

**REGIONAL INSTITUTE FOR POPULATION STUDIES  
UNIVERSITY OF GHANA, LEGON**

**SOCIO-ECONOMIC DISPARITIES AND  
ADOLESCENT SEXUAL BEHAVIOUR IN GHANA**

**BY**

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**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF  
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**ACCEPTANCE**

Accepted by the College of Social Sciences, University of Ghana, Legon, in partial fulfilment of the requirement for the degree of MA (Population Studies).

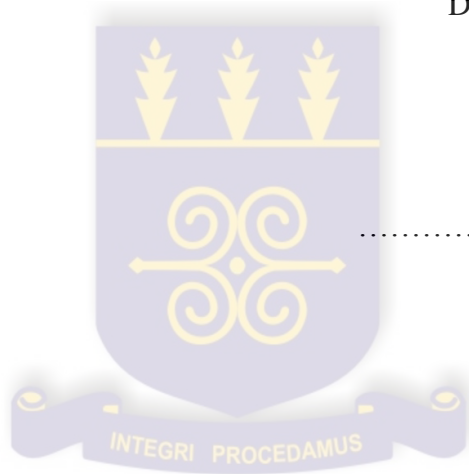
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**DECLARATION**

I hereby declare that except for reference to other publications, which I have duly acknowledged, this is the result of my own research and it has neither in part nor in whole been presented for another degree.

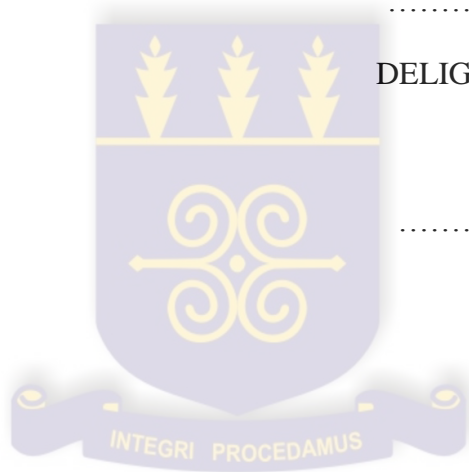
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## **DEDICATION**

This work is dedicated to my mother, Miss Esther Peace Ablor for her care and support.



## ACKNOWLEDGEMENT

My utmost thanks go to the Creator God, for making this work a success.

My most sincere gratitude goes to Dr. Pearl Kyei; my supervisor for her patience, encouragement, contributions and making time out of her busy schedule towards the success of this work. God bless you.

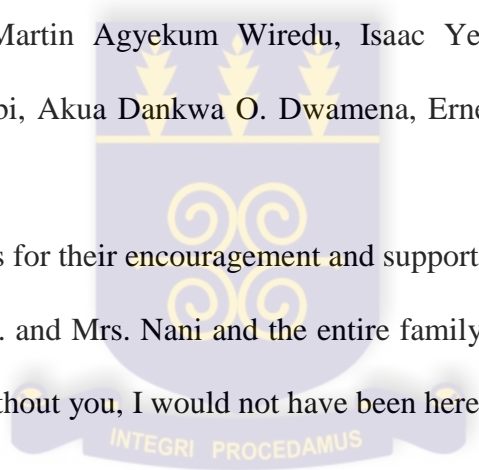
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## ABSTRACT

Unequal distribution of socio-economic resources predisposes adolescents to the consequences of risky sexual behaviours. This study aimed to identify the extent to which two socio-economic factors wealth quintile and educational level influence risky sexual behaviour among adolescents' aged between 15 and 19 in Ghana.

Data from the 2008 Ghana Demographic and Health Survey (GDHS) were analysed. A total sample of 902 unmarried adolescent males and 929 unmarried adolescent females were studied. Safe sexual behaviour is defined as sexual abstinence or condom use if sexually active. Risky sexual behaviour is defined by condom non-use though sexually active or inconsistent condom use during sexual intercourse.

Among the adolescents studied, 83.7 per cent of the males practise safe sexual behaviour whilst 73.3 per cent of the female adolescents, practised safe sexual behaviour. Most adolescents belong to the lower wealth quintile, which accounts for 59.4 per cent of adolescent males (poorest (18.4%), poorer (21.2%), and middle (19.8%)) and 53.4 per cent of the adolescent females (poorest (13.5%), poorer (18.1%) and middle (21.8%)). About 51 per cent of adolescent males and 58.3 per cent of the adolescent females had Middle/JHS education. Only small proportions (4.6 per cent for the adolescent males and 5.5 per cent of the adolescent females) had no education.

Using a chi-square test ( $\alpha < 0.05$ ), wealth quintile showed a significant association with sexual behaviour among adolescent females but was not significant among adolescent males. The age of adolescents also showed a significant association with sexual behaviour among both adolescent males and females. Region of residence of both adolescent males and females showed a significant association with sexual behaviour but lost its significance at the binary logistic regression level.

The result of the binary logistic regression on adolescents' sexual behaviour revealed that age was a significant predictor of risky sexual behaviour among both adolescent males and females. Wealth quintiles and ethnicity were significant predictors of risky sexual behaviour among adolescent females only. Contrary to expectations, educational level of the adolescents was not a significant predictor of risky sexual behaviour among both adolescent males and females in Ghana.

Since risky sexual behaviour among adolescents increases with age, a comprehensive intervention programme is needed to encourage adolescents especially the older and sexually active adolescents to practise safe sexual behaviour. Preventive programmes also have to target the poor and the most vulnerable. These would be achieved if the social and cultural elements of the adolescents are instilled into the intervention programmes.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

Sexual behaviour among adolescents is a global public health concern. This is because adolescents according to research, lack the necessary knowledge and skills to prevent unintended pregnancies and sexually transmitted infections (Madise, Zulu, & Ciera, 2007). Globally, the adolescent population is steadily increasing as studies showed an increase from 721 million in 2012 to an estimated population of approximately 755 million by 2040 (UNFP, 2012). The rate in sub-Saharan Africa is estimated to increase rapidly from 18% in 2012 to 28% by 2040 (UNFP, 2012).

Adolescence is the transition from childhood to adulthood and is associated with biological changes such as the onset of puberty, emotional and psychological changes (UNFP, 2012; WHO, 2015). Doyle, Mavedzenge, Plummer, & Ross (2012), categorize adolescents as ages between 15 and 19 years, a period mostly characterized by self-esteem and emotional distress such as depression, anxiety, and hostility among others, autonomy, independence and a growing sense of identity into adulthood.

Ghana's adolescent population in the 2010 Population and Housing Census was 271,247, representing about 11% of the total population. The population also constitutes a higher proportion of male than female adolescents, at a sex ratio of 100.9. The adolescent population however makes up less than a quarter of the country's population (Ghana Statistical Service, 2013).

As adolescents transit from childhood to adulthood, they identify their sexuality and begin to practise certain sexual behaviours that are likely to result in negative consequences. Sexual behaviour therefore describes all activities relating to sex, its understanding and satisfaction, which include abstinence, early sex, use or non-use of condoms, multiple and concurrent sexual partnerships, unsafe abortion, among others (Esere, 2008).

Female adolescents are mostly identified to become sexually active before age 16 and the most affected by the negative consequences of their sexual acts than their male counterparts (UNFP, 2012). These consequences were found to include increased risk of teenage pregnancy with its complications, such as obstetric fistulae, underweight babies, infant and maternal death, and sexually transmitted infections especially HIV (Langille *et al*, 2005).

Current research shows that HIV prevalence is high among adolescent girls than the adolescent boys in sub-Saharan Africa. This is as a result of the differentials in sexual debut among both sexes (UNAIDS, 2014). Sub-Saharan Africa also accounts for an increasing incidence of premarital births among adolescents (Palamuleni & Adebowale, 2014). Ghana is no different as the rate of teenage pregnancies continues to increase (Ghana Statistical Service, 2013) with a recorded HIV prevalence of 0.8% among adolescents (GSS, 2013).

Studies have shown that socio-economic background of adolescents, which reflects their household wealth, education, household structure and occupation (Madise *et al.*, 2007), influences adolescent sexual behaviours and decisions (Harling *et al*, 2013). Afenyadu & Goparaju (2003) found that female adolescents with parents from poor socio-economic background are more likely to engage in sex, sometimes with older men “*Sugar Daddies*”, for financial aid in school or apprenticeship. Adolescent males also have sexual intercourse

with their female counterparts from higher socio-economic backgrounds in order to support themselves financially in school (Chatterji, Murray, London & Anglewicz, 2004). Sex at an early age is found to be associated with inconsistent contraceptive use especially among female adolescents and a likelihood of multiple sexual partners among adolescents (Karim, Magnani, Morgan, & Bond, 2003).

Several studies have explored the socio-economic factors such as poverty, lack of parent-child communications, among others as determinants of risky sexual behaviour among adolescents across sub-Saharan Africa, including Ghana. This study seeks to explore the differentials in socio-economic status and how it influence adolescent sexual behaviour in Ghana. The study therefore analyses this separately by gender.

## **1.2 Statement of the Problem**

As adolescents successfully transit from childhood to adulthood, they experience emotional and psychological changes and make certain decisions (WHO, 2015) such as sexual experimentation and exploitation, that are risky to their well-being (Esere, 2008). These behaviours contribute to an increased risk of acquiring HIV and other sexually transmitted infections, unintended pregnancies, infant and maternal mortality, and an overall decrement in educational attainment (Doyle et al., 2012; Langille et al., 2005). The adverse consequences of adolescent sexual behaviours negatively affect their future livelihoods as these adolescents constitute future adults and human resource for development, known as the “Window of Hope” (Awusabo-Asare, Biddlecom, Kumi-Kyereme, & Patterson, 2006).

