

UNIVERSITY OF CAPE COAST

DETERMINANTS OF CONTRACEPTIVE USE AMONG FEMALES IN
GHANA

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BY

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:..... Date:.....

Name: Victor Owusu Boateng

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature:..... Date:.....

Name: Eugene K. M. Darteh

ABSTRACT

The aim of this study is to assess the determinants of contraceptive use among females in Ghana. The rate of contraceptive use among females in Ghana is very low. That leads to high fertility, high maternal mortality and high infant mortality in the country. So to improve the overall reproductive health status of women, it is important to encourage contraceptive use among women. This study investigates the effects of some demographic, social programmatic factors on current use of contraceptives among female using data from Ghana Demography and Health Survey 2008.

The analysis used include descriptive, cross tabulation and Multivariate statistics method. Findings showed that knowledge of contraception is almost universal among the women. The use of modern and traditional method of contraception is high among all the regions except that of Northern Region. The use of modern method of contraception is very high in Greater Accra and Brong Ahafo, but low in Northern and Western Region. The use of traditional method of contraception is very high in Ashanti and Greater Accra region but less in Northern and Upper West Regions.

The findings from the bivariate analysis suggest that all the variables namely age; residence, education, region, religion, employment status and exposure to media had significant effect on contraceptive use. The major findings derived from the study is for policy formulations and appropriate interventions for increasing the level of contraceptive use among females in Ghana as well as to give suggestion for further research on this issue.

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DEDICATION

To My Family

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CHAPTER ONE

INTRODUCTION

Background to the Study

The persistently high levels of fertility in Ghana and most sub-Saharan African countries, accompanied by declining mortality, has given rise to an unprecedented and rapid growth in population, contributing to environmental degradation, poverty and a deteriorating quality of life for the majority of the people (WHO, 2010). The relatively high fertility in Ghana is largely attributed to a low level of contraceptive use (Ghana Statistical Service, 1998).

Contraceptive use is one of the four proximate determinants of fertility; the other three are proportions married, induced abortion and period of lactational infecundability (Bongaarts, 1995). The proportion of currently married women knowing any contraceptive method has increased from 68% in 1979 to 79.4% in 1988, while the proportion of currently married women currently using contraception has registered a slight increase from 9.5% to 12.9% during the same period. An examination of women's need for family planning to space or limit future births according to their intention to use contraception shows that, in 1988, 18.2% of women in union wanted no more children and were not using contraception; 47.7% of currently married women wanted to postpone the next birth or were uncertain about having another child and were not using contraception. Together, 65.9% of currently married women had an unmet need for contraception (Ghana Statistical Service, 1998). The wide gap between

knowledge and use of contraception has generated considerable interest in the study of the factors that influence a couple's decision to use contraception. Contraceptive use is important not only for its effect on fertility but also because it has health implications for both mother and child (Cleland *et al*, 2006).

Contraceptive methods tend to be lumped into two broad categories: modern and traditional. Overall contraceptive use among married women in Ghana has nearly doubled over the past 20 years. According to Ghana Demographic and Health Survey there was a relatively high increase in the late 1980s and 1990s, from 13 to 22 percent. However, there has been only a small increase in contraceptive use over the past ten years. The contraceptive prevalence rate increased from 22 percent among currently married women in 1998 to 25 percent in 2003 and has remained steady over the past five years (24 percent in 2008). Similarly, the use of modern methods nearly doubled over the past 15 years from 10 percent in 1993 to 19 percent in 2003, before declining slightly to 17 percent in 2008. According to the GSS, there has been only a small decrease in use of traditional methods over the past 20 years. While there was an increase in the use of traditional methods from 8 percent in 1988 to 10 percent in 1993, use of these methods decreased to nine percent in 1998 and to seven percent in 2003, and remained at this level in 2008 (Ghana Statistical Service, 2008). This shows that there has been some improvement in the contraceptive use among Ghanaians compared to some of the countries in Sub-Saharan Africa such as Botswana, Burundi and Chad (Malhotra & Thapa, 1991).

Women in urban areas are more likely to use contraceptive methods (27 percent) than their rural counterparts (21 percent). The highest contraceptive prevalence rate by region is in the Greater Accra Region (33 percent), followed by the Brong-Ahafo and Volta Regions (29 percent each). The Northern Region reports the lowest level of contraceptive use (6 percent). Women with at least some secondary education are more than twice as likely to use contraception as women with no education. Household wealth status is related to the use of contraception; 14 percent of currently married women in the lowest wealth quintile are using a contraceptive method, compared with 31 percent of their counterparts in the highest wealth quintile (Ghana Statistical Service, 2008).

Family planning practice was introduced in Ghana in 1970. The objective then, according to the Ghana National Family Planning Program (GNFPP) was to make family planning services available to all couples with a view to encouraging them to adequately plan their families. Implicit in this objective was fertility control. However, the lack of any more than moderate success of the program, as measured in terms of the adoption rate and aggregate fertility reduction has led to the criticism that this shortcoming may reflect the failure to recognize the unique demographics and socio-cultural characteristics of the Ghanaian society. This is against the background of the fact that the relative importance of cultural variables in the explanation of fertility differentials has come to be accepted as a reality.

The means for regulating fertility have been popularly labeled the intermediate variables. Davis *et al* (2006), point out that there are actually three

phases to fertility: intercourse, conception and gestation. Intercourse is required if conception is to occur, if conception occurs, successful gestation is required if a baby is to be born alive.

The intermediate variables play a role in determining the overall level of fertility in a society, the relative importance of each varies considerably. Bongaarts (1995) has been instrumental in refining our understanding of fertility control first by calling these variables the proximate determinants of contraceptive use instead of intermediate variables and secondly by suggesting that differences in fertility from one population to the next are largely accounted for by only four of those variables: proportion married, use of contraceptives, incidence of abortion and involuntary infecundity (especially postpartum fecundability as affected by breast feeding practices) (Bongaarts, 1995).

Of all proximate determinants of fertility, contraception is by far the most important. Without modern contraception, fertility can be maintained at levels below the biological maximum, perhaps even as low as three children per woman, but it is very difficult to achieve low levels of fertility without a substantial fraction of reproductive-age couples using some form of modern fertility control (Weeks, 1999).

The exact nature of the relationship between fertility and contraception has been measured with increasing accuracy and frequency over the past few decades, beginning with the Knowledge, Attitude and Practice (KAP) surveys of the 1960s and 1970s and followed by the World Fertility Surveys and the Contraceptive

Prevalence Surveys of 1970s and 1980s and then by the Demographic and Health Surveys of the 1980s and 1990s.

In North America, these kinds of data have come to us through the National Surveys of Family Growth in the United States, through the General Social Survey in Canada and through the National Fertility Studies in Mexico. In Ghana, these kinds of data have come to us through the Ghana Demographic and Health Survey organized by Ghana Statistical Service.

Contraceptive utilization is usually measured by calculating the rate of contraceptive prevalence, which is the percentage of “at risk” women of reproductive age (15 to 44 or 15 to 49) who are using a method of contraception. Being at risk of a pregnancy means that a woman is in a sexual union, is fecund, but is not currently pregnant.

There are approximately 900 million women in the world right now who are at risk of pregnancy and about 56 percent of them are using some contraceptive methods (United Nations Population Fund, 1997).

Statement of the Problem

At the global level, the rate of population growth has declined from 1.7 % per annum in the 1980s to 1.4 % per annum in the 1990. It has further declined to 1.2 % per annum in 2010, but that of Ghana has reduced to 2.3 (Population Reference Bureau, 2011). The use of modern methods nearly doubled over the past 15 years from 10 percent in 1993 to 19 percent in 2003, before declining slightly to 17 percent in 2008 (GSS, 2008).

Low fertility can be regarded as a joint consequence of birth averted by contraception and abortion and abortion can be thought of as a consequence of unintended pregnancy occurring either through contraceptive failure or through failure to use contraceptive (Adinma, 2002).

Improvements in contraceptive practice can assume different forms, including the emergence of new technology or an increase in the proportion of couples who use more effective methods. Use of more effective methods, in its turn, could result from their greater acceptability because of technical improvement. Our concern is with the rate of unwanted fertility which is the excess fertility that theoretically would not occur of all women exposed to the risk of unwanted conception were to use perfect contraception. (Adinma, 2002).

High fertility rate could be one of the major deterrents to sustained economic growth in Sub-Saharan Africa (SSA) countries. The ill effects of population growth can be examined at macro and micro levels (Adinma, 2002).

At the macro level, high population growth combined with stagnant income can result in growing income inequalities, lack of economic opportunities and high level of unemployment. In SSA countries where productivity level is low, food production cannot keep up with population growth which leads to food security – SSA countries are predominantly agricultural based which puts pressure on land used. Densely populated area results in limited arable land for production and consumption (Adinma, 2002).

Another problem created by high population growth is congestion and rapid depletion of resources, especially in developing countries where property

rights governing access to the resources are not well-defined. This leads to overexploitation of resources, pollution, and degradation of the environment.

In a study by Government of Bangladesh (1998), pressure on limited land availability in the rural areas due to high population growth has contributed to a massive migration of peasants to urban centers. Indeed, migration to the city has led to the mushrooming of slums in the cities, which has exacerbated the problems of unemployment, lack of proper hygiene, and education opportunities.

At the micro level, high population growth leads to a more serious issue of poverty. Poorer families, especially women and marginalized groups, bear the burden of a large number of children with fewer resources per child, further adding to the spiral of poverty and deterioration in the status of women. Low levels of income among the poorer families with many children leads to inadequate food availability, which perpetuates malnutrition, which in turn accelerates high levels of infant and maternal morbidity and mortality. Studies by Amazigo et al (1997), have widely reviewed the relationship between family size, mean education and the health of children. Among poorer families, beyond a certain family size, additional children are usually associated with lower average educational attainment and reduced levels of child health as measured by nutritional status, morbidity and mortality.

What account or determines contraceptive use among women in Ghana?

Objective of the Study

The general objective of the study was to examine the determinants of contraceptive use among females in Ghana. The specific objectives were to:

1. Find out the level of contraceptive usage among females in Ghana.
2. Examine the socio-demographic characteristics of females using contraceptive.
3. Assess the factors that determine females' contraceptive use.

Research Questions

1. What are socio-demographic characteristics of females using contraceptives?
2. What are the intentions of females about contraceptive use?
3. What are the factors which determine contraceptive use?

Rationale of study

The use of contraceptive has become one of the major concerns in both developed countries and developing countries, since its consequences are very detrimental to life and natural bodies. Hence there is the need to research into some of the factors that affect the use of it and its effect on fertility. Some works have been done on family planning services and contraceptive use and its challenges in Ghana but have been limited mainly to the adult, married population. But none of the research has focused specifically on the determinants of contraceptive use among females in Ghana.

The study will help to assess the determinants of contraceptive use. The outcome of the study will enable one to identify a demographic, social and programmatic factor that determines contraceptive use among females in Ghana.

