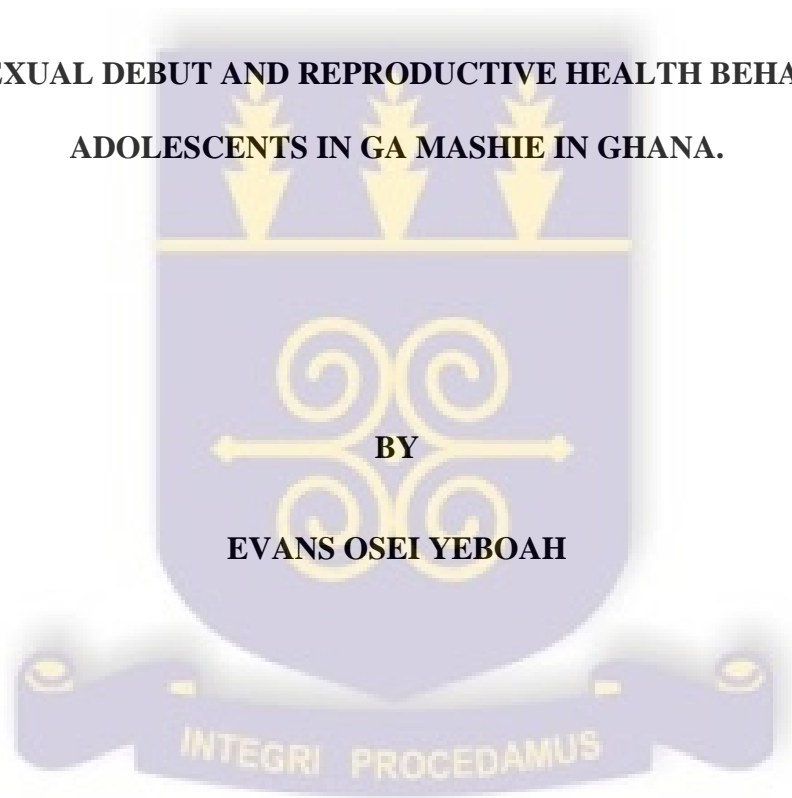


REGIONAL INSTITUTE FOR POPULATION STUDIES

AT THE UNIVERSITY OF GHANA, LEGON

**AGE AT SEXUAL DEBUT AND REPRODUCTIVE HEALTH BEHAVIOUR OF
ADOLESCENTS IN GA MASHIE IN GHANA.**

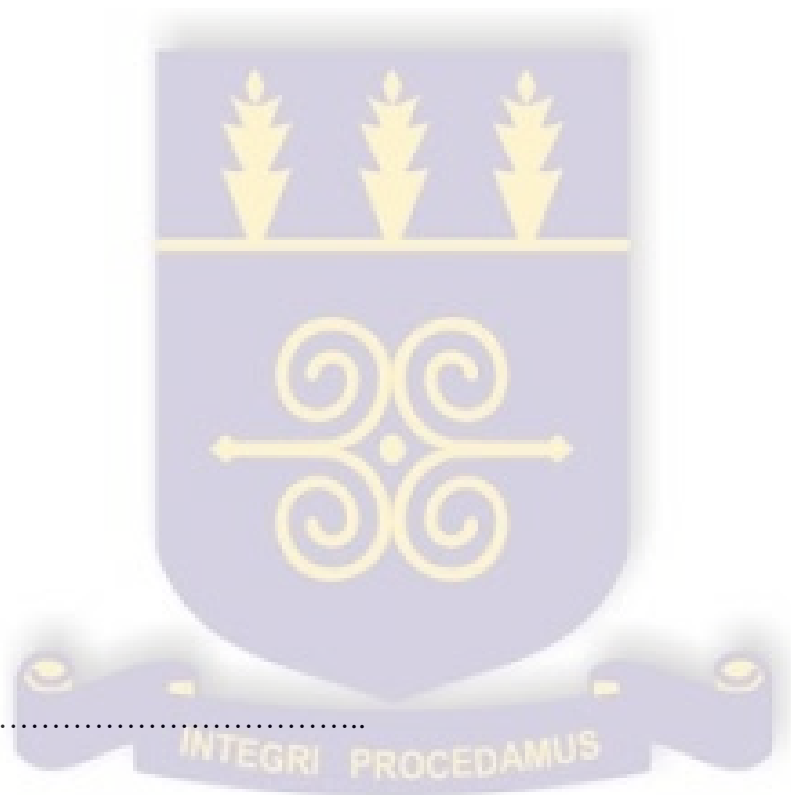


**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN
PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MA
POPULATION STUDIES DEGREE**

JULY, 2014

ACCEPTANCE

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



Signed:.....

SUPERVISOR OF DISSERTATION

DR. NAA DODUA DODOO

Date:

DECLARATION

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

Signed.....

EVANS OSEI YEBOAH

(Candidate)

Date.....



DEDICATION

I dedicate this work to my mother Miss Christiana Obuobi and my siblings, Linda, Francisca, Prince and Aaron. May God bless all of them.



ACKNOWLEDGEMENT

This study has reached completion due to the immense support of people in my life. I am thankful to God for blessing me with such exceptional people in my life and the courage to pursue this path in spite of all the challenges. I would first like to thank my supervisor Dr. Dodoo for her immense contribution, direction and constructive criticism all of which helped to create a work of which I am proud.

In particular, my appreciation goes to the director of the institute, Professor Cudjoe, whose encouragement and constant promptings made this pursuit possible. You have been part of this journey as a teacher, counsellor, boss and friend. My heartfelt appreciation also goes to Professor Anarfi, your good and sincere counsel and involvement in the beginning has been invaluable to me.

I am equally grateful to Professor S. O Kwankye and all members of staff for the knowledge they have imparted to me and also for giving me the necessary assistance during the period of my study at the institute. Aside my academic helpers, I have been blessed by a group of extraordinary family and friends without whom, perhaps this journey may not have been made.

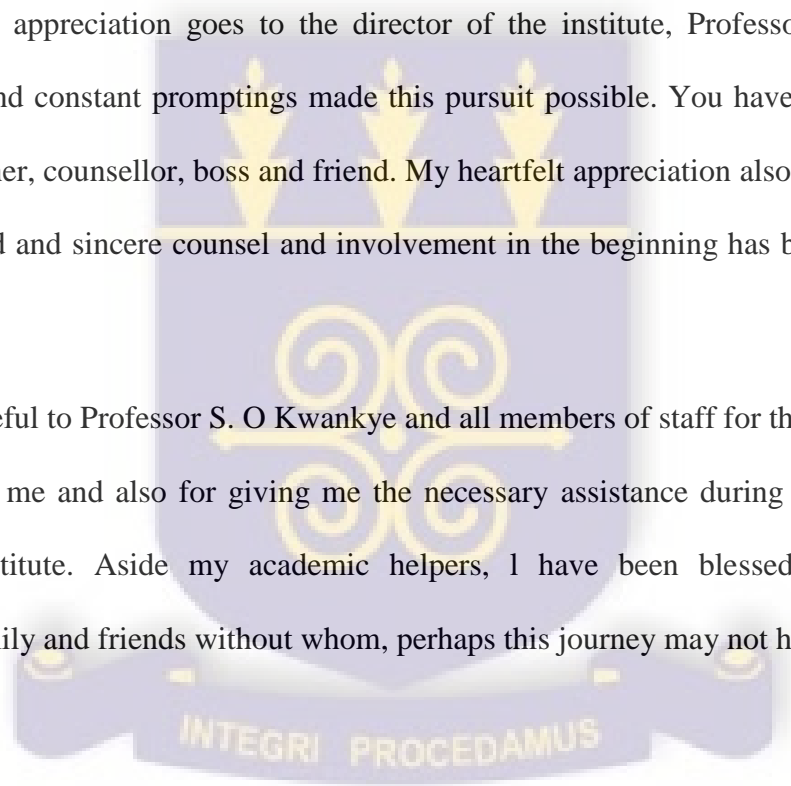


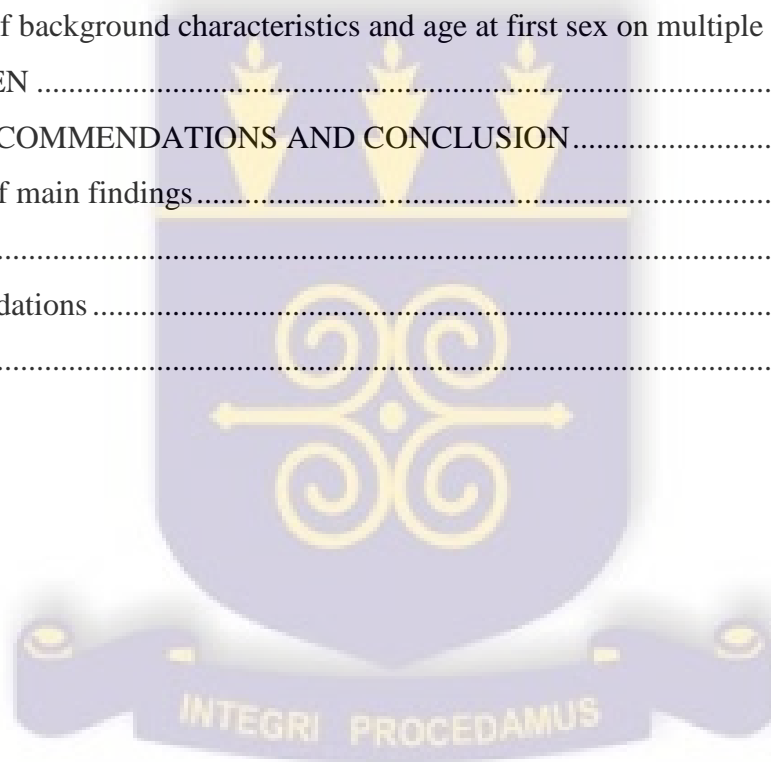
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ABSTRACT

The objective of the study was to examine the relationship between age at first sex and reproductive health behaviour among adolescents with specific emphasis on multiple sexual partnerships and the implication for public policy.