Adolescent females are more affected by the negative consequences of risky sexual behaviours than adolescent males (UNFP, 2012). For instance, in 2014, the average global

birth rate among adolescent females was 49 births per 1000 girls with a range of 1 to 299 births per 1000 adolescent girls from sub-Saharan Africa recording the highest birth rate (WHO, 2015). It is however projected that childbirth among adolescents aged between 15 and 19 years would exceed a total of approximately 4.8 million by 2020 (Ankomah, 2013). Statistically, 10% (WHO, 2015) of adolescent girls give birth each year in Sub-Saharan Africa (PRB, 2013).

Studies in Ghana, have shown that adolescent childbirth has negative demographic and social consequences as births to adolescent mothers accounts for the highest infant and child mortality (Ankomah, 2013). About ten per cent of female adolescent population has already had a child and three per cent are pregnant with their first child (Ghana Statistical Service, Ghana Health Service & ICF Macro, 2009). Studies however relate these issues to early initiation of sex and absence of contraceptive use especially condom among the sexually active adolescents (Moreland & Logan, 2000). The health consequences of adolescent pregnancy include; anaemia, malaria and maternal death (WHO, 2015). Also, about fifty per cent of stillbirths and prenatal deaths are found to occur among babies born to adolescent mothers (Ankomah, 2013). There is also a high rate of unsafe abortion, increased rate of single adolescent mothers and an increasing population marked by high young age dependency ratio (Ayibani, 2013).

Researches have shown that most school policies are unfriendly to pregnant adolescent girls and this leads to a high rate of school dropout among adolescent females (Fatusi & Hindin, 2010). Adolescent girls are also less likely to return to school after birth because of the shame and stigmatization attached to adolescent childbirth (National Population Council, 2000). Moreover, risky sexual behaviour among adolescents also contributes to the

prevalence rate of HIV among adolescents (Glasier, Gülmezoglu, Schmid, Moreno & VanLook, 2006) which constitutes approximately 0.8% in Ghana (GSS, 2013).

Studies have also shown that adolescents from families with low socio-economic status engage more in sexual activities that negatively affect their lives (Langille et al, 2005). Because of economic vulnerability, many female adolescents from poor socio-economic background in Ghana become victims of teenage pregnancy (Ankomah, 2013). This is mostly to financially support their own education, and provide certain basic social needs for themselves and their families (Wusu, 2011).

Currently in Ghana, traditional puberty rites performed to educate and introduce adolescents into sexuality including other social controls exercised by community elders over fertility and sexuality of adolescents are no longer in place due to modernization and industrialization (Munthali & Zulu, 2007). Parents, who are the first point of socialization, also do not educate their adolescents because they see it as a taboo to talk about sex so they leave it to the schools/teachers, who are themselves, shy to discuss topics concerning sexuality (Lagina, 2002). Discussions related to sex and sexuality is therefore shrouded in secrecy, leaving the adolescents to seek answers from friends and other unreliable sources (Esere, 2008). This leads to an increase rate of risky sexual behaviour among adolescents with its diverse negative consequences (Kirby, Laris, & Rolleri, 2007).

### **1.3 Objectives**

The main objective of the study is to examine adolescent sexual behaviour due to differences in socio-economic characteristics.

### **1.3.1 Specific Objectives**

- ❖ To examine the relationship between educational level and sexual behaviour separately for adolescent males and females
- ❖ To examine the differences in household wealth and sexual behaviour separately for adolescent males and females
- ❖ To study the differentials in age and sexual behaviour separately for male and female adolescents

### **1.4 Research Questions**

- ❖ What is the relationship between educational level and sexual behaviour among adolescent males and females?
- ❖ How does the difference in household wealth affect sexual behaviour among adolescent males and females in Ghana?
- ❖ Does a difference in age influence sexual behaviour among adolescent males and females?

### **1.5 Rationale for the Study**

The 1994 international Conference on Population and Development (ICPD) articulated the importance to include the right and needs of adolescents in national policies in order to promote adolescent sexual and reproductive health, which is essential for development (WHO, 2015).

As a result of the ICPD program of action, the government of Ghana developed a policy to address reproductive health and right, which includes the adolescents (Parkes, 2001). This study would therefore help in promoting the agenda of the ICPD in Ghana.

Moreover, adolescents between the ages of 15 and 19 years are relevant groups to study in terms of sexual behaviour. This is because at that early stage of their lives, most people lack the adequate knowledge, skills and expertise about sexuality, protection from unwanted pregnancies and other sexually transmitted infections (Adu-Gyamfi, 2014). It is also at these ages that most young people attain basic and secondary education, which serves as a foundation for higher education. Dropping out of school at that early age because of pregnancy especially for the adolescent female is a cause for concern especially in Ghana, which seek to promote female education and fertility decline (Wusu, 2011).

The National Population Policy of Ghana was designed purposely with the aim of reducing the population growth of the country (National Population Council, 2000). This study will however help in reducing school drop-out rate among adolescent females, delay sexual debut, reduce adolescent fertility, and ultimately delay reproduction if precautions are taken to encourage adolescents in practising safer sexual behaviour. The study aimed at promoting safer sexual and reproductive health behaviour among adolescents.

It would finally contribute to existing literature on adolescent sexual and reproductive health.

### **1.6 Definition of Terms**

- ❖ **Sexual Behaviour:** Any activity that is related to sex, which is shaped by socialisation and sexual orientation.
- ❖ **Adolescents:** Persons between the ages of 15 and 19 years.
- ❖ **Safer Sexual Behaviour:** Any sexual behaviour that prevent any negative consequences such as abstinence and consistency of condom use.

- ❖ **Risky Sexual Behaviour:** Any sexual behaviour that results in negative consequences such as inconsistent or non-use of condoms during sexual intercourse.

### **1.7 Organization of the Study**

This study is made up of seven chapters. Chapter one introduced the study with the background to the study, statement of the problem, rationale of the study, objectives, research questions, definitions of terms and the organization of the study. Chapter two constitutes the review of relevant literature, conceptual framework and statement of the hypotheses. Chapter three spells out the methodology used, which include the sources of data used, method of analysis, unit of analysis and data limitation. Chapter four consists of the profile of the study area and respondents' characteristics using the univariate analysis. Chapter five and six makes up the bivariate and multivariate analysis stages respectively. Chapter seven gives the summary, conclusion and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter seeks to analyse the problem under study by reviewing previous studies done in relation to socio-economic disparities as a predictor of adolescent sexual behaviour. This would provide a clear understanding and further knowledge on the topic of interest. The chapter is made up of sub topics that define the relationship between socio-economic factors and other demographic variables and adolescent sexual behaviour. The chapter also discussed the conceptual model used and the stated hypotheses.

#### **2.2 Socio-Economic Factors and Adolescent Sexual Behaviour**

The overall success and development of a nation depends on its young people who are the potential nation-builders. Their health and well-being is crucial towards the prosperity of their countries. Confronting the challenges faced by adolescents as they progress through childhood to adulthood is very important in achieving development. This is imperative in developing countries where adolescent life expectancy is shortened by maternal mortality and HIV/AIDS (Hargreaves et al, 2008).

Adolescent transition is characterised by a wide- range of changes which Fatusi & Hindin (2010) categorised as physical, biological, psychological, and social changes. These changes were identified to be associated with emotional, cognitive and behavioural attitudes, which bring about self-reliance and sometimes financial independence (Doyle et al., 2012). These changes also account for an increased mortality among adolescents as a result of certain complications during adolescent childbirth, and other sexually transmitted infections such as

HIV. The decisions made at this stage of adolescent lives therefore have adverse effect on the health and well-being of the adolescents (Fatusi & Hindin, 2010).

Doyle et al. (2012) and Zaba, Pisani, Slaymaker, & Boerma (2004) in studying the pattern and trend of adolescent sexual behaviour in sub-Saharan Africa categorised adolescents as ages between 15 and 19 years. This is consistent with the Ghana Demographic and Health Survey's classification of adolescents as the ages between 15 and 19 years (GSS et al., 2009).

As adolescents mature and begin to identify their self-esteem and independence, they also develop sexually and this development promotes emotional, cognitive and behavioural changes that influence their relationship with their parents, peers and their sexual behaviours (Bearinger, Sieving, Ferguson, & Sharma, 2007). It is well established in literature that adolescents are likely to become sexually active before they reach the age of 19 and this increase in sexually active adolescents is found to increase rapidly, especially in Sub-Saharan Africa (Madise et al., 2007). Sexual behaviour among adolescent boys differs from that of the adolescent girls by their biological make-up, socialization and by age difference (age of sexual debut) (Meekers, 1994). Numerous factors however account for these behavioural changes which sometimes lead to risky sexual behaviour among adolescents (Bastien, Kajula, & Muhwezi, 2011). These factors include friends, families, communities and socio-economic status or background of the adolescent, which is the most influential factor.