The study will provide information on level of education on female respondents; utilization and knowledge on contraception. It will help to assess the socio-demographic characteristics of females and contraceptive use and the quality of information females are having on contraceptives which often shape their attitude toward its use. The study will help to identify factors that determine contraceptive use among females.

The result of the study could also assist the Ministry of Education in developing an appropriate reproductive health education curriculum for schools and the Ministry of Health on how to structure policies and strategies on health program for females on the use of contraceptive.

Chapter Organisation

The dissertation is organized into five chapters. Chapter One introduces the study. It presents the problem statement and the objectives that the study seeks to verify. It also states the rationale of the study as well as the study areas and chapter organisation. The purpose of the second chapter is to examine the theoretical and empirical issues in Contraceptive use and present the conceptual framework.

Chapter Three discusses the methods used in the study and the justification for using these methods. Chapter Four discusses the findings from the

research categorized under Socio-demographic and programmatic perception. Finally, Chapter Five considers the implications of the findings with respect to contraceptive use as well as a summary, recommendations and conclusion.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter discusses the background of contraceptive use worldwide and narrows the focus to sub-Saharan Africa and Ghana. It further examines the socio-demographic, cultural and programmatic factors as they relate to contraceptive use. The purpose of the chapter is to provide an in-depth critical review of the literature. The chapter concludes with a discussion of the theoretical and conceptual framework underlying the study.

Concept of Fertility and Contraceptive Use

Population is still a vitally important policy area in both developed and developing countries. Patterns of and trends in fertility are now as important as other health related issues that are focused in public health terms in fertility rates. Age at first sex for females is increasing but males decreasing (GDHS, 2008). The so-called 'second demographic transition', characterised by declining age at first intercourse (to an average age of 16 years for today's teenagers) and increasing age at first childbirth (average age 27 years for women and 29 years for men), creates an extended interval during which people are at risk of unintended pregnancy and sexually transmitted infection (Raine *et al*, 2003; Gupta & Joshi, 1995). Increasing proportions of women are delaying childbearing until their fourth decade.

The trend towards later marriage and the greater prevalence of cohabitation, delayed pregnancy and smaller families have major implications for contraceptive use and the demand for abortion. Condom use at first intercourse has increased dramatically over the past two decades. Comparative studies, however, show the prevalence of intercourse before age 16 years in England to be the second highest and recent condom use among young people to be the fifth lowest, in Europe. Abortion rates in the UK are comparable to those in other Western European countries in which contraceptive prevalence is high. Abortion ratios (the proportion of all pregnancies which are terminated) have been increasing, especially among teenage women. However, the figures for the UK remain considerably lower than those in other European countries.

The Government of Ghana initiated its first National Population Policy in 1969 to manage population resources in a manner consistent with the Government's ultimate objective to accelerate the rate of economic development and improve the quality of life of the people. After 25 years, population growth still remained unacceptably high and so the Population Policy was revised in 1994 to include a systematic integration of population in development planning with renewed emphasis on fertility reduction to accelerate economic modernization, sustainable development and poverty eradication (NPC, 1994). Since then, Ghana has made substantial progress in reducing fertility through the use of contraceptive. One of the major indicators provided by the DHS surveys in Ghana has been the current fertility rate, which is important for development of population policies and programmes.

In bid to understand this seemingly complicated issue, increasing attention has been focused on the concept of the proximate determinants of fertility developed by Bongaarts (1995). Bongaarts argues that the most important intermediate variables of fertility are contraceptive, lactation, sexual exposure and induced abortion. And undoubtedly, for most areas of the world, research has shown that contraception adoption has been a major determinant in the transition from high to low fertility (Gaisie, 1984; Bumpass *et al*, 1973; Amazigo *et al*, 1997; Muia *et al*, 2000). As well, knowledge and practices of contraception in Ghana and some other African countries have been documented in KAP studies dating back to 1963. Research by Caldwell (1968) and Armar (1983) all showed the increasing spread of both knowledge and practice of family planning in Ghana.

It is worthy to note that marriage and childbearing are important and cherished values of the Ghanaian society, at the same time, there is a source of social status and prestige. The social prestige of an adult in traditional Ghanaian society is enhanced by their marital status and the number of children that they have. Marriage based on legal or common law is virtually a universal phenomenon in Ghana.

Childlessness is also frowned upon in Ghanaian society and carries with it some degrees of social stigma. Unmarried adults and childless couples would normally be regarded as immature and irresponsible and may not be invited to participate in certain traditional and social functions. Customarily, large family sizes are the preferred norm and the prayer offered for potential couples is “may

you have thirty children” (Gaisie, 1969). The child is regarded as the consummation of a marriage hence sterility, barrenness and childlessness may constitute sufficient grounds for the dissolution of a marriage.

Still with respect to marriage, the fact that a second or subsequent marriage does not carry any social stigma in Ghanaian society ensures that the opportunity to have children does not end with the dissolution of a first marriage. Hence, this practice is another contributory factor to large families. In fact, it is observed that even though economic support is an important reason for remarriage, reproduction and the perpetuation of the lineage and clan are of prime essence, just as the inability to have children is the principal cause of divorce. As well, the high level of mortality, especially infant and child mortality may also compel couples to have large numbers of children so that in the event of deaths, there may still remain some survivors.

The most obvious socioeconomic reason that explains high births is that in a largely agrarian society such as obtains in Ghana children are regarded as a source of labour. And related to this is the fact that the low level of education of women and their consequent low level of participation in the formal sector and the relatively low level of urbanization also tend to support high fertility. Working in jobs that do not interfere with maternal roles makes the raising of larger families possible. On the other hand, high level of education, urbanization and employment in the formal sector give women access to facilities such as better nutrition, increasing incomes and other socioeconomic advantages that make large families not only undesirable but also costly to maintain.

Teenage conception rates in the UK have remained relatively stable over recent decades unlike those in some Western European countries, where rates have fallen. Rates in the UK remain amongst the highest in developed countries.

Contraceptive use

At the time of the 2008 GDHS, 24 percent of currently married women were using a method of contraception. The most commonly used modern method of contraception among married women is injectables (6 percent), followed by the pill (5 percent). Male condoms and female sterilisation are used by 2 percent each, while implants are used by 1 percent of married women. The most commonly used traditional method is rhythm, which is used by 5 percent of married women (GSS, 2008).

In Ghana, both the public and private sectors are important sources of supply for users of modern methods (39 and 51 percent, respectively). Government hospitals or polyclinics are the most common public source (20 percent), followed by government health centres (14 percent). In addition, five percent combined obtain their methods from government health posts or community-based health and planning services (CHPS) compounds, and family planning clinics. In the past 20 years, there has been a shift in the source of modern contraceptive methods from the public to the private sector. The proportion of current users relying on private medical sources has increased from 43 percent in 1988 to 51 percent in 2008, although there was a slight decline over the past five years from 54 percent in 2003. The reliance on public sources for all

modern methods decreased from 47 percent in 1998 to 39 percent in 2008 (Ghana Statistical Service, 2008).

Contraceptive prevalence has increased dramatically in the last five decade. Concerning contraceptive choices, there are marked differences between countries. Age and stage of life are major determinant of contraceptive choice (Williamson *et al*, 2009; Scott & Glasier, 2006).

Although contraceptive use has increased among young women in recent years, consistent reliance on effective form of contraception remains low. Reasons for inconsistent contraceptive use are not easily characterized, as they are as diverse as they are complex (Davies *et al*, 2006). Even though continuous correct use of contraceptives during all periods of risk can greatly reduce the likelihood of unintended pregnancy, many women have difficulty adhering to such a regimen over a long period. A better understanding of why young women have difficulty using contraceptives continuously even when they do not want to become pregnant will strengthen programs and policies that are designed to reduce unintended pregnancy. Women's attitude towards pregnancy prevention, service providers, experience with contraceptive methods, socioeconomic and sexual partner characteristics are some factors that affect use of contraceptives (Frost *et al*, 2007).

The use of modern contraceptive methods among adolescents in some communities in Ghana has been found to be low. Only 30.4% of sexually active adolescents were found in a study in Nigeria to be using any form of modern methods and only 6.2 percent use condom. Many relied on traditional methods

such as periodic abstinence and coitus interruption (Okpani & Okpani, 2000). In spite of significant risk of unwanted pregnancy and induced abortion the practice of contraceptives was found to be very low among young female undergraduates in Ethiopia (Tamire & Enqueselassie, 2007).

Major factors which influenced the choice of contraceptives for users were convenience and effectiveness, so where users are offered a range of commodities that effective and convenient usage will likely increase, 88.5% were found to be satisfied with current contraceptive methods (Oye-Adeniran *et al*, 2006).

Most women at family planning clinics have been found to have decided already which contraceptive methods they want and that failure to obtain that method is probably the biggest deterrent to adoption and sustained use (Cleland *et al*, 2006). Addition of a new method has been found to attract new users and raises overall frequency of use (Ross & Winfrey, 2002). Rising adherence and continuation rate difficulty are not different from other forms of prolonged medication (Osterberg & Blaschke, 2005).

Despite being sexually active, majority of adolescents do not always use methods like condom or use them inconsistently (Ohene & Akoto, 2008). Contraceptive behaviour was studied in a national household survey among Greek females, ages 16-45 years, in 2001. The sample of 797 was representative of the Greek female population. About seven per cent of women participating in the survey reported not being sexually active and were excluded from the analysis (Ohene & Akoto, 2008).

Partners' communication influences contraceptive decisions. Young women who communicate less frequently with their sex partners about prevention issues are less likely to use contraceptive consistently. Culture that discourages openness and honest discussion about contraceptive use has been found to limit access to accurate, protective information and therefore increase risk taking by young women (Davies *et al*, 2006). There is the need to involve male partners and work on developing communication skill of a young adult in sexual relationship as a solution to limited contraceptive use (MacPhail *et al*, 2007).

In New Zealand it was found that few pregnant adolescents attributed their pregnancies to lack of knowledge of contraceptives or difficulty obtaining them, but rather they found that pregnancies were commonly related to positive or ambivalent feelings about pregnancy and concluded that these positive or ambivalent feelings toward pregnancy interfere with effective contraception and that adolescents require motivation to avoid pregnancy rather than increased knowledge or access to contraception. Lack of concern over the possibility of pregnancy has been found to be a common barrier to effective contraceptive use (Bankole *et al*, 2007).

Many young mothers have failed to access contraceptive globally because they did not care about the possibility of becoming pregnant. Indifference also influence their use of contraceptive even when it is available, removing their motivation to use it effectively. Perceived low risk to pregnancy has also acted as a barrier to access and use of contraceptives. And this is a common theme among

young women who had been using contraceptive irregularly and those who had not used contraceptives at all (Breheny & Stephen, 2007).

