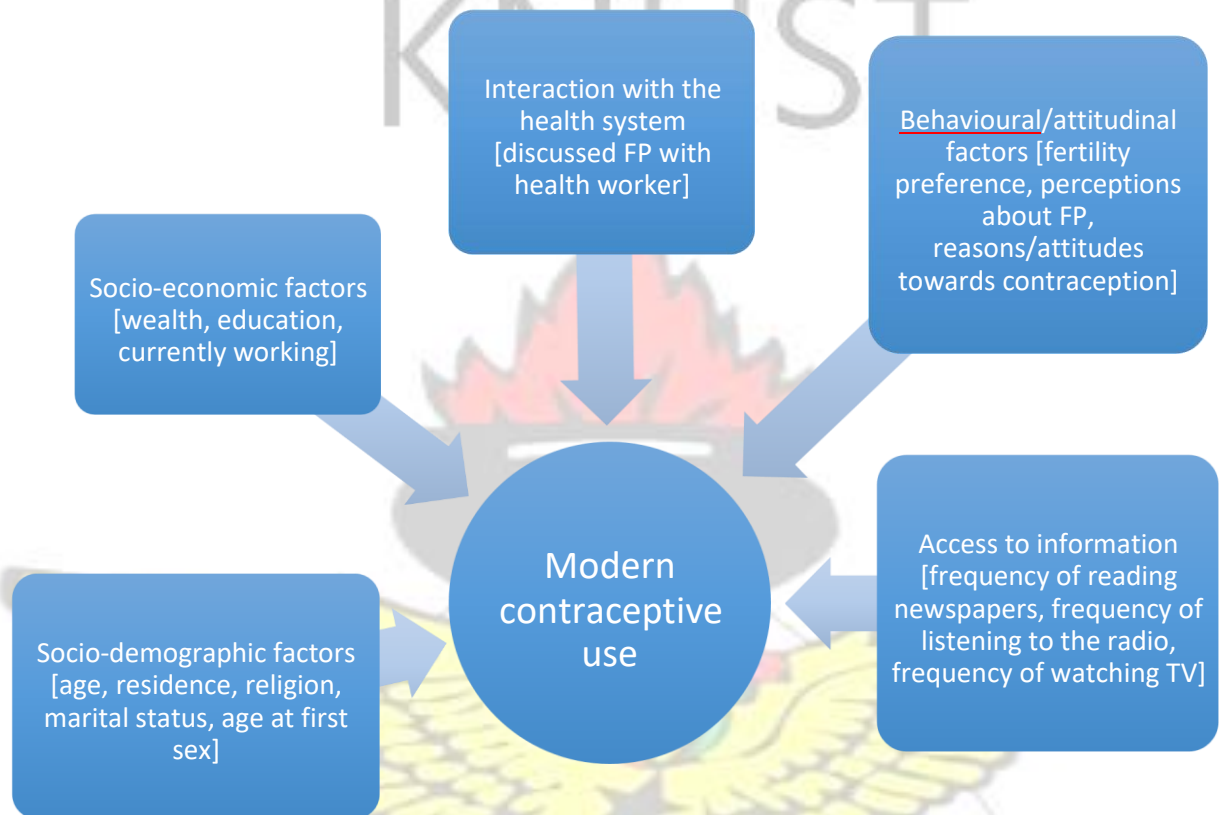
Abortion rates in the Sekondi-Takoradi Metropolis are high: 14.2% for 2014, 19.9% for 2015 and 18.3% for 2016 (Ghana Health Service [GHS], 2016). Teenage pregnancy is also high in the metropolis. Over a three-year period from 2014 to 2016, early teenage pregnancy was 0.19% in 2014, 0.2% in 2015 and 0.2% in 2016. With late teenage pregnancy being 2014 for 7.6%, 8% in 2015 and 7.1% in 2016 (GHS, 2016). The high abortion rates coupled with the equally high teenage pregnancy rates could be attributed to low contraceptive uptake in the metropolis.

Investigating and identifying factors that contribute to low contraceptive uptake among the population would go a long way to devising interventions aimed at improving it.

1.3 Study Rationale

The study seeks to find out the reasons why persons in the reproductive age do not readily patronize modern contraceptives and as a result end up having unplanned pregnancies. The youth who are also in school become pregnant due to having unprotected sex. Most of these young girls drop out of school and become burdens on their parents who will have to cater for both mother and baby. In some instances the young boys who impregnate the girls deny parentage of the unborn child. Recommendations from findings of this study will be geared towards health education of persons in the reproductive age on the use of contraceptives to keep them healthy, prevent unplanned and unwanted pregnancies and also to protect them against sexually transmitted infections.

1.4 Conceptual Framework



Adopted from Ochako et al., 2017

FIGURE 1.1 Factors that influence Modern Contraceptive Use

This conceptual framework looks at some of the factors that determine the use of modern contraceptives in persons of reproductive age. The conceptual framework consists of an interaction of five sets of determinants namely the socio-demographic, socio-economic, health system, behavioural or attitudinal factors and access to information.

Evidence points to the fact that socio-demographic factors, such as gender, age and marital status among others influence modern contraceptive use (Asimwe et al., 2013).

Socio-economic factors such as education, wealth status, etc. have also been identified as influencing modern contraceptive use (Aremu 2013).

Persons who interact with the health system by discussing family planning with health workers will see the essence of modern contraceptive usage. Questions that baffle their minds will be clarified (Ochako et al., 2017).

Behavioural or attitudinal factors also determine modern contraceptive use. For example people have various perceptions about family planning through personal experiences discussed by women at the family planning clinics such as weight gain (Lwelamira et al., 2012). Frequency of reading newspapers, listening to radio and watching television are means by which persons in the reproductive age can be made aware of the use of modern contraceptives (Habibov & Zainiddinov, 2017).

1.5 Research Questions

1. Do persons in reproductive age know the modern contraceptive methods in use?
2. What are their attitudes towards contraceptive methods?
3. Are the contraceptive methods accessible to persons in the reproductive age?
4. What possible factors could be influencing contraceptive use among persons in their reproductive age?

1.6 Main Objective

To determine factors that influence the use of modern contraceptive methods in sexually active persons of reproductive age.

1.7 Specific Objectives

1. To assess the knowledge, attitudes and perceptions of persons in the reproductive age on modern contraceptive use.
2. To determine the accessibility of contraceptive services to persons in reproductive age.

3. To assess the influence of the socio-demographic, economic and other indicators of persons in the reproductive age on the use of modern contraceptives methods.

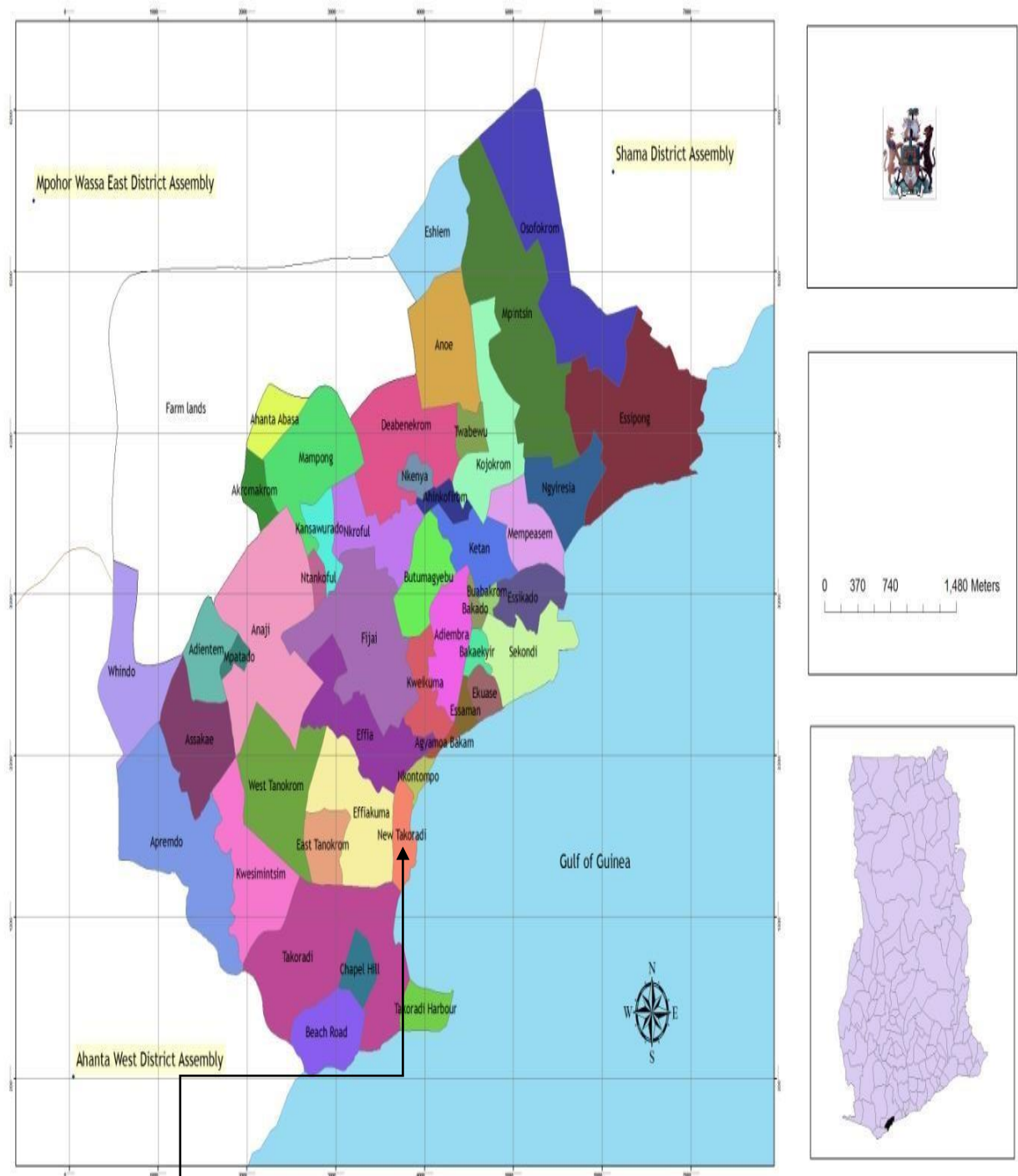
1.8.0 Profile of Study Area

The population of the community was projected to be 19,902 in 2012. The community is characterized by high unemployment, high rate of unskilled youth, poor environmental condition. New Takoradi is situated in the Eastern Coast of Takoradi, near the eastern side of the Takoradi Harbour with high incidence of sanitation related diseases and high level of illiteracy. The community was relocated to the current location, when it became necessary for the construction of the Takoradi Harbour in 1924.

The community is divided into two electoral areas with two Assembly members. The main economic activity of the people is fishing. Being a coastal community, about 90% of the population depends on fishing as their main source of livelihood. The seasonal nature of fishing therefore implies that majority of the people are underemployed during the lean season.

Refer to the Map of STMA for the location of New Takoradi.

Map of STMA Showing Communities



New Takoradi

Map showing communities in Sekondi – Takoradi metropolis

1.8.1 Brief History of New Takoradi

The people of New Takoradi migrated from Techiman in the Brong Ahafo Region of Ghana. They were led by Nana Yaw Nketsiah I in the 15th Century. They entered the western side of the Coast through the Nzemaland under the leadership of Kwaku Aka. They first settled at Apoonian, Princes town, Adiewaso and finally at Ahanta traditional area under the reign of Omanhene Nana Baidoo Bonsoe. Nana Baidoo Bonsoe offered them a parcel of land behind the ‘whim’ river, which is currently the location of Atlantic Hotel to the Butuah River. Takoradi was initially ‘Toworase’ meaning a big tree where people sat to take decisions. With the arrival of the Europeans, it was changed to Takoradi due to the difficulty in pronunciation of the name. (Abusuapanyin Aye of New Takoradi, 2009).

1.8.2 Physical Characteristics

The community has similar physical characteristics as that of the Sub-Metro and the entire Metropolis.

New Takoradi covers a land area of about 58.33 square kilometers. The community is bordered on the South by the Atlantic Ocean, on the west by Apowa stool land, on the East by Sekondi Stool land and the North by Odum Dominase (Wassa fiase).

1.8.3 Vegetation

The area has lost its vegetation cover to human development activities and has resulted in heavily build up area. There are however patches of natural vegetation at the monkey hill sanctuary and mangroves along the Butuah lagoon. The ‘monkey hill’ is an inner city ecotourism sanctuary that is home to different kinds of monkeys and plant species.

1.8.4 Topography

New Takoradi, is a low lying area and prone to flooding during heavy downpour and thus is protected by sea defence wall, constructed some years back to protect the community from being washed away by the sea.

1.8.5 Drainage

Sections of New Takoradi is below sea level and therefore had been drained to some extent and further require storm drains to carry away rain water from up-land into the sea. Drainage within the built up areas are generally poor and had created gullies on most of the earth surfaces.

