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MARRIAGE TYPE AND CHILDREN EVER BORN AMONG
WOMEN IN GHANA



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ACCEPTANCE

Accepted by the Faculty of Social Studies, University of Ghana, Legon in partial fulfillment of the requirements for the Degree of M.A. (Population Studies).

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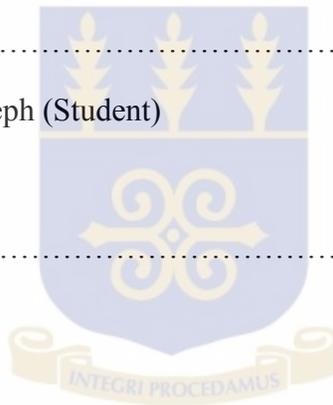
DECLARATION

I hereby declare that, except for references to other people's work which have been duly acknowledged, this is the result of my own research and it has neither in part nor in whole been presented for another degree. I, however, accept responsibility for any errors found in this work.

Signed:.....

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Date:



DEDICATION

I dedicate this work to the memory of the late Emmanuel A. Juayire and the entire Juayire family for their encouragement.



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ABSTRACT

Ghana currently has an average parity of 5.6 (GDHS, 2008) which means the average Ghanaian woman would have more than 5 children by the end of her reproductive period. Ghana like many other sub-Saharan African countries recognises the value of fertility reduction, hence the initiation of policies and strategies to make family planning programmes and methods available to couples and women. Ghana's fertility rate of 4.0 is still high compared to the global average of 2.5 (United Nations, 2013). Ghana is a nation that puts in much effort to reduce its fertility rate. It therefore was a step in the right direction to examine the relation polygyny might have on a woman's number of children ever born.

The Ghana Demographic and Health Survey (GDHS, 2008) data set was used in this study. It was shown in the study that polygyny was significantly and positively related to a woman's number of children ever born; and polygynous women were found to have a higher number of children ever born than monogamously married women. Some background characteristics of women in the study sample such as education, contraceptive use, age at first birth, ethnicity, wealth index and religion were significantly related to children ever born. The place of residence of women was not significantly related to marriage type. A bivariate analysis between place of residence and children ever born showed a significant relationship between the variables, with rural areas having largest of polygynous wives as compared to urban residence.

The study recommends that literacy programs such as adult education should be prioritized to enhance contraceptive use in the country and also to provide women with occupational skills for income generating ventures.

CHAPTER ONE

1.1 Background to the study

1.2 World fertility

The demographic transition theory came about as an attempt to describe the demographic trends and changes that took place in advanced nations around the period 1908 to 1927. The theory describes the transition from high birth and death rates, to low birth and death rates (Weeks, 2008). According to the theory it is expected that at the end of the demographic transition, fertility rates will be low. As countries experience the transition, differences have emerged in terms of the consequences of the transition between and within countries.

Currently, almost all the developed countries are at the end of the transition (Weeks, 2008). In Japan and most of Eastern Europe (TFR=1.5) and Southern Europe (TFR= 1.4) fertility rates are below replacement level (PRB, 2013). Yet, a country like Ireland has been able to maintain its replacement fertility level (2.0) (PRB, 2013). The global south countries like China, Cuba and Puerto Rico have also attained fertility rates below replacement level (Weeks, 2008). Countries in sub-Saharan Africa (SSA) are classified as being in the process of transition (Weeks, 2008). According to Bongaarts (2012) sub-Saharan Africa (SSA) is experiencing fertility decline (1990: TFR=6.2) to (2010: TFR=5.1) in the number of children per woman. Sub-Saharan Africa has an average fertility rate of 4.8 children per woman, which is higher than the global average of 2.53 children per woman (United Nations, 2013).

Developing nations, including many sub-Saharan African countries are faced with the challenge of controlling and reducing their fertility rates. According to the Ghana Demographic and Health Survey, Ghana has experienced fertility decline since 1988, with a total fertility rate of 6.4 (1988) to 4.0 in 2008. In 2013, Ghana's TFR at 4.2 births per woman (PRB, 2013; GSS, 2010). United Nations (2013) projections suggest that, by 2025 at least 20% of the working population in developed nations will be aged 65 years and older, while less than 20% of the population will be under 15 years. This means most developed nations would have about 40% of their population being dependents, there will then be the need to have a working group to replace the 20% aged in other to keep the economy in a good shape to support social policies such as public pension schemes and health insurance for the increasing aging population. Developed nations would also have to rely on immigrants for a sustainable labor supply (Weeks, 2008).

Barro (1991; 1997) in a study to examine the effect of fertility on economic growth, using panel data from 100 countries, finds that fertility has a negative impact on productive output. Barro (1997) realized that expenditure on childrearing rather than productive goods (income generation) is a main factor in the negative effect of fertility on economic growth. Ghana could be facing economic difficulties with its current fertility rate of 4.2 (GSS; 2010). Instead of spending its resources on improving macro-economic indicators and promoting the private sector, the government would end up spending national resources on policies and programmes such as free maternal health and child care. These are some of the implication of high fertility on a country's economy.

1.3 Marriage Type

Marriage according to Caldwell (1967a) is the transfer of a woman's reproductive rights from her father to her husband. This means men have a great control when it comes to reproduction or fertility decisions, due to the payments of bride price. Marriage, according to Nukunya (1992) is recognized as an important establishment that maintains family all over the world. Marriage is therefore a very important institution in every society. The purpose of marriage in sub-Saharan Africa is for reproduction (Caldwell, 1967). Marriage types practised and recognized both socially and legally in sub-Saharan Africa are monogamy and polygyny (Klein and Dodoo, 2004; Lestheaghe et al., 1986). According to Lardoux and van de Walle (2003), marriage type contribute greatly to fertility behaviour of women. Examining the effect of marriage type on fertility had been pursued through what is known as the polygyny-fertility hypothesis (Bumi, 2014). This hypothesis states that women in polygynous unions have a lower fertility than women in monogamous unions (Bumi, 2014).

Polygyny in the Western societies has been described by Winking et al. (2013) as rare. Polygyny among the USA is reported by Bean and Mineau (1986) as being practised among the Mormons, a religious group prevailing among residents in Utah and Illinois. Here polygyny was found to have an effect on fertility by increasing the fertility (CEB) of polygynous wives. Tertilt (2005) in a study, classified developed nations particularly Western nations as monogamous nations because of the almost non-existence of polygyny in such countries.

The situation of polygyny in South America was different from those of North America. According to Hern (1992) among the Shipibo tribe in South America, 9.8 percent of all women in their reproductive ages (15 years and more) were in polygynous marriages. The impact of polygyny on fertility among South American tribes such as the Yanomama and Xavante was a reduction in the number of children ever born (Hern, 1992). Long post-partum sexual abstinence among these tribes and the prevalence of infanticide was said to be the reasons for such lower number of children ever born among polygynous wives in both tribes (Hern, 1992). Currently, education, urbanization, access to health facilities and the quest of female education were some of the variables discouraging the practice of polygyny and long post-partum abstinence in South America (Hern, 1992).

Alnuaimi and Poston (2009) claim that the prevalence of polygyny in the United Arab Emirates is lower as compared to world statistics. On average 12 percent of marriages in Arab nations are polygynous, and in some instances with a prevalence of 3 to 5 percent among North Africans, Syria and Palestine (Tabutin and Schoumaker, 2005). Polygyny among non-Arabs residing in the UAE reduces their children ever born, but polygyny among Arabs in the UAE increases their children ever born (Alnuami and Poston, 2009).

Tertilt (2005) suggests that sub-Saharan African nations have the highest incidence of polygyny and this is characterized by high children ever born. Data from ICF international (2012) showed high fertility trends for West Africa, followed by Middle and East Africa. Polygyny was shown to have a correlation with such high fertility. West Africa and middle Africa were shown to have

registered the highest fertility rates (5.4 and 5.3), with polygyny prevalence of 35.5% and 28.6% respectively. With such high fertilities Barro (1991; 1997) in a study about the effect of parity on economic growth found that parity has a negative impact on productive output. This he attributed to large expenditure on child-rearing rather than on productive goods (income generating), hence concluded that a drop in fertility raises productive output in the long run.

Fenske (2012) indicates that polygyny has been declining in sub-Saharan Africa over the last half century; in Benin 60 percent of women married in the 1970 were polygynist. However, in 2000 the figures for women in polygynous marriages were less than 40 percent. According to Fenske (2012) this was true of countries like Ghana, Burkina Faso, and Guinea. Reduction in polygyny in Ghana according to the GDHS was 32.7% (1988) and 12.3% (2008). Polygyny as indicated by GDHS has been reducing in Ghana. In Ghana currently, 78.8% and 12.3% of Ghanaian women were in monogamous and polygynous marriage respectively, 6.0% of the women did not know whether their husbands had any other wives besides them, hence they were classified under the “I don’t know” category GDHS (2008). The interest of this study is to find out whether marriage type has an association with children ever born (CEB).

Despite this decline in polygyny Africa is still classified by Tertilt (2005) as having the highest incidence of polygyny in the world. According to Tertilt (2005), women in countries where polygyny is still practised have 2.2 children more than women in countries where polygyny is less prevalent. He agreed that the enforcement of monogamy as the preferred marriage type will lead to lower fertility and will shrink spousal age gap. Tertilt (2005) finds that if polygyny were banned it will decrease fertility by 40% and increase savings rate by 70%, while per capita output increases by 170%.

