



UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

**HUSBAND-WIFE DECISION MAKING DYNAMICS AND
MODERN CONTRACEPTIVES METHOD USE TYPE IN GHANA**

BY

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ACCEPTANCE

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Date: May 10, 2021

DECLARATION

I, DORCAS KWARTENG, declare that unless otherwise indicated in the text or references, this is the result of original research undertaken under supervision at the Regional Institute for Population Studies at the University of Ghana, Legon, between August 2019 and October 2020 and that neither a part nor the whole of it has been presented elsewhere for the award of another degree.



.....
Dorcas Kwarteng

Date: May 10, 2021

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DEDICATION

This work is first and foremost dedicated to the Almighty God, for giving me life and strength and also to my husband, Mr. Richard Baffo Kodom, a hard-working husband who laboured for my education.

ABSTRACT

The literature suggests an important association between husband-wife decision making and contraceptive use. Decision making in every marital union is very crucial because it helps to strengthen the bond between couples as negotiations can be made on delicate issues, such as those pertaining to fertility preference, the type of modern contraceptive method to use, and other reproductive health issues that affect the overall health and wellbeing of the woman. The main objective of the study was to describe the relationship between husband-wife decision making dynamics on the type of modern contraceptive methods used in Ghana. The study used the 2014 Ghana Demographic and Health Survey (GDHS) women's file dataset and the weighted sample consisted of 1,164 married or cohabiting women who were currently using a modern method of contraception.

Husband-wife decision making and the type of modern contraceptive method used was investigated by using cross tabulations and binary logistic regression techniques to assess their associations. At the multivariate level, the relationship between decision making and the type of modern contraceptive method used was analyzed while controlling for socio-economic and demographic characteristics of the woman using binary logistic regression. Decision making was found to be a statistically significant predictor of the type of modern contraceptive method used as those making joint decisions were more likely to use long-acting and permanent methods of contraception. A woman's age, ethnicity, wealth quintile, partner's age and education showed significant associations with the type of contraceptive method used. Findings from the study inform recommendations to improve joint decision making among couples. There is also a need for further qualitative research to explore the details of husband-wife decision making and how it influences their type of modern contraceptive method used.

TABLE OF CONTENTS

ACCEPTANCE	i
DECLARATION	ii
ACKNOWLEDGEMENT	iii
DEDICATION	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
 CHAPTER ONE	 1
INTRODUCTION	1
1.0 Background of the Study.....	1
1.1 Statement of the Problem.....	3
1.2 Research Questions	6
1.3 Rationale of the Study.....	6
1.4 Research Objectives	8
1.5 Organization of the Study	8
 CHAPTER TWO	 10
LITERATURE REVIEW, THEORITICAL PERSPECTIVES AND CONCEPTUAL FRAMEWORK.....	10
2.1 Introduction	10
2.2 Modern Contraceptives	10
2.3 Husband-wife Decision Making on Type of Modern Contraceptive Methods.....	12
2.4 Factors that Influence the Type of Modern Contraceptive Method Used.....	15
2.4.1 Age of Woman	15
2.4.2 Educational Level.....	16
2.4.3 Wealth Quintile	17
2.4.4 Religion	18
2.4.5 Place of Residence.....	20
2.4.6 Ethnicity	22
2.4.7 Employment	23
2.4.8 Knowledge.....	24
2.4.9 Breastfeeding.....	24

2.4.10 Parity	26
2.4.11 Partner Characteristics.....	26
2.5 Gaps in the Literature.....	28
2.6 Conceptual Framework.....	28
2.7 Theoretical Underpinnings.....	33
2.8 Study Hypotheses.....	34
 CHAPTER THREE.....	 35
METHODOLOGY.....	35
3.1 Introduction.....	35
3.2 Study Design.....	35
3.3 Source of Data.....	35
3.4 Sampling Design.....	35
3.5 Inclusion and Exclusion Criteria.....	36
3.6 Measurement of Variables	37
3.6.1 Dependent Variable	37
3.6.2 Independent Variables.....	37
3.6.3 Control and Intermediate Variables	38
3.7 Methods of Data Analysis.....	40
3.8 Binary Logistic Regression.....	40
3.9 Limitations of Data	41
 CHAPTER FOUR.....	 43
BACKGROUND CHARACTERISTICS OF RESPONDENTS.....	43
4.1 Introduction.....	43
4.2 Independent and Dependent variables	43
4.2.1 Decision Making on Modern Contraception	43
4.2.2 Type of Modern Contraceptive Method Used.....	44
4.3 Characteristics of Respondents	45
4.3.1 Age of Woman	45
4.3.2 Type of Place of Residence	46
4.3.3 Wealth Quintile	47
4.3.4 Religion	47
4.3.5 Ethnicity	48

4.3.6 Educational Attainment.....	49
4.3.7 Employment Status.....	50
4.3.8 Partners' Education	51
4.3.9 Partners' Employment Status	51
4.3.10 Breastfeeding.....	52
4.3.11 Knowledge on Modern Contraceptives	53
4.3.12 Parity	53
4.3.13 Partner's Age	54
CHAPTER FIVE.....	55
RELATIONSHIP BETWEEN HUSBAND-WIFE DECISION MAKING, DEMOGRAPHIC, SOCIO-ECONOMIC AND PARTNER CHARACTERISTICS AND TYPE OF MODERN CONTRACEPTIVE METHOD USED.....	55
5.1 Introduction.....	55
5.2 Couple's decision making about contraception and the type of modern contraceptive method used	55
5.3 Respondent's socio-demographic, socio-economic and partner characteristics and type of modern contraceptive method used	56
5.3.1 Respondent's age and the type of modern contraceptive method used.....	56
5.3.2 Respondent's type of place of residence and the type of modern contraceptive method used.....	57
5.3.3 Respondent's ethnicity and the type of modern contraceptive method used	58
5.3.4 Respondent's wealth quintile and the type of modern contraceptive method used	58
5.3.5 Respondent's religion and the type of modern contraceptive method used.....	59
5.3.6 Respondent's educational level and the type of modern contraceptive method used	60
5.3.7 Respondent's partners' education and the type of modern contraceptive method used.....	61
5.3.8 Respondent's employment status and the type of modern contraceptive method used.....	62
5.3.9 Respondent's breastfeeding status and the type of modern contraceptive method used.....	63
5.3.10 Respondent's knowledge on modern contraceptives and the type of modern contraceptive method used	64

5.3.11 Respondents partners' occupation and the type of modern contraceptive method used.....	65
5.3.12 Respondent's Parity and the type of modern contraceptive method used.....	66
5.3.13 Respondent's partners' age and the type of modern contraceptive method used.....	67
CHAPTER SIX	68
RELATIONSHIP BETWEEN DECISION MAKING, WOMEN AND PARTNERS CHARACTERISTICS, SOCIO-ECONOMIC, AND TYPE OF MODERN CONTRACEPTIVE METHOD USED	68
6.1 Introduction.....	68
6.2 The effect of decision making on the type of modern contraceptive method used.....	69
6.3 The effect of decision making and individual characteristics of women on the type of modern contraceptive method used.....	70
6.4 The effect of decision making and individual characteristics of women on the type of modern contraceptive method used controlling for intermediate variables and other factors.....	75
CHAPTER SEVEN.....	81
SUMMARY, CONCLUSION AND RECOMMENDATIONS	81
7.1 Summary of Findings	81
7.2 Recommendations	83
7.3 Conclusion	84
REFERENCES.....	86

LIST OF TABLES

Table 3.1 Measurement of the control and intermediate variables	39
Table 4.1 Percentage Distribution of Respondents by their Age.....	46
Table 4.2 Distribution of respondents by partners' employment status.....	52
Table 4.3 Distribution of respondents by Parity	54
Table 4.4 Distribution of respondents by partners' age	54
Table 5.1 Association between decision making and the type of modern contraceptive method used.....	56
Table 5.2 Association between women's place of residence and the type of modern contraceptive method used	57
Table 5.3 Association between women's ethnicity and the type of contraceptive method used.....	58
Table 5.4 Association between respondent's household quintile and type of modern contraceptive method used.	59
Table 5.6 Association between respondent's religion and type of contraceptive method used.....	60
Table 5.7 Association between women's educational level and type of modern contraceptive method used	61
Table 5.8 Association between Partners' education and type of modern contraceptive method used.....	62
Table 5.9 Association between women's employment status and type of contraceptive method used.....	63
Table 5.10 Association between breastfeeding and type of modern contraceptive method used.....	63
Table 5.11 Association between knowledge of contraceptives and type of modern contraceptive method used	64
Table 5.12 Association between Partner's occupation and type of modern contraceptive method used.....	65
Table 5.13 Association between respondent's parity and type of modern contraceptive method used.....	66
Table 5.14 Association between respondent's partner's age and type of modern contraceptive method used	67
Table 6.1 A Binary logistic regression model showing the variation in decision making and type of contraceptive method used	70

Table 6.2 A Binary logistic regression model showing the variation in decision making, women's individual characteristics and type of modern contraceptive method used.....	74
Table 6.3 A Binary logistic regression model showing the variation in the type of modern contraceptive method used by decision making, women's individual characteristics, intermediate variables and other factors.	75

LIST OF FIGURES

Figure 2.1 Conceptual framework showing husband-wife decision making and type of modern contraceptive method used in Ghana.....	30
Figure 4.1 Distribution of respondents by decision making on contraception	44
Figure 4.2 Distribution of respondents by type of modern contraceptive method used	45
Figure 4.3 Distribution of respondents by type of place of residence	46
Figure 4.4 Distribution of Respondents by Wealth Quintile.....	47
Figure 4.5 Distribution of respondents by religious affiliation.....	48
Figure 4. 6 Distribution of respondents by ethnic groups.....	49
Figure 4.7 Distribution of respondents by educational attainment	50
Figure 4.8 Distribution of respondent by employment status	50
Figure 4.9 Distribution of respondents by partners' education.....	51
Figure 4.10 Distribution of respondents by currently breastfeeding.....	53
Figure 4.11 Distribution of respondents by knowledge on modern contraception	54

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

Family Planning enables individuals in union to plan and achieve the number of children they desire by means of spacing and controlling their births which therefore assist to reduce the dangers of unfavorable maternal, peri-natal and child outcomes (WHO, 2005). According to United Nations Population Fund [UNFPA] (2017), accessing safe and voluntary family planning is a human right and for this reason very critical to gender equality and empowerment of women which is also a key aspect in poverty reduction. The problem of induced abortion and its associated complications are the most common results of unintended pregnancies which occurs as a result of the non-use of contraceptives (Adebowale et al., 2014; Gribble & Haffey, 2008, Nonvignon & Novignon, 2014). Globally, the range of deaths that are maternal are envisioned to be higher among women who do not use contraceptives (Hameed et al., 2014). Contraception is therefore an essential component of reproductive health and has positive effects on the health of women (WHO, 2012).

Similarly, contraceptive use provides significant protection for women by not only improving their health but also gives them the opportunity to participate in non-domestic activities such as joining the labor force, and also taking advantage of educational opportunities (Cleland et al., 2006; Tsui, McDonald-Mosley & Burke, 2010). Modern methods of contraception can be categorized into three: a) short-acting contraceptive methods which comprise of oral contraceptive pills, spermicides, condoms and injectable. b) long-acting reversible contraceptive methods (LARC), that is, intrauterine devices (IUD) and hormonal implants and c) permanent methods which include sterilization, tubal-ligation or vasectomy (Creanga, Gillespie, Karklins & Tsui, 2011). The short-acting contraceptive methods are normally used than LARC methods, despite it being extra effective,

inexpensive, and better tolerated than short-acting methods (Secura et al., 2010). Although long-acting and permanent methods (LAPMs) are the simplest contraceptive methods of present day birth control, they're the least utilized contraceptive methods globally and especially in sub-Saharan Africa (Family Health International, 2008; WHO, 2012). A number of reasons for their underutilization include, insufficiency of commodities, unavailability of skilled personnel and the inaccessibility of services to potential clients, among others (Family Health International, 2008). Thus, the use of LAPMs will help to effectively reduce unplanned births and induced abortions which in the long run will help families and countries to achieve their health goals (United Nations, 2003).

The fertility rates in most sub-Saharan African countries however remain excessively high, usually due to poor access to contraception because of cultural, monetary and political barriers (White, Hopkins, Potter & Grossman, 2013). Even though modern contraception usage is increasing in many parts of the world, only about 17% of reproductive aged women in sub-Saharan Africa use a modern contraceptive method (Singh & Darroch 2012). The use of contraceptives has improved in continents like Asia and Latin America, however remains low in sub-Saharan Africa of which Ghana is no exception (Singh & Darroch, 2012). In Ghana, the number of children a woman is expected to have dropped from 5.82 births for each woman in 1988 to 4.10 births per woman in 2014 (Ghana Demographic and Health Survey, 2014). These indicate that although there have been a reduction in the number of children per woman over the past years, the contraceptive prevalence rate for women of reproductive age in Ghana is below 30% (GDHS, 2014).

In spite of various technological advancements in modern contraceptive methods, there is still a worldwide problem of unintended pregnancies that affect women, their families and the society as a whole (Obwoya, Wulifan & Kalolo, 2018). Women's involvement in decision-making processes, whether at the family or household, community, national or

international levels, was considered as one of the critical indicators of poverty decline and women empowerment in the Millennium Development Goals (Grown, Gupta & Kes, 2005; Van Staveren, 2013). The ability of women to participate actively in decision-making is hindered by socio-cultural practices which identify men as superior to women (Wrigley-Asante, 2013). However, women can actively partake in making decisions at the household if they have access to resources like education, training and income (Duflo, 2012).

The income of a woman makes her independent financially which makes it possible for her to equally contribute to the expenses of the household. This, in the end, makes her autonomous to partake in decisions in the family, which includes contraceptive method use. In sub-Saharan Africa, traditional religious ideals and practices rooted in lineage systems influence the structure of society which affect women and men choices concerning contraceptive use (Yakong et al., 2010). Thus, empowering women and increasing their knowledge of modern contraception will increase their decision making power when it comes to the type of contraceptive method to use.

1.1 Statement of the Problem

High fertility rate and consequently high rate of population increase are many of the crucial economic and social issues facing developing countries including Ghana. Likewise, unplanned pregnancies and their related consequences such as unsafe abortion among women in their reproductive ages are associated with poorer maternal and infant health outcomes and these place a significant financial burden on families as well as the Government (Adjei et al., 2015; Payne & Fanarjian, 2014). Globally, it was estimated that about 210 million women become pregnant each year of which about 75 million (36%) are unplanned and could have been prevented through the use of contraceptives (Amalba, Mogre, Appiah & Mumuni, 2014). Due to the inadequate use of contraceptives, it was estimated by the World Health Organization (WHO) that in every eight minutes one woman

dies in developing countries from unsafe abortion rising from unplanned pregnancies, which constitutes one of the leading causes of maternal mortality and morbidity (Amalba, Mogre, Appiah & Mumuni, 2014).

In few countries or among some social groups, the husband has greater influence than his spouse with regard to decision making in the household. Since the 1994 International Conference on Population and Development, empowerment of women has been recognized as important to their access to family planning. However, their loss of authority within the household restricts their capabilities to make decisions about family planning practice and even makes it difficult for them to openly have a discussion about family planning with their partners. This may be as a result of the stigma associated with the use of modern contraception, extending from the feelings of mistrust as well as the love for many children (Ogunjuyigbe et al., 2009).

The patriarchal setting in Ghana contributes greatly to gender inequality, hence women are normally discriminated against in decision making (Tagoe & Abakah, 2015, Lattof et al., 2018). When it comes to issues concerning contraceptive decision making in the household, the male partner plays a very vital role as well as decide on when to space their children. Hence, couples who jointly makes decisions are likely to mutually decide on which contraceptive method type to use, the number of children they want to have and the spacing between their children. However, in Africa, most of the decisions taken by couples on fertility are controlled by the male partner (Kamal et al., 2012).

Ghana has embarked on several interventions to enhance the use of contraceptives among women. Some of these interventions include introduction of reproductive health and family planning programs by the Ministry of Health with the primary aim to reduce maternal and infant deaths, likewise support and enhance access to services of reproductive health in

every aspect of health care delivery. The Government of Ghana under the Ministry of Finance and Economic Planning established the Ghana National Family Planning Programme in 1970 with the belief that every couple has the fundamental human right to decide on the number of children they intend to have as well as their spacing (Odoi-Agyarko, 2003). Though, there are several attempts made by government to improve contraceptive use, the prevalence rate continues to be relatively low.

Majority of studies on contraceptive decision-making among couples have focused on contraceptive use in general (Bawah, 2002; Sharan & Valente, 2002; Gebreselassie & Mishra, 2007; Yue, O'Donnell & Sparks, 2010, Darteh, Doku & Esia-Donkoh, 2014, Atiglo & Codjoe 2019, Afriyie & Tarkeng, 2019) with relatively few studies on contraceptive method type (Mutombo, & Bakibinga, 2014, Salway, 1994) using nationally representative data. Even though the autonomy of women is very important in the household, evidence suggests that the opposition by the partner/husband is one of the factors that result in an unmet need for family planning among 10% of women (Darroch, Sedgh & Ball, 2011). This evidence implies an involvement of men in making contraceptive decisions which is very important to ensure effective contraceptive choice among both partners.

One way of improving modern contraceptive usage is to persistently address communication and decision making among couples and their choice of modern contraceptive methods, particularly long-acting and permanent methods. Literature has revealed that the LAPMs are the most effective and most reliable methods of contraception (USAID, 2007). However, these methods remain on the lower side and often a missing aspect in many family planning and reproductive health programs. An effective family planning program offer users the opportunity to pick out from a complete range of modern methods of contraception, but in many places including Ghana LAPMs are the least available, the least used, and in all likelihood the least understood methods by women (USAID, 2007).

This study will add to the literature on this subject by presenting a different side of couple's communication about contraception, which is decision making about whether to use a short-acting method of contraception or LAPMs. Given the importance of LAPMs as the most effective birth control due to its long lasting nature and inexpensiveness, this study attempts to fill the literature gap by providing results of an investigation of decision making between husband and wife on the type of modern contraceptive method used in Ghana.