1.8.6 Demographic Characteristics

The demographic features of New Takoradi is similar to the entire Metropolitan Assembly in the sense that they all have a population of female out numbering that of the male.

1.8.7 Population Size and Growth Rate

According to the 2000 Population Census Report, the population of the community was 13,556 and projected to 18,668 in 2010. The estimated projected population of the community for 2012 was 19,902 and was estimated using annual growth rate of 3.8. The community is dominated by females who represent 51% of the total population with the remaining 49% being males. The projections helps development partners as well as the government to know how best to distribute its scarce resources to the benefit of the present and the future population. The projected population for the community for the plan period (2012-2015) is presented in table 1.1 below;

Table 1.1: Projected population

YEAR	MALE	FEMALE	TOTAL
2012	9751	10150	19902
2013	10069	10480	20,549
2014	10397	10821	21,218
2015	10735	11173	21,908

Source: Metro Development Planning Unit (2012-2015)

1.8.8 Age-Sex Distribution

The age-sex composition of the population needs to be considered in the planning process. It helps in the development requirements of both sexes and their respective age cohorts. These will help in the development policy directions and accompanying projects to be implemented. The age structure of the community follows the general socio-economic development pattern with a broad base that gradually reduces with increasing age and shows an indication of high population of children and youth, high dependency ratio and high population growth rate. The age and sex structure of the community indicates that female population outnumber the male at all levels as presented in table 1.2 below.

Table 1.2: Age-Sex Distribution of New Takoradi

AGE-COHORT	MALE	FEMALE	TOTAL	% OF TOTAL POPULATION
0-14	4369	4547	8917	44.8
15-64	5061	5267	10329	51.9
65+	321	334	656	3.3
TOTAL	9751	10150	19902	100

Source: Metro Development Planning Unit Construct based on projected population (2012-2015)

From table 1.2 above, it can be said that the population of the community is relatively youthful and calls for pragmatic policies to keep them in school and create avenues for those in the working class group (15-64) to be engaged all year round. Again, the high proportion of children, representing 44.8% is an indication of high school going age and this call for

expansion in educational infrastructure to ease pressure on the existing ones and also to increase enrolment of pupils. Recreational and specialized facilities should be provided to cater for the dependency age group which consists 48.1% (0-14, 65+) of the populace.

1.8.9 Labour Force and Dependency

From table 1.2 above, the economically active population of the community is 10,329 representing 51.9% of the total population. Out of this, 49.1% are males while 50.9% are females. The age dependence ratio of the community is 1:0.93. This means that each person within the working age group has slightly less than one additional person to look after. This figure may however be misleading since there are people within the active age group who are unemployed. A lot more are students while some are merely unpaid family labour and apprentices. The reality is that the economic dependency rate is higher. There is therefore the need to develop productive programs to cater for the looming high unemployment segment.

1.8.10 Household Characteristics

The houses are built with sandcrete blocks and mud. However, sandcrete blocks constitute the majority; 60% and mud 40%. There are few squatters visible in the community. The type of houses are mainly compound houses and few storey buildings.

New Takoradi has an average household size of six (6) with average room occupancy of 5.5 and about 80% living in compound houses. The average household size is relatively higher than the entire Metropolis of 4.3.

The houses in New Takoradi are mainly for residential purposes. There are about 40 makeshift structures spotted in the community where most delinquents hang out. Majority of the people are renting which implies that a proper housing policy is needed to help solve the housing problems in the community.

1.8.11 Health

The Metro Health Directorate is responsible for the provision of health care to the people within the metropolis. As the population keeps increasing yearly, there is the need for the Assembly to relatively increase health facilities and also the human resource capacities.

Currently, there is only one public clinic in the community which serves the entire population. There are five chemical Shops where people can get access to first aid and 17 Traditional Birth Attendants. The clinic is under resourced in terms of facilities. Majority of the populace prefer to access health care either at Takoradi Hospital or Effia-Nkwanta Regional Hospital because of the under resourced nature of the community clinic and the dusty environment due to the poor road network. There is the need for upgrading the facilities in this clinic to reduce the pressure on Takoradi Hospital and Effia-Nkwanta Regional Hospital.

SOURCE: Compiled by the Metropolitan Development Planning Unit of Sekondi-Takoradi Metropolitan Assembly 2012.

1.9 Scope of the Study

The study will be carried out at New Takoradi, a community under Takoradi sub metropolis under the Sekondi Takoradi metropolitan Assembly (STMA) in the Western region of Ghana. The target population of this study are persons in the reproductive age of (15 - 49) years. The study focuses on married people and adolescents to determine their usage of modern contraceptives. Those whose ages fell outside the category were excluded from the study. The study was done by collecting data from Lower and Upper New Takoradi through the administration of structured questionnaires. The responses from the questionnaire were used for the analysis. A sample size of 200 was estimated for the study.

1.10 Organization of Report

This project work is written in six chapters. Chapter one comprises the background of the study, problem statement, rationale of the study and hypothesis or conceptual framework. It continues

with research questions pertaining to the study, general objective(s), specific objectives, profile of the study area and scope of the study.

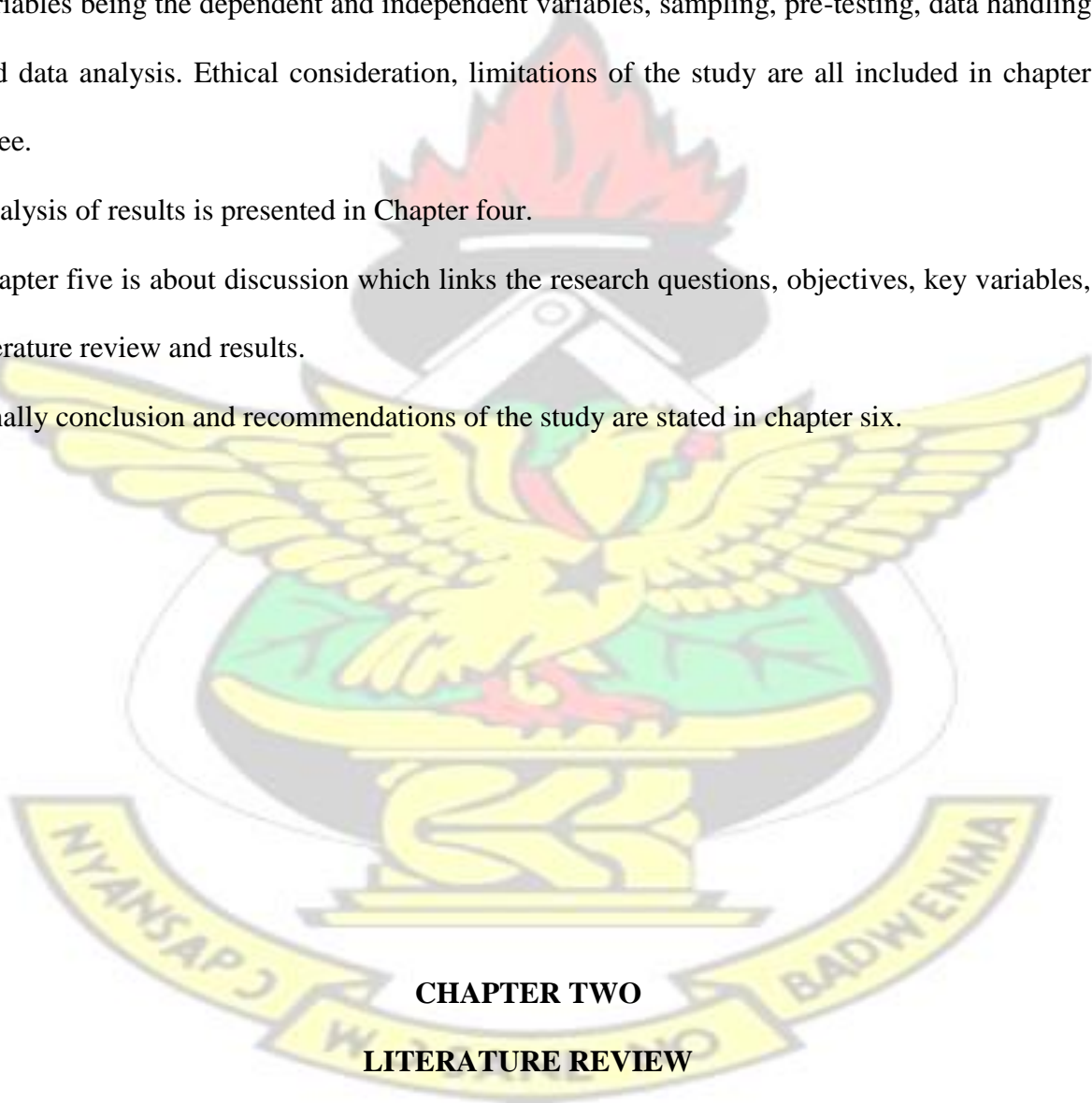
Chapter two reviews scholarly text on the research area being the determinants of modern contraceptive use in persons of reproductive age.

Chapter three talks about the methodology. It has to do with the study methods and design, data collection techniques and tools and study population. This chapter again talks about the study variables being the dependent and independent variables, sampling, pre-testing, data handling and data analysis. Ethical consideration, limitations of the study are all included in chapter three.

Analysis of results is presented in Chapter four.

Chapter five is about discussion which links the research questions, objectives, key variables, literature review and results.

Finally conclusion and recommendations of the study are stated in chapter six.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of scholarly text on the research area being determinants of modern contraceptive use by sexually active persons of reproductive age.

Women worldwide in reproductive age (15 - 49) years who were married or in a relationship as at 2011 used the two most common methods of contraception being female sterilization and intra uterine device (IUD). About 19% of the world's married women of reproductive age settled for female sterilization and 14% used the IUD. Temporary methods were not too common. The pill was used by 9% of women, 8% relied on male condoms and 4% used injectable (Biddlecom & Kantorova 2013).

Traditional methods were used by 6% of married women worldwide. Short term and reversible methods such as the pill, injectable and condom were commonly used in Africa and Europe. The permanent and longer term methods were common in Asia (18%) and more than 20% in Northern America (Biddlecom & Kantorova 2013).

Worldwide contraceptive prevalence increased from 54.8% in 1990 to 63.3% in 2010. There was a decline in unmet need for family planning from 15.4% in 1990 to 12.3% in 2010. Women worldwide aged 15 - 49 years who were married and had an unmet need for family planning numbered about 146 million in 2010. It is projected that the number of women who either use contraceptives or have an unmet need for contraception will grow from 900 million in 2010 to 922 million in 2015 and will increase in most developing countries (Alkema et al., 2015).

Majority of married women or in union women worldwide use contraceptives. Married or in union women of reproductive age (15 - 49) years worldwide formed 64% of those who used some form of contraception in 2015. In the least developed countries contraceptive use accounted for 40% and it was very low particularly in Africa (33%). Contraceptive use was much higher among other major geographical areas like Oceania and Northern America. Contraceptive use ranged from 59% in Oceania to 75% in Northern America. Globally in 2015, 57% of women who are married or in a relationship used a modern method of contraception. This accounted for 90% of contraceptive users. Married women worldwide formed 18% of

those estimated to have an unmet need for modern methods in 2015 (United Nations [UN], 2015).

The growing preference for small families and timing of births in developing countries coupled with population growth has led to a rise in the number of women of reproductive age who are in need of effective contraception. In 2012, women and their partners in developing countries who used modern contraceptives or their partner accounted for 645 million. About three quarters of these women used modern contraceptives to prevent pregnancy. From 2003 to 2012, a slight increase of 38% to 42% was recorded in the proportion of women who wanted to prevent pregnancy and were also using modern contraceptives. Although there was no substantial increase in the proportion of women who used modern contraceptives to prevent pregnancy, the number of users increased by 139 million between 2003 and 2012 with average annual increases of 15 million (Darroch et al., 2013).

There were very low levels of contraceptive use (less than or equal to 26%) in middle and Western Africa and moderate use (46% - 66%) in Eastern Africa, South Asia and Western Asia and in the 69 poorest countries. Contraceptive use was highest ($\geq 77\%$) in Southern Africa, Eastern Asia, Central and South America (Darroch et al., 2013).

A study carried out on effects of knowledge, acceptance and contraceptive use on household wealth in 26 African countries showed that accumulation of wealth in a district increased as the number of births decreased. An increase in contraceptive use is also associated with a reduction in the number of births. The highest percentage of women using modern contraceptives was from Egypt being 90.4% and the lowest percentage of contraceptive use (30%) by women was recorded in Chad, Benin and Cote d'Ivoire. There was a generally high acceptance of contraceptives in most countries having over 70% of women who accepted modern contraceptives. In Senegal, the level of acceptance is however low with 50% of women who accepted modern contraceptives (Longwe et al., 2012).