Socio-economic status of adolescents define their educational level, household wealth, household structure, living arrangements and occupation ( Madise et al., 2007). Langille et al. (2005) also defined socio-economic status by including real income. Socio-economic status

of adolescents is found to have a strong association with adolescent sexual behaviour and decisions as adolescents from poor socio-economic backgrounds are more likely to engage in risky sexual behaviours that are detrimental to their health and well-being (Awusabo-Asare & Annim, 2008). Fatusi & Hindin (2010) confirmed the previous assertion in their studies that identified low socio-economic status as a pathway to risky sexual behaviour among adolescents. They further gave an instance where pregnancy among adolescent girls from lower socio-economic backgrounds was found to be high as compared to those from higher socio-economic backgrounds (Fatusi & Hindin, 2010).

Adolescent sexual behaviours are the activities that enable the adolescent to express his/her sexuality (Esere, 2006). This is influenced by their sexual orientation, financial needs and power (Ampofo, 2001). Sexual behaviours therefore help adolescents identify their sexualities but become risky when the activity becomes a threat to the health and well-being of the adolescent (Fatusi & Hindin, 2010). These risky sexual behaviours are what Darteh & Nnorom (2012) describe as early sexual debut, multiple sexual partners, and non-use of condom for those in active sexual relationships.

Doyle et al., (2012) established the fact that multiple sexual partnerships is not a risky sexual behaviour but becomes risky when the act is concurrent. They further explain that for multiple partnership to be precarious to the health and well-being of the adolescent, sexual relationships with partners should be studied within durations and its overlap within a particular time period, which was described by Xu, Luke, & Msiyaphazi Zulu (2010), as concurrent partnership. Risky sexual behaviours among adolescents if uncontrolled could lead to diverse adverse effects on the adolescents and their future generations (Ayalew, Mengistie, & Semahegn, 2014). These negative effects include unintended pregnancies,

sexually transmitted infections and abortion (Gupta & Mahy, 2003). These negative consequences of adolescent risky sexual behaviour contribute to the high mortality and morbidity rate apart from other cause-specific death rates among adolescents, who are the future stakeholders of nations, also referred to as the “Window of Hope” especially in developing nations (Awusabo-Asare et al., 2006).

### **2.3 Adolescent Education and Sexual Behaviour**

Increasing years of formal education or schooling improves the individual well-being and general development. Apart from the mass media, schooling serves as a source of adolescent sexual and reproductive health education (Esere, 2008). In an analysis by Fatusi & Hindin (2010), it was established that increasing level of adolescent education would delay early sexual debut, marriage and childbirth among female adolescents. This is evident in studies conducted in sub-Saharan African countries including Ghana, Kenya, Mali, Togo and Zimbabwe. These studies showed an increasing year of formal education accounting for a delay in the age at first sexual intercourse to about a mean age of 15.7. There is also a delay in age at first marriage, an increased rate of condom use and delay in childbirth among educated female adolescents compared to the less educated ones (Agyei, Biritwum, Ashitey, & Hill, 2000; Gupta and Mahy, 2003; Hargreaves et al., 2008 & Meekers, 1994).

Increased years of schooling also prevent unintended pregnancies among adolescent females reducing the health and psychological effects of anaemia, underweight of babies, stress, stigmatisation, abortion and most seriously maternal death. Fatusi & Hindin (2010) however counteracts the positive influence of education on adolescent sexual behaviour by establishing the fact that even though education is found to delay age at first sex, schooling in itself creates the social environment that encourages peer-relationships and other

relationships with adults especially teachers. It was further stated that, these relationships rather aid early sexual debut which accounts for poor academic performance, school drop-out with its long-term effect on the adolescents' education and that of their future children. This assertion was confirmed by Darteh and Nnorom (2012) when they found no relationship between educational level of adolescents and sexual behaviour. In analysing data from sub-Saharan Africa, (Madise, Zulu, & Ciera, 2007) also found that in-school adolescent females from Burkina-Faso were more likely to initiate sex early compared to out-of -school adolescents.

School-based programs which include reproductive health education in their curriculum improve adolescent sexual and reproductive health but much emphasis is placed on Sexually Transmitted Infections (STIs) especially HIV (Paul-Ebhohimhen, Poobalan and Teijlingen, 2008). It was found that school-based sexual and reproductive health education does not benefit out-of-school adolescents, especially those from poor financial backgrounds. This was confirmed by Udigwe et al. (2014) in their study in Nigeria, which found that in-school adolescents were more abreast with sexual health education as compared to their out-of-school counterparts. Meanwhile adolescent education on sexual and reproductive health is very essential in achieving a healthy transition.

Practical education on healthy sexual behaviours especially the practical or demonstrational use of condoms was identified by Bankole & Malarcher (2010) to promote the most appropriate and correct use of condoms. A study conducted across four sub-Saharan Africa countries including Ghana, found that majority of adolescents between the ages of 15 and 19 years had little knowledge on the correct methods of condom use (Bankole & Malarcher, 2010). But as part of the school curriculum, in-school adolescents who received sex

education, acquired adequate knowledge on the right ways of using a condom (Kirby et al., 2007). Unfortunately, out-of-school adolescents have little knowledge on the correct ways and the relevance of condom use. Findings from Uganda reported a higher rate of condom use among in-school female adolescents compared to their out-of-school counterparts while the males had an inverse relationship where there is an increased use of condom among out-of-school adolescent males and a lower usage among the in-school-adolescents (Madise et al., 2007).

#### **2.4 Household Wealth and Adolescent Sexual Behaviour**

There is a relationship between household wealth and adolescent sexual behaviour (Biddlecom, Awusabo-Asare, & Bankole, 2009). Adolescents with wealthier parents or from a higher economic background can make better and healthier sexual decisions since resources and means are available or easily accessible in promoting healthier sexual behaviours. For instance adolescents from households with higher wealth status were identified to use condom consistently and correctly and are more likely to delay sex at an early age as compared to adolescents from poor households (Biddlecom et al., 2009; Stephenson, Simon, & Finneran, 2014). Fatusi & Hindin (2010) in reviewing and analysing literature from developing countries, found that by controlling for schooling and parental connectedness, lower parental wealth have a strong association with risky sexual behaviour and early sexual debut. This is because adolescent females especially from poor socio-economic households are more likely to resort to commercial sex in the absence of employment opportunities and social support systems. This enables them to financially sustain themselves through school and in providing other basic necessities for themselves (Sommer, 2009).

Using the 2003 DHS of Kenya and Ghana, Awusabo- Asare & Annim (2008) have proven the fact that there is a higher probability for adolescent males from the highest and middle wealth quintile to engage in multiple concurrent sexual partners because wealthier adolescent males have the financial resources and power that enable them finance such relationships. This act is also backed by the socialization nature of the Ghanaian society, in which adolescent males are socialized to be sexually adventurous than the female adolescents. Poor female adolescents are also exposed to abuse or rape and HIV infections since they have no negotiating power (Tiruneh, 2004; Madise et al., 2007).

As a result of household financial difficulties, a significant number of parents from poor economic background in Tanzania were identified to tacitly encourage or arrange their female adolescents into the practise of concurrent partnerships (CPs) in order to bring money and other consumer goods home (Fehringer et al., 2012). Adolescent female financial independence also encourages female adolescents to engage in multiple concurrent partnership with the intention of keeping the wealthy men or boys while still keeping another for social outing as compared to the adolescent males (Odimegwu, 2005).

## **2.5 Place and Region of Residence and Adolescent Sexual Behaviour**

Adolescents from urban residence are thought to practise safer sexual behaviours as compared to their rural counterparts (Madise et al., 2007). Early sexual debut and multiple-sexual partners were found to be high among rural adolescents then adolescents living in the urban centres (Voeten, Egesah, & Habbema, 2004). It is established that rural adolescents are confronted with lower years of education, poor socio-economic status and poor health services which serves as a contributing factor towards rural adolescent's risky sexual behaviours (Doku, 2012). Doodoo (2004) in a study in Kenyan slum found that socio-

economic difficulties associated with urban livelihood also compel adolescents from poor urban slums to engage in risky sexual behaviours such as early sexual debut and multiple concurrent partners as compared to rural adolescents. There is therefore the element of socio-economic factors influencing risky sexual behaviours among adolescent from both urban and rural residence.

Mean age at first sexual intercourse, 13.3 years and 15.1 years was found among urban adolescent males and females respectively, especially those from the most affluent parts of Ghana as compared to 15.5 years and 15.2 years for both males and females respectively from rural areas (Agyei, Biritwum, Ashitey, & Hill, 2000). This might be as a result of the strong traditional norms and values attached to premarital sex, family ties and social connectedness exhibited in the rural areas of the country. Adolescents from the affluent part of urban areas are exposed to social media and affected by the breakdown of family ties and parental guidance. To support this argument, adolescent pregnancy is found to be higher among urban females especially those from poor socio-economic backgrounds compared to their rural counterparts in most part of the African Sub region. This was explained to be the result of rapid urbanisation, modernization and high standard of living which leads to the decline in traditional social restraints to early sex.

Furthermore, urban parental monitoring was found to be loosening its effectiveness as compared to the rural parental control and social constraints (Dodoo, 2004). Even though female adolescents from affluent urban areas in sub-Saharan Africa begin sexual intercourse early, their pregnancy rate is relatively low compared to those from the poor urban communities and those from the rural areas. This is because they have easy access to effective contraceptive methods such as condoms, pills and injectable and available health

services in the urban centres. This contributes to the high rate of abortion among the affluent adolescents compared to the low abortion rate among rural and poor urban adolescents (Agyei et al., 2000). Reviewing literature from Kenya Machakos district, Meekers (1994) found that adolescent females are 26.2% less likely than adolescent males with 64.1% likelihood of initiating sex before the age of 16 years. Condom use among rural adolescents was found to be low as against that of the urban adolescents in Burkina-Faso, Malawi and Uganda. This might be the result of inaccessibility of health care services, source and cost of condom in the rural area (Madise et al., 2007).