1.4 Statement of the Problem

The Ghana Demographic and Health Survey from 1988 and 1993 reported a significant fertility decline from 6.4 to 5.2. According to Garenne (2008) fertility stalling is a change from downward fertility trends to flat or even slightly rising trend for usually a few years. Ghana's fertility rate from 1998 to 2008 as reported by the GDHS is described by experts such as Garenne (2008); Shapiro and Gabreselassie (2007) as stalling at about 4.0 between 1998 and 2008. Despite all the reduction in fertility, Ghana's fertility rate of 4.0 is high compared to the global average of 2.53 (United Nations, 2013). The development objectives of the country could be frustrated with such a fertility rate, since fertility reduction according to Casterline (2010), assists in economic growth, through changes in the age-structure (demographic dividend), which allows a country to reap massive economic growth if efforts and programmes are put in place to further maintain fertility reduction.

The age group 15-19 years determines a population's future size and growth rate. Hence the higher the percentage of 15-19 year olds in a population, the higher its future size and growth would be (Casterline, 2010). The GSS (2010) reports that the age category 15-19 years forms 43.1% of Ghana's population, meaning there is an in-built momentum for sustaining a relatively high population growth rate for a longer period, leaving an impact of high dependency on the few employed persons. The youthful population could pose serious constraints on the provision of employment, health and educational facilities. This could negatively impact on the standard of

living, since savings and investments would be adversely affected (United Nations, 2013; Weeks, 2008).

Ghana still has quite a significant percentage of female population having more than five births by the end of their reproductive years. According to the GDHS (2008), Ghanaian women attain a parity of 5.6 children by the end of their reproductive period and 8% of Ghanaian women have 10 or more children by the end of their reproductive period. Total fertility rate (TFR) which represents the average lifetime births per a woman implied by the age-specific fertility rates prevailing in one historical period is affected by these births (Casterline, 2010).

1.5 Rationale of Study

Ghana recognizes marriage in both traditional and legal settings as a union where couples could have children. In most Ghanaian societies it is only within marriage that birth is expected to take place. In most cases marriage starts at very early ages for most Ghanaian women, which of course has a consequence of a high children ever born by the end of a woman's reproductive years. Women in polygynous unions are known to have both lower age at first marriage and lower age at first birth than their monogamous counterparts (Oyefara, 2012), hence the need to research into the effect of polygyny on children ever born.

Ghana currently has a fertility rate of 4.0 (GDHS, 2008); this suggests that policies and programs aimed at fertility reduction had not been much successful. A study on how polygyny determines children ever born will provide an insight on the short coming of such programmes and policies. These findings will contribute information needed to initiate programmes that will affect fertility reduction.

1.6 Research Questions

1. What are the variations in fertility between polygyny and monogamy in Ghana?
2. What are the difference in socio-demographic characteristics of women in polygyny and monogamy?
- 3 Do women in polygynous marriages have more children than their counterparts in monogamous marriages?

1.7 OBJECTIVES

General Objectives

The general objective of this study is to examine the effect of marriage type on fertility (children ever born).

Specifically

- i. To describe the socio-demographic characteristics of women in polygyny and monogamy.
- ii. To examine the fertility level of both polygynous and monogamous marriages.

1.9 Organization of study

This research is organized into seven chapters.

Chapter one- Introduction of the study, with background information about the study, problem statement, the research questions of the study, objectives, and rationale of the study.

Chapter two- contains literature review; here works done by other scholars in relation to the study are examined and the hypotheses are stated in this chapter.

Chapter three - outlines the research methodology, where a critical review of the processes involved in carrying out the research is presented.

Chapter four – titled socio-demographic characteristics of respondents deals with a univariate analysis of the variables of the survey respondents. Simple frequency tables and charts are used.

Chapter five is titled marriage type and fertility (CEB) and deals with a bivariate analysis by critically examining the association between the socio-demographic variables and fertility.

Chapter six – titled correlates of marriage type and fertility; employs linear regression model is used to examine the relationship among the two variables.

Chapter seven- the final chapter, with the heading summary, conclusion and recommendations gives an overview of the research process and its major findings including appropriate policy suggestions for action.

CHAPTER TWO

2.1 Literature Review

2.2 Marriage type and fertility

Marriage is an intimate union between a man and a woman that is either socially or legally recognized by society (Mokomane, 2004, Lestheaghe et al., 1986). In a study done in Nairobi by Klien and Dodoo (2004) marriage in sub-Saharan Africa (SSA) was said to be either polygynous or monogamous. When studying polygyny, some concepts need to be clearly defined; they are: Monogamy which refers to the marriage structure in which there is one spouse at a time. It is the practise of each married person to have only one spouse (Bumi, 2014; Marshall 1998) while polygyny means the marriage structure in which there is more than one spouse at a time (Bumi, 2014; Marshall 1998). However, some writers appear to use polygyny to mean marriage of one man with two or more wives, which should properly be termed polygyny (Bumi, 2014; Marshall 1998). Polygyny can also be classified into two types of unions. The first, and the more common type of polygyny, is polygyny, which is, as mentioned above, a marriage structure in which a man is simultaneously married to more than one wife (Bumi, 2014 Marshall 1998;). The second type of polygyny is polyandry in which a woman is simultaneously married to more than one husband (Bumi, 2014; Marshall 1998). The latter is a rarely encountered form of marriage, and usually occurs when a woman is married to two or more brothers to maintain the land and property within one family; this is because inheritance passes to the children, who are all regarded as being offsprings of the same father(s) (Bumi, 2014; Marshall, 1998).

According to Lestheaghe et al. (1986), marriage in sub-Saharan Africa (SSA) constitutes both polygyny and monogamous unions and the purpose of these marriage types in sub-Saharan

Africa is reproduction. This study considers women in either monogamous or polygynous unions as married, and will be included in the study as forming the marriage type variable.

Bean and Mineau (1986) in their study about the polygyny-fertility hypothesis in the USA used the 19th century data from Nauvoo, Illinois and Utah. Their findings supported the claim that monogamous wives are on average more fertile than polygynous wives. They outlined factors such as lower coital frequency, inclusion of infertile wives and limited risk of conception among the first wives of polygynous men as the driving factors associated with lower fertility among polygynous wives in the USA.

Anderton and Emigh (1989) also used 19th century Utah population to examine the fertility of polygynous households. They concluded that polygynous wives have higher number of children born than monogamous wives based on the fact that the number of children in a polygynous household was more than the number of children in a monogamous household. Anderton and Emigh (1989) ruled out the possibility of a higher fertility due to competition among co-wives, rather fertility in polygyny depends on children already born. Hence as the number of children ever born increases, the first wives of polygynous men experience lower fertility (Anderton and Emigh, 1989). According to Bumi (2014) the above study by Anderton and Emigh (1989) ignores the important question of what drives fertility choices, and also that the study treats all women as having the same incentive for childbearing. Finally, Bumi (2014) concludes that the analysis was not based on Africa, where most of polygyny-fertility debate is centered.

Alnuaimi and Poston (2009) in a study about the polygyny-fertility hypothesis among the Emerati ethnic group in the United Arab Emirates at the end of the 20th century concluded that women in polygynous marriages on average have a higher fertility than women in monogamous marriages. Alnuaimi and Poston (2009) based their conclusion on the evidence that women in polygynous marriage are more likely to have a child in the last 12 months than women in monogamous marriages, thus after controlling for husbands' age, women's residence, co-residence status, employment status and other variables, Alnuaimi and Poston (2009), based on their findings suggested to the government and population experts who at the time of the study were interested in increasing the nation's fertility to make polygyny attractive and to encourage it, if they want to increase the fertility of the country.

According to Hayase and Liaw (1997) the prevalence of polygyny in sub-Saharan Africa was a contributory factor in the 1950s' population explosion in the region. Polygyny according to Hayase and Liaw (1997) has maintained a total fertility rate of 6 to 8 between countries where polygyny was practised. Fapohunda and Todaro (1988) as cited by Hayase and Liaw (1997) indicated that the fertility levels between monogamous women and polygynous women were surprisingly similar, since monogamous wives in the sub-Saharan African region were keenly aware of the possibility of becoming polygynous. According to Muhsam (1956) the total number of children born (by all wives together) in polygynous families exceeds the total number of children born in monogamous families; polygyny is a traditional way of maintaining large families. This is one of the main demographic and cultural reasons for the continuous nurturing of polygyny.

Garonne and Van de Walle (1989) in their study of Senegal, argue that husband's age and co-residence status have important effects on the difference in fertility levels between polygynous and monogamous wives. It states that polygynous women have lower fertility than monogamous women because of the presumed reduction in coital frequency of each woman in a polygynous marriage. This occurs because the husband must divide his time among all his wives, presumably increasing sexual competition and decreasing the risk of pregnancy for each wife (Muhsam, 1956; Garonne and Van de Walle, 1989). An important consideration is the separate residence status of many women in polygynous marriages. Thus, polygynous wives usually spend more time separated from their husbands, which tends to lower their fertility as compared to monogamous wives who co-reside with their husbands (Alnuaimi, 2009). Alnuami (2009), in a literature review agrees there is a general consensus in the literature regarding the age difference between women in polygynous and monogamous unions, and regarding the age difference between polygynists and their wives. Chojnacka (1980) shows that age at first marriage is lower among polygynous wives than monogamous wives. A lower age at first marriage is associated with high fertility levels (Weeks, 2008). A monogamous wife marries about one to two years later than polygamous wives; the mean ages at first marriage are between 15-21 and 22-27 years for women and men in polygynous marriages respectively (Chojnacka, 1980). However, it was noticed that the difference in age between spouses at first marriage is similar in both types of marriages (Chojnacka, 1980). Thus, the first wives in polygynous marriages share similar average age of first marriage as monogamous wives because, first wives of polygynists were monogamous wives for some time before their husbands decided to marry another wife or wives.