Growth in the number of people who use contraceptives is projected to be high for all regions of Africa. The number of women with an unmet need for contraception is projected to increase from 142 million in 2015 to 143 million in 2030. This is due to growth in the number of married or in – union women of reproductive age in Sub-Saharan Africa and growth in the demand for family planning (UN, 2015).

In Ghana more than a quarter of women who are married use any method of contraception. Married women who use a modern method of contraception form 22% and those who use traditional methods constitute 5%. Injectables form 8%, implants 5% and the pill 5%. These were the most commonly used modern methods. Among sexually active women aged 15 - 49 years who never married, about one-third (32%) use a modern method of contraception. The most commonly used methods are the pill (8%), the male condom (8%) and injectables (7%). Use of modern contraceptives varies by residence and region. One-quarter of married women in rural areas use modern methods as compared to 1 in 5 married women in urban areas (GSS, 2014).

The lowest use of modern contraceptives among married women aged 15 - 49 years was from the Northern region (11%) whilst the highest was from the Volta region being 30%. Modern contraceptive use increases with education. It was noted that 17% of married women with no education use modern methods compared with 24% of women with secondary education and beyond. Modern methods of contraception has however increased more than four times from 5% in 1988 to 22% in 2014 (GSS, 2014).

The GDHS 2014 reveals that 3 in 10 married women have an unmet need for contraceptives. Unmet need for contraceptives is defined as the percentage of married women who want to space their next birth or stop child bearing entirely but are not using contraception. Unmet need

is higher among younger women aged 15 - 19 (51%) than older women 45 - 49 being 14% (GSS, 2014).

2.1 Contraceptive Services and Their Use

2.1.1 Review on Modern Contraceptive Methods

Modern contraceptives are products that interfere with reproduction from acts of sexual intercourse. Some methods however do not fall under modern contraceptives called NonModern methods. Examples of those methods are abstinence, fertility awareness, withdrawal and lactational amenorrhoea (Hubacher and Trussel 2015).

Some of the modern methods of contraception or family planning are the use of Barrier methods (male and female condoms), Diaphragm and Cervical cap, Spermicides, Intrauterine device (IUD), Oral contraceptives, Injectables, Implants, Combined vaginal ring, Sterilization (male and female) and emergency contraception. A condom acts by preventing direct contact with semen and genital lesions. The female condom however shields the vaginal opening and provides a physical barrier between male and female genitalia. The diaphragm is a female contraceptive device, which is dome shaped and made of latex rubber with a flexible rim. The hollow of the diaphragm is filled with a spermicidal cream and inserted deep into the vagina ensuring that it covers the cervix. The cervical cap is also made of latex and has a string to make removal easy. It can be left in the vagina to up to 48 hours (Danso et al., 2014).

Spermicides are chemical products inserted in a woman's vagina before sex so that it kills the sperms. The various forms are gel, cream, tablet and suppository (Danso et al., 2014). The intrauterine device is a T-shaped polyethylene frame inserted into the uterus of a woman. Its function is to prevent fertilization, inhibit implantation and also inhibit development of the ovum. Oral contraceptives is categorized under hormonal contraceptives. The combined oral contraceptive (COC) or the pill. The pill is taken for 21 days followed by 7 days break when

withdrawal bleeding usually occurs. The effectiveness depends on the user if no mistakes are made in taking the pills (Danso et al., 2014).

The injectables are classified into two as progestin only injectable contraceptive and the combined injectable contraceptives (CIC). The progestin only contraceptive (Depo Provera) is taken every 12 weeks and the CIC is taken on monthly basis. They act by inhibiting ovulation. Subdermal implants are also contraceptive devices. Examples are the Norplant and the Jadelle. The Norplant has been replaced by the Jadelle which has two rods that are inserted subdermally on the inner aspect of the non-dominant arm above the elbow. It provides contraception for 5 years (Danso et al., 2014). The combined vaginal ring is a flexible ring which has been medicated and inserted into the vagina. The ring is worn for three weeks. The ring can be removed for sex or for cleaning. It is effective through persistent and correct use. Emergency contraception (EC) refers to the use of a drug or device to prevent pregnancy after unprotected sex. It acts by inhibiting ovulation, interfering with fertilization subsequently preventing pregnancy. Sterilization is also carried out as a surgical procedure against pregnancy. It involves both men and women (Danso et al., 2014).

Female sterilization or tubal occlusion is done by mechanically blocking the fallopian tubes thus preventing pregnancy. Vasectomy or male sterilization is also done by ligating and excising the vas deferens under local anaesthesia. Pregnancy is however prevented because the sperm no longer enters the urethra thereby preventing fertilization (Danso et al., 2014).

2.2 Knowledge, Attitudes and Perceptions of Persons in Reproductive Age on Modern Contraceptive Use.

2.2.1 Knowledge on Modern Contraceptive Use

In Bangladesh, a study carried out indicated that men who were educated had proper knowledge about modern contraceptives and were willing to be involved in family planning and

reproductive health. However men who were not educated had false knowledge about modern contraceptives and this is the reason why most males in Bangladesh do not participate in family planning (Kamal et al., 2013).

A study assessed the knowledge of contraceptive use, side effects and danger signs of contraceptives in married women in Peshawar, a city in Pakistan. Knowledge in this study was rated as good, average and poor. Respondents who had seven or more correct answers were scored as having good knowledge. Those who scored from four to six correct answers had average knowledge and those who had less than three or less correct answers scored poor knowledge (Ayub et al., 2015).

In the Central region of Ghana, a study conducted among adolescents in selected Senior High Schools indicated that 81% out of the 300 respondents had knowledge about contraceptive use. Majority of them (60%) said their source of information was by television and radio. Those who had no idea about contraceptives was 18.7%. In addition, students who obtained information about contraceptives from their friends formed 30%. Some of them also acquired knowledge about contraceptives from their siblings forming 6.7% and 3.3% from their parents (Hagan et al., 2012).

Knowledge on modern contraceptives among married women of reproductive age in Central Tanzania was ascertained in a study. Majority of the participants (98.8%) were aware of the methods and over (80%) knew at least three methods. The methods which were commonly known were Pills, Injectables, Norplant and IUD represented by 94.3, 93.7, 87.3 and 51% of respondents respectively (Lwelamira et al., 2012).

Among female undergraduate students in Makerere university in Uganda a study was conducted to determine their knowledge on modern contraceptives. Their response was nearly universal forming 99.6% of the study population interviewed. The modern methods which were

commonly known were pills (86.7%), male condoms (88.4%), injectables (50.3%), IUD (35%), implants (26.7%), female condom (22.1%) and withdrawal method which formed (34.2%) was the commonly mentioned traditional method (Nsubuga et al., 2016).

Blackstone and colleagues in their study said that though women had adequate knowledge about child spacing, those who gave birth within shorter time intervals were over 50%. These women had more pregnancies than they would have wished for if they were in charge of their reproductive health. Other women also confessed that they will immediately discontinue contraceptive use if they faced spousal disapproval (Blackstone et al., 2017).

Though much awareness has been created in developing countries with regard to modern contraceptive use for child spacing, rates between countries still differ considerably. In subSaharan Africa even though men and women appear to have adequate knowledge, uptake of contraceptives is low with the various statistics such as 7% in Mali, 8% in Nigeria and 17% in Tanzania. Findings in this study also showed that men's knowledge regarding contraceptives is similar to that of women however they are able to influence women's decisions whether to uptake or stop the use of contraceptives (Blackstone et al., 2017).

In a study carried out on the knowledge of women in Osogbo metropolis in Osun State, Nigeria, it was realized that most of the respondents knew of at least five modern methods of family planning. It was however noted that only one tenth (13.1%) of the respondents were currently using a method of family planning. However gaps in women's knowledge on modern contraceptives will prevent them from using methods that would prevent pregnancy and sexually transmitted infections (Olarinmoye et al., 2013).

2.2.2 Attitudes of Persons towards Contraceptive Use

A study conducted among married men in Peshawar on the attitudes of modern contraceptive use showed that married men who were illiterate and young did not use contraception and did

not also allow their partners to practice family planning either. Although most of the married men had good knowledge about contraception, they had negative attitudes towards its use. Most of the married men desired a large family size with a preference for sons (Wahid et al., 2016). A study carried out in Kanpur, India on the attitudes among married women towards contraceptive use showed that 71.22 % of the respondents thought that contraceptives were used to prevent pregnancy and 31.21% thought that contraceptives could be used to prevent infections like Acquired Immune Deficiency Syndrome (AIDS). Only 1.95% thought that contraceptives could be used to control birth intervals (Srivastav 2014).

The attitudes of people towards the use of contraceptives in a study in a refugee settlement in Yaoundé was based on their religion. Christianity being the predominant religion in Yaoundé had an adverse effect on modern contraceptive use. There was also a high level of unemployment in the study population which probably discouraged contraceptive usage. (Halle-ekane et al., 2016).

2.2.3 Perceptions of Modern Contraceptive Use

Perceptions of contraceptive use among diploma students in the University of Ghana Business School showed that six (33.33 %) respondents believed that contraceptives were used after sexual intercourse. Three (16.67 %) said contraceptives were used before sexual intercourse 50% of the respondents said contraceptives were used during sexual intercourse.

Some respondents forming the majority said that contraceptive use did not affect quality, comfortability and enjoyment of sex (Appiah-Agyekum and Kayi, 2015).

According to Aryeetey et al., (2010) in a study to assess the perception and ever use of modern contraception among women in the Ga East District, Ghana, almost all respondents (97 %) thought about family planning as an important health action. Reasons given by respondents for using family planning was for birth spacing forming 57 %, 42 % being delay births and 21% to prevent sexually transmitted infections (Aryeetey et al., 2010).

Respondents who affirmed contraceptive use (76 %) said they felt comfortable using them. A greater part of the respondents forming 78 % said that couples should be involved in the decision to use any contraceptive and only 18 % indicated that the decision should be made mainly by the woman (Aryeetey et al., 2010).

Findings from a study carried out among the youth in a refugee camp in Nigeria indicated that most of the youth were misinformed and had very little correct information about contraceptives. Most of the inmates of the camp wanted to use contraceptives to prevent pregnancies but did not because they perceived modern contraceptive methods such as oral contraceptive pills, emergency contraception and intrauterine device as dangerous to their health. They also feared side effects and thought contraceptives could affect their fertility (Okanlawon et al., 2010).

2.3 Accessibility of Contraceptive Services to persons in reproductive age.

A publication in the Lancet in 2006 on sexual and reproductive health stated that family planning programmes are delivered by three main systems, which are health facilities, commercial outlets and community based approaches. Access to contraceptive services in many countries was initially restricted to health facilities under the control of doctors with demands such as a written consent of husband, proof of marital status and the number of children. They also insisted that women who were in their menstrual period should be allowed to start contraception (Cleland et al., 2006).

The above demand on clients impeded quick and appropriate access to methods. Facility based services remain as the main delivery systems in most countries especially where surgical interventions are carried out like insertion of intrauterine device and giving of injectable contraceptives.

Geographical access to contraceptive services was seen as a major constraint. Many experts believe that inadequate physical access is due to the fact that clients are restricted to a central point. The poor quality of contraceptive services is also an important factor that hinders accessibility. This is due to presence, competence and continuity of supplies. Patients are not treated with respect and also privacy is not adequately provided (Cleland et al., 2006).

Findings from a study to assess the spatial and socio-demographic determinants of contraceptive use in the Upper East region indicated that a facility such as the Community – Based Health Planning and Services (CHPS) compound is strongly associated with the use of modern contraceptives. It was noted that there was an increase in contraceptive use by women who lived within a 2 km radius from the service point. However contraceptive use declined with people who stayed more than 2 km from the health facility (Achana et al., 2015).

A study was carried out to measure the out-of-pocket costs for women with private, public and no insurance prior to the federal contraceptive coverage requirement. In the analysis of this study women who were not actively seeking to become pregnant were asked how much they paid for a one month supply of the pill and how much they had to pay each time they had a shot of Depo-Provera. They were also asked how much they had to pay when they got an IUD or implant inserted (Finer et al., 2014)

A study carried out on adolescents in rural communities in the central region of Ghana on family planning needs showed that adolescents preferred injectables because of its discreet nature. Non – use could be due partly to the fact that it could not be accessed in chemical shops in communities as compared to other methods like condoms and pills. There is however the need to make more methods liked by adolescents accessible to them (Enuameh et al., 2015).

The youth of Uganda have the greatest obstacle to improving access to contraceptive services. This is because of the prevailing view amongst political and religious leaders that there was a

fundamental relationship between contraceptive use and early sexual engagement. However previous research showed that access to information about contraceptives and education does not have a clear positive correlation with the onset of becoming sexually active (Celik 2016).