## **2.6 Religion and Adolescent Sexual Behaviour**

There is little research on the relationship between religious affiliation and adolescent sexual behaviour in Sub-Saharan Africa, of which Ghana is of no exception (Biddlecom, Munthali, Singh, & Woog, 2007). Socialisation of the adolescent within the religious content is found to greatly influence their values, attitudes and sexual practises and behaviours. The religious doctrine and sanctions meted out on premarital sex is found to positively influence the timing of sexual intercourse and other risky sexual activities (Addai, 2000). Research in Sub-Saharan Africa including Ghana found that Muslim adolescent females, as a result of early marriage, have a higher probability of early sexual debut compared to adolescent Christians (Madise et al., 2007). Research by Meekers (1994) in Ghana, Liberia, Kenya and Togo found that unmarried adolescent Muslim females are less likely to have an early sexual intercourse compared to their Christian and traditional counterparts.

Adolescents who attend religious services frequently are more likely to value their religious teachings, hence a greater commitment towards sexual abstinence. This also creates the opportunity to associate with influential adults who positively influence their sexual

behaviours. Certain Christian doctrines also positively influence adolescent sexual behaviour. For instance, Pentecostal and other radical groups are more likely to oppose premarital sex hence advocates for abstinence until marriage and offenders were sanctioned. Adolescents from Catholic and other evangelical Protestant background are more likely to accept and engage in premarital sex and early sexual debut (Addai, 2000). The previous assertion is evident in a study in Nigeria in which adolescents who were affiliated to the Pentecostal religious group were two times more likely to engage in early sexual debut compared to six times likelihood among Muslims (Wusu, 2011). The same study also indicated that religious affiliation have no significant influence on adolescent sexual behaviour but in other studies, religious practises which includes attending religious services regularly, daily reading and practise of the bible or Quran and praying have a positive significant influence on adolescent sexual behaviour (Odimegwu, 2005).

## **2.7 Age and Adolescent Sexual Behaviour**

Age is an important variable that determines the level of risk, awareness, knowledge of protection, ability to access information and services related to sexuality (Doyle et al., 2012). This knowledge enable one to deal with the consequences of early sexual debut and relatively reduce the risks and complications associated with risky sexual behaviours (Kirby et al., 2007). Female adolescents are more likely to experience sex earlier compared to the adolescent male and these increases with age. Significant number of adolescent girls experience sexual intercourse by the age of 15. This number increases by the age of 19 while the adolescent males' age at first sex gradually increases at about 8% from the age of 16 to 19 years. Both adolescent male and female had the same reason for initiating sex and some of these include; they felt like it, expectation of a gift or a reward especially money, partner's

insistence and as a result of coercion, which mostly affect the female adolescents (Biddlecom, Awusabo-Asare, & Bankole, 2009).

In Ghana and most part of sub-Saharan Africa, males are expected to be traditionally older than their female sexual partners and are expected to initiate sex early. An older woman in a sexual relationship with a younger man is however frowned upon in the African society. Awusabo-Asare, Biddlecom, Kumi-Kyereme, & Patterson (2006), established the fact that about 38% female adolescents between the ages of 15 and 19 years are likely to have sexual partners who are five or more years older than them while about 57% had theirs 1-4 years older. It was further explained that the wide age gap between partners had an implication on sexual communication among partners and in condom use, which is likely to increase the risk of unintended pregnancies, high risk of STIs among others. This could be attributed to lack of power to negotiate sex considering the age gap.

The willingness to have sex for the first time is very high among a significant number of adolescents. First sexual intercourses occur spontaneously among adolescents and the use of protection is rare. From a study conducted in Ghana among adolescents, about 60% adolescent girls and 65% adolescent boys between the ages of 15 and 19 years did not use protection during their first sexual intercourse. At least 28% and 26% girls and boys respectively used the male condom with insignificant number of adolescents using other contraception method at first sex. The use of the male condoms in particular serves as a dual protection, that is, to prevent unwanted pregnancy and STIs. This explains the notation that adolescents initiating sex at an early age put them at risk of pregnancy and STIs in the absence of protection (Awusabo-Asare et al., 2006).

## **2.8 Ethnicity and Sexual Behaviour**

Ghana is ethnically heterogeneous but has similar characteristics in respect to their ways of life (GSS et al., 2009). Socialisation of children across the various ethnic groups in the country is also similar especially with female adolescents. There exist a complex household structure in which the extended family is responsible for the communication and monitoring of the child and not necessarily the parent of the child. For instant, among the Dagbon, a sub-group of the Mole- Dagbani in Ghana, socialisation is the responsibility of the community and not necessarily by the parents. The girl child in particular is very much monitored in order to ensure chastity before marriage. Adolescent girls who become pregnant as a result of early sexual debut and before rite of passage were ostracized and that cast a slur on her image and that of her family (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). These practises were in place to control early sexual debut and its consequences.

Also, a study by Afenyadu & Goparaju, (2003) established the importance of rite of passage as practised by certain ethnic groups to usher female adolescents into adulthood. The dipo performed by the people of Dodowa (Ga- Dangbe) ethnic group and other ethnic groups across the country, was mainly performed for females aged 19. Adolescents who get pregnant before the rite were ostracised as outcast and unfit for marriage as indicated by the previous study. As a result of modernisation and education, these rites are being frowned upon by both parents and adolescents hence an increased rate of premarital and early sexual debut among adolescents (Afenyadu & Goparaju, 2003).

In a study by Madise et al.(2007) across some sub-Saharan Africa countries, ethnicity was a significant determinant of age of first sex except for Ghana where ethnicity was insignificant. This seems to counteract the findings of the previous literature which stated the important

role the various ethnic groups in Ghana play in the lives of adolescents especially females. In a general sense, ethnicity as a social and cultural factor, greatly influence adolescent sexual behaviour through values and norms exhibited by the various groups within the sub region (Madise et al., 2007; Munthali & Zulu, 2007).

## **2.9 Conceptual Framework**

The framework concentrates on socio-economic disparities as predictors of adolescent sexual behaviour. The study adapts the rational adaptation model which view sexual behaviours as a means to an end. Thus, lower socio-economic status compels adolescents especially females to engage in risky sexual behaviours, which are associated with complications and have certain health implications (Stephenson et al., 2014). There is therefore an association between socio-economic factors and adolescent sexual behaviours (Meekers, 1994).

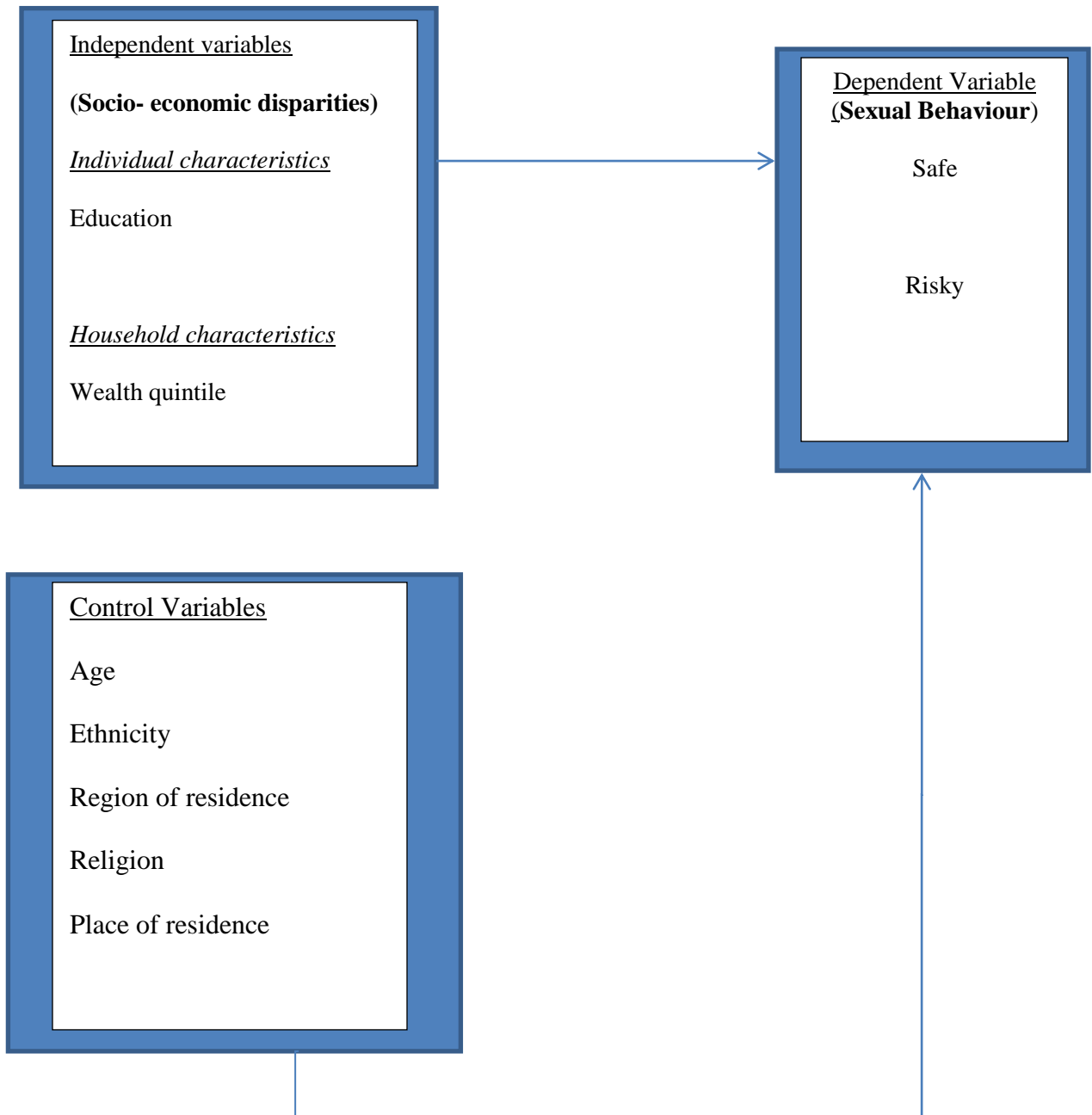
The rational adaptation model was used by Djamba (1997) in conceptualising female sexual behaviour in Africa. It was however argued that sexual decisions among unmarried females are economically rational. Thus, unmarried females initiate sex early as a result of lower financial capital, hence receives money or gifts in an exchange for sex. Financial capital was based on family wealth measured by household amenities. Sexual initiation however has an inverse relationship with financial capital. In order words, lower financial capital results in an early sexual debut and risky sexual behaviour while higher financial capital results in a delay in sexual debut among females. Financial capital or household wealth is therefore an important element of the rational adaptation model. Higher level of education also delay sexual debut and encourage safer sexual behaviour among sexually active individuals. According to Djamba (1997), the rational adaptation model explains the fact that female sexual activities were associated with unequal distribution of resources. This makes females