The study employed data from the Edulink Data: Urban Health and Poverty Survey – Wave II which was conducted under the auspices of the Regional Institute of Population Studies, University of Ghana in the year 2011. Age at first sexual intercourse is the independent variable, whereas the socio-economic characteristics of respondents were the control variables. These were age, sex, marital status, occupation, religion, locality, ethnicity, income and education. Both bivariate and logistic regression analyses were employed to identify the most important factors determining sexual partnerships. Binary regression model was used for the multivariate analysis.

The study revealed that about 52% of adolescent aged 15 to 18 years are engaging in multiple sexual partnerships in urban poor communities in Accra. This sexual behaviour varies with socio-economic status of respondents. The study further indicates that the most influencing factors are early age at first sex, religion, sex and marital status. For example, the bivariate analysis indicated that age at first sex has an inverse relationship with multiple sexual partnerships, with almost 65% multiple sexual partners for adolescent who had their first sex before age 15. It was also realized that adolescent within the age group 20 to 24 are more likely to have multiple sexual partners than those aged 15-19 years. Secondly, adolescent with middle/JHS education are as likely to have multiple partners. The study made several recommendations including the importance of

making sex education as part of the school curricular from basic to Senior High School and the setting up of recreational and community centers across urban poor communities. At the community centers, indoor and outdoor games as well as counselling sections on issues about sex and the importance of family planning should form part of the programs for the youth.

CHAPTER ONE

INTRODUCTION

1.0 Background

Reproductive health of adolescents is an essential component of young people's ability to become well-adjusted, responsible and productive members of society (UN, 2002). There is a relationship between reproductive health and other dimensions of adolescent lives such as age at first sexual intercourse, education, employment, economic position among others. Reproductive health suggests that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. The World Health Organization (WHO) defines health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.

Today's generation of adolescents is the largest proportion of the total population in history. UNFPA (2006) posit that nearly half of the global population is less than 25 years old. Therefore, it is imperative to consider issues that border on their well-being such as education, work, relationships and health including sexual and reproductive health. Sexual behaviours among youth, if uncontrolled, can lead to negative outcomes such as unplanned pregnancy and the spread of sexually transmitted infections (STIs). So, knowledge of contraceptives and contraceptive use are important indicators of sexual health among youth (Dann, 2009). Sexually transmitted infection transmission is determined by sexual behaviour, such as multiple sexual partners and non-use of condoms. National surveys on sexual health and behaviour of many countries have shown increased prevalence of multiple sexual partners and casual sexual contacts over time. Studies carried out in Europe and North America has shown that the distribution of risk factors in a population depends on people's social status. Age at first sex, marital status,

income, and other social characteristics are key determinants of sexual behaviour (Regushevskaya et al., 2008).

Age at first sexual activity has the potential of increasing the rate at which an individual is exposed to risky sexual behaviour. It has the risk of spreading sexually transmitted infections such as HIV/AIDS because most first timers are less likely to practice safe sex. First sexual activity at an early age has a potential of undermining the socio-economic resources of the country making young adults to experience unemployment, poverty and illiteracy. It most often leads to high school dropout rate as a result of pregnancy. This as a result leads to low status of women, high fertility and poverty. It also leads to death as a result of unsafe abortion because they do not have the means of preventing pregnancy and do not have adequate education concerning safe sex. Early initiation into sexual activity increases risky sexual behaviour (Mensch et al, 2006).

In Ghana, some studies have been carried out on reproductive health as correlates of reproductive health behaviour such as age at first marriage and age at first birth. However, few studies have been carried out into age at first intercourse and reproductive health behaviour. Other evidences have pointed out that rural women are likely to be exposed to early sexual activity and for that matter are likely to start childbearing earlier than their urban counterparts. The timing of first sexual intercourse varies greatly among cultures. While there are often societal and cultural norms for which is considered to be appropriate age and circumstance for first intercourse, the individuals' first intercourse is closely associated with a number of factors. These include religion, economic, education, and place of childhood residence.

1.1 Statement of the Problem

In sub-Saharan Africa, 75 percent of young women reported having had sex by age 20 (Blum, 2007). In addition, DHS data from Mali, Burkina Faso and Senegal show that 30 percent, 40 percent and 4 percent respectively of young unmarried women reported that they had been sexually active (Dann, 2009). Also as many as 14 million unintended pregnancies occur yearly and about half is by women aged 15 - 24 years (Hubacher et al, 2008). In Ghana, young people aged between 10-24 years are most at risk of early child-bearing, unintended pregnancies, unsafe abortion, sexually transmitted diseases (STDs) and HIV infection, sexual exploitation and violence (Awusabo-Asare et.al., 2006). These factors account for the poor status of reproductive health among adolescents. They also assert that adolescent health status is further exacerbated by the early onset of sexual activity.

Research in Tanzania has shown that a significant proportion of young people become sexually active at young ages. Also, much of the young people's sexual practice is unprotected. Furthermore, research has shown that most young people have low levels of reproductive health knowledge. With exposure to coital activity, young people are vulnerable to sexually transmitted diseases (STDs) including HIV/AIDS, unintended pregnancies which might end up with abortions or other adverse pregnancy outcomes. There are also social consequences of young people's sexuality mainly affecting girls. These include limited educational attainment as a result of drop-out from school, social isolation in some societies and forced marriages (Masatu M. et al 2009).

The Government of Ghana has keen interest in improving the health of adolescent in Ghana. In partnership with United Nations Population Fund (UNFPA), the World Bank, United States Agency for International Development (USAID) and other development partners, Ghana

has implemented several projects geared towards reducing reproductive health problems in the population. In addition, there has been an immense interest and quite a number of studies on adolescent's reproductive health within the framework of enhancing development and quality of lives of adolescents in the past decade (Takyi, 2003; Ngom et al., 2003).

According to the Ghana Human Development Report (2003) many economically active Ghanaians, including the youth who are within the productive age, have neither regular nor steady employment. Unemployment is high and increasing faster particularly among the youth aged 18-24 years who have either completed Junior High School (JHS) or Senior High School (SHS) but could not further their education for various reasons, Darteh and Nnorom, (2012). Inclusive of this group are those who have not had any formal education at all. The inability of most young people to earn a living and be economically independent tends to increase their vulnerability to STI/HIV/ AIDS and other sexual reproductive health problems.

Despite this high level of sexual activity, condom use is generally low. In the Ghana Demographic and Health Survey, condom use at first sex was found to be uncommon as only 25 percent of females and 32 percent of males used condom the first time they had sex. Ghana Demographic and Health Survey (GDHS) report of 2008 shows that 8 percent of women and 4 percent of men initiated sex at age 15. As the gap between sexual debut and age at marriage widens, sexual activity prior to marriage also increases leading to increased premarital exposure to pregnancy risks (Bearinger et al., 2007; Mensch et al. 2006). Knowledge on the effects of several sexual partners is an important indicator of reproductive health among adolescents (Dann, 2009). In Ghana, marriage is traditionally and legally acknowledged as union where couples can give birth. It is within this union that sexual activities are expected to start.

Nevertheless, in most cases, sexual activities start long before marriage. Thus potential for child bearing starts before marriage.

Adolescents who initiate sexual activity at young ages tend to have more sexual partners and to use condoms less than those who initiate sex later, and are at increased risk for STDs and pregnancy during the teenage years. Therefore, understanding influences on early initiation of intercourse and identifying possible strategies for delaying first sex have important implications for adolescent health (Sieving et al 2006). A further serious risk to health that arises as a consequence of adolescent sexual activity is unsafe abortion, which directly causes the deaths of many adolescent girls and injures many more. A 2003 study by the World Health Organization (WHO) estimates that 14 per cent of all unsafe abortions that take place in the developing world amounting to 2.5 million that year involve adolescents under age 20. Of the unsafe abortions that involve adolescents, most are conducted by untrained practitioners and often take place in hazardous circumstances and unhygienic conditions.

Health in urban communities is a global concern. Urbanization has produced negative effects on physical health of the urban poor. Studies by Dodoo et al. (2007) and Zulu et al. (2002) have alluded that slum residents are at higher risk of poorer health than non-slum residents. This is because the characteristics of slum dwelling such as poverty, joblessness, poor housing and sanitation (UN-Habitat, 2012), are the same factors posited to adversely affect health behaviour of the urban poor. The study would therefore examine the relationship between age at first sexual intercourse among adolescent in urban poor community and their reproductive health behaviour.

1.2 Research Question

1. What is the relationship between age at first sexual intercourse and reproductive health behaviour?
2. How does age at first sexual intercourse influence the number of sexual partners of adolescents?

1.3 Rationale of the Study

Initiation of sexual intercourse at an early age contributes to vulnerability to HIV infection by exposing adolescents to more sexual partners and a longer period of sexual activity before they form long-term monogamous relationships. If this risky sexual behaviour is not handled well both at the household and national level, it has the tendency of resulting in problems of unwanted pregnancy, induced abortion, pre-marital birth and several sexual partners. Over the past decade, adolescent sexual and reproductive health concerns have increasingly been on national agendas. For many countries, this concern has been driven by the high prevalence of HIV/AIDS among young people. In other countries, a central concern has been early childbearing; and still others have focused predominantly on sexual behaviours among adolescents.