The World Health Organization (WHO) looks at access to modern contraceptives as the ultimate right of every woman. In connection with this right is a need to respect the self – worth of women by giving them a variety of family planning options and the liberty to make their personal choices (Chan, 2012). Globally an expected number of 222 million women have an unmet need for contraception. In many countries 30% of women who want to use contraception are unable to get it. WHO takes on a number of activities aimed at increasing access to contraceptive services and choices so that every woman can choose a method that is suitable for her (Chan, 2012).

In Iringa Municipality Tanzania, a study conducted among women on accessibility to modern contraceptives showed that out of 218 women 161 (73.8%) were using modern contraceptives and the remaining 57 (26.2%) were not on any method. Among the women who were using contraceptives, 67.7% said they had no challenges in accessing the services. The reasons being that, the services were highly available and no one needed to travel long distances to access it. Respondents affirmed that the services were freely accessed throughout the working days. A recent study however suggested that 32.3% of users said they faced different problems while accessing the services. These problems had to do with shortage of family planning service providers and the shortage of some of the methods such as implants (Kamangu, 2016).

2.4 The Influence of the Socio-Demographic and Economic Indicators of Persons in the Reproductive Age on the Use of Modern Contraceptives.

Socio – demographic and economic indicators are background characteristics which influence modern contraceptive use such as age, marital status, occupational status, education, religion, residence (urban or rural) and ever use of contraceptives (Palamuleni, 2013).

Ochako and colleagues in their study on prevalence of modern contraceptive use among sexually active men in Kenya considered the socio-demographic characteristics of these men. It was found out that a significant positive association existed between age and use of partner methods. Men over 25 years were over 3 times as likely to use a partner method as compared to using traditional or no method. Comparing urban and rural men, there was a significant difference in that rural men were less likely to use a particular method as compared with urban men (Ochako et al., 2017).

Among 851 currently married women in Ethiopia their socio-demographic and economic status were determined through the administration of questionnaires. This yielded a response rate of 97.9%. Six hundred and two (76.6%) of the respondents were from the urban areas and the remaining 199 (23.4%) were from the rural areas. In terms of educational status 190 (22.3%) of the respondents could not read nor write, 77 (9%) and 100 (11.8%) of the women and husbands were unable to read and write respectively. Two hundred and eighty (32.9%) of the women had attained primary education. Women who had secondary school education were 225 forming (26.6%) and the rest 79 (9.3%) attended college or university (Abdurahman et al., 2014). In this same study eight hundred and thirty eight (98.5%) had heard about family planning and were able to mention at least one method. The most common method used was the injectables forming (98.9%). In terms of advantages, 591 (70.5%) and 401 (48.6%) of women reported that contraceptives have the advantage of spacing births. Again 448 (52.6%) of women had ever used family planning methods. Three hundred and ninety nine (46.9%) urban and 41.21% rural married women were currently using modern family planning methods (Abdurahman et al., 2014).

In the Upper East region of Ghana a study was carried out in the rural parts of the region out of 5511 women who were eligible. There was a high rural percentage of (87%) that was represented. Over 60% of the respondents had not been to school and only 5.1% had secondary or tertiary education. The rest had either primary or junior high school education. It was noted that contraceptive use varied with age. Only 5.6% of 15 - 19 year olds used modern contraceptives compared with about 13% of 35 - 49 year olds and 17% of 20 - 34 year olds. Urban dwellers used more of contraceptives (14.1%) as compared with rural dwellers (12.8%). Religious affiliation was not statistically associated with contraceptive use. It was also noted that married women in monogamous relationships were more than twice likely to use modern contraceptives (18.1%) than single women being 7.4%. (Achana et al., 2015).

A bivariate analysis was done to assess contraceptive use among Malawian women and they were selected by their demographic and socio – economic status. It was found out that there was an increase in the use of contraception among currently married women from 30.2% in 2000 to 31.3% in 2004. The use of contraceptives increased with age of the women reaching a maximum age of 40 – 44 years and declines slightly in age group of 45 - 49 years. However women in the age group of 15 - 19 years had low contraceptive use which may be due to the fact that most of them are newly married and marriage is looked upon as an institution for producing children (Palamuleni 2013). Again an increase in educational level has an influence on increased contraceptive use of both women and their spouses. Contraceptive prevalence in the year 2000 was 22% among women with no education, 26% with primary and secondary education and 42% among women with higher education respectively. The number of children ever born and number of living children also influence contraceptive use among newly married Malawian women (Palamuleni, 2013)., Contraceptive use is also influenced by number of children ever born and number of living children. According to the 2000 Malawian demographic and health survey (MDHS) it was indicated that contraceptive use was 1.8%

among women with no children, 21.8% among women with 1 - 2 children, 28.6% among women with 3 - 4 children and 36% among those with five children or more.

Consequently in the year 2002, contraceptive use was 2.6% among women with no living children, 22.5% among women with 1-2 living children, and 31.4% among women with 3 - 4 living children and 40% among women with five living children and more (Palamuleni 2013). From the above studies and analyses carried out from this literature review, it is evident that socio-demographic and economic indicators have an influence on the use of modern contraceptives by persons in reproductive age.

CHAPTER THREE

METHODOLOGY

3.1 Study Methods and Design

This was a descriptive and observational analytical study type. The study was a cross sectional design that was conducted in households in the New Takoradi community. Quantitative methods of inquiry was used for gathering data for this study.

3.2 Data Collection Techniques and Tools

The study made use of primary data. Interviews with structured questionnaires was the main approaches to data collection. The structured questionnaire covered factors associated with modern contraceptive usage by persons in reproductive age.

3.3.0 Study Population

The study population comprises persons [male and female] in the age bracket of 15 - 49 years in reproductive age.

3.3.1 Inclusion criteria:

Participants enrolled in the study were aged 15 - 49 years and sexually active. They were living in the community for at least six months. Participants were recruited regardless of their relationship status.

3.3.2 Exclusion criteria:

Persons younger than 15 years and older than 49 years were excluded from the study. Visitors or persons living in the study area for less than 6 months were excluded from the study.

3.4 Study Variables

The study variables comprised dependent and independent variables. The dependent variables were ever and current modern contraceptive use among persons of reproductive age, whilst the independent variables include: socio-demographic factors such as age, residence, religion, marital status, age at first sex, socio-economic factors like wealth status, education, currently working, interaction with health system to discuss family planning with health worker, behavioural/attitudinal factors like fertility preference, perceptions, reasons/attitude towards contraception, and sources of information on contraceptives e.g. newspapers, radio and TV.

3.5 Sampling Techniques and Sample Size

The sample size was determined by using Snedecor and Cochran sample size determination formula based on a single population proportion. This formula covers for both male and female.

The annual prevalence rate of contraceptive use in Sekondi Takoradi Metropolis in the year 2016 was 13.2% (Annual Report 2016). Hence by the formula:

Sample size (n) = $\frac{Z^2 PQ}{e^2}$ where;

Z is the critical value of 1.96 of the 95% confidence level

P is the proportion of contraceptive use in the district among persons of reproductive age
(13.2% = 0.132)

Q is the proportion of persons of reproductive age who currently are not using contraceptive
(1-p = 1-0.132) = 0.868

E is the level of precision or margin of error in the population of study 5% (0.05)

$$\text{Sample size (n)} = \frac{1.96^2 * 0.132 * 0.868}{0.05^2} = 176$$

A non-response rate of 10% is added giving us a total of **200** participants were interviewed for the study.

New Takoradi is a suburb of Sekondi Takoradi Metropolis and by administrative demarcation is divided into upper and lower New Takoradi. The assistance of a total number of 100 persons were sought for interview in each of the two communities. The total population of sexually active persons of reproductive age was obtained by population proportion, a quota was assigned to each demarcation. The Upper and Lower New Takoradi communities were used as a cluster and from each cluster a landmark was identified. A coin was tossed and the surface that shows up determined the direction to move either to the left or to the right of the landmark. Households within the communities were used in conducting the study. Sampling was done among the households.

The first household which is closer to the landmark was selected as the starting point and two participants being a male and a female was interviewed. Participants were interviewed from household to household. In a household where there are only males, one was interviewed and vice versa. In a household where eligible participants are plenty, simple random sampling was used to select two participants (male and female) for the interview and in the case where a selected household has no eligible participants, the next household was chosen for the interview.

3.6 Pre -Testing

The pretesting of the questionnaire was done in a community in Takoradi with similar characteristics as the study area. This exercise was carried out to assess whether the

questionnaire were understood and answered correctly. Modifications were made to address shortfalls identified to enhance the correctness and accuracy of data collected.

3.7 Data Handling

Administered questionnaires were checked for completeness and consistency. Other errors including typographical errors and incorrect entries were eliminated. Data duplications were also identified and eliminated.

3.8 Data Analysis

Before analysis, data was pre-coded, corrected and checked for accuracy in responses, and then entered into the software for analysis. Two independent persons before analysis entered the data. During the analysis, data was cross checked and cleaned before statistical methods are employed in the analysis. Data was analysed using STATA version 13.0. Categorical variables were analysed in descriptive statistics and presented using frequency distribution tables with their respective counts and percentages. Continuous variables such as respondent's age and age at first sex was analysed quantitatively by presenting their respective average means and standard deviation. The association between categorical variables and modern contraceptive use were determined using chi-square by univariate analysis. The influence of certain variables such as wealth index, education and sources of information on modern contraceptive use was determined using multiple logistic regression with their odd ratios and P-value measure at 95% confidence interval of the 5% margin of error ($P\text{-value} = 0.05$).

3.9 Ethical Considerations

The study protocol and other required documentation was presented to the Committee on Human Research and Publication Ethics (CHPRE) of the Kwame Nkrumah University of Science and Technology for ethical approval ahead of initiating the study. A letter introducing the researcher to the Sekondi-Takoradi Metropolitan Assembly including the Health

Directorate was provided for the student by the School of Public Health to facilitate community entry. Study participants were only to be enrolled after they have gone through the informed consent process and appropriately consented to be part of the study. The privacy of study participants was ensured and information collected were stored confidentially on a pass worded personal computer. The outcome of the study is expected to inform policy, which will in the long run improve the reproductive health of respondents.

3.10 Study Limitations

The problem of recall bias is anticipated due to the retrospective nature of some of the questions. Though the study sought to interact with equal numbers of males and females, the latter predominated due to their being much more accessible than the former.

3.11 Assumptions

It is assumed that the study population has characteristics that are shared by the target population. It is also assumed that the answers that will be given by the respondents will be genuine.

KNUST

CHAPTER FOUR

RESULTS

4.0 Introduction

The study assessed determinants of modern contraceptive use in sexually active persons of reproductive age in New Takoradi, a community under Takoradi sub-metropolis in the Sekondi Takoradi Metropolitan area, western region, Ghana.

4.1 Socio-Demographic Indicators

As shown in tables 1a and 1b, a total of 197 persons of reproductive age between the ages of 15 to 49 years were interviewed using a structured questionnaire. About 127 (64.5%) were females and the age category with the highest frequency was 20 - 29 years which recorded 119 (60.3%), followed by age group 20-39 which also recorded 42 (21.3%). Only 21 (10.7%) of the participants were currently schooling as at the time of the study. On the level of education, about 96 (48.8%) of the participants had basic education, followed by 63 (32.0%) who had their education up to SHS, 19 (9.6%) of the participants had no formal education as the same was for tertiary 19 (9.6%).

About 51 (25.9%) of the respondents said that they were currently staying with their husbands, 18 (9.1%) said they were staying alone whereas 38 (19.3%) said they were staying with their parents.