Barriers to accessing contraceptives have been overcome in some places such as Botswana, Chad, Ghana and South Africa. Using adult support, concrete sex education that is personalized to young women's experience and targeted contraceptive messages to young women will encourage a broad based understanding of preventing unplanned pregnancy as the responsibility of the community (Kaufman *et al*, 2003). The Perceived low risk of pregnancy, lack of awareness of the risk of pregnancy (as they believed that one must have several sexual intercourse before conception can occur), and several other factors on the part of young women act as barrier to accessing contraceptives and family planning services. Fear of side effect, poor knowledge of available methods and individual religion are major barriers to contraceptive use. For example, the Catholic Church disapproves the use of modern contraceptives and it has been the major reason for non contraceptive use among the predominantly Catholic South Eastern Region of Nigeria (Oye-Adeniran *et al*, 2006).

Inadequate, knowledge of where to get condom and not discussing family planning with partner have been found to be a barrier to family planning and risk for sexually transmitted infection among young women (Ohene & Akoto, 2008). Inaccessibility to contraceptives was found to be the major cause of unwanted pregnancy and subsequent unsafe abortion in Ethiopia (Senbeto *et al*, 2005).

In many countries access to family planning methods was initially restricted to health facilities, under strict control of medical practitioner, eligibility

criteria and constraints such as written consent of husband, proof of marital status, age or parity, excessive revisit schedule and insistence that only menstruating women be allowed to start contraception (WHO, 2004; Campbell *et al*, 2006). The success of family planning programmes has been linked to dismantling of administrative and medical barriers that impede quick, convenient and appropriate access to methods (Cleland *et al*, 2006).

Static health facilities continue to be the dominant source of family planning and geographical access is considered a possible major constraint on uptake of services. In most societies women are found to be prepared to travel long distance for advice and contraceptives, especially for methods which require infrequent or no further visits. Poor quality of service is a major important constraint to effective access to family planning programme. Some aspects of these are continuity of supplies, presence and competence of staff, treating patient with dignity and reasonable privacy (Cleland *et al*, 2006).

However in Sri Lanka the main barriers for the adolescents was accessing effective contraception, the unavailability of reproductive health services, inadequate knowledge about reproductive health services, inadequate privacy and confidentiality, negative attitudes of parents and society and public health facilities that are insensitive to the need of young people are the main barriers young people face in (Agampodi *et al*, 2008).

Another problem created by high population growth is congestion and rapid depletion of resources, especially in developing countries where property rights governing access to the resources are not well-defined. This leads to

overexploitation of resources, pollution, and degradation of the environment (Khan *et al*, 1997).

Moreover, pressure on limited land availability in the rural areas due to high population growth has contributed to a massive migration of peasants to urban centers. Indeed, migration to the city has led to the mushrooming of slums in the cities, which has exacerbated the problems of unemployment, lack of proper hygiene, and education opportunities. At the micro level, high population growth leads to a more serious issue of poverty. Poorer families, especially women and marginalized groups, bear the burden of a large number of children with fewer resources per child, further adding to the spiral of poverty and deterioration in the status of women. Low levels of income among the poorer families with many children leads to inadequate food availability, which perpetuates malnutrition, which in turn accelerates high levels of infant and maternal morbidity and mortality. Studies by Abdullah (1983) and Demeney (1992) have widely reviewed the relationship between family size, mean education and the health of children. Among poorer families, beyond a certain family size, additional children are usually associated with lower average educational attainment and reduced levels of child health as measured by nutritional status, morbidity and mortality.

Coale and Watkins (1986) in the European Fertility Study reported that group characteristics such as religion, language and other factors account for the variation and change in contraceptive use, over and above that accounted for by the traditional demographic variables such as mortality, urbanization, income and

industrialization. As a matter of fact, there are a number of socio-demographic factors such as cultural practices and norms that tend to influence childbearing in Ghana. However, this paper argues that the latter are strongly latent factors that do not lend themselves to easy measurement, but instead, give significant meaning to the expression of the former.

In connection with the above argument, this study examines the determinants of contraceptive use among females in Ghana for the decade spanning 1998 and 2008. Contraception in this study is investigated as a proximate determinant that mediates the influence of other factors such as education, age, religion, ethnicity and place of residence on fertility behaviour. The study proposes that socio-cultural norms and practices are manifestly expressed in these factors which, in turn, influence fertility behavior indirectly through contraceptive practice. In light of this, a brief insight of some socio-cultural norms and practices in Ghanaian society, as well as some socio-economic factors that influence fertility behaviour would help situate this study in proper perspective.

Given the increasing interval between the onset of sexual activity and the start of childbearing, considerable achievements have been made in helping people to regulate their fertility. Men and women take into account a number of criteria when choosing a contraceptive method (from a list which might include effectiveness, safety, positive and negative side effects and acceptability of use) according to their health and situation in life. Couples in the UK who have completed their families still tend to choose sterilisation, despite the availability

of long-acting methods that are easy to use and reversible in the event of wishing to resume childbearing with a new partner (Osterberg & Blaschke, 2005).

Most women need to use contraception for over 30 years. During the perimen-pause, declining fertility, an increasing tendency towards menstrual irregularity and increasing background risks of both cardiovascular disease and breast cancer influence contraceptive choice and eligibility (Castle, 2003). Contraceptive continuation rates, in common with other health behaviours, increase even after menopause (Cates & Steiner, 2002). With reversible methods, continuation rates have been shown to be highest with long-acting methods of contraception. Evidence from the USA suggests that increasing the uptake of injections and implants has contributed to a reduction in teenage pregnancy. The causes of discontinuation are not well understood but side effects, perceived or real, play a major part. Evidence is emerging of a beneficial effect on continuation rates of high quality information and advice (Raine *et al*, 2005).

Failure to use contraception at all, or to use it effectively and consistently, is often used as an indicator of unplanned pregnancy. Research has shown pregnancy intentions to be complex and so a simple measurement strategy is likely to provide poor estimates of the prevalence of unplanned pregnancy. Moreover, the value attached to the outcome of pregnancy varies with life stage and situation. Although a new evidence-based measure of unintended pregnancy has been developed, taking account of these factors, it has not yet been used to estimate prevalence. Furthermore, there is almost no detailed research on how

women experience pregnancy, make decisions on outcomes and seek and use abortion services (Boonstra, 2007).

In the context of the need for prevention of sexually transmitted infections, there is an increasing necessity to ensure that protection against both pregnancy and infection are practised in tandem.

Contraceptive methods risks, benefits and new developments

A variety of different methods of contraception are available. All are generally extremely safe. Not all methods are suitable for everyone. Combined hormonal methods, in particular, are contraindicated for women with certain medical conditions. Summaries of product characteristics and patient information leaflets produced by the manufacturers of contraceptives are often at odds with evidence and with national guidance. (Donahoe, 1996).

While there is evidence for an increased relative risk of breast and cervical cancer and cardiovascular disease in association with hormonal contraception, the absolute risk is very small (Cates, 2005). Since most cardiovascular events among oral contraceptive users occur in women with well-recognised risk factors (including smoking, hypertension and adverse lipid profiles), the most important preventive strategy in reducing cardiovascular risk among women of reproductive age is to reduce these risk factors (Bhana, 2006).

Concern persists about the effect hormonal contraception may have on the risk of sexually transmitted infections and HIV infection acquisition and transmission. The noncontraceptive health benefits of different methods (such as

the reduction in menstrual dysfunction and ovarian, colorectal and endometrial cancer associated with the combined pill) have potentially enormous consequences for public health (Arowojolu *et al*, 2002). These benefits may also increase uptake and continuation rates.

The prospect of new systemic methods of contraception, which depart from the theme of steroid hormones, remains distant. While antiprogestogens have been shown to have a wide range of contraceptive effects, their development has been hampered by their association with abortion (Kjellberg *et al*, 2000).

Provision of contraceptive education

Broad-spectrum dedicated campaigns, using the mass media, have been shown to be of value in raising awareness of the need for safer sex and contraception. By contrast, routine coverage in the print and broadcast media has contributed greatly to successive sensationalised 'pill scares', which have hindered progress in terms of preventing unplanned pregnancy (Al-Sabir *et al*, 1997).

Research has shown benefits of personal and sex education in schools in terms of increased likelihood of contraceptive use at first intercourse. Despite the many potential interventions for improving service delivery, there are few good data demonstrating that they improve contraceptive uptake, compliance or continuation rates, and none showing an effect on rates of unintended pregnancy. There is little evidence, as yet, of any impact of protocols and guidelines on effectiveness of service provision. There is, however, evidence that contraceptive

access is improved by provision of services in a range of settings, including nonclinical venues. There is also evidence from other countries, most notably the Netherlands, that the dismantling of services is quickly followed by a deterioration of sexual and reproductive health status (Vahratian *et al*, 2008).

Research shows confidentiality to be paramount in young people's decision to choose and use a service. There are many factors that affect individual's use or non-use of contraceptives. Several studies have been done in the different countries in the past to find out the factors that affect contraceptive use.

Three priority factors, namely demographic, social and programmatic factors are reviewed here to formulate the conceptual framework (Hong-Seltzer, 2006).

The demographic characteristics such as number of living children and age play an important role in determining the use of contraception (Williamson *et al*, 2009).

Demographic Factors

Age

It must be mentioned that among the several variables that are known to influence fertility behaviour, age stands out as one of the most important indirect influence on childbearing, as has already been illustrated. This is possible through a number of ways. A longer waiting time before marriage shortens exposure to the risk of childbearing. As well, age at marriage affects the pattern of birth intervals,

with early marriage being associated with high fertility levels (Bumpass *et al*, 1973). But it can be argued that education is also a function of age and marriage. Age determines when a girl would start attending school, how long she would be in school, and eventually, when she would complete school and start childbearing. As well, it is commonly assumed that age is positively correlated with knowledge (Tountas *et al*, 2004).

This, in effect, means that at a certain age, even the uneducated woman is presumed to have acquired some basic knowledge that would enable her make rational decisions regarding fertility choices. Age, therefore, in addition to its direct influence, also represents a factor that works through education and contraceptive use to determine fertility behaviour.

Number of Living Children

Historically, thinking about children in numerical terms became parts of people's mental outlook as they passed through a process of reproductive change (Simmons, 1996). In fact, the numbers of living children influence the use of contraceptive positively. A study in Kuwait (Shah *et al*, 1998; Anderton & Lee, 1985) had shown that numbers of living children and the experience of death of the children had effect on use or non use of contraceptives.

Number of living children determines the use or non use of contraception. Mitra *et al* (1997), in a study in Bangladesh had found that 13 per cent started using contraception before having the first child, because it was a social pressure to the couple to have a child after marriage. Twenty per cent began using

contraception after the first child and 20 per cent initiated to use contraception after having the second children.

