

**REGIONAL INSTITUTE FOR POPULATION  
STUDIES AT THE  
UNIVERSITY OF GHANA**

**FACTORS ASSOCIATED WITH MULTIPLE  
INDUCED ABORTIONS IN GHANA**

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**THIS DISSERTATION IS SUBMITTED TO THE  
UNIVERSITY OF GHANA, LEGON IN PARTIAL  
FULFILMENT OF THE REQUIREMENTS FOR THE  
MASTER OF ARTS DEGREE IN POPULATION  
STUDIES**

**JULY 2016**

## **ACCEPTANCE**

Accepted by the College of Humanities, University of Ghana, Legon in partial fulfilment of the requirement for the Master of Arts Degree (Population Studies).

SUPERVISOR OF DISSERTATION

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DR. ADRIANA ANDREA E. BINEY

DATE .....

## DECLARATION

I hereby declare that except for the references made to other people's work which have been duly acknowledged, this work is a product of my research undertaken under supervision. It has neither in part nor in whole been presented elsewhere for another degree.

.....

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## **DEDICATION**

I dedicate this work to my parents Commander (rtd) Attah Adomako Kwabia and Mrs Judith Adomako. I appreciate their unrelenting support throughout my education.

## ACKNOWLEDGEMENT

I am eternally grateful to Jehovah God for his mercy and goodness towards me. I am most grateful for his love and concern for me, without him I will not have reached this level.

I am sincerely grateful to my supervisor Dr Adriana Andrea Biney. My heart is filled with thanks for her tremendous help and support. She did not only serve as a supervisor but she was a coach from whom I learnt how to practically use the statistical tools. Her patience with me, humility, readiness to help and apt response to my calls and questions have played a key role in making this work a success.

I also thank my siblings Frank Adomako Kwabia, Adoma Kwabiah, Nana Yaw Adomako Kwabia, Kwame Adomako Kwabia and Frempomaa Adomako Kwabia for their immense support and help.

I am thankful to Prof J.K. Anarfi for his contribution along the way. I am also grateful to my senior colleagues, Martin Agyekum, Akua Dwamena, Maame Peterson, Ernest Afrifa-Anane, Olutobi Adekunle Sanuade, Reuben Larbi and the entire RIPS family for their help along the way.

I am indeed grateful to my colleagues in the MA 2015/2016 cohort. I thank God for being in the same class with you. I appreciate the unity and love that existed amongst us during our MA program.

I say a big thank you to Miss Priscilla Ayebea Davies for proof reading this work. I also say thank you to Mr Charles Agyei – Asabere for his help along the journey. Finally, I thank all my loved ones who in one way or the other played a role in making this work a success. I pray the blessings of God upon your lives.

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## ABSTRACT

When a woman is faced with an unintended pregnancy the onus lies on her to either carry the pregnancy to term or terminate it, and in the developing world the majority of these are terminated unsafely. The problem of induced abortion can further be exacerbated when they become repeated. Women who have previous records of induced abortion stand a greater risk of resorting to it again when the need arises. It is therefore necessary to note the factors that serve as contributors to the already existing problem of maternal mortality. Therefore, this study sought to identify the various factors associated with a woman obtaining multiple abortions.

The source of data used was the 2007 Ghana Maternal Health Survey. Women between ages 15 and 49 who had ever undergone abortions formed the sample and the total weighted sample size consisted of 1482 women. Univariate, bivariate and binary logistics regression analyses were the various stages of analyses conducted.

The results obtained showed women that who entered into unions when they were less than age 20 were 17.4% less likely to carry out multiple abortions as compared to those who entered into unions when they were thirty years and above. Women who were poor and lived in rural areas were also less likely to seek multiple abortions. In addition, urban dwellers, SHS/higher educated and richer women were more likely to report experiencing multiple abortions. Women who had their first abortion earlier than age 30 and women with an increased number of pregnancies were also susceptible to multiple abortions.

Recommendations therefore include the availability of contraceptives to women, especially those below age 20, as well as reproductive health counselling for the rich and educated women. Also further studies should be conducted to understand why sexually active women not in stable unions are less likely to seek multiple abortions.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

The survival of a foetus is often dependent on how the expectant mother safeguards its growth. Its survival in the womb can be terminated consciously or unconsciously. The World Health Organization (WHO) defines abortion as “the expulsion or extraction of a foetus or embryo weighing 500 grams or less from its mother. There are two types of abortion; spontaneous and induced abortion. Spontaneous abortion refers to pregnancy loss at less than 20 weeks of gestation in the absence of elective medical or surgical measures to terminate the pregnancy (Griebel, Halvorsen, Golemon & Day, 2005). On the other hand, induced abortion is the intentional termination of a pregnancy and it may be performed because of two main reasons: medical and elective reasons.

Medical reasons for inducing abortion deal with abortions that are performed because of debilitating medical conditions that confront the mother or the foetus. This pregnancy has to be terminated by a medical practitioner when the life of the female can be protected and the foetus saved from future health problems. Elective reasons (Osler, David, & Morgall, 1997) for terminating a pregnancy, on the other hand, are associated with a woman’s own decision regardless of the fact that she or the foetus suffer no health issues.

Also, induced abortion can either be safe or unsafe. Safe induced abortions are abortions conducted by authorized persons such as a gynaecologist in hospitals and clinics. A safe abortion is a procedure supervised by a medical officer

whilst unsafe abortions are those undertaken by unauthorized persons such as quack doctors in unauthorized places (outside a health unit). WHO defines unsafe abortions as abortions performed by people lacking the necessary skills or in an environment that does not conform to minimum medical standards (World Health Organisation, 2007).

In Ghana, a law on abortion was enacted in 1960 and was further amended in 1985 to make it liberal enough for women. Although this law exists not everybody knows about it (Morhee & Morhee, 2006). The law gives specifications on the reasons that can call for an abortion of a pregnancy. These reasons are the defilement of a female idiot, rape, incest, and health effects the woman or the foetus are likely to face if the pregnancy continues.

Abortion is a public health concern because it poses some dangers to women's health if not undergone safely. Death is just the most extreme outcome; countless other women and girls suffer from short and long term morbidity ranging from heavy bleeding and infection, pelvic inflammatory disease, infertility and physical disability.

Studies suggest that the frequency of abortion, or how often one procures an abortion, is anchored on various reasons. While some women rely on induced abortion as a form of birth control to delay childbirth, space childbirth or prevent the occurrence of childbirth (Aniteye & Mayhew, 2011), others have different reasons for each of their abortions ranging from financial constraints to the desire to pursue their education. The success of the first induced abortion will

probably lead to successive abortions if the victim goes on being sexually active without using effective contraceptive method.

Prata et al. (2013, pg 1) state that “repeat abortion or having more than one pregnancy termination is bound in a vicious cycle with unintended pregnancy” (Prata, Martina, Ashyley, & Yilma, 2013, pg 1). Also, complications of induced abortions are often exacerbated when the procedure becomes repeated. Multiple induced abortions increase a woman’s chances of severe health effects (Prata et al., 2013). Understanding the factors associated with multiple induced abortions is of great interest in this study. The study seeks to identify factors that are related to multiple induced abortions among women in Ghana. The major factors associated with induced abortion may be socio-demographic, socio-economic and socio-cultural. It is expedient that such factors are considered by researchers in our bid to help curb maternal mortality.

## **1.2 Problem Statement**

Women in developing countries have a higher likelihood of having induced abortions than women in developed countries. The abortion rate from 2010 to 2014 stood at 27 abortions per 1,000 women in developed countries, while in developing countries the rate was higher at 37 abortions per 1,000 women. In Western Africa, the figure was 31 abortions per 1000 women between 2010 and 2014 (Guttmacher Institute, 2016).

Furthermore, obtaining safe abortions come at a cost. The high cost of safe abortions makes it unattractive to some women, especially for women in sub

Saharan Africa where the economic situation often makes life burdensome. In 2015, some public and private health facilities in Ghana were charging between GHC500 (approximately USD 130) and GHC700 (approximately USD 185) as against GHC120 (approximately USD 38) and GHC130 (approximately USD 40) in 2014 to perform abortions for pregnancies that were one to four months old (Awlesu, 2015). Women in the top two wealth quintiles are known to be those who can readily access it (Adjei et al., 2015); however, unsafe means become the next possible option for those who cannot.

Every year, close to 20 million women risk their lives and health by undergoing unsafe abortions (Grimes, Benson, Singh, Romero, Okonofua, et al., 2006). Some suffer permanent complications and even death as a result of these unsafe abortions. On average, every woman in a developing country is expected to have at least one unsafe abortion before the end of her reproductive age (Shah & Åhman, 2004). The disability adjusted life year's (DALYs) combined burden of morbidity and mortality per 1000 unsafe abortions in sub Saharan Africa is exceptionally high (World Health Organisation, 2007). In Ghana, unsafe abortion is the second cause of maternal mortality among women (GSS, GHS, & Macro, 2009).

Although there is an existing law in Ghana on induced abortions, most women and healthcare providers may be oblivious of this existing law (Morhee & Morhee, 2006). Stigmatisation of abortion seekers and abortion service providers makes it difficult for prospective abortion seekers to use health facilities in Ghana (Payne et al., 2008). These women eventually seek abortions from quack doctors,

pharmacists and nurses who operate outside approved healthcare facilities (Ahiadeke, 2001; Appiah-Agyekum, 2014). Harsh substances like laundry bleach, tea made of livestock manure, and other concoctions are used by women in Africa, and for that matter Ghana, to abort pregnancies (Bleek, 1978). Other substances are inserted into the uterus through the cervix like rubber catheters, lump of sugar and knitting needles (Grimes, Benson, Singh, Romero, Ganatra, et al., 2006). Grimes et al. (2006) succinctly state that “irrespective of the research methodologies used, the public health message is clear: unsafe abortion kills large numbers of women” (Grimes et al., 2006 pg 3).

According to Lithur (2004), in Ghana, “unsafe abortion is silently being performed underground within the communities in Ghana and outside the formal health service structures. This is as a result of stigmatisation coupled with the lack of health services for abortion” (Lithur, 2004, pg 4). Some family planning nurses and even some doctors are judgmental about those seeking induced abortion and they tend to be harsh towards them (Payne et al., 2013). Women who want to acquire these services are likely to avoid the health personnel or health unit because of what they may have heard about the treatment given by health professionals to those seeking abortions (Schwandt et al., 2013).

Although an abortion may be safe, the adverse health challenges faced by repeat abortion seekers cannot be ignored. Multiple abortions exacerbate the challenges that arise from induced abortions; however, little is known about women who seek repeat abortions in Africa (Prata et al., 2013). Prata et al. (2013, pg 57) also

state that the available information is not enough for generalizing. Health problems like ectopic pregnancies, placenta previa, foetal loss, preterm delivery, potential low fertility are the resultant factors of repeat abortion (Thorpe et al 2003; as cited in Prata et al., 2013). In a study by Aniteye & Mayhew (2011), conducted in two major hospitals in Ghana where women were seeking treatment for incomplete abortions, twenty-two percent of the respondents had a second abortion experience whilst 14% had a higher number of abortions.

Abortion is a serious personal, political and health care issue of contention and repeat abortions increase women's risk of morbidity and mortality (Westfall & Kallail, 1995). Information on repeat abortions among women in Ghana and the factors associated with multiple abortions is scarce or non-existent despite incurring serious implications for women's health. This makes it difficult for researchers to assess the types of women prone to the phenomenon. Therefore, this study seeks to fill this gap by examining the factors that are associated with women's use of multiple abortions in Ghana.

### **1.3 Research Question**

Due to the problems identified above this study seeks to answer one question, what are the factors associated with multiple induced abortions among women in Ghana?

### **1.4 Research Objectives**

The main objective is to identify the factors that are associated with multiple abortions among women in Ghana.

Specific objectives are:

- ❖ To identify the major contributing factors that are associated with multiple induced abortions among women in Ghana.
- ❖ To provide recommendations for policy formulation.

### **1.5 Rationale**

Ghana's total fertility rate (TFR) has declined since 1990 beginning at 5.2 births per woman in 1993 to 4.4 in 1998. It remained at 4.4 births per woman in 2003, and then declined to 4.0 in 2008 (Mote et al 2010). The TFR currently stands at 4.2 births per woman (GSS et al, 2015; Melorose, Perroy, & Careas, 2015). The modern contraceptive prevalence rate (MCPR) which should be a major determinant of fertility decline has also not increased well enough to cause the decrease in Ghana's TFR (Mote, et al., 2010). It has been suggested that the decline in fertility has been as a result of women's use of induced abortion to control births. This discovery has increased the research into abortion experiences among women in Ghana and provides a rationale to study induced abortions and the factors associated with it. From the 1960's onwards, researchers such as Bleek (1978, 1981) started contributing to research in this area and concentrated on a clan among the Akan tribe in Ghana. There have been many others since then who have studied different aspects of this phenomenon (Ahiadeke, 2001; Biney, 2011; Lithur, 2004; Morhee and Morhee, 2006; Sundaram, Juarez, Bankole, & Singh, 2012). However, these studies have

failed to address the issue of women's use of multiple abortions which is a topical issue that must be added to the discussion on abortion in Ghana.

Induced abortion which has been reported to play a role in the fertility decline has not ceased to claim lives. The act of terminating the life of a foetus makes the procedure very dangerous to the women involved, especially since they tend to be performed unsafely. This phenomenon has also raised a lot of moral issues and controversies in the public domain, making it a delicate human right's issue in Ghana. The government in its bid to make the procedure safe has also revised the law which was rather rigid in 1960 to a more liberal one used from 1985 to date. Yet women still use secret means to acquire the procedure because of their ignorance of the existing law (Morhee & Morhee, 2006) and also because society stigmatizes those who obtain it (Lithur, 2004).

In addition, abortion has been identified as the second highest cause of maternal deaths in Ghana (GSS, GHS, & Macro, 2009). Sustainable Development Goal Three (SDG 3) borders on healthy living and wellbeing for people of all ages; therefore, the reduction or eradication of maternal mortality still remains a part of the United Nations' development goals. Although some progress has been made, it is still necessary that some improvement be brought into the lives of women, especially those who are exposed to the risk of maternal mortality, namely adolescent girls residing in developing countries. Thus, studies that provide further insights into women's abortion practices in the developing world regions where they are carried out unsafely are necessary.