relatively poorer than males, hence vulnerable to risky sexual activities such as multiple partnership, early sexual debut, in-frequent and non-use of condoms in exchange for a reward.

The Study therefore linked socio-economic factors such as household wealth, individual and household educational level to sexual behaviour among females in Africa. Sexual behaviour was however measured as age at first sex, number of sexual partners and contraceptive use.

The focus here is to examine the differences in socio-economic background and adolescent sexual behaviour as shown in fig 2.1. The independent variables that define socio-economic background include adolescents' educational level, and household wealth quintile. The difference in these variables directly influences the dependent variable, adolescent sexual behaviour. Other demographic variables which are likely to predict the dependent variable include age, ethnicity, place and region of residence and religion.

**Fig 2.1 Conceptual Framework on Socio-Economic Disparities and Adolescent Sexual Behaviour**



Source: Modified from Djamba (1997).

## 2.10 Hypotheses

- ❖ The higher the adolescent's education, the less likely they are to engage in risky sexual behaviours
- ❖ The higher the household wealth of the adolescent, the less likely they are to engage in risky sexual behaviours
- ❖ The younger the adolescent, the less likely they are to engage in risky sexual behaviours

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter looks at the source of data, unit of analysis, measurement of the dependent, independent and control variables, methods of analysis and the limitations of the data. The focus of this research is to study socio-economic disparities and adolescent sexual behaviour in Ghana.

The study deals with two models. The first model looks at the influence of socio-economic factors on adolescent males' sexual behaviour, while controlling for other demographic variables that might influence adolescent sexual behaviours. The second model also concentrates on the female adolescent. The model used for the study was based on the rational adaptation model used by Djamba (1997), with modifications based on the limitations of the Ghana Demographic and Health Survey (GDHS) 2008 dataset. The model would therefore help in studying the socio-economic disparities and how they predict adolescent sexual behaviour in Ghana.

#### **3.2 SOURCES OF DATA**

The data from the 2008 GDHS was used for this study. It is a nationally representative survey conducted under the worldwide Demographic and Health Surveys programme. The 2008 GDHS was designed purposively to collect, analyse and disseminate current and reliable information on household characteristics, sexual activity, fertility levels, marriage, maternal and child health, awareness and behaviour. The 2008 GDHS made available updated estimates of the fundamental demographic and health indicators obtained in the 1988, 1993, 1998 and 2003.

This household-based survey was undertaken by the Ghana Statistical Service, with the aid of stakeholders from other government sectors, researchers, civil society organizations and international organizations. The planning and implementation of the 2008 GDHS was jointly undertaken by the Statistical Service and the Ministry of Health/ Ghana Health Service Management team (GSS et al., 2009). Representative probability samples of more than 12,000 households were selected nationwide. Using a two-stage sampling design, 412 clusters were selected from the master sampling frame, using the systematic sampling method. In order to ensure adequate number of completed individual interviews that would provide an estimate for important indicators with acceptable precision, 30 households were listed within clusters using the systematic sampling.

The data would be used to examine the influence of the independent variable; socio-economic factors such as educational level and wealth quintile on the dependent variable; adolescent's sexual behaviour measured as safe and risky sexual behaviours. The study controlled for variables such as age, place and region of residence, ethnicity and religion. The aim is to examine sexual behaviours among adolescent males and females separately. This is because of the difference in genetic and hormonal make-ups as well as the difference in socio-cultural roles performed by both male and female, and the type of socialization, which influence their attitude towards sexuality (Ampofo, 2001). Out of the total sample used in the data, this research seeks to study unmarried males and females aged between 15 and 19 years, which makes up of 902 and 929 males and females respectively.

### **3.3 UNIT OF ANALYSIS**

The unit of analysis for this study is the individual adolescent. The study excluded married adolescents because it is assumed that they are more vulnerable to sexual experimentations

and relationship instability that makes them susceptible to unintended pregnancies and STI's. Married adolescents are assumed to be sexually active and their sexual behaviour influenced by their spouses, which makes them more likely to practise risky sexual behaviour, which would not give a true reflection of sexual behaviour among adolescents (Biddlecom, Awusabo-Asare & Bankole, 2009). Besides, just 9.4 per cent adolescent females and 0.9 per cent adolescent males were married. In analysing sexual behaviours among adolescents, the dependent, independent and control variables were categorised and measured.

### **3.4 METHOD OF ANALYSIS**

#### **3.4.1 Categorization of variables**

This section describes how the dependent, independent and controlled variables would be categorised and measured.

##### **3.4.1.1 Dependent Variable**

In measuring the outcome variable, sexual behaviour, a composite measure was created using age at first sex to derive the variable "Ever had sex". Respondents who never had sexual intercourse were coded as 0 representing never had sex while those who reported an age at first sex were coded as 1 representing ever had sex. The other variable used is "condom use". In order to determine the effectiveness of condom use, the study combines condom use every time with the last sexual partner, next to last sexual partner and second to last sexual partner. Condom use consistently was therefore re-coded as a dummy variable, with 0 representing "no" and 1 representing "yes". Since sexual behaviour in and of itself is not a negative attitude (Fatusi & Hindin, 2010), the study created a composite measure to be able to measure the risky aspect of sexual behaviour. The variables ever had sex and condom use consistently was further combined to obtain inactive sexual behaviour (abstinence), safe

sexual behaviour representing sexually active adolescents who uses condom and risky sexual behaviour representing sexually active adolescents who do not use condom. The proportions representing safe sexual behaviour were 4.6 and 3.0 per cent for males and females respectively hence, added to the inactive categories in creating the category, “Safe” sexual behaviour. The dependent variable “Sexual Behaviour” became a dummy variable with safe sexual behaviour re-coded as 0 and risky sexual behaviour as 1. Age at first sex was used because it is assumed that the variable, age at first sex, provides the relevant number of unmarried adolescents who have ever had sexual intercourse and those who never had sexual intercourse. Condom use consistently was included because the consistency in condom usage reduces the risk of both Sexually Transmitted Infections and unintended pregnancies among adolescents.

#### **3.4.1.2 Independent Variables**

The independent variable education, measures the adolescent’s highest educational level attained. This was categorised as “no education, primary, middle/JHS, secondary and higher education”. For the purpose of this study, educational level was re-coded as 0 indicating no education, 1 representing primary education and 2 representing middle/JHS and 3 representing secondary+ education. “Household wealth quintile was measured by household assets reduced into five categories known as wealth quintiles, which were coded as 1 representing poorest, 2 representing poorer, 3 representing middle, 4 representing richer and 5 representing richest.

#### **3.4.1.3 Control Variables**

The control variables used in this study include age, which is a continuous variable measuring adolescent age from 15 to 19 years. Ethnicity was categorised into Akan,

Ga/Dangme, Ewe, Guan, Mole-Dagbani, Grussi, Gruma, Mande and other ethnic groups. These were also re-coded as Akan, Ga/Dangme, Ewe, Mole-Dagbani, and others. Religion was categorised into Catholic, Anglican, Methodist, Presbyterian, Pentecostal/Charismatic, other Christians, Moslem, Traditional/Spiritualist, Others and other minor religions, For the purpose of this study, religion was re-coded into Catholics, Orthodox, Pentecostal/Charismatic, Muslim, Traditional and Other minor religions, where others and other religion were re-categorised as others. Region of residence was categorised into “Western, Central, Greater-Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper-East and Upper-West” and place of residence was categorised into “Urban and Rural”.