A study (Islam *et al*, 1997) had indicated that among those who said they wanted no more children, 29.4 per cent used contraception. Among ones who said they wanted another child in the future, 15.6 per cent were practicing contraception. The same trend was also found in various studies in other countries. Yethenpa (1999) in India and revealed in a study that the desire for an additional child had an influence on contraceptive use. Desired for additional children plays an important role in the decision making process concerning practicing family planning methods (Mitra *et al*, 1997; Donahoe, 1996; Khan *et al*, 1997). According to the Mitra *et al* (1997), only 13 per cent initiated use of contraceptives before having the first child. There is always pressure on newly married women especially in developing countries to have children after marriage. So there is a negative relation between contraceptive use and desired for the additional child.

Social Factors

Women's Education

A study in Bangladesh showed that adolescent women who had secondary education and higher were found to two and half times practice contraception than those who had no education (Islam *et al*, 1997). Mitra *et al* (1997) had also shown that 46 per cent of women with no formal education were currently using a method compared with 51 per cent of women with either incomplete or complete

primary school or 56 per cent of those with at least some secondary education. A study in Kenya by Lasee and Beakur (1997) has revealed that if the husband lacked education but the wife had some higher education were 4.3 times as likely as uneducated couples to use contraceptive. According to the researcher, one interpretation of this result was that in case the wife was better educated than her husband, she might have considerably more household decisions-making. A study in Mexico by WHO/ USAID (2008) indicated that non-use of contraception was higher (49 per cent) among the illiterate women than among those who had completed secondary schooling (31 per cent).

A study in Latin America country (Martin-Castro & Juarez, 1995) had revealed that the gap in contraceptive prevalence between least and most educated women ranges from approximately 20 per cent in Columbia and the Dominican Republic to more than 40 per cent in Bolivia, Ecuador, Guatemala, Mexico and Peru. Women's education increases the age at first marriage .A study had shown that among women aged less than 18 years, who have passed 10th grade, less than one per cent were married (Islam *et al*, 1997). A study in Kuwait also showed that illiterate women were significantly less likely than educated women to practice contraception (Shah *et al*, 1998). The strong relation between women's education and contraceptive use is also evident in Nigeria, Avbayeru (1993) and India, Yethenpa (1999). The studies indicate that female's education has strong positive relation with use of contraception.

Women's Occupation

Many studies (Shapiro & Tambashe, 1994) found a significant positive association between women's employment and contraceptive use. These studies show that women's employment influences their contraceptive behaviour. In a study in India, Dharmalingam and Morgan (1996) found out that women's work give women autonomy that led limit birth and spacing birth and contraceptive use. A study in Nepal (Narsingh, 1997) had shown the same findings that working women were more likely to use contraception. The study had also shown that the level of uses of contraceptive was higher among women who were engaged in non-agricultural sector. The study had shown that women who were currently working in non-agricultural job were more likely to use contraceptives than who were working in agriculture.

A study by Furstenberg *et al* (1987) indicated that women who were not working outside the home were 2.1 times as likely as those who never practiced contraception. In Bangladesh, Mabud *et al* (1991) found that there was a relation between women's occupation and contraceptive use.

Husband's Education

Higher educated husband is more concerned of higher living status. They are more aware of the consequence of health risk due to pregnancy of their wives. In a study in Kenya, Odhiambo (1997) found that there was a large positive effect of husband's education and contraceptive use. This study had also indicated that

the net effect of husband's education on contraceptive use was higher than that of the wife's education.

A study in Kuwait (Shah *et al*, 1998) revealed that husband's educational level is a strong predictor of contraceptive use than wife's educational level, suggesting that husbands exert great influences on their wives' contraceptives behaviour. Moreover, the husband's desire for more children and his attitude towards contraception is likely to have an impact on the wife's desire as well as on her contraceptive use. Thus obtaining the husbands support is likely to be a major factor in advancing contraceptive use in Kuwait (Shah *et al*, 1998).

Husband's Occupation

In a study in Kenya by Odhiambo (1997), found that there is positive effect of husband's occupation on wives current contraception use. In that study, Odhiambo also found that husbands in higher status occupation were more likely to use contraception than husbands employed in lower status occupation. A study in Bangladesh had shown that wives of husbands employed in sales, services or production sectors were 1.5 times more likely to practice contraception than wives of agricultural labours or farmers (Islam *et al*, 1995). These findings suggested that husband's occupational status had an effect on wives contraceptive use.

In a study by Islam *et al* (1997) had mentioned the mobility of women had an impact on contraceptive method use. Islam *et al* (1997), shown that women who had permission to work outside the home were two times more likely to be using contraception than those women who had no permission to work outside the

home. This study by Islam *et al* (1997) had also pointed out that women's mobility was also positively associated with intention to use modern contraception in Bangladesh.

Islam *et al* (1997) in a study found out that husband had a strong influence on contraceptive use among the adolescent married women in Bangladesh. That study had also shown that older family members were more perceived by the respondents to be the most hostile to family planning. In that study, 28.6 per cent of currently married women reported the disapproval of their older family members and 17 per cent reported that husband disapproved family planning. Mitra *et al* (1997) had also shown that husband had an important role in making decisions on family planning practice. A study in Kenya, Lasee and Beakur (1997) found that the wives' perception on her husband's approval was statistically significant in contraceptive use.

Islam *et al* (1995) in a study had shown that the respondents who had been contacted prior to previous six month period and during the previous six month period, ever uses were 60 per cent and 71.5 per cent respectively. The respondents, who had never been contacted, ever used contraceptives only 26.5 per cent. Only 14.5 per cent of the clients who were currently using contraceptives methods never been contacted.

Kamal and Sloggett (1996) in a study has shown that visitation of a field worker (family welfare assistant) in rural area during the previous three months (from the time of study) was the most significant determinant of contraceptive use in Bangladesh. Kueninning *et al* (1997) had pointed out that the female field

workers' visit had a direct effect on family planning preferences. Islam *et al* (1995) had shown that adolescent mothers were more likely to use contraception when family planning worker's visit them several times than those who were not visited at all. Service provider's visit interaction and spending time with the client had positive effect on contraceptive use (Kane *et al*, 1997). But in a study in Bangladesh, Janowitz *et al* (1999) found that repeated home visits by field worker was not a possible indicator in convincing some women to accept family planning.

Education

According to Martin-Castro and Juarez (1995), education is a source of knowledge transmission, "vehicle" of socio-economic advancement and a transformer of attitudes. In the contemporary world, any development depends on the effective transmission of new information. Educated women are more likely to exercise the "quality-quantity trade-off" of their children (Jacobson, 1992).

Indeed, several studies have established that formal education is one of the main avenues through which the transition from natural to deliberate fertility takes place (Gaisie, 1969; Caldwell, 1982; Cochrane & Susan, 1980). First, formal education gives access to information through mass media and printed materials to broaden the woman's horizon. Firstly, with access to information, the educated woman is more likely to know of, and practice modern contraception to prolong birth intervals or cease childbearing when the desired number is attained. Secondly, formal education socializes the individual into new behaviour patterns

like the rejection of traditional norms of procreation. The acquisition of new values undermines traditional practices that inhibit the application of scientific knowledge. Thirdly, formal education generally improves the standard of living of women and exposes them to better facilities and nutritional practices that reduce infant mortality, thus offsetting the need to have many children.

Generally, education equips women with the necessary skills that ensure their qualification for engagement in high-paying jobs in the modern sectors of the economy. This provides economic incentives for them to desire smaller families. As the familial economy is reversed, women are more likely to enhance their status outside the home than within it (Caldwell, 1982; Coale & Watkins, 1986). Mothers working away from home tend to have shorter lactation periods than other group of mothers (Aikin *et al*, 1981), but contraceptive adoption enables the former to delay or space childbearing in order to reduce overload and stress that are often associated with maternal employment (Malhotra & Thapa, 1991). By improving the income-earning potentialities of women, formal education also reduces the demand for children by increasing women's decision-making power regarding fertility and its alternatives.

Lastly, there is greater commitment on the part of the educated to ensure that their children obtain formal education which involves substantial cost. The cost component of putting a child through school means a reversal flow of wealth from parent to child (Caldwell, 1982). With each additional child, the household expenditure becomes greater. Therefore, to attain higher standards of education for children, there is the need to trade off quantity for quality. As a result, the

educated woman would more likely control fertility by spacing and/or limiting births through the adoption of contraception. Hence, it is argued in this paper that formal education has an indirect effect on fertility through contraceptive use.

Region

An equally important factor in the Ghanaian context of fertility analysis is the cultural environment. Due to cultural backgrounds and normatively accepted ways of doing things, ethnicity or the region where an individual comes from or stays can play an important role in the adoption of contraception. At the same time, it is acknowledged that ethnic variations in contraceptive use in Ghana might be operating through such mechanisms as formal education, urbanization and place of residence. These factors, as would be noted, reflect to a large extent modernization and socioeconomic development. It is therefore expected that given the disparity in socioeconomic development, ethnic groups of southern and northern Ghana would be different in the level of adoption of scientific knowledge and practices related to childbearing. This is based on the historical fact that the major ethnic groups of southern Ghana, having experienced greater exposure to cultural and scientific innovations from the western world are more likely to adopt modern birth control practices. Ethnic groups of northern Ghana, on the contrary, are expected to be much more traditional with regard to childbearing as a result of little, or lack of exposure to western culture.

But in a study by Addai (1996), ethnicity was seen as not having any significant impact on the use of any contraceptive method, although non-Akan

women were slightly less likely to use an efficient method than Akan women. The above notwithstanding, this paper argues that the most probable means by which ethnicity would affect fertility behaviour is through contraceptive practice of any form. Related to the issue of ethnicity is place of residence.

Residence

Regional variations in contraceptive adoption have mainly been interpreted in terms of levels of socioeconomic development and health care (Tuoane *et al*, 2003). In areas where health care services are rudimentary and infant mortality is high, potential family size is also high, as intimated elsewhere. Since there are fewer surviving children, the motivation to limit births does not exist. Naturally, fertility then becomes a rational response to the parents' basic reproductive circumstances (Jacobson, 1992). Better health does not only increase the survival rate of children, it also raises per capita income via the productive activities of a healthy population.

Expansion of health services and facilities also increases accessibility of programs of fertility control. Since health care in Ghana is heavily subsidized by government, fertility control services are provided at low cost. Thus, increased knowledge and accessibility of family planning services, and invariably the use of modern contraception is expected to be higher in regions, and more specifically, in urban centres and large towns where medical services are readily available. In a related study, Ohene and Akoto (2008) found out that urbanization appeared to have some impact on the use of efficient contraception, although the effect was

not statistically significant. Women were about 20% more likely to use an efficient method if they lived in urban areas and 3% for those in the rural areas.

The study also notes that the household structures of predominantly rural areas make large numbers almost a necessity. Domestic chores, farm work and running errands are some of the major jobs for children. Specifically, most Ghanaian children help parents on the farm weeding, planting, harvesting, etc., and in the homes fetching water, cooking, marketing of farm produce and looking after the young ones. Given these economic realities, rural women are less likely than urban women to want to control their fertility through the practice of contraception as the benefits of having children far outweigh costs. Therefore, this study argues that access to, or lack of contraceptive knowledge through family planning programs has an indirect effect on fertility by virtue of where the individual resides.