In recent times, sexuality, which includes sexual behaviour of adolescents, has become an important area of research and development interest in response to concern about reproductive health, notably the spread of HIV/AIDS and concern about fertility control population growth (Ulim, 1992). The study of multiple sexual partnerships by adolescent is important, timely and reasonable for a number of reasons. The youth of today are exposed to sex earlier than formally through the internet, where strip and sex shows, marketing of women and children in commercial sex have captured the attention of most adolescent. The problems connected with adolescent's risky or unsafe sexual behaviour are of national concern.

Increasingly research and programme experience has shown that it is neither feasible nor productive to focus on one isolated behaviour without addressing a broader set of adolescent sexual and reproductive health concerns (WHO, 2004). It is hoped that the findings of this study will provide policy makers with information on the relationship between age at first sexual intercourse and reproductive health behaviour among adolescents and aid effective policy interventions in reducing risky sexual activities.

1.4 Objectives of the Study

The general objective of this study is to examine the relationship between age at first sexual intercourse and reproductive health behaviour among adolescents in urban poor communities in Accra.

The specific objectives are:

- i. To examine the relationship between age at first sexual intercourse and sex with multiple partners
- ii. To examine the relationship between background characteristics and sex with multiple partners.
- iii. Make recommendations for possible policy interventions.

1.5 Definition of Concepts

Multiple Sexual Partnerships

This term is defined as a situation where male-female partnerships overlap in time, either where two more partnerships continue over the same time period, or where one partnership continues over the same time period, or where one partnership begins before the other terminates. A sexual

partnership is considered to be concurrent in surveys if one reports having two or more sexual partners in a month.

Risky Sexual Behaviour: Risky sexual behaviour in this study refers to unprotected vaginal, oral, or anal intercourse with non-marital, non- cohabiting partner which ranges from having two sexual partners to a large number of sexual partners.

Sexually Active Adolescent

In this study, sexually active adolescent refers to all adolescent age 15 to 24 years who had sex twelve months before the survey. These adolescent are conceived to have the potential to engage in sex at some regular time intervals.

1.6 Organization of Study

The study is divided into seven chapters. Chapter one focuses on the introduction, which includes the background of the study, statement of the problem, research question, and rationale of the study, objectives, and definition of concepts. Chapter two reviews literature, conceptual framework and states the hypothesis. Chapter three indicates the research methodology. Chapter four examines the background characteristics of respondents (univariate) while chapter five looks at the socio-economic variables and reproductive health behaviour. Chapter six investigates the determinants and relationship between age at first sexual intercourse and multiple sexual partners using multivariate analysis (binary logistic regression). The last chapter discusses the summary, recommendation and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the literature review of the study on concepts of age at first sexual intercourse and reproductive health behaviour among adolescents. The literature identifies three key sets of factors that have been associated with risky sexual behaviours; number of sexual partners, non-contraceptive use and induced abortion.

2.1 Age at first sex and reproductive health behaviour

The timing of first sexual intercourse and the context in which it occurs both have health implications. In some parts of the world, for instance in North Africa and parts of Asia, most sexual activity reported 10–15 years ago takes place within the context of marriage (Singh et al., 2000). With the gap between age at first sexual intercourse and age at marriage widening in many developing countries, more people are sexually active before marriage than in the past (Blanc and Way 1998). Adolescent girls commonly face obstacles when seeking medical contraceptive methods, including insufficient knowledge about modern methods, limited access to services and even health-care providers who actively discourage use of such methods by teenagers. Yet, other studies have stressed the problem of young people not accessing services due to perceived fear of receiving negative reception from clinic staff (Wood and Jewkes, 2006)

2.2 Adolescents Sexual Activity and Sexual Partners

Young people who have several sexual partners are at increased risk of contracting STIs, including HIV. According to Guttmacher Institute (1998) in countries where data are available, a substantially larger proportion of adolescent boys than girls have had two or more partners in the past year. These differences might in part be due to cultural pressures on boys to prove their

virility (WHO, 2004). The double standard for sexual behaviour, whereby restraint is expected of girls and excesses are tolerated for boys, compounds reproductive health problems for both sexes (Wellings et al., 2006)

Having become sexually experienced does not necessarily mean a teenager will be sexually active from that point on. Nevertheless, research indicates that once a person have had sex, they are likely to continue to be sexually active. Among young adults aged 18-22 years who had ever had intercourse, over 70 percent had a second experience of intercourse within six months of first intercourse (Moore et al., 1989)

A study by Kost and Forrest (1992) shows that age at first intercourse has a strong association with number of partners a person accumulates. Thus, early intercourse means that over the years there is more time to accumulate partners. The study by Kost and Forrest (1992) revealed that among teens who were aged 20 in 1992, 74 percent of males who had sexual intercourse at age 14 or younger had 6 or more partners during their lifetime, compared to 48 percent of those who initiated sex at ages 15 or 16 and 10 percent of those who did not have intercourse until age 17 or older. The comparable figures among females were 57 percent, 34 percent, and 10 percent, respectively.

2.3 Adolescents Sexual Activity and Induced Abortion

Economic, legal, moral, and religious contexts are likely to have different effects on subgroups regarding decisions about abortion (Bankole et al., 1999). In a study by Bankole et al., (1999) using 34 countries as a sample size showed that in most countries, rates of induced abortion had an inverted “U” pattern in relation to age of women. Thus, induced abortion was greatest in the younger and older age groups. In countries where abortion is legal under broad conditions, rates

of abortion are relatively high. The rate was 29–44 abortions per 1000 girls aged 15–19 years per year in countries like Bulgaria, the Russian Federation, and the USA, and moderately high (20–28 person) in Australia, Canada, and New Zealand.

This implies that in Ghana, especially urban poor communities, where abortion is legal under strict conditions, adolescent may not report issues of abortions to recognized health institutions. They would rather have the tendency to practice induced abortion at their homes or other secret places. Therefore, the rate may seem to be low. Besides, the proportion of teens that are sexually experienced has increased during the past several decades, and therefore it is reasonable to consider abortion in light of this trend.

From one sample of pregnant middle school students, 71.4% of the pregnant teens got an abortion and 28.6% gave birth but gave up the child for adoption (Kim and Lee 2000). In a study by Jang et al., (2000) 4% of 11,214 teenagers had an abortion. Among the respondents who had an abortion, approximately 80% aborted one time and two teenagers answered that they had an abortion more than three times. Since the age pattern of unsafe abortion is important in understanding barriers to health-care access, the study would find out about the relationship between age at first intercourse and reproductive health behaviour.

2.4 Adolescents Sexual Activity and Non-use of contraceptive

Poor reproductive health status is further exacerbated by the early onset of sexual activity, limited knowledge and understanding of contraception including condom use and low access and utilization of quality health services (Awusabo-Asare et. al., 2006). Some of these sexually active teens who do not want to become pregnant do not use any contraception. The estimated risk of a female aged 15-19 becoming pregnant during one year of intercourse using no

contraceptive method is 90 percent (Harlap et al., 1991). Similarly, teens who do not use contraception account for nearly 50 percent of the unintended teen pregnancies (Forest, 1994). In terms of contraceptive use among teenagers, more female teenagers other than male teenagers use contraceptives during sexual intercourse (Jang et al. 2000).

On the other hand, in the 2008 GDHS survey, condom use at first sex was found to be uncommon as only 25 percent of females and 32 percent of males used condom the first time they had sex. In a study using a non-representative sample of adolescents, found that women who initiated sex with an older partner were significantly more likely to have been pregnant during their lifetimes and less likely to use condoms at first sex, last sex and during their lifetimes, although there was no difference in STI diagnosis or use of birth control methods (Miller et al., 1997).

The proportion of unmarried adolescent who are sexually experienced is of public-health interest. According to WHO (2007) adolescents rarely get married. There are two possible reasons to account for the low number of marriages among adolescents. First, due to the countries law on abortion and second, adolescents graduate from high school at the age of 18 and are not financially independent at this period (WHO, 2007). It is assumed that the lack of financial independence is the cause of few adolescents getting married. The majority of adolescent pregnancy prevention programs have been designed for females, partly because women are the ones who get pregnant and because, except for condoms, all reversible contraceptive methods are female methods (Kalmus et al., 2003). However, Warren et al., (1998) indicates that the median age at first sex is 13.6 years for males. Kalmus et al., (2003) further explains that young males are frequently coerced into having vaginal sex as a way to prove masculinity and thus solidify social standing.

2.5 Adolescents Sexual Activity and Urban Poor Communities

A study by Anarfi (1997) suggests that residents of urban poor communities are susceptible to sexual and reproductive health challenges as a result of factors such as poverty, urbanization, peer and partner influence that make them prone to early sexual initiation and its consequences. Meekers (1994) suggests that adolescents' sexual behaviour in urban community could be alluded to two factors; adaptation strategy and social disorganization concept. Meekers (1994) suggests that adolescent or premarital sex results from poverty, with youth using sex as a means to achieve certain goals such as provide for their basic or material needs, or secure a husband.

On the other hand, the social disorganization assumption states that influences such as urbanization and education, have contributed to the disintegration of adult control over children in society. Similarly, Marston and King (2006) suggest that peer and partner influence has a great influence on sexual behaviour. Abbott and Dalla (2008) also assert that there are a variety of social factors or systems that interact to influence one's social development. They suggest that individuals vary and thus different persons with the same familiar and social interactions may exhibit varying personal beliefs and behaviours. Abbot and Della (2008) posit that despite the evident influence of social, cultural and environmental factors on adolescent sexual behaviour, what a person thinks about his or her sexual self could be a viable mediating factor.

In addition, Brofenbrenner's (1989) suggest four ways in which the environment interacts with an individual behaviour and influences it. First, Brofenbrenner (1989) suggest that people directly influence and interact with a person in immediate spaces around that individual i.e. church, school, friends, family etc. Second, the interaction of two or more of these individual's form a larger influence. Third, the interaction between the individual and other environments that do not directly affect the individual (such as a parent's workplace and even the media) gives rise

to the larger system of influence. Finally, the individual is influenced by cultural beliefs, attitudes and other societal factors at large. As the rate of urbanization continues to rise and the majority of adolescents settle in urban poor communities they are influenced by the cultural beliefs and attitudes of the community.