1.2 Research Questions

The following research questions will be answered at the end of the study:

- i. What is the relationship between husband-wife decision making and the type of modern contraceptive method used in Ghana?
- ii. What is the relationship between individual characteristics of women and the type of modern contraceptive method used in Ghana?
- iii. Are partner's socio-economic characteristics associated with the type of modern contraceptive method used in Ghana?

1.3 Rationale of the Study

Contraception remains an important strategy for improving women's reproductive health and wellbeing. The study would provide useful information to the Ghana Health Service and other institutions that deal with sexual and reproductive health on the different method of contraceptives used. This would help provide insight into the different modern contraceptive methods used amongst couples.

The use of modern contraceptive methods have been found to promote gender equality and also improve educational and financial empowerment for women (Apanga & Adam, 2015). This implies that the use of contraception among women of reproductive ages can be a significant and cost-effective tool that will help in poverty eradication and socio-economic

development in developing countries of which Ghana is no exception. Therefore, a study in this area will inform policy decisions and foster discussions on modern contraceptive usage among women which will help improve the development of the country through the promotion of education and empowerment of women.

Modern contraceptive usage among couples has become a global concern since the problems of non-use result in an increase in one's population which impedes the development of a country. (Boateng, 2013). Hence, there is the need to research into decision making among couples on the type of modern contraceptive method used. This is because contraceptive usage enables couples to space their children so that they can give adequate care and attention to the children they choose to have. It also relieves the women from the anxiety of becoming pregnant or having an unplanned pregnancy. In addition, since the study is using a nationally representative dataset, the contribution of this study, will be to help assess how the dynamics of decision making among spouses will inform the choice of a particular method of modern contraception.

Also, the result of the study will allow one to identify which type of husband-wife decision making leads to the use of modern methods of contraceptives among women in Ghana. That is, whether the decision to use modern contraceptive methods was solely the woman's decision, the husband/partner's decision or a joint decision. Furthermore, the study will also reveal the demographic, social and cultural factors that are linked to short-acting contraceptive methods or LAPMs use among women in Ghana.

The study will also consider the individual characteristics of the woman as well as that of the partner that are associated with the use of short-acting contraceptive methods or LAPMs. This will allow one to identify which of the characteristics of either the woman or the partner strongly result in the use of a particular method of modern contraceptives. The expected

outcomes of this research can also be compared to other studies on the characteristics of women who use either the short-acting methods of contraception or LAPMs.

Finally, the results of the research are to enhance and make a contribution to literature within the area of reproductive and maternal health care in Ghana and also can be used by any interested person to serve as a guide for further study in this area.

1.4 Research Objectives

The main objective of the study is to describe the relationship between husband-wife decision making dynamics and modern contraceptives method type used in Ghana.

The specific objectives of the study are to,

- i. Examine the relationship between husband-wife decision making and the type of modern contraceptive method used in Ghana.
- ii. Analyze the relationship between individual characteristics of women and the type of modern contraceptive method used in Ghana.
- iii. Investigate partner's socio-economic characteristics associated with the type modern contraceptive method used in Ghana.

1.5 Organization of the Study

The study comprises of seven chapters. The first chapter outlined the background of the study, problem of the study, research objectives and research questions. Also, the chapter included the rationale of the study. The second chapter contains the review of literature relevant to the study, conceptual framework, hypotheses as well as theoretical underpinnings. The third chapter discusses the methodology adopted for conducting the study. Descriptive statistics are used to investigate and describe the distribution of the participants by their background characteristics, partners' characteristics and decision making about modern contraception in chapter four. The fifth chapter looks at the bivariate

associations between the control and intermediate variables as well as the associations on the independent variable and the dependent variable which is type of modern contraceptive method used. Chapter six explains the binary logistic regression models used in the study. These were conducted to examine the association between husband-wife decision making and the type of modern contraceptive method used, while controlling for individual characteristics of the woman and intermediate variables. The final chapter summarizes the major findings of the study, draws conclusions and makes recommendations.

CHAPTER TWO

LITERATURE REVIEW, THEORITICAL PERSPECTIVES AND CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter presents a review of relevant literature on husband-wife decision making and type of modern contraceptive method used in Ghana. It is important to conduct literature review in every study because, it shows relevant theories, controversies and arguments in a study. It also shows significant scientific body of work which has previously been done in the area being researched into. The topics discussed in the literature consist of modern contraceptives, concept of husband-wife decision making, individual and partner's characteristics that affect the type of modern contraceptive method used. The chapter also discusses the conceptual framework and theoretical perspectives that guided the study as well as hypotheses that will be tested.

2.2 Modern Contraceptives

Contraception is defined as the deliberate practice of methods to avoid or space future pregnancy (Baidoo, 2013). Access to contraceptive methods involve the application of one of the various methods, devices, drugs, sexual practices, or surgical procedures to prevent conception or impregnation (Ahmed & Zayed, 2013). It can be divided into two methods: traditional and modern contraceptive methods. Traditional methods include the natural family planning, withdrawal (coitus interruptus) and sexual abstinence (WHO, 2008; 2013). Modern contraceptives are easily classified into four (4) methods and this includes the Barrier methods (examples: diaphragm, cervical shield, cervical cap, contraceptive sponge, female and male condom), hormonal methods (examples: combined pill (COC), progestogen- only pill (POP), injections, vaginal ring and contraceptive patch), implantable devices (examples: implantable rods, intrauterine devices (IUDs), intrauterine systems

(IUS) and implantable rods) Permanent birth control methods (examples: male and female sterilization), lactation amenorrhea (LAM) and Emergency contraceptives (WHO, 2008; 2013).

It can further be grouped into LARC methods, short-acting contraceptive methods and permanent methods. Long-acting and permanent methods (LAPMs) encompass implants, sterilization and intrauterine devices which are used to reduce child bearing and short-acting methods include condoms, spermicides, pills and injectable (GHS, 2013). However, male condoms and sterilization are examples of modern contraceptive methods that are for men only (WHO, 2015). LAPMs are typically used to control births, while short-acting contraceptive methods are used for delaying birth and child spacing. LAPMs have been defined to have less rate of failure, more secure and cost effective than short acting contraceptive methods.

Women in sub-Saharan Africa have been recognized as unable to use or access modern contraception, specifically, LAPMs, with reasons related to both demand and supply (Waggoner, Lanzi & Klerman, 2012, Ochako et al., 2016). They often depend on short-acting contraception or traditional methods, which are liable to failure and inconsistent use (Lipetz, Phillips & Fleming, 2009, Secura et al, 2010). Meanwhile, many LARC methods provide more than 10 years protection against unplanned pregnancy. They are a few of the most reliable, safest and cost-effective forms of birth control available nowadays (Shoupe, 2016, Stoddard, McNicholas & Peipert, 2011). In spite of this, these methods are not usually utilized in sub-Saharan Africa, where they could benefit hundreds of thousands of women seeking to control their fertility.

2.3 Husband-wife Decision Making on Type of Modern Contraceptive Methods

The system of recognizing and selecting alternatives based on the principles and preferences of the one making the decision is termed as decision making (Fulop, 2005). It can further be defined as the process of choosing from among two or more options in order to come up with an answer for a given problem (Trewatha & Newport, 2012). This implies that before one can make any decision there are alternative choices that need to be considered. It is very important to go through the possible alternatives and choose the one that best fits your goals, desires, values and objectives. As part of improving the relationship between couples as well as other matters relating to their reproductive life, communication is very key when it comes to making such decisions.

Studies have shown that decisions made by couples should be in the best interest of both partners. Thus, decisions made by married couples are to help them make the right choices and also to inform them on the way forward. When it comes to issues on reproductive health, the processes of making decisions are very delicate and requires the attention of both partners to compromise to reach a consensus (Trewatha & Newport, 2012). Decision making amongst couples is very important because it gives them the opportunity to compromise on delicate topics, especially those related to their preference in terms of fertility, the type of contraceptive method to use and other issues associated with reproductive health that affects the overall health and well-being of the woman. However, the lack of communication or joint decision making among couples can result in poor reproductive health knowledge, lack of trust towards modern contraceptive usage, having unprotected sexual relations and many others leading to unplanned pregnancies (Shahabuddin et al., 2016).

Joint decision making is considered generally by literature as the best choice for couples when it comes to contraceptive method adoption (Bawah et al., 1999; Bawah, 2002; Islam, Alam & Hasan, 2014). Thus, couples are able to make better decisions on fertility

preferences, family planning and contraceptive method to use when they jointly make decisions. Joint decisions for contraception are based on communication between a husband and a wife implying that effective communication among couples helps them to decide on what type of modern contraceptive method to use, how many children to have and the space between their offsprings. Traditionally, male decisions have dominated discussions concerning fertility in the household (Kamal et al., 2012). Women sometimes take the sole decision to use modern contraception not only to prevent unplanned or unwanted pregnancies but also to avoid contracting sexually transmitted infections. Contraceptive use in some cultures is solely the woman's decision, because they are expected to know more about contraceptives. However, these decisions might be restricted due to the less power of women when it comes to decision making (Martenowska et al., 2010; Darteh, Doku & Esia-Donkoh, 2014, Roger & Earnest, 2014). This supports a study by Bawah et al. (1999) which revealed that majority of the men, especially in the northern part of Ghana, do not support the idea of using modern methods of contraception. These men therefore make a decision to restrain themselves and their partners from the use of any modern contraceptive methods (Bawah et al., 1999).

On the other hand, a study in southern Ghana has revealed that, women practise contraception in secret with the reason that their husbands/partners refused to give their approval (Adongo et al., 2014). Similarly, a study conducted in Tanzania to investigate family planning decisions, perceptions and gender dynamics among couples, found that women used family planning without the consent of their husband as a deliberate attempt to protect their health and that of their children. Some of the explanations they gave for using this approach, were to ensure that, they have the power to plan and space the number of children they intend to have (Mosha, Ruben & Kakoko, 2013). This evidence suggests the

importance of the husband's inclusion in making contraceptive decisions which will serve as an avenue for effective contraceptive use.

The LAPMs consists of the implants, tubal ligation, vasectomy and IUDs. These methods are noted as the most effective methods of birth control which are very safe and convenient. Their long term nature reduces the fear of unplanned pregnancies among users due to its high continuation and effectiveness rates (USAID, 2007). Therefore, couples who desire to have the safest protection against pregnancy would benefit from the usage of LAPMs. Also, they may require fewer visits to health providers which in the long run will help them save time, effort and money. Although LAPMs are the most effective methods of modern contraception, globally and specifically sub-Saharan Africa, they are the methods that are least utilized (WHO, 2012).

The various factors responsible for its underutilization may be as a result of the healthcare system, the individual/couple or the nation. These factors include, lack of skilled personnel and supplies, and the long distances one needs to cover to be able to access services, among others (Family Health International, 2008). The use of LAPMs helps to reduce the incidence of abortion and pregnancy-related deaths among women due to their efficacy in reducing the prevalence of unplanned pregnancy. Moreover, short-acting contraceptive methods have high discontinuation and failure rates (Cleland et al., 2006). Interestingly, if the short-acting contraceptive method such as the condom is used consistently and effectively, it has a dual benefit of preventing an unplanned pregnancy and reducing the spread of HIV/AIDS (Cleland et al., 2006).

A cross-sectional study by Mutombo and Bakibinga, (2014) on the effect of joint contraceptive decisions among married females in Zambia found that women who jointly made decisions regarding family planning with their husband/partners are more likely to use

ILAPMs than women who decide alone. Similarly, a study on determinants of LAPMs found that couples who decide on modern contraceptive methods jointly were more likely to use LAPMs than when the women decide alone without involving their husbands/partners (Tekelab, Melka & Wirtu, 2015).

2.4 Factors that Influence the Type of Modern Contraceptive Method Used

2.4.1 Age of Woman

In terms of contraceptive use the age of a woman has been found to have a significant relationship, with women who are old most likely not to use contraceptives than women who are young (Blanc et al., 2009). A study by Tekelab, Melka and Wirtu (2015), using a multinomial logistic regression analysis found that age was independently associated with contraceptive use. The study revealed that, women aged 25–34 years used modern contraceptive methods more than women in the other age groups. Likewise, in the Democratic Republic of Congo, age was also associated with contraceptive use (Izale, Govender, Fina & Tumbo, 2014). Similarly, in Ghana, a bivariate analysis study by Aryeetey, Kotoh and Hindin (2010) in the Ga-East District showed that, age is significantly related with modern contraceptives usage.

A cross-sectional study conducted in southern Ethiopia on factors affecting the use of LAPMs in Jinka town showed that older women were more likely to use LAPMs as compared to the younger women. Likewise, a study conducted in central Ethiopia found that women in the older age groups were more likely to use LAPMs (Mekonnen et al., 2014). This could be linked to the fact that older women have more children and have intentions to limit births than younger ones with few or no children. A study by Nuhjah et al., (2013) on contraceptive methods used by women who are 35 years and above revealed that, in spite of a decline in fecundity in late years of reproduction, the incidence of unintended pregnancy and its related complication in pregnancy in this age group is high. Therefore, it was found

that the most popular contraceptive methods used by these women were tubal ligation, oral contraceptive pills (OCP) and condoms and these methods are modern methods.

Similarly, Frost and Darroch (2008) also reported that women who were 35-44 years old were likely to use the condom and other barrier methods of modern contraceptives. Again, some studies indicated that in spite of choosing sterilization as a common contraceptive method, hormonal methods were chosen by women aged 35 years and older in recent years (Frost, Singh & Finer, 2007).

2.4.2 Educational Level

Amongst the determinants of sexual reproductive behaviour and contraceptive use, the education of a woman is acknowledged to be one of the most important factors that help in fertility decline (Cleland & Rodriguez, 1988; Cochrane, 1988; Jejeebhoy, 1995; Martin, 1995). The educational level of a woman is very vital in the utilization of family planning services. Also, the education of a woman is one of the best investment that can be made as this gives her the autonomy to delay marriage, having children and making informed decisions on modern contraceptive use than less educated women (Tekelab, Melka & Wirtu, 2015). Research has equally evidenced that education usually improves knowledge and attitude of women towards modern contraceptive use. Many studies have also proven that education is associated with contraceptive use (Awingura & Ayamba, 2015; Mosha, Ruben & Kakoko, 2013).

A study conducted in Bangladesh on employment of women revealed that women who are employed and also well-educated had a likelihood of contraceptive use than uneducated women (Islam et al., 2016). Similarly, a study done in Nigeria by Igbockwe et al. (2014), reveals that highly educated women were likely to use modern methods of contraception than those with primary education (Igbockwe et al., 2014). There is also a common notion

that education makes women autonomous which empowers them to stand up to their husbands and provides them the opportunity to learn about how to control their fertility and make good use of health care systems available (Ogawa & Mason, 1986).

Education of women is important when it comes to decisions on contraceptive use as well as the education of their male partners. This will result in high contraceptive uptake by women (Gilbert & Bernard, 2015). In contrast, Ngome and Odimegwu, (2014) in a study oppose that education does not seem to change the pronatalist ideas since young women are expected generally to prove their fecundity through childbearing once they are married. However, contraceptive use becomes a necessity after bearing a child (Ngome & Odimegwu, 2014). A study in fourteen sub-Saharan African countries, found that women's education had a positive association with contraceptive use at all levels (Ainsworth, Beegle, & Nyamete, 1996). This indicates that once the woman becomes well-educated she literally becomes her husband's equal to a greater extent in terms of communication, which will improve her bargaining power in household decisions (Larsson & Stanfors, 2014).

A cross sectional study on the determinants of LAPMs utilization amongst married women in Ethiopia found that the education of a woman showed a significant relationship with the use of LAPMs. The study revealed that women who had secondary education and above were more likely to utilize LAPMs compared to those who had primary school education and lower (Tekelab, Melka & Wirtu, 2015).

2.4.3 Wealth Quintile

A woman's remuneration and wealth index determine her level of income which makes it easier for her to afford and access modern contraceptives (Javed et al., 2014, Nyarko, 2015). A study conducted from thirteen demographic and health surveys in Africa discovered that women with high wealth status were more likely to use contraceptives than those with low

wealth status (Creanga et al., 2011). Women who are poor are usually dependent and are not given the opportunity to control their own health. Thus, women who have high income are likely to use modern methods of contraception as compared to those with low income in Ghana (GSS et al., 2015). A study in Malawi revealed that, carrier women had the likelihood of using modern contraceptives than those not working and are housewives (Palamuleni, 2014). Again, a study in rural Zambia among married women revealed that wealthier women were more likely to use modern contraceptives than women who were poor. The possible reason for this finding could be that, women who were wealthy had the resources to purchase modern contraceptives by not necessarily relying on their partners (Lasong et al., 2020).

2.4.4 Religion

Religion is another factor that influences the decision of women to use contraceptives. Even though the educational level and income status of a woman plays a major role in her decision to use contraceptives, one's religious beliefs also have an influence on her decision to use contraceptives. Also, source of information, culture and religion have been identified as factors that influence women's decision to use a particular method of modern contraception (Srikanthan & Reid, 2008, Javed et al., 2014). In a survey conducted in southern Mozambique on religious involvement and modern contraceptive use found that, modern contraceptive use was higher among women who were Catholics than among traditional and protestants women (Agadjanian, 2013). In contrast a study by Tawiah (1997), came up with a finding that cultural and religious background of a person did not have any effect on their use of contraception (Tawiah, 1997).

The study further revealed that ethnicity and religious affiliation of a woman does not really affect her usage of modern methods of contraception if she is highly educated. This finding is confirmed by a study in Accra which revealed that the religion a woman belongs to does not affect her decision to use modern contraceptives (Adanu et al., 2009).