Religion

Although religion is one of the possible factors that can determine the contraceptive use among females, yet this study did not include it as one of its independent variables. It is common knowledge that fertility and birth patterns vary by religious groups as a result of the different religion goes beyond the church doctrines concerning birth control. Some denominations like the Catholics, Mormons and Baptists maintain strong doctrinal positions against the use of modern contraceptive and other artificial means of controlling fertility, or promote large families in other ways (Coale & Watkins, 1986).

However, the importance of religion in predicting fertility control in Ghana might also be partly reflected in attitudes towards the value of children, and in cultural practices and doctrines regarding the practice of birth control as mentioned earlier. Fertility differences have been reported between Christians, Moslems and Traditionalists. For example, Tawiah (1997) found that compared to all other religions in Ghana, Moslem women have the lowest fertility, while Christians have the highest. The author suggested that factors such as strict adherence to postpartum abstinence, prolonged breastfeeding, and poorer health that constrains fertility may be the potential causes of low Moslem fertility in Ghana. The study notes further that the fertility behaviour of women that practice Traditional African religion is similar to that of Christians, while the fertility level of people that do not practice any form of religion are just slightly higher than that of Moslems.

Also in the study by Addai (1996) on socio-economic and cultural differentials in contraceptive usage among Ghanaian women, the author observed that religion affects the use of any method of contraception as well as the use of an efficient method. For instance, the study revealed that non-Christians are less likely to use an efficient method; specifically, women are almost 75% less likely to use an efficient method if they are not Christians. The author notes that Protestant churches in Ghana on the whole have more liberal policies towards family planning.

Though not quite extensive, the foregoing review provides some fairly broad perspective of some of the factors that influence fertility behaviour in

Ghana. This context is expected to facilitate an informed discussion of the outcome of the analysis that will be executed shortly.

Knowledge of Contraception

Family planning education programmes should reach out to both men and women and provide accurate information on the risks of pregnancy, the benefits of birth spacing, and the safety and possible side effects of contraception, and encourage positive attitudes toward family planning (WHO, 2008).

A variety of safe and effective contraceptives are available and efforts are made to increase availability and access to them. In spite of this, unintended pregnancy remains a considerable social and health problem (Atuyambe *et al*, 2005).

Lack of adequate knowledge and awareness has been found to be associated with lack of contraceptive use among young women. Its use has been found to be associated with having previously been pregnant, meaning it is only after a pregnancy that young women are educated about and subsequently offered contraceptives services (MacPhail *et al*, 2007) Some pregnant adolescents have attributed their pregnancy to lack of knowledge of contraceptives and how to access them (Garenne *et al*, 2000).

Lack of awareness and poor knowledge of contraceptives methods has been found to be common among young women seeking for abortion. And that it is necessary to ensure dissemination of correct and appropriate information to young women about contraceptives. The main sources of information for young

women about contraceptives are friends, radio and nurses (Oye-Adeniran *et al*, 2006) where clients of family planning services have prior counselling about side effect of methods which enable them in chosen help to counter the side effects.

The level of awareness of contraceptives has been found to be high in some community but good knowledge of different contraceptive methods is very low (Onwuzurike & Uzochukwu, 2001). Therefore there is the need for women to receive information about contraception and promote women's right to control their reproductive health, generate awareness and dispel myths about contraceptives (Shoveller *et al*, 2007).

Accurate knowledge of emergency contraception among young people on contraceptive method has been found to be low and that only few have accurate and detailed information regarding emergency contraception. Many who report familiarity with emergency contraceptive were found to be having misinformation and very few knew the correct timing of use. Lack of detail and accurate information on contraceptive was found to have resulted in reluctance to adopt family planning method as some will want to know its side effect and contra indications (Muia *et al*, 2000; Kaufman *et al*, 2003; Tamire & Enqueselassie, 2007) Among university students in Ethiopia it is only about 44 percent who have ever heard about emergency contraceptives, however below 10 percent of them have the correct knowledge of when to use it (Tamire & Enqueselassie, 2007).

Research on preventing pregnancy in adolescent population has tended to focus on the role that contraceptive knowledge plays in determining use of contraception; some have found no relationship between reproductive and

contraceptive knowledge and contraceptive behaviour among young women generally. It was recognized that young women are not poorly educated about contraception or fertility but their education is not sufficient to ensure consistent effective contraceptive use (Boohene *et al*, 1991).

Knowledge of young people on aspects of their sexuality has been found to be insufficient and lack of access to information and to services has been mentioned as a problem (Senbeto *et al*, 2005).

Knowledge of family planning is nearly universal, with 98 percent of all women and 99 percent of all men age 15-49 knowing at least one modern method of family planning. Among all women, the most widely known methods of family planning are the male condom (94 percent), the pill (87 percent), injectables (86 percent), the female condom (81 percent), and rhythm (70 percent). About six in ten women have heard of female sterilisation, implants, and withdrawal, while 43 percent of all women have heard of the IUD and 35 percent have heard about emergency contraception. The lactational amenorrhoea method (LAM) is the least known method of family planning among both women and men. There has been an increase in the level of awareness of contraceptive methods over time. The proportion of all women who know any method of contraception has risen from 76 percent in 1988 to 98 percent in 2003 and 2008. The proportion of women who know about implants has risen steeply from 4 percent in 1993 to 64 percent in 2008. A similar trend is seen among men (Tinelli *et al*, 2006).

In India, Yethenpa (1999), Nepal, Narsingh (1997) and Nigeria, Avbayeru (1993) showed that women with high knowledge of modern contraceptive were

more likely to use contraceptive methods. Knowledge measured in terms of the contraceptive methods respondents know to be a positive relationship with contraceptive use. It was found that the more the respondents knew about methods of contraception, the higher the proportion of use among them (Leoprapai & Thongthai, 1987). Knowledge on contraceptive methods can play an important role in the acceptance and use of various contraceptive methods. Unless a woman knows about the different method of contraceptives it is unlikely that she will practice family planning. Various studies have shown that there is a strong relationship between the knowledge of methods and its use. But a study by Regmi (1980) noted that higher knowledge did not necessarily lead to higher level of contraceptive use; knowledge was a pre-requisite to contraceptive use. He urged by giving the example of Pakistan fertility survey and Bangladesh fertility survey where the higher level of knowledge on contraception was followed by relatively low use of contraception.

Conceptual Framework

This study aims to determine the factors that affect contraceptive use among the females in Ghana. The conceptual framework for this study was adopted from The Hong-Seltzer framework (2006). This framework is designed to examine the impact of family planning on three broader factors which directly or indirectly affect contraceptive use. The framework was USAID's original theoretical basis for the design of the Women's Studies Project. It has two categories;

1. Independent variable: Contraceptive use
2. Dependent variables: Demographic factors, social-economic factors and Programmatic factors

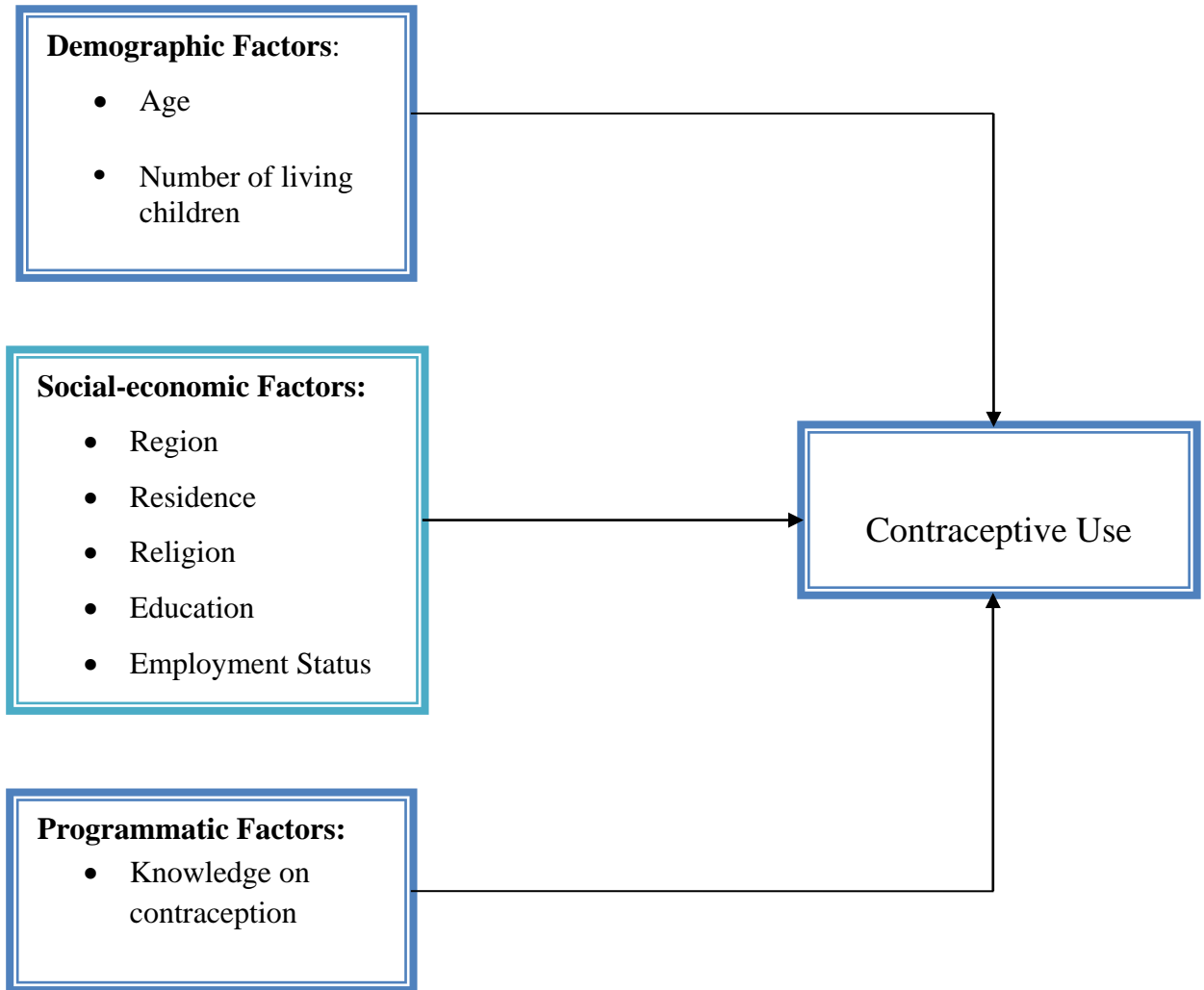
The conceptual framework provides a study that enables the formulation of the hypothesis thus: contraceptive use mediates the influence of age, Number of living children, region, residence, religion, education and knowledge on contraception.

In other words, the study aims to examine the determinants of contraceptive use among females in Ghana. This is based on the premise that contraceptive use has been cited as an important determinant of fertility transition in developing countries and particularly in sub-Saharan Africa (Bongaarts, 1995; United Nations Population Fund, 1997).