Studies indicate that infecund women may be less likely to be monogamously married and more likely to end up as first wives in polygynous marriages (Chamie 1986; Timaeus and Rydnar 1998). Varea and Colleagues (1996) found that polygynous marriages in Marrakech are characterized by a significant increase in childless women and women who were previously married. They also found that the sterility of the first wife favours the inclusion of a second wife into the union, and that it is the divorcees and the widows who mostly enter already established marriages.

Conclusively, available literature suggests that the number of children of a woman in a particular marriage type (monogamy or polygyny) is influenced by her marriage type. According to some writers Muhsam (1956); Garenne and Van de Walle (1989) women in polygynous marriages have lower fertility than women in monogamous marriages, while writers such as Tertilt (2005); Alnuaimi and Poston (2009) women in polygynous marriages have a higher fertility than monogamously married women. There is no definite conclusion as to whether polygyny increases a woman's number of children ever born or it reduces her number of children ever born. The gap I want to fill, is to find out whether the women in polygynous marriage in Ghana either have lower fertility compared to their monogamous counterparts.

2.3 Overview of Fertility Situation.

Fertility is an important component of population dynamics. Fertility has played a major role in changing the size and structure of population (Jara, et al., 2013; Weeks, 2008). There has been a universal desire for fertility transition among nations (Weeks, 2008). The developed nations

(Canada, Japan, United States of America, and Australia) with a desire to reduce fertility introduced and promoted the spread of education, contraceptive usage and legalized abortion (Weeks, 2008). Developing nations, particularly sub-Saharan Africa with most of its countries having a fertility rate higher than the global average of 2.53, are also adopting anti-natalist measures (contraceptive usage, family planning and educating its young females) to reduce fertility (Jara, et al., 2013; United Nations, 2013; Weeks, 2008). Fertility control had been a worldwide desire because of its impact on the standard living of the population United Nation, (2003). According to Jara, et al. (2013), in most countries where fertility is high, maternal, infant and child mortality rates are high, and also foetal deaths and low birth weight are associated with unregulated fertility.

The desire for most developed countries is to control fertility (Weeks, 2008). Developed nations like Australia, Switzerland, France, Germany and Russia had adopted pro-natalist policies such as offering academic scholarships to international students, and to families with more than two children (Jara, et al., 2013; Weeks, 2008). These are efforts directed towards increasing their fertility rates which currently is below replacement levels (Weeks, 2008). Developed nations like Japan and Australia have a fertility rate below replacement level of 2.0 (United Nations, 2013; Weeks, 2008; Jara, et al., 2013). Fertility reduction in most sub-Saharan African countries is recognized as the suitable fertility control measure (Weeks, 2008; Jara, et al., 2013). Ghana currently puts lots of efforts to increase female educational enrolment, to attain fertility reduction indirectly. Since the more time women spend in school, reduces their fertility (Jara, et al., 2013). High age at first marriage is associated with fertility reduction (Oyefara, 2012; Weeks, 2008).

2.4 Determinants of fertility

Studies (Nabar, et al., 2013; Jara, et al., 2013; Skirbekk and Samir, 2012; Mturi, and Hinde, 2011 and Bongaarts, 1983) done on fertility had been aimed at determining the factors associated with fertility. Studies by Nabar, et al. (2013); Jara, et al. (2013); Skirbekk and Samir (2012); Mturi, and Hinde (2011); and Bongaarts (1983) suggest that a country's fertility is associated with: age at marriage, education, religion, ethnicity, contraception and where data is available abortion. Most of these studies were done in developing nations, particularly Sub-Saharan Africa.

The fertility determinants are grouped into two factors. The first being the socio-economic and demographic factors (education, ethnicity, religion, place of residence, age at first birth and wealth index) which are said to have indirect effect on fertility, hence being characterized as indirect determinants (Weeks, 2008; Bongaarts, 1982). The second group characterized as intermediate determinants such as (contraceptive usage, post-partum fecundity and abortion), socio-economic factors such as education, religion, ethnicity and place of residence influence the intermediate determinants to affect fertility (Weeks, 2008; Bongaarts, 1982).

2.5 Education and Fertility

Education as socio-demographic factor had been found (established) in several studies done in sub-Saharan Africa and some parts of the world to reduce fertility (Dejene, 2000; Vilaysook, 2009; Weeks, 2008; Henry, 2006; Bongaarts, 1982). Education having an inverse relationship with fertility means education reduces fertility in countries where education is prevalent (Dejene, 2000; Vilaysook, 2000; Weeks, 2008). Fertility has been low among couples with high

educational levels (Dejene, 2000; Vilaysook, 2009). Among couples with higher education, knowledge of contraception and its usage is improved; barriers to communications about family planning are mostly broken. Years spent in education lead to postponements of marriages and births (Derebssa, 2002; Azhar and Pasha, 2008). All these characteristics of the educated woman (higher age at first marriage, knowledge and use of modern contraceptive) influence fertility reduction among educated women (Derebssa, 2002; Azhar and Pasha, 2008; Weeks, 2008).

2.6 Place of Residence and Fertility

Socio-demographic factors such as place of residence (urban or rural) has been found to have association or effects on fertility (Weeks, 2008; Derebssa, 2002 and Azhar and Pasha, 2008). Urban residents have been discovered to have low fertility compared to rural residents, and this has been as a result of access to health facilities, modern contraceptive methods and the harsh living conditions associated with urban residency (Weeks, 2008; Boupha et al., 2005).

2.7 Ethnicity and fertility

Ethnicity is an important variable in demographic analysis. An individual's beliefs, attitude and behavior patterns are acquired through socialization which in the initial stages is achieved principally through one's ethnic group, which is identified and differentiated from other groups by a common language, habit, social systems and cultural practice (Weeks, 2008; Boupha et al., 2005). The influence of ethnicity on fertility had to do with norms and traditions associated with being both a practitioner and a member of an ethnic group (Boupha et al., 2005). Some of these norms are, desires for large families, acceptance and practise of family planning and contraceptive usage, the length or duration of exclusive breast feeding and post-partum periods

(Mturi, and Hinde, 2011; Weeks, 2008; Boupha et al., 2005). All these norms and practises affect the fertility of a woman.

2.8 Religion and Fertility

Fertility and birth pattern is known to vary by religious affiliation, as a result of the difference in doctrines. According to Chamie (1981); Sholnick et al. (1978); Coale (1986) Catholics, Mormons and Baptists maintain a strong doctrinal positions against contraception and other artificial means of reducing and controlling fertility, and sometimes encourage large family size. However fertility increase as related to religion, according to Boupha et al. (2005) had been suppressed by modernization and secularization.

2.9 Age at first birth and fertility

Oyefara (2012) in a study about age at first birth and fertility finds that irrespective of a woman's place of residence, current age, occupational status, educational level, marital status and form of marriage, women who had their first birth below age 20 years shows significant higher number of children ever born in comparison with women who had their first birth by age 20 years and above. Thus, age at first birth is a determinant of fertility. Polygynous wives according to Oyefara (2012) have a lower age at first birth than monogamous wives. The implication of lower age at first birth for polygynous wives is high number of children ever born as compared to monogamous wives, whose age at first birth is higher.

2.10 Hypotheses

- i. Women in polygynous marriage are less likely to have a higher number of children ever born than women in monogamous marriages.

3.1 Conceptual Framework

3.2 Education

Women with high education are less likely to enter into polygynous marriages (Ohadike 1968; Shan, 2004; Chojnacka, 1980; Chamie, 1996; Timaeus and Reynar, 1998). However, Timaeus and Rydnar (1998) suggest that women who have achieved a high level of education, and remained single into their twenties or thirties, might end up marrying polygynous men. The age and academic achievements of some career women make them less attractive to younger and unmarried males on the marriage market. Thus they may be unable to realize their preference for a monogamous marriage and might accept a proposal from a polygynist (Timaeus and Reynar, 1998).

3.3 Type of Place of Residence

According to Bumi, (2014); Kolmegah, (1997); Boupfa et al, (2005) women in urban areas are more likely to be in monogamous union than in polygynous union. The easy accessibility of modern contraceptive, the strong value for girl child education in urban areas and the high cost of living (residential and utility charges) had been some of the factors associated with the less prevalence of polygyny in urban areas as compared to rural areas (Kolmegah, 1997). The strong value for large families in rural areas had been a factor contributing to the high prevalence of polygyny in rural areas (Hern, 1992; Boupfa et al., 2005).