A study conducted in Navrongo by Bawah et al., (1999), on women's fears and men's anxieties in Ghana also revealed that, some women may not use contraceptives for fear of ancestral punishment. This is because they believed that their forefathers were not in support of the use of contraceptives, and that they may lose their lives or may not be blessed by them if they continue to practice contraception (Bawah et al., 1999). Palamuleni (2014), in a study in Malawi, noted that the usage of contraception was low among Muslims and Catholics, as these religions value children based on Biblical and Quranic principles. Amongst the Catholics, they consider the use of contraception as undesirable but view population increase as positive which resulted in low contraception usage among them (Palamuleni, 2014). A similar study by Gilbert and Bernard (2015), confirmed these observations that, respondents who were Muslims were the least people who used contraception, because their doctrine discourages artificial family planning or contraception, followed by Catholics.

Likewise, a comparative analysis study conducted by Wusu, (2015), revealed that the reason why women of Islam and Traditional religions were not likely to use modern contraceptives could be explained by their poorer socioeconomic status. The study further explained that, the ancestors of African traditional religion are honored through the bearing of children who serve as their descendants. This is because they consider high fertility as morally good which brings divine approval (Wusu, 2015). Studies have also shown that Catholics have a firm stand on artificial birth control but when it comes to natural methods they are a bit flexible (Fagley, 1967, Blake, 1984; Coale, 1986). This however links women of this religion to resort to the use of methods that are natural (Lesthaeghe, 1989). Yet, in recent times, things might have changed. The current trends of education on contraception across various media on the need to limit births in Ghana have resulted in changes in contraceptive use among these religions. Some studies show that women affiliated to the Muslim Religion were also more likely to use a method of contraception as compared to

women who do not belong to any religion. Yet, the Islamic Religion seems to caution its members to produce additional children and increase in number (Caldwell, 1968; Chamie, 1981; Fagley, 1967; Kirk, 1965).

2.4.5 Place of Residence

The type of place of residence of a woman is another factor that has been found to have an influence on contraceptive use. It consists of whether a woman resides in an urban or a rural area. Majority of women live in rural areas, however those in the urban areas have greater probabilities of using modern contraceptive methods than women in rural areas (Igbodkwe et al., 2014). In developing countries for instance, women in rural areas live in poor households and are also not highly educated which affects their usage of contraceptives. Thus, women who live in urban areas have a lower level of unmet need for contraception. The results of a study in Osun state, showed that women who reside in urban areas tend to use contraceptives more as compared to those who reside in rural areas (Olalekan & Olufunmilayo, 2012). Similarly, a study in Ethiopia, found that rural women were less likely to use modern contraceptives compared to urban women (Bogale et al., 2011).

Likewise, a study in five countries in sub-Saharan Africa showed that women who live in rural areas were less likely to use modern contraception as compared to their urban counterparts in Kenya and Ghana (Tawiah, 2011). Studies in Ethiopia revealed that women who live in areas that are rural had the likelihood of making an independent decision on modern contraceptive usage than urban women (Central Statistical Authority, 2006). In rural areas especially delivery of services of health care is undeveloped and deaths of infants are also on the rise. As a result, potential family size also increases because there are fewer surviving children and so couples may decide to have many children to replace the ones who are dead (Heaton, Jacobson & Fu, 1992). Therefore, the motivation to limit births does

not exist. However, improving the accessibility to health care services increases programs of fertility control.

In Ghana, fertility control services are provided at a low cost because of the subsidy provided by the Government to improve health care delivery. Hence, it is expected that regular use of modern contraception as well as availability and understanding of family planning services would be higher in urban centers and large towns where medical services are easily accessible (National Research Council, 1993). In addition, households with large numbers are almost a necessity in rural areas. This is because most of the domestic chores in the house are performed by children such as running errands and working on the farm. In the homes they engage in activities like cooking, fetching of water, selling of farm produce and looking after their younger siblings. For instance, a greater proportion of Ghanaian children who reside in rural areas assist their parents on the farm with activities like planting, harvesting and weeding. These examples provide an impression that rural women are less likely to control their fertility through the use of a method of contraception as they gain more benefits in having children (Ohene & Akoto, 2008).

Some studies also revealed that rural women who were unwilling to accept contraceptive methods were concerned about child survival and viewed children as a source of support in old age. (Kartikeyan & Chaturvedi, 1995). According to GDHS (2008) reports, women in urban residence recorded 26% of contraceptive use, compared to 20.9% by women in rural residence. However, GDHS 2014 recorded 28% of modern contraceptives usage by women in rural residence and 26% by their urban counterparts. The contraceptive gap between rural and urban dwellers is a known gap in Ghana, and as a result given the needed attention and strategies, but the current GDHS shows a slight increase in contraceptive use among the rural women which did not use to be the norm.

2.4.6 Ethnicity

Ethnicity, irrespective of the education level of a woman, carries with it social norms and ideas, which may influence her sexual socialization and reproductive health choices (Guzzo & Hayford, 2012). Ghanaians have diverse cultural backgrounds and attachments that carry values, norms, beliefs, and ideas that likely affect their sexual and reproductive health attitudes and practices including the adoption of contraception. There are five major ethnic groups in Ghana and they are the Akan, Ewe, Ga/Dangme, Guan and Mole Dagbani followed by other small groups like the Grussi, Gurma, Mande etc. The heterogeneity of ethnic groups in Ghana offers diverse cultural practices and these practices may encourage large families which in turn promote high fertility. In order to assist policymakers in strategies to reduce fertility, it is essential to ascertain if contraceptive method use disparities are correlated with ethnicity.

A study on predictors of contraceptive use in Ghana found that, among the ethnic groups, Grussi ethnic group is shown to have low predicted contraceptive usage (Adjei, Sarfo & Asiedu, 2014). This is because they are predominantly found in the northern part of Ghana where contraceptive usage rate has been low for some time now (GSS, 2008). Also, cultural reasons could be a possible explanation to how women of that ethnic group respond to contraceptive usage. For instance, if the cultural values believe in women having more children, they are not likely to use contraceptive methods because they are controlled by this cultural belief as compared to those who do not cherish large families.

Likewise, Mole-Dagbani ethnic groups are also not so much receptive to contraceptive use. This is because they are mostly found in the Northern part of the country where Islamic Religion is predominantly the main religion which generally accepts large families. This makes it difficult for women in that family to accept and use contraceptive methods as compared to those living in the southern part of the country (Adjei, Sarfo & Asiedu, 2014).

This finding is consistent with the report of the Ghana Demographic and health Survey, 2008 which showed that Northern Region where Mole-Dagbanis mostly live have the lowest contraceptive prevalence rate (GDHS, 2008).

A study by Addai, (1999), on ethnicity and contraceptive use in sub-Saharan Africa specifically Ghana found that among the five major ethnic groups in Ghana, Ewes were more likely to use modern methods of contraception as compared to the other ethnic groups (Addai, 1999). When it comes to conducting studies using ethnicity, there are some variations with the type of contraceptive method used. These variations are often based on the country or region the study is been conducted and they are often attributed to the difference in datasets and locations of the surveys.

2.4.7 Employment

Women's employment status is one of the most influential factors among several socio-demographic determinants of contraceptive use. Evidence shows that women's employment status is strongly associated with contraceptive use as economic role gives them more autonomy and more control over important decisions (Hossain et al., 2011; Islam et al., 2016). A study in Bangladesh found that maximum use of contraceptives was observed among employed women as compared to those that are unemployed (Islam et al., 2016). Women's employment is expected to influence the number of children they desire and, hence, their contraceptive behavior, but a distinction must be made between informal and formal sector employment.

It is expected that women employed in formal sector jobs are more likely to use contraceptives, since the number of children they intend to have are relatively low because of the nature of their jobs (Shapiro & Tambashe, 1994). For women who work in the informal sector, they have the opportunity to combine work and childcare which gives them

the liberty to have the desired children they expect to have. Hence, contraception practice is low amongst them. However, women with formal sector jobs have the lowest demand for larger numbers of children and the highest motivation for contraception (Shapiro & Tambashe, 1994).

2.4.8 Knowledge

The ability to recognize a family planning method when it is described is a simple test of a respondent's knowledge of the method but not necessarily an indication of the extent of his or her knowledge (Ghana Demographic and Health Survey, 2014). Knowledge of at least one method of contraceptives is nearly universal among currently married men and women in Ghana. The high level of knowledge could be attributed to the successful distribution of family planning messages, mainly through the mass media (Ghana Demographic and Health Survey, 2014). A cross-sectional study found that knowledge about modern contraceptives was a strong predictor for the use of LAPMs. However, it was also raised by most of the participants that their knowledge on LAPMs was very low probably because there were no continuous programs on health education specifically addressing LAPMs. Besides, those who had knowledge on LAPMs were those who were in union and with some level of education (Mekonnen et al., 2014).

2.4.9 Breastfeeding

Breastfeeding is very beneficial for both babies and mothers (Lawrence, 1989). It is known to provide better nutrition for the baby and the maternal antibodies passed in the milk protect the baby from infections. It also promotes bonding between mother and child and also delays the return of ovulation, thus extending the time a woman is expected to have another child (Labbok, 1985). The connection between contraception and breastfeeding has become important due to the expansion of contraceptive usage worldwide (Curtis & Neitzel, 1996; United Nations, 1999). Traditionally, women in sub-Saharan Africa relied mainly on

breastfeeding, amenorrhoea and sexual abstinence to space their births. However, the increase in modernization, urbanization and social change have gradually reduced the effectiveness of these traditional birth spacing mechanisms and therefore women have increasingly been at risk of unintended pregnancies in the postpartum period (Ndugwa et al., 2011).

Women who intensively breastfeed their children exclusively for the first six months or abstain from sexual intercourse following delivery are usually not exposed to the risk of becoming pregnant. However, those who do not practise exclusive breastfeeding and have resumed sexual intercourse are at risk of becoming pregnant especially in the absence of contraceptive use. One of the reasons that women might have chosen to breastfeed in the past is that they wanted to postpone their next conception. Now, the use of modern contraception is more reliable than breastfeeding for fertility regulation, therefore they choose to adopt contraception, and their motivation to exclusively breastfeed has reduced. The choice of contraception could be limited for lactating women due to concerns about hormonal effects on quality and quantity of breast milk and the passage of hormones to the infant.

However, most contraceptive methods can be safely used by breastfeeding women, but the combined pill preparation is an exception because its estrogen content reduces milk production (Carballo, 1987; WHO, 1988). Contraceptive use, of course, is an alternative and more reliable means of postponing conception. Therefore, women who choose not to breastfeed adopt modern contraception, to avoid having an unplanned pregnancy following delivery, though contraception cannot replace the other benefits of breastfeeding for child health.

2.4.10 Parity

Children ever born to a woman is an important factor which can determine a woman's type of contraceptive method used. Women with higher numbers of children are more likely than those with no children to use modern methods of contraception. In a study by Osei et al. (2014), found that couples who had at least one child were willing to use more effective contraceptive methods to space their children to a number that they can properly take care of (Osei et al., 2014). The study also found that women who indicated that they had completed childbearing had resulted to the use of less effective methods of contraceptives in an effort to minimize the effect of the "chemicals" on their bodies (Osei et al., 2014). These methods usually involves the short acting methods like the condoms. Likewise, a study conducted among poor women in Africa found that women with fewer children who want to space their offsprings were less likely to use LAMPs than those who want to stop having children completely because they have more children (Creanga et al., 2011). Such women will resort to the use of LAPMs to avoid an unplanned pregnancy totally.

2.4.11 Partner Characteristics

Factors such as a partner's age, educational attainment and occupation have been found by studies as very important factors that may influence a couple's decision to either use modern contraception or not (Caldwell, 2009; Gribble & Haffey, 2008; Sharan et al., 2011). The consideration of age variations among couples is of unique importance in sub-Saharan Africa, wherein, because of disparities in gender and cultural influences, men are often in charge of what takes place in relationships, such as sexual interactions and choices concerning the size of a family and contraceptive use. Women are often constrained in making decisions in this setting which impedes their ability to obtain their fertility dreams (Wrigley-Asante, 2013). Moreover, in a patriarchal context, pro-natal views tend to be stronger among men than women, and husbands' actual or perceived opposition to family

planning may additionally prevent wives who need to delay or stop childbearing from using contraceptives (Gribble & Haffey, 2008; Sharan et al., 2011).

An age distinction between sexual companions is a social norm in most societies; usually, the man is older than the woman. The acceptability of unions wherein the husband is significantly older than his spouse is greater variable, despite the fact that quite a big age difference are found in patriarchal societies. Studies reveal that women who are ten or more years younger than their husbands/partners are less likely to use modern methods of contraception due to differences in their positions in the society, experiences in life and resources (Ibisomi, 2014). The possible reason might be the fact that, the woman contributes more resources in the household therefore takes more of the decision in the household. Thus, she decides on whether to use contraception or not. Again, women who had an age difference of five years less than their partners/husbands were more likely to use modern contraception indicating that her decision to use modern contraception is not solely her decision but involves the partner. However, these associations were significant indicating that partner's age or the age difference between partners is associated with couple's modern usage of contraceptives.

Spouses who are educated are more likely to know the benefits of optimal spacing and limiting childbearing. A study from Nepal found that husbands with formal or higher level of education had a strong association or a greater influence on the type of contraceptive method a couple decides to use. The study also emphasized that the education of the partner gives them a greater purchasing power and greater access to methods (Gubhaju, 2009). The education of the partner as well as the education of the woman is important when it comes to decisions on contraceptive use because it will result to high contraceptive uptake by the women (Gilbert & Bernard, 2015). Other studies revealed that, women with well-educated husbands are more likely to consent and approve the use of modern methods of

contraceptives (Kabagenyi et al., 2014; Ochako et al., 2016). Similarly, a study in Ghana by DeRose and Ezech (2005) found that the educational level of a woman's partner has a greater effect on her fertility and usage of contraceptive than her personal training (DeRose & Ezech, 2005).

2.5 Gaps in the Literature

A major gap in the present literature is that there are limited studies on decision making on modern contraceptive methods used by couples. The few studies which already exists looks at the relationship between husband-wife decision making and modern contraceptive use within the northern regions of Ghana (Bawah, 2002; Bawah et al., 1999) without paying particular attention to the modern method types. Others solely looked at decision making on contraceptive use in general (Afriyie & Tarkeng, 2019; Atiglo & Codjoe, 2019; Darteh, Doku & Esia-Donkoh, 2014). Yet few others concentrated on contraceptive method type used by couples without taking into consideration who the decision maker was (Mutombo, & Bakibinga, 2014, Salway, 1994). Lastly, some studies that also assessed decision making and contraceptive use, covered other spheres of decision making, such as household decision making. However, this study attempts to fill the literature gap by providing results of an investigation of decision making between husband and wife on the type of modern contraceptive method used in Ghana, using the 2014 GDHS which is a nationally representative dataset.

2.6 Conceptual Framework

The reviewed literature on decision making among couples and modern contraceptive use shows that there exists an association between couples' decision making, as well as some demographic and socioeconomic variables and their type of modern contraceptive method adopted. The objective of the study is to describe the relationship between husband-wife decision-making and the type of modern contraceptives method used in Ghana. This study

adapted various ideas from studies that assessed spousal decision making and type of modern contraceptive methods used (Mutombo & Bakibinga, 2014; Tekelab, Melka & Wirtu, 2015). Therefore, a conceptual framework was constructed by the author to aid in analysis.

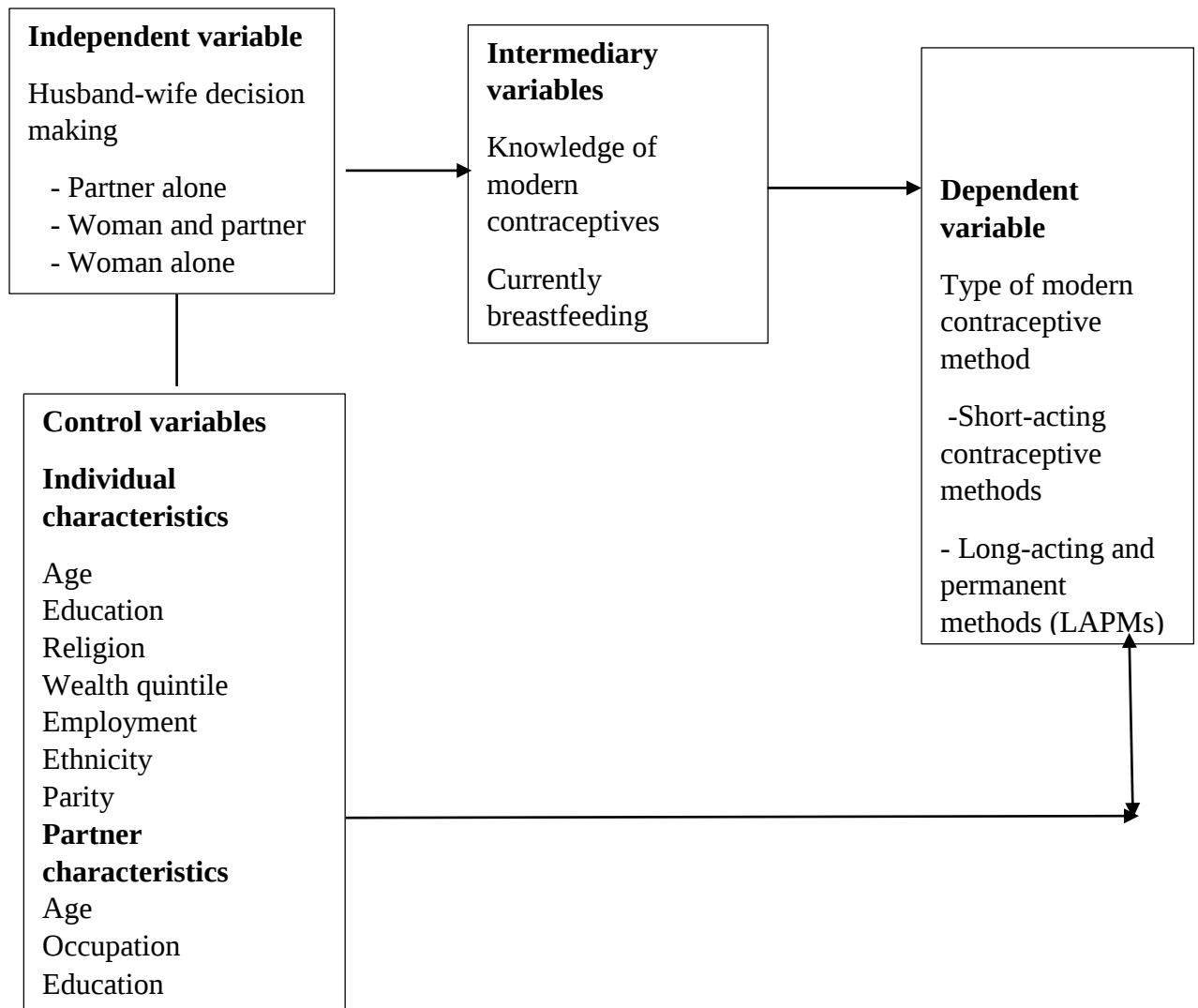
The independent variable, husband-wife decision making, as shown in the framework, may have an impact on short-acting contraceptive methods or LAPMs use. The decision to use a particular type of contraceptive method can be solely the wife's decision, the partner (husband), or it can be a joint decision. Respondents who reported to have made joint fertility decisions with their partners were more likely to use LAPMs than women who did not (Tekelab, Melka & Wirtu, 2015). On the other hand, women who did not have discussions with their husbands on contraceptives were less likely to use the LAPMs. Thus, women's ability to access modern contraception should involve the partner's approval which is quite often a necessity for women's use of contraceptives (Sharan & Valente, 2002; Yue, O'Donnell & Sparks, 2010).