Independent Variables

Dependent

Variables



Source: The Hong-Seltzer framework (2006)

Figure 1: Conceptual framework of the Study

Summary of the Literature Review

From the literature review, most of the past studies show that demographic, social and programmatic factors have influence on the use of contraceptives among the married women. Previous studies have shown number of living children and desire for another child also one of the important variables to determine contraceptive use among the married female adolescents. The studies have shown that women's education plays an important role to use contraceptive. Contraceptive use rate also increases with an increase of level of education. Contraceptive use rate is higher among the married women with secondary education than primary education. Women's occupation also affects contraceptive use. Husband's educational level and type of occupation have influence on contraceptive use. Service provider's visitations with the client have positive effect to the use of contraception. The knowledge on contraceptives is positively related to the contraceptive use.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter discusses the methods used for the research and justifies their relevance. It presents the sources of data, which is a secondary data from the 2008 Ghana Demographic and Health Survey (GDHS), research instrument and the sampling procedure.

Source of Data

The study used secondary data from the Ghana Demographic and Health Surveys (GDHS) conducted in 2008, in particular, the study used the individual dataset for women. The GDHS are a series of surveys undertaken by the Ghana Statistical Service (GSS) in collaboration with the Ghana Health Service (GHS), with technical assistance from ICF Macro through MEASURE DHS programme every five years. The surveys are part of the worldwide DHS programme, which has been implemented in more than 80 countries of Africa, Asia, Latin America, and Europe. The first of its kind in Ghana was in 1988. These surveys collect data from nationally representative samples of households and from men and women in the sampled households. Typically, the GDHS use a two stage sampling design and a set of core questionnaires to gather a wide range of information on child nutrition, reproductive health, maternal and child mortality and related issues.

The 2008 GDHS sampled 12,360 households comprising 182 clusters in the urban areas and 230 clusters in the rural areas. A total of 4,916 women aged 15-49 were interviewed as against 4,568 men aged 15-59 years.

The GDHS 2008 is chosen for this study because they have variables on contraceptive use and are nationally representative. The 2008 GDHS is part of worldwide surveys. This allows for both inter and intra country comparison of study findings. Ghana has successfully implemented five of DHS, which allows for trend analysis, since similar variables are used for all the surveys.

A total of 4,916 women age 15-49 and 4,568 men age 15-59 from 6,141 households were interviewed. Data collection took place over a three-month period, from early September to late November 2008.

Data acquisition

Data used in this study is 2008 GDHS individual woman datasets. Permission for the use of the data was sought for, from the data processing unit of the Ghana Statistical Service. Data sets in STATA format were used for the purpose of this study.

Operationalization of Variables

The dependent variable in this study is current Contraceptive use among females in Ghana. The independent variables for this study include demographic, social and programmatic. The selection of these variables is based on the supportive research findings and the conceptual framework guiding the study.

The demographic variables are age of the respondent and number of living children. The age of currently married women at the date of survey is grouped into seven categories (15-19, 20-24, 25-29, 30-35, 36-39, 40-44 and 45-49). However, the number of living children is grouped into five categories (no child, 1 child, 2 children, 3 children, and above 4 children). Here, again, the consideration is to separate the low and high parity women for identifying the specific segments who may have intention to use contraceptive. These categories were made to reflect the nature of the DHS data and to enable a more meaningful discussion.

The socio-economic variables considered in this study are highest educational level, religion, place of residence and region. The rationale for including the region is to examine differences in contraceptive use across regions. The level of education of women has been recoded into four categories (no education, primary, secondary and higher education). Religion has been recoded into a two categorical variable, (Christian and Non-Christian). The purpose to incorporate place of residence (urban and rural) in the analysis is to explore whether the probability of using contraceptive varies between rural and urban women. The study also includes regional divisions based on the 10 administrative regions of Ghana to observe whether contraceptive use varies among region. Employment status has been divided into two categories; employed and unemployed. This variable is important to observe whether employment status of women can have any influence on the use of contraceptive.

The programmatic variable included in this study is knowledge on contraception through the level of exposure to mass media.

Dependent Variables

Contraceptive Use: This variable is classified as whether or not a woman has ever used any contraceptive method (coded Yes = 1; No = 0).

Age: Age is measured in years as at the last birthday of the respondent at the time of the interview.

Region: The ten (10) categories of Regions in the country were listed to capture the background characteristics of respondents.

Residence: The two categories of current place of residence are i) urban (consisting of all regional capitals, cities and towns with a population of 5,000 and above) and, ii) rural (all areas with population below 5,000). This is coded as Urban = 1 and Rural = 0.

Education: Education refers to the level of attainment in formal education by the individuals and it is grouped into three categories; no education, primary education and secondary education and above. The same classification is used for men and women.

Religion: Religion refers to the mode of worship to the Creator or the Supreme Being and it is grouped into two categories; Christian and Non-Christian.

Employment Status: Employment status refers to the economic activities of women and it is grouped into employment and Unemployment.

Exposure to Media: This refers to how women get access to information about contraceptive use.

Method of Analysis

The Statistical software called STATA was used to analyze the data. Frequency distribution and descriptive statistics was used to explore the background characteristics of the sample population, such as age, residence, education, region and level of contraceptive use. Bivariate analysis such as, cross tabulation was applied to analyse the association between independent variables and dependent variable.

Multivariate analysis such as logistic regression was applied to examine the factors that determine contraceptive use and predict the possible relationship between dependent variables and the independent variables. Logistic regression is used because it allows researchers to combine both categorical and continuous variables in one model and also aids to overcome many restrictive assumptions of ordinary least squares regression (Berry & Feldman, 1985) . It provides an opportunity to estimate the chances of an event occurring. A single model technique was adopted to identify variables that affect unmet need for family planning.

CHAPTER FOUR
RESULTS AND DISCUSSION

Introduction

This chapter deals with the issues revealed from the univariate, bivariate and multivariate analyses. It shows the relationship between the dependent variable (contraceptive use) and the independent variables (age, residence, education and region) under the bivariate and the multivariate analyses.

Background Characteristics of Respondent

Percentage distribution of selected background Characteristics of the sample

Table 1 shows the percentage distribution of women who are using contraception. Out of the total number of women of 4,916, about 53.5 percent use modern method of contraception while 45.3 percent use traditional method.

Table 1: Percentage distribution of contraceptive use

Contraceptive use	Frequency	Percentage (%)
Using modern method	2,630	53.5
Using traditional method	2,286	45.3
Total	4,916	100.0

Source: calculated from GDHS 2008 dataset

Table 2 shows those with intention to use contraception and those without the intention to use contraceptive. Non-users of contraception who intend to use it

later are made up of about 48 percent while about 52 percent do not intend to use contraceptive.

Table 2: Percentage distribution of intention to use contraceptive

Intention to use contraceptive	Frequency	Percentage (%)
Non-user-intends to use later	2,340	47.6
Does not intend to use	2,576	52.4
Total	4,916	100.0

Source: calculated from GDHS 2008 dataset

Age of respondents

Age group 15-19 recorded the highest percentage (21.1) of the respondents followed by age group 20-24, while age group 45-49 recorded the least followed by age group 40-44. From the Table (3), it can be observed that as the ages increase the percentages decrease with respect to the number of women sampled. It can be inferred that those in the age group of 15-19 and 20-24 are sexually active hence more attention is needed on their sexual life since age and stage of life is a major determinant of contraceptive choice (Scott & Glasier, 2006)

Socio-demographic Characteristics

Table 3: Socio-demographic variables

	Frequency	Percentage (%)
Age		
15 -19	1,037	21.1
20 -24	869	17.7
25 -29	817	16.6
30 - 34	636	12.9
35 - 39	637	13.0
40 - 44	485	9.9
45 - 49	435	8.8
Total	4,916	100.0
Region		
Western	438	8.9
Central	334	6.8
Greater Accra	692	14.1
Volta	433	8.8
Eastern	479	9.7
Ashanti	815	16.6
Brong Ahafo	403	8.2
Northern	497	10.1
Upper East	373	7.6
Upper West	452	9.2
Total	4,916	100.0
Education		
No education	1,243	25.3
Primary	999	20.3
Secondary	2,489	50.6
Higher	181	3.7
Total	4,912	99.9
Residence		
Urban	2,162	44.0
Rural	2,754	56.0
Total	4,916	100.0

Religion

Christian	3,012	61.3
Non-Christian	1,904	38.7
Total	4,916	100.0

Employment Status

Unemployed	2,236	45.5
Employed	2,680	54.5
Total	4,916	100.0

Source: calculated from GDHS 2008 dataset

Place of Residence of Respondents

In Table 3, Respondents in the urban area recorded about 12 percent less than their counterpart in the rural area (56.0). The means more respondents were found in the rural area than that of the urban area. This is due to the fact that rural areas are an area where health care services are rudimentary and infant mortality is high, potential family size is also high (Tuoane *et al*, 2003). Since there are fewer surviving children, the motivation to limit births does not exist.

Regional Distribution of Respondents

Table 3 shows that all the regions recorded a percentage ranging from a lower percentage of 6.8 to 16.6 as the highest. Ashanti Region recorded the highest percentage followed by Greater Accra Region whiles Central Region recorded the lowest followed by Upper East and Brong Ahafo Regions (7.6 and 8.2 respectively)

Educational Background of Respondents

Table 3 shows that out of the 4,916 women sampled, those with secondary education recorded the highest percentage (50.6) while those with higher education recorded the least (3.7). Those with no education were the second highest in terms of the percentage of the respondents.

Religion

Out of the 4916 respondents, about 61 per cent are Christians and about 39 per cent are non-Christian. This means more of the respondents are Christians as shown in table 3.

Employment Status

Respondents who are unemployed are about 9 per cent less than those who are employed (54.5).

Exposure to Media

Table 4 shows the percentage distribution of exposure to media, which indicate that about 78 percent of the respondents recorded yes and 22 per cent recorded no.

Table 4: Exposure to media

Exposure to Media	Percent	Number
Yes	77.9	3,830
No	22.1	1,086
Total	100.0	4,916

Source: calculated from GDHS 2008 dataset

Contraceptive Use and Demographic Characteristics

Table 5 shows the distribution of women by current use of family planning methods, according to background characteristics. Current use of contraception varies with number of living children, urban-rural residence, region and education.

The proportion currently using any modern method of contraception generally increases with increasing number of children. 11.1 percent of women without children are currently using contraceptive methods, compared with 18.8 percent of women with five or more children. Current use of contraception is highest among women who have three or four children (20.1 percent). This inferred that women without children may want to give birth as many as they want since having a child is seen as a blessing, heritage and social prestige in the Ghanaian community.

Women in urban areas are more likely to use contraceptive methods (18.6 percent) than their rural counterparts (15.1 percent). This may be due to availability, accessibility and affordability of the contraceptive in the urban areas as compare to that of the rural areas.