It is unfortunate that a procedure that tends to be performed unsafely and thus claims the lives of women is not obtained once but maybe performed repeatedly (Agyei et al, 2016; Appiah Agyekum, 2014). This is the basis for this research. It is necessary to identify the factors that are associated with seeking multiple abortions. Research on repeat abortions among women in Ghana is sparse. Agyei and colleagues (2016) studied repeat abortions in Ghana but concentrated on a major variable, which was contraceptive use after the first abortion experience. Also Aniteye & Mayhew, (2011) focused their research in two main hospitals in Accra, Ghana. They concentrated on women who were seeking care for incomplete abortions during that period. Out of the total number of respondents, 22% had a second abortion whilst 14% had three or more abortions. However, this study seeks to identify the socio-demographic, socio-economic and socio-cultural factors associated with multiple abortions among women in Ghana, using nationally representative data. Identifying factors associated with multiple abortions could help us understand the problem of repeated induced abortion and its multiplying health effects on women and the society as a whole. Also, findings from this study will help in addressing maternal health issues in relation to policymaking and development, as we aim at reducing maternal mortality and other negative health outcomes associated with induced abortion.

## **1.6 Organisation of Chapters**

Chapter one entailed background to the study, the problem statement, research question, research objectives and the rationale of the study. Chapter two includes literature review, conceptual framework and hypotheses. Chapter three contains

information about the data source, the research design, study sample, and measurement of the variables. It also contains data analyses techniques used and data limitations.

Chapter four begins with univariate analyses of the variables in the study. Figures and tables are used to present the distributions of the women across various categories for the variables under study. Chapter five consists of bivariate analyses which are mostly cross tabulations with a Pearson Chi-square test to indicate the proportions of women in the different independent variable categories and their relationship with the dependent variable. Means of women's number of pregnancies will also be compared across their frequency of abortion using ANOVA. Chapter six contains multivariate analyses of the variables in the study whereby a binary logistic regression model is used to examine the various factors associated with multiple induced abortions among women in Ghana. Chapter seven is the final chapter in this study and contains the summary of findings, conclusion and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section seeks to review the existing literature on the various factors that are associated with induced abortions and more so multiple induced abortions among women in Ghana. The occurrence of an abortion in a woman's life is fuelled by some associated factors. It is therefore appropriate to identify and understand the differing views and discussions on the factors related to induced abortion and to a large extent multiple abortions. In this section, the literature on repeat abortions will be discussed. Also, the literature on different characteristics such as age at first union, age at first abortion, contraceptive use, education, type of place of residence, household wealth, religion, ethnicity and number of pregnancies and how they relate to the likelihood of an induced abortion will be reviewed. Finally, a conceptual framework drawn from the literature is depicted in the chapter along with the hypotheses to be tested in the study.

#### **2.2 Induced abortion and multiple/repeated induced abortions**

Abortion is considered a delicate human rights issue that often raises differing arguments from morality to legitimacy. There are two main types of induced abortion these are therapeutic abortion (Morhee & Morhee, 2006) and elective abortion (Prager, Steinauer, Foster, Darney, & Drey, 2007). The therapeutic abortions are carried out based on health complications the mother or foetus is facing or is likely to face. These health problems could either be psychological

or physiological and it is dependent on a health service provider to undertake the procedure. Furthermore, elective abortions are carried out based on the mother's decision or significant other. In this case there may not be any health complications that could warrant an abortion but it is carried out based on the request of the woman or any significant other.

There are differing stances and attitudes towards induced abortion. The argument finds people either being “pro-life”, that is, anti-abortion or “pro-choice”, that is, offering the woman the right to choose abortion or not. It is sometime stated that there is no point in bringing up a child during certain conditions, for example, when the mother is financially handicapped (Lopez, 2012). Therefore, women in this position are justified when they decide to seek abortions when their current economic situation is not favourable for childbearing and childrearing. Lopez (2012) further stated that “it is inhumane to keep children in the world and torture them with lack of food, lack of respect, verbal abuse and physical abuse” (Lopez 2012 pg .516). Although the author addressed the issue by comparing the differing views on abortion up take, he failed to consider repeat abortions. The positions taken by the actors in our society on abortion may be relaxed or further strengthened in cases of multiple abortions where women's lives are especially at stake.

Induced abortion has since served as a mode through which women exercise control over their fertility. Women of all ages and social strata do seek abortion services. Women give varying reasons for their abortions. Some talk about their financial problems, non-stable unions and fear of parental reaction to a mistimed

pregnancy. These factors may be internal or external. If these factors remain unchanged in a woman's life abortion may be an inevitable experience and multiple abortions may become a product of this.

Multiple abortions occur when a woman resorts to induce abortion repeatedly. Out of the total sample of 1,200 women who sought abortion related services in health facilities in Addis Ababa, Ethiopia between October 2008 and February 2009, 30% of them were repeat abortion seekers (Prata et al., 2013). A study in Ghana also revealed that out of the 131 respondents who were patients at a hospital for complications of abortions, the majority terminated their pregnancies in the twelve weeks preceding the survey. About 22 % were seeking a second abortion whilst 14 % were seeking a higher order abortion. These data were collected between June and December 2002 (Aniteye & Mayhew, 2011). Health providers of abortion care often get worried when a woman who sought a first abortion returns for another. Since every abortion has a motive, health professionals are encouraged to treat each case as different and not be judgmental about it (Weitz & Kimport, 2012). Multiple abortion has some factors associated with it and this is the basis for this study. Differing aspects of this topic have been investigated in other studies and the findings and conclusions have been reviewed in this section.

## **2.3 Factors associated with induced abortion**

### **2.3.1 Marital Status/Unions**

A worldwide study on the characteristics of women who sought abortions revealed that abortion rates observed for married women and unmarried women differed with region. Abortion rates are higher among married women in developed countries, whilst abortion rates are also higher among unmarried in developing countries (Bankole, Susheela, & Haas, 1999; Guttmacher Institute, 2016). This suggests that more abortions occur in non-marital relationships in the developing world.

Women who lack stable partners are likely to resort to induced abortions.

Women are likely to abort a pregnancy when a partner is not prepared for an additional child or has little or no socio-economic support (Schwandt et al., 2013). Schwandt et al. (2013) found that a male partner's decision to accept a pregnancy was based on his relationship with the woman. Men who were in formal unions were most likely to accept responsibility for a pregnancy, thus abortions were less likely to occur among those in union. In comparison, male partners who were not in formal unions often decided to accept or not accept responsibility and this led to high abortion rates among women in such relationships (Schwandt et al., 2013). A study at the Komfo Anokye Teaching Hospital (KATH) in Kumasi which included women between ages 15 and 49 years presenting cases of induced abortion, found out that women may decide to abort a pregnancy when her partner refuses to accept responsibility, when the family sees pregnancy outside marriage as unacceptable, and if she is not ready to get married (Agyei et al 2016).

In the abortion decision making process, Kumi-Kyereme et al. (2014) found that a woman's decision is often influenced by significant others which includes her partner. In their study, male partners were the dominate external influencers in the decision made by the woman to abort an unwanted pregnancy (Kumi-Kyereme, Gbagbo, & Amo-Adjei, 2014).

Women who are likely to seek abortions are women who are unmarried. The odds are twice as high among never married women as among the married (Guttmacher Institute, 2013). Most of the pregnancies that occur in society usually occur within marriage. The few that occur among unmarried people often end up as induced abortions. Married women, however, are unlikely to seek abortions as compared to unmarried women (Ilboudo et al., 2014; Silva & Vieira, 2009). Thus, all these findings indicate that there is an association between induced abortion and marital status.

Although studies have been conducted on marital status and its association with induced abortion, the authors did not look specifically at the age at first union and its association with abortion or multiple abortions. The age at first union can provide a more precise means of understanding the role of marriage than the current marital status of the respondent. Therefore, this study goes a step further to look at that association.

### **2.3.2 Age at First Abortion**

Women in their mid-twenties have a greater advantage of carrying an out of wedlock pregnancy to term than women in their teens. This is because they can

readily bear the cost of taking care of the baby than women in their teens (Adamczyk, 2008). Another study showed that women who had undergone repeat abortions were likely to have started sexual relations at a younger age. Repeat abortion seekers were those who had a greater number of sexual partners in their life time (Stone & Ingham, 2011). Multiple partnerships predispose women to the risk of encountering unwanted pregnancies which lead to induced abortions. What makes it worse is that estimates indicate that twenty five percent of all unsafe abortions in Africa are among adolescents (Shah & Åhman, 2004).

Adolescents are most likely to experience unintended pregnancies and they often resort to induced abortion when unintended pregnancies occur. They tend to abort these pregnancies to avert premature parenthood (Coles et al., 2010). Another study conducted in Ouagadougou found that abortions were prevalent among women who were less than thirty years old than women who were thirty or more (Ilboudo et al., 2014). On the contrary, Mote and colleagues found that women within ages 25 to 44 years residing in some part of the Volta Region of Ghana were more likely than younger women to terminate their pregnancies (Mote et al., 2010). Yet another study indicates that abortions mostly occur among women whose age at first abortion was between ages 20 and 29 compared to women whose first abortions were at ages thirty and above (Bankole et al., 1999).

Often unintended pregnancies do occur among teens and this occurrence should not be down played. Younger females who get pregnant out of wedlock often resort to abortions due to a variety of reasons, including parental reaction.

Young women may anticipate harsh reactions from parents and guardians as a

result of their adolescent pregnancies so they find a way to evade their parents' harsh reactions (Oduro & Otsin A.N., 2014; Steinberg & Finer, 2011).

Furthermore it was suggested that parents and educators should equip teens with the necessary information and tools they need to protect themselves if and when they choose to become sexually active. State agencies should also see to it that resources are allocated to ensure the effectiveness of this (Finer, 2010).

A study carried out in Addis Ababa in Ethiopia used records of women who sought abortion related services from four public hospitals and three private centres between October 2008 and February 2009 .Women in the sample were between ages 15 and 49 and the authors found that repeat abortions among women increased with age. Their results showed that every one year increase in age increases the risk of repeat abortion by 10% among women (Prata et al., 2013).

Age specific abortions have two unique features according to Bankole et al. (1999). They found out that the age specific abortion rate can take a "U" shape. This shape "U" is created when abortion rates are high during teenage years; they then decline during the twenties and later increases during the forties. Another observed feature indicates that abortions may rather start out low during teen years and then increase as women's age also increase , therefore having a "J" shape (Bankole et al., 1999). Age does play a role in abortion seeking as stated by various studies on this topic. Some have posited that the age at which a woman starts having her abortion determines the number she would possibly have in her life time.

### 2.3.3 Contraceptives

“The choices for couples who wish to limit their fertility are but three: abstinence, contraception and abortion” (Look & Herten, 1993 pg. 2.). This quote suggests the three viable ways of reducing fertility. Couples who fail to abstain from sexual activities must consider using contraceptives. Contraceptive usage helps to reduce fertility. If contraception fails, then abortion becomes the possible eventuality. Therefore, in reducing fertility, abortion fills the gap which contraception failed to fill.

A study conducted in Wichita, in the United States consisted of a sample of 2001 women with 11% of them reporting a repeat abortion. The authors found that the women seeking repeat abortions did so because they lacked a personal physician who would introduce them to primary health care contraceptive use after their first abortion. They sought repeat abortions because of their lack of information on how to effectively prevent pregnancies after their first abortions (Westfall & Kallail, 1995). Further studies suggest repeat abortion seekers are those who had sexual intercourse when they were less than twenty years and were less likely to use contraception at the time of sexual intercourse. This is because they had little or no knowledge, poor attitude and practice in relation to contraception (Cheng et al., 2004).

A study among Danish women indicated that women who sought repeat abortions were those who relied on traditional methods, no method or used modern contraceptive methods less effectively (Osler et al., 1997). Poor post abortion care and counselling was deemed a reason for repeated induced

abortions. Women who lacked reproductive health counselling after their first abortion often came back for an additional one because of another unwanted pregnancy. Post abortion care (PAC) counselling is meant to encourage patients who had an earlier abortion to adopt a contraceptive method. The authors admitted that this is lacking or is a less effective service – post abortion care (PAC) – and for that matter it is the major cause of another abortion in the lives of women (Agyei et al 2016; Cheng et al., 2004). It is further argued that fecundity returns shortly after termination of a pregnancy and so if measures are not taken the woman will have to go through another abortion (Agyei et al 2016).

Contraceptive failure was a reason for undergoing induced abortion given by women in a study by Oduro and Otsin (2014). In the study, some respondents admitted using contraceptives, such as the condom but they still got pregnant so abortion was the next option. Contraceptives do have failure rates and the greater the failure rate the higher the risk of an unplanned pregnancy (Oduro & Otsin, 2014). Another study found that repeat abortion seekers were consistent contraception users than first time seekers. Their abortions could be attributed to contraceptive failure that occurred at some point (Westfall & Kallail, 1995). It could also suggest that after recurrent abortions, women decided or were advised to use contraception.

Highly effective contraceptives come with major side effects to women whereas the less effective ones which do not cause major side effects easily lead to unwanted pregnancy and repeat abortions in case of failure (Teitze, 1974). Women often reject contraceptive use because of the perceived side effects. Most

women have cited the complications they encounter when using modern contraceptives as the reason for their non-use. Some say they have irregular menstrual flow, weight gain, and loss of their fecundity at a time when they need children. That makes it quite difficult for health professionals to reach some women in their reproductive ages with the family planning message. Abortions are often preferred when unwanted pregnancies occur among these women (Biney, 2011; Rasch, Silberschmidt, Mchumvu, & Mmary, 2000).

A study carried out in Benin City, Nigeria revealed that adolescents who were sexually active preferred to use abortions as a way of dealing with unwanted pregnancies than contraceptives. These young ladies expressed their low or lack of knowledge about contraceptives. Others who knew about it had their misconceptions. Some stated that their mothers told them they would have difficulty in producing children in the future if they used it (Otoide, Oronsaye, & Okonofua, 2001). Fear of unknown side effects and so on prevents sexually active people from using contraception (Biney, 2011; Otoide, Oronsaye, & Okonofua, 2001).