Studies have established that women who intend to stop having children but use a short-acting method of contraception are not meeting their need, likewise women who merely want to space births but use long-acting and permanent contraceptive methods (Imasiku et al., 2014; Starbird, Norton & Marcus, 2016). This evidence suggests that male inclusion in contraceptive decisions is very important. Hence, spousal communication or joint contraceptive decision-making is very important in such a situation to help couples to make informed decision on whether to use either the short-acting method of contraception or the LAPMs to inform effective contraceptive use.

The control and intermediate variables as shown Figure 2.1, may also have a direct influence on couple's decision to use a modern contraceptive method. It must be noted that, husband-

wife decision making is the main independent variable and the remaining illustrated variables serve as control and intermediate variables.

Figure 2.1 Conceptual framework showing husband-wife decision making and type of modern contraceptive method used in Ghana



Source: Author's Construct

The conceptual framework above in Figure 2.1 illustrates how the control variables affects both the independent and dependent variables and also shows the direct relationship between the intermediary variables and the dependent variables. It also shows a relationship between the independent, intermediate and dependent variables. The age of a woman has been found to have a significant relationship with modern methods of contraceptive use. Women who are old are typically much less likely to use contraceptives than those who are more youthful

(Blanc et al., 2009). However, a study conducted in central Ethiopia found that women in the older age groups were more likely to use LAPMs (Mekonnen et al., 2014). This could be linked to the fact that women who were older may have many children already and also have aspirations to limit births than younger ones who had few or no kids. Similarly, a study on women aged 35 years and older found that, in spite of a decline in fecundity in late years of reproduction, the prevalence of unintended pregnancy and related complication in pregnancy in this age group is high (Nouhjah et al., 2013) which causes women in this age group to use the LAPMs. The possible reason may be that women who are older have gone through all their years of reproduction and will no longer need any more.

Religion also plays a significant role when it comes to modern contraceptive use. A study which employed the Malawi Demographic and Health Survey (2004) data, noted that among Muslims and Catholics, contraceptive use was low because these religions value children based on Biblical and Quranic principles (Palamuleni, 2014). Catholics view having a large family and population increase as good, so they consider the use of contraception as unattractive which accounts for low usage among women practising that religion.

Also, the educational level of a woman is one of the factors that influence women's use of modern contraception. A study on the influence of schooling on women's contraceptive use, found that the education of females is positively related to contraceptive use at all levels (Ainsworth, Beegle, & Nyamete, 1996). Studies have shown that women with secondary education or higher educational background were more likely to use LAPMs compared to those who had primary or lower school education (Tekelab, Melka & Wirtu, 2015).

With regard to wealth quintile, women with higher income are more likely to use modern contraceptives compared to women with low income. A study by Bawah et al. (2013) indicates that a woman's use of contraception is affected when she earns a relative high income. A study in rural Zambia, discovered that wealthy women or those in the richest category were more likely to use modern contraceptives than poor women (Lasong et al.,

2020). In terms of women's employment status, Adanu et al., (2009) in their study revealed that those who had the opportunity of doing their own jobs in Accra were less likely to use modern contraceptives than women working in formal sectors. In terms of place of residence, women who live in urban areas are considered to have a greater possibility of using modern methods of contraceptives than those in rural areas (Igbodkwe et al., 2014). This is because women in urban areas are exposed to better reproductive health care services as compared to their rural counterparts. However, studies have shown that women who reside in rural areas are more likely to use modern methods of contraception than those in urban areas (GDHS, 2014).

With regard to ethnicity, Mole-Dagbani and Grussi women are less likely to adopt modern contraceptive use. This is because they are mostly located in the Northern part of the country where the main religion that dominates, is the Islamic religion and they generally accept large families making it difficult for the women to adopt a method of modern contraception. Also, with parity women who have a lot of children are more likely to use modern contraceptive methods than those without children (Oyeka, 1989). Hence, women who desire to space their children were less likely to use LAPMs than women who want to stop giving birth completely because they have more children (Creanga et al., 2011).

The intermediary variables, as shown, may also directly influence the adoption of a modern contraceptive method and also influence the independent and dependent variables. Thus, knowledge of contraceptives among couples is important to promote contraceptive use. A good knowledge on the different methods of contraceptives and how they are used will clear a lot of misconceptions associated with contraceptive use. It is therefore logical that once a woman has very good knowledge on contraceptives and can easily access them, their attitudes towards the use of contraceptives will also change. However, despite the awareness of modern contraceptives the attitudes of women hasn't changed. This may be influenced by social and cultural backgrounds of these women.

Breastfeeding and contraception has become important due to the expansion of contraceptive usage worldwide (Curtis & Neitzel 1996; United Nations, 1999). Research has revealed that women who do not breastfeed are more likely to adopt a modern method of contraception. However, women who are currently breastfeeding are less likely to use contraceptives because of the fear of contaminating the breast milk which may have adverse effects on the baby.

2.7 Theoretical Underpinnings

The “theory of resources” was propounded by Blood and Wolfe (1960) which indicates that husband-wife decision-making power depends upon resources. Resources in this context refer to income, occupation and education. This theory further explains that women’s decision-making power may increase when her resources also increase. The underlying assumption is that, women who make greater contributions in terms of resources towards household expenditure may have more say within household decision-making procedure, such as right over the number of children she wants to have. Thus, women who contribute more income or resources to the household are probable to exert more power in the family than people who contribute little or nothing at all in any respect, with relative authority translating into reproductive autonomy for women who are empowered to put into effect their preferences in terms of usage of contraceptives (Bawah et al., 2013).

According to Blood and Wolfe (1960), the personal resources of an individual are what contribute to their level of power. The sources of women’s power consist of attaining higher education, working outside the home, or having access to extra familial relations (Bawah et al., 2013). For instance, if the woman’s educational status increases and she has a well-paid job which generates some level of income for her, it will increase her level of decision-making within the household. Also, she would be able to decide on her own healthcare specifically reproductive health, method of contraception as well as purchase the type she wants. Also, women with more income comparative to their husbands or women who

contribute more resources have a better “threat point” of bargaining. The “threat point” explains the point at which the woman is prepared to risk spousal conflict while bargaining together with her husband (Bawah et al., 2013).

Similarly, a study by Belch and Willis, (2002) explained that “as women became more educated and provided more income to the family on a relative basis, the more egalitarian the decision-making process became”. The theory of Blood and Wolf also established the fact that, there ought to be a fair or more egalitarian relationship within the household in terms of decision making as the level of education and income of the wife increases (Belch & Willis, 2002).

The theory of resources was very useful for the study as it provided a deeper understanding of the resources that influence decision making among a husband and wife. The theory enabled the researcher to examine how the resources which includes income, occupation and education informs a couple’s decision to use a particular method of modern contraceptives. Given that, decision made by couples can be jointly, husband alone or wife alone.

2.8 Study Hypotheses

The study will seek to test for the following hypotheses,

- i. Women with joint decision-making powers are more likely to use Long-acting and permanent methods of contraception than those who decide alone.
- ii. Educated women are more likely to use Long-acting and permanent methods of contraception than those with no education.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provides information on the study design, source of data, sampling strategies, measurement of variables and methods of data analysis for the study.

3.2 Study Design

The study employed a cross-sectional design due to the fact that information is gathered from the study at only one point in time (Mann, 2003). The study used data from the 2014 Ghana Demographic and Health Survey (GDHS) which was conducted by ICF international and Statistical and Health Services of Ghana from March, 2014 to September, 2014.

3.3 Source of Data

This study adopted Ghana Demographic and Health Survey (GDHS), specifically the 2014 dataset. It is a nationally representative household survey which is conducted every five years since 1988. As part of the global Demographic and Health Surveys (DHS) Program, among population and health surveys conducted in Ghana, the 2014 GDHS is the sixth in a sequence. It was employed by the Ghana Statistical Service (GSS), Ghana Health Service (GHS) and the National Public Health Reference Laboratory (NPHRL) of the GHS. The main purpose of the GDHS was to create recent and reliable records on maternal and child health, fertility, family planning, infant and child mortality and nutrition. Respondents from the ten administrative regions were chosen for the study. Women, men and children were interviewed during the survey.

3.4 Sampling Design

The 2014 GDHS adopted a sampling frame from an updated frame from the 2010 Ghana Population and Housing Census provided by the Ghana Statistical Service (GSS, 2013b). It

excluded nomadic and institutional populations like persons in prisons, barracks and hotels. The 2014 GDHS used a two-stage sample design which was intended to allow evaluations of key indicators at the national level and also for rural and urban areas. The initial stage comprised of selecting sample points known as clusters which consist of enumeration areas (EAs) demarcated for the 2010 Population and Housing Census. In total, 427 clusters were selected with 216 in urban areas and 211 in rural areas.

The systematic sampling of households was used in the next stage which involved listing of households in all the selected EAs in January-March 2014. Thus, households were randomly selected from the list to be included in the survey. In all, approximately 30 households were chosen from each cluster to make up a total sample size of 12,831 households (GDHS, 2014). Due to the approximately equal sample sizes in each region, it is not self-weighting at the national level. Therefore, weighting factors have been included to the data file in order to make the results comparative at the national level.

Relevant information on women, men and the household were collected on the field using the questionnaire. Respondents' socioeconomic and demographic characteristics such as their age, place of residence, marital status, educational attainment, religion, etc. were collected as well as issues pertaining to contraception practices, household headship, nutritional status of women and children, family planning methods, just to mention a few. The information obtained from respondents can be generalized to the entire population because it is nationally representative.

3.5 Inclusion and Exclusion Criteria

Information from the women's questionnaire alone were used in this study. This is because it provides relevant information on women, their partners and also their reproductive behaviors. The women's file data used for the study initially contained 9396 female

respondents. The data were weighted and filtered out missing cases to obtain 1,164 women who were either married currently or living with a partner and using a modern method of contraception. However, women who were never married and formerly married or formerly living with partner were excluded from the sample because the question on decision-making in the GDHS (2014) was asked to only married women or those living with their partners.

3.6 Measurement of Variables

This section describes the description and measurement of variables. This includes the dependent, independent, control and intermediate variables.

3.6.1 Dependent Variable

The dependent variable of the study is “the type of modern contraceptive method used” among women in Ghana which has two binary outcomes. During the survey women were asked whether they have currently used anything or tried in any way to delay or avoid getting pregnant. Some responded “Yes” they had currently used contraceptive while others responded “No”. Those who are currently using any contraceptive method were further asked which method they used. The various methods were pills, injectable, diaphragm, foam/jelly, lactational amenorrhea method (LAM), male condom, female condom, male sterilization, female sterilization, implants/norplants and IUD. All these methods are classified as modern contraceptive methods. The first seven methods were grouped into short-acting methods while the last four were grouped into long-acting permanent methods (LAPMs). Short-acting methods were coded as “0” while long-acting and permanent methods were coded as “1”.

3.6.2 Independent Variables

Husband-wife decision making is the independent variable for this study. Women’s involvement in decision making is considered as a measure of women’s autonomy in decision making. During the 2014 GDHS women were asked “Would you say that using

contraception is mainly your decision, mainly your husband's/ partner's decision, or did you both decide together?" Women who responded that it was mainly their decision to use contraceptives were coded as "1". Those who said it was mainly their partner's decision were coded as "2" and those who responded that it was a joint decision were coded as "3". Thus, women are considered as autonomous when they make decisions alone without consulting their partners. Semi-autonomous women are women who jointly make decisions with their husbands but in a situation of male dominance the partner makes the decision alone without consulting the woman. Therefore, women who are not allowed to partake in decision-making are considered not to be autonomous (GDHS, 2014).

3.6.3 Control and Intermediate Variables

Control variables are variables that can directly affect the dependent variable, but, they are not the main variables of interest and are therefore controlled for. It consisted of the individual characteristics of the woman. Age, ethnicity, religion, employment status, wealth quintile and educational attainment. Intermediate variables are variables that operate through the independent variable to influence the dependent variable. The variables include currently breastfeeding and knowledge on modern contraceptives.

Table 3.1 Measurement of the Control and Intermediate Variables

The table shows the measurement of the control and intermediary variables

Control/intermediate Variables	Description of Variables	Measurement
Age of respondent	This measured the age of the women at the time of survey.	15-24 25-29 30-34 35-39 40-44 45-49
Religion	This measured the religious affiliation of the women during the time of the survey.	Catholic/Anglican Methodist/Presbyterian Pentecostal/Charismatic Other Christians Islam Traditional/Spiritualist
Ethnicity	This measured the ethnical groups of the women at the time of the survey	Akan Ga/Dangme Ewe Mole-Dagbani Other
Employment Status	This measured the women's employment status at the time of the survey	Respondent currently working Yes No
Educational Attainment	This measured the educational level of the women at the time of the survey	No education Primary Secondary Higher
Wealth Index	This measured the wealth index of the women at the time of the survey.	Poorest Poorer Middle Richer Richest
Knowledge on contraceptives	This measured the knowledge of women on contraceptives at the time of the survey	Inadequate Adequate
Currently breastfeeding	This measured women who were currently breastfeeding at the time of the survey	Yes No
Type of place of residence	This measured the place of residence of women at the time of the survey	Urban Rural
Partner's educational attainment	This measured the education of the women's partner at the time of the survey	No education Primary Secondary Higher

Partner's employment status	This measured the education of the women's partner at the time of the survey	Professional/Technical/Managerial Sales/Services Agricultural Skilled Manual Unskilled Manual
Partner's age	This measured the age of the women's partner at the time of the survey	19-24 25-34 35-44 45-54 55+
Parity	This measured the number of children ever born to the woman at the time of the survey	0,1,2,3,4,5,6 and 7+

3.7 Methods of Data Analysis

Analyses were done using the Scientific Package for Social Sciences software (IBM SPSS, version 21). Univariate analyses were conducted to indicate the proportions of respondents with various characteristics as well as their decision making levels. This consisted of descriptive statistics using percentages, frequency tables and graphs.

Bivariate analyses were used to examine the relationship between the individual characteristics of women and contraceptive method type used. Chi square tests were performed to check if the observed associations are statistically significant.

Binary logistic regression models were used at the multivariate level to assess and identify which of the variables were associated with the dependent variable.

3.8 Binary Logistic Regression

The binary logistic regression is a type of regression analysis that estimates the relationship between one or more explanatory variables and a single output binary variable. This model can be used to examine the effect of a particular exposure on an outcome or dependent variable. In other words, it makes use of the relationship between independent variables and a discrete dependent variable. The outcome is often coded as 0 and 1, where 1 shows that

the outcome of interest is present, and 0 indicates that the outcome of interest is absent (Orlanes & Cuarteros 2020). If we define p as the probability that the outcome is 1, the multiple logistic regression model can be written as follows: $\pi = \frac{e^{(b_0 + b_1X_1 + b_2X_2 + \dots + b_pX_p)}}{1 + e^{(b_0 + b_1X_1 + b_2X_2 + \dots + b_pX_p)}}$.

Where π : is the expected probability that the outcome is present;

X_1 through X_p : are distinct independent variables; and

b_0 through b_p : are the estimated coefficients.

There are three major assumptions of binary logistic regression. These are,

- The outcome must be discrete. That is, the dependent variable should be dichotomous or binary in nature (e.g. modern vs. traditional)
- There should be no outliers in the data, which can be assessed by converting the continuous predictors to standardized, or z scores, and remove values below -3.29 or greater than 3.29
- There should be no high intercorrelations (multicollinearity) among the predictors. This means that the independent variables should not be too highly correlated with each other.

Since the outcome of this study is binary or dichotomous which is contraceptive use, women who use the modern methods of contraceptives will be coded as 1 because it is the outcome of interest and women who use the traditional methods of contraceptives will be coded as 0.

3.9 Limitations of Data

Firstly, because of the random sampling of the study data, it cannot categorically emphasize that a specific style of decision making resulted to the usage of a particular method of modern contraception. It simply assesses the relationship between decision making and modern contraceptive method choice among husband and wife and what informs their

decision to use a particular type of modern contraceptive method. Also, the data are subject to over-reporting and under-reporting of the age, educational attainment and employment status of the men by the respondents. This can result in bloating of the figures or cause some inconsistencies in the results.