The Greater Accra region has the highest contraceptive prevalence rate (22.2 percent), followed by the Brong Ahafo and Volta regions (21.6 and 20.5 respectively). The Northern region reports the lowest level of contraceptive use (About 6 percent). This is due to the fact pharmacy and chemical/ Drug stores where contraceptives are sold are more predominant in southern Ghana than that of the northern Ghana. There is a fact that the major ethnic groups of southern Ghana, having experienced greater exposure to cultural and scientific innovations from the western world are more likely to adopt modern birth control practices (Addai, 1996).

Women with at least some secondary education are more than twice as likely to use contraception as women with no education (18.5 and 10.9 percent, respectively). Use of any method and use of any modern method increase with level of education. The findings suggest that a certain education threshold is necessary for women to use contraception. Increasing female education is not only good in itself but also for improving the status of women. Females should be given at least secondary education so as to improve the effectiveness of contraceptive use that will lead to lower fertility and better health.

The pattern of current use of modern and traditional methods of contraception is similar across subgroups. Use of both modern and traditional methods is more common in urban areas than rural areas and increases with level of education. Unlike the proportion currently using any modern and traditional method of contraception. The proportion not currently using contraceptive method generally decreases with increasing number of children.

Women in urban areas are less likely not to use contraceptive method (72.9) than their rural counterparts (79.1). Northern Region has the highest percent (94.1) of those who are not currently using contraceptive method followed by Brong Ahafo region. This can be inferred that the women in the northern Ghana are trading off “quality with quantity” as they may need more children to help them in their farms.

Women with highest level of education reports 69.7 percent of not currently using any contraceptive method and those with no education reports about 86 percent of not currently using contraceptive. This finding is in agreement with other studies (Ross *et al*, 2001).

Table 5: Contraceptive use and Background characteristics

Percentage distribution of currently married women age 15 - 49 by contraceptive method used, according to background characteristics					
Background Characteristics	Any modern Method	Any traditional Methods	Not currently using	Total	Number of women
Number of living Children					
0	11.1	6.0	82.9	100.0	240
1-2	13.3	6.8	79.7	100.0	1,079
3-4	20.1	7.2	72.7	100.0	915
5+	18.8	7.2	74.1	100.0	641
Residence					
Urban	18.6	8.5	72.9	100.0	1,216
Rural	15.1	5.8	79.1	100.0	1,660
Education					
No education	10.9	2.7	86.4	100.0	853
Primary	17.9	8.7	73.4	100.0	638
Middle/JSS	19.6	7.8	72.6	100.0	1,058
Secondary +	18.5	11.8	69.7	100.0	325
Region					
Western	13.2	5.9	80.9	100.0	261
Central	17.0	5.9	77.1	100.0	254
Greater Accra	22.2	10.4	67.4	100.0	422
Volta	20.5	8.1	71.4	100.0	290
Eastern	17.0	7.2	75.8	100.0	252
Ashanti	15.7	11.3	73.0	100.0	542

Brong Ahafo	21.6	7.4	71.0	100.0	267
Northern	5.7	0.2	94.1	100.0	338
Upper East	14.3	0.4	85.3	100.0	168
Upper West	20.5	1.2	78.3	100.0	82

Source: calculated from GDHS 2008 dataset

Number of children at first use of contraception

Table 6 shows the percent distribution of women by number of living children at the time of first use of contraception, according to current age. The results indicate that more Ghanaian women are adopting family planning methods at lower parities (i.e., when they have fewer children) than previously. This change in behaviour can be seen by comparing women's parity at first use of contraception among younger and older women.

Among women age 15-19, 18 percent began using contraception before having any children, compared with 5 percent of women age 40-44. Older women are more likely to have waited until they had children to start using contraception, with the largest proportion starting after they had four or more children. About 81 percent of women age 15-19 have never used contraception, compared with 42 and 42.5 per cent of women age 20-24 and 40-44 respectively. This is due to the fact that the desire for children plays an important role in the decision making process concerning practicing family planning methods at a younger age than that of an old age.

Table 6: Number of children at first use of contraception

Percentage distribution of women age 15 - 49 by number of living children at the time of first use of contraception, according to current age, Ghana

Current age	Never used Contraception	Number of living children at times of first use of contraception						Total	Number of women
		0	1	2	3	4+	Missing		
15-19	80.5	17.5	1.6	0.2	0.0	0.0	0.2	100.0	1,025
20-24	42	42.6	11.2	2.7	0.8	0.0	0.7	100.0	878
25-29	38.6	27.0	19.9	9.1	4.1	1.2	0.1	100.0	832
30-34	39.4	14.5	16.7	13.6	8.1	7.5	0.2	100.0	644
35-39	38.9	10.8	12.0	12.4	11.4	14.3	0.2	100.0	638
40-44	42.5	5.0	10.8	8.0	11.3	22.4	0.0	100.0	470
45-49	51.7	6.8	7.3	8.1	5.0	21.1	0.0	100.0	429
Total	49.6	20.2	11.1	6.9	4.9	7.1	0.2	100.0	4,916

Source: calculated from GDHS 2008 dataset

Intention to use contraception

Table 7 shows the percent distribution of currently married women who are not using a contraceptive method and intention to use in the future and according to number of living children. Forty-eight percent of currently married non-users say they intend to use family planning in the future, while 46 percent do not intend to use. Six percent are unsure.

The proportion of those intending to use varies slightly with the number of living children, increasing from 48 percent for those with no children to a peak of 53 percent for those with three children. The proportions who do not intend to use contraception in the future are highest among those with no child (48 percent) and those with 4 or more children (49 percent). This is due to the fact that children are important in the life of a woman, especially when she is in a marriage union.

Table 7: Intention to use contraception

Future use of contraception Percentage distribution of women age 15 -49 who are not using a contraceptive method by intention to use in future, according to number of living children, Ghana						
Intention to use in the future	Number of living Children					Total
	0	1	2	3	4+	
Intends to use	47.5	49.3	47.9	53.0	43.7	47.5
Unsure	4.9	7.8	5.4	5.0	6.8	6.2
Does not intends to use	47.6	42.5	46.2	41.6	48.6	45.7

Missing	0.0	0.3	0.5	0.4	0.9	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	126	386	478	387	823	2,200

Source: calculated from GDHS 2008 dataset

Socio-demographic variables and contraception use and intention

Age 15-19 recorded the least percent (5.4) of those using modern method and 2.51 percent using traditional methods of contraception while age 30-34 recorded the highest percent (18.1) followed by age 35-39 (17.7) using modern method while age 25-29 also recorded the highest percent among those who use traditional method of contraception. Also 50.4 of age 20-24 who are non-users intend to use followed by 45.53 recorded by age 25-29 while age 45-49 recorded 10.6 been the least percent of those who have the intention to use contraception. But 74.26 per cent recorded by age 45-49 does not intend to use and age 20-24 recorded the least percent (28.5) of those who do not intend to use contraception. The Chi-square test shows the effect of age on contraceptive use is statistically significant. It can be inferred that age as a variable is totally significant to contraceptive use.

The use of modern contraceptive increases with an increase in education where those with no education recording the least percentage (10.9) while those with higher education recorded highest (14.9). The same situation happens to the use of traditional method where no education recorded 1.8 while those with

higher education recorded 8.3. This is due to the fact that non-use of contraception is higher among the illiterate women than among those who had completed secondary schooling (WHO, 2008). Those with intention to use contraception increases with an increase in education. 35.3 of those with no education intend to use contraception and 43.1 percent of those with higher education intend to use contraception.

Also those who do not intend to use decreases with increase in education. Those with no education recorded 52.1 percent of those who do not have intention to use contraceptive while 33.7 percent of those who do not intend to use contraceptive are those with higher education. The Chi-square test shows the effect of education on contraceptive use is statistically significant. This indicates that education is a predictor of contraceptive use among females.

About 14 percent of respondents who use modern method of contraceptive against 6.2 percent of traditional method, compared to their counterpart in rural areas where the use of modern contraceptive recorded about 13 percent against 4.5 of the traditional methods. This may be due to the exposure of modern contraceptive to the women in the urban areas than those in the rural areas.

Those who intend to use contraceptive in the urban area is less than their counterpart in the rural area by about 2 percent. The same gap of percentage exists between those who do not use contraceptive in urban and rural area. The Chi-square test shows the effect of residence on contraceptive use is statistically significant. This is due to the fact those in the urban areas are likely to have used contraceptive in the past.

The use of modern method of contraception is low in the Northern region and high in Greater Accra, compare to the use of traditional method of contraception which is high in Ashanti region (9.5) and low in Upper East (0.3). This indicates the level of exposure, availability, accessibility and affordability of the modern methods of contraceptive in Greater Accra Region as compared to those in Northern Region. Ashanti Region has many of the herbal concoction available, this serve as an alternative to those who cannot afford the modern method of contraceptive.

The intention to use contraception is high among all the regions with Upper west region recording the highest (43.6) while Brong Ahafo recorded the lowest (34.0).

The intention not to use contraception is high in Northern region (58.7) and Greater Accra recorded the lowest percentage (34.3). This reflects that those in the Greater Accra are aware of the use of the contraceptive methods. The Chi-square test shows the effect of region on contraceptive use is statistically significant.

Table 8: Socio-demographic variables and contraception use and intention

Variable	Contraception use and intention								Total (%)
	using modern		using tradition		non-user intends to use		does not intend to use		
	Number	%	Number	%	Number	%	Number	%	
Age									
15-19	56	5.4	26	2.51	464	44.74	491	47.35	100.0
20-24	132	15.19	51	5.87	438	50.4	248	28.54	100.0
25-29	124	15.18	55	6.73	372	45.53	266	32.56	100.0
30-34	115	18.08	38	5.97	254	39.94	229	36.01	100.0
35-39	113	17.74	37	5.81	226	35.48	261	40.97	100.0
40-44	78	16.08	30	6.19	108	22.27	269	55.46	100.0
45-49	45	10.34	21	4.83	46	10.57	323	74.26	100.0
P value = 0.001									
Education									
No education	135	10.86	22	1.77	439	35.32	647	52.05	100.0
Primary	137	13.71	59	5.91	378	37.84	425	42.54	100.0
Secondary	362	14.54	162	6.51	1012	40.66	953	38.29	100.0
Higher	27	14.92	15	8.29	78	43.09	61	33.7	100.0
P value = 0.001									
Residence									
Urban	301	13.92	134	6.2	820	37.93	907	41.95	100.0
Rural	362	13.14	124	4.5	1088	39.51	1180	42.85	100.0
P value = 0.044									

Region									
Western	46	10.5	20	4.57	177	40.41	195	44.52	100.0
Central	52	15.57	17	5.09	138	41.32	127	38.02	100.0
Greater Accra	115	16.62	57	8.24	283	40.89	237	34.25	100.0
Volta	69	15.94	26	6	155	35.8	183	42.26	100.0
Eastern	75	15.66	28	5.84	173	36.12	203	42.38	100.0
Ashanti	95	11.66	77	9.45	321	39.38	322	39.51	100.0
Brong Ahafo	59	14.64	20	4.96	137	34	187	46.4	100.0
Northern	30	6.04	3	0.6	172	34.61	292	58.75	100.0
Upper East	44	11.8	1	0.27	155	41.55	173	46.38	100.0
Upper West	78	17.26	9	1.99	197	43.58	168	37.17	100.0

Source: calculated from GDHS 2008 dataset

Results from the multivariate analysis (Logistic Regression)

Determinants variables of contraceptive use

Table 9 present the logistic regression results of contraceptive use in 2008 which shows variables that are statistically significantly related to contraception. Table 9 contains woman's age of using contraception. Age group 20-24 is statistically significant ($p < 0.05$) to contraceptive use. This mean from the odd ratio percentage, those in the age group 20-24 are about 300 per cent more likely to use contraception (OR=3.27; 95% CI=2.47-4,34) relative to the women in the age group 15-19. All the age groups from 20-49 are statistically significant to contraceptive use relative to age group 15-19 ($p < 0.05$).