3.4 Wealth quintile

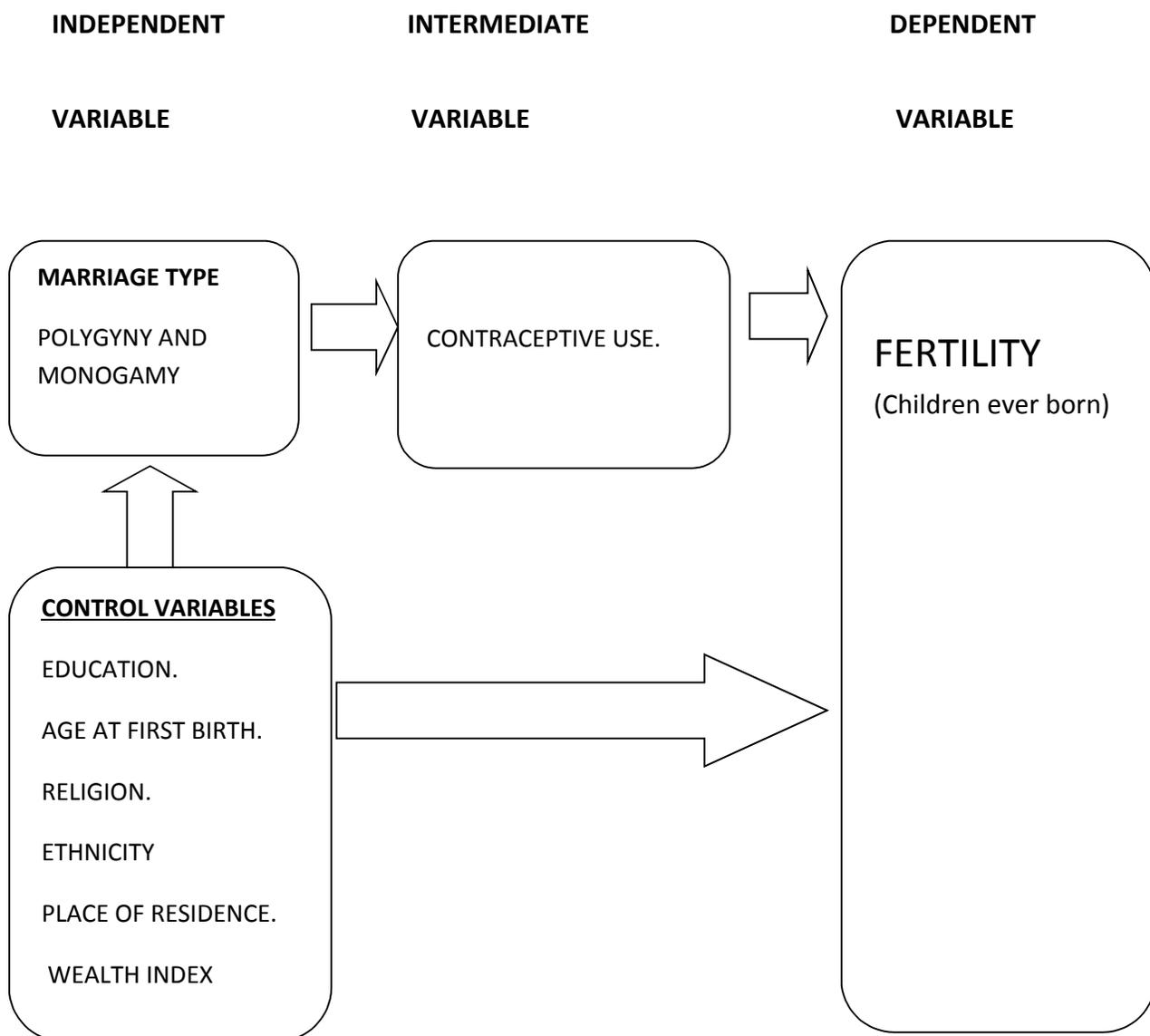
The wealth of the household is associated with the type of marriage and the fertility of the woman (Bumi, 2014). Women from poor background are generally married to polygynous men, basically because of the bride price to be gained from such marriages. The differences in the fertility of polygynous wives and monogamous wives have been as a result of wealth or the inheritance laws that exist. Since most of these laws allow a woman with children a great share of the husband's inheritance, most co-wives compete among themselves by having more children. This competition of having more birth than the other is what had resulted in polygynous wives having a higher fertility than monogamous wives (Bumi, 2014; Al- Hibri, 2000).

3.5 Contraception

Contraceptive use among women in polygyny and monogamy had been found to have an association. Audu et al. (2007); Bove and Vallengia (2008) in examining the influence of monogamy and polygyny on contraceptive use found that there was an association between monogamy and non-utilization of contraception; however, women in polygynous marriages were more likely not to use contraception.

3.6 Conceptual Framework

Figure 1.1 A modification of the Bongaarts intermediate determinant framework.



SOURCE: Bongaarts Intermediate Framework.

CHAPTER THREE

4.1 METHODOLOGY

4.2 Data

This study uses a secondary data from the Women's Questionnaire of the Ghana Demographic and Health Survey 2008 which is a national survey covering all the ten regions of the country. The 2008 Ghana Demographic and Health Survey is the fifth round since it began in the country. The 2008 Ghana Demographic and Health Survey collects demographic, Socio-economic and health information on both men and women. Data from the survey was representative because of its cluster sampling techniques.

4.3 Dependent variable

The dependent variable for the study is children ever born, which is measured by the variable total children ever born. The dependent variable was operationalized using questions such as; how many children had the respondent ever had, how many are alive, how many are staying elsewhere and how many stays with her. Respondents of the reproductive age 15-49 were asked the above questions about their fertility.

4.4 Independent variables

The independent variables in the study are the socio-demographic characteristics of women. These variables are marriage type, place of residence, educational level, ethnicity, religion, wealth index and age at first birth and age at first birth was grouped into 12-19years, 20-29years and 30-40years. Place of residence of women was put into categories rural and urban. The highest level of education of women were classified into categories, women with no education, women with primary education, and women with secondary or higher education.

Wealth index of a woman was categorized into poorest, poorer, middle, richer and richest. Marriage type the independent variable of interest was operationalized by the question, ‘number of other wives a husband has’. Two categories will be computed from this variable. This variable will include women whose husbands have no other wives (monogamy) and women whose husbands have other wives (polygyny).

4.5 Sample size

The 2008 GDHS was a household-based survey implemented in a representative sample of more than 1200 households selected nationwide. A two-stage sample based on the 2000 population and housing census was used to produce separate estimate for key indicators for each of the ten regions in Ghana. A total of 11,778 households were interviewed, including a total of 4916 of all eligible women age 15-49. A sample of 2630 women will be used for this study, because this sample includes only married women. Categories such as ‘single women and widows’ were excluded from the study because of the study’s interest in marriage type.

4.6 Method of Analysis

A variety of methods will be employed in the analysis of the data. This includes frequency distributions, ANOVA and cross tabulations for a bivariate analysis. Bivariate analysis will be computed to determine the significant effect of the control variables (religion, ethnicity, education, wealth index, type of place of residence and contraceptive use) on the independent (marriage type) and on the dependent variable. Multiple regression analysis will then be undertaken using children ever born as the dependent variable and other socio-demographic

characteristics such as marriage type, education, and place of residence, religion, ethnicity and wealth quintile as independent variables.

This will be done to see the effect of polygyny and other socio-demographic variables on fertility (CEB). The regression analysis will be carried out to examine the net effect of polygyny on fertility (CEB) by including the intermediate variables (contraceptive use) into the model. The statistical analysis for this study will be done using the statistical package for social sciences (SPSS).

4.7 Limitation

The limitation for this study is that not all births included in the study will be births that took place in a respondent's current marriage type. Some births might have been had when the women were in monogamous marriage and these births might be included as births had in their current polygynous marriage. It is possible that such births could have effect on the analysis and result.

CHAPTER FOUR

5.1 BACKGROUND CHARACTERISTICS OF RESPONDENTS

5.2 Introduction

The demographic and socio-economic characteristics are the independent variables presented in the conceptual framework. These socio-economic characteristics of the respondents have influence on their lives in general, particularly their fertility. The chapter provides a descriptive statistics of all the independent variables. Through frequency and percentage distribution the background characteristics of the respondents would be analyzed.

5.3 Type of Place of Residence

Type of place of residence of an individual, whether urban or rural is a crucial factor explaining variations in an individual's fertility. Weeks (2008) and Boupha et al. (2005) have shown that urban dwellers have higher educational attainment than their rural counterparts, therefore urban dwellers tend to report lower fertility compared to their rural counterparts. Evidence gathered by Weeks (2008) and Boupha et al. (2005) agrees that the desire for a large family is stronger in rural areas than in urban areas, where the impact of socio-economic crises was more harshly felt.

Modernization ensures easy access to education and health facilities in urban areas, while rural communities have fewer provisions of such services. Urban women are therefore more informed about the various contraceptive methods and are more empowered to negotiate for protected sex with their spouses and hence are able to regulate their fertility. The lack of such opportunities for rural women pushes them to have more children.

Most women interviewed in the GDHS, 2008 were rural dwellers. As shown in Table 4.1, 59.1 percent of the women were residing in rural areas at the time of interview, while 40.9 percent were urban dwellers. The GDHS key indicator, (2015) shows urban population as having the highest percentage of 55.5 of female respondents, while rural population has the least percentage of 44.5. There has been an increase in urban population among women in Ghana.

Table 4.1 Place of Residence

Place of residence	Frequency	Percent (%)
Urban	1076	40.9
Rural	1555	59.1
Total	2630	100.0

Source: Computed from GDHS, 2008 dataset

5.4 Ethnicity

Ethnicity is one important variable in demographic analysis. An individual's beliefs, attitude and behavior patterns are acquired through socialization which in the initial stages is achieved principally through one's ethnic group. Ethnicity is one factor that affects a person's marriage type and therefore his/her fertility. In Ghana there are ethnic groups where polygyny is prevalent such as Mole-Dagbani and other northern groups; the existence of polygyny in such communities is because of their high value for large families and their patriarchal ancestral system of beliefs.

Table 4.2 shows that 47.2 percent of the sample population is made up of Akan ethnic group. The second largest ethnic group is the Mole-Dagbani, which constitutes 19.1 percent of the sample population. The Guan ethnic group is made up of the smallest proportion with 2.4 percent of the sample population. The Mende ethnic group instead of Guan had the least percentage of 0.9 while Akan remain the ethnic group with the highest percentage of 50.1 (GDHS key indicator report, 2015).