A study in Dar es Salaam found that few adolescent girls had knowledge about contraceptives. These girls were unable to negotiate safe sex with their older partners for fear of losing them. The study showed that young ladies entered into relationships for financial gains so they often preferred older men regardless of the fact that these men were married or not. The men often denied responsibility for any pregnancies that occurred. The girls were left with no option but to

induce an abortion and often ended up at health facilities with complications of incomplete induced abortions (Rasch et al., 2000).

In Britain, one study found some factors to be associated with multiple induced abortions. These were poor contraceptive use, unsafe sexual activity and an increased number of life time sexual partners (Stone & Ingham, 2011). Among adolescents seeking repeat abortions, the younger the age at first intercourse the higher the likelihood that contraceptives were not used. (Cheng et al., 2004)

Another study conducted in Hohoe, Ghana among randomly selected women between ages 15 and 49 years, showed that abortion incidence is bimodal between the younger ages and the older ages. This is because women in their very old ages may not use contraceptives because they think they cannot get pregnant at those ages, whilst younger women are more likely to abort because of contraceptive unmet need and lack of knowledge on contraception (Mote et al., 2010). It is reported that the incidence of induced abortions in Ghana is largely due to non-contraceptive use or contraceptive failure (GSS et al., 2009). However, one contrary finding to this was by Ilboudo et al. (2014), who found that contraceptive use was not associated with induced abortions. The researchers admitted this as a contrary view to the existing research and attributed their findings to the small sample size used.

In a study using telephone interviews in the United States (Wietz and Kimport, 2012), the analysis, which was limited to women who had repeat abortions and were ages 21 to 47 years found that some women reported that they treated multiple abortions distinctive of each other. The abortions are unique based on

the circumstances surrounding the abortions. They found it quite challenging when contraceptive providers or health workers became judgmental about their situation and often prescribed contraceptives for them without asking their opinions. The researchers stated that each abortion should be treated distinctive of each other so women may feel comfortable walking to the health units for help (Weitz & Kimport, 2012). Researchers restricted the study to the emotional state of the respondents.

It was also found in Finland that a planned decision to use more effective methods such as the intrauterine method of contraception and sterilization are associated with reduced risk of experiencing repeat abortion (Niinimäki et al., 2009). Contraceptive use is usually meant to prevent unwanted pregnancies therefore non-use or method failure leads to unwanted pregnancies which usually end in abortions.

#### **2.3.4 Education**

In recent times much precedence is placed on education over fertility. Women are currently putting their career aspirations and income earnings above reproductive roles. Unlike in past years when women put reproductive roles above education, currently there has been a growing change (Rinderknecht, 2006).

A study by Adamczyk (2008) using two waves of the National Longitudinal Study of Adolescent Health found that women with higher academic grades and better educational aspirations were more likely to obtain or seek abortions because they saw motherhood as a hindrance to their progress (Adamczyk,

2008). Women who are in college are most likely to end an unintended pregnancy in an abortion because they were still in school (Finer & Zolna, 2011). Also opportunity cost for education rather than religion was a decider on women's decisions to have an out of wedlock birth or not (Adamczyk, 2008). Adamczyk's study focused exclusively on first pregnancies. However, abortion cannot only be limited to first pregnancies and the author admitted this as a limitation to the study.

Another study carried out in the US found that women who had obtained bachelors and graduate degrees strongly supported abortion. This, the author attributed to women's desires to postpone childbearing (Rinderknecht, 2006). Unmarried and young women alluded to the fact that pregnancies will disrupt their education and career. Even among older women, one third of them stated in a study that they did not want to disrupt their education (Finer, Frohwirth, Moore, Dauphinee, & Susheela, 2005).

A study by Appiah -Agyekum (2014) used focus group discussions among University of Ghana students who had personally induced abortions or knew someone who had undertaken an induced abortion. Out of the 88 participants who had personally induced abortions, 29.5% of them had undergone two abortions and 22.1% had performed more than two abortions (Appiah-Agyekum, 2014). The study further found that a number of respondents who had personally had induced abortions did it repeatedly. They did this because they were successful at the first attempt so they rather relied on abortion than contraception. Two-thirds of the sample had self-induced their abortions

secretly in the first trimester to avoid parents or peers from finding out (Appiah-Agyekum, 2014).

Women with a higher level of education have a higher probability of obtaining induced abortions than those who had no education (Ahiadeke, 2001). Also, women with no education and primary education also had reduced odds of inducing abortions than women with senior high school education (Mote et al., 2010). These results can be attributed to the fact that with higher aspirations, women may require a college education to achieve their goals, and hence, are more likely to postpone pregnancies and child bearing. On the other hand, people whose life aspirations do not need higher education have greater desires of becoming pregnant and maintaining it (Phipps, Salak, Nunes, & Rosengard, 2011).

One finding that went contrary to the majority of the literature was from a Finnish nationwide survey. The study was about the frequency and risk factors for repeat abortion after medical versus surgical termination of pregnancies. The study found that women with low educational attainment were rather found to be at risk of seeking repeat abortions in Finland (Niinimäki et al., 2009). Another study on repeat abortions among young women not more than 22 years old in China found that individuals who were seeking repeat abortions were people who had no high school education (Cheng et al., 2004).

### **2.3.5 Wealth Index**

Yi (2011) conducted a review of reports, seminal studies and articles in the United States on economic indicators and family planning. The author found that women with low socio-economic statuses had an increasing desire for abortions. These women attributed their desire to cost in taking care of their children and additional ones. Some admitted they could not continue taking birth control because they could not afford it and so they preferred to abort in the cases where unwanted pregnancies occurred (Yi, 2011). Another study that used mixed methods identified that women who were poor and unemployed stated that they could not afford another baby so they opted for an abortion (Finer et al., 2005).

In addition, Niinimäki and colleagues also found that women who are found to be in blue collar jobs, unemployed and with the low socio economic status were more at risk of repeat abortions than women with a high socio-economic status (Niinimäki et al., 2009). Inability of the poor to acquire safe abortion leads to increased unsafe abortions in developing countries.

Adamczyk's (2008) study which looked at testing the relationship between religion, abortion and structural constraints found that young unmarried women who were unemployed found it difficult to pay for an abortion. If they were not using their parent's money to pay for it, then they relied on state funded abortions (Adamczyk, 2008). Safe abortions come at a cost and women who need one but are unable to pay rely on state funds which are usually accessible in most developed countries.

In Ghana, the national health insurance does not cater for induced abortions so women who cannot afford it, self-induce their abortions. The national health system only makes provision for complications of miscarriages. Often women try induced abortions at home and when there are complications they are taken to the hospital. They are treated as miscarriages or gynaecological issues which can be taken care of by the health insurance. Since miscarriages are catered for by the health insurance, induced abortions in Ghana are more unsafe. This is the situation many women who are financially handicapped face (Payne et al., 2013).

The livelihoods of women are essential to their everyday living; thus, it is important that a woman who wishes to bear children consider her financial resource base. Women who stand the advantage of gaining maternity leave with pay have greater chances of keeping their pregnancy to term rather than women who are self-employed and have no such privileges as found in some areas in Ghana (Ahiadeke, 2001).

On the other hand women who have the wherewithal are at ease if they wish to get an abortion. In countries where the law governing abortion is quite restrictive well to do women and well-connected women know their way around to get an abortion performed (Look & Herten, 1993). Wealthier women have greater chances of obtaining a safe abortion in case of any unwanted pregnancy. This is because they have the funds which enable them to access better health facilities, information and medications needed rather than those in the poor category (Sundaram et al., 2012)

Women in formal employment have the economic strength so they either decide to keep or terminate an unwanted pregnancy. These women are also privy to maternity leave from their employers and hence have fewer challenges to deal with if they decide to keep their unwanted pregnancy (Mote et al., 2010). Global statistics reveal that women in the top two wealth quintiles have a 67 percent to 80 percent probability of having an abortion than poor women (Guttmacher Institute, 2013).

### **2.3.6 Place of Residence**

Women of higher socioeconomic status, who are better educated and live in urban areas are more prepared to seek an abortion when they need one simply because they have access to better health care and facilities. More education also means greater access to information through the media, which may include better knowledge of the abortion law. Women from these high social strata are more likely to use contraceptives to prevent unintended pregnancies but in case they do occur they are in a better position to abort (Sundaram et al, 2012). Also the difference between urban abortion estimates and rural estimates are partly attributed to differing population sizes in these two areas which affects the proportion of abortion seekers in urban areas than in rural areas (Bankole et al., 1999). Peri-urban women also have a greater likelihood of having induced abortions than rural women (Mote et al., 2010).

Unmarried women who live in places without an abortion clinic are less likely than women who live in places with an abortion clinic to obtain abortions.

Therefore, the residency of the woman who seeks to get an abortion matters in her decision to get one (Adamczyk, 2008).

In addition, urban areas are characterized by services that are both legal and illegal (Royston 1989, as cited in Look & Herten, 1993). Abortion care services also fall within this sphere. This makes it much easier for women in urban areas to seek abortion in a large setting without being found out. This is not the case for rural dwellers who wish to obtain abortions (Look & Herten, 1993).

### **2.3.7 Religion**

Religion is a primary form of socialisation which influences both the private and public lives of people. People fashion their lives to suit the dictates of their religion. Religious groups express their dissatisfaction at different sexually immoral behaviours, one being premarital sex, and members of these faiths are aware of this expectation (Anarfi & Owusu, 2011). Religion has some influence on the reproductive health issues in people's lives (Takyi 2003; Anarfi and Owusu, 2011). Pregnancies that occur out of wedlock are a sign of non-adherence or non-conformity to religious teaching which may attract sanctions. Therefore, religion may play a role in influencing a woman's decision to abort a pregnancy or not (Verona, 2011). People who are most concerned about their religious groups reactions to premarital pregnancy and the stigma that may result from this transgressive behaviour may often seek abortion (Adamczyk, 2008).

Religion influences people's decisions through doctrine and dogmas that are set to guide worship and the way of conduct of people. Finer and colleagues (2005)

found that some women considered abortion as sinful based on moral grounds. Others, on the other hand, thought giving birth to the unintended child was rather the sin and abortion was the best choice to make in such situations (Finer et al., 2005).

From the 1970s, a trend in the literature showed that “studies of the relationship between religion and fertility control have shifted their focus from contraceptives to the more controversial issue of abortion” (Hertel et al., 1974 pg 23). A person consistently involved in religious activities and adheres to religious messages is likely to disapprove of abortions (Hertel et al., 1974). Thus, religion can exercise either direct or indirect control over an individual’s behaviour and conduct. The religious teachings and regulations, which are derived from their Holy Books, “provide a manual for everyday living and upright living”. In relation to premarital sex, religious teachings may aid in suppressing sexual desires until marriage (Verona, 2011).

Since religious groups highly regard marriage, sex is believed to solely occur in marriage, premarital sex tends to be prohibited (Verona, 2011). This often leads to out of wedlock pregnancies which attract sanctions, but Adamczyk (2008) found that neither public nor private religiosity affects opinions about abortion or abortion behaviours (Adamczyk, 2008)

Among the different religious groups in Ghana, Sundaram et al. (2012) found that Pentecostal/Charismatic and Protestant women were at greater odds of terminating a pregnancy than did women in the “Muslim or other” category.

Also, Pentecostal/Charismatic and Protestant women have been shown to have lower desired levels of fertility than those of Muslims and others, who also have low levels of modern contraceptive use (Ahiadeke, 2001; Sundaram et al 2012). These findings may indicate that certain religious denominations in the Christian faith, namely Pentecostals and Protestants, have stricter sanctions for non-marital pregnancies rendering women to resort to abortion (Verona, 2011).

### **2.3.8 Ethnicity**

Socio-cultural factors seem to play a role in women's decisions to seek abortions (Oduro & Otsin , 2014). In most cultural settings, a woman is expected to be faithful to her partner and so if she gets pregnant with another man's child she resorts to abortion to avoid shame. A study by Bleek (1978) among a clan in the Akan ethnic group found that women and girls had a lot of knowledge about how to induce abortions. They relied on local herbs and concoctions to get rid of unwanted pregnancies. Bleek (1990) reported that abortion was a method used by women during the pre-colonial era and this provides some knowledge that abortion is not a recent phenomenon but rather some traditional settings had some knowledge about it.

The Akan's and Ga/Dangme's have a greater tendency to use contraceptives (Addai, 1999). Therefore, abortion rates among these ethnic groups will be low considering the high contraceptive prevalence among these ethnic groups. This is quite different from what Bleek found about the Akans. The difference between these two findings could be attributed to the context of time. Bleek conducted his study in the 70's while Addai's was in the 90's (Addai, 1999).

Among the Ga ethnic group, women who are known to have abortions are given names that connote immorality. Also the chances of the ladies in her family in securing prospective husbands will be limited. This is because the society esteems fertility and so any attempt to disrupt this creates mixed feelings and stigmatisation (Lithur, 2004).

Customary rites in some Ghanaian societies place undue burden on young girls. “Dipo” and “Bragoro” are rites of passage performed for girls in some parts of Ghana by the Krobos and Akans, respectively. A girl can only perform such rites if she is a virgin and it is a way of bringing honour to the girl’s family. Girls who find themselves pregnant before that time are likely to abort so they can go through the rites and prevent shame (Lithur, 2004).

Adjei and his colleagues (2015) conducted a study on abortion in Kintampo in the Brong Ahafo region of Ghana. They conducted the study to investigate the reasons behind Ghana’s fertility decline despite the low contraceptive prevalence rate. Their research found that abortion is prevalent among these rural women. The characteristics of women who often sought abortion were they being more educated and wealthier to name a few (Adjei et al., 2015). Despite the fact that Kintampo is composed of various ethnic groups, the indigenous Mo and Nkoranza groups along with migrant groups from all over Ghana (GSS, 2014a, 2014b), the study failed to assess the role of ethnicity on women’s pregnancy termination experiences.

A study by Mote et al. (2010) undertaken in Hohoe, in the Volta Region revealed that women often sought unsafe ways to abort their pregnancies. Women of all ages who procured abortions preferred quack doctors than qualified health professionals. These women only reported to the hospital when there were complications (Mote et al., 2010).