Most of the participants said they belong to Protestant Christianity 53 (26.9%), followed by charismatic 50 (25.4%), 47 (23.9%) were Pentecostal while 28 (14.2%) were Roman Catholics. A total of 114 (57.9%) of the study participants were Fantes whilst 77 (39.2%) were Ahanta, Wassa, Ewe, Akan, Ga. On marital status 118 (59.9%) were single, 67 (34.0%) were married/cohabiting and 12 (6.1%) were Widowed, separated or divorced. The working class of the participants were 74 (37.6%), 66 (33.5%) were studying whilst 57 (28.9%) were not working. On income levels about 28 (14.2%) of the respondents had their income below < 100 GHC and 41% of the participants had an income of 500 GHC and below whereas 24 (12.2%) had income of 5000 GHC and above. Moreover, 63 (32.0%) of the participants had no children at the start of the study, 96 (48.7%) had 1 and 2 children, 30 (15%) had 3-4 whilst 8 (4.1%) had 5 or more children

Table 1a: Demographic characteristics of respondents

Respondent characteristic	Number (N=197)	Percentage (%)
Gender		
• Male 70		35.5
• Female 127		64.5
Age groups		
• 15-19 18	18	9.1
• 20-29 119		60.3
• 30-39 42		21.3
• 40-49 18		9.1
Currently in school		
• Yes 21	21	10.7
• No 176		89.3
Educational level		
• No formal education 19	19	9.6
• Basic education 96	96	48.8
• SHS 63	63	32.0
• Tertiary 19	19	9.6
Age at first sex		
• 15-19 133	133	67.5
• 20-24 54	54	27.4
• 25-49 10	10	5.1

With whom are respondent currently staying

□ Both parents	38	19.3
• Single parent	18	9.1
• Wife	13	6.6
• Husband	51	25.9
• Any other specified	77	39.1

Table 1b: Demographic characteristics of respondents

Respondent characteristic	Number (N=197)	Percentage (%)
Religious background		
• Protestant Christians	53	26.9
• Roman Catholic	28	14.2
• Charismatic	50	25.4
• Pentecostal	47	23.9
• Islam	4	2.0
• Traditionalist	1	0.5
• Any other specified	14	7.1
Ethnic group		
• Nzema	6	3.1
• Fante	114	57.9
• Other specified (Ahanta, Wassa, Ewe, Akan, Ga)	77	39.2
Marital status		
• Married/cohabiting	67	34.0
• Single	118	59.9
• Widowed/ Separated /Divorce	12	6.1
Occupation		
• Working	74	37.6
• Studying	66	33.5
• Not working	57	28.9

Income level

• <100 GHC	28	14.2	31.0
• 101-200 GHC	61	20.8	
• 201-500 GHC	41	3.1	
• 501-1000 GHC	6	1.0	
• 1001-2000 GHC	2	17.7	
• 2001-5000 GHC	35	12.2	
• >5000 GHC	24		

Number of children

• None		32.0	48.7
• 1-2	63	15.2	
• 3-4	96	4.1	
• 5 or more	30		
	8		

4.2 Knowledge, Attitude and Perceptions on Modern Contraceptive Use**4.2.1 Knowledge on Modern Contraceptives**

Almost all the study participants 196 (99.5%) have heard of modern contraceptives before participating in the study. About 87 (32%) of the participants said they knew about injectable and 75 (27.6%) said they knew about the male condom. The number of participants who said they knew about the pill and implants were the same [39 (14.3%)]. None of the participants knew about Diaphragms, Spermicides, cervical cap and only one (1) knew about male sterilization. On sources of information, 80 (40.6%) had their contraceptive information from watching television, 15 (7.6%) said they heard it from the radio whereas friends and health workers were 48 (24.4%) each. None of the participants got information from teachers or internet. All participants heard about the modern contraceptive before using it.

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Table 2: Respondents knowledge on modern contraceptive use

Respondent characteristic	Number (n)	Percentage (%)
Have you ever heard of a contraceptive method?		
• No	1	0.5
• Yes	196	99.5
What type (s) of contraceptive methods do you know <input type="checkbox"/> Injectable		
• Intra - uterine device (IUD)	87	32.0
• Male sterilization	16	5.9
• Female sterilization	1	0.4
• Male condom	2	0.7
• Female condom	75	27.6
• Implants	6	2.2
• Pill	39	14.3
• Emergency contraception	39	14.3
	7	2.6

Where did you hear of the contraceptive method(s) you have mentioned?

• Parent	4	2.0
• Radio	15	7.6
• Television	80	40.6
• Print media	1	0.5
• Friends	48	24.4
• Teacher	0	0
• Health worker	48	24.4
• Partner	1	0.5
• Internet	0	0
• Any other specified	0	

Knowledge on contraceptive methods before using them

• Yes	106	100
• No	0	0

4.2.2 Attitudes to Modern Contraceptive Use

Ever use of contraceptives was (53.8%) even though all participants have been sexually active. Majority of the participants who had ever used contraceptives 75 (71.3%) was more than one month ago whereas 4 (3.7%) used it less than a week ago. The most frequently used contraceptive method was emergency 51 (48.1%), followed by male condom 36 (34.0%) and injectable 12 (11.3%). About 44 (48.4%) of the participants who have never used contraceptives desired to use it in the future. Moreover, 38 (35.9%) used modern contraceptives to space birth, 27 (25.5%) said they used it to prevent Sexually Transmitted Infection (STIs), 22 (20.7%) said they used it in order to marry before childbirth, 18 (17.0%) said they used it to delay pregnancy whilst one (1) person said she used it to prevent teenage pregnancy.

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Table 3: Respondents attitudes to modern contraceptive use

Respondent characteristic	Number (n)	Percentage (%)
last date use of modern contraceptives		
• Less than a week ago	4	3.7
• 1 - 2 weeks ago	5	4.6
• 3 - 4 weeks ago	22	20.4
• More than a month ago	75	71.3
Type (s) of contraceptive methods used		
• Injectable	12	11.3
• Intra - uterine device (IUD)	0	0
• Male sterilization	0	0
• Female sterilization	0	0
• Male condom	36	34.0
• Female condom	0	0
• Diaphragm	0	0
• Spermicides	0	0
• Implants	0	0
• Cervical cap	7	6.6
• Pill	0	48.1
• Emergency contraception	51	

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Reason for the use of contraceptive (s) method mentioned

• To delay pregnancy	18	
• To avoid teenage pregnancy	1	17.0
• To space births	38	0.9
• To avoid contracting STI	27	35.9 25.5
• To marry before childbirth	22	20.7

Ever used contraceptives

• Yes	106	53.8
• No	91	46.2

Ever use contraceptives in the future

• Yes	44	48.4
• No	47	51.7

4.2.3 Perception on Modern Contraceptive Use

About 83 (42.0%) stated that they disagreed with the statement that accessing contraceptives service may be very costly, 43 (22.1%) said neither whilst 70 (35.9%) agreed with the statement. Also, 89 (45.2%) said that only women should be concerned about contraceptives whereas 79 (40.1%) said they felt shy accessing contraceptive services. Those who agreed that contraceptives were safe recorded 84 (43.1%) whereas 64 (32.8%) disagreed. Moreover, 68 (34.5%) of the participants thought that women who used contraceptives had multiple sexual partners whilst 89 (45.2%) thought that unmarried youth should not be allowed to use contraceptives (table 4).

Table 4: Respondents perception on modern contraceptive use

Respondent characteristic	Number (n)	Percentage (%)
Accessing contraceptives service may be very costly <input type="checkbox"/> Agree		
• Neither	70	35.9
• Disagree	43	22.1
	83	42.0
Do you think only women should be concerned with contraceptive use?		
• Yes	89	45.2
• No	108	54.8
I will feel shy to go for contraceptive method <input type="checkbox"/> Agree		
• Neither	79	40.1
• Disagree	67	34.0
	51	25.9
Contraceptive service is safe		
• Agree	84	43.1
• Neither	47	24.1
• Disagree	64	32.8
Do you think women who use contraceptives have many sexual partners?		
• Yes	68	34.5
• No	129	65.5
Should unmarried youth be allowed to access and use contraceptives		
• Yes	108	54.8
• No	89	45.2

4.2.4 Accessibility to Contraceptive Services

Accessing modern contraceptives by those who believed that it was cheap recorded 80 (75.5%), 20 (18.9%) said it was moderately cheap and 6 (5.7%) said they were very costly All participants (100%) who accessed the contraceptive service said that the providers were friendly and they were satisfied with the service rendered. On travel time, 176 (89.6%) said they travelled less than 30 minutes to access modern contraceptives whilst 21 (10.4%) said they

spent 31 minutes to 1 hour but none spent 2 hours or more. Except 4 (3.8%) participants all the others said they got their family planning methods of their choice when they visited the facility. Majority 77 (39.1%) of the participants said that family planning centres and Planned Parenthood Association of Ghana (PPAG) clinic were places they knew for accessing family planning service, 51 (25.9%) said chemical/drug store, 29 (14.7%) said government hospital and the least was 2 (1.1%) for private hospital. Moreover, 77 (39.1%) said they preferred to access family planning service at the family planning clinic and PPAG clinics whilst 72 (36.5%) said they preferred the pharmacy.

4.3 Respondents Access to Modern Contraceptive Services

Table 5: Respondents' accessibility to contraceptive services

Respondent characteristic	Number (n)	Percentage (%)
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Knowledge on where persons in your community access contraceptives?		
• Government Hospital	29	14.7
• Government Health Post / CHPS	17	8.6
• Pharmacy	21	10.7
• Chemical/Drug Store	51	25.9
• Family Planning/PPAG Clinic	77	39.1
• Private Hospital	2	1.1
Where would participants prefer to access contraceptives in their community?		
• Government Hospital	29	14.7
• Government Health Post / CHPS	17	8.6
• Pharmacy	72	36.5
• Family Planning/PPAG Clinic	77	39.1
• Private Hospital	2	1.1
Do you get family planning methods of your choice when you visit a health facility?		
• Always	102	96.2
• Sometime	4	3.8
• Never	0	0
Travel time to the nearest access family planning services		
• Less than 30 minutes	176	89.6
• 31 minutes to 1 hour	21	10.4
• 2 hours or more	0	0
Health providers friendly		
• Yes	106	100
• No	0	0
The cost of contraceptives		
• Expensive/very costly	6	5.7
• Moderate	20	18.9
• Cheap	80	75.5
Client satisfaction of the service		
• Yes	106	100
• No	0	0

4.4 Associations between Socio-Demographic and Other Indicators and Modern Contraceptive Use

Table 6a, b & c show the associations between socio-demographic characteristics of respondents and contraceptive uptake. The bivariate analyses showed no statistically

significant association in age at first sex (P-value=0.689), marital status (P-value=0.55), religion (P-value=0.21), ethnic group (P-value=0.164) and number of children (P-value=0.06) of respondent even though there were differences in the report odds. A decrease odds of contraceptive use was observed in participants aged at first sex 20-24 [COR=0.8(95% CI, 0.51-6)] but increase for age group, 25-49 [COR=1.5(95% CI, 0.4-6.6)] as compared with mothers aged 19 years and below. The odds of contraceptive usage in participants who were single was [COR=0.7 (95% CI, 0.4-1.3)], widows/separated/divorce was [COR=0.9 (95% CI, 0.2-3.3)] than the odds of married/cohabiting participants. On ethnic groups, Fantes had 0.5 times [COR=0.5(95% CI, 0.1-2.7)] whilst others had 0.8 times [COR=0.8 (95% CI, 0.1-4.8)] the odds of contraceptive uptake compared with Nzemas. The odds of contraceptive use increases with an increase in the number of children. The odds of contraceptive uptake in participants with 1 – 2 children was 2.7 times [COR=2.7(95% CI, 1.1-3.9)], 3-4 was 2.8 times [COR=2.8(95% CI, 1.1-7.1)] and 5 and above was 2.3 times [COR=2.3(95% CI, 0.5-10.8)] than those with no children.

Educational status of participants, gender and currently school were found to have a significant association with the uptake of modern contraceptives.

The odds of participants within the ages 20 to 29, 30 to 39, and 40 and above using contraceptives were 2.7 , 8.3 and 3.2 times the odds of those of age 19 and below [COR= 2.7(95% CI, 0.08-0.9)] , [COR= 8.3(95% CI, 0.4-0.9)] and [COR= 3.2(95%CI, 0.8-0.13)] respectively. In multivariate analysis age group, 20 to 29 [AOR 3.5 (95% CI, 0.1- 0.9) and 30 to 39 [AOR 17 (95% CI, 0.7- 0.8) were still significant with the exception of age group 40 to 49. Also being a female [COR= 0.4(95% CI, 0.2-0.8)] decreased the odds of contraceptive uptake compared with males and the odds further decreased in the multivariate analysis [AOR=

0.1(95% CI, 0.03-0.3)]. The study found out that the odds of modern contraceptive uptake among those who were not currently in school was 4.5 times [COR= 4.5(95% CI, 0.5- 0.9)] the odds of those who were in school in the bivariate analysis whilst in the multivariate analysis it was still significantly higher being 12.5 times [AOR= 12.5 (95% CI, 0.5- 0.9)].

On education, the odds of participants using contraceptives decreased with increased educational level comparing basic education [COR=0.7, (95% CI, 0.2-0.3)], SHS [COR=0.5, (95% CI, 0.2- 0.4)] and Tertiary [COR=0.2, (95% CI, 0.04-0.7)] with participants with no formal education. In multivariate analysis all the factors were significant.

An increase in odds of contraceptive uptake was observed for participants currently staying with a single parent [COR=1.5, (95% CI, 0.5-0.9)], wife [COR=4.3, (95% CI, 0.01-0.5)], husband [COR=2.7, (95% CI, 0.1- 0.6)] and others [COR=3.1, (95% CI, 0.4-0.7)] compared with those staying with both parents. In the multivariate analysis, however, none of them was significant ($p < 0.281$). Participants who were not working and studying were found to have decreased odds of contraceptive usage. Income levels from 101-200 GHC, 201-500 GHC, 501-1000 GHC were found to increase contraceptive uptake by 1.2 times [COR=1.2, (95% CI, 0.43-1)], 1.8 times [COR=1.8, (95% CI, 0.7-4.9)], and 3.8 times [COR=3.8, (95% CI, 0.4-36.4)] respectively. Income level above 2001 GHC was found to decrease the odds compared with income level below 100 GHC.