Table 4.2 Percentage Distribution of Ethnic Groups

Ethnic groups	Frequency	Percent (%)
Akan	1241	47.2
Ga/Dangme	156	5.9
Ewe	372	14.1
Guan	64	2.4
Mole-Dagbani	501	19.1
Grussi	69	2.6
Gruma	118	4.5
Other	108	4.1
Total	2630	100.0

SOURCE: Computed from GDHS, 2008 dataset

5.5 Religion

It is evident that religion affects decisions pertaining to marriage and the use of contraception in fertility regulation in varied contexts. Ahonsi (1991) observed that the prospects for fertility decline in Ghana is almost unattainable, owing to the persistence of some cultural practices such as religion and marriage that encourage high fertility. It has been established that a person's behavior, beliefs and norms are generally influenced by his/her religion. Some religions are strict on the use of contraception and other unnatural fertility control measures, while others allow the use of such unnatural fertility control measures such as family planning and contraception (Weeks, 2008).

Table 4.3 shows that majority of the respondents with a percentage of 35.1 are affiliated to Pentecostal/Charismatic religion representing the highest percentage. The second largest proportion of respondents are Moslems with the percentage of 16.5, and women with no religion had the least percentage of 4.2. Pentecostals/Charismatic was reported GDHS key indicator report, (2015) as having the highest percentage of 41 and this was in agreement with the data displayed in table 4.3. Traditionalist/Spiritualist had the least percentage of 2.0 (GDHS, 2015), but table 4.1 shows No Religion as having the least percentage of 4.2.

Table 4.3 Percentage Distribution of Religious affiliation

Religion	Frequency	Percent (%)
Catholics	329	12.5
Protestants	378	14.4
Pentecostals/Charismatic	922	35.1
Other Christians	302	11.5
Moslems	434	16.5
Traditionalist/Spiritualist	152	5.8
No Religion	111	4.2
Total	2629	100.0

SOURCE: Computed from GDHS, 2008 Dataset

5.6 Education

Education, particularly female education has been singled out as a prime determinant of fertility decline (Bledsoe et al., 1999). The relationship between education and fertility is an inverse one. Caroline et al. (1999) suggested that the duration of schooling is seen as a factor that can influence critical demographic events in girls' transition to adulthood. Evidence has shown that women with no or less than secondary schooling tend to have earlier age at first marriage or

earlier age at first birth and subsequently higher fertility than those who complete secondary school (Weeks, 2008).

Table 4.4 shows that 46.5 percent of women in the sample had attained secondary and higher education, which is the highest percentage in the distribution. The lowest percentage of 22.7 falls in the category of primary education. However the category of no-education was the second largest in terms of percentage (30.9%). GDHS key indicator report, (2015) reports 17.7 percent for primary education as the least percent in terms of educational distribution among women in Ghana, while secondary and above recorded the highest percentage of 63.1, and this was in agreement with the data shown in table 4.4.

Table 4.4 Percentage Distribution of Educational Level

Educational level	Frequency	Percent (%)
No education	811	30.9
Primary	596	22.7
Secondary or Higher	1221	46.5
Total	2628	100.0

SOURCE: Computed from GDHS, 2008 dataset

5.7 Wealth Quintile

Wealth index is a composite measure of the cumulative living standard of a household.

Households were ranked from poorest to richest. The wealth index is calculated by collecting

data on household's ownership of some selected items like television, radio, vehicles, materials used for housing construction, and household access to water and sanitation facilities.

The wealth of a person determines whether she can afford the basic needs of life such as food, shelter and clothes, and so can also afford modern methods of fertility regulation. In other words the higher a woman's position in the wealth quintile, the more likely she is to use contraceptives, hence regulating and reducing their children ever born. A wealthy woman is more likely to be well educated, and therefore well-informed about contraceptive use and the benefits of a lower fertility.

As shown in Table 4.5, the sample of women by their wealth index reduces from the poorest to the richest. A percentage of 20.9 of the women in the sample fell within the category poorest representing the highest percentage in the wealth index, while a percentage of 18.7 of the women fell within the category middle, representing the lowest percentage. In the GDHS key indicator report, (2015) the richest category of the wealth index among respondents had the highest percentage of 23.4 while the poorest category had the lowest percentage of 16.4. The report from the GDHS key indicator report (2015) was not in agreement with the data shown in Table 4.5.

Table 4.5 Percentage Distribution of Wealth Quintile

Wealth quintile	Frequency	Percent
Poorest	549	20.9
Poorer	538	20.5
Middle	492	18.7
Richer	542	20.6
Richest	509	19.4
Total	2630	100.0

SOURCE: Computed from 2008, GDHS dataset

5.7 Marriage Type

The marriage type of a woman has been established to have an influence on her fertility. Polygyny as a marriage type is known to be associated with increasing number of children ever born; while monogamy had been established to be associated with lower number of children ever born (Tertilt, 2005). Table 4.6 indicates that 80.3 percent of the sample is in a monogamous marriage, while 19.7 percent are in polygynous marriages.

Table 4.6 Percentage Distribution of Type of Marriage

Type of marriage	Frequency	Percent (%)
Monogamy	2111	80.3
Polygyny	519	19.7
Total	2630	100.0

SOURCE: Computed from GDHS, 2008 dataset

5.9 Contraception

Contraception is the temporary prevention of pregnancy. The effective use of contraception reduces unwanted pregnancies and in effect reduces fertility. Women in this sample were asked questions on ever use and current use of contraceptives.

Table 4.7 presents a distribution of contraceptive usage among the sample. A percentage of 17.2 of the women were using modern methods and 7.0 percent were using traditional methods; 75.8 percent of the sample does not use contraception. This suggests that more than 70 percent of the study sample is not using any form of contraception, and this has an implication for an increase in fertility.

Table 4.7 Percentage Distribution of Contraceptive Use

Contraceptive use	Frequency	Percent
Modern Methods	452	17.2
Traditional Methods	185	7.0
Not Using Any Methods	1993	75.8
Total	2630	100.0

SOURCE: Computed from GDHS, 2008 dataset

5.10 Age at First Birth

A woman's age at first birth has been established to have an association with her fertility (Oyefara, 2012). The earlier a woman gives birth the longer her reproductive years and the higher her number of children ever born (Weeks, 2008).

Table 4.9 shows that a high percentage (49.8%) of the sample fell within the age group 12-19 years as their age of first birth, with a lower percentage (2.2%) of the sample falling within age group 30-40 years as their age of first birth. This suggest that almost half of the respondents had a lower age at first birth being within 12-19 years. This implies that there is a potential for a high number of children ever born among the study sample. The GDHS key indicator, (2015) report mean age of first birth as 21.8 and the age group 25-29 as the median age at first birth, this report is not in agreement with the data shown by table 4.9, since the highest percentage of women in the analysis fell within the age category of 12-19 years.

Table 4.8 Percentage Distribution Age of First Births

Age At First Birth	Frequency	Percent (%)
12-19	1310	49.8%
20-29	1264	48.1%
30-40	56	2.2%
Total	2713	100.0%

SOURCE: Computed from 2008, GDHS dataset

CHAPTER FIVE

Demographic and Socio-Economic Characteristics of the Study Population and Fertility (CEB)

6.1 Introduction

This chapter examines the relationship the independent and intermediate variables have on the dependent variable. Cross tabulation and ANOVA will be used to examine the significance of the relationship between the independent variables and the dependent variable. The intention of this analysis is to determine which independent variable to include in the final Multiple Regression analysis.

6.2 Contraceptive use and Children ever born

The use of contraception has been associated with lower fertility and the intention to prevent pregnancies (Mturi, and Hinde, 2011; Weeks, 2008). Hence it is expected that women using contraception particularly modern contraceptives should demonstrate lower fertility level than women not using any form of contraception.

Table 6.1 shows women using traditional methods of contraception had the least mean number of children ever born (3.52); women using modern methods have the highest mean number of children ever born (3.80). This result is contrary to the expected theories that women using modern method of contraception have a lower number of children ever born than women using any traditional method of contraception (Mturi and Hinde, 2011 and Weeks, 2008). The possible explanation will be that contraception is being used not primarily to reduce fertility. According to Lockwood (1995) contraceptive use among Gambian women had not been to reduce their fertility but help them observe post-partum sexual abstinence; they use contraception so they could have sex with their husbands while observing the traditional post-partum laws or norms. Hence women in this sample could be using contraceptives not for the purpose of reducing their

fertility. The ANOVA table 6.2 shows that contraceptive use was not significantly associated with fertility (CEB).

Table 6.1 Bivariate analysis between contraceptive use and Children ever born

Total children ever born			
Contraceptive Use	Mean	N	Std. Deviation
Using Modern Method	3.80	452	2.072
Traditional Method	3.52	185	1.924
Not Using Any Method	3.65	1993	2.291
Total	3.67	2630	2.231

SOURCE: Computed from GDHS, 2008 dataset

Table 6.2 ANOVA

Total children ever born * Contraceptive Use	Sum of Squares	Df	Mean Squares	F	Sig
Between Groups	12.45021	2	6.225103	1.250802	0.286
Within Groups	13074.29	2627	4.976888		
Total	13086.74	2629			

SOURCE: Computed from GDHS, 2008 dataset

6.3 Marriage Type and Age at First Birth

Polygynous wives according to Oyefara (2012) have a lower age at first birth as compared to monogamous wives. Table 6.3 shows that 54.8% of polygynous wives had their age at first birth falling within the age group 12-19 years. However, 48.6% of monogamous wives had their age at first birth falling within age group 12-19 years. A lower age at first birth is associated with a high number of children ever born, while a higher age at first birth is associated with lower number of children ever born (Oyefara, 2012; Weeks, 2008). This means polygynous wives might be experiencing a higher number of children ever born than monogamous wives, since polygynous women have a lower age at first birth than monogamous women.