2.6 Age at first sexual intercourse and Background Characteristics

Pettifor et al (2004) posit that women who sexually debut at earlier ages are more likely to participate in high-risk behaviours and experience unintended pregnancy, HIV and sexually transmitted infections (STIs). Though research has examined how age differentials in current sexual relationships influence reproductive health, few studies have focused on how age differences at first sexual intercourse affect subsequent reproductive health outcomes.

In the context of poverty and gender inequality, cross-generational sex often involves sex in exchange for money or goods (transactional sex), characterized by less condom use and greater sexual coercion (Luke, 2005). The risks associated with cross-generational sex may be, in part, due to the power imbalances between the partners. Particularly if a young woman is dependent on an older man for financial support, she may have little power to negotiate safe sex. Furthermore, in instances where a young woman does assert herself, she may face sexual and physical violence.

A study from 2000 with data from 14 countries showed that the context of early sexual experience often differs between young men and young women, especially in developing regions (Singh et al 2000). Ghana Demographic and Health Survey (GDHS) report of 2008 shows that 8 percent of women and 4 percent of men initiated sex at age 15. On the other hand, Darteh and Nnorom (2012) in a study on sexual behaviour among urban poor adolescents indicates that the

mean age at first sex was 17.5 years (17.0 and 17.8 years respectively for males and females) among the adolescents with more than half of both male (69.2%) and females (54.1) reporting having ever had sex at the time of the study. The results show that male adolescents were having sex 0.8 years earlier than their female counterparts. However, GSS, (2009) assert that the age at first sex is 1.2 years higher than what is reported in 2008 GDHS

Singh et al (2000) asserted that the initiation of sexual intercourse is a milestone in the physical and psychological development of men and women in all societies, and both the timing of this sexual activity and the context within which it occurs can have immediate and longer term consequences for the individual. In some instances, the reason for early sexual intercourse is involuntary. For example, when a young person is raped, the victim of incest or turns to prostitution because of financial need. The surveys reveal that the context of early sexual experience is often very different for young men and for young women, especially in developing regions.

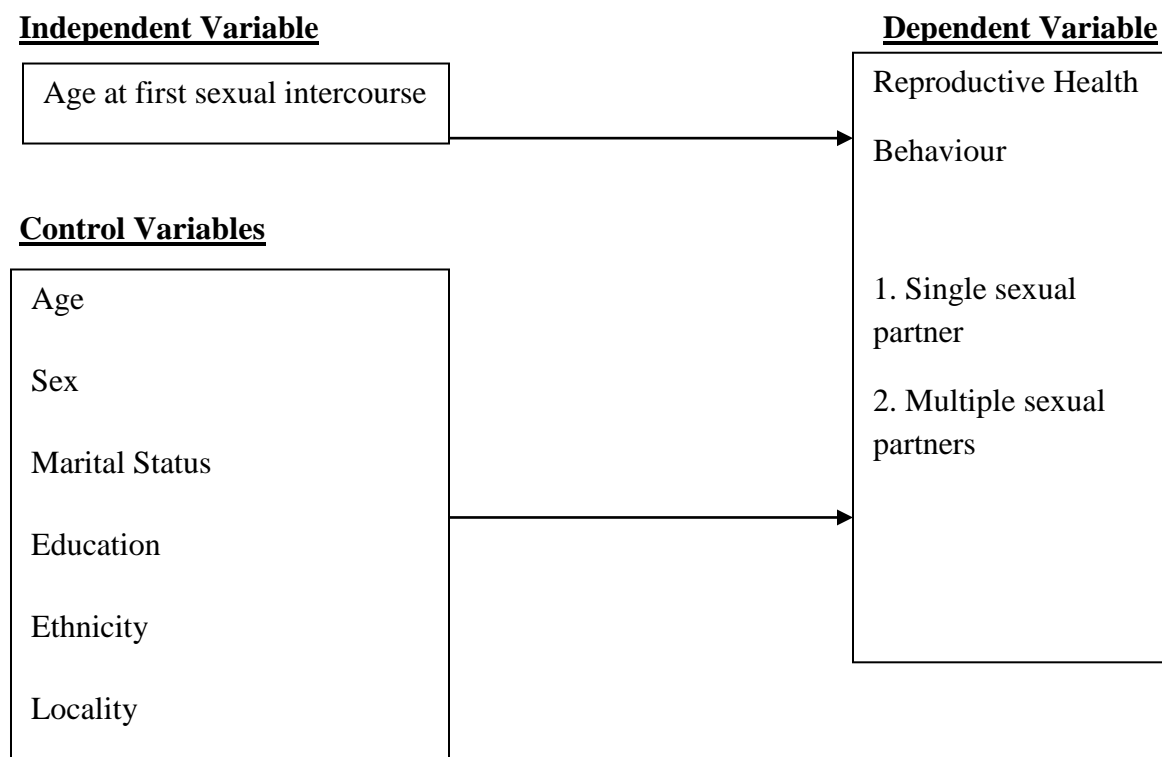
Sexually experienced adolescent women are much more likely ever to have been married than are sexually experienced adolescent men. For example, in Zimbabwe, where about one-third of both female and male 15–19-year-olds have had intercourse. One-fifth of these young women (21% overall) have been married, compared with almost no adolescent men. In Great Britain and the United States, overall levels of sexual experience among young men are about as high as those in Brazil and Jamaica; levels for young women are comparable to those in Ghana, Mali and Jamaica. However, the vast majority of British and U.S. sexually experienced adolescents of both sexes have never been married and most ever-married adolescent women became sexually active before marriage.

In many societies, it is excusable for men to become sexually active at a significantly earlier age than women, and even expected that they will do so (Reiss, 1994). Okigbo (2010) explains that males in mid- and late adolescence had lesser hazard of transitioning to first sex compared to those in early adolescence. Therefore, it can be deduced that females sexually debut during mid- or late adolescence while males sexually debut in early adolescence. This could be explained by the fact that adolescent males experience increased pressure to be sexually active in order to be considered physically matured.

2.7 Conceptual Framework

The figure below presents the relationship among the variables.

Figure 1 Conceptual Framework for Analyzing Reproductive Health Behaviour



Source: Authors Construct

The model shows the relationship among the independent variable, control variables including socio-demographic variables and the dependent variable. In this study, age at first sexual intercourse was examined as the main variable which influences reproductive health behaviour. Reproductive health behavior is measured on two levels; single sexual partner and multiple sexual partner. Age at first sexual intercourse does not solely affect health behaviour but does so indirectly by interacting with other socio-demographic factors. Age, Sex, Marital Status, Education, Ethnicity, locality, religion and income are the socio-demographic factors that influence adolescent reproductive sexual behavior.

Adolescents in their early ages are expected to have single sexual partners than those in their later ages. Males are expected to have multiple sexual partners in order to prove their virility as expected from society. Marital status is expected to influence adolescent reproductive health in that adolescents not in marital union are expected to have more sexual partners than those in marital unions. Education is expected to influence adolescent reproductive health decisions. Therefore, it is expected that adolescents with higher level of education are expected to reveal single sexual partnership. The lineage system of adolescents is found to have influence on their sexual reproductive behavior. Matrilineal society is found to be lenient on sexual behaviours compared to the patrilineal society. Therefore, adolescents belonging to the matrilineal society are expected to have multiple sexual partners. Other socio-demographic variables are examined to reveal its influence on sexual reproductive health behavior.

2.8 Hypothesis

This study hypothesizes that

- i. Adolescents who initiate first sex at younger ages are likely to have multiple sexual partnerships than those who initiate first sex at a later age.
- ii. Male adolescents are more likely to have multiple sexual partnerships than female adolescents

CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction

This chapter discusses the research techniques and methods used in the study. It focuses on the following areas: data source, research design, sampling design, population and sample size, measures, data analysis and data limitations.

3.1 Source of Data

The study uses the second round of data collected by the Population Training and Research Capacity Development project (EDULINK) in three communities in Accra. The study relied on secondary data from the 2011 Edulink Urban Health and Poverty Project wave two. This Edulink Urban Health and Poverty Project is a project undertaken by the Regional Institute for Population Studies (RIPS), University of Ghana with collaboration from Southampton University (UK), Cape Coast University (Ghana), University of Ibadan (Nigeria) and Fourah Bay University (Sierra Leone). The aim of the project is to integrate real-life fieldwork into the teaching and learning of population sciences among students and staff in participating African and UK Higher Education Institutions (HEIs). The focus of the data collection was directed towards urban poverty and health. The Project was conducted in three urban poor communities in Accra (James Town and Ussher Town in Ga Mashie and Agbogbloshie). The Edulink Urban Health and Poverty Survey seeks to contribute to knowledge on inequalities in health and human welfare between the urban poor and other sub-groups in Africa and to sensitize local and regional stakeholders on urban poverty and health issues. The survey brings together a variety of research interests in the areas of migration, community and environmental challenges, climate change, reproduction, contraception, child and maternal health, marriage, sexual health and behaviour,

fertility preference, HIV/AIDS and other STIs, adolescent sexual and reproductive health, and nutrition. The Edulink data is collected within a period of 18months interval and it is made up of different waves.