CHAPTER FOUR

BACKGROUND CHARACTERISTICS OF RESPONDENTS

4.1 Introduction

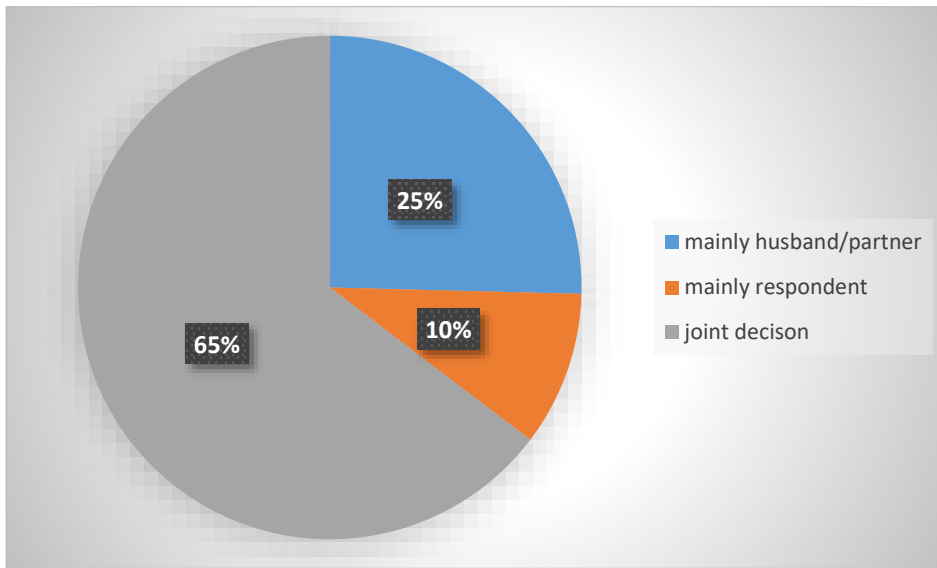
This chapter describes the demographic and socio-economic characteristics of the respondents in relation to the type of modern contraception method used. The main background characteristics are age, religion, ethnicity, employment status, education, parity, place of residence, wealth quintile, currently breastfeeding and knowledge of contraceptives. Other characteristics of the partner such as their age, educational attainment and employment status were considered. The appropriate frequency distributions, tables and charts are used in this section of the study to present the outcomes from the univariate analyses.

4.2 Independent and Dependent variables

4.2.1 Decision Making on Modern Contraception

Figure 4.1, shows the percentage distribution of decision making on modern contraception among women in union in Ghana. The smallest proportion (10%) of the respondents reported that the decision made on modern contraceptive method type was mainly the wife's (respondent's) decision. On the other hand 65% of the respondents representing the largest proportion of the respondents reported that decision making was a joint decision. Again, 25 percent of the respondents reported that the decision made on modern contraceptive method type was mainly the husband's decision.

Figure 4.1 Distribution of Respondents by Decision Making on Modern Contraception

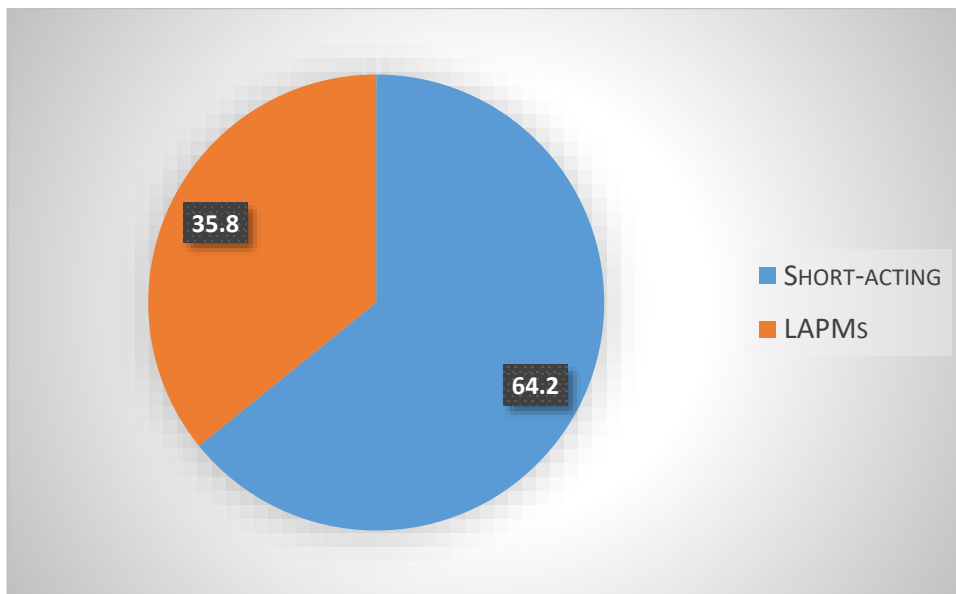


Source: Computed from the 2014 GDHS dataset

4.2.2 Type of Modern Contraceptive Method Used

The dependent variable which is the type of modern contraceptive method used is a dichotomous categorical variable which was recoded as “short-acting contraceptive method” and “long-acting and permanent contraceptive methods (LAPMs)”. The results displayed in Figure 4.2, shows that 64 percent of the respondents were currently using short-acting contraceptive methods while 36 percent were using LAPMs.

Figure 4.2 Distribution of Respondents by Type of Modern Contraceptive Method Used



Source: Computed from the 2014 GDHS dataset

4.3 Characteristics of Respondents

4.3.1 Age of Woman

Age is a continuous variable and it is usually measured in five or ten-year age groups. However, in this study the ages of women were categorized into 15-24, 25-29, 30-34, 35-39, 40-44 and 45-49 years. From Table 4.1, a higher proportion (24.6%) of the women were 25-29 years, twenty-one percent (21%) of the women were 30-34 years. From the table, 18.6%, 14.0% and 13.7% of the respondents were 35-39, 15-24 and 40-44 years respectively. The oldest age group consisting of 45-49 years is the least represented with 8.1 percent.

Table 4.2 Percentage Distribution of Respondents by their Age

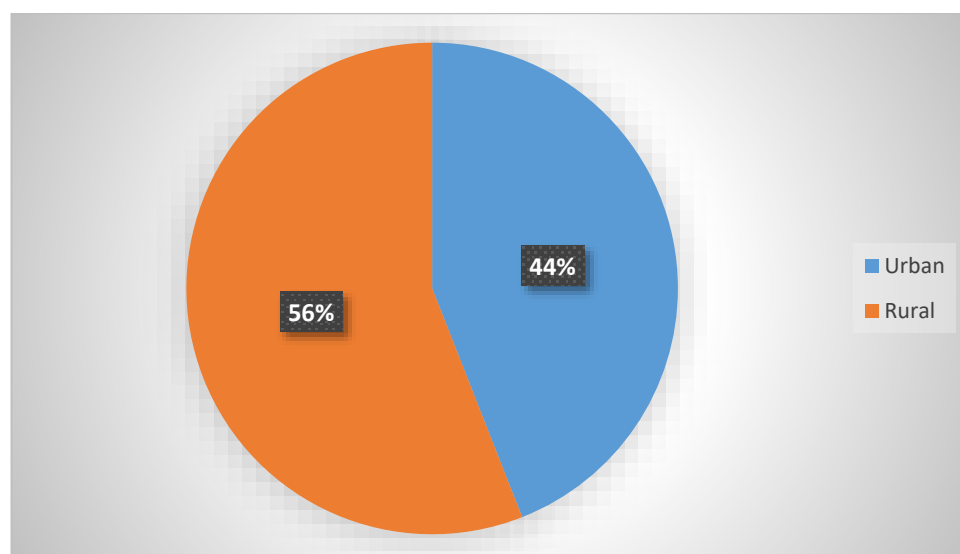
Age	Frequency	Percent
15-24	163	14.0
25-29	287	24.6
30-34	244	21.0
35-39	217	18.6
40-44	159	13.7
45-49	94	8.1
Total	1164	100.0

Source: Computed from the 2014 GDHS dataset

4.3.2 Type of Place of Residence

Respondents were grouped into either residing in rural or urban areas. Figure 4.3 shows the percentage distribution of respondents by place of residence. The pie chart displays that majority of the respondents reside in the rural areas which represents 56 percent while 44 percent reside in the urban areas.

Figure 4.3 Distribution of Respondents by Type of Place of Residence

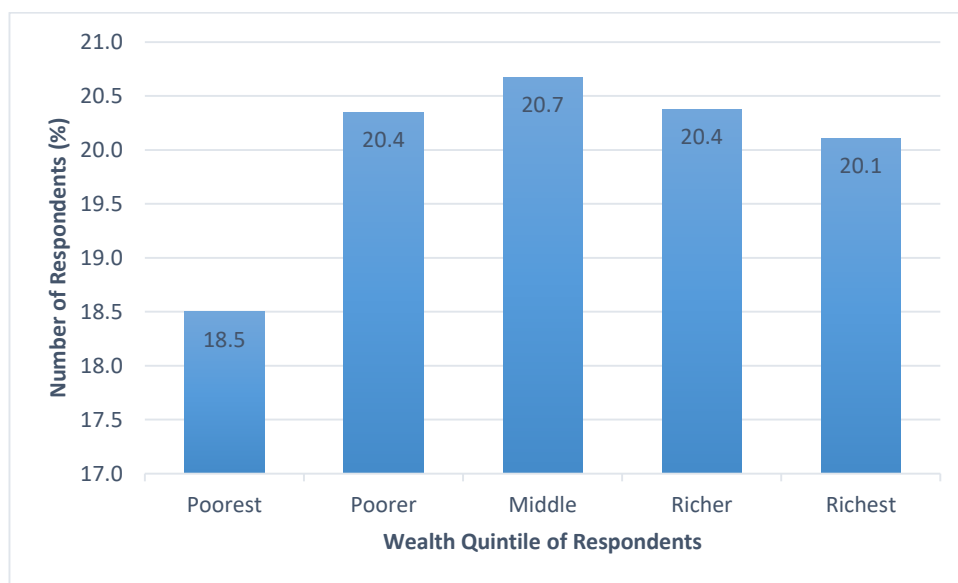


Source: Computed from the 2014 GDHS dataset

4.3.3 Wealth Quintile

The wealth quintile as stated in Figure 4.4 is categorized by the respondent being in one of the following groups: Poorest, Poorer, Middle, Richer and Richest. Respondents categorized as Middle had the highest proportion of 20.7 percent at the time of the survey, interestingly respondents in the richer and poorer category had a similar percentage of 20.4 and the least percentage of 18.5 among respondents in the poorest category.

Figure 4.4 Distribution of Respondents by Wealth Quintile



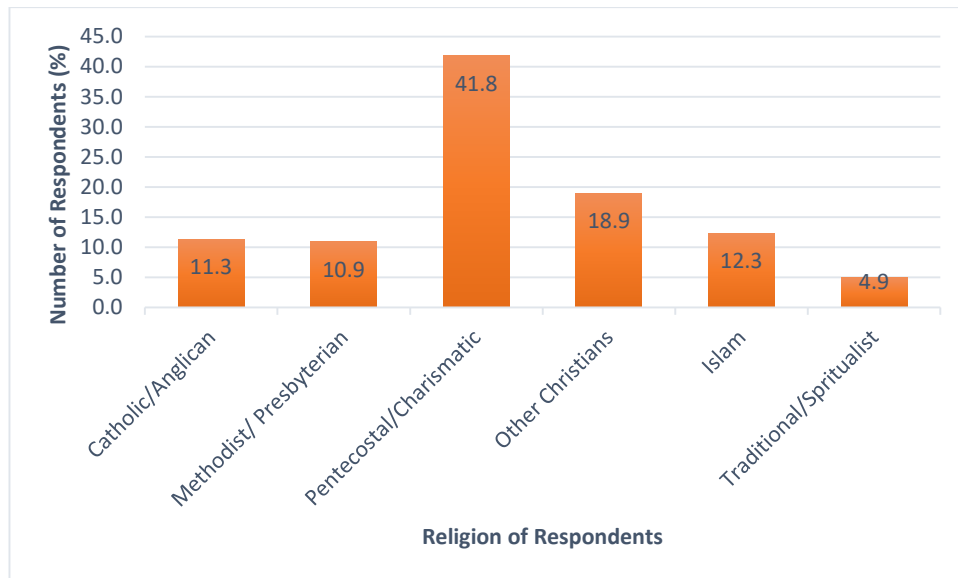
Source: Computed from the 2014 GDHS dataset

4.3.4 Religion

Religion plays an important role in the lives of most Ghanaians. Majority of Ghanaians belong to either one of the three main religious groups in Ghana which include Christianity, Islamic and the traditional religions. The beliefs and practices of these religious groups could be related to the type of modern contraceptive method used by women. For instance, some studies have shown significant relationships between Catholics and the use of modern methods of contraception although their beliefs oppose it (Hill et al, 2014). Figure 4.5, shows that the religious group with the highest group of respondents was the Pentecostal/Charismatic group with a percentage of 41.8% while the lowest percentage of

respondents was recorded among those who reported to be Traditionalist/Spiritualist with (4.9%).

Figure 4.5 Distribution of Respondents by Religious Affiliation

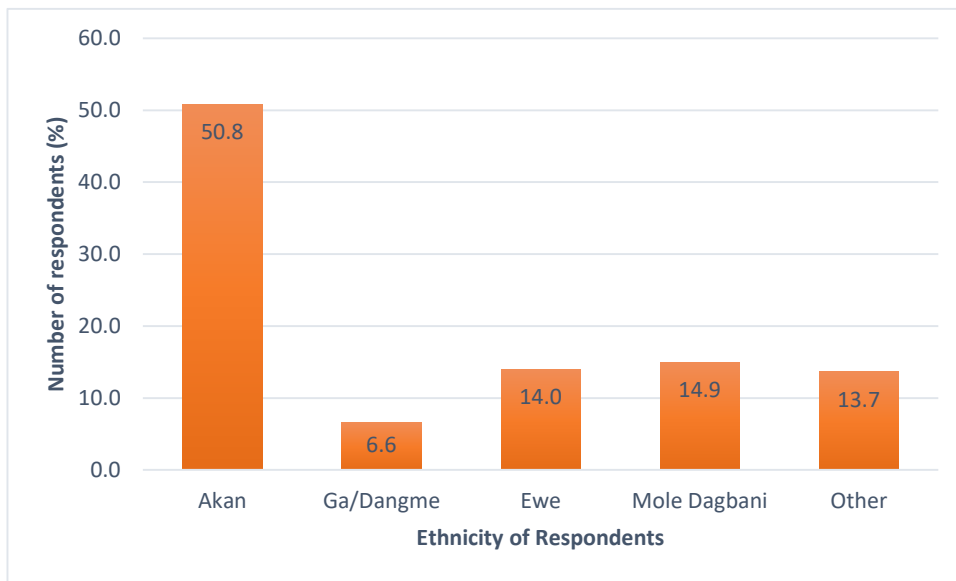


Source: Computed from the 2014 GDHS dataset

4.3.5 Ethnicity

Ethnicity of respondents as shown in Figure 4.6 is categorized using the five main ethnic groups in Ghana which include Akan, Ewe, Ga-Dangme, Mole-Dagabani and others. Respondents in the “Others” category are made up of smaller ethnic groups, namely Guans, Gussi, Gurma, Mande etc. Majority of the respondents were Akan with a percentage of 50.8 percent. Respondents in the “Other” category made up 13.7 percent of the study sample. The ethnic group with the smallest percentage were the Ga/Dangmes with 6.6 percent.

Figure 4. 6 Distribution of Respondents by Ethnic Groups

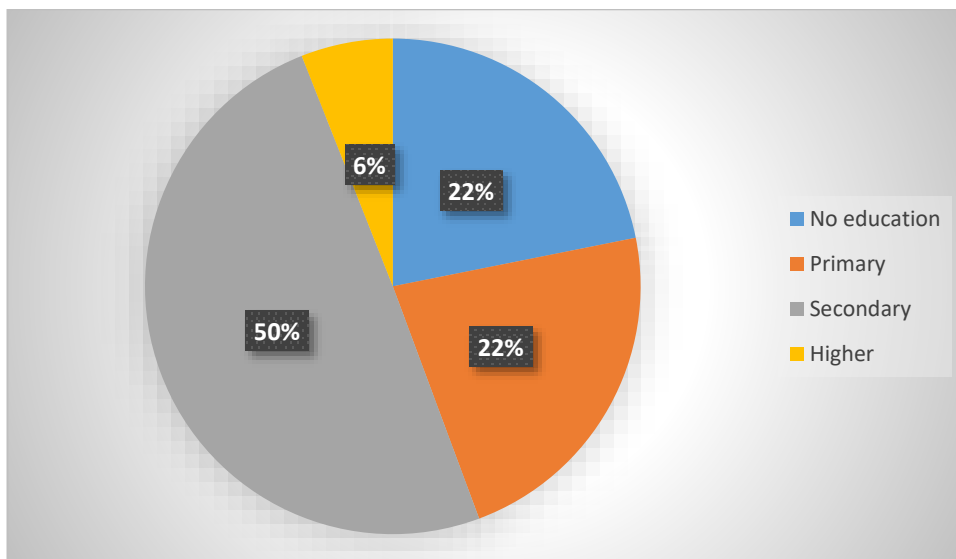


Source: Computed from the 2014 GDHS dataset

4.3.6 Educational Attainment

Figure 4.7 shows the percentage distribution of respondents by their educational level. Respondents who reported to have been to secondary school had the highest proportion of 50 percent while respondents who reported to have higher education had the lowest proportion of 6 percent.