Table 6.3 Cross tabulation of Marriage type and total children ever born

MARRIAGE TYPE	Age at first birth						Total		p-value
	12-19		20-29		30-40				
Monogamy	1026	48.6%	1045	49.5%	41	1.9%	2112	100%	0.009
Polygyny	284	54.8%	219	42.3%	15	2.9%	518	100%	

SOURCE: Computed from GDHS, 2008 dataset

6.4 Contraceptive Use and Type of Marriage

Contraceptive use among women in polygynous and monogamous marriage has been found to have an association. Audu et al. (2007) examined the influence of monogamy and polygyny on contraceptive use in Nigeria and found that there was a statistically significant association between monogamy and non-utilization of contraception ($P=0.03$); women in polygamous marriages were more likely not to use contraception than monogamous women. Bove and Vallengia (2008) did a study about polygyny and women's health in sub-Saharan Africa and found that women in polygynous unions were associated with lower contraceptive usage.

Table 6.4 shows that generally a high percentage of both monogamous and polygynous wives did not use any method of contraception (74.1% and 82.8% respectively); but polygynous wives had a much higher percentage of non-contraceptive use than monogamous wives. At a statistically significant level of 0.000, contraception was found to be associated with type of marriage.

Table 6.4 Cross tabulation of Contraceptive use and Marriage Type

Contraceptives Usage	Marriage Type				P-Value
	Monogamy		Polygyny		
Modern Methods	390	18.5%	62	12.0%	0.000
Traditional Methods	158	7.5%	27	5.2%	
Not Using Any Methods	1564	74.1%	429	82.8%	

SOURCE: Computed from GDHS, 2008 dataset

6.5 Education and Marriage Type

Women with high educational attainment are more likely to enter monogamous marriage (Chamie, 1996; Timaeus and Reynar, 1998; Shan, 2004). Polygynous wives are expected to have lower educational levels compared to monogamous wives.

Table 6.5 shows that 32.6 percent of polygynous wives had no education, with 67.4 percent of monogamous women having no education. However, 88.7 percent of monogamous wives have secondary or higher education, while 11.3 percent of polygynous wives had secondary and higher education. At statistically significant level of 0.000 education was associated with type of marriage. With such lower percentage of polygynous wives having secondary or higher education, the implication is that polygynous wives might have a high number of children ever born than monogamous wives; since the number of children ever born reduces as a woman's education increases (Weeks, 2008; Shan, 2004).

Figure 6.5. Educational Level and Marriage Type

Educational level	Marriage type				Total	
	Monogamy		Polygyny			
No education	696	67.4 %	337	32.6 %	1033	100 %
Primary	501	79.3 %	131	20.7 %	632	100 %
Secondary and above	1115	88.7 %	142	11.3 %	1257	100 %

SOURCE: Computed from GDHS, 2008 dataset

6.6 Ethnicity and Marriage Type

The cultural values, norms, religion and traditions of ethnic groups make the practices of polygyny more favorable in one ethnic group than the other. Northern ethnic groups according to the GSS (2010) had the highest prevalence of polygyny; Northern Ghana is predominantly Moslem and Traditionalist by way of religion and the value for sons and large families is stronger there than it is in the southern part of the country. Having more than one wife among northern ethnic groups is seen as a religious obligation and also much respect is given to a man with a large family (Fenske, 2011 and Timaeus and Reynar, 1998).

Table 6.6 shows that 35.3 percent of polygynous wives are in the Mende ethnic group, representing the highest percentage. The second highest percentage of 33.7 of polygynous wives were members of the Mole-Dagbani ethnic group. Akan had the least percentage of 11.1 polygynous wives. At a statistical significance level of 0.000, ethnicity was associated with type of marriage.

Table 6.6 Ethnicity and Marriage type

Ethnicity	Marriage Type				p-value
	Monogamy		Polygyny		
Akan	1047	88.9%	131	11.1%	0.000
Ga/Dangme	133	84.2%	25	15.8%	
Ewe	311	77.9%	88	22.1%	
Guan	48	72.7%	18	27.3%	
Mole-Dagbani	474	66.3%	241	33.7%	
Grussi	104	72.2%	40	27.8%	
Gruma	107	73.8%	38	26.2%	
Mande	11	64.7%	6	35.3%	
Other	79	78.2%	22	21.8%	

SOURCE: Computed from GDHS, 2008 dataset

6.7 Type of Place of Residence and Marriage Type

According to Kolmegah (1997) more women in urban areas are likely to be in monogamous marriages than in polygynous marriages. In Ghana, for example, 75.2 per cent of wives in urban settlements are monogamous, whereas only 24.8 per cent of them are polygynous GDHS (2008). In the rural settings, 65.5 per cent of wives are married to monogamists, compared to 34.5 per cent of them married to polygynists (GDHS, 2008).

Table 6.7 shows that a great proportion of polygynous wives with a percentage of 25.1 reside in rural areas, while a percentage of 13.8 reside in urban areas. Place of residence was significantly associated with type of marriage.

Table 6.7 Cross tabulation of place of residence and Marriage type

Type of place of residence	Monogamy		Polygyny	
Urban	953	86.2%	153	13.8%
Rural	1362	74.9%	457	25.1%

SOURCE: Computed from GDHS, 2008 dataset

6.8 Religion and Marriage Type

The marriage type of a woman could be determined by her religious affiliation (Bumi, 2014; Ahonsi, 1991). While some religions such as Muslim and traditional religions accept polygynous marriages; Christian religious groups such as Catholics and Pentecostals do not accept polygynous marriages (Ahonsi, 1991; Bean and Mineau, 1986). The prevalence of polygyny in most communities had been influenced by the most dominant religion in that area or community.

Table 6.8 shows that 40.1 percent of polygynous wives were in the traditionalist category representing the highest percentage in the distribution, with women belonging to the Moslem religion having the second highest percentage of 33.7, while 13.1 percent of polygynous wives were in the Pentecostal/Charismatic category representing the least percentage in the distribution. Pentecostal/Charismatic have 37.9 percent of monogamous wives, representing the highest percentage in the distribution, while monogamous wives in the category of no religion had 3.6 percent representing the lowest percentage in the distribution. Religion with a significant level of 0.000 was shown to be associated with type of marriage.

Table 6.8 Cross tabulation of Religion and Marriage type

Religion	Marriage type				Total	
	Monogamy		Polygyny			
Catholic	362	82.6%	76	17.4%	438	100
Protestants	322	85.9%	53	14.1%	375	100
Pentecostal/charismatic	823	86.9%	124	13.1%	947	100
other Christian	240	85.4%	41	14.6%	281	100
Moslem	354	66.3%	180	33.7%	534	100
Traditionalist	125	59.0%	87	41.0%	212	100
no religion	85	65.4%	45	34.6%	130	100

SOURCE: Computed from GDHS, 2008 dataset

6.9 Wealth Index and Type of Marriage

The wealth of the household is associated with the type of marriage and the fertility of the woman in marriage (Bumi, 2014). Women from poor background are generally married to polygynous men, basically because of the bride price to be gained from such marriages (Al-Hibri, 2000). Since most traditional inheritance laws allows a women to inherit her husband's properties through her children, many women see giving birth to many children as creating wealth through such inheritance laws (Al-Hibri, 2000).

Table 6.9 shows that a high percentage of 33.7 women in polygynous marriages were in the poorest category of the wealth index while the lowest percentage 6.2 of the women in polygynous marriages were in the richest category. However the highest percentage of 93.8 of monogamous wives was in the richest category of the wealth index, while the lowest percentage

of 66.3 of monogamous women was in the middle category of the wealth index. With a significant level of 0.000 wealth index was associated with type of marriage.

Table 6.9 Cross tabulation of Wealth index and Marriage type

Wealth index	Marriage type				Total	
	Monogamy		Polygyny			
Poorest	515	66.3%	262	33.7%	777	100%
Poorer	462	76.5%	142	23.5%	604	100%
Middle	387	79.8%	98	20.2%	485	100%
Richer	471	86.1%	76	13.9%	547	100%
Richest	480	93.8%	32	6.2%	512	100%

SOURCE: Computed from GDHS, 2008 dataset

6.10 Marriage type and Children ever born

It has been found that a woman's marriage type has an association with her fertility (Bumi, 2014; Alnuaimi and Poston, 2009; Garenne and Van de Walle, 1989). Women in polygynous marriages are known to have lower number of children ever born than monogamously married women (Garenne and Van de Walle, 1989). However Alnuaimi and Poston (2009) in their study about polygyny among the United Arab Emirates found that polygynously married women have higher children ever born than monogamously married women. Conclusively there is a relationship

between a woman's children ever born and her type of marriage. Yet it not conclusive as to whether polygynous woman has a high number of children ever born than a monogamous wives.

Table 6.10 shows a higher mean number of children ever born (4.48) for polygynous women as compared to monogamous women with a mean number of children ever born (3.47); this finding is in agreement with (Alnuaimi and Poston, 2009). Alnuaimi and Poston (2009) found that polygynous women have higher number of children ever born than monogamous women. However studies done by Hern (1992); Josephson (2002); Lardoux and Van de Walle, (2003) found that polygynous wives have a lower number of children ever born than monogamous wives; polygynous wives were found in Table 6.10 to have a higher mean number of children ever born than monogamous wives. The ANOVA Table 6.11 below also shows a p-value of 0.000 which means marriage type is significantly associated with children ever born.