Abortion also connotes the “spilling of blood” in communities in Ghana (Fayorsey 2002; as cited in Sedgh, 2010). Many women who are faced with unintended pregnancies will often use unsafe means to abort it. The rites of passage that are upheld by most ethnic groups have an effect on young girls and how they ought to behave. The social control theory states that people have the tendency to move towards deviance but they are restricted by the organisation they are a part of. This may explain why unmarried women in these areas resort to abortions when pregnancy occurs outside the confines of marriage.

### **2.3.9 Number of Pregnancies**

The number of pregnancies a woman has had is related to her abortion behaviour. The more pregnancies a woman experiences connotes more opportunities to suffer unintended pregnancies, which are likely to end in an induced abortion.

Women who had four or more children were more likely to have an abortion if they realised that they were pregnant (Ahiadeke, 2013). Women whose pregnancies often ended in live births may be demotivated to carry subsequent pregnancies to term provided they have reached their desired fertility.

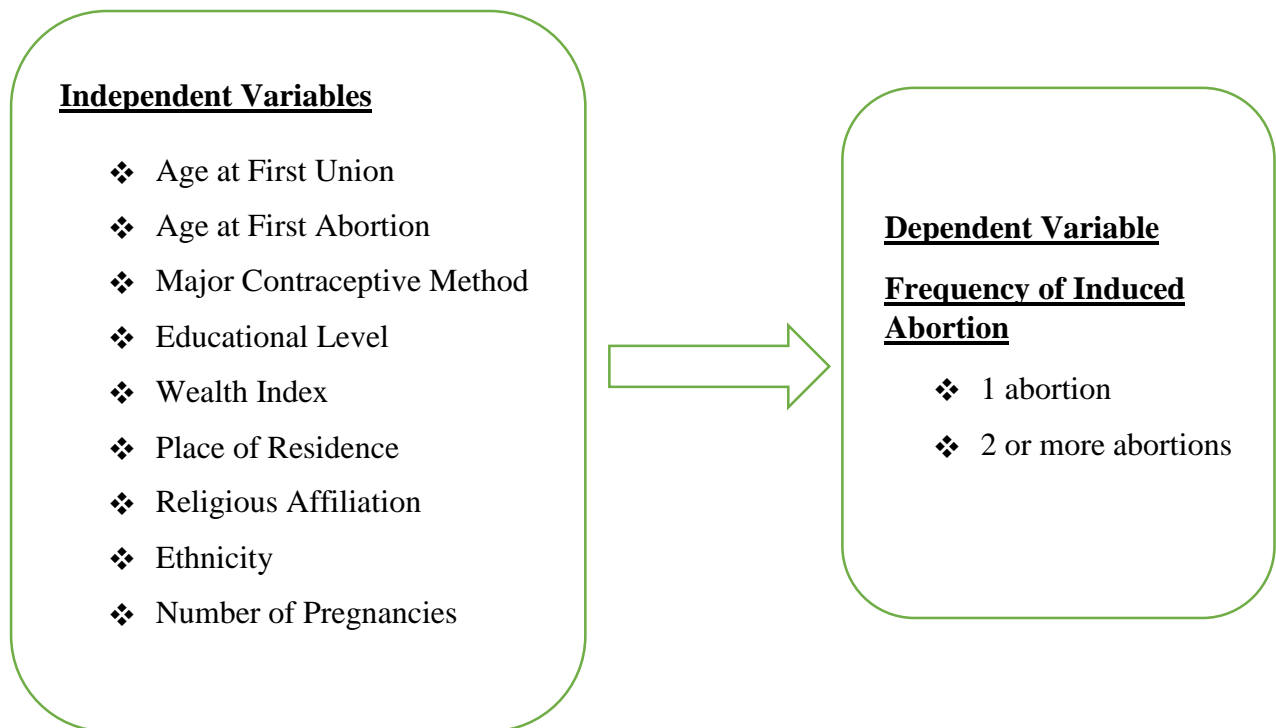
Also women whose intentions are to delay pregnancy until marriage or upon completion of their education will not be motivated to carry a pregnancy to full term (Aniteye & Mayhew, 2011). Therefore, as often as the pregnancy occurs outside the expected time she has set for herself, she will have to terminate it until she is ready. A woman with successive pregnancies will usually have some being terminated to create birth spacing (Warriner & Shah, 2006). Prata and colleagues (2013) also found that a higher number of pregnancies occurred among repeat abortion seekers (3 pregnancies). Whilst those seeking their first abortions had 1.8 pregnancies (Prata et al., 2013).

## **2.4 Conceptual Framework**

The conceptual framework depicted in Figure 2.1 shows the various factors associated with women's multiple abortions. This conceptual framework was informed by Bankole and colleagues' (1999) world review as their findings provided a great deal of information from which this study could draw from. They looked at characteristics of women who obtain abortions by relying on data from regions around the world. They identified the underlying characteristics that do affect women's desires to obtain or not obtain an abortion. These characteristics were age at first abortion, marital status, ethnicity, place of residence, religion, parity, to name a few (Bankole et al., 1999). Their research did not include women's multiple abortion experiences. This study goes further to examine all these factors including the number of pregnancies, wealth index, age at first union, etc and their associations with multiple or repeat abortions among women in Ghana.

The independent or predictor variables in this study are age at first union, age at first abortion, major contraceptive method used, educational level, wealth index, place of residence, religious affiliation, ethnicity and number of pregnancies. The dependent variable is the frequency of induced abortion which has two main categories: one abortion and two or more abortions (multiple abortions). This conceptual framework, as displayed in Figure 2.1, seeks to establish the relationship between the various independent variables and the dependent variable.

**Figure 2.1: A Conceptual framework showing factors associated with multiple induced abortions among women in Ghana**



Source: Author's own construct, informed by Bankole et al. (1999)

Age at first union is the age at which respondents first entered into marriage or cohabitation. Silva and Vieira (2009) found out that abortions often occur among unmarried people than among married people. Women who enter into

unions early have a reduced chance of having unplanned pregnancies which could often end in multiple abortions. On the other hand, women who start abortions early in their reproductive years have longer periods of reproductive years to have multiple abortions. Those who start abortions late have a reduced reproductive life span which does not permit them to abort multiple pregnancies.

Major contraceptive method includes those who were not using any method. It also consists of those who were using natural and modern methods.

Respondents who were not using any method were at risk of aborting multiple times. Respondents who were using unreliable or inefficient methods like the natural method may experience multiple abortions. Some modern contraceptives do have failure rates, and the higher the failure rate the greater the risk of unplanned pregnancies and induced abortions. Education also plays a role in women's decisions to seek multiple abortions. The higher the level of education of a woman the greater her desire to postpone child birth which could impede her education. The lower her educational level, then it is more likely she will be able to carry a pregnancy to term.

Women with a high wealth index can afford safe abortions so they are more likely to seek multiple induced abortions, whereas women in the poor category are likely to desist from seeking multiple abortions and even safe abortions.

Urban dwellers have better healthcare facilities and access to safe abortions so these women may be more likely to seek multiple abortions as compared to rural women.

Religious affiliation in this study refers to the particular religious denominations respondents belong to. Almost all religious groups in Ghana abhor the practice of abortions which they consider as murder. They also hold strict views on premarital sex which carries sanctions in these groups.

However, people who are often concerned about their religious group's reaction to non-marital, adolescent or unintended pregnancies often resort to induced abortion (Adamczyk, 2008). Nonetheless married couples who seek to abort their pregnancies do not disclose their intentions for fear of being found out and sanctioned for committing a sin. Some literature shows that women who are Pentecostals are more likely to resort to multiple abortions. Whenever they find themselves going against the rules of their religious group they seek an escape route out of that situation which in this case is abortion, especially unsafe abortion.

The ethnicity of the individual can affect her desire to seek multiple abortions. Women belong to various ethnic groups who have different levels of knowledge on how to terminate pregnancies. Although society stigmatises those who seek abortion, women who wish to obtain it may do so clandestinely. Akans may be more likely to seek multiple abortions. Number of pregnancies also determines the number of abortions women will have. The higher the number of pregnancies, the higher the chance that some might end in induced abortion.

## **2.5 Hypotheses**

- ❖ Women whose ages at first abortion were less than age twenty are more likely to have multiple abortions than those whose first abortions occurred at ages 30 and above.
  
- ❖ Women who live in rural areas are less likely to have multiple abortions than women residing in urban areas.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This section outlines information about the data used in the study. More specifically, information about the data source, sampling and the measures are presented in this section. Additionally, the selection of variables, categorisation and the methods of analyses used in this study are discussed in detail.

#### **3.2 Data Source**

The research used data from the Ghana Maternal Health Survey (GMHS) which was conducted throughout Ghana in the year 2007. It was a nationwide survey comprising of a nationally representative sample. It was primarily carried out by the Ghana Statistical Service with assistance from Ghana Health Service, Macro International and the Guttmacher Institute. So far, the GMHS is the only recent study with nationwide coverage that provides in-depth data on maternal health issues. The data collected in the survey were intended to help the Government of Ghana and the consortium of organizations participating in the Reducing Maternal Morbidity and Mortality (R3M) program. It was also carried out to launch a series of collaborative efforts to significantly expand women's access to modern family planning services and comprehensive abortion care (CAC) (GSS, GHS, & Macro, 2009). The R3M program was launched in 2006 by a consortium of organizations led by the Population Council (GMHS 2009).

### **3.3 Sample design and study sample**

The research design consisted of 1,600 primary sampling units which were selected (half from the R3M regions and half from the other regions) within the 10 administrative regions of the country, across urban and rural areas. It was a cross-sectional survey that used a multistage sampling procedure, primarily cluster and stratified sampling methods. The entire survey was in two phases – the first and second phases. In this study the second phase of data collection was of interest. The second phase consisted of interviews with women in a selected sample of households identified in the first phase. Thus, out of the 1600 sampling units selected, 400 clusters were randomly sampled, from which women between 15 and 49 years were interviewed.

A total sample of 10,370 women between ages 15 and 49 out of 10,885 households were interviewed. The women's questionnaire was used in the data collection process. However, for purposes of this study women who reported that they have ever undergone abortions were the sample used. The total weighted sample that was used in this study was 1,482 women (from an unweighted sample of 1528 women) who had ever had an induced abortion. The women were asked questions in the survey about their pregnancy history, abortion experiences, and their demographic and socioeconomic characteristics which were analysed for the study. The quality of the data was assessed using digit preference index. This method was used because the data only contained one sex - that is women. The digit preference index was about 0.0% indicating that current ages reported by respondents were accurate.

### **3.4 Variables in the study**

There were nine independent variables and one dependent variable being analysed in this study. The independent variables were age at first union, age at first abortion, education, place of residence, wealth index, religious affiliation, major contraceptive method used, ethnicity and number of pregnancies. The dependent variable was the frequency of induced abortion.

#### **3.4.1 Independent variables**

The independent variables were the variables which were manipulated to ascertain its effect on the dependent variable. Most of the variables were recoded for purposes of this study. These variables were religious affiliation, age at first union, age at first abortion, education, ethnicity and wealth index. Also, the number of pregnancies variable was kept as a discrete one.

##### ***Age at first union***

This variable sought to identify the age at which respondents first entered into a union. This variable was a continuous variable which ranged from 7 years to 45 years. The age at first union which had been calculated in the data set was recoded into three main categories. These categories were: “less than 20 years” and “20 and above”. Those who were not or had never been in union were coded as “no union”.

##### ***Age at first abortion***

This variable sought to identify the age at which respondents first had their abortion. It was originally a continuous variable which ranged from 11 years to

46 years. The variable was recoded into three main categories which includes: “less than 20 years”, “20 – 29 years” and “30 years and above” (Sundaram et al., 2012). This variable was absent in the dataset but was calculated using the following formula:

$$Y = \frac{\text{CMC of date at each pregnancy termination} - \text{CMC of date of birth of women}}{12}$$

Where  $Y$  was the time at which she had her pregnancy terminated. If the woman had no previous pregnancy termination, then  $Y$  becomes age at first abortion.

The *CMC* is the century month code. It is a primary standardised way in which dates are coded in the Demographic Health Survey. *CMC* reduces all months to codes taking the values which are; 1 in January 1900, 2 in February 1900, 13 is January 1901 and so on (Rutstein, & Rojas, 2003). The formula for calculating the *CMC* is as follows:

$$\text{CMC (month, year)} = 12(\text{year}-1900) + \text{month}$$

#### ***Major contraceptive method used***

Major contraceptive method used is a variable that sought to measure the main contraceptive methods respondents were using at the time of the survey. These responses were recoded into three main categories; modern method, natural method and no method. Contraceptives like female condom, male condom, pills, IUD, female sterilization, injectables and implants were coded as modern methods. Those who used traditional, rhythm, withdrawal and others were all

coded as natural methods. Those who used neither of the methods were coded as no method.

### ***Educational level***

Educational level measured the highest educational attainment of all respondents. They were Primary, Junior High School (JHS), Senior High School (SHS) and Higher. SHS and higher were combined and recoded as SHS/ higher. Those without education were grouped into the “no education” category.

### ***Wealth Index***

Wealth index measured the household wealth of respondents. These categories included poorest, poor, middle, rich, and richest. In this study the poor and poorest were combined and recoded as “poor”. The categories used in this study were poor, middle, rich and richest.

### ***Place of Residence***

Place of residence had two main categories these were rural and urban. In this study these two categories were maintained.

### ***Religion***

Religious groups present in the data set were Catholics, Protestants, Methodists, Presbyterians, Pentecostal, other Christians, Muslims, Traditionalists, no religion and others. Further categorisation was done in this study and this was informed by Takyi’s (2003) manner of recoding. These were Protestant, Methodists and Presbyterians recoded into “Protestant”. Also, Muslims, those with no religion and others were categorised as “Others”.

*Table 3.1: Independent variables and their categories*

<b>Variable</b>	<b>Categories</b>
Age at First Union	No union Less than 20 years 20 and above
Age at First Abortion	Less than 20 years 20 - 29 years 30 +
Major Contraceptive Method Used	Natural method Modern method No method
Educational level	No education Primary education Junior High School Senior High School/Higher
Wealth Index	Poor Middle Rich Richest
Place of residence	Rural Urban
Religious Affiliation	Catholics Protestants Pentecostals Others Other Christians
Ethnicity	All others Ga/ Dangme Ewe Akan
Number of Pregnancies	1 – 16 pregnancies

***Ethnicity***

There were seven ethnic groups as provided by the data. These ethnic groups were Akan, Ewe, Ga/Dangme, Grussi, Gruma, Mole Dagbani and Guans. For purposes of this study, recoding was necessary. Grussi, Gruma, Mole-Dagbani and Guans were all recoded and represented as “all others”.