Figure 4.7 Distribution of Respondents by Educational Attainment

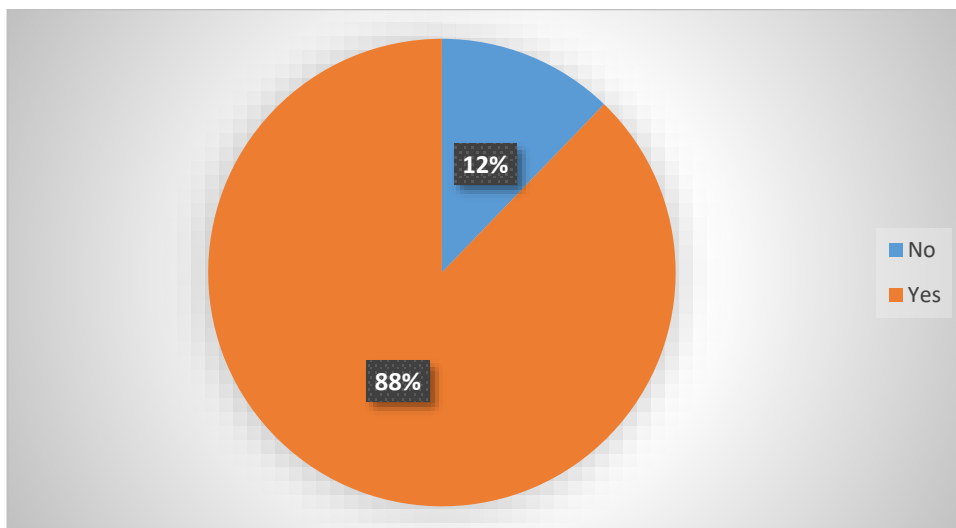


Source: Computed from the 2014 GDHS dataset

4.3.7 Employment Status

The results in Figure 4.8 shows respondents that are currently working. Over 88% of respondents mentioned that they were currently working whereas 12% were not working.

Figure 4.8 Distribution of Respondent by Employment Status

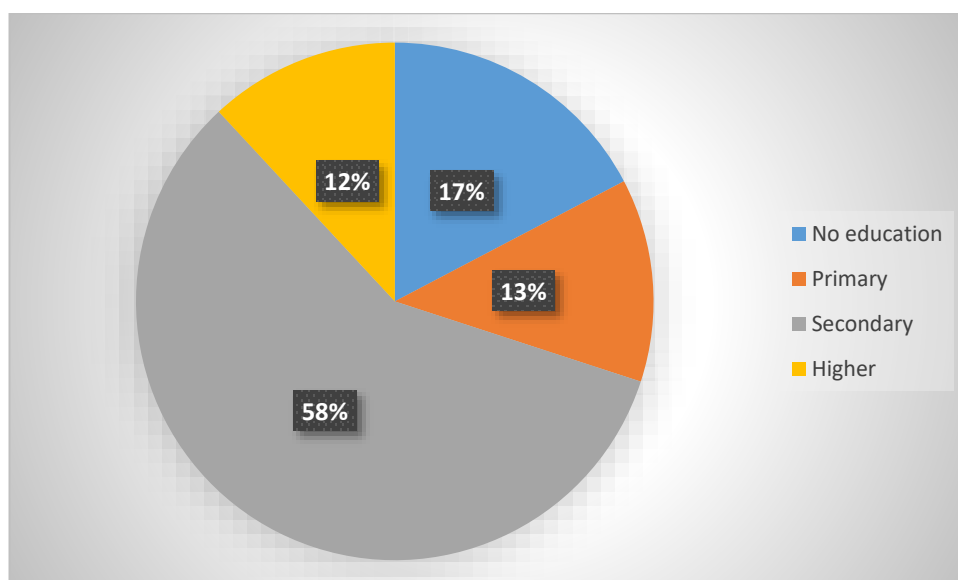


Source: Computed from the 2014 GDHS dataset

4.3.8 Partners' Education

The educational attainment of the partner is an important variable in relation to the effect it could have on the respondent's decision to choose a particular method of modern contraception. Figure 4.9 shows the percentage distribution of partners' education. The figure shows that a large proportion of the partners 58 percent had completed secondary education followed by 23 percent who had no education and 13 percent and 12 percent had primary and higher education respectively.

Figure 4.9 Distribution of Respondents by Partners' Education



Source: Computed from the 2014 GDHS dataset

4.3.9 Partners' Employment Status

Table 4.2 shows the percentage distribution of the partners' employment status. A number of the partners were engaged in Agricultural activities with a percentage of 36.2%. Others were engaged in skilled and unskilled manual work with a percentage of 18.7% and 18.2% respectively. The type of employment engaged in by the least proportion of partners was professional/technical/managerial with a percentage of 12.9%.

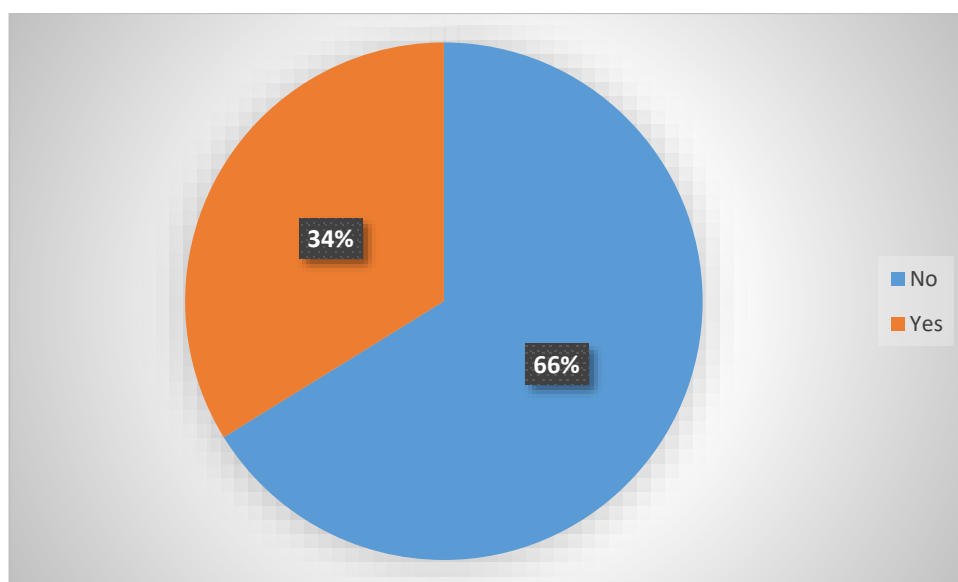
Table 4.2 Distribution of Respondents by Partners' Employment Status

Partners' employment status	Frequency	Percent
Professional/Technical/Managerial	150	12.9
Sales/Services	164	14.0
Agricultural	421	36.2
Skilled Manual	217	18.7
Unskilled Manual	212	18.2
Total	1164	100.0

Source: Computed from the 2014 GDHS dataset

4.3.10 Breastfeeding

Figure 4.10 shows the percentage distribution of respondents that were currently breastfeeding at the time of the study. More than half (66%) of the respondents were currently not breastfeeding while about 34 percent were currently breastfeeding.

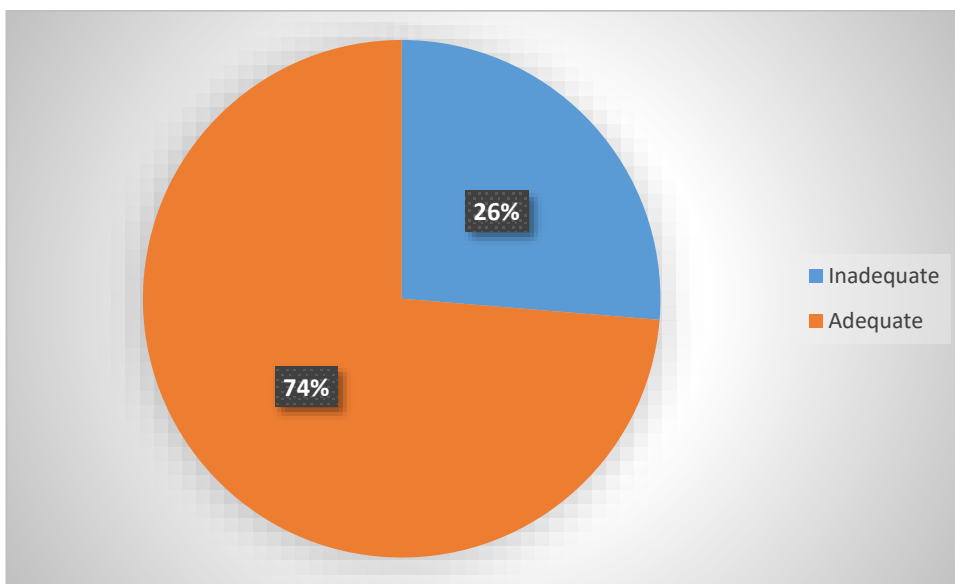
Figure 4.10 Distribution of Respondents by Currently Breastfeeding


Source: Computed from the 2014 GDHS dataset

4.3.11 Knowledge on Modern Contraceptives

Contraceptive knowledge is a very crucial variable that influences respondents' ability to choose a particular method of modern contraception. Figure 4.11 presents the knowledge of respondents on modern contraceptives. Majority of the respondents reported that they had adequate knowledge with a proportion of 74% while 26% reported that they had inadequate knowledge on modern contraceptives.

Figure 4.11 Distribution of Respondents by Knowledge on Modern Contraceptives



Source: Computed from the 2014 GDHS dataset

4.3.12 Parity

Children ever born to a woman can have an influence on her usage of a particular type of modern contraception method. The results from the Table 4.3 indicate that the highest proportion 48.6 percent of respondents have 1-3 children while respondents who reported to have no children had the smallest proportion of 4.0 percent of the study sample.

Table 4.3 Distribution of Respondents by Parity

Parity	Frequency	Percent
0	47	4.0
1-3	565	48.6
4-6	444	38.1
7+	108	9.3
Total	1164	100.0

Source: Computed from the 2014 GDHS dataset

4.3.13 Partner's Age

Table 4.4 shows the percentage distribution of partner's age. From the table 38.0 percent of the partners fall within the age bracket 35-44 years and less than a fifth (3.5%) falls within 19-24 years. This is because few of the women were adolescents who had partners below the age of 25 years.

Table 4.4 Distribution of Respondents by Partners' Age

Partner's Age	Frequency	Percent
19-24	41	3.5
25-34	351	30.2
35-44	443	38.0
45-54	250	21.4
55+	79	6.8
Total	1164	100.0

Source: Computed from the 2014 GDHS dataset

CHAPTER FIVE

RELATIONSHIP BETWEEN HUSBAND-WIFE DECISION MAKING, DEMOGRAPHIC, SOCIO-ECONOMIC AND PARTNER CHARACTERISTICS AND TYPE OF MODERN CONTRACEPTIVE METHOD USED.

5.1 Introduction

Under this section a bivariate analysis was conducted to examine the relationships between husband-wife decision making, demographic and socio-economic characteristics, and the method of modern contraception used among respondents. The woman's characteristics of interest which included age, education, employment, religion, place of residence, wealth index, parity and ethnicity were analyzed. Also, other intermediate variables such as breastfeeding, knowledge on modern contraceptives as well as the age, employment and educational status of the partner were also included. The association between these variables is also shown using cross tabulations. A Pearson Chi-square test at the 95% confidence level was used to measure the significance of the association between decision making, the type of modern contraception used and also the control and intermediate variables.

5.2 Couple's decision making about contraception and the type of modern contraceptive method used

The chi-square test showed a statistically significant correlation between decision making and the type of method of modern contraceptives used by respondents at a 95% confidence level with Chi-square of 8.860 and p-value=0.01 as shown in Table 5.1. This depicts that husband-wife decision making has a statistically significant association with the type of modern contraceptive method used in Ghana.

Table 5.1 Association between decision making and the type of modern contraceptive method used

Decision making	Modern contraceptive method type		Percentage	Total
	Short-acting method	LAPMs		
Mainly husband	71.3	28.7	100	296
Mainly respondent	62.1	37.9	100	116
Joint decision	61.6	38.4	100	752
$X^2=8.860$			Asymp. Sig .01	

Source: Computed from the 2014 GDHS dataset

5.3 Respondent's socio-demographic, socio-economic and partner characteristics and type of modern contraceptive method used

The individual characteristics of the respondents that were statistically significant in this study were the age, ethnicity, parity and religion of respondents. However, respondent's educational level, employment, wealth quintile and place of residence were statistically not significant. Every one of the characteristics employed in this study as intermediate variables, with the exception of partner's occupation, has a statistically significant association with the type of modern contraceptive method used. These variables were currently breastfeeding, knowledge on modern contraceptives and partner's age and partner's educational level.

5.3.1 Respondent's age and the type of modern contraceptive method used

As shown in Table 5.2, respondents' age is only statistically significantly associated with the type of modern contraceptive method used at the 0.05 significance level. The results showed that the age of respondents had a statistically significant relationship with the type of contraceptive method used at a Chi-square of 8.860 and a p-value of 0.01. It can be observed from the table that as the woman's age increases, the usage of LAPMs also increases.

Table 5.2 Association between women's age and the type of modern contraceptive method used

Age type	Modern contraceptive method		Percentage	Total
	Short-acting method	LAPMs		
15-24	76.7	23.3	100	163
25-29	71.1	28.9	100	287
30-34	65.2	34.8	100	244
35-39	60.4	39.6	100	217
40-44	56.0	44.0	100	159
45-49	41.5	58.5	100	94
$X^2=44.215$			Asymp. Sig .01	

Source: Computed from the 2014 GDHS dataset

5.3.2 Respondent's type of place of residence and the type of modern contraceptive method used

Studies have shown that the type of place of residence has a significant association with the use of modern contraceptive methods (Igbockwe et al., 2014; Olalekan & Olufunmilayo, 2012; Tawiah, 2011; Woku et al., 2015). However, the results from this study showed otherwise. The results showed that women's place of residence had no statistically significant relationship with the type of modern contraceptive method used at a Chi-square of 2.399 and a P-value of 0.12 as showed in Table 5.3.

Table 5.3 Association between women's place of residence and the type of modern contraceptive method used

Place of residence	Modern contraceptives method type		Percentage	Total
	Short-acting method	LAPMs		
Urban	61.7	38.3	100	512
Rural	66.1	33.9	100	652
$X^2=2.399$			Asymp. Sig .12	

Source: Computed from the 2014 GDHS dataset

5.3.3 Respondent's ethnicity and the type of modern contraceptive method used

In addition to the other individual characteristics of women, ethnicity has also been considered as an important factor that influences modern contraceptive method type used by women. A study by Addai, (1996) on ethnicity and contraceptive use in sub-Saharan Africa demonstrated a statistically significant relationship between contraceptive method used and ethnicity. This finding is consistent with this study which found that ethnicity is statistically significant with the type of contraceptive method used at a Chi-square of 23.699 and a P-value Of 0.00 as showed in Table 5.4.

Table 5.4 Association between women's ethnicity and the type of modern contraceptive method used.

Ethnicity	Modern contraceptives method type		Percentage	Total
	Short-acting method	LAPMs		
Akan	59.1	40.9	100	591
Ga/Dangme	53.2	46.8	100	77
Ewe	69.3	30.7	100	163
Mole Dagbani	72.4	27.6	100	174
Other	73.6	26.4	100	159
$X^2=23.699$				Asymp. Sig .00

Source: Computed from the 2014 GDHS dataset

5.3.4 Respondent's wealth quintile and the type of modern contraceptive method used

The results of this study showed that there was a statistically significant relationship between respondent's wealth quintile and modern contraceptive method used at a Chi square of 13.489 and a P-value of 0.01 as showed in table 5.5. It can be observed from the table that women in the richest category had the highest percentage using LAPMs as compared to those in the poorest category.

Table 5.5 Association between respondent's wealth quintile and the type of modern contraceptive method used.

Wealth Quintile	Modern contraceptives method type		Percentage	Total
	Short-acting	LAPMs		
Poorest	73.1	26.4	100	215
Poorer	62.0	38.0	100	237
Middle	64.2	35.8	100	240
Richer	64.7	35.4	100	237
Richest	57.4	42.6	100	235
$X^2=13.489$				Asymp. Sig. 01

Source: Computed from the 2014 GDHS dataset

The results showed that as women's household wealth increased, the higher the proportions of women using the LAPMs contraceptive methods. The women using the long-acting and permanent contraceptive methods had the highest proportion of 42.6 percent among the richest women followed by 35.8 percent among women who fell under the middle wealth quintile. Thus, it was poorest women as compared to their richest counterparts who had the least percentage of 32.5 percent using LAPMs. This is consistent with a study among poor women in Africa which found that women with high wealth status are more likely to use modern methods of contraception than women with low wealth status (Creanga et al., 2011).

5.3.5 Respondent's religion and the type of modern contraceptive method used

Religion is another socio-economic factor that is considered as an important variable in relation to type of modern contraceptive method used. Studies have shown a statistically significant relationship between religion and the type of contraceptive method used (Srikanthan & Reid, 2008). A study that employed the Malawi Demographic and Health Survey data, found that contraceptive method use was low among Muslims and Catholics, as these religions value children based on Biblical and Quranic principles. Also, these religious groups view population increase as positive, and contraception as undesirable which accounted for low contraception among individuals practising that religion

(Palamuleni, 2014). These results are consistent with this study, which found that Catholics and Islam adherents have the least proportion using LAPMs which represent 33.3% and 26.6% respectively.

Table 5.6 Association between respondent's religion and the type of modern contraceptive method used

Religion	Modern contraceptive method type		Percentage	Total
	Short- acting method	LAPMs		
Catholic/Anglican	66.7	33.3	100	132
Methodist/ Presbyterian	56.3	43.7	100	126
Pentecostal/Charismatic	63.7	36.3	100	487
Other Christians	60.5	39.5	100	220
Islam	73.4	26.6	100	143
Traditional/Spiritualist	71.4	28.6	100	56
X ² =11.713			Asymp. Sig .04	

Source: Computed from the 2014 GDHS dataset

The results from the chi-square test indicate that there is a statistically significant relationship between religious affiliation and type of method of contraception used by women at a P-value of 0.04. Respondents who reported to be Islam, Traditional/ spiritualist and Catholic/Anglican reported with proportions of 27%, 29% and 33% respectively with each using LAPMs. These findings are similar to studies that found that there are low contraception practices among women who adhere to these religions (Bawah et al., 1999; Gilbert & Bernard 2015; Palamuleni, 2014).

5.3.6 Respondent's educational level and the type of modern contraceptive method used

The education of women is acknowledged to be one of the most important determinants of reproductive behaviour and contraceptive use. Studies have demonstrated a correlation between educational level and the method of contraceptive use (Awingura & Ayamba, 2015; Bawah 2002; Mosha, Ruben & Kakoko, 2013).