Table 6.10 Total children ever born

MARRIAGE TYPE	Mean	N	Std. Deviation
Monogamy	3.47	2111	2.134
Polygyny	4.48	519	2.429
Total	3.80	2630	2.231

SOURCE: Computed from GDHS, 2008 dataset

Table 6.11 ANOVA Table

Total children ever born * MARRIAGE TYPE	Sum of Squares	Df	Mean Squares	F	Sig
Between Groups (Combined)	424.160	1	424.160	88.030	0.000
Within Groups	12662.576	2628	4.818		
Total	13086.736	2629			

SOURCE: Computed from GDHS, 2008 dataset

6.11 Education and Children ever born

Studies done by Blesdoe et al. (1990) and Caroline et al. (1999) establish that the fertility of a woman reduces as her educational level increases. Boupfa et al. (2005) and Weeks (2008) mentions that education has an inverse relationship with a woman's children ever born. Meaning the more educated a woman is the less likely she is to have more children.

Table 6.12 shows that the mean number of children ever born reduces as respondents' educational level increases. Women with no education has the highest mean of 4.40 children ever born while women with secondary and above educational level has lowest mean of 2.69 children ever born.

Table 6.12 Compare means of Education and children ever born

Total children ever born		
Education	Mean	N
No Education	4.40	1033
Primary	3.59	632
Secondary and Above	2.69	1257
Total	3.49	2922

Source: Computed from GDHS, 2008 data set.

6.12 Age at First Birth and Children Ever Born

Age at first birth had been found to have a relationship with a woman's children ever born (Bumi, 2014; Oyefara, 2012 and Weeks, 2008). Women with lower age at first birth are more likely to have more number of children ever born as compared to women with higher age at first birth, this is because women with lower age at first birth ends up having a longer reproductive periods than women with higher age at first birth.

Table 6.13 shows that women with lower age at first birth (12-19years) have a higher mean of 4.21 number of children ever born, while women with a high age at first marriage (30-40 years) has a lower mean of 2.30 number of children ever born. At a statistical significance level of 0.000, age at first birth was related to children ever born.

Table 6.13 Compare means of Age at first birth and children ever born

Total children ever born		
Age at first birth	Mean	N
12-19	4.21	1390
20-29	3.34	1257
30-40	2.20	65
Total	3.76	2712

Source: Computed from GDHS, (2008) data.

6.13 Wealth Index and Children ever born

The wealth index of respondent has been found to have an effect on the number of children ever born (Weerasingle and Parr, 2002). Women in poverty tend to have more children than wealthy women (Lovenheim and Mumford, 2011).

Table 6.14 shows that women in the poorest and poorer category has a higher mean of 4.29 and 3.80 number of children ever born respectively as compared to women in the richer and richest categories, with a mean of 2.88 and 2.48 number of children ever born. This indicates that a woman's children ever born reduces as she rises up from the poverty ladder.

Table 6.14 Compare means of Wealth Index and Children ever born

Total children ever born		
Wealth index	Mean	N
Poorest	4.29	777
Poorer	3.80	604
Middle	3.54	485
Richer	2.88	547
Richest	2.48	512
Total	3.49	2925

Source: Computed from GDHS, (2008) data.

6.14 Religion and Children ever born

The religious affiliation of a respondent has an effect on the number of children ever born (Bumi, 2014; Ahonsi, 1991 and Weeks, 2008). The doctrines, principles and traditions of most religious groups turn to either promote fertility or reduce fertility (Ahonsi, 1991 and Bumi, 2014).

Religions such as Catholicism and Islam are known to have strong convictions against abortions and the use of contraception. Hence members of such faith are more likely to have more children than members of a religious groups that supports abortion and the use of other contraceptives.

Table 6.15 shows that women in the category of Traditional/Spiritualist religion had the highest mean of 4.9 number of children ever born while women in the Presbyterian religion had the lowest mean of 2.63 number of children ever born. Religion was statistically significant to children ever born at a p-value of 0.000.

Table 6.15 compare means Analysis of Religion and children ever born

Children Ever Born		
Religion	Mean	N
Catholic	3.34	438
Anglican	3.91	22
Methodist	3.35	163
Presbyterian	2.63	190
Pentecostal/Charismatic	3.26	947
other Christian	3.49	281
Moslem	3.56	534
Traditional/spiritualist	4.90	212
No religion	4.28	130
Other	4.40	5

Source: Computed from GDHS, (2008) data

6.15 Ethnicity and Children Ever Born

A study done Iyer and Weeks (2009) show an association between a woman's ethnicity and her number of children born. The incident of culture and values of a particular ethnic group had been found to determine the number of children ever born in a particular ethnic group (Iyer and Weeks, 2009). Traditional values such as value for large family size and the prestige accorded to women who demonstrate a very high fertility level had been some of the practises promoting high fertility in communities where they are cherished and practised.

Table 6.16 shows women in the Gruma ethnicity has the highest mean of 4.42 children ever born while women from the Ewe ethnic groups has the lowest mean of children ever born at 3.16. At a statistical significant level of 0.000 ethnicity was related to children ever born.

Table 6.16 Compare means analysis of Ethnicity and children ever born

Total children ever born		
Ethnicity	Mean	N
Akan	3.33	1178
Ga/Dangme	3.33	158
Ewe	3.16	399
Guan	3.36	66
Mole-Dagbani	3.82	715
Grussi	3.60	144
Gruma	4.42	145
Mande	3.24	17
Total	3.50	2822

Source: Computed from GDHS, (2008) data

6.16 Type of place of residence and Children ever born

Type of place of residence was found to have an effect on the number of children ever born (Bumi, 2014; Weeks, 2008; Boupah et al, 2005 and Kolmegah, 1997). Women living in rural areas are more likely to have a high number of children ever born than women in urban areas (Kolmegah, 1997). Women living in urban areas have been associated with having lower fertility due to the easy accessibility to modern contraceptive and the hard living conditions (payment of high utility bills and high cost of child education) in urban areas as compared to rural areas (Weeks, 2008 and Boupah et al, 2005).

Table 6.17 shows that women living in rural areas have a higher mean of 3.84 children ever born while urban women have a lower mean of 2.90 children ever born. Type of place of residence was statistically significant to children ever born, at a p-value of 0.000.

Table 6.17 Compare means analysis of type of place of residence and children ever born

Total children ever born		
Type of place of residence	Mean	N
Urban	2.90	1106
Rural	3.84	1819
Total	3.49	2925

Source: Computed from GDHS, (2008) data

CHAPTER SIX

Multiple Regression Result Showing The Relationship Between Type of Marriage And Children Ever Born.

7.1 Introduction

In the preceding chapter, an attempt was made to examine the effect of the background characteristics on children ever born. This was done separately to see how each background characteristics such as education and religion impacts on children ever born by the use of the bivariate analysis. To examine the net effect of marriage type and children ever born, a linear regression was done. This was done in view of the fact that children ever born among Ghanaian women are not affected by only one variable, but by a wide range of variables. The dependent variable children ever born is a continuous variable, hence the use of linear regression to examine the net effect of marriage type on children ever born.

In this study, the Statistical Package for Social Science (SPSS) was used in fitting the linear regression model. For all the independent variables, dummy variables were created and a reference category was chosen for each variable. The reference categories were then compared with the other categories of the variables.

Table 6.18 Multiple regression analysis of marriage type and Children ever born.

	Unstandardized Coefficients	Std. Error	Standardized Coefficients	Sig.	95% Confidence Interval for B	
			Beta		Lower Bound	Upper Bound
(Constant)	-1.439	1.775		0.418	-4.919	2.041
TYPE OF MARRIAGE						
Monogamy	RC					
Polygyny	0.655	0.106	0.117	0.000	0.447	0.863
AGE AT FIRST BIRTH						
30-40	RC					
12-19	4.242	1.748	0.950	0.015	0.813	7.670
20-29	3.653	1.748	0.818	0.037	0.224	7.081
WEALTH INDEX						
Poorest	RC					
Poorer	-0.190	0.136	-0.034	0.164	-0.457	0.077
Middle	-0.270	0.150	-0.047	0.072	-0.564	0.024
Richer	-0.674	0.164	-0.122	0.000	-0.995	-0.352
Richest	-0.606	0.184	-0.107	0.001	-0.967	-0.244
EDUCATIONAL LEVEL						
Secondary and Higher	RC					
No Education	1.263	0.122	0.261	0.000	1.024	1.502
Primary	0.426	0.110	0.080	0.000	0.211	0.642
ETHNICITY						
Grussi	RC					
Akan	1.105	0.241	0.247	0.000	0.632	1.577
Ga/Dangbe	0.709	0.283	0.075	0.012	0.155	1.264
Ewe	0.434	0.255	0.068	0.089	-0.066	0.934
Guan	0.366	0.335	0.025	0.275	-0.291	1.024
Mole-Dagbani	0.326	0.235	0.057	0.166	-0.135	0.787
Gruma	0.785	0.296	0.073	0.008	0.205	1.365
CONTRACEPTIVE USE						
Not Using Any Method	RC					
Modern Method	0.437	0.109	0.074	0.000	0.224	0.650

Traditional Method	0.231	0.160	0.026	0.150	-0.083	0.546
TYPE OF PLACE OF RESIDENCE						
Urban	RC					
Rural	0.057	0.113	0.012	0.616	-0.165	0.278
RELIGION						
Protestants	RC					
Catholics	-0.002	0.136	0.000	0.990	-0.269	0.266
Other Christians	0.013	0.137	0.002	0.927	-0.257	0.282
Moslems	0.138	0.150	0.023	0.358	-0.156	0.432
No Religion	0.457	0.160	0.061	0.004	0.144	0.771
Traditionalist	0.518	0.266	0.054	0.051	-0.003	1.039

Source: Computed from GDHS, (2008) data set

R SQUARE= 0.172

DURBIN WATSON=2.004

F CHANGE=20.668

ADJUSTED SQUARE=0.163

RC= REFERENCE CATEGORY

7.2 Interpretation of Results

The model was significant at a p-value of 0.00 this means the relationship between the independent variables and dependent variables was significant. To check for independence, the Durbin Watson statistics was used. The Durbin Watson statistics was 2.004. In this study the Durbin Watson statistic is around 2, indicating that the data points are independent.