Table 6a: Demographic characteristics of respondents associated with modern

contraceptive use Respondent	N	cOR(95%CI)	P-value	aOR(95%CI)
P-value characteristic				
Gender			0.004	0.001

Male	70	1		
Female	127	0.4(0.2-0.8)	0.1(0.03-0.3)	
Age groups			0.003	0.252
15 – 19	18	1		
20-29	119	2.7(0.9-8.1)	3.5(2.1-61.9)	
30-39	42	8.3(2.4-29.1)	17(2.7-48.1)	
40 – 49	18	3.2(0.8-13)	4.2(0.8-62.8)	
Currently in school			0.002	0.019
Yes	21	1		
No	176	4.5(1.5-12.9)	12.5(1.5-99.5)	
Educational level			0.02	0.04
No formal education	19	1		
Basic education	96	0.7(0.2-2.1)	0.3(0.2-1.4)	
SHS	63	0.5(0.2-1.4)	0.07(0.01-0.9)	
Tertiary	19	0.2(0.04-0.7)	0.04(0.01-0.4)	
Age at first sex			0.689	
15 – 19	133	1		
20-24	54	0.8(0.5-1.6)		
25 – 49	10	1.5(0.4-6.6)		

Table 6b: Demographic characteristics of respondents associated with modern contraceptive use

Respondent characteristic	N	cOR(95%CI)	P-value	aOR(95%CI)	P-value
Ethnic group			0.164		
Nzema	6	1			
Fante	114	0.5(0.1-2.7)			
Others (Ahanta,Wassa,Ewe,Akan,Ga)	77	0.8(0.1-4.8)			
Marital status			0.556		
Married/cohabiting	67	1			
Single	118	0.7(0.4-1.3)			
Widowed /Separated /Divorce	12	0.9(0.2-3.3)			
Occupation			0.001		0.057
Working	74	1		1	
Studying	66	0.3(0.1-0.5)		0.2(0.1-1.5)	
Not working	57	0.9(0.4-2.0)		0.6(0.2-1.4)	

Table 6c: Demographic characteristics of respondents associated with modern contraceptive use

Respondent characteristic	N	cOR(95%CI)	P-value	aOR(95%CI)	P-value
currently staying			0.032		0.281
Both parents	38	1		1	
Single parent	18	1.5(0.4-4.8)		0.2(0.2-2.4)	
Wife	13	4.3(1.1-16.7)		1.8(0.6-5.7)	
Husband	51	2.7(1.1-6.5)		1.8(0.2-2.4)	
Any other specified	77	3.1(1.4-7.2)		1.1(0.4-3.2)	
Religious background			0.211		
Protestant Christians	53	1			
Roman Catholic	28	2.1(0.7-5.8)			
Charismatic	50	0.7(0.3-1.5)			
Pentecostal	47	0.7(0.3-1.5)			
Islam	4	0.7(0.1-5.4)			
Traditionalist	1	1			
Others	14	0.5(0.2-1.7)			
Income level			0.001		0.578
<100 GHC	28	1		1	
101-200 GHC	61	1.2(0.4-3.1)		10.5(1.3-87.8)	
201-500 GHC	41	1.8(0.7-4.9)		6.2(0.5-15.7)	
501-1000 GHC	6	3.8(0.4-36.4)		5.6(2.1-9.8)	
1001-2000 GHC	2	1		1	
2001-5000 GHC	35	0.4(0.1-1.1)		0.8(0.4-1.1)	
>5000 GHC	24	0.3(0.1-0.8)		0.5(0.1- 1.0)	
Number of children			0.06		
0	63	1			
1-2.	96	2.7(1.1-3.9)			
3-4.	30	2.8(1.1-7.1)			
5 and above	8	2.3(0.5-10.8)			

In table 7, participants who perceived women who used contraceptives as not having multiple sexual partners had a decreased odds [COR=0.7, (95% CI, 0.4-1.3) of contraceptive uptake compared with those who perceived them as having multiple partners. However, those who were not of the perception that only women should be concerned with contraceptive use were 1.1 times [COR=1.1, (95% CI, 0.6-1.9)] more likely to use modern contraceptives.

The study found out that, participants who disagreed contraceptives were safe have 0.1 times [COR=0.1, (95% CI, 0.03-0.2)] decrease odds of contraceptive uptake than those who agreed. Those who disagreed that accessing contraceptive service may be very costly had 9.0 times [COR=9.0, (95% CI, 4.2-18.7)] and neither 4.4 times [COR=4.4, (95% CI, 1.9-9.9)] the odds of contraceptive uptake than those who agreed. Those who thought that unmarried youth should not use contraceptives had 2.1 times [COR=2.1, (95% CI, 1.2-3.8)] the odds of contraceptive uptake than those who said yes to the statement. Even though those who disagreed that they felt shy to buy contraceptives, had 1.5 times [COR=1.5, (95% CI, 0.7-3.2)] the odds for contraceptive use but this was not significant.

In the multivariate analysis, factors that were retained as significant were; disagree to contraceptives being safe [AOR=0.06, (95% CI, 0.008-0.4)], disagree that accessing contraceptives may be costly [AOR=22, (95% CI, 2.7- 106.7)] and disagree that unmarried youth should not be allowed to use contraceptives [AOR= 4.3, (95% CI, 1.5-11.9)].

Table 7: Association between perceptions on modern contraceptives and modern contraceptive usage

Respondent characteristic	N	cOR(95%CI)	Pvalue	aOR(95%CI)	P-value
Contraceptive services are safe			0.001		0.001
Agree	84	1			
Neither	47	0.3(0.1-0.7)		0.2(0.03-1.3)	
Disagree	64	0.1(0.03-0.2)		0.06(0.008-0.4)	
Accessing contraceptives service may be very costly			0.001		0.001
Agree	70	1			
Neither	43	4.4(1.9-9.9)		4.0(0.7-23.3)	
Disagree	83	9.0(4.2-18.7)		22(2.7- 106.7)	
I will feel shy to go for contraceptive method			0.41		
Agree	79	1			
Neither	67	1.3(0.6-2.6)			
Disagree	51	1.5(0.7-3.2)			
Do you think only women should be concerned with contraceptive use?			0.728		
Yes	89	1			
No	108	1.1(0.6-1.9)			
Do you think women who use contraceptives have many sexual partners?			0.322		
Yes	68	1			
No	129	0.7(0.4-1.3)			
Should unmarried youth use contraceptives			0.008		0.005
Yes	108	1		1	

Bivariate analysis in Table 8 shows that there were no significant associations between the places where participants knew community members access family planning and where they preferred to access contraceptives. There was also no significant associations between travel time and family planning uptake. The odds of contraceptive uptake among those who spent about 31minutes to 1hour [COR=0.7, (95% CI, 0.2-1.7)] decreased as compared with those who spent less than 30 minutes. Participants who preferred to access family planning service at family planning/PPAG clinic and government health post have 1. 2 times [COR=1.2 (95% CI, 0.5-3.1)] and 1.5 times [COR=1.5, (95% CI, 0.4-5.1)] the odds of contraceptive uptake compared with the government hospital. Cost of contraceptives was significantly associated with contraceptive uptake. Those who said the contraceptive was moderately cheap [COR=11, (95% CI, 1.2-46)] and cheap [COR=20.4, (95% CI, 2.2-52)] had increase odds of contraceptive uptake compared to those who said it was expensive and this was still significant in the multivariate analysis.

Table 8: Association between respondents' accessibility to contraceptive services and usage

Respondent characteristic	N (%)	Unadjusted OR(95%CI)	Pvalue	Adjusted OR(95%CI)	Pvalue
Knowledge on where do persons in your community access contraceptives?					
			0.927		
• Government Hospital	29	1			
• Government Health Post / CHPS	17	1.5(0.4-5.03)	0.691		
• Pharmacy	21	0.8(0.2-2.6)	0.733		
• Chemical/Drug Store	51	1.1(0.4-2.8)	0.813		
• Family Planning/PPAG Clinic	77	1.3(0.5-3.1)	0.618		
• Private Hospital	2				
Where would participants prefer to access contraceptives in their community?					
			0.712		
• Government Hospital	29	1			
• Government Health Post / CHPS	17	1.5(0.4-5.1)	0.081		
• Pharmacy	72	0.9(0.4-2.2)	0.322		
• Family Planning/PPAG Clinic	77	1.2(0.5-3.1)	0.126		
• Private Hospital	2				
Travel time to access family planning services					
• Less than 30 minutes	176	1	0.427		
• 31 minutes to 1 hour	21	0.7(0.2-1.7)			
• 2 hours	0				

The cost of contraceptives			0.003	0.015
• Expensive/very costly	6	1		
	20	11.0(1.2-46)	0.001	4.2(1.2-17)
• Moderate	80	20.4(2.2-52)	0.001	2.9(1.8-6.2)
• Cheap				

CHAPTER FIVE

DISCUSSION

5.0 Introduction

The study revealed that ever use of modern contraceptive methods was 53.8% amongst study participants compared to a national coverage of 34% and the district coverage of 10% (Ghana Health Service 2016). The national and regional coverage are probably lower than what this study found because their estimation was done from mixed populations, which are largely rural representation. It could also be as a result of the proportion (48.8%) of the participants having gone through basic education. People with basic education are more likely to accept health intervention than others. A study done in Bangladesh indicated that, men who are educated had proper knowledge about modern contraceptives and were willing to be involved in family planning and reproductive health (Kamal et al., 2013). United Nations (UN) report on contraceptives stated contraceptive usage among women in their reproductive age was 34% which is lower than what this study found out (UN, 2015). This result of the contraceptive usage among participants was similar to what was found in Senegal where the level of acceptance of modern contraceptives was about 50% (Longwe et al., 2012).

5.1 Socio-demographic characteristics and contraceptive use

In this study sex was significant in the determination of usage of contraceptives. Being a female decreases the odds of contraceptive usage up to about 60%. This could be as a result of men

being the decision makers in the various households and are more likely to decide on usage of modern contraceptives. Moreover, the use of male condom was one of the most accessed contraceptive method identified among participants in this study. This method is mostly used by men and therefore could have influenced the responses and decreased the female odds of contraceptive usage. Also in terms of knowledge on contraceptives, the male condom rated higher among participants than other methods and this could have influenced their usage.

Age of participants was also important in the determination of contraceptive usage. The study identified an increase odds in contraceptive usage among age groups 20 and above as compared with 15 - 19 years. These findings were significant at the bivariate analysis and could be due to the fact that participants below 20 years may not be very sexually active due to their education. A Study done in Malawi also saw age group of 15 - 19 years to have low contraceptive use and attributed it to the fact that most of them were newly married and marriage was looked upon as an institution for producing children (Palamuleni, 2013). Also participants within this age may also have a little knowledge on contraceptives which could influence their usage.

Among the age groups above 20 years it could be noticed from the findings that, age group 30 to 39 have the higher odds of contraceptive usage (8.3 times) than the rest. This could also be due to the fact that this category of people are mostly married and are within the early stage of their marriage. They however may have higher need for contraceptives since they want to space their children. These findings were not significant in the final model after adjustment for possible confounders. This could be that factors such as currently in school, educational level, and occupation could confound or modify the effect of age as a factor in contraceptive usage. This study was consistent with a study done by Ochako and his colleagues where men over 25 years were over 3 times as likely to use contraceptive methods than others (Ochako et al., 2017).

Religion as a socio-demographic factor was not significant in termination of contraceptive usage. Some churches are known not to support the use of modern contraceptives, yet this was not portrayed in this study. In a study done in Upper East region of Ghana to identify the influence, affiliation and contraceptive usage, it found no statistical association between religious affiliation and contraceptive usage which is similar to our findings (Achana et al., 2015). Another study done in Ethiopia also had similar findings where religious affiliation did not influence contraceptive usage (Lakew et al., 2013). A Study done in Nigeria compared contraceptive usage among Moslem and Christians and saw a significant difference in contraceptive usage among the two religious groups (Babalola et al., 2015).

5.2 Associations of Various Indicators with Contraceptive Use

Currently in school was found to be significant in determining contraceptive usage during both bivariate analysis and also after adjustment. Those who were not in school had higher odds of contraceptive usage. This could be due to the fact that those in school may be less sexually active due to tight schedules and their academic work. Likewise, most of those in school may not be married, and not married was found in the study to decrease the odds of contraceptive use even though it was not significant. Those in school may also have limited access to contraceptive devices and therefore could affect their usage.

Despite suggestions that contraceptive usage may be influenced by ethnic differences, this study did not find any association between contraceptive usage and ethnic background. This could be due to the fact that the study site is a peri-urban area with many ethnic groups. This was seen in the ethnic distribution of the study participants. This finding is similar to what was found in Nkwanta district in the Volta region of Ghana (Eliason et al., 2014).