*Number of pregnancies*

The number of pregnancies a woman has had in her lifetime was measured as a discrete variable. It ranged from 1 to 16 pregnancies. The lowest pregnancy by a woman was 1 while the highest number of pregnancies by a woman was 16 as recorded in the data.

**3.4.2 Dependent variable**

The dependent variable was originally a discrete variable consisting of the number of abortions a woman had ever had, and it ranged from one to nine abortions. This measure was then categorised into two main groups, thus a dichotomous variable was created: these categories were one abortion (1) and two or more abortions (2+). Two or more abortions also refers to multiple abortions in this study.

**3.5 Method of Analysis**

In analysing the data in this research, the statistical software analysis package IBM SPSS package (version 22) was used. Figures, tables and graphs were used to show outputs of univariate, bivariate and multivariate analyses.

Univariate analyses were displayed using the percentage and frequency distribution of all the variables involved in this study. Tables and graphs were used to show the distributions across the various categories of the variables.

Bivariate analyses were conducted to determine the varying differences between the various factors associated with induced abortion and the frequency of induced abortion. Cross tabulations and Pearson chi square tests were the

measures of association used at the bivariate analysis stage. Tables were used to display the bivariate analysis output. In addition, one analysis of variance (ANOVA) model was conducted and the mean number of pregnancies women had by frequency of abortion was examined.

Multivariate analysis was the third and final stage of the data analysis where a binary logistic regression model was used. The model was used to assess the relationship between the various independent variables and their association with two or more abortions (multiple abortions). This dependent variable was dichotomous, it was categorized into: one abortion (coded as '0') and two or more abortions (multiple abortions) coded as '1'. The binary logistic regression model equation is as follows:

$$\text{Logit}(P_i) = \text{Log} \left[ \frac{P_i}{1-P_i} \right] = X_i B_i + e^i$$

Where  $P_i$  is the probability of a respondent having two or more abortions,  $X_i$  the matrix of the selected independent variables, and  $B_i$  (Beta) is the vector of coefficients related to the specific independent variable.

### **3.6 Limitations of the Data**

Abortion is a delicate social issue that suffers a lot of underreporting when surveys are conducted on it. People find it embarrassing to talk about their abortion experience hence they may withhold some of this information when they are asked in a survey. When women are being asked to report on multiple

abortions they are most likely to withhold some information. In societies where abortion is highly stigmatised, a lot of under reporting can be anticipated. This bias in information on abortion is likely to affect research in such areas. Despite this limitation, since the Ghana Maternal Health Survey is a credible data source and was conducted in a rigorous manner, the information that we do have available is most appropriate for use for this study.

The second limitation is that variables that could mediate or moderate the effect of the independent variable on the dependent variable were unavailable in the dataset. For example, the respondents' relationship quality, marital status at the time of the abortion, and so on.

Due to various contextual factors, this research was limited to only known statistical tools at the analysis stage. The sample was also limited to women who had ever encountered an induced abortion which hindered the ability to determine the prevalence of repeat abortions in the sample. Therefore, other statistical approaches such as ordinal logistic regression could be adopted in subsequent studies to a sample of all sexually initiated women to reduce selection biases. Nonetheless although these limitations exist, the available information obtained for this study provides adequate information to help explain this rather delicate human rights issue. The data were collected on a national scale so findings could be generalised to women in Ghana who had ever had an induced abortion in order to enhance better policy formulation and implementation.

## **CHAPTER 4**

### **SOCIO-DEMOGRAPHIC, SOCIO-CULTURAL AND SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS**

#### **4.1. Introduction**

The frequency of induced abortion is associated with various factors as mentioned in the literature review chapter. The background characteristics of the respondents are essential in assessing women's use multiple abortions in Ghana. In this chapter, graphs and tables are used to depict the various percentages and proportions of respondents for each variable used in this study. These variables include the frequency of induced abortions, age at first abortion, educational level, place of residence, age at first union, major contraceptive method used, religious affiliation, ethnicity and number of pregnancies of women who have ever had abortion.

#### **4.2 Frequency of Abortions**

Frequency of abortion refers to the number of abortions procured by each respondent. It ranged from one to nine abortions but for purposes of this study it was categorised into two (1 abortion and 2 or more abortions). For many post-abortion patients, the lack of family planning and counselling services quickly leads to another unwanted pregnancy that may end in induced abortion. This is because fertility returns within four to six weeks after a miscarriage or induced abortion (Agyei et al 2016).

*Table 4.1: Percentage distribution of women by number of abortions*

Number of Abortions	Frequency	Percent
1	982	66.3
2+	500	33.7
Total	1482	100

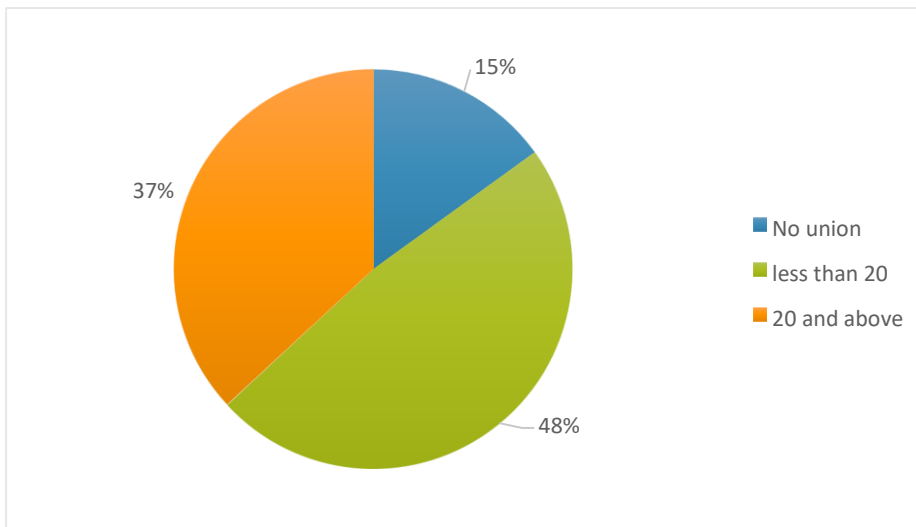
**Source: Ghana Maternal Health Survey 2007**

Table 4.1 shows the number of abortions women have had. There were two main categories these were one abortion and two or more abortions. Two or more abortions refers to the multiple abortions that respondents had undergone. Respondents with one abortion experience were 66.3% whilst respondents with multiple abortions (2+) were 33.7%.

### **4.3 Age at First Union**

Age at first union refers to the age at which respondents first married or cohabited. Induced abortion is high among married women in most regions around the world but the reverse is the case in Northern America and Western Africa for which Ghana is included (Guttamcher, 2016). A pronatalist society like Ghana legitimises fertility in unions other than outside unions. Therefore, pregnancy outside the confines of a formal union attracts shame and disgrace to the women involved and their families as well. This explains why induced abortion may be more prevalent among single women than married women. Women who get into unions early in their reproductive years are likely to get pregnant within a union. If pregnancy does occur within the union it is less likely to be aborted.

*Figure 4.1: Percentage distribution of women by age at first union*



**Source: Ghana Maternal Health Survey 2007**

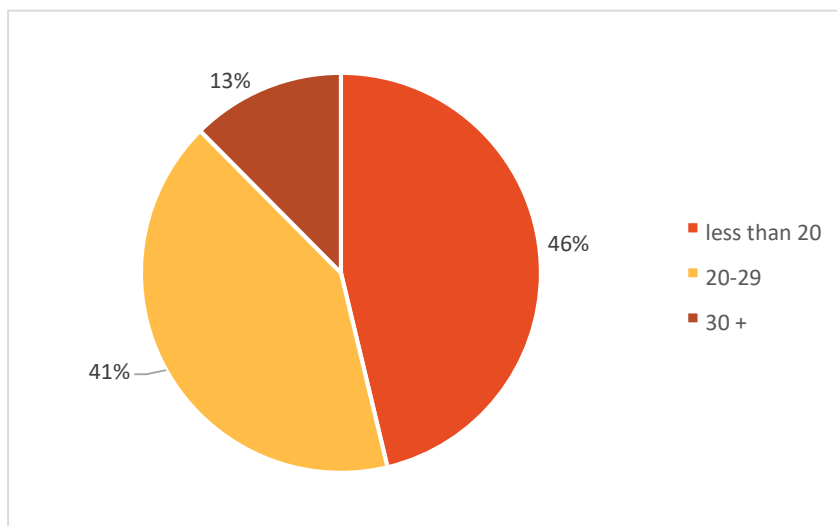
On the other hand there is a greater possibility that women who get into union later in life would have had unwanted pregnancies before their union. These pregnancies outside unions would often be aborted to avoid stigmatisation and shame (Bleek, 1981; Lithur, 2004). Therefore those who enter into unions early have reduced chances of having multiple abortions. Whereas women who enter into unions late have increased chances of having multiple abortions before they finally get into unions.

Figure 4.1 displays a pie chart that represents the age groups at first union of respondents, which comprises of their first ages at marriage and cohabitation. This variable's categories are no union which consisted of 15% of the women, 48% were less than 20 years old at the time of their first unions, and those aged above 20 years were 37%.

#### 4.4 Age at First Abortion

Age at first abortion has a relationship with the number of abortions a respondent is likely to have. Respondents whose first abortion occurred when they were in their teen ages have a greater likelihood of repeating it provided they remain sexually active without using a contraceptive method. Women who use abortions to terminate their pregnancies often resort to it when they encounter another unwanted pregnancy, especially since they now have an idea on how abortions are carried out (Appiah-Agyekum, 2014). Therefore if they started at a younger age they will possibly have multiple abortions compared to those who started later. It is unlikely for a woman whose first abortion occurred late in her reproductive age to have multiple abortions. In addition, older women are more likely to acquire contraceptives without prejudice from service providers as compared to teenagers. Therefore, their likelihood of using contraceptives increases whilst their likelihood of resorting to induced abortion is reduced.

*Figure 4.2: Percentage distribution of women by age at first abortion*



**Source: Ghana Maternal Health Survey 2007**

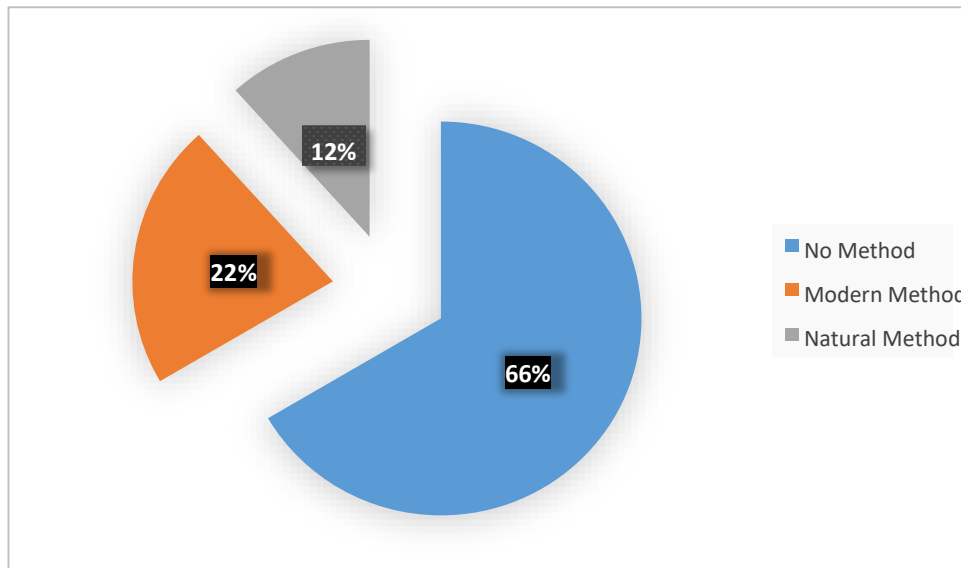
Figure 4.2 represents the age at first abortion for women in this study. The variable was categorised into three groups: ages less than 20, 20 to 29 years and 30 years and above. Women less than 20 years old at the time of their first abortion had a greater percentage which was 46%. This means that close to 50 percent of women experienced their first abortion during adolescence or the early stages of reproductive life. The second highest proportion of abortions had occurred among women aged 20 and 29 years who have ever had abortion. Among women who have ever had abortion, women whose first abortion was at age 30 and above were the smallest proportion.

#### **4.5 Major Contraceptive Method**

The major contraceptive method stated in this study includes natural and modern methods. Respondents who did not use any of these methods were classified as “no method”. Contraceptives are said to prevent unwanted pregnancies among sexually active people. Modern methods are the most effective methods of preventing unwanted pregnancies. They consist of the pills, injectables, implants, IUD and so on. Natural methods include withdrawal, rhythm and folkloric methods of preventing pregnancies. These methods are not so reliable in preventing pregnancies. For example, the rhythm method can only work with women who have a consistent twenty – eight day menstrual cycle. A slight change or wrong calculation of the safe period of the woman can cause an unwanted or mistimed pregnancy. Abortions would only occur if a respondent is a non-user of contraceptives or has an unmet need for contraception. Multiple abortions are also likely to occur if a first abortion seeker does not adopt an effective contraception method to prevent further unwanted

pregnancies (Agyeiet al2016). Most teenagers lack knowledge about contraception, are financially handicapped to purchase contraceptives, and may find it uneasy to acquire contraceptives because of prejudice from health workers (Otiode et al., 2001).