3.2 Background of the Study Area

Accra is the capital and second largest city in Ghana, with an urban population of 1,848,614 according to the 2010 census (GSS, 2012). Accra is one of the leading and fastest growing cities in Africa, with an annual growth rate of 3.36%. Accra serves as the nation's economic and administrative hub. The main study areas form part of central Accra. Located directly east of the Korle Lagoon, James town and Ussher town are the oldest districts in the city of Accra, and emerged as communities around the 17th century. These districts were heavily developed by the end of the 19th century, and following the rapid growth of the city during the 20th century, they became areas of a dense mixture of commercial and residential use. James town and Ussher town remain fishing communities inhabited primarily by the indigenous Ga. Agbogbloshie is a suburb of Accra. The town covers approximately four acres and is situated on the banks of the Korle Lagoon, northwest of Accra's Central Business District. 40,000 Ghanaians inhabit the area (GSS, 2012) most of whom are migrants from rural parts of Ghana.

3.3 Research Design

Cross sectional study of adolescent in their reproductive ages 15-24 was used for this study. A cross sectional survey is a study in which statistically significant sample of a population is used to estimate the relationship between an outcome of interest and population variables as they exist at one particular time. Since both the outcome and the variables are measured at the one time these studies are not strong at showing cause-effect relationship.

3.4 Sampling Design

The sampling design consisted of selected 29 enumeration areas (EAs) in these localities and 40 households were sampled from each EA. After informed consent was obtained, household interviews were conducted with household members; individual questionnaires were also administered to respondents of ages 15-24.

3.5 Population and Sample Size

The population of the study was adolescents in their reproductive ages 15-24 and the sample size for the study was one hundred and ninety five (195) adolescent ages 15-24. The sample size was arrived by filtering out the males and females above age 24 in the data. Using the total number of adolescents in the data, adolescent in their reproductive ages that had never had sex before were not considered, thus only adolescent who had ever had sex in the last 12 month in the data were selected. The questions from the questionnaire were “Have you ever had sex in the last 12 month”? This was used to arrive at a sample size of 195 adolescent ages 15-24.

3.6 Measures

Age at first sexual intercourse is the dependent variable to be measured using the age at first sexual intercourse and the questions asked in the data are: How old were you when you had your first sexual intercourse?

The number of sexual partners is the independent variable to be measured. The questions asked for the independent variable is: In the last 12 months how many persons have you had with. The number of sexual partners was categorized into the following groups:

- i. One sexual partner and
- ii. Two or more sexual partners.

Control variables are age, sex, marital status, income, religion, locality, education and ethnicity.

3.7 Method of Analysis

In this study, I presented results of a secondary analysis exploring the associations between age at first sexual intercourse and reproductive health behaviour using single sexual and multiple sexual partnerships as an indicator of the latter. Associations between early age at first sexual intercourse and reproductive health behaviour may demonstrate an opportunity for preventing adverse reproductive health behaviours by addressing early sexual intercourse directly. Also, these associations may open our eyes to new ways of looking at risk-taking behaviours in light of sexual activities that provide keys to effective prevention messages.

The study used SPSS version 16 in the data analysis. Various methods were employed in the analysis of the data. This includes frequency distributions and simple cross tabulations. In order to examine the relationship between age at first sexual intercourse and reproduction health behaviour, cross tabulations of age at first sexual intercourse and, current age of respondent and educational categories and other control variables were used.

Binary logistic regression analysis was then taken using age at first sexual intercourse as the independent variable and various socio-economic characteristics like education, age of the respondents, sex, marital status, religion, occupation, ethnicity and locality as the control variables. This was done to see the effect of age at first sexual intercourse and other control variables on reproductive health behaviour such as the number of sexual partners. In the logistic regression model, the log of the odds ratio or exponential β (which in this study is the ratio of the proportion of adolescents engaging in multiple sexual partnerships to those having single sexual partners) is expressed as a function of the independent variable (predictor). A positive β indicates

the likelihood increase in multiple sexual partnerships in relation to the reference category (RC). On the other hand, a negative β indicates the likelihood reduction in multiple sexual partnerships in relation to the reference category (RC). A zero β coefficient on the other hand also indicates no change in relation to the reference category.

Mathematically, it is expressed as follows:

$$\ln(P/1-P) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n$$

Where $\beta_1, I = 0, \dots, n$ are logistic co-efficients

$X_i, I = 0, \dots, n$ are the independent variables and

P = probability of success

e = base of natural logarithms

The logistic regression is fitted for all adolescents between 15 and 24 years who have ever had sex to determine the factors that influence their sexual behaviour (single and multiple sexual partnerships). The model estimates the probability that an adolescent will have at a given time one or more than one sexual partners.

In the logistic regression analysis, age at first sex is the independent variable whereas multiple sexual partnerships is the dependent variable. The demographic and socio-economic factors are the control variables.

CHAPTER FOUR

BACKGROUND CHARACTERISTICS OF RESPONDENTS

4.0 Introduction

This section of the chapter deals with the univariate analysis of the background characteristics, independent variable and dependent variable of the respondents. Information about background characteristics of household members is deemed important in the interpretation of the study's findings. The age of the individuals, sex, level of education, marital status, ethnicity, locality, religion and income are what this chapter seeks to analyze. This analysis enable the author to observe the variation of these factors considered in the study.

4.1 Age Distribution of Respondents

The study population is made up of 195 sexually active young people aged 15-24 years. The distribution of sexually active respondents by five-year age groups is shown in Table 4.1 below

Table 4. 1 Age Distribution of Respondents

Age	Number of Respondents	Percentage
15-19	44	22.6
20-24	151	77.4
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

Conventional five-year age groups of respondents can minimize errors in single year age. Five year age groups tend to smoothen age shifting and this enables the researcher make a fair analysis of data. The distribution shows that more than half (77.4%) of the respondents are aged 20-24 years while the proportion in the 15-19 years age group is about 22.6%. The ages in the complete years was used to ascertain the mean age of respondents. The mean age of respondents in the 2011 Edulink for young persons aged 15-24 years was 19.70 years.

4.2 Distribution of Respondents by Sex of Respondents

The sex of respondents refers to whether respondents are either male or female. This is a crucial factor in explaining variations in individual reproductive health behaviour. The table shows that more than half (64.1%) of the respondents are female while about 35.9 percent are males.

Table 4. 2 Sex Distribution of Respondents

Sex	Number of Respondents	Percentage
Female	125	64.1
Male	70	35.9
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

4.3 Educational Level of the Respondents

The educational background of the respondents was obtained in the 2011 Edulink data set by grouping the respondents into the following categories; those with no education, primary/pre-school, middle/JHS, and SHS/higher. Table 4.5 shows that approximately 30 percent of the respondents from the data set had no education compared to approximately 43 percent of respondents who had SHS/higher level of education. The table also shows that about 11.3 percent of the respondents had middle/JHS education compared to about 15.9 percent of respondents who had primary/pre-school level of education. The number of respondents who had no education exceeds those with both primary/pre-school and middle/JHS level of education by 0.5 percent.

Table 4. 3 Educational Attainment of Respondents

Educational Level	Number of Respondents	Percent
No education	58	29.7
Primary/Pre-school	31	15.9
Middle/JHS	22	11.3
SHS/Higher	84	43.1
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

4.4 Age at first sex

The onset of sexual activity is an important determinant of subsequent sexual behaviour and the risk of exposure to STIs including HIV/AIDS. Table 2.1 shows the percentage distributions of respondents by age at first sexual intercourse. The distribution shows that by age 15 years, about 17% of the respondents has had their first sexual intercourse, more than half (52.3%) of the respondents has had their first sexual intercourse and about 30% has initiated sex at 19years and above. The mean age at which the respondent had sex was approximately 18.60 years. This is contrary to the findings of Darteh and Nnorom (2012) in a study on sexual behaviour among urban poor adolescents that indicated that the mean age at first sex was 17.5 years. However, the study used respondents aged 15-24 years.

Table 4. 4 Distribution of Respondents by Age at First Sex

Age	Number of Respondents	Percent
<15	34	17.4
15-18	102	52.3
>18+	59	30.3
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

4.5 Religious Affiliation

Religious affiliation is considered as one of the important factors influencing reproductive health behaviour. Evidence has shown that a person's behaviour, beliefs and norms are generally affected by his/her religious affiliation. Some religions make strong prescriptions about reproductive health behaviour such as being chaste, abstaining from sexual intercourse and holy living. The GDHS over the years together with national censuses indicate that Ghana has a predominantly Christian population. This is evident in the study population since about 77 percent are affiliated to the Christian religion.

In the 2011 Edulink, respondents interviewed were asked about their religious affiliation and categorized into denominations. Table 4.3 presents the frequency of the religions the respondents interviewed during 2011 Edulink were affiliated to. About 77 percent of the respondents were Christians while about 14.4% of the respondents were Moslems. Minority of the respondents had no religion and contributed to about 8.2%.

Table 4. 5 Religious Affiliation of Respondents

Religious Affiliation	Number of Respondents	Percent
No Religion	16	8.2
Christians	151	77.4
Islam	28	14.4
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

4.6 Current Marital Status of Respondents

Marriage in Ghana is accepted as an institution where sexual unions between two people of the opposite sex are legal or set by custom. Marriage relates directly with changes in population composition, size and most important issue in population dynamics that affect reproductive health behaviour. It is assumed that once a person marries he/she reduces the number of sexual partners and sticks to only the spouse. On the other hand when a young person is not married he has the tendency to experiment and have sexual escapades with numerous partners. Respondents were asked about their marital status. For the purpose of this study, the marital status has been re-categorized into currently married, cohabitation and never married. As shown in Table 4.4, out of the 195 respondents interviewed, about 7.7 percent reported themselves as married while about 23.6 percent reported as living together with a partner (cohabitation). More than half (68.7%) of the respondents have never been married.