The study also examined the association between marital status and modern contraceptives. The finding suggests no significant association between modern contraceptives and marital

status even though the odds of contraceptive usage was higher in married women. The higher odds in married women could be due to the fact that married women are sexually active and therefore the need for modern contraceptives. . This finding is similar to what was found in Lithuania on the study of factors influencing choice of contraceptive usage. Their findings also found no significant association between having a stable partner and modern contraceptive use (Academy et al., 2012). Moreover a study done in Talensi district in Upper West region also saw no significant association between contraceptive usage and marital status (Apanga and Adam, 2015).

The study also looked at who participants were currently staying with and modern contraceptive usage. It was found that there was no significant association between whom one is staying with and contraceptive usage. It was observed in the study that there was an increase in odds of contraceptive uptake for participants currently staying with a single parent, wife, husband and others compared with those staying with both parents.

The income level of participants was also found not to have a significant association with the usage of contraceptives in this study. Although an increase in contraceptive usage corresponds to increase in income levels, this could be due to the fact that people who earn more are more likely to have higher education. Education was found to have influence on contraceptive usage. People who earn higher incomes could afford the cost of contraceptive services. This study agrees with studies conducted in Nigeria, Ethiopia, Lithuanian , Afghanistan and Talensi district in Upper East region of Ghana (Babalola et al., 2015; Lakew et al., 2013; Apanga and Adam, 2015; Academy et al., 2012; Rasooly et al., 2015) . Another study done in Nkwanta district in Ghana also found no significant association between contraceptive usage and socio-economic status (Eliason et al., 2014).

The study also looked at perception of participants on modern contraceptive usage. Participants who did not agree to the statement that contraceptives were safe had less odds of contraceptive usage probably due to the fear of side effects. However, contraceptive services being safe is significant to the study. This finding is contrary to what was found at Nkwanta district in Ghana (Eliason et al., 2014).

Participants who held the view that accessing contraceptives was costly were found to have less odds of modern contraceptive usage. This is because people cannot simply access what they cannot afford. In this study, cost of contraceptives is identified as one of the significant factors that can determine the usage of modern contraceptives. This suggests that cost plays a significant role in determining the usage of modern contraceptives. This finding is consistent with a study done in both Ethiopia and Afghanistan (Lakew et al., 2013; Rasooly et al., 2015).

Knowledge on where people in the community access contraceptives and their preferred place of accessing them was found not to be associated with contraceptive usage. This could be as a result of the fact that Takoradi is an urban area and therefore have a lot of family planning outlets. Almost all the participants said they got contraceptives from their preferred outlets. This could also explain why travel time to the contraceptive point was not also significant in determining contraceptive usage.

In this study the most preferred methods of contraceptives were the male condom, injectable and emergency contraceptives. This could be explained by their knowledge on the contraceptives where majority of the clients said they had heard about these three types. The study also found out that emergency contraceptive usage was very high among respondents as compared with the other methods. This type of contraceptive method refers to the use of a drug or device to prevent pregnancy after unprotected sex and it is not expected to be high (Danso et al., 2014). This may suggest unmet need for modern contraceptives.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

In conclusion, the prevalence of contraceptive uptake among study participants in reproductive age was 53.8% compared with a national coverage of 34% and the district coverage of 10% and was found to have increased. It could be as a result of the proportion (48.8%) of the study participants who have had basic education. Socio-demographic factors identified to significantly affect contraceptive uptake were: gender, educational level, and currently in school.

Gender was significantly associated to modern contraceptive use in the study. It was discovered that females formed the greater part of the study population being 64.5% as compared with the males (35.5%). Being a female decreased the odds of contraceptive usage up to about 60%. Currently in school had a significant association with modern contraceptive usage. It was found that those who were not in school had higher odds of contraceptive usage. Those in school may however have limited access to contraceptive devices and therefore could affect their usage. Perception on the use of modern contraceptive was significantly associated to modern contraceptives use. Factors such as accessing contraceptive services may be very costly, safe contraceptive services and should unmarried youth use contraceptives were significantly associated to the perceptions of respondents regarding modern contraceptive use.

6.2 Recommendations

Based on the above findings, the following recommendations have been suggested

6.2.1 The Sekondi-Takoradi Metropolitan Health Directorate.

- The Health Directorate/administration should intensify community home visits to provide targeted education on family planning methods to increase its uptake.
- The metropolitan health directorate should strengthen school health activities to sensitize the youth in their reproductive age on modern contraceptive methods.
- The metropolitan health directorate should collaborate with the Ministry of Health and other agencies to further subsidize modern contraceptives as its cost adversely influences uptake.

6.2.2 Health Facilities

- Health facilities should also continue with the routine public education of clients on contraception to encourage both men and women to patronize the service. Such educational programs should address some negative perceptions such as women using contraceptives having multiple partners, myths, etc.
- The quality of service must be improved to attract more clients.
- Increase the range of contraceptives to ensure that clients have options to choose from.
- Service providers should undergo further training and skills upgrade to acquire new knowledge in order to better deliver quality service to their clients.
- The Ghana Health Service should establish Adolescent health corners in every health facility. Adolescents who attend these clinics will be educated on reproductive and sexual health needs.

6.2.3 Women of Reproductive Age

- They should be encouraged to further appreciate the role of contraceptives in enhancing their health and well-being. They should know where to access services on contraception as well as information on the various methods. They should seek counsel where necessary on issues of myths, negative perceptions, etc. to ensure they make the best of contraceptive services available to them.
- The women should equally be empowered economically and socially through financial assistance and elimination of social and cultural barriers to be enabled to negotiate with their partners on issues of sex and contraceptives as gender was found to significantly related to modern contraceptives.

6.2.4 Government Subsidy for Modern Contraceptives

- The government of Ghana should extend health insurance policy to cover modern contraceptives to make it more accessible to women who might need contraceptives but do not have purchasing power so as to empower women to have control over the number of children in the family.

6.2.5 Increased Campaign for Girl Child Education

- Campaign for girl child education should be supported and intensified at the basic, secondary and at the tertiary level by giving an increased quota of girl enrolment at the various level of education, since educational level of individuals was significantly associated with modern contraceptives use.

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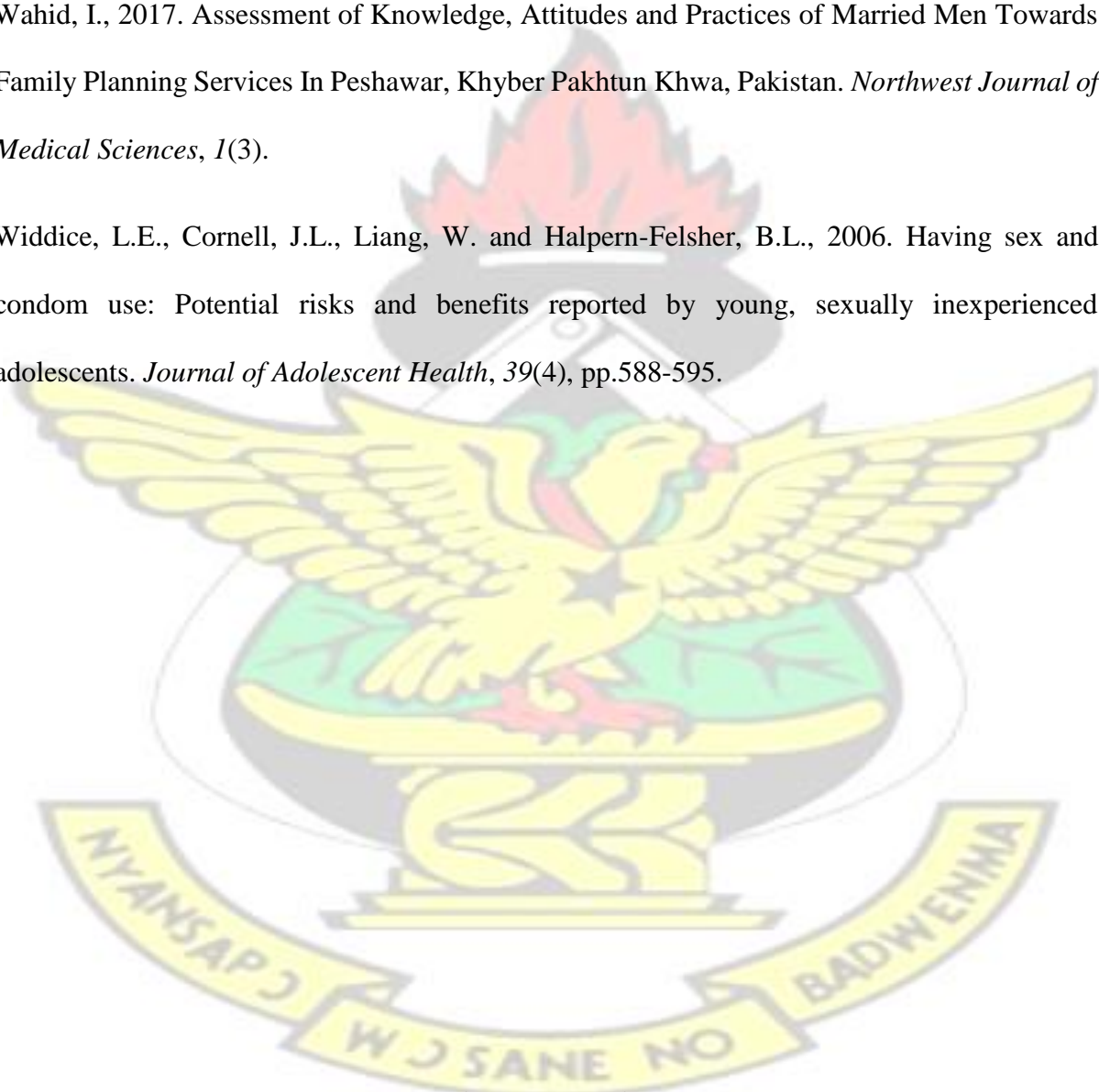
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APPENDIX A QUESTIONNAIRE

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY (KNUST), KUMASI
DEPARTMENT OF POPULATION, FAMILY AND REPRODUCTIVE HEALTH

QUESTIONNAIRE ON DETERMINANTS OF MODERN CONTRACEPTIVE USE BY SEXUALLY ACTIVE PERSONS OF REPRODUCTIVE AGE IN NEW TAKORADI, A COMMUNITY IN THE SEKONDI – TAKORADI METROPOLIS, WESTERN REGION, GHANA.

INTRODUCTION: Hello. My name is VIVIAN ZORMELO and I am a student of KNUST. I am conducting a study on issues that influence modern contraceptive use in sexually active persons of reproductive age in the New Takoradi Sub-Metropolitan Area.

I would be very grateful if you could participate in the interview process. The interview process will take about 10 – 15 minutes. You are guaranteed that whatever information you provide will be kept strictly confidential. Your participation in this interview exercise is voluntary and thus, you could stop the interview at any time. However, I hope that you will kindly participate fully in the interview process, since your views are important.

MAY I START NOW? 1 [] YES, PERMISSION IS GIVEN. START INTERVIEW 2. [] NO, PERMISSION IS NOT GIVEN. STOP.

Questionnaire Number.....

Interview Date.....

Interviewer ID

SECTION A: SOCIO-DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

Please tick as applicable in this part of the questionnaire

NO.	QUESTION	CLASSIFICATION/OPTION	COD E	CHECK
Q1	In what month and year were you born?	Month....., Year.....		DOB
Q1a	How old are you now in completed years?			Age
Q2	NB: The researcher will place the interviewee in one of the age clusters.	15-19	1	AgeRs
		20-24	2	
		25-29	3	
		30-34	4	
		35-39	5	
		40-44	6	
		45-49	7	
Q3	Sex	Male	1	Sex
		Female	2	
Q4	Are you currently in school?	Yes	1	Sch
		No	2	
Q5	What is the level of your education?	No formal education	1	Edn
		Primary	2	
		JHS	3	
		SHS	4	
		Tertiary	5	
Q6	What is your religious background	Protestant Christian	1	Rel
		Roman Catholic	2	

		Charismatic	3	
		Pentecostal	4	
		Islam	5	
		Traditionalist	6	
		Other, specify.....	7	
Q7	What ethnic group do you belong?	Ahanta	1	Ethn
		Wassa	2	
		Nzema	3	
		Fante	4	
		Ewe	5	
		Ga	6	
		Akan	7	
		Other, specify.....	8	
		Other, specify.....		
Q8	What is your marital status?	Married	1	Mar
		Single	2	
		Cohabiting	3	
		Widowed	4	
		Separated/Divorced	5	
Q9	With whom are you currently staying?	Both parents	1	Stay
		Single parent	2	
		Wife	3	
		Husband	4	
		Other, specify.....	5	
Q10	At what age did you have sex for the first time?		AgeS
Q11	NB: The researcher will place the interviewee in one of the age clusters.	15-19	1	AgeG
		20 - 24	2	
		25 - 29	3	
		30 - 34	4	
		35 - 39	5	
		45 - 49	6	
Q12	What is your occupation?	Trading	1	Occ
		Student	2	
		Formal work	3	
		Housewife	4	

		Artisanship	5	
			6	
		Other, specify.....		
Q13	How much do you averagely earn each month?	< 100 GHC	1	Inc
		101 – 200 GHC	2	
		201 – 500 GHC	3	
		501 – 1000 GHC	4	
		1001 – 2000 GHC	5	
		2001 – 5000 GHC	6	

		>5000 GHC	7	
		Unemployed	8	
		Student	9	

SECTION B: RESPONDENTS KNOWLEDGE, ATTITUDES AND PERCEPTIONS ON MODERN CONTRACEPTIVE USE.