### **3.4.2 Data Analysis**

Statistical Package for Social Sciences (SPSS) version 20 was used in analysing the data. This aided in testing for significance by employing the univariate, bivariate and multivariate techniques. The univariate technique explored frequencies and percentages of the variables of interest. The relationship between the outcome variable and the main independent and controlled variables were explored using cross-tabulations. A test for significance using chi-square test at 95% confidence interval and a significant level of 0.05 ( $p < .05$ ) were conducted when employing the bivariate technique in testing for association. The relationship between the dependent variable, independent and the controlled variables was tested using the multivariate technique in which binary logistic regression was used in running the dependent variable, sexual behaviour which was measured under the categories, “safe and risky”.

### **3.5 LIMITATIONS OF THE DATA**

Due to the sensitivity with regard to issues concerning sexual behaviours, adolescents are more likely to be reluctant in answering questions concerning their sexual activities and are

more likely to under and over report their age at first sex and condom use during sexual intercourse. There could also be bias in reporting these cases as female adolescents might over report their age at first sex while the male adolescents are likely to under-report their age at first sexual intercourse. This is as a result of the gender socialisation which encourages sexual experimentation among adolescent males in order to show their masculinity and maturity (Ampofo, 2001).

There could also be misreporting as a result of memory lapses since some of the questions regarding age at first sex and condom use were based on past events mostly in the last 12 months.

Parental co-residence, orphanage and other living arrangements were found by other studies to significantly predict adolescent sexual behaviour (Ayalew et al., 2014). Unfortunately living arrangement and orphanage were limited to children under the age of 18, which exclude adolescents ages 18 and 19 for this study.

Despite these limitations, the information provided by the respondents was considered accurate for use in this study.

## **CHAPTER FOUR**

### **BACKGROUND CHARACTERISTICS OF RESPONDENTS AND ADOLESCENT SEXUAL BEHAVIOUR**

#### **4.1. Introduction**

This chapter gives a description of the study area, in addition to the socio-economic characteristics of adolescent males and females in frequencies and percentages. The socio-economic characteristics include adolescent educational level, household wealth quintile, the age of adolescent, ethnicity, place of residence, region and religion. The description also includes the sexual behaviour of adolescents.

#### **4.2 Background Characteristics of the study area**

Ghana is geographically located on the West African coast, with a total land area of 238,537 square kilometres. It shares a boarder with Togo on the east, Burkina Faso in the north and Cote d'Ivoire on the west. On the southern border is the Gulf of Guinea, which extends to about 560 kilometres (GSS, 2009). Ghana is made up of ten administrative regions with several ethnic groups.

According to the 2010 population and housing census, Ghana recorded a youthful population with adolescents between the ages of 15 and 19 years representing 271,247 (11%) of the total population (GSS, 2013). About 3.6 and 8.2 per cent of adolescent males and females between the ages of 15 and 19 years respectively had their first sexual intercourse before the age of 15. Adolescents who ever had sex accounted for about 200 males and 383 females, of which 31.4 and 25.9 per cent males and females respectively used condom. Among the 902 never-married adolescent males, 15.2 per cent had sexual intercourse in the past 12 month preceding the survey, of which 37.6 per cent used condom. Among the adolescent females,

929 were unmarried and 22.7 per cent of that had sexual intercourse preceding the survey, out of which only 25 per cent used condom (GSS et al., 2009).

### **4.3 Sexual Behaviour among adolescents**

Sexual behaviour among adolescents would be safe if the adolescent decide to abstain from sex or use condom as a form of protection if they decide to be sexually active. These would promote a healthy adolescent life and reduce the outcomes of risky sexual behaviour such as unintended pregnancies and a higher risk of acquiring STI's. Sexual behaviour could be risky only if the adolescent is sexually active but do not use condom every time they have sex as a form of protection. In reducing the risks associated with sexual behaviour Biddlecom et al. (2007) in reviewing the WHO report, recommend a consistency in condom usage for effective protection among the sexually active adolescents.

Table 4.1 shows the percentage distribution of sexual behaviour among adolescents. Out of the total number of 902 unmarried adolescent males, 755 representing 83.7 per cent practise safe sexual behaviour while 147 representing 16.3 per cent practise risky sexual behaviour. This is an indication that most adolescent males either abstain or uses condom anytime they engage in sexual intercourse. An increasing level of education enlightens adolescents on the importance of abstinence. Condom use and its consistency could also be a contributing factor (Biddlecom et al., 2007).

**Table 4.1: Distribution of Adolescents by Sexual Behaviour**

Sexual Behaviour	Male		Female	
	N	%	N	%
Safe	755	83.7	671	72.3
Risky	147	16.3	258	27.7
Total	902	100	929	100

**Source: GSS, 2008.**

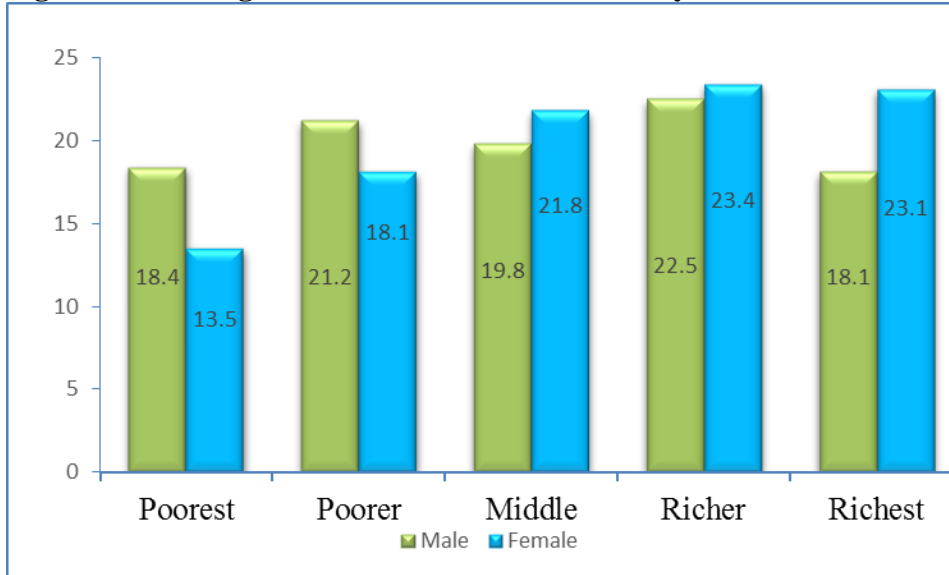
Table 4.1 also illustrate the percentage distribution of adolescent females' sexual behaviour. About 671 adolescent females representing 72.3 per cent engage in safe sexual behaviour, while 258 females representing 27.7 per cent engage in risky sexual behaviour. The increased percentage of adolescent females who engage in safe sexual behaviour accounts for the increasing influence of religious doctrine that prohibits premarital sex and that shapes the sexual life of most adolescent girls (Odimegwu, 2005). Higher level of education could also contribute to the higher proportion of adolescent females practising safer sex.

As with the adolescent males, the females also delay sexual debut either by abstaining from sex or consistently using condom every time they have sexual intercourse. Higher level of education is also assumed to increase adolescent knowledge on sexual and reproductive health issues (Madise et al, 2007). Adolescent females are also more likely to engage in risky sexual behaviour than their male counterparts because they are economically powerless and bounded by societal norms which do not allow them to negotiate for safe sex (GSS at al., 2009). This accounts for the slightly higher percentage of adolescent females who engage in risky sexual behaviour compared with the adolescent males.

#### **4.4 Household wealth index of adolescents**

The wealth status of adolescent determines their ability to access sexual and reproductive health services. Adolescents from Higher wealth quintile (richer and richest) are more likely to have a safe sexual behaviour since they have the resources to access information, health services and a higher likelihood to negotiate for safe sex compared with those from the lower wealth quintile (middle, poorer and poorest) (Madise et al., 2007). Having a better knowledge of the proportion of adolescents within each wealth quintile is very important for this study.

Figure 4.1 shows the percentage distribution of adolescents' household wealth quintile. Adolescent males from richer household represent 22.5 per cent while those from the poorer households represent 21.2 per cent. Those from the middle, poorest and richer households also represent 19.8, 18.4 and 18.1 per cent respectively. These distribution of adolescent males by wealth quintile shows that about 40.6 per cent of the males belong to households with higher wealth quintile (richer and richest) as compared with 59.4 per cent from the lower wealth quintiles (middle, poorer and poorest).

**Fig 4.1: Percentage Distribution of Adolescents by Household Wealth Quintile**

**Source: GSS, 2008.**

The percentage distribution of adolescent females' household wealth is also shown in figure 4.1. This shows that 23.4 per cent of adolescent females are from the richer wealth quintile, 23.1 from the richest wealth quintile whilst 21.8, 18.1 and 13.5 per cent belong to households with middle, poorer and poorest wealth quintiles respectively. The proportion of adolescent females who belong to households with higher wealth quintiles (richer and richest) summed up to 46.5 per cent as compared with a greater proportion from the lower wealth quintiles (middle, poorer and poorest), which also summed up to 53.4 per cent.