Table 4. 6 Marital Status of Respondents

Marital Status	Number of Respondents	Percentage
Married	15	7.7
Cohabitation	46	23.6
Never Married	134	68.7
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey 2011

4.7 Income Status of Respondents

Research has shown that a man's level of wealth has some influence on his sexual behaviour (Kongny, 2006). Likewise the poor income status of adolescent girls is more likely to influence them to engage sexual transactions with most especially older men in order to get money. Table 4.6 shows that the proportion of respondents by income status varies from 5.1% for the higher

income to 47.7% for the low income status. About 88.7 per cent of respondents are within the income status of no income to low income status respectively. This suggests that with a higher proportion of young people within such a low income status the tendency of respondents engaging in multiple sexual partners is less.

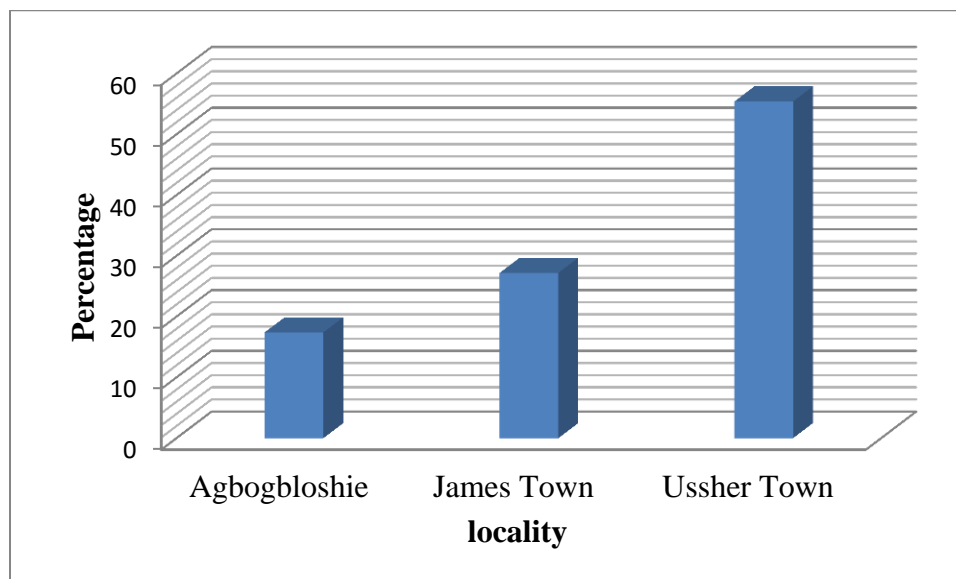
Table 4. 7 Distribution of Respondents by Income Status

Income Status	Number of Respondents	Percentage
No income	80	41.0
Low income	93	47.7
Middle income	12	6.2
Higher income	10	5.1
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

4.8 Locality of Respondents

The study is made up of three localities namely Agboghloshie, James Town and Ussher Town. The distribution of the localities is such that more than half (55.4%) of the respondents are from Ussher Town, about 27.2 per cent of the respondents are from James Town while about 17.4 per cent of the respondents are from Agboghloshie.

Figure 4.1 Percentage distributions of respondents by locality

Source: Computed from Urban Poverty and Health Survey, 2011

4.9 Ethnicity of Respondents

The study was undertaken in a Ga community. Table 4.8 reveals that there are two dominant ethnic groups; Ga-Dangmes and Akans. However, there are other minor ethnic groups. The distribution of the ethnic groups are such that more than half (58.5%) of the respondents are Ga Dangmes, about 25.6 per cent of the respondents are Akans while about 15.9 per cent of the respondents are from other ethnic groups.

Table 4. 8 Percent distribution of respondents by ethnic groups

Ethnicity	Number of Respondents	Percentage
Akans	50	25.6
Ga-Dangme	114	58.5
Others	31	15.9
Total	195	100.0

Source: Computed from Urban Poverty and Health Survey, 2011

4.10 Summary of Univariate Analysis

The analysis at this stage gives the distribution of frequency of the sample the researcher used. It was observed that about 77 % of the respondents were age 20-24 years while approximately 23% were aged 15-19 years. About two-thirds of the sample were females a third males. Its interesting to note that about one third of the respondents had no education. This could clearly depict the environment in which these adolescents live. More than two thirds of the sample experienced their sexual debut before 19 years. While about 8% of the adolescents used in the study were married, one out of every five adolescent was cohabiting. This is crucial observation and could predispose the adolescents to active sexual partner relationship.

CHAPTER FIVE

SOCIO-ECONOMIC VARIABLES AND REPRODUCTIVE HEALTH BEHAVIOUR

5.0 Introduction

This chapter includes bivariate analysis of the control variables and the dependent variables as well as the independent variable and dependent variable. The individual's background characteristics are influential and can contribute to their reproductive health behaviour. Individual's sexual behaviour varies with demographic and socio-economic characteristics. Socio-economic factors influencing the number of female sexual partners a man has, according to Kumar Das et al (2008) include male difference in resource attainment, and views about sexual behaviour. Findings from their studies indicated that male resource attainment positively influences the men's preference for multiple sexual partners.

5.1 Age and Sexual Partnerships

Age is one of the most important demographic variables that are associated with sexual behaviour. People sexual preferences typically change over time, reflecting sexual experience. Age of an individual influences his behaviour and for that matter his sexual activity. Table 5.1 below outlines the differences in sexual partnerships by the age of respondents.

Table 5. 1 Respondents Sexual Partnerships by Age

Age	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
15-19	29	65.9	15	34.1	44	100.0
20-24	73	48.3	78	51.7	151	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=4.214$		<i>P</i> value=0.040			

Source: Computed from Urban Poverty and Health Survey 2011

The chi-square test indicates a significant association between age and sexual partnerships. Multiple sexual vary in an increasing pattern from age 15-19 years (34.1%) to age group of 20-24 years (51.7%). Adolescents within the age group 15-19 years recorded the highest proportions of respondents engaging in multiple sexual partnerships than those in the age group of 20-24.

It is observed that almost half (47.7%) of the respondents are engaging in multiple sexual partnership. This exposes them to Sexually Transmitted Infections and unwanted pregnancies.

5.2 Sex and Sexual Partnerships

Pettifor et al (2004) suggested that women who sexually debut at earlier ages are more likely to participate in high-risk behaviours and experience unintended pregnancy, HIV and sexually transmitted infections (STIs). It is observed that adolescent girls are often the most vulnerable when it comes cross-generational sex in which they have sex with older men with no choice about the use of condom. This exposes them to several risks. Table 5.2 shows the percentage distribution of respondents by sex and sexual partnership.

Table 5. 2 Cross Tabulation of Respondents by Sex and Sexual Partnership

Sex	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
Male	30	42.9	40	57.1	70	100.0
female	72	57.6	53	42.4	125	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=3.910$		<i>P</i> value=0.048			

Source: Computed from Urban Poverty and Health Survey 2011

The chi-squares test with a p value of 0.139 implies that there is no statistical association between sex and sexual partnerships. Table 5.2 shows that a higher proportion (57.1%) of males is engaging in multiple sexual partnerships than females (42.4%). However, both sexes have a considerable higher proportions engaging in multiple sexual partnership. The overall proportion of respondents engaging in single sexual partnership is 50.3 percent and 47.7 percent for multiple sexual partnerships. This result contradicts with the findings of Pettifor (2004) who suggested that women are more likely to have multiple sexual partnerships due to early sexual debut.

5.3 Education and Sexual Partnership

Education status is an important socio-economic variable that plays an important role in the lives of every individual in regard to acquisition of skills and knowledge, enhancement of economic and secular values as well as morals that transform norms and beliefs that shape attitudes in life. Table 5.3 displays the pattern of sexual partnerships by educational level of respondents.

Table 5. 3 Distribution of Respondents by Level of Education and Sexual Partnerships

Level of education	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
No Education	2	40.0	3	60.0	5	100.0
Pre-School/Primary	22	50.0	22	50.0	44	100.0
Middle/JHS	43	53.1	38	46.9	81	100.0
Sec/Higher	35	53.8	30	46.2	65	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=.479$		<i>P</i> value=.924			

Source: Computed from Urban Poverty and Health Survey 2011

The chi-square test confirms that there is no association between level of education and sexual partnerships. That is, the p-value of 0.924 indicates no statistical significant association between the level of education and the number of sexual partners. It is evident that respondents with higher level of education have lower proportions engaging in multiple sexual partnerships compared to respondents with no education. The tendency for respondents with formal education to have multiple sexual partners reduces from 50.0 percent for those with Pre-School/Primary level of education to 46.9 percent from those with Middle/JHS level of education. This result is inconsistent with a study by Karim et al., (2003) cited by Cofie (2010), which suggest that higher educational status is associated with an elevated risk of having multiple sexual partners although there are differences between males and females.

However, the inverse relationship exists in the case of single partner relationship. It is apparent that respondents with formal education have the highest proportion of its respondents engaging in single sexual partnership than respondents with no education.

5.4 Marital Status and Reproductive Health Behaviour

Marriage is an important variable that determines the age at which a man/woman is expected to first experience sexual intercourse. According to Wiederman (1997) multiple sexual partnerships are a common phenomenon in African country. Whether an individual is currently married or never married affects his sexual behaviour and for that matter the number of sexual partners he has. Table 5.4 summarizes the pattern of sexual partnerships according to respondents' marital status.

Table 5. 4 Distribution of Respondents by Sexual Partnerships and Marital Status

Marital Status	Single Sexual Partner		Multiple Sexual Partner		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
Currently Married	10	66.7	5	33.3	15	100.0
Cohabitation	21	45.7	25	54.3	46	100.0
Never Married	67	50.0	63	47.0	134	100.0
Total	98	50.3	93	47.7	195	100.0
$\chi^2=3.909$ P value=0.418						

Source: Computed from Urban Poverty and Health Survey 2011

For the purpose of this analysis the marital status has been categorized into currently married, cohabitation and never married. The proportion of adolescents having multiple sexual partners ranges from 33.3 per cent for adolescents currently married to 54.3 per cent for those in cohabitation. According to Table 5.4, the never married have 47.3 percent likelihood of engaging in multiple sexual partnerships.