*Figure 4.3: Percentage distribution of women by the major contraceptive method used*



**Source: Ghana Maternal Health Survey 2007**

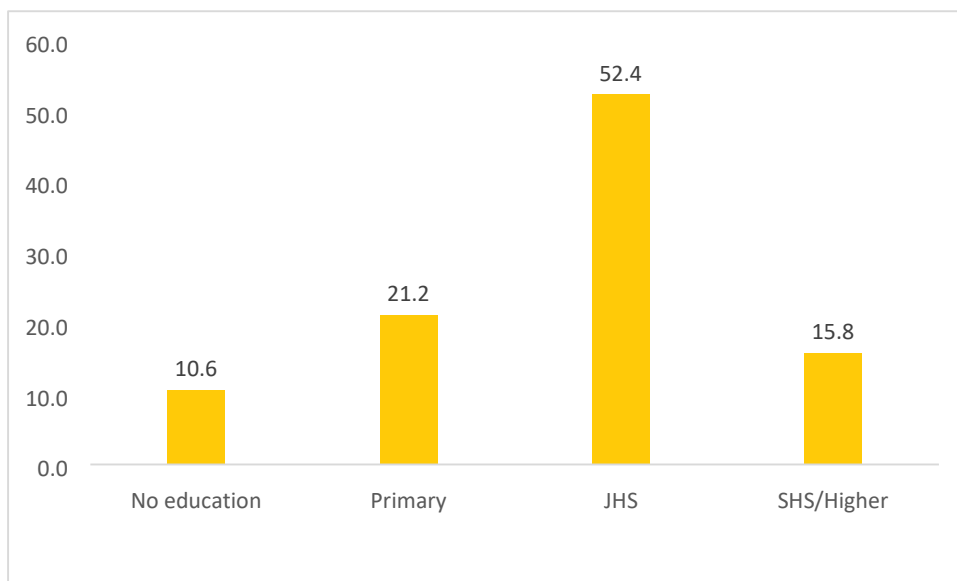
Figure 4.3 is a pie chart that shows the proportion of women and the major contraceptive method they use. Out of the total number of respondents, 12% used natural method and 22% of the respondents used modern method. Those who were not using any method were 66%.

#### **4.6 Educational Level**

Educational level had four main categories which include: no education, primary education, junior high school, senior high school or higher education. This variable described the highest level of education attained by respondents in the survey. The higher a woman's education the higher her likelihood of seeking an abortion than a less educated woman. Women with higher education are privy to information on

contraceptive use (Bbaale & Mpuga, 2011). When there is an unmet need for contraception, they are likely to resort to induced abortion when the need arises. Educated women may also terminate unwanted pregnancies in order to continue with their education (Phipps et al., 2011). Women with no education often have less or no knowledge about how to and where to obtain an abortion.

*Figure 4.4: Percentage distribution of women by educational level*



**Source: Ghana Maternal Health Survey 2007**

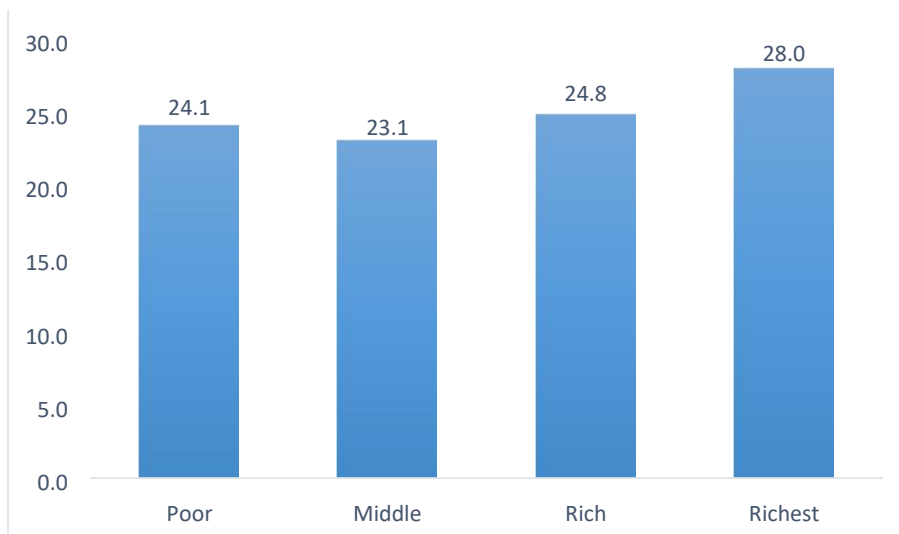
Figure 4.4 depicts the highest educational level attained by respondents. Out of the total number of respondents, 52.4% had Junior High School education. Respondents whose highest level of education was primary were 21.2%. Women who had SHS/Higher education were also 15.8% and respondents with no education were 10.6%.

#### 4.7 Wealth Index

The wealth index of respondents represents their resource base. Wealth index has four main categories (poor, middle, rich and richest). Respondents who are in the rich – richest categories can easily acquire safe induced abortions because they can afford it (Adjei et al., 2015).

The poor may have greater obstacles in their quest to seek abortions, especially safe abortions, as compared to the rich. Seeking abortion comes at a cost which is an impediment to the poor who wish to abort their unwanted pregnancies.

*Figure 4.5: Percentage distribution of women by wealth index*



**Source: Ghana Maternal Health Survey 2007**

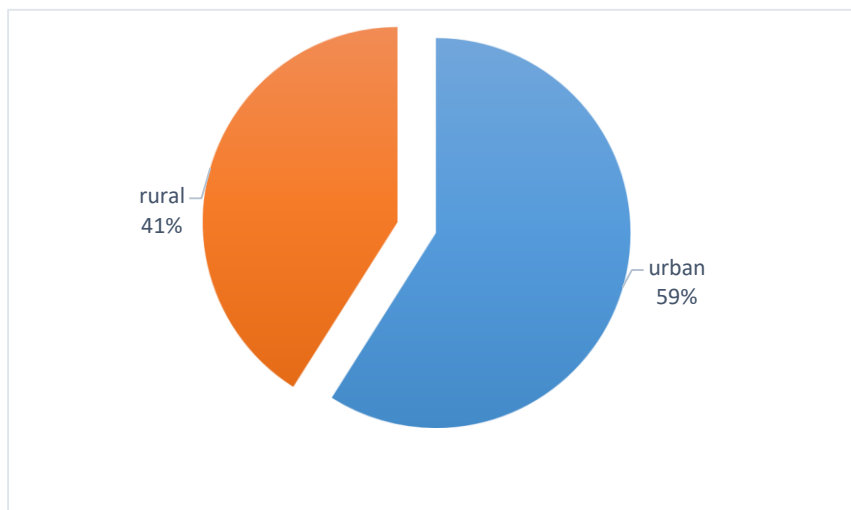
Figure 4.5 shows the household wealth index of respondents across the four main categories for the wealth index which were poor, middle, rich and richest. The highest proportion of women was in the richest category which had 28% of

the responses. The other three categories which were poor, middle and rich also had 24.1%, 23.1% and 24.8% of women respectively.

#### 4.8 Place of Residence

Place of residence was categorised into two main areas which are urban and rural areas. Urban areas tend to have medical facilities, health centers and chemical shops which are readily accessible. Rural areas on the other hand are areas which are usually characterised by inadequate health facilities which are not well equipped to carry out serious medical procedures as compared to the urban centers. Urban dwellers are often characterised by the better educated and the affluent (Look & Herten, 1993). These urban dwellers could also easily seek post abortion care in case there are complications after an abortion.

*Figure 4.6: Percentage distribution of women by place of residence*



**Source: Ghana Maternal Health Survey 2007**

Rural areas also are not overly lacking in the medical facilities and personnel, although it is incomparable to the facilities and personnel in urban areas. Rural

dwellers also maintain large family sizes so they encourage high fertility and discourage anything set to reduce fertility such as induced abortion.

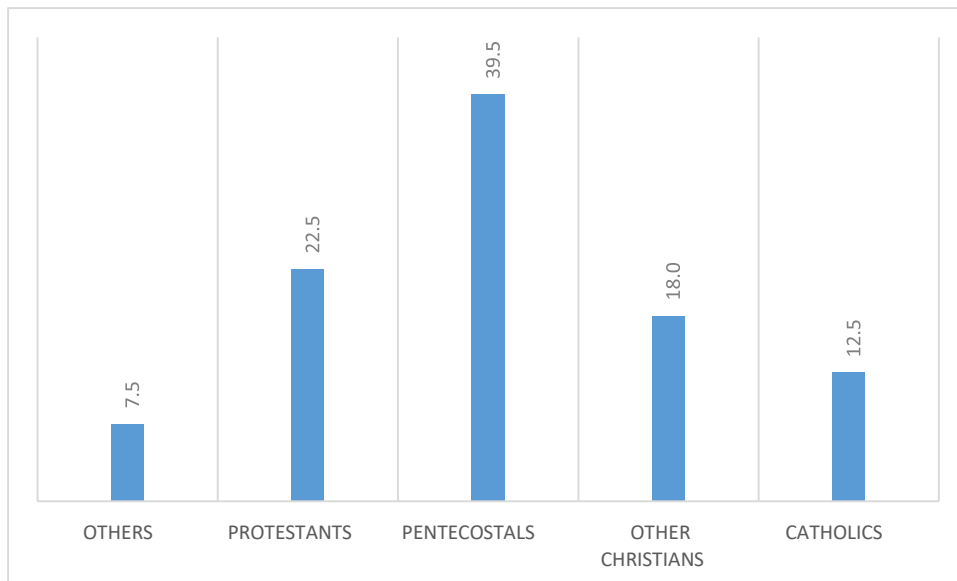
Figure 4.6 depicts a pie chart that presents the proportions of the respondents in the two place of residence categories: urban and rural areas. More than half of the sample (59%) were from urban areas whereas less than half (41%) were from rural areas. This signifies that a higher proportion of respondents, women who had ever had an induced abortion, were residing in the urban centres.

#### **4.9 Religious Affiliation**

There are three main religions in Ghana and these are Christianity, Islam and Traditionalist. The early groups of denominations of Christianity in Ghana were the Catholics, Protestants, just to name a few. In recent times there have been other Christian groups that have emerged and this includes the Seventh Day Adventists, Jehovah Witnesses, Mozama Disco Christo church and so on (Takyi 2003). These various Christian sects have different doctrines and dogmas that govern their faith.

For purposes of this study re-grouping of some of the denominations was necessary. The religious affiliations of women were categorized into Catholics, Protestants (consisting of Protestants, Methodists, and Presbyterians), Pentecostals and Charismatics (labelled as “Pentecostals”), and Other Christians. Finally, Muslims, Traditionalists, those with no religion and Others were categorized as “Others”. In this study it was necessary to know the various religious groups that the respondents belonged to. Religious groups in Ghana invariably abhor sex outside marriage and children out of wedlock (Lithur, 2004). Sanctions are meted out to those who flout these rules (Verona, 2011).

*Figure 4.7: Percentage distribution of women by religious affiliation*



**Source: Ghana Maternal Health Survey 2007**

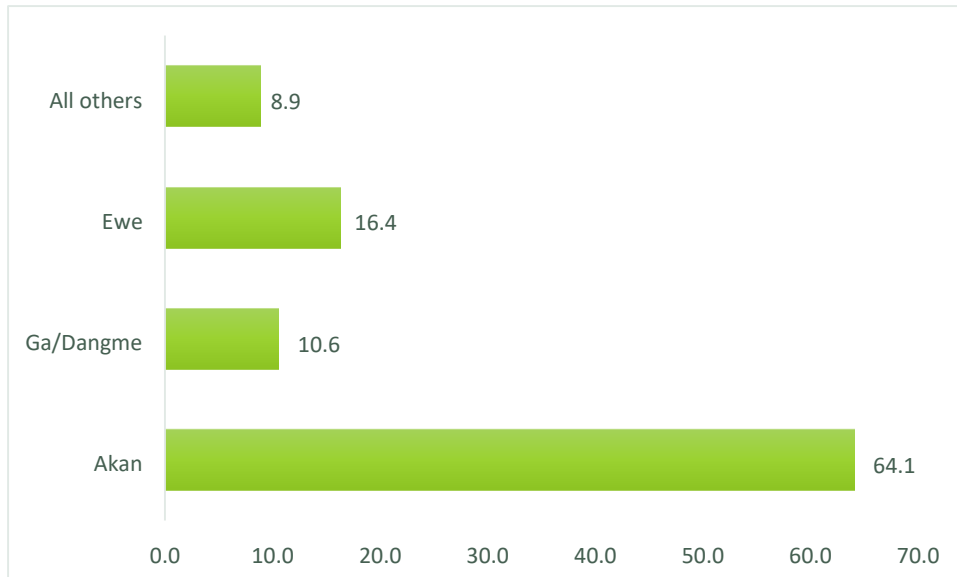
Figure 4.7 shows the different categories of religious affiliations in Ghana. A bar graph is used to represent the proportions of women in each category. Pentecostals were 39.5%, Protestants were 22.5%, other Christians were 18%, Catholics were 12.5% and 7.5% were in the ‘Others’ category.

#### **4.10 Ethnicity**

The ethnic groups in this study are in four major categories: Akan, Ewe, Ga/Dangme and All others. All others include Grussi, Gruma, Mole Dagbani and Guan women. Some researchers have conducted studies on varying aspects of abortion in some few ethnic groups. The knowledge about modes of inducing abortions among different groups affects the increasing or decreasing rate at which people resort to abortions. A study by Bleek (1990) among an Akan clan revealed that individuals knew more about herbs and concoctions used to induce abortions in case of any unwanted pregnancy. It is worth noting that the Akans

are the largest ethnic group in Ghana which is made up of many different tribes (GSS et al. 2015).

*Figure 4.8: Percentage distribution of respondents by ethnicity*



**Source: Ghana Maternal Health Survey 2007**

In Figure 4.8 the percentage of women in the various ethnic groups in Ghana are shown. Akans had the highest proportion of women, that is, 64.1%. The Ewe ethnic group had the second highest percentage of respondents with 16.4%. Ga/Dangme and all others were 10.6% and 8.9% respectively out of the total sample.

#### **4.11 Number of pregnancies**

The number of pregnancies a woman has is related to induced abortions since the pregnancies will all have differing outcomes. Pregnancies may either end in live births, still births, miscarriages or abortions. Successive pregnancies often lead women to take actions to end some. An increase in the number of

pregnancies can also affect the number of abortions which has occurred in a woman's life.

*Table 4.2: Summary statistics of number of pregnancies of women*

<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>
<b>1482</b>	<b>1</b>	<b>16</b>	<b>4.63</b>

The least number of pregnancies experienced by women in the total sample was one and the maximum number of pregnancies was sixteen. The mean number of pregnancies experienced by women was 4.63 (approximately five pregnancies).