Table 5.7 Association between women's educational level and the type of modern contraceptive method used

Women's level of education	Modern contraceptives method type		Percentage	Total
	Short-acting method	LAPMs		
No education	65.4	34.6	100	254
Primary	61.5	38.5	100	262
Secondary	65.9	34.1	100	578
Higher	55.7	44.3	100	70
$X^2=3.942$				Asymp. Sig .27

Source: Computed from the 2014 GDHS dataset

The results from Table 5.7 display a statistically insignificant relationship between respondents' educational level and their type of modern contraceptive method adopted. The results show that respondents with higher education had the highest proportion of 44.3% using LAPMs. However, there was a slight difference between respondents who reported to have secondary education and respondents who reported to have no education and their use of the LAPMs which represent 34.1% and 34.6% respectively. The results are similar to a study by Bawah (2002), which found that women with higher levels of education had a higher use of modern contraceptive methods.

5.3.7 Respondent's partners' education and the type of modern contraceptive method used

The education of the respondent's partner is another important variable related to method of modern contraception used by respondents. Because husbands play a major role in their wives' contraceptive decisions it is very important to know the association of the partner's education with the type of modern contraceptive method used.

Table 5.8 Association between Partners' education and the type of modern contraceptive method used

Partner's educational level	Modern contraceptive method type		Percentage	Total
	Short-acting methods	LAPMs		
No education	67.3	32.7	100	202
Primary	62.2	37.8	100	148
Secondary	67.1	32.9	100	675
Higher	47.5	52.5	100	139
$X^2=20.608$				Asymp. Sig .00

Source: Computed from the 2014 GDHS dataset

The results from Table 5.8 indicate a statistically significant relationship between partners' education and type of modern contraceptive method used at a Chi-square of 20.608 and a P-value of 0.00. Interestingly, respondents who reported that their partners had attained higher education had a higher percentage using LAPMs. However, the results show that respondents who reported that partners had no education and secondary education had the lowest percentages (32.7% and 32.9%) respectively using LAPMs.

5.3.8 Respondent's employment status and the type of modern contraceptive method used

The results from the chi-square test portray no statistically significant relationship between respondent's employment status and type of modern contraceptive method used at 95% confidence level with a Chi-square of 1.203 and P-value of 0.27. This indicates that the employment status of respondents does not have a correlation with the type of modern contraceptive method used.

Table 5.9 Association between women's employment status and the type of modern contraceptive method used

Women's employment	Modern contraceptives method type		Percentage	Total
Currently employed	Short- acting methods	LAPMs		
No	68.3	31.7	100	142
Yes	63.6	36.4	100	1022
$X^2=1.203$				Asymp. Sig .27

Source: Computed from the 2014 GDHS dataset

The results from the table showed that women who reported they were working had the highest proportion (36.4%) of using LAPMs while those who reported that they were not working had 31.7% using LAPMs.

5.3.9 Respondent's breastfeeding status and the type of modern contraceptive method used

The results from the chi-square test portrays a statistically significant relationship between respondent's breastfeeding status and type of modern contraceptive method used at 95% confidence level with a Chi-square of 7.233 and P-value of 0.01. This indicates that breastfeeding has a correlation with the type of modern contraceptive method used. The results from Table 5.10 show the association between breastfeeding and the type of modern contraceptive method used.

Table 5.10 Association between breastfeeding and the type of modern contraceptive method used

Currently breastfeeding	Modern contraceptives method type		Percentage	Total
	Short-acting methods	LAPMs		
No	61.5	38.5	100	771
Yes	69.5	30.5	100	393
$X^2=7.233$				Asymp. Sig .01

Source: Computed from the 2014 GDHS dataset

The results show that respondents who are currently not breastfeeding had the highest proportion of using the LAPMs with a percentage of about 39% while those who were currently breastfeeding recorded 30.5 percent use of LAPMs. This is consistent to a study on breastfeeding and contraception which found that non-breastfeeding positively influences the use of contraceptives (Millman, 1985). These results could imply that women who are currently not breastfeeding may have the desire to space their children and so have resorted to LAPMs to lengthen the time until their next conception or they might have completed their years of reproduction and so do not want to have any more children. Also, the use of contraception provides extra protection against the risk of pregnancy and so women who are not breastfeeding but still have babies may resort to LAPMs to avoid an unplanned pregnancy.

5.3.10 Respondent's knowledge on modern contraceptives and the type of modern contraceptive method used

Acquiring knowledge about contraception is an important step toward gaining access to and using a suitable contraceptive method. A good knowledge of the different forms or methods of contraceptives and how they function will clear a lot of misperceptions related with contraceptive use. This will make users better informed and more assertive in deciding which form or method of contraception to use.

Table 5.11 Association between knowledge on modern contraceptives and the type of modern contraceptive method used

Knowledge		Modern contraceptives method type	Percentage	Total
	Short-acting methods	LAPMs		
Inadequate	71.2	28.8	100	306
Adequate	61.5	38.5	100	858
$X^2 = 9.149$			Asymp. Sig .00	

Source: Computed from the 2014 GDHS dataset

The results from Table 5.11 indicate a statistically significant relationship between respondent's knowledge on contraceptives and type of contraceptive method used at a Chi-square of 9.149 and a P-value of 0.00. A greater percentage of the respondents had adequate knowledge on LAPMs while about 29% had inadequate knowledge about the methods.

5.3.11 Respondents partners' occupation and the type of modern contraceptive method used

The employment status of the respondent's partner is also very crucial when it comes to the decision to use a particular type of contraceptive method. The chi square results show a statistically insignificant correlation between partner's occupation and type of modern contraceptive method with a Chi-square of 3.862 and a P-value of 0.43. This implies that the occupation status of respondent's partner does not have a correlation with the type of modern contraceptive method use.

Table 5.12 Association between Partner's occupation and the type of modern contraceptive method used

Partner's Occupation	Modern contraceptives method type		Percentage	Total
	Short-acting methods	LAPMs		
Professional/Technical/managerial	57.3	42.7	100	150
Sales/services	65.9	34.1	100	164
Agricultural	63.9	36.1	100	421
Skilled Manual	65.9	34.1	100	217
Unskilled Manual	66.0	34.0	100	212
$X^2=3.862$				Asymp. Sig .4

Source: Computed from the 2014 GDHS dataset

From the table, respondents whose partners were engaged in Professional/Technical/managerial jobs had the highest proportion of 42.7% using LAPMs whereas respondents whose partners were engaged in jobs that were unskilled had the lowest proportion of 34.0% of using LAPMs.

5.3.12 Respondent's Parity and the type of modern contraceptive method used

The number of children desired by a woman as well as the children she successfully delivers have been considered as an important variable related to the type of modern contraceptive method used. This is because the more children women have, the higher the likelihood that they would resort to more effective methods of modern contraception (LAPMs) to reduce childbearing. Some studies demonstrated a statistically significant correlation between the method of contraception used and parity which showed that women who have more children are likely to use a modern method of contraception to limit the number of children than those with no children (Baidoo, 2013).

Table 5.13 Association between respondent's parity and the type of modern contraceptive method used

Parity	Modern contraceptive method		Percentage	Total
	Short-acting	LAPMs		
0	66.0	34.0	100	47
1-3	71.2	28.8	100	564
4-6	57.9	42.1	100	444
7+	53.2	46.8	100	109
$X^2 = 25.377$				Asymp.Sig .00

Source: Computed from the 2014 GDHS dataset

The results from the chi-square test indicate that at a p-value of 0.05, there is a significant relationship between the parity of respondents and the type of method of modern contraception adopted. The results in Table 5.13 also show that respondents with seven or more children had the highest proportion (46.8%) adopting LAPMs. Additionally, women with 1-3 children were the least represented with a proportion of 28.8% when it comes to the use of LAPMS.

5.3.13 Respondent's partners' age and the type of modern contraceptive method used

The age of the respondent's partner is also considered as an important variable in relation with the type of modern contraceptive method used. The results from the chi-square test portray a statistically significant relationship between the partner's age and type of modern contraceptive method used at 95% confidence level with a Chi-square of 15.299 and P-value of 0.00.

Table 5.14 Association between respondent's partner's age and the type of modern contraceptive method used

Partner's Age	Modern contraceptive method		Percentage	Total
	Short-acting	LAPMs		
19-24	70.7	29.3	100	42
25-34	70.1	29.9	100	351
35-44	63.6	36.4	100	442
45-54	55.2	44.8	100	250
55+	67.1	32.9	100	79
X ² = 15.229				Asymp.Sig .00

Source: Computed from the 2014 GDHS dataset

The results from Table 5.14 show that respondents whose partners were aged between 45-54 years constituted a higher proportion of those who agreed for the respondents to use the long-acting and permanent methods of contraception followed by those who were 55+. This shows that the decision for a couple to use the LAPMs is age specific since as the couples grow older their desire to use LAPMs also increases.

CHAPTER SIX

RELATIONSHIP BETWEEN DECISION MAKING, WOMEN AND PARTNERS CHARACTERISTICS, SOCIO-ECONOMIC, AND TYPE OF MODERN CONTRACEPTIVE METHOD USED

6.1 Introduction

This chapter analyses the relationship between the independent variable (decision-making) and the dependent variable (type of modern contraceptive method used). Also, all demographic and socio-economic variables as well as intermediate variables were analyzed in relation to type of modern contraceptive method used. This was done to examine the extent to which these variables influence the type of modern contraceptive method used in Ghana. A binary logistic regression was employed for studying and analyzing the statistical relationship between the dependent variable which is binary and one or more independent variables, which can either be continuous or categorical. The binary logistic regression was used because of the nature of the dependent variable of interest to this study, measured by the type of modern contraceptive method used which is dichotomous.

With regard to this study, reference categories (RC) were created for all the variables to ensure easy comparison using exponential β which represents the odds ratios. Thus, three binary logistic regression models were fitted. For the first model (Model 1), decision making was regressed on the type of modern contraceptive method used to examine the relationship between these two variables. In the second model (Model 2), decision making and the individual characteristics of women were altogether regressed on the type of modern contraceptive method used. Lastly, in the third model (Model 3), decision making, the individual characteristics of women, other control variables as well as the intermediate variables which include partner's age, partner's education, partner's employment status,

breastfeeding and knowledge on methods of contraceptives were altogether regressed on the type of modern contraceptive method used.

The results in the models were interpreted in two different ways. The first was to determine whether there is a statistically significant relationship between selected independent variable(s) and the dependent variable at 0.05 margin of error (95% confidence level). Therefore, variable(s) with a p-value less than 5% (< 0.05) were treated as statistically significant variables in explaining the occurrence or not of the dependent variable. Secondly, the relationships between the independent variables and dependent variable were interpreted using the odds ratio. This was done by examining the likelihood of a woman using the LAPMs when compared to the reference category (RC) set as 1.0, with the use of the odds ratios. Therefore, an odds ratio value less than 1 depicts less likelihood of a woman using the LAPMs. A value greater than 1 shows a more likelihood of a woman using a LAPMs and a neutral value of 1.0 indicates that there is no relationship between the variables.

6.2 The effect of decision making on the type of modern contraceptive method used

As mentioned earlier, in Model 1, decision making was regressed on the type of contraceptive method used. The results obtained in Model 1 as shown in Table 6.1, indicates that decision making has a significant relationship with LAPMs. This implies that, respondents whose husbands mainly make the decision are 1.51 times more likely to use LAPMs as compared to when the respondent mainly makes the decision. Consequently, the results also indicate that couples who jointly decide on a modern type of contraceptive method to use are 1.55 times more likely to use the LAPMS as compared to when the wife decides alone. Therefore, when it comes to decision-making on LAPMs among couples, joint decision is strongly associated with the usage of the method. This result show a strong association between decision making and the type of modern contraceptive method used. This is similar to studies that have demonstrated that women who discuss about family

planning issues with their spouses and have their approval are more likely to use a modern method of contraception (Gebreselassie & Mishra 2007; Sharan & Valente 2002; Yue, O'Donnell & Sparks, 2010). It is also similar to a study by Mutombo and Bakibinga (2014) which found that, couples who communicate effectively are more likely to jointly agree on what type of contraceptive method to use specifically LAPMs. The Nagelkerke R^2 value of 0.011 indicates that decision making explains only 1.1% of the variation in type of modern contraceptive method used. This implies that 98.9% of the variation is due to other variables. Also, the model correctly predicts 64.2% of the response.

Table 6.1 A Binary logistic regression model showing the variation in decision making and the type of modern contraceptive method used

Model 1		
Independent Variable	OR 95% CI	P-value
Decision making		0.010
Mainly respondent (RC)	1.00	
Mainly husband/partner	1.51(0.958-2.370)	0.076
Joint decision	1.55(1.158-2.075)	0.003
Correct % Prediction	64.2%	
Nagelkerke R^2	0.011	
Model Chi-square (df)	9.116(2)	

Source: Computed from the 2014 GDHS dataset

6.3 The effect of decision making and individual characteristics of women on the type of modern contraceptive method used

In the second model, logistic regression on the type of modern contraceptive method used based on decision making and women's individual characteristics was conducted to examine the effect of these variables on the dependent variable which is the type of modern contraceptive method used. In Model 2 as represented by Table 6.2, a Nagelkerke R^2 value of 0.100 was obtained, depicting that decision making and women's individual

characteristics explain only 10.0% of the variation in the type of modern contraceptive method used. The result in Model 2 still indicates that joint decision making is a significant ($p\text{-value} = 0.01$) predictor of the type of modern contraceptive method used after controlling for the women's individual characteristics. This confirms the hypothesis that women who jointly make decisions with their spouses are more likely to use LAPMs than those who decide alone.

The results showed that respondents whose husbands mainly makes the decision are 1.55 times more likely to use LAPMs as compared to when the respondent mainly makes the decision alone. Similarly, the results also indicated that couples who jointly decide on a type of modern contraceptive method to use are 1.54 times more likely to use the LAPMs as compared to when the wife decides alone. This implies that decisions that are made jointly are more likely to result in the use of LAPMs than sole decision making. Also, the results portray that the age of the woman is a significant predictor of the type of modern contraceptive method used in Ghana. It was found that all women irrespective of their ages were more likely to use the LAPMs. Women with ages of 25-29, 30-34, 35-39, 40-44 and 45-49 had odds ratios of 1.12, 1.45, 1.58, 1.95 and 3.67 respectively compared to women who were 15-24 years.

This shows that as women age their desire to use the LAPMs also increases. Women who were within the ages of 45-49 years were three times more likely to use the LAPMs as compared to those within the ages of 15-24 years. However, women within these age brackets showed a strong significant at a $p\text{-value}$ of 0.000. This may be linked to the fact that, women who are within these age groups would have gone through all their reproductive ages or would have given birth to all the children they desire to have with their partners and so they may prefer the long-acting and permanent methods of contraception that will help lengthen their time of conception or help them avoid pregnancy completely. A study by

Mosher et al., (2004) revealed that most of these women prefer the permanent methods notably sterilization. This is similar to a study in the United States conducted by Frost and Darroch (2008) which found that, women who were above 35 years were more likely to use LAPMs.

Ethnic groups such as Ewe, Mole-Dagbani and others showed statistically significant associations with LAPMs usage. Ewes were 0.68 times less likely than Akans to use LAPMs. This result is contrary to Addai's, (1999) study which found that Ewes were more likely to use modern contraception and long-acting contraceptive method is an example. Women who belong to the Mole-Dagbani and other ethnic groups were 0.62 and 0.56 times less likely to use LAPMs as compared to those who belong to the Akan ethnic groups which is the reference category.

The findings further reveal that women's employment status, educational level, parity and religion were however not significant predictors of type of modern contraceptive method used in Ghana. However, it was found that women with primary and higher education were more likely to use the LAPMs than those with no education. This implies that, they were 6.1% and 24.4% more likely to use the LAPMs than those with no education. The most plausible explanation is that more educated women have increased access to information on the benefits of LAPMs methods hence their usage. Although statistically not significant, the finding appears not consistent with a cross-sectional study which revealed that women who had secondary education or higher were more likely to utilize LAPMs compared to those who had primary or lower school education (Tekelab, Melka & Wirtu, 2015). The second hypothesis was however, not accepted because it was not a significant predictor of modern contraceptive usage in Ghana, though significant at the bivariate level.

The results also indicate that women who belong to the Islam and Traditional/Spiritualist religion were 0.77 and 0.71 times less likely to use LAPMs than those who belong to the Catholic/Anglican religion. This supports other studies that Muslim respondents were the least people who practice contraception, because the Islamic doctrine discourages modern contraception (Gilbert & Bernard, 2015). Similarly, a study conducted in Navrongo by Bawah et al., (1999) on women's fears and men's anxieties in Ghana showed that, the fear of being punished by their ancestors prevented the women from using contraceptives. This was because they believed that it was a sin against their ancestors to use contraceptives. They also had the notion that, they may lose their lives or might not be blessed by their forefathers because of their usage of contraception (Bawah et al., 1999). This could be linked to the reason why LAPMs are less likely used among women who belong to the Traditional/Spiritualist religion. The finding also showed that women who were currently employed were 0.99 times less likely to use the LAPMs than those who were not employed. The association between parity and modern contraceptive usage indicates that women who had four or more children were more likely to use LAPMs as compared to those with no children. This is consistent with a study conducted among poor women in Africa which found that women with fewer children who intend to space their births were less likely to use LAPMs than women who have more children and want to stop having children completely. They will resort to the use of LAPMs (Creanga et al., 2011).