The result from the chi-square test indicates that there is no association between the two variables since the p -value of (0.418) is greater than the level of significance at which the test was carried out ($p < 0.05$). This tells us that there is no association between marital status and number of sexual partners. Adolescents living together with partners (cohabitation) are most likely to maintain multiple sexual partners compared to all other categories of marital status of adolescents. Similarly, adolescents never married are more likely to have multiple sexual partners than those currently married. On the other hand, adolescents currently married are most likely to maintain single sexual partners compared to other marital status categories. This is expected for married couples since they are always close to their normal sexual partners.

5.5 Age at first sex and Sexual Partnerships

The onset of sexual activity typically takes place during adolescence, a period of growth, experimentation and identity search during which individuals are particularly vulnerable and in many cases ill-informed with respect to making responsible choices that will compromise their sexual and reproductive health (Zabin and Kiragin, 1998). Table 5.5 outlines the pattern of sexual partnerships by age at first sex.

Table 5. 5 Cross Tabulation of adolescent sexual partnership and Age at first sex

Age at First Sex	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
<15	12	35.3	22	64.7	34	100.0
15-18	51	50.0	51	50.0	102	100.0
>18	39	66.1	20	33.9	59	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=8.663$		P value=0.013			

Source: Computed from Urban Poverty and Health Survey 2011

The result from the chi-square test indicates that there is significant association between sexual partnership and age at first sex since the p -value is less than the level of significance at which the test was carried out ($p < 0.05$). A significant proportion (50.0%) of adolescent who initiated sex at ages 15-18 are engaging in multiple sexual partnerships. It is apparent from the table that adolescent who started sexual intercourse at earlier ages (i.e less than 15 years) are more likely to have multiple sexual partners than adolescents who initiated sexual activity at later ages (i.e 19 years and above). This implies that there is an association between age at first sex and the number of sexual partners. Age at first sexual intercourse influences the number of sexual partners an individual has (Zaba et al, 2004). The median age at first sexual intercourse for women and men generated from the Edulink for those aged 15-24 years is 17 years and 18 years respectively.

5.6 Religion and Sexual Partnerships

People's religious beliefs may have some considerable impact on their sexual and reproductive behaviour, depending on the specific doctrine of their religion which is likely to influence their involvement in multiple sexual partnerships. In a Ghanaian sample, Gyimah et al., (2010) found out that males affiliated to Islam and traditional religions were less likely to engage in risky sexual behaviour compared with Christian men. However, when other socio-demographic variables were controlled for, the religious difference was no longer significant. For the purpose of this study religion has been categorized into 'no religion', 'Christians' and 'Moslem'. Table 5.6 outlines distribution of respondents by religion and sexual partnerships.

Table 5. 6 Distribution of respondents by religion and sexual partnership

Religion	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
No Religion	11	68.8	5	31.2	16	100.0
Christians	78	51.7	73	48.3	151	100.0
Islam	13	46.4	15	53.6	28	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=2.148$		<i>P</i> value=0.342			

Source: Generated from Urban Poverty and Health Survey, 2011

The chi-square test indicates that there is no statistical significance association between religion and sexual partnership. Table 5.6 indicates that respondents affiliated to the Islamic religion are more likely to engage in multiple sexual partnerships than members from the Christian group and those with no religion. However, Moslems with a low proportion of 46.4 percent are less likely

to involve themselves in single sexual partnership than Christians and those with no religion. The higher proportion of multiple sexual partnerships for Moslem could be due to their likelihood of adhering to their religious belief and norm that promotes polygamy. It appears that the pattern of sexual partnerships does not vary among the various religious groups.

5.7 Locality and Sexual Partnership

As mentioned in the chapter 3, the study area is made up of three urban poor communities. They include Agbogloboshie, James Town and Ussher Town. James Town and Ussher are separated road link but share lot elements in common. The differentials among these people are such that their proximity to each other may influence the culture of the people in the respective societies. Moreover, the type of environment in which a person is brought up has some influence on his moral behaviour and attitude towards sex. Table 5.7 displays the differences in sexual partnerships for the three localities.

Table 5 7 Distribution of respondents by locality and sexual partnership

Name of Locality	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
Agbogloboshie	18	52.9	16	47.1	34	100.0
James Town	30	56.6	23	43.4	53	100.0
Ussher Town	54	50.0	54	50.0	108	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=0.628$		<i>P</i> value=0.730			

Source: Computed from Urban Poverty and Health Survey, 2011

The chi-square test shows that there is no statistically significant association between locality and sexual partnership. The locality with the higher proportion (50.0%) of respondents engaging in multiple sexual partnerships is the Ussher Town. The other two localities have a statistically significant proportion of the respondents also engaging in multiple sexual partnerships. The Agbogbloshie and James Town localities have 47.1 percent and 43.4 percent of respondents engaging in multiple sexual partnerships respectively.

5.8 Income and Sexual Partnership

Table 5.8 summarizes the pattern of sexual partnership by income status of respondents.

Table 5 8 Distribution of respondents by income status and sexual partnership

Level of Income	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
No income	42	52.5	38	47.5	80	100.0
Low income	34	54.8	28	45.2	62	100.0
High income	26	49.1	27	50.9	53	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=0.385$		<i>P</i> value=0.825			

Source: Computed from Urban Poverty and Health Survey 2011

The chi-square test indicates that there is no statistically significant association between respondents' income and sexual partnerships. Respondents with high income had the highest proportion (48.8%) of respondents engaging in multiple sexual partnerships. Respondents with no income or low income have similar proportions (47.5% and 47.2% respectively) of

respondents engaging in multiple sexual partnerships. However, respondents with no income have the highest proportion (51.2%) of respondents engaging in single sexual partnership. This could be that since they don't have money they do not want to go in for additional sexual partners.

5.9 Ethnicity and Sexual Partnerships

Table 5.9 summarizes the pattern of sexual partnership by the ethnicity of respondents.

Table 5 9 Distribution of respondents by ethnic group and sexual partnership

Ethnicity	Single Sexual Partner		Multiple Sexual Partners		Total of sexually active adolescent	
	Number	Percent	Number	Percent	Number	Percent
Akans	25	50.0	25	50.0	50	100.0
Ga-Dangme	61	53.5	53	46.5	114	100.0
Others	16	51.6	15	48.4	31	100.0
Total	102	52.3	93	47.7	195	100.0
	$\chi^2=.179$		<i>P</i> value=.915			

Source: Computed from Urban Poverty and Health Survey 2011

The chi-square test indicates that there is no statistically significant association between respondents' ethnic groups and sexual partnerships. Respondents affiliated to Akan Ethnicity had the highest proportion (50.0%) of respondents engaging in multiple sexual partnerships. Respondents belonging to either Ga-Dangme or other ethnic groups have similar proportions (46.3% and 48.4% respectively) of respondents engaging in multiple sexual partnerships.

However, respondents belonging to other ethnic groups have the highest proportion (51.6%) of respondents engaging in single sexual partnership.

CHAPTER SIX

THE RELATIONSHIP BETWEEN AGE AT FIRST SEXUAL INTERCOURSE AND REPRODUCTIVE HEALTH BEHAVIOUR

6.0 Introduction

The main focus of this chapter is to determine the effect of age at first sexual intercourse on sexual partnerships (reproductive health behaviour) while controlling for social and demographic factors. Some demographic factors controlled for are age, sex, marital status, education, religion, locality, ethnicity and income. This chapter uses binary logistic regression with sexual partners in the past 12 months categorized into “single sexual partner”, and “multiple sexual partners” as the dependent variable to analyze the net effect and strength of independent variables. The model controlled for the effect of the socio-demographic variables.

6.1 Results of the Binary Logistic Regression

The first part of this chapter uses a binary logistic regression model with sexual partnerships as the dependent variable to analyze the effect and strength of the independent variable (age at first sexual intercourse). The first section examines the relationship between the independent and dependent variable to analyze the relative contribution of each of the variables to the dependent variable (sexual partnerships). Using all the socio-economic variables together with age at first sexual intercourse included as independent variables and regressed against sexual partnership.

Table 6.1 contains the estimated coefficients and related statistics from the binary logistic regression model that predict the association of age at first sexual intercourse with multiple sexual partnerships. In the table, statistics shown are the logistic coefficient (β), the standard

error (S.E), the Exp (β) and the significance (Sig.) of the relationship between the independent variable and dependent variable.

Table 6. 2 Binary Regression models of Multiple Sexual Partnerships by Independent Variables of Adolescents in Urban Poor Community

Independent Variable	(β)	(S.E)	Significance (Sig.)	Beta Exp (β) (Odds Ratio)
Age at first sex				
<15			0.015	
15-18	-0.606	0.410	0.139	0.545
19+	-1.274	0.452	0.005	0.280

Source: Computed from Urban Poverty and Health Survey 2011

Model chi-square =8.799

Sig.=0.012

RC=Reference Category

Nagelkerke R-Square =0.059

df=2

The Nagelkerke R-Square is 0.059. This implies that approximately, 6 percent of the variation in multiple sexual partnerships is explained by respondents' age at first sex. The results of the analysis as shown in Table 6.1 reveal that age at first sex has a strong statistically significant influence on multiple sexual partnerships. It indicates the odds ratio of multiple sexual partnerships varies with regards to various age at first sex groups. Respondents who had sex at ages between 15-18 were about 0.545 times as likely to engage in multiple sexual partners

compared to those who had sex before age 15. Adolescents who initiated sex at age 19 and above were about 0.28 times as likely to engage in multiple sexual partnerships compared with those who had sexual debut before age 15 years.