#### **4.12 Summary**

In summary, there were factors that could be associated with two or more induced abortions. This chapter looked at the characteristics of women who have ever had an abortion. The results showed that the respondents were mostly women who entered into union before age 20. It further showed that the respondents were urban dwellers who were mostly Akans and predominantly Christians (with the majority within the Pentecostal and Protestant categories). Socio-economically, the respondents were found in the richest household category, with their highest educational attainment being junior high school. The ages at first abortion among these women mostly occurred before they were twenty years old. The average number of pregnancy was approximately 5; this was high when compared to the total fertility at the time of the data collection (4.2 births per woman). This simply means that some women may have exceeded their maximum fertility and so some of the pregnancies may have ended in an induced abortion.

## CHAPTER 5

### BIVARIATE RELATIONSHIPS BETWEEN FACTORS AND FREQUENCY OF INDUCED ABORTION IN GHANA

#### 5.1 Introduction

There are various factors that are associated with multiple induced abortions in Ghana. This chapter seeks to examine the relationship that exists between the independent variables; age at first union, age at first abortion, major contraceptive methods, educational level, wealth index, place of residence, religious affiliation, ethnicity and number of pregnancies and the dependent variable. The Pearson chi-square test was used to indicate the significance of the relationships between variables at a 0.05 significance level (95% confidence level).

#### 5.2 Socio demographic characteristics of respondents

##### 5.2.1 Age at First Union

Table 5.1 shows significant associations between age at first union and the frequency of induced abortions. The highest proportion of women who had one abortion was those who were not in union. They were represented by 76.7 % of the respondents who were not in union. The highest proportions of respondents who had multiple abortions were those less than 20 years and those who were 20 years and above. Their proportions were 32.7% and 39.1% respectively. The age at first union was significantly related to frequency of abortions ( $p$  value = .000). This shows that the age of the woman when she enters into her first union has a relationship with the number of abortions she will possibly have. This means that those who enter into

union late or 20 years and above often have an increased number of women seeking multiple abortions.

### **5.2.2 Age at First Abortion**

Age at first abortion was significantly associated with the frequency of abortions ( $p$  value =.001). From Table 5.1, it can be observed that the highest percentage of respondents who reported to have had only one abortion were those aged 30 and above when they had their first abortion (represented by 76.1%). Similarly, the lowest percentage of women who had two or more induced abortions were those in the same age group (30 and above), and constituted 23.9%. This could suggest that women aged 30 and above at the time of their first abortion, may have been married or had progressed enough in their careers. Therefore the pregnancies they had were wanted, so abortion does not become an option during these late reproductive years. Most of them could also be in formal unions so the multiple abortions were unattractive to them.

On the other hand, the highest percentages of people who had successive induced abortions were predominantly in the ages below 20 and between 20 and 29 years. This is because most people in this age range may not be in union, may be in school, and are also not financially sound to take care of a baby, and hence may resort to abortion when they get pregnant. Otuide et al. (2001) found that adolescents who are not sexually active knew less about contraception but were aware of methods to induce abortions. Adjei et al (2016) also stated that contraceptive non-use among people who seek abortion leads to further unplanned pregnancies which increase the risk of repetitive abortions. Therefore,

induced abortions may become a way of controlling fertility among young people.

### **5.2.3 Major Contraceptive Method**

The relationship between major contraceptive methods used by women and frequency of abortion was not significant based on the Pearson chi square test (.430). However, the following patterns were observed: the highest number of women with one abortion experience were using no method whereas, the highest proportion of respondents who sought multiple abortions were women using a natural method. Tietze, (1974) stated that women will return for repeat abortion unless they use very effective modern contraception which also has an effect on their health. Modern contraceptives are effective enough to prevent unintended pregnancies. On the contrary, the proportion of women who used modern methods and had multiple abortions was also quite a high percentage. This may be attributed to the fact that most of the respondents using modern contraceptives used less effective ones which is characterized by successive pregnancies and repeat abortions (Tietze, 1974). Since the contraceptive method is also a current measure, repeat abortions could also be a trigger that results in women's use of modern methods.

A study by Adjei et al (2016) revealed that the majority of the respondents, irrespective of their ages, were involved with self-induced abortion and contraceptive non-use. The three most important reasons for repeated abortions are the women's lack of appropriate knowledge, attitude, and practice (KAP) regarding contraception (Cheng et al., 2004). Cheng et al. (2004) found in their study that among repeat

abortion seekers a higher proportion were people using a natural contraceptive method.

*Table 5.1: Percentage distribution of women by socio-demographic characteristics and frequency of abortion*

	Frequency of Abortion (%)		Total Percentage	Number	p value
<b>Age at First Union</b>	1	2+			
No Union	76.7	23.3	100%	223	.000'
Less than 20	67.3	32.7	100%	712	
20 and above	60.9	39.1	100%	547	
	$\chi^2 = 18.266$	df=2			
<b>Age at First Abortion</b>					
Less than 20	62.1	37.9	100%	686	.001'
20 to 29 years	68	32	100%	613	
30 years +	76.1	23.9	100%	184	
	$\chi^2 = 14.120$	df=2			
<b>Major Contraceptive Method</b>					
Natural Method	62.4	37.6	100%	173	.430'
Modern Method	65.3	34.7	100%	323	
No Method	67.2	32.8	100%	986	
	$\chi^2 = 1.688$	df=2			

Source: Ghana Maternal Health Survey, 2007

### 5.3 Socio-economic and socio-cultural characteristics of respondents

#### 5.3.1 Educational level

Educational level was significantly associated with frequency of abortions (p value = 0.000) in this study (see Table 5.2). Among women who had ever had an abortion, women with no education had the highest percentage inducing abortions once (79.1%) and consequently the lowest percentage reporting multiple abortions (20.9%) Women with no education start childbearing earlier and tend to desire more children, so the percentage of multiple abortions was lower. Women with SHS/higher education were the lowest proportion that

induced abortion once whilst they had the highest proportion inducing multiple abortions (35.9%) as compared to the other groups. The findings concur with those of Mote et al. (2010), who found that among abortion seekers in their study, women with no education and basic education were less likely to seek abortion as compared to women with Secondary education. However, it contradicts a finding by Cheng et al (2004) who found that among the abortion seekers who reported more than one previous abortion, there were higher rates of poorly educated women (no high school education). When a woman climbs higher in her educational attainment, she often wants to delay or limit her fertility (Phipps et al., 2011). She also has a better economic base which enables her to acquire abortions more easily.

### **5.3.2 Wealth Index**

The wealth index variable was significantly associated with abortion frequency (p value= .000). The highest proportion of people who sought abortions only once were in the “poor category” (75.8%), while the smallest proportion of women who sought abortions only once were the richest (59.5%). The poor category had the least percentage (24.2%) experiencing multiple abortions. The poor may desire more children because they serve as financial insurance for them during their old age. The percentages of middle, rich and richest women with two or more abortions were 31.6%, 34.9% and 40.6%, respectively.

### **5.3.3 Place of Residence**

As indicated in Table 5.2, rural dwellers had a higher percentage than urban dwellers (72.7% versus 61.8%) with the incidence of one abortion. Also those in

urban settlements had higher proportions of women who had multiple abortions (38.2%) than rural women who had multiple abortions (27.3%). The relationship between place of residence and the frequency of abortion was significant ( $p$  value = .000). Rural women often desire more children so this could explain why a smaller proportion sought more than one abortion. On the other hand, urban women had a high proportion who sought multiple pregnancy terminations and this could be attributed to the various complexities in the urban environment ranging from their busy schedules to their access to abortion services. Urban women are often engaged in active employment which tends to require their attention and so may leave them with less time to nurture another baby, resulting in them seeking abortions repeatedly if need be. Apart from fertility and the desire to have more children being lower in urban settings, urban women also have more access to health services that provide abortion care and contraceptive methods (Biney and Atiglo, 2016).

#### **5.3.4 Religious Affiliation**

As indicated in Table 5.2, a cross-tabulation between religious affiliation and frequency of abortions showed that the proportions of women reduced as the frequency of abortions increased for all religious categories. Although this trend existed there were some observations. Out of the total number of women in the “other” category who had ever had an induced abortion, 72.1% reported to have had it once, while 69.7% of Catholics reported having ever had one abortion. Also, 35.4% of Pentecostals and 32.6% of Protestants and 36.1% other Christians, had terminated 2 or more pregnancies. Thus, Pentecostals and other Christians had the highest proportions of women having multiple abortions. The

relationship between religious affiliation and frequency of abortions, was not significant (p value = 0.377).

*Table 5.2: Percentage distribution of women by socio-economic and -cultural characteristics and frequency of abortion*

	Frequency of Abortion (%)		Total Percentage	Number	p value
	1	2+			
<b>Level of Education</b>					
No education	79.1	20.9	100%	158	.000'
Primary	68.6	31.4	100%	315	
JHS	65.1	34.9	100%	777	
SHS/Higher	58.1	41.9	100%	234	
	$\chi^2 = 19.81$	df=3			
<b>Wealth Quintile</b>					
Poor	75.8	24.2	100%	347	.000'
Middle	68.4	31.6	100%	329	
Rich	65.1	34.9	100%	387	
Richest	59.4	40.6	100%	465	
	$\chi^2 = 25.862$	df=3			
<b>Place of Residence</b>					
Urban	61.8	38.2	100%	875	.000'
Rural	72.7	27.3	100%	607	
	$\chi^2 = 18.781$	df=1			
<b>Religious Affiliation</b>					
Catholics	69.7	30.5	100%	185	.377
Protestants	67.4	32.6	100%	334	
Pentecostals	64.6	35.4	100%	585	
Other	72.1	27.9	100%	111	
Other Christians	63.9	36.1	100%	266	
	$\chi^2 = 4.222$	df=4			
<b>Ethnicity</b>					
Akan	65.8	34.2	100%	950	.065'
Ga/Dangme	63.9	36.1	100%	158	
Ewe	64.0	36.0	100%	242	
All others	76.5	23.5	100%	132	
	$\chi^2 = 7.218$	df = 3			

Source: Ghana Maternal Health Survey 2007

### 5.3.5 Ethnicity

The highest proportion of respondents (76.5 %) who had one abortion was those in the “All Others” category. Akans had the second highest percentage (65.8%) undergoing a first and only abortion. Ga/Dangmes had the highest percentage having multiple abortions (36.1%) whilst Ewe respondents had the second highest percentage (36%). All other ethnic groups had the lowest proportion of respondents undergoing multiple abortion (23.5%). Ethnicity was not significantly related to the frequency of induced abortion.

### 5.4 Number of pregnancies

The variable, number of pregnancies, was significantly associated with frequency of abortion. The mean values for the frequency of abortions showed that the higher the number of pregnancies the higher the number of abortions. This suggests that the incidence of induced abortion increases as pregnancies increase. When a woman has several pregnancies, there is a higher possibility that some will end in induced abortions especially when the pregnancies are successive with little spacing.

*Table 5.3: Number of pregnancies by frequency of abortion*

Frequency of Abortions	Mean	Std. deviation	N	P value
1	4.07	2.386	982	.000'
2(+) or more	5.74	2.372	500	
Total	4.63		1482	
F ratio = 162.509	df = 1			

**Source: Ghana Maternal Health Survey 2007**

## **5.5 Summary**

In summary, this section assessed the relationships between the various independent variables and the number of abortions the women had. The variables that were significant at this bivariate stage of analysis were: age at first union, age at first abortion, education, wealth index, place of residence and number of pregnancies.

Variables that were not significant at this stage included major contraceptive method used, religious affiliation and ethnicity.

## **CHAPTER SIX**

### **FACTORS ASSOCIATED WITH MULTIPLE INDUCED ABORTIONS IN GHANA**

#### **6.1 Introduction**

This chapter comprises of analysis techniques that assess the relationship between all the factors and the dependent variable. Unlike the previous chapter where the proportions of women were ascertained using bivariate methods, cross tabulations with Pearson chi square test, this chapter entails the use of multivariate analysis, specifically a binary logistic regression model. The output is displayed in Table 6.1 where the  $\alpha$  level of significance, odds ratios, 95% confidence intervals and the model summary are shown. Section 6.3 provides the discussion of the various findings obtained in this study. At the discussion stage findings in this study are compared with other studies. Despite the fact that some of these studies only looked at the occurrence of abortion and not multiple abortions, they are still very relevant in an examination of the factors associated with multiple abortions, and thus are worth comparing with the findings in this study.

#### **6.2 Factors associated with multiple induced abortions**

Prior to the regression analysis, multicollinearity among the factors was assessed. The variance inflation factors (VIF) each indicated a value below three; hence, there was no multicollinearity among any of the factors. Therefore, all nine independent variables were included in the regression model. Table 6.1 shows the factors associated with multiple induced abortions.

Age at first union, age at first abortion, educational level, wealth index, place of residence and number of pregnancies were significantly associated with multiple induced abortions. On the other hand, religious affiliation, major contraceptive method used, and ethnicity were not significantly associated with multiple abortions. Once again, all the results are interpreted among women who have ever had an induced abortion.

The results indicate that those who were not in union (p-value .004) were 46.5% less likely to obtain two or more abortions as compared to those who entered into union when they were twenty and above. Also, those whose age at first abortion was below age twenty were 5.984 times as likely to obtain two or more abortions as those whose age at first abortion was at age thirty and above. In addition, women whose ages at first abortion were between ages 20 and 29 were 3.639 times as likely to obtain two or more abortions as those who had their first abortion at age 30 and above.

Furthermore, women who had no education were 78.4% less likely to obtain two or more abortions as compared to those whose highest educational level was SHS/Higher. Women with primary and JHS education were 43.8% and 41.8% less likely, respectively, to obtain two or more abortions than women who had SHS/higher education. On the same note, women in the poor wealth category were 39.2% less likely to obtain two or more abortions than women in the rich category. Also women who have ever sought abortion who lived in the rural areas were 30.1% less likely to obtain two or more abortions than women who had ever sought abortion living in urban areas.