Table 9: Variable logistic regression

Variable	Binary Logit Model						
	OR	% OR	Robust Std. Err.	Z	P> Z	95% C.I	
Age							
15 -19 (ref)	1.0000	100.0					
20 -24	3.2719	327.2	0.4720	8.22	0.000	2.4661	4.3412
25 -29	3.5698	357.0	0.5170	8.79	0.000	2.6876	4.7415
30 - 34	4.3720	437.2	0.6609	9.76	0.000	3.2509	5.8795
35 - 39	4.2636	426.4	0.6425	9.62	0.000	3.1732	5.7287
40 - 44	4.0087	400.9	0.6505	8.56	0.000	2.9166	5.5097
45 - 49	2.5242	252.4	0.4556	5.13	0.000	1.7721	3.5956
Number of living children							
0 -1 (ref)	1.0000						
2	1.1517	115.2	0.6202	4.06	**0.476	0.7020	1.8893
3	1.5868	158.7	0.5201	2.98	**0.081	0.9451	2.664

Education

No education (ref)	1.0000						
Primary	1.6945	169.5	0.2128	4.20	0.000	1.3248	2.1673
Secondary	1.9349	193.5	0.2253	5.67	0.000	1.5401	2.4311
Higher	1.7542	175.4	0.3664	2.69	0.007	1.1649	2.6415

Place of residence

Urban (ref)	1.0000						
Rural	1.1176	111.8	0.0988	1.26	**0.208	0.9398	1.329

Religion

Christian (ref)	1.0000						
Non-Christian	1.2917	129.2	0.0167	1.01	**0.211	0.9343	1.8759

Employment Status

Unemployed (ref)	1.0000						
Employed	0.4954	49.5	1.9211	2.62	0.001	0.9600	0.7317

Region

Western (ref)	1.0000						
Central	1.5354	153.5	0.2987	2.20	0.028	1.0487	2.2479
Greater Accra	1.8617	186.2	0.3154	3.67	0.000	1.3358	2.5948
Volta	1.6766	167.7	0.3038	2.85	0.004	1.1753	2.3916
Eastern	1.5552	155.5	0.2772	2.48	0.013	1.0966	2.2054
Ashanti	1.5088	150.9	0.2458	2.52	0.012	1.0964	2.0763
Brong Ahafo	1.4676	146.8	0.2743	2.05	0.040	1.0173	2.1171
Northern	0.5420	54.2	0.1268	-2.62	0.009	0.3427	0.8573
Upper East	0.9873	98.7	0.2100	-0.06	**0.952	0.6507	1.4981
Upper West	1.7453	174.5	0.3260	2.98	0.003	1.2103	2.5168

Exposure to media

No (ref)	1.0000						
Yes	0.6906	69.1000	0.2603	0.28	**0.8860	0.7494	1.2830

Source: Calculated from 2008 GDHS dataset. OR=odd ratio; P-values in parenthesis;

Confidence interval in brackets; ref= reference; ** p>0.05- Not significant at 95%

The use of contraceptive depends on one's level of education and place of residence. From Table 9, it is observed that education is statistically significant ($p < 0.05$) to contraceptive use. However those whose level of education is at the primary level is about 170 per cent more likely to use contraceptive as related to those with no education. Those with secondary education are about 194 per cent more likely to use contraceptive as related to those with no education. This indicates that education is related to the use of contraceptive.

For place of residence which is urban or rural, with urban as the reference, it is observed that a rural area is statistically not significant ($p > 0.05$) to contraceptive use. However those in the rural are 112 per cent more likely to use contraceptive (OR=1.12; 95% CI=0.94-1.33). This is due to the level of exposure of the contraceptive use to those in the rural areas (Jacobson, 1992).

Table 9 shows that all the regions in the country are statistically significant variable to contraceptive use except Upper East which is statistically not significant ($p > 0.05$) variable to contraceptive use but those in the region are almost 99 per cent less likely to use contraceptive. Those in Central Region are about 154 per cent more likely to use contraceptive (OR=1.54; 95% CI=1.04-2.25) as related to their counterpart in the Western Region. Those in Greater Accra are 186 per cent more likely to use contraceptive as compared to their counterpart in Western Region. However those in the Northern Region are 54 per cent less likely to use contraception although it is statistically significant variable region ($p < 0.05$). This is due to the fact Southern Ghana is predominantly Christians and the Northern Ghana has a large Moslem population.

Women with two children are 115 per cent more likely to use condom as compared to their counterpart with 0-1 children while those with three children are also 158 per cent more likely to use contraceptive relative to those with 0-1 children. Those with 2 and 3 children are statistically not significant ($p>0.05$) variable to contraceptive use. This is due to the fact that women are now actively involved in economic activities to support the family up-keep, there they are trading off “quantity with quality” (WHO, 2008).

Religion also plays a key role in the use of contraceptive. Those who are not Christians are about 130 per cent more likely to use contraceptive relative to those who are Christians. From the Table 4.16, non-Christian are statistically not significant ($p>0.05$) variable to contraceptive use. This is due to the doctrine of a section of the Christian community who are in majority against the use of contraceptive use.

Women who are employed are 49.5 per cent less likely to use contraceptive relative to the unemployed. It is observed from table 4.16 that, employment status is statistically significant ($p<0.05$) variable to contraceptive use. This is due to the fact that the number of children that a career woman will have will affect her output at that the workplace.

About 70 per cent of women are exposed to the media for the acquisition of knowledge on contraceptive use as related to those who are not exposed to the media. From table 9, exposure to the media is statistically not significant ($p>0.05$) variable to contraceptive use. It can be inferred that women are less exposed to the

media whether the print or the electronic. Knowledge on contraceptive use is less discussed in this form of media.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this study was to examine the determinants of contraceptive use among females in Ghana. This is because the control of high fertility in Ghana and the world in general has become a great concern and can only be controlled by the level of prevalence of contraceptive use as one of the proximate determinants of fertility (Bongaarts, 1995).

Data from the 2008 Ghana Demographic and Health Survey (GDHS, 2008) was used. Data on female respondents totaling 4916 was analyzed. In analysing the data, three (3) levels of statistical methods were employed namely: univariate, bivariate and multivariate.

Summary

Contraceptive use is a key subject of interest to countries which are concerned about the consequences of high fertility which can result in high infant mortality and high maternal mortality.

It is observed that in Ghana, the prevalence of contraceptive use is low compared to that of the world, but high as compared to countries in the Sub-Saharan Africa. The study reveals that the use of contraceptive increases with an increase in age but sharply declines at age 45 – 49.

Women use more of the modern methods of contraception than the traditional methods while about 70 per cent do not use any of the contraception

methods despite high level of knowledge of the use of contraception across the regions in the country.

Those who do not have children are less likely to use contraceptive than those who have children. This might be due to the pressure sometimes being mounted by the society on married couple to give birth as soon they marry.

Those in the urban areas use any method of contraception than their counterparts in the rural areas. The place of residence in terms of the rural area is statistically not significant to contraceptive use because its P value is greater than 0.05.

The region is statistically significant to contraception use but it is only Upper East that is statistically not significant to contraceptive use.

The contraception use increase with an increase in education. From the multivariate analysis, with no education as the reference point, those in the primary level are about 170 per cent more likely to use contraception than those with no education while those in secondary schools are also about 194 percent more likely to use contraception than those with no education. Women with higher education are 175 percent more likely to use contraception than those with no education.

Conclusions

From the analysis of the study, all the variables cited to be independent variables are all statistically significant ($p < 0.05$) except rural area as a place of residence and Upper East as a region and exposure to media ($p > 0.05$). Some major findings observed are:

1. Among the demographic variables used for the study, only one demographic variable was identified to be a determinant of contraceptive use among females in Ghana. This demographic variable is age. It can be concluded that this variable is significantly associated with contraceptive use.
2. Education, place of residence and employment status of females determine the contraceptive use among females in Ghana. It can be inferred that these variables are significantly related to contraceptive use.
3. The study analyzed the programmatic variables that influence contraceptive use. Among the programmatic variables, exposure to mass media about knowledge on contraceptive predicts total contraceptive use.
4. The study determines that there is a significant relationship between socio-demographic characteristics of female (age) and contraceptive use. It concludes that age, education, place of residence, region, religion and employment status significantly relate to contraceptive use among females in Ghana.

Recommendations

On the basis of the objectives, findings and conclusions from the study, recommendations are formulated here for promoting contraceptive use among the females in Ghana.

1. The use of any method of contraception must be promoted in the following regions by Ministry of Health, Ghana Health Service and other Non-

Governmental Organisations such as PPAG in designing messages for their contraception campaigns:

- a. Western Region
- b. Northern Region and
- c. Upper West Region

There is a need also for periodic analysis of family planning service delivery points to complement the supply side of the family planning equation in the regions stated above.

2. The use of contraception should be encouraged in our secondary and high schools by Ministry of Health and Ghana Health Service in conjunction with Ministry of Education where those in the age group 15 – 19 fall, since the rate at which they use contraceptive is very low. This might help reduce high birth rate and empower women through education as they stay long in classroom. The Non Governmental Organisations such as PPAG in their business of promoting contraceptive use, design messages for their contraception campaigns should target females in schools from lower level to the higher level.
3. Women with low education should be targeted by Ghana AIDS Commission, Ghana Health Service and Ministry of Health when there is a programme on the promotion of contraceptive use. The District Assemblies as part of their responsibility in helping the Education and Health Departments in the various districts can facilitate the activities of these

departments to achieve one of their goals thus promoting contraceptive use among other equally important goals.

4. Women without children should be educated by Social Welfare and Family Planning Worker under Ghana Health Service on the importance of having a smaller family size in our dispensation when turning out messages on family planning and contraceptive use.
5. Further study will be needed to find out why the knowledge on contraceptive use is high among all the regions but does not reflect in its use.

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