Table 6.2 A Binary logistic regression model showing the variation in decision making, women's individual characteristics and the type of modern contraceptive method used

Individual characteristics of women	Model 2	
	OR 95% CI	P-value
Decision-making		
Mainly respondent(RC)	1.00	
Mainly husband/partner	1.552(0.961, 2.505)	0.072
Joint decision	1.544 (1.136, 2.099)	0.006
Age of respondents		
15-24 (RC)	1.00	
25-29	1.122 (0.698, 1.806)	0.635
30-34	1.446 (0.875, 2.390)	0.151
35-39	1.582 (0.912, 2.743)	0.102
40-44	1.949 (1.087, 3.492)	0.025
45-49	3.667 (1.902, 7.072)	0.000
Women's educational level		
No education (RC)	1.00	
Primary	1.061 (0.710, 1.585)	0.774
Secondary	0.874 (0.591, 1.291)	0.498
Higher	1.244 (0.659, 2.349)	0.500
Ethnicity		
Akan (RC)	1.00	
Ga/Dangme	1.385 (0.840, 2.283)	0.202
Ewe	0.675 (0.454, 1.003)	0.052
Mole Dagbani	0.617 (0.390, 0.976)	0.039
Other	0.563 (0.358, 0.884)	0.013
Religion		
Catholic/Anglican (RC)	1.00	
Methodist/Presbyterian	1.283 (0.742, 2.220)	0.372
Pentecostal/Charismatic	1.055 (0.681, 1.634)	0.811
Other Christians	1.143 (0.695, 1.879)	0.598
Islam	0.774 (0.447, 1.343)	0.363
Traditional/Spiritualist	0.710 (0.344, 1.467)	0.355
Women's employment status		
No(RC)	1.00	
Yes	0.988 (0.654, 1.493)	0.955
Parity		
0 (RC)	1.00	
1-3	0.833 (0.411, 1.689)	0.612
4-6	1.151 (0.537, 2.466)	0.717
7+	1.058 (0.433, 2.584)	0.902
Correct % Prediction	65.8%	
Nagelkerke R ²	0.100	
Model Chi-square (df)	88.209 (23)	

Source: Computed from the 2014 GDHS dataset

6.4 The effect of decision making and individual characteristics of women on the type of modern contraceptive method used controlling for intermediate variables and other factors

Model 3, as represented by Table 6.3 shows the influence of decision making, women's individual characteristics, intermediate variables and other factors when regressed on the type of modern contraceptive method used. From the table, a Nagelkerke R^2 value of 15.4% was obtained. This shows that 15% of the variation of the type of contraceptive method used is explained by all variables included in the model. Also, the model correctly predicts 69.2% of the response.

As observed in Model 2, when the independent variable and the women's individual characteristics were analyzed together, decision making (Joint) which is the independent variable was found to be statistically significant predictor of the type of modern method of contraceptive used with a p-value of 0.006 and was also significant in Model 1 with a p-value of 0.003. Thus, when all the other factors together with the intermediate variables were added together with the independent variable, joint decision making was still significant at a p-value of 0.012. This depicts that joint decision making alone is sufficient in determining the type of modern contraceptive method used by women in Ghana. This is because even though other factors or variables have been controlled for it still remains significant at all levels (that is, bivariate, model 1, 2 and 3).

The results show that couples who jointly decide on the LAPMs had an odds ratio of 1.508, implying that couples who jointly decide on LAPMs are 50.8% times more likely to use the method than when the wife decides alone. The findings also show that the age of the woman, ethnicity, household wealth quintile, partner's age and partner's education were statistically significant in explaining the dependent variable which is type of modern method of contraceptives used. However, women's education, place of residence, religion, women's employment status, currently breastfeeding status, knowledge on modern contraceptives, parity and husband's occupation were statistically insignificant in explaining the dependent variable.

Table 6.3 A Binary logistic regression model showing the variation in the type of modern contraceptive method used by decision making, women's individual characteristics, intermediate variables and other factors

Model 3		
All Variables	OR 95% CI	P-value
Decision-making		
Mainly respondent(RC)	1.00	
Mainly husband/partner	1.437 (0. 872, 2.368)	0.155
Joint decision	1.508 (1.095, 2.075)	0.012
Age of respondent		
15-24 (RC)	1.00	
25-29	1.180 (0.688, 2.024)	0.548
30-34	1.685 (0.905, 3.138)	0.100
35-39	2.003 (0.993, 4.040)	0.052
40-44	2.891 (1.337, 6.252)	0.007
45-49	6.595 (2.787, 15.605)	0.000
Women's educational level		
No education (RC)	1.00	
Primary	1.024 (0.671, 1.563)	0.912
Secondary	0.703 (0.457, 1.083)	0.110
Higher	0.499(0.230, 1.082)	0.078
Ethnicity		
Akan (RC)	1.00	
Ga/Dangme	1.434 (0.849, 2.419)	0.177
Ewe	0.660 (0.434, 1.005)	0.053
Mole Dagbani	0.644 (0.392,1.059)	0.083
Other	0.604(0.372, 979)	0.041
Religion		
Catholic/Anglican (RC)	1.00	
Methodist/Presbyterian	1.252 (0.707, 2.217)	0.440
Pentecostal/Charismatic	1.030(0.653, 1.625)	0.898
Other Christians	1.136(0.678, 1.903)	0.627
Islam	0.851(0.482, 1.502)	0.578
Traditional/Spiritualist	0.701(0.330, 1.487)	0.354
Women's employment status		
No (RC)	1.00	
Yes	1.023(0.667, 1.567)	0.918
Parity		
0 (RC)	1.00	
1-3	0.978(0.461, 2.074)	0.954
4-6	1.519(0.664, 3.475)	0.322
7+	1.734(0.655, 4.587)	0.268
Place of residence		
Urban (RC)	1.00	
Rural	1.063(0.728, 1.554)	0.751
Household wealth quintile		
Poorest (RC)	1.00	
Poorer	1.496(0.935, 2.392)	0.093
Middle	1.598(0.925, 2.760)	0.093
Richer	1.726(0.913, 3.260)	0.093
Richest	2.176(1.041,4.550)	0.039
Currently breastfeeding		
No	1.00	
Yes	0.884(0.648, 1.204)	0.433
Knowledge on contraceptives		
Inadequate (RC)	1.00	
Adequate	1.401(1.001, 1.961)	0.049

Partner's education		
No education (RC)	1.00	
Primary	0.890(0.535, 1.480)	0.654
Secondary	0.668(0.431, 1.036)	0.071
Higher	2.143(1.084, 4.236)	0.028
Partner's Occupation		
Professionals/Technical/Managerial (RC)	1.00	
Sales/Services	1.353(0.751, 2.438)	0.315
Agricultural	1.431(0.787, 2.604)	0.240
Skilled manual	1.208(0.674, 2.165)	0.525
Unskilled manual	1.181(0.659 ,2.116)	0.577
Partner's Age		
19-24 (RC)	1.00	
25-34	0.617(0.271, 1.402)	0.249
35-44	0.427(0.174, 1.046)	0.063
45-54	0.343(0.131, 0.899)	0.029
55+	0.147(0.048, 0.449)	0.001
Correct % Prediction	69.0 %	
Nagelkerke R ²	0.152	
Model Chi-square (df)	137.009 (41)	

Source: Computed from the 2014 GDHS dataset

The results from Table 6.3 show that the knowledge of women on modern contraceptive methods was statistically insignificant in predicting the type of modern contraceptive method used with a p-value of 0.05. Women with adequate knowledge were 1.40 times more likely to use LAPMs than those with inadequate knowledge. This supports the research that, knowledge of at least one method of contraceptives is nearly universal in Ghana. Almost 99% of women know of a method of modern contraceptives and modern methods of contraceptives comprise of either short-acting contraceptive methods or LAPMs. The high level of knowledge could be attributed to the successful dissemination of family planning messages, mainly through the mass media (GDHS, 2014).

Partner's education showed a statistically significant association with using LAPMs. The results show that women whose partners had higher education were 2.14 times more likely to use LAPMs as compared to women whose partners had no education. This result is consistent with a study from Nepal, which found that husbands with formal or higher level of education had a strong association or a greater influence on the type of contraceptive method a couple decides to use. The study also emphasized that couples in which the husband is educated have greater purchasing power and greater access to methods (Gubhaju,

2009). Similarly, a study by Gilbert and Bernard (2015) revealed that the education of the partner is as important as the education of the woman when it comes to decisions on contraceptive use, because it will result in high contraceptive uptake by the women. Likewise, other studies have revealed that, women with well-educated husbands are more likely to consent and approve the use of modern contraceptive methods (Kabagenyi et al 2014; Ochako et al., 2016)

Also, women's age is also a strong predictor of the use of LAPMs. This is because it is statistically significant at all levels in determining the type of modern contraceptive method used in Ghana. It can be observed from the table that after controlling for all other variables women who were between the ages of 45-49 years had the highest odds ratio 6.6 which means that they were 6 times more likely to use the LAPMs than women who were between the ages of 15-24 years. This finding supports a study by Nohjah et al., (2013), on women aged 35 years and older found that, due to the decline in fecundity in late years of reproduction, the incidence of unplanned pregnancy and its related complications in pregnancy in this age group is high. This could be the possible reason why women in this age groups use the LAPMs to avoid unintended pregnancies or its related complications. Again, some studies indicated that sterilization was among the common modern contraceptive methods used by women aged 35 years and older (Frost, Singh & Finer, 2007). In addition, the ethnical group of women was found to be a significant determinant of type of modern contraceptive method used in Ghana. The results showed that women who belonged to the Ga-Dangme ethnic group were 1.43 times more likely to use the LAPMs as compared to those who belonged to the Akan ethnic group. Women who belong to the Ewe, Mole-Dagbani and other ethnic groups had odd ratios of 0.66, 0.64 and 0.60 respectively, indicating that they were 34%, 36% and 40% less likely to use LAPMs than those in the Akan ethnic group.

With regard to the religious affiliation of women, the results showed that religion was not a significant determinant of the type of modern contraceptive method used even though it was significant at the bivariate level. The results indicated that, women who belong to the Methodist/Presbyterian, Pentecostal/Charismatic and other Christians had odds ratio of 1.25, 1.03 and 1.14 respectively, indicating that they were more likely to use the LAPMs than those who belong to the Catholics/Anglican. Islam and Traditional/Spiritualist religion were 0.85 and 0.70 times less likely to use LAPMs than those who belong to the Catholic/Anglican religion. This can be linked to the fact that Methodist/Presbyterian, Pentecostal/Charismatic and other Christians may not have strong doctrines that prevent them from using the LAPMs, hence their likelihood to use the method. On the other hand Islam and Traditional/spiritualist religion have strict doctrines that prevent the use of modern contraceptive methods which makes it less likely for them to use the LAPMs. This is similar to a study by Wusu (2015), who revealed that Catholic women were more likely to use modern contraceptives than those in the Islam and Traditional religions.

Household wealth quintile was also found to be a significant determinant of the type of modern contraceptive method used in Ghana. Thus, it was observed that women who came from Richer/Richest households were 2.17 times more likely to use the LAPMs as compared to those from poorer/poorest households. Similarly, a study conducted from thirteen demographic and health surveys in Africa, discovered that women with high wealth status are more likely to use modern contraceptive methods than women with low wealth status (Creanga et al., 2011). This is because women who are poor are usually dependent and do not have the opportunity to take charge of their own health.

Moreover, the place of residence was also discovered as not having a statistically significant relationship with the type of modern contraceptive method used in Ghana. The results show that women who live in rural areas are 1.06 times more likely to use the LAPMs than those who live in the urban areas. This could be as a result of the improved education and

sensitization of women on the importance and use of modern contraceptives. Also, in rural areas health care delivery are undeveloped and infant deaths is also high. This result is contrary to a study by Ohene and Akoto (2008) who found that, rural women were less likely than urban women to control their fertility through the practice of contraception as the benefits of having children far outweigh costs. This is because, domestic chores such as farm work and running errands are some of the major jobs for children in rural areas.

With regard to the employment status of women, the results showed that the employment status of women does not significantly predict the type of modern contraceptive method used in Ghana. However, the results portrayed that women who were currently working had an odds ratio of 1.02, depicting that they were 1.02 times more likely to use the LAPMs as compared to those who were not working. The results confirm studies that show that women's employment status is strongly related with the type of contraceptive method used as economic role gives them more autonomy and more control over important decision (Islam et al., 2016, Hossain et al., 2011). Likewise, a study conducted in Bangladesh revealed that women who are well-educated and employed had an increased chance of contraceptive use compared to those with no education (Islam et al., 2016).

The findings further revealed that, the employment status of the partner was found not to be statistically significant to the type of modern contraceptive method used. However, partners who engaged in non- professional/technical/managerial work were more likely to use the LAPMs as compared to those who engaged in professional/technical/managerial work. Thus, partners who engaged in Agricultural activities had the highest odds ratio of 1.43, indicating that they were 43% times more likely to use the LAPMs as compared to those who are employed in the professional/technical/managerial sector. Finally, partner's aged between 45 years and older showed a statistically significant relationship to the use of LAPMs. However, they were less likely to use LAPMs as compared to those within the ages of 19-24 years.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Summary of Findings

The key objective of the research was to examine the relationship between husband-wife decision making dynamics and the type of modern contraceptive methods used in Ghana. The dataset used for the study was the 2014 Ghana Demographic and Health Survey women's file and the weighted sample consisted of 1,164 women who were married or living with a partner and currently using a modern method of contraception. Husband-wife decision making and the type of modern contraceptive method used was explored by using cross tabulations and binary logistic regression techniques to assess their associations.

At the univariate level of analysis, it was found that about 65 percent of the women reported having joint decision with their husbands/partners while about 25 percent of decisions were made mainly by the respondent (wife). The remaining 10 percent were found to be decisions made mainly by the husband/partner. The proportions using the types of modern contraceptive methods were 64.2 percent for those who were currently using the short-acting contraceptive methods and 35.8 percent for long-acting and permanent method (LAPMs) users. This is an indication that majority of Ghanaian women who were currently in union were short-acting contraceptive method users even though the LAPMs are widely available and safe for most women.

The bivariate stage of analysis showed results between decision making and the type of modern contraceptive method used. In addition, the individual characteristics of the women, as well as the partner's characteristics and other variables of interest were tested together with the type of modern contraceptive method used to examine the significance of these associations using the Pearson chi-square test. The results showed a statistically significant relationship between decision making and the type of modern contraceptive method used. Cross tabulation results confirmed that LAPMs type was highest among those who made the decisions jointly, followed by respondent alone and lastly partner alone.

The age of respondents had a statistically significant relationship with the type of modern contraceptive method used with women in the older ages (45-49) having the highest percentage of 58.5 percent using LAPMs. Also, the partner or husband's educational level showed a significant relationship with the type of contraceptive method used. LAPMs usage was highest among women whose partners had higher and primary education and least among women whose husbands had no education. Ethnicity, religion, household wealth quintile, parity, currently breastfeeding, knowledge of modern contraceptives and partner's age are some of the variables which were significant at the bivariate level. Respondents' educational level, employment, place of residence and partner's occupation showed no significance in the analysis.

At the multivariate level, three binary logistic regression models were run to determine the relationship between decision making and the type of modern contraceptive method used. For the first model (Model 1), decision making was regressed on the type of modern contraceptive method used to examine the relationship between these two variables. In the second model (Model 2), decision making and the individual characteristics of women were altogether regressed on the type of modern contraceptive method used. Lastly, in the third

model (Model 3), decision making, the individual characteristics of women, other control variables as well as the intermediate variables which include partner's characteristics such as the age, education and employment status as well as breastfeeding and knowledge on methods of modern contraceptives were altogether regressed on the type of modern contraceptive method used. Findings from the analysis in all three models indicated that decision making had a significant effect on the type of modern contraceptive method used even after controlling for other variables. This finding confirmed the first hypothesis that women with joint decision making powers are more likely to use LAPMs than when they make the decisions alone. The second hypothesis which stated that educated women were more likely to use LAPMs than those with no education was however not accepted in the study. Characteristics that emerged as significant predictors of LAPMs used were age, ethnicity, partner's education, partner's age and household wealth quintile.

7.2 Recommendations

The findings have demonstrated that joint contraceptive decisions between couples is important to the use of LAPMs. Hence, it is recommended that vigorous campaigns or programs on family planning should be organized by the Ministry of Health through the district directorates to encourage couples on the importance of joint decision making. By so doing, couples can communicate effectively on what type of modern contraceptive method to use, how many children they desire to have and the spacing between their children. This is because the LAPMs are the most effective methods of fertility control.

Secondly, studies have found that there is high failure and discontinuation rates of the short-acting contraceptive methods. As a result, increased education and counselling services should be provided to couples in the form of workshops and seminars to encourage them to use the LAPMs due to its effectiveness in reducing the risk of pregnancy-related deaths

among women as well as reducing the incidence of unintended pregnancy and also preventing the likelihood of abortion and its complications.

Thirdly, the Ministry of Health should intensify health promotion campaigns or exercises on modern contraceptive utilization especially LAPMs among couples to create awareness on the benefits and possible side effects of using these methods to help improve their usage. This health promotion exercise should also be made available to our religious and ethnic groups to sensitize them on the importance of using modern methods of contraceptives especially the LAPMs. Also, the use of local languages should be encouraged to improve access to reproductive health care and increased use of LAPMs amongst couples in our various ethnic groups. The mass media should likewise be encouraged to do more in public education on the benefits and effectiveness of modern contraceptives method especially LAPMs.

Finally, periodic training sessions should be organized for service providers of LAPMs to get them well informed and equipped on the application of LAPMs. This will help them provide accurate information about family planning choices to couples which will help them to make informed decision on the type of method to use.

7.3 Conclusion

It is evident that the short-acting contraceptive methods are more commonly used than LAPMs, despite the LAPMs being more effective, more economical, and better accepted than short-acting contraceptive methods. Although (LAPMs) methods are widely available and safe for most women few Ghanaian women use them. The literature has established a relationship between husband-wife decision making and modern contraceptive use; however, this study sought to examine the relationship with the type of modern contraceptive methods used by couples. Husband-wife decision making showed statistically

significant associations with the type of modern contraceptive method used. Likewise, age, ethnicity, partners' education, partner's age and household wealth quintile were seen as statistically significant correlates of type of modern contraceptive method. Therefore, policy makers should increase their efforts to promote the use of LAPMs by improving women's access to reproductive healthcare centers as well as introduce counselling units in these centers to equally counsel couples on the importance of joint decision making on modern contraception and family planning methods. There is the need to explore this in detail by conducting an in-depth study using a qualitative research to help improve our understanding of decision-making within households and how it influences the type of modern contraceptive method used.

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