*Table 6.1: Binary logistic regression showing the factors associated with multiple induced abortions in Ghana*

Independent variable	Sig.	Exp(B)	95% C.I. for Exp(B)	
			Lower	Upper
<b>Age at first union</b>				
No union	0.004	0.535	0.349	0.821
less than 20	0.373	0.826	0.543	1.257
20 and above (RC)	0.001			
<b>Age at first abortion</b>				
Less than 20	0.000	5.984	3.8	9.424
20-29	0.000	3.639	2.326	5.694
30+(RC)	0.000			
<b>Major contraceptive method</b>				
No method (RC)	0.980			
Modern method	0.884	0.978	0.725	1.320
Natural method	0.915	1.021	0.695	1.501
<b>Education</b>				
No Primary	0.000	0.216	0.121	0.386
Primary	0.008	0.562	0.368	0.859
JHS	0.003	0.582	0.41	0.828
SHS / Higher (RC)	0.000			
<b>Wealth Index</b>				
Poor	0.023	0.608	0.395	0.934
Middle	0.172	0.773	0.534	1.119
Rich	0.975	1.006	0.716	1.412
Richest (RC)	0.066			
<b>Place of residence</b>				
Urban(RC)				
Rural	0.024	0.699	0.513	0.954
<b>Religious Affiliation</b>				
Catholic(RC)	0.659			
Protestants	0.966	0.991	0.639	1.536
Pentecostals	0.289	1.245	0.831	1.865
Others	0.649	1.153	0.623	2.134
Other Christians	0.663	1.107	0.702	1.746
<b>Ethnicity</b>				
Akan(RC)	0.047			
All others	0.073	0.624	0.373	1.044

Ga Dangme	0.414	1.18	0.793	1.757
Ewe	0.078	1.352	0.967	1.890
<b>Number of Pregnancies</b>	0.000	1.598	1.494	1.709
Constant	0.000	0.04		
Nagelkerke R square 0.274 -2 Log likelihood = 1568.906				
df = 21				
Sample size = 1482, Reference Category =RC				

**Source: Ghana Maternal Health Survey (2007)**

Finally, the number of pregnancies of respondents was significantly associated with multiple abortions. The final results show that for every unit increase in the number pregnancies, there was 1.598 likelihood of a woman undergoing repeat abortions.

The Nagelkerke R squared value was .274 or 27.4% thereby suggesting that 27.4% of the variation in the dependent variable (frequency of induced abortion) is explained by the independent variables in the study that is, religious affiliation, age at first union, age at first abortion, place of residence, educational level, major contraceptive method used, wealth index, ethnicity and number of pregnancies.

### 6.3 Discussion

The regression results suggest various things. First, respondents who were not in union were less likely to obtain two or more abortions than those who entered into union when they were thirty years and above. This finding is quite different from Sundaram and colleagues' (2012) study that found out that women who sought abortion most were often not in union. These women did this because

they were unsure of their partner's support for them and the unborn baby (Sundaram et al., 2012). Also, Look and von Hertzen (1993) and Silva and Vieira (2009) found results similar to Sundaram et al. (2012), that unmarried women were more likely to resort to induced abortions when they became pregnant (Look & Hertzen, 1993; Silva & Vieira, 2009). The findings from this study go further to suggest that they are less likely to resort to multiple induced abortions than those entering into unions at age 20 and above. The finding could suggest that majority of the respondents who were not in union were adolescents who had just started their reproductive life which is characterised by fewer pregnancies or unintended pregnancies which leads to multiple abortions.

In addition, age at first abortion was significantly associated with multiple abortions. Those who started having abortions when they were less than twenty years old and those who were between ages 20 and 29 years were more likely to have multiple abortions. This result supports the first hypothesis of the study. It is consistent with a study by Bankole, Susheela, & Haas, (1999) who conducted a global review on the characteristics of abortion seekers. They found out that the largest proportion of abortions occur among women in their 20's. The authors attributed this to the fact that these women may be married, fecund and sexually active so they will experience the highest rates of pregnancies.

Mote and colleagues (2010) also had similar results to those found in this study, although their sample included women with abortion experience and women without abortion experience. They explained that abortion is high among younger women because they often want to delay child bearing (Mote et al.,

2010). Young unmarried women in their quest to avoid out of wedlock childbearing, which attracts stigma and shame from the society, often abort their pregnancies (Lithur, 2004; Sundaram et al., 2012). Lack of contraceptive use or an unmet need for contraception among young women make them more prone to induced abortions (Mote et al., 2010; Otoide et al., 2001). Due to the strength in the association, it can be concluded that those whose ages at first abortion were less than age twenty were more likely to undergo multiple abortions than women whose first abortion occurred at age thirty years and above. The hypothesis has been supported at the 95% significance level.

In addition, the major contraceptive method was not significantly associated with multiple abortions. This is consistent with a study by Ilboudo, Somda, and Sundby, (2014) who found that contraceptive use was not significantly associated with induced abortion. Major contraceptive method used by respondents had no relationship with them seeking multiple abortions. It is worth noting that other researchers have found that contraceptive use does have a relationship with induced abortion (Agyei et al, 2016; Biney, 2011). Agyei et al (2016) in their study attributed repeat abortion to non-contraceptive use after the first abortion (Agyei et al, 2016).

On the other hand, education was significantly related with multiple induced abortions. This finding was supported by Adamczyk's study that found that educational aspirations were the greatest predictors of induced abortions and not religion (Adamczyk, 2008). This goes contrary to a study by Ilboudo et al., (2014) who found no significant association between education and abortion.

The difference between Ilboudo et al., (2014) and this study could be attributed to the larger sample size used in this study. Moreover this study looked at frequency of abortion among women who have ever had an abortion.

Respondents with no education were less likely to have two or more abortions. This may be because they prefer large family sizes where wealth will flow from their children to them in their old age. According to the wealth flow theory parents tend to have more children when wealth flows from children to parents. More often than not non-educated people have professions that require manual labour and having a lot of children serves as labour to parents (Hirschman & Twum-Baah, 1978).

Women who had primary and JHS education were less likely than women with senior high school or higher education to have multiple abortions. This is consistent with results from a study by Mote et al, (2010) who found that women with no education and primary education had reduced odds of induced abortions than women with senior high school education. Unlike women with high education, those with low education may not know where to go to undergo a safe abortion (Mote et al., 2010), so they are less likely to abort pregnancies. Also, women with higher academic aspirations and career goals see childbearing as an impediment to their career aspirations so they support abortions (Rinderknecht, 2006). Therefore, the higher the educational level of the woman the higher her chances of aborting the pregnancy (Adjei et al., 2015).

On that same note, highly educated women are more exposed to a lot of information and they can discuss reproductive health issues with friends. They

are therefore likely to have multiple abortions because of their exposure to knowledge on reproductive health issues. Phipps et al. (2011) found that women with higher aspirations that required college education were more likely to postpone pregnancies and child bearing, while those whose life aspirations did not need higher education had a greater desire of becoming pregnant and maintaining it (Phipps et al., 2011).

Women in the poor category were less likely to have multiple abortions than women in the richest category. This is because they are often unable to afford safe abortion procedures (Sundaram et al., 2012) which is a demotivating factor in seeking successive abortions when necessary. This finding is consistent with Finer and Zolna's (2011) study which found that women with poor or low incomes were less likely to abort when an unintended pregnancy occurred (Finer & Zolna, 2011). In another direction, Yi (2011) found that poor women were likely to seek abortion when there were poor economic conditions. The poor adjust their lives by reducing the fertility when there is an economic recession (Yi, 2011). Sometimes the poor also rely on their children as a source of security or insurance during old age, therefore they may preferably keep a pregnancy to term.

The results show that women living in rural areas were less likely than women living in urban areas to have multiple abortions. This is consistent with the literature as abortion rates are high among urban dwellers compared to rural dwellers (Bankole et al., 1999). Urban areas most often than not are characterised by a larger number of health facilities and centers that provide abortion services

compared to rural areas. Also, rural women may not seek multiple abortions because they may be discovered and disgraced owing to the pronatalist system in most rural areas. Rural women's fertility decisions tend to be made by the men who are household heads and would not allow their wives to get rid of their seed. The desire to have large families is a characteristic of rural family settings. The burden of shared responsibility when it comes to taking care of a baby being raised in an extended family home relieves the woman of her lone burden and encourages more births. Due to the results at the multivariate analysis, the second hypothesis that states that women residing in rural areas are less likely to undergo multiple abortions as compared to women residing in urban areas has been supported at the 95% significance level.

Religion was not significant in the model and this is consistent with a study by Koster – Oyekan (1998) in the western province of Zambia which showed that induced abortion was not significantly associated with religion (Koster-Oyekan, 1998). Also, a study by Adamczyk (2008) in the United States identified that neither generic religiosity nor conservative Protestantism affects abortion decisions (Adamczyk, 2008). Therefore, from this study it can be concluded that a woman's decision to obtain multiple abortions is not associated with her religious affiliation or her religious group. There was also no significant relationship between ethnicity of respondents and multiple induced abortions. Thus, multiple abortions among women are being explained by variables other than ethnicity.

Finally, the number of pregnancies was significantly associated with multiple abortions. Women with a higher number of pregnancies were also more likely to have a higher number of abortions. A unit increase in the number of pregnancies also brought an increase in the number of induced abortions. The higher the number of pregnancies experienced by a woman, the greater likelihood that some may end in live births, stillbirths, miscarriages or induced abortions. However, a study by Ilboudo et al. (2014) found the contrary, where the number of pregnancies was not significantly associated with induced abortions. The researchers attributed the result to the multivariate model removing correlated variables such as number of pregnancies, number of living children, previous abortion and religion.

## CHAPTER SEVEN

### SUMMARY, RECOMMENDATIONS AND CONCLUSION

#### 7.1 Summary of findings

The study sought to determine the factors associated with multiple abortions.

Two main objectives were set and these were: to identify the factors associated with multiple induced abortions and also to provide recommendations for policy formulation. The factors identified (the independent variables in the study) were age at first union, age at first abortion, major contraceptive method used, educational level, wealth index, place of residence, religious affiliation, ethnicity and number of pregnancies. The dependent variable, frequency of abortion, was categorised into two: one abortion or two or more (multiple) abortions.

The dataset used for this study was the Ghana Maternal Health Survey conducted in 2007. The women's individual questionnaire was used to capture information on the abortion histories of respondents. The total weighted sample size employed in this study was 1482 women who had ever undergone an induced abortion.

The statistical analysis package - SSPS version 22 - was used for the data analysis. Univariate analysis was conducted to determine the different characteristics of the respondents in the study. Tables and graphs were used to present results of the analyses. Bivariate analyses consisting of cross tabulations with the Pearson chi-square test were used to determine the proportions of

respondents with the various socio-demographic, socio-economic and socio-cultural characteristics and their frequency of abortions.

The final stage of statistical analyses was the multivariate analysis. This stage employed a binary logistic regression model. At this stage two or more abortions were coded as '1' while one abortion was '0'. It was the aim of this study to identify the relationship between the independent variables and multiple abortions. At the 95% significance level, the significant variables were: age at first union, age at first abortion, education, wealth index, place of residence and number of pregnancies. The non-significant variables were contraceptive use, religious affiliation and ethnicity.

The results showed that women who had their first abortion earlier than age 30 were more likely to have multiple abortions. The first hypothesis stated that women whose age at first abortion was less than age twenty would be more likely to have multiple abortions than those whose first abortion occurred at age 30 and above. This hypothesis was confirmed by the findings. Also, women with an increased number of pregnancies were also susceptible to multiple abortions which is similar to results in a study by Prata et al. (2013).

In addition, women who were not in union, had no education, had primary or junior high school education, were poor and lived in rural areas were also less likely to seek multiple abortions. The second hypothesis which stated that women in rural areas were less likely to undergo multiple abortions than urban women was also supported by the findings.

## 7.2 Recommendations

The findings from this study provide additional knowledge for further research and policy making. It is recommended that contraceptive messages and service providers target young women, especially those below twenty years, because women who started abortions at these ages were more likely to have multiple abortions. Non-governmental or governmental organisations could target these girls by providing a support base for them. Also social reorientation programs could be initiated so that girls are counselled on the most appropriate behaviours to promote their reproductive health. Abstinence is the best way to curb unwanted pregnancies that lead to induced abortion. The creation of small area groups, peer clubs, and associations should be strengthened so they become support groups for adolescents and young women who are likely to succumb to their sexual desires.

Furthermore, educated women (SHS or higher) and the rich women who have ever had abortions should all be encouraged to seek reproductive health counselling so they could prevent unintended pregnancies which lead to multiple abortions. Results from this study showed that educated women and rich women were more likely to seek multiple abortions.

Maternity leave could also be increased from 3 months to 6 month or more. This may encourage career-minded and high achieving women to carry their pregnancies to term because they have ample time to take care of the baby. Affordable pre-schools or child care could be provided closer to or at the mother's place of work so periodic checks could be carried out on babies by

their mothers. The convenience may encourage women in the rich category to carry their pregnancies to full term because they can still get access to their babies even when they are at work.

In this study it was found that women with abortion experiences who were not in union were less likely to undergo multiple abortions as compared to those with abortion experiences whose age at first union was 20 years and above.

Therefore, it will be beneficial to conduct more studies to understand how and why those who were not in union were less likely to seek multiple abortions.

This will add to the existing knowledge especially since various researchers have found otherwise (Aniteye & Mayhew, 2011; Sundaram et al., 2012).

Due to various contextual factors, this research was limited to only known statistical tools at the analysis stage. The sample was also limited to women who had ever encountered an induced abortion which hindered the ability to determine the prevalence of repeat abortions in the sample. Therefore, other statistical approaches such as ordinal logistic regression could be adopted in subsequent studies to a sample of all sexually initiated women to reduce selection biases.

### **7.3 Conclusion**

The findings show that starting abortions at early ages perpetuates the use of abortion throughout a woman's lifetime; while not being in a union, ensures that women do not undergo repeat abortions. In addition, the more pregnancies a

women with an abortion history experiences, the higher the likelihood that some of these pregnancies could result in repeat terminations. Also, women with abortion experience who have higher socio-economic status, that is - more educated and richer women, are prone to multiple abortions. Finally, better access to health facilities among the urban dwellers may be the reason for women's multiple abortions in these settings. Additional research is needed to understand why cultural factors were not significantly related to use of multiple abortions.

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