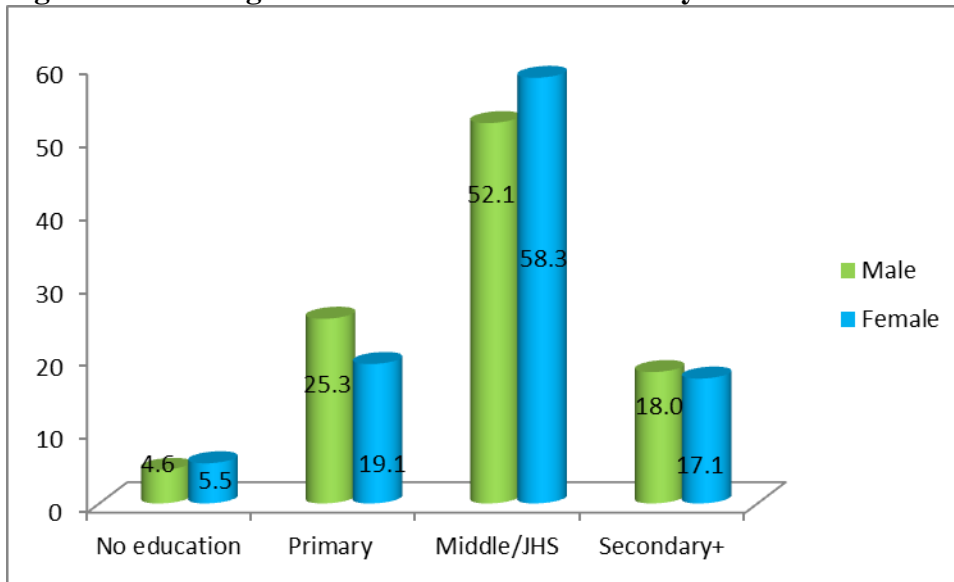
The proportion of adolescent males in the lower wealth quintile is a little higher than that of the adolescent females but the difference is insignificant. This is an indication that the proportion of adolescent males who engage in risky sexual behaviours are lesser than adolescent males who engage in safer sexual behaviour. This is in consensus with literature that stated that adolescent males from higher wealth quintiles were likely to engage in risky sexual behaviour because of their wealth status and is able to afford concurrent sexual

partnerships (Awusabo- Asare & Annim, 2008). Adolescent females from the lower wealth quintile are also likely to resort to sex as an exchange for financial rewards.

#### **4.5 Educational Level of Adolescents**

Formal education creates the enabling environment for adolescents to acquire the necessary knowledge and skills that enhances their awareness of the sexual changes that accompanies their transition from childhood to adulthood. Adolescents with a higher level of education have a greater chance of engaging in safe sexual behaviour compared with those with little or no education (Fatusi & Hindin, 2010).

From figure 4.2, adolescent males with Middle/JHS education represents 52.1 per cent, those with primary education represent 25.3 per cent, secondary and no education representing 18 and 4.6 per cents respectively. There is a greater concentration of adolescent males at the primary and Middle/JHS levels of education, with quite a little proportion at the secondary and above and a smaller proportion having no education. As observed from figure 4.2, the proportion of adolescent males dropped as they proceed to secondary and higher levels of education.

**Fig. 4.2: Percentage Distribution of Adolescents by Educational level**

**Source: GSS, 2008.**

Figure 4.2 also shows that majority of adolescent females representing 58.3 per cent had middle/JHS education, 19.1 had primary education whilst 17.1 and 5.5 per cents had secondary and above and no education respectively. There is a negligible difference between the proportion of adolescent males within the various educational levels and that of the adolescent females. At least a majority of adolescents obtained some sort of basic education and would be better informed with issues concerning reproductive and sexual health than those with no education. Averagely, adolescents percentage decreased by 37.7 per cent as they progressed to the higher levels of education and this is evidence from figure 4.2. This could be as result of financial constraints that prevent household from enrolling their adolescents especially the female adolescents into a higher education, hence resort to risky sexual behaviours in order to finance themselves. This risky sexual behaviour is likely to result to a higher rate of adolescent pregnancy that also account for the drop-out rate among adolescent girls (Marrone, Abdul-Rahman, De Coninck, & Johansson, 2014).

#### 4.6 Age of the Adolescents

The age of the adolescent determines their level of risk, awareness, knowledge of protection, ability to access information and services related to sexuality (Doyle et al., 2012). Age is therefore an important variable in this study and it is imperative to know the age distribution of adolescents in determining the age at risk.

Table 4.2 shows the age distribution of adolescent males with a mean age of 17 years. About 231 representing 25.6 per cent of the adolescent males were 18 years, 209 representing 23.2 per cent were 16 years old whilst 162 and 150 representing 17.9, 16.7 and 16.6 per cent were 15, 19 and 17 years old respectively.

**Table 4.2: Age Distribution of Adolescent Males**

Age	Male		Female	
	N	%	N	%
15	162	17.9	211	22.7
16	209	23.2	181	19.5
17	150	16.6	190	20.4
18	231	25.6	210	22.6
19	150	16.7	137	14.7
Total	902	100	929	100

**Source: GSS, 2008.**

Table 4.2 also shows the age distribution of adolescent females with a mean age of approximately 17 years. Out of the total of 929 adolescent females, 211 representing 22.7 per cent were 15 years old, 210 representing 22.6 per cent were 18 years, 190, 181, and 137 representing 20.4, 19.5 and 14.7 per cent were 17, 16 and 19 years old respectively.

#### 4.7 Place of Residence of Adolescents

Place of residence of adolescents determine the kind of sexual and reproductive health services that would be available and accessible to the adolescent. According to the Ghana

Statistical Services report in 2004 cited by Marrone et al. (2014), rural residents have a limited number of health facilities and schools compared to urban residents. This creates a disparity in accessing and promoting a safer sexual behaviour. Knowing the proportion of adolescents living in either urban or rural areas is necessary in this study in order to determine the proportion at risk of any risky sexual behaviour.

Table 4.3 depicts the distribution of adolescent males by place of residence. It has been observed that majority of adolescent males summing up to 536 representing 59.4 per cent resides in rural areas whilst 366 representing 40.6 per cent lives in urban areas of Ghana.

**Table 4.3: Distribution of Adolescents by Place of Residence**

Place of Residence	Male		Female	
	N	%	N	%
Urban	366	40.6	461	49.7
Rural	536	59.4	467	50.3
Total	902	100	929	100

**Source: GSS, 2008.**

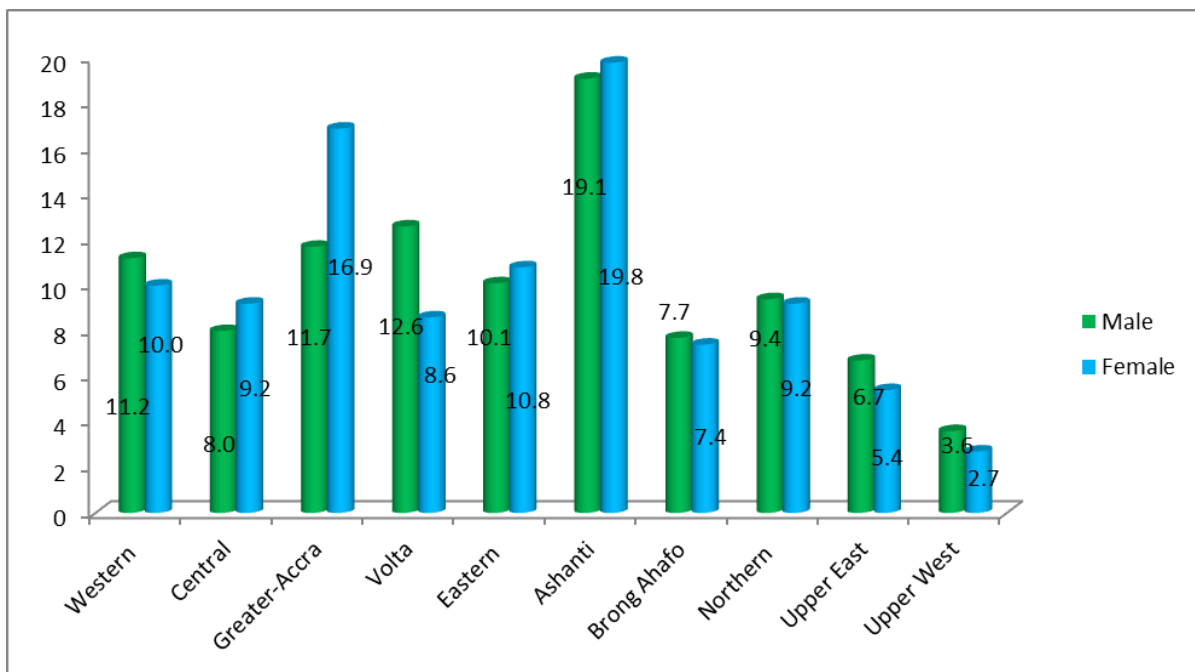
From table 4.3, adolescent females who reside in rural settings accounted for 467 representing 50.3 per cent whilst the urban adolescent females accounted for 461 representing 49.7 per cent. There was no significant difference (0.6%) between adolescent females residing in rural areas and those in urban areas.

#### **4.8 Region of Residence of Adolescents**

Regional distribution of adolescents is relevant for this study because it would help determine the region with the greatest proportion of adolescents engaging in either safe sexual behaviour or risky sexual behaviour for further recommendation and policy implementation.

Figure 4.3 shows the percentage distribution of adolescents by their regions of residence. The most represented region for the adolescent males is Ashanti region, representing 19.1 per cent. Volta region represents 12.6 per cent; Greater-Accra and Western regions represent 11.7 and 11.2 per cents respectively. Eastern (10.1%), Northern (9.4%), Central (8.0%), Brong Ahafo (7.7%), Upper-East (6.7%) and Upper-West (3.6%) in descending order.