Q14	Have you ever heard of a contraceptive method? <i>(If no, skip Q15 & Q16, AND MOVE TO Q17)</i>	Yes	1	CUse
		No	0	
Q15	If yes which type (s) of contraceptive methods do you know?	Injectable	1	CMe
		Intra - uterine device (IUD)	2	
		Male sterilization	3	
		Female sterilization	4	
		Male condom	5	
		Female condom	6	
		Diaphragm	7	
		Spermicides	8	
		Implants	9	
		Cervical cap	10	
		Pill	11	
		Emergency contraception	12	
Q16	Where did you hear of the contraceptive method(s) you have mentioned?	Parents	1	CHear
		Radio	2	
		Television	3	
		Print media	4	
		Friends	5	
		Teacher	6	
		Health worker	7	
		Partner	8	
		Internet	9	

		Others, specify.....	10	
Q17	Have you ever used contraceptives? <i>(If no move to Q22)</i>	Yes	1	CEver
		No	0	
Q18	If yes did you know about these contraceptive methods before using them?	Yes	1	CYes
		No	0	
Q19	If yes to Q17 which type of contraceptive methods? (If used more than one, tick)	IUD	1	CTyp
		The pill	2	
		Male sterilization	3	
		Female sterilization	4	
		Injectable	5	
		Implants	6	
		Male condom	7	
		Female condom	8	
		Diaphragm	9	
		Spermicides	10	

		Lactational amenorrhoea	11	
		Withdrawal	12	
		Foam/ jelly	13	
		Periodic abstinence/Calendar method	14	
		Emergency Contraceptive	15	
		Other [specify]	16	
Q20	When did you last use contraceptives?	Less than a week ago	1	CLst
		1 - 2 weeks ago	2	
		2 - 4 weeks ago	3	
		More than a month ago	4	
Q21	Why did you use the contraceptive (s) you have mentioned?	To delay pregnancy	1	CWhy
		To avoid teenage pregnancy	2	
		To space births	3	
		To avoid contracting STI	4	
		To marry before childbirth	5	
		Other, specify	6	
Q22	If no to Q17, will you ever use contraceptives in the future?	Yes	1	CFut
		No	0	
Q23		Desire to have children	1	CNot

	If no to Q22 why don't you want to use contraceptives in the future?	Fear of side effects	2	
		Lack of parental consent	3	
		Non- affordability	4	
		Religious prohibition	5	
		Others, specify	6	
Q24	Do you think only women should be concerned with contraceptive use?	Yes	1	Cwo
		No	0	
Q25	If yes to Q22, what are your reasons for future use of contraceptive?	To prevent unwanted pregnancies	1	CRe
		To prevent teenage pregnancies	2	
		Improves quality of life	3	
		Spacing of births	4	
		To treat painful menstruation	5	
Q26	If no to question 24, what are your reasons?	Contraception involves both males and females	1	CRNo
		Women are not primary decision makers	2	
		It brings mutual understanding between couples when either of them decides to use contraceptives	3	
		Other, specify.....	4	
Q27	Do you think women who use contraceptives have many sexual partners?	Yes	1	CMP
		No	0	
Q28	Should unmarried youth be allowed to access and use contraceptives?	Yes	1	CUm
		No	0	
Q29	If yes to question 28, what are your reasons?	Good for their health	1	UmYC
		It reduces teenage pregnancies	2	
		It keeps them in school	3	
		It prevents contracting sexually transmitted infections	5	
		It prevents the girls from dying from complications of illegal abortion	6	
		Not sure	7	
Q30	If no to question 28, what are your reasons?	Religious prohibition	1	UmNC
		Belief that sex is mainly for people who are married.	2	
		Cultural beliefs which prohibits premarital sex	3	

		Perception that use of contraceptives is a sign of sexual promiscuity.	4	
		Not Sure	5	
SECTION C: RESPONDENTS' ACCESSIBILITY TO CONTRACEPTIVE SERVICES				
Q31	Where do persons in your community access contraceptives?	Government Hospital	1	CAcc
		Government Health Post / CHPS	2	
		Pharmacy	3	
		Chemical/Drug Store	4	
		Family Planning/PPAG Clinic	5	
		Private Hospital	6	
		Drug Peddlers	7	
		Maternity Home	8	
		Mobile Clinic	9	
		Community Volunteer	10	
Q32	Where did you last access contraceptives?	Government Hospital	1	AcCL
		Government Health Post / CHPS	2	
		Pharmacy	3	
		Chemical/Drug Store	4	
		Family Planning/PPAG Clinic	5	
		Private Hospital	6	
		Drug Peddlers	7	
		Maternity Home	8	
		Mobile Clinic	9	
		Community Volunteer	10	
Q33	Where would you prefer to access contraceptives in your community?	Government Hospital	1	PreC
		Government Health Post / CHPS	2	
		Pharmacy	3	
		Chemical/Drug Store	4	
		Family Planning/PPAG Clinic	5	
		Private Hospital	6	
		Drug Peddlers	7	
		Maternity Home	8	
		Mobile Clinic	9	
		Community Volunteer	10	
Q34		Always	1	FPCh
	Do you get family planning methods of your choice when you visit a health facility?	Sometimes	2	
		Never	3	
Q35		Less than 30 minutes	1	

	How long do you have to travel to a health facility or pharmacy shop to access family planning services?	Thirty minutes to one hour.	2	
		Two hours	3	
		Others, specify	4	
Q36	Is it easy to approach health providers in the family planning clinic?	Yes	1	FPAp
		No	0	
Q37	Were health providers friendly?	Yes	1	HPFd
		No	0	
Q38	Were health providers willing to provide as much information and guidance on contraceptive method use?	Yes	1	HPIIn
		No	0	
Q39	What can you say about the cost of contraceptives?	Expensive/very costly	1	Cst
		Moderately costly	2	
		Affordable	3	
		Cheap	4	
Q40	Were you satisfied with services provided?	Yes	1	Sat



APPENDIX B - ETHICAL APPROVAL



KWAME NKURMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF HEALTH SCIENCES

SCHOOL OF MEDICAL SCIENCES / KOMFO ANOKYE TEACHING HOSPITAL
COMMITTEE ON HUMAN RESEARCH, PUBLICATION AND ETHICS



Our Ref: CHRPE/AP/437/17

14th September, 2017.

Mrs. Vivian Zormelo
Department of Nursing
Faculty of Allied Health Sciences
KNUST-KUMASI.

Dear Madam,

LETTER OF APPROVAL

Protocol Title: *"Determinants of Modern Contraceptive Use by Sexually Active Persons of Reproductive Age in the New Takoradi Sub Metropolitan Area."*

Proposed Site: *New Takoradi Community, Sekondi-Takoradi Metropolis.*

Sponsor: *Principal Investigator.*

Your submission to the Committee on Human Research, Publications and Ethics on the above named protocol refers.

The Committee reviewed the following documents:

- A notification letter of 18th July, 2017 from the Sekondi-Takoradi Metro Health Directorate (study site) indicating approval for the conduct of the study in the Metropolis.
- A Completed CHRPE Application Form.
- Participant Information Leaflet and Consent Form.
- Research Protocol.
- Questionnaire.

The Committee has considered the ethical merit of your submission and approved the protocol. The approval is for a fixed period of one year, beginning 14th September, 2017 to 13th September, 2018 renewable thereafter. The Committee may however, suspend or withdraw ethical approval at any time if your study is found to contravene the approved protocol.

Data gathered for the study should be used for the approved purposes only. Permission should be sought from the Committee if any amendment to the protocol or use, other than submitted, is made of your research data.

The Committee should be notified of the actual start date of the project and would expect a report on your study, annually or at the close of the project, whichever one comes first. It should also be informed of any publication arising from the study.

Yours faithfully,

Rev. Prof. John Appiah-Poku.
Honorary Secretary
FOR: CHAIRMAN

APPENDIX C – DUMMY TABLES

VARIABLES	OPERATIONAL DEFINITION	SCALE OF MEASUREMENT
Socio-demographic indicators		
Age	Respondent age from the last birth day	Continuous variable
Residence	Where respondents live whether urban, periurban or rural	Nominal
Religion	What Respondents believe in based up on their faith	Nominal
Marital status	Whether Respondent is married or not	Nominal
Education	Respondent' educational status	Ordinal
Wealth index	Respondent' household socio-economic status	Ordinal
Age at first sex	Respondent's first sexual encounter	Continuous
Most recent sexual activity	How long ago from the survey did the person last engage in sexual activity [Days ago, Weeks ago, Months ago and Years ago?]	Ordinal
Optimal number of children	Number of children perceived as adequate for a person	Continuous
Number of children	Current number of children a person has	Continuous
Attained optimal number	Currently has number considered optimal	Binary
Desire for limiting	Wish to stop having further babies	Binary
Desire for spacing	Wish to have children within 2 years or beyond	Binary
Desire for more children	Interest in having more children and by whom? Respondent alone; partner alone; or both?	Binary

Currently working	Whether respondents are gainfully employed	Binary
Knowledge, attitudes and perceptions on contraceptive use		
Ever use of contraceptives	Whether respondents have used contraceptives before	Nominal
Current use of contraceptives	Respondents who are presently using contraceptives	Nominal
Discussed FP	Whether there is discussion on FP issues	Binary
Fertility preference	Number of children respondent desires to have	Continuous
Perceptions about FP	Whether family planning is good or not	Binary
Reasons/attitude	Respondent's behaviour towards family planning practices.	Binary
Partner's acceptance of FP	Partner's willingness to use FP [Yes; No; Don't know]	Binary
Contraception information from newspapers	Respondents exposure to contraceptive information from newspapers	Binary
Contraception information from the radio	Respondents exposure to contraceptive information from listening to radio	Binary
Contraception information from the TV	Respondents exposure to contraceptive information from watching TV	Binary
Other sources of contraceptive information	Friends; relatives; partner; places of worship; etc.	Binary

Accessibility of contraceptive services		
Cost	How costly or affordable contraceptive services are	Binary
Distance	How far one moves to receive contraceptive services	Continuous
Time	The time it takes to arrive at the service delivery point	Continuous
Availability	Contraceptive methods being there to be used	Binary
Care provider attitudes	How person providing contraceptive service related to client	Nominal
Acceptability	Whether client is satisfied with service provided	Binary

APPENDIX D - GANTT CHART OF RESEARCH ACTIVITIES



APPENDIX E – BUDGET

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI							
SCHOOL OF PUBLIC HEALTH							
DISERTATION BUDGET							
NO.	ITEMS DESCRIPTIONS	NUM BER	FREQ	UNIT COST GHS	TOTAL COST GHS	PERSO N RESP	REMAR KS
1.0	Materials					THE PRINCIPAL INVESTIGATOR/RESEARCHER	
1.1	Stationery (pens, pencil, Rim of A4 Sheet)	5	1	10.00	50.00		
1.2	IRB/Ethical Clearance	1	1	100.00	100.00		
1.3	Printing of questionnaire	200	1	2.00	400.00		
1.4	Pre-testing	10	1	5.00	50.00		
	Sub-Total	216	4	117.00	600.00		
2.0	Personnel Allowance						
2.1	Researcher ®	1	30	20.00	600.00		
2.3	Research Assistants	3	15	15.00	675.00		
2.4	Data Manager	1	15	15.00	225.00		
	Sub-Total	5	60	50.00	1,500.00		
3.0	Training						
3.1	Training of Research Assistants	4	1	40.00	160.00		
	Sub-Total	4	1	40.00	160.00		
3.0	Transport						

3.1	Recognisance visit	1	1	20.00	20.00		
3.2	T&T for Researcher	1	15	20.00	300.00		
3.3	T&T for Researcher Assistants	3	15	10.00	450.00		
	Sub-Total	5	31	50.00	770.00		
4.0	Finalization and Dissemination of Report						
4.1	Printing of final dissertation	5	1	23.0	115		
4.2	Binding of final report	5	1	10	50		
4.3	CD for softcopies	4	1	2	8		
	Sub-Total	14	3	35	173		
	GRAND TOTAL	244	99	292.00	3,203.00		



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