Thus, there is a strong positive association between early sexual intercourse and multiple partners. This supports the hypothesis that, adolescents who initiated sex at earlier ages are more likely to have multiple sexual partners.

6.2 Net effect of background characteristics and age at first sex on multiple sexual partners.

Table 6.2 contains the estimated coefficients and related statistics from the logistic regression model that predict contribution from independent and control variables.

Table 6. 3 Binary Logistic Regression Parameter Estimates of the Model on Multiple Sexual Partnerships among Adolescent

Variables	(β)	(S.E)	Significance (Sig.)	Beta Exp (β) (Odds Ratio)
Age at first sex				
<15(RC)			0.000	
15-18	-0.824	0.492	0.094	0.439
>19	-2.183	0.572	0.000	0.113
Age Group				
15-18(RC)				
19-24	-1.374	0.447	0.002	0.253
Locality				
Agbogbloshie(RC)			0.666	
James Town	-0.395	0.552	0.474	0.674
Ussher Town	-0.280	0.384	0.466	0.756

Marital Status				
Married(RC)			0.167	
Cohabitation	-1.036	0.708	0.144	0.355
Never married	.324	0.399	0.418	1.382
Income Status				
High income(RC)				
Low income	-0.126	0.418	0.763	0.882
No income	0.035	0.391	0.928	1.036
Education				
No education(RC)			0.865	
Primary/Pre-school	0.884	1.062	0.405	2.421
Middle/JHS	0.130	0.440	0.768	1.139
Secondary/Higher	0.105	0.400	0.793	1.111
Ethnicity				
Akan(RC)			0.619	
Ga-Dangme	-0.144	0.601	0.811	0.866
Others	-0.484	0.607	0.425	0.616
Sex				
Male(RC)				
Female	0.877	0.359	0.015	2.404
Religion				
Other Religion(RC)				
Christians			0.210	
Muslims	1.093	0.627	0.081	2.984
	1.128	0.783	0.150	3.089

Source: Computed from Urban Poverty and Health Survey 2011

The Nagelkerke R-square is 0.215. This implies approximately, 22 percent of the variations in multiple sexual partnerships in urban poor communities are explained by their age at first sex and other control variables explained in the conceptual framework.

The logistic regression showed that adolescents who initiate sex in their younger ages are more likely to have multiple sexual partners than adolescents within their older ages. This confirms the hypothesis that adolescents who initiate sex at a younger age are more likely to have multiple sexual partners. This supports the result of the binary logistic regression analysis of independent variable (age at first sex) regressed against multiple partnerships. The result also confirms the assertion by Pettifor (2004) proposed that women who sexually debut at earlier ages are more likely to participate in high-risk behaviours and experience unintended pregnancy, HIV and sexually transmitted infections (STIs). The logistic regression shows that adolescents who had their first sexual experience within ages 15-18 are 0.438 times as likely to engage in multiple sexual partners as those who had their first sexual experience at younger age group. Respondents above age 19 are also 0.113 times as likely to engage in multiple partnerships.

Again, from Table 6.2 above, current age emerges as a strong determinant of multiple sexual partners. Age group (19-24) recorded a significance level of 0.002 and are 0.253 times as likely to engage in multiple sexual partnerships.

The locality of adolescents is not a significant determinant of sexual partnerships. The model shows that adolescent in James Town and Ussher Town are 0.674 and 0.756 as likely to engage in multiple sexual partners respectively compared with those in Agbogloshie. Again, it shows that adolescents in James Town are Ussher town are less likely to engage in multiple partnerships than those in Ussher Town. This confirms the chi-test result of the bivariate analysis

of locality and multiple sexual partnerships. The test states that there is no significant association between locality of adolescent and sexual partnerships.

Results from the logistic regression indicate that marital status is not a significant determinant of sexual partnership. For example, adolescents in cohabitation are 0.355 times more likely to engage in multiple sexual partnerships than that not in union. Likewise, adolescents who are never married are 1.382 a likely to engage multiple sexual partnerships. Thus, adolescent who are never married are more likely to engage in multiple sexual partnerships. Adolescents' income status is not a significant determinant of sexual partnerships. Adolescents who have low income are 0.882 times less likely to engage multiple partnerships while those with no income are 1.03 as likely to engage multiple sexual partnerships. Low income adolescent who will engage in multiple sexual partners as the table indicates may occur as a result of older men who use money to influence these girls. More so, this result may be due to the study area, since it is an urban poor community.

Adolescents' education emerges as not a significant determinant of sexual partnerships. The model shows that education level of adolescents is not correspondent with the probability of having multiple sexual partnerships. For example, adolescents with primary education are 2.421 times as likely to have multiple sexual partnerships as those with no education. Also, adolescents with middle education are 1.139 times as likely to have multiple sexual partners as those with No education.

It is apparent that ethnicity is not significant determinant of sexual partnerships. Results indicate that Ga Dangme's are 0.866 times as likely to engage in multiple sexual partners as

adolescents in the Akan group. However, other ethnic groups are 0.616 times as likely to engage multiple sexual partners.

Results also show that sex of respondents has a strong significant association with multiple sexual partnerships. It shows that females are 2.404 times as likely to engage in multiple sexual partnerships as males. This does not support the study by Kost and Forrest (1992) that revealed that among teen's males have multiple sexual intercourse at younger ages than their female counterparts. Although; the mean age at first sex is higher among women than men, men tend to have multiple sexual partners than their female partnerships.

Religion is not a significant determinant of multiple sexual partnerships. Thus, Christians are 2.984 times as likely to engage in multiple sexual partnerships as those practising other religion. Also, Muslims are 3.08 times as likely to engage in multiple sexual partners as those practising other religions.

CHAPTER SEVEN

SUMMARY, RECOMMENDATIONS AND CONCLUSION

7.1 Summary of main findings

This chapter provides a summary of the findings, conclusion and policy recommendations for the study. The general objective of the study was to examine the relationship between age at first sexual intercourse and reproductive health behaviour among adolescents in urban poor communities in Accra. For the purpose of the study, multiple sexual partnership as an indicator of reproductive health behaviour was used as the dependent variable with age at first sexual intercourse as the independent variable. The study was on sexually active adolescents aged 15-24 years. The study employed a sample of 195 adolescent from the second round of data collected by the Population Training and Research Capacity Development project (EDULINK) in three communities in Accra.

The methods of analysis used included frequencies, charts and tables, percentages and cross tabulations to examined multiple sexual partnerships in the three urban poor communities. This was done to explore the distribution of the various background characteristics for the univariate and bivariate analysis. For the multivariate analysis, a binary logistic regression model was used to examine the relationship between sexual partnerships as the dependent variable and age at first sexual intercourse as the independent variable. The main dependent variable, multiple sexual partners, was measured using the number of sexual partners an individual has had over the past 12 months.

The respondents with the highest frequency were those who had their first sexual intercourse between 15-18 years (52.3 percent). Sixty-eight percent of the respondents had never been married which reflects the adolescent status of the sample. A significant proportion of the

adolescent in the sample had higher/ SHS education, (43.1) with about 30 percent having had no education. Comparatively, the distribution showed that, more than half of the respondents were educated. A significant proportion of the adolescents did not earn any income.

Respondents with an early sexual experience were more likely to have multiple sexual partners in comparison to those who had sexual intercourse at a later age.

7.2 Conclusion

This study shows that multiple sexual partnerships exist among adolescents living in urban poor communities. The findings from this study have shown that demographic and socio-economic factors have to some extent an influence on the tendency of adolescent to engage in multiple sexual partnerships, which is a very important aspect of adolescent sexual behaviour. An adolescents age at first sex, sex, age group and to some extent, religion, are important socio-economic factors determining multiple sexual partnerships in urban poor communities. The study indicates that about 65 percent of sexually active adolescent who experienced first sex below age 15 have two or more sexual partners while 35 percent have single partners. Notwithstanding the variations in the magnitudes of this sexual practice among adolescent of different socio-economic standings, this study has revealed that about 57 percent of sexually active males in urban poor communities have two or more sexual partners while about 42 percent have single sexual partners.

About 25% of the independent variables considered for this study could explain this aspect of sexual behaviour of adolescents in urban poor communities in Accra. This implies that other factors might be involved in the tendency of adolescent to engage in multiple sexual partnerships. These other factors could be socio-cultural that influences adolescent attitude or

behaviour, example; moral teaching from parents, peers or society. Other factors include the adolescent's own beliefs, customs, tradition, practices and personal motives. Another aspect could also be spirituality, which is described as a search process in an attempt to discover that which is sacred (e.g. God) through different pathways (Pargoment and Mahoney, 2002), culture and societal norms and religiosity of an individual, which according to Hendrick and Hendrick (1987) is significantly related to predicting or shaping one's sexual behaviour, attitudes and experiences. A combination of these might bring about an adolescent's understanding of what he believes about sex and how he/she will approach sexual behaviour.

7.3 Recommendations

The findings of this study have important policy implications for reproductive health. Results from the study have shown that adolescents enter into sexual relationships at young ages some before age 15 years. The results further reveal that adolescent who initiate sex at early ages tend to have multiple sexual partners. This can be associated to the youth of today being exposed to sex earlier than formerly through the internet, where strip and sex shows and marketing of women and children in commercial sex (Hughes, 2003). Hence, the earlier they are taught the right things concerning their sexuality and the dangers of risky sexual behaviour the better it will help develop and shape their attitude and behaviour towards sex before they are fully matured. There is no other way to achieve this other than through sex education. Sex education must form part of the school curricular and made a compulsory core subject from primary level through to Senior High School.

Based on the above findings and recommendations, further research may be carried out on gender and multiple sexual partnerships to help in further programme and policy interventions.

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