The r-squared is a measure of goodness of fit. From the table the r-squared is 0.172 indicating that 17 percent of the variations in women's children ever born in Ghana are explained by the independent variables considered in the model.

Table 6.18 shows that polygyny was positively associated with children ever born among Ghanaian women; and polygynous wives were found to have 0.12 children more than monogamous wives. This finding was not in agreement with works done by Alnuami (2009); Musham (1956) and Garonne and Van de Walle (1989). Alnuami (2009); Musham (1956) and Garonne and Van de Walle (1989) agrees that polygynous women have lower number of

children ever born compared to monogamous women, and they sight reasons such as the husband having to share bed room time among polygynous wives; which increase sexual competition while decreasing the risk of pregnancy for each wife. Table 6.18 proves that the situation of fertility among polygynous and monogamous wives is different in Ghana. According to the multiple regression computed from the GDHS, (2008) data set, polygynous women have more children ever born than monogamous women in Ghana.

Women from the Akan and Gruma ethnic had 0.25 and 0.07 children more than women from the Grussi ethnic group respectively. The Akan and Gruma ethnic groups at a significant level of 0.000 and 0.012 respectively had significant effect on women's number of children ever born.

Women with age at first birth 12-19 and 20-29 had 0.950 and 0.818 children more than women with age at first birth being 30-40 year. Age at first birth had a significant effect on children ever born. The category of women with no education or primary education had 0.261 and 0.080 children more than women with secondary and higher education. A woman's educational level has a significant effect on her number of children ever born; at s significant level of 0.015 and 0.037 for age 12-19years and 20-29years respectively. The mean children ever born of a woman reduces as her education increases and this was supported by works done by (Weeks, 2008 and Mturi and Hinde 2011).

The wealth quintile showed that the category of richer and richest at a significant level of 0.000 and 0.001 had significant effect on children ever born respectively; with women in the richer and richest category having 0.122 and 0.107 children less than women in the poorest category respectively. The category of using traditional methods showed no significant effect with children ever born at p-value of 0.050. However the category of using modern method showed a

significant effect on children ever born with a significant level of 0.000. Women using modern method had 0.074 children more than women not using any method of contraceptive. This results is contrary to work done by (Weeks, 2008; Mturi and Hinde, 2011) where women using modern contraceptives had lower number of children ever born than women not using any contraceptive method. This could possibly mean that women in the sample study were using contraception primarily not to reduce their number of children ever born (Lockwood, 1995).

The women with no religion showed significant effect on children ever born, with a significant level of 0.004; women with no religion had 0.61 children more than women in the Protestants Religion. Place of residence was shown not to have any significant effect on children ever born, with a significant level of 0.616.

CHAPTER SEVEN

Summary, Conclusion and Recommendation

8.1 Summary

The ultimate objective of this study is examining the effect of type of marriage (polygyny or monogamy) on children ever born among Ghanaian women, with the specific objectives of describing the socio-demographic characteristics of women in both polygynous and monogamous marriages. Determining whether polygynous wives have lower number of children ever born than monogamous women was also a specific objective of the study.

Data for the study was obtained from the 2008 demographic and health survey involving 2630 women age 15 to 49 from all regions in Ghana. Simple proportions and percentages were used to describe the background characteristics of the study respondents. Multiple regression analysis was done to measure the net effect of polygyny and other socio-economic variables on children ever born.

The study showed that more than 70% of women in the study sample were not using any form of contraception at the time the survey was conducted. The univariate analysis showed that more than 50 percent of the study sample fell in the category of no education and primary education and equally more than 50 percent of the respondents were within the wealth quintile category of poorest and poorer.

In the bivariate analysis it was shown that polygynous wives had more than 50% of their proportion falling within the age group (12-19 years) representing the lowest age at first birth, while monogamous wives had more than 40% of their proportion in that same age category (12-19). Polygynous wives were shown to have a higher mean of children ever born than monogamous wives in the bivariate analysis. In terms of contraceptive use, polygynous wives

had the highest percentage of women not using any method of contraception; however both monogamous and polygynous wives showed a percentage of more than 60% of women in both marriage types belonging to the category of “not using any method”.

The multiple regression analysis showed polygyny has a significant net effect on children ever born. With monogamy as a reference category, the results showed women in polygyny having 0.115 children more than monogamous wives.

8.2 Conclusion

The main finding of the study was that polygynous wives have a higher number of children ever born than monogamous wives. This was not in support of the polygyny-fertility hypothesis that states that polygynous wives have lower number of children ever born compared to monogamous wives. The possible reason for polygynous wives having more children ever born than monogamous wives could be that, and as shown by the bivariate analysis, polygynous wives have a lower age at first birth than monogamous; meaning polygynous wives had longer reproductive years than monogamous wives, hence polygynous wives having a higher number of children ever born than monogamous wives. Polygynous wives had the highest percentage of women in the category of no education, and finally a high percentage of polygynous wives reside in rural areas where the desire for large families is stronger. These factors may have contributed to the higher number of children ever born among polygynous wives as compared to monogamous wives.

The study shows that more than 80% of polygynous wives were not using contraception, while 70% of monogamous women were not using any form of contraception. The relatively lower

level of contraceptive use among polygynous wives as compared to monogamous wives could be another reason for the relatively higher number of children ever born among polygynous wives as compared to monogamous wives.

The educational level between women in polygyny and monogamy could also give reason to the high number of children ever born among polygynous women. The bivariate analysis between education and type of marriage showed that 23.3 percent of polygynous wives had attained secondary and higher education, while 48.2 percent of monogamous wives had attained secondary and higher educational levels. Since children ever born reduce as a woman's education increases (Weeks, 2008), it is not far from the truth that the lower educational level of polygynous wives is a contributory factor to their high number of children ever born as compared to monogamous wives.

The place of residence of both polygynous and monogamous wives could also be a contributory factor to the difference in children ever born among both marriage types. The bivariate analysis of place of residence and marriage type shows that more than 60 percent of polygynous wives as compared to 55.7 percent of monogamous wives were living in rural areas at the time of the survey. The strong value for large families in rural areas could be the reason why polygynous wives have a high number of children ever born than monogamous wives.

It was hypothesized that women in polygynous unions had a lower number of children ever born as compared to women in monogamous unions, but it was shown in the study that polygynous wives have a high number of children ever born compared to monogamous wives.

The study revealed that the independent variables in the study only explained 17 percent of the variation in children ever born among Ghanaian women. This means there are other variables

with much influence on the variation in children ever born among Ghanaian women which have not been included in the study. The implication is that programmes and policies to be developed from this study should be cautious of the conclusion they make since more than 80 percent of the variation in children ever born among Ghanaian women are determined by variables not included in the study. There is therefore the need for further research into the determinants of polygyny and children ever born among Ghanaian women before successful policies and programmes could be developed from this study.

8.3 Recommendations

The bivariate analysis shows that contraceptive use is low among both monogamous and polygynous women, but much lower among polygynous women. The provision of contraceptive services should be strengthened and expanded to reach all segments of the population, particularly polygynous wives. According to Al-Hibri (2000), most polygynous wives give births so they could inherit their husband's properties through their children. Sensitization programmes put in place to educate these women about having quality children (where such children are educated and equipped with the needed skill and know-how to succeed and create their own wealth) this could help polygynous wives understand that they need not give birth to children so they could inherit their husbands' wealth, but rather having the number of children they could support is more beneficial than having children so you could have a share in a dead husband's property.

It must be noted that education increases the mean age at first birth and leads to marriage postponement (Derebessa, 2002); this is achieved mostly among women with secondary or higher education. Since a higher age at first birth reduces the number of children ever born

(Weeks, 2008; Derebessa, 2002), the government needs to pursue affordable and accessible educational programmes. Education from primary to secondary should be made free and compulsory, if only government has the funds for it. To ensure that such free primary and secondary education achieves its purpose, personnel should be made to visit homes and communities unannounced to make sure parents send their children, especially the girl children to school. An educational policy or programme like this could impact greatly on the fertility level of the nation if successful, since the years involved in schooling from primary to secondary school in Ghana is quite a long period; this will allow most of the country's young girls to spend a greater part of their reproductive years in school thereby increasing their age at first birth. The priority of this programme should be at the rural communities of our country.

Educated couples according to Weeks (2008) have a lower number of children ever born as compared to non-educated couples. Adult education should be made accessible to women in rural areas particularly polygynous wives. This educational programme will make polygynous women more discerning about the customs and traditions of their community. For example, some of these polygynous wives refuse using contraception because their husbands don't want them to. When these women are enlightened through the adult education programmes, where they could read and write, they will be able to research and ask about types of contraception they could use without their husbands knowing they are using contraception. These women now empowered to control their number of children ever born, could find the appropriate means of controlling their fertility (CEB) without being noticed by their husbands and community members while on contraception.

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