**Fig 4.3: Percentage Distributions of Adolescents by Region of Residence**



**Source: GSS, 2008.**

Figure 4.3 also shows a percentage distribution of adolescent females' regions of residence. About 19.8 per cent adolescent females are from the Ashanti region, 16.9 per cent from Greater-Accra region, 10.8 per cent from Eastern region, 10.0 per cent are from the Western region. Both Central and Northern regions were represented by 9.2 per cent alike whilst Volta (8.6%), Brong Ahafo (7.4%), Upper East (5.4%) and Upper West (2.7%) follows in a descending order.

#### 4.9 Ethnicity of Adolescents

Ethnic background of adolescents is an important factor that shapes their sexual behaviour through its norms and values. Ghana is ethnically heterogeneous but the ethnic groups share similar characteristics with respect to their ways of life, including methods of socialisation (Kumi-Kyereme, Awusabo-Asare & Biddlecom, 2007).

Table 4.4 shows the ethnic distribution of adolescents. The Akan ethnic group constitute the largest proportion, accounting for 424 adolescent males representing 46.9 per cent. The Mole-Dagbani consist of 208 adolescent males representing 23.1 per cent, the Ewes makes up 147 representing 16.3 per cent, while Ga/Dangme and other minor ethnic groups sum up to 6.5 and 7.1 per cents respectively.

**Table 4.4: Distribution of Adolescent Males by Ethnic Groups**

Ethnicity	Male		Female	
	N	%	N	%
Akan	424	46.9	479	51.6
Ga/Dangme	59	6.5	62	6.7
Ewe	147	16.3	110	11.8
Mole-Dagbani	208	23.1	204	22.0
Others	64	7.1	74	7.9
Total	902	100	929	100

**Source: GSS, 2008.**

Table 4.4 also shows the distribution of ethnic groups of adolescent females. Majority of the adolescent females also belong to the Akan ethnic group which summed up to 479 representing 51.6 per cent. Mole-Dagbani was also well represented with 204 adolescent females representing 22 per cent, the Ewes accounted for 110 representing 11.8 per cent, while 62 (6.7%) and 74 (7.9%) were Ga/Dangme and other minor ethnic groups respectively.

#### 4.10 Religion of Adolescents

The sexual life and behaviour of the adolescent is shaped by religious doctrines, values, attitudes and beliefs (Addai, 2000). Studying the religious distributions of the adolescents would better explain the effectiveness of religious influence on adolescent sexual behaviour.

Table 4.8 shows the count and percentage distribution of the various religious groups of the adolescents. The largest is the Pentecostal/Charismatic religious group which add up to 395 adolescent males representing 43.7 per cent. Those who belong to the Orthodox faith adds up to 177 males representing 19.6 per cent, whilst 131 (14.6%), 109(12.0%), 47(5.2%) and 44(4.9%) were Muslim, Catholic, Other religions and Traditional religions respectively.

**Table 4.5 Distribution of Adolescent Males by Religion**

Religion	Male		Female	
	N	%	N	%
Catholic	109	12.0	122	13.2
Orthodox	177	19.6	167	18.0
Pentecostal/Charismatic	395	43.7	458	49.3
Muslim	131	14.6	134	14.5
Traditional	44	4.9	29	3.2
Others	47	5.2	17	1.9
Total	902	100	929	100

**Source: GSS, 2008.**

Table 4.5 also shows the count and percentage distributions of adolescent females by their various religious groups. From the table, 122 adolescent females representing 13.2 per cent were Catholics, 167 representing 18.0 per cent belong to the Orthodox faith, the largest; Pentecostal/Charismatic summed up to 458 representing 49.3 per cent. The other religious groups include Muslim, Traditional, and other minor religions which also accounts for 134 (14.5%), 29 (3.2%) and 17 (1.9%) respectively.

## CHAPTER FIVE

### RELATIONSHIP BETWEEN SOCIO-ECONOMIC CHARACTERISTICS AND ADOLESCENT SEXUAL BEHAVIOUR

#### 5.1 Introduction

This chapter examined the association between socio-economic characteristics (Educational level and wealth status) of adolescents and their sexual behaviour. Other socio-demographic factors such as age, place of residence, region, ethnicity and religion were controlled for in order to eliminate their influence on the main independent variables (Educational level and household wealth). The association was measured using the bivariate analyses technique, thus, Pearson chi-square test at p-value <0.05.

#### 5.2 Educational level and sexual behaviour

With the increasing years of formal education, adolescents are likely to acquire adequate knowledge on sexual and reproductive health that would promote safe sexual behaviour among them. According to Fatusi & Hindin (2010), increasing level of adolescent education would delay early sexual debut, delay marriage and childbirth among female adolescents and increase the use of condom as a form of protection.

The chi-square result shows that there is no association between educational level of adolescent male and sexual behaviour ( $\chi^2=6.025$ , p-value= 0.110). From table 5.1, adolescent males with no education who engage in safe sexual behaviour constitute 85.4 per cent whilst 14.6 per cent engage in risky sexual behaviour, those with primary education who engaged in safe sexual behaviour make up 85.5 per cent whilst 14.5 per cent engaged in risky sexual behaviour, adolescent males with Middle/JHS education who engaged in safe sexual behaviour constitute 84.9 per cent whilst 15.1 per cent engaged in risky sexual behaviour,

and those with secondary+ education who engaged in safe sexual behaviour make up 77.3 per cent whilst 22.7 per cent engages in risky sexual behaviour. This finding, in a way agree with the findings of Kirby, Laris, & Rolleri (2007), which indicated that sexual education and knowledge acquired in schools promote the use of condom as a form of protection among in-school sexually active adolescents. The higher proportion practicing safe sexual behaviour is also expected as GSS (2009) recorded a high level of abstinence among never married adolescents. As illustrated from the table, greater proportions of adolescent males engage in safe sexual behaviour but the pattern decreases as the level of education increases and the proportion who engage in risky sexual behaviour increases as the educational level increases. Darteh & Nnorom, (2012), who also found no relationship between educational level and adolescent sexual behaviour, explained that schooling in itself creates the environment for risky sexual behaviour as adolescents no longer live under the protective eyes of their parents or guardians hence more likely to be influence by peers.

**Table 5.1: Percentage Distribution of Adolescent Males by Educational Level and Sexual Behaviour**

Educational level	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
No Education	85.4	14.6	41(100)
Primary	85.5	14.5	228(100)
Middle/JHS	84.9	15.1	470 (100)
Secondary+	77.3	22.7	163 (100)
Total	83.7	16.3	902 (100)
$\chi^2= 6.025$			df= 3
			P-value= 0.110

**Source: GSS, 2008.**

The result of the chi-square shows no relationship between adolescent female educational level and sexual behaviour ( $\chi^2= 5.780$ , p-value= 0.123). As illustrated from table 5.2, majority of adolescent females are practicing safe sexual behaviour just as the adolescent males. This result is again expected as the 2008 Demographic and Health Survey of Ghana

reported a high level of abstinence among young adults (GSS, 2009), which includes the adolescents. Adolescent females with no education who engage in safe sexual behaviour accounted for 84.3 per cent as against 15.7 per cent who engage in risky sexual behaviour. 70.1 per cent against 29.9 per cent and 70.8 per cent against 29.2 per cent with primary and Middle/JHS education engage in safe against risky sexual behaviour respectively. Those with secondary+ education who engaged in safe sexual behaviour accounted for 75.9 per cent against 24.1 per cent who engaged in risky sexual behaviour. The proportion of unmarried adolescent females with no education who practised safe sexual behaviour could be influenced by traditional and religious norms and values that prohibit premarital sex among adolescent females hence abstinence (Addai, 2000). Adolescent females with primary and Middle/JHS education were identified to have insufficient knowledge on protection, sexual and reproductive health hence exposed to risky sexual behaviour (Marrone et al., 2014), as compared with those with secondary+ education. Again, Marrone et al. (2014) found an increasing use of condom among adolescent females with secondary education, which is evidence in this study.

**Table 5.2: Percentage Distribution of Adolescent Females by Educational Level and Sexual Behaviour**

Educational level	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
No Education	84.3	15.7	51 (100)
Primary	70.1	29.9	177(100)
Middle/JHS	70.8	29.2	541 (100)
Secondary+	75.9	24.1	160 (100)
Total	72.3	27.7	929 (100)
$\chi^2= 5.780$	df= 3	P-Value= 0.123	

Source: GSS, 2008.

### 5.3 Wealth index and Adolescent Sexual Behaviour

Adolescents' wealth status is a necessary factor in determining their ability to access sexual and reproductive health services and in making decisions regarding their sexual behaviour. In a study by Biddlecom et al. (2009), adolescents from wealthier households were identified to make better and healthier sexual decisions since resources and means are available or easily accessible in promoting healthier sexual behaviour. It is therefore important for this study to know the association between wealth and adolescent sexual behaviour for further recommendation.

Table 5.3 illustrates the percentage distributions of adolescent males by household wealth quintile and sexual behaviour. From the table, out of a total of 902 adolescent males distributed across the various wealth quintiles, 83.7 per cent practised safe sexual behaviour whilst only 16.3 per cent practised risky sexual behaviour. There is no association between wealth quintile and sexual behaviour among adolescent males ( $\chi^2= 4.862$ , p-value= 0.302). 85.5 per cent of the adolescent males from the poorer wealth index practised safe sexual behaviour whilst 14.5 per cent practised risky sexual behaviour, 85.8 per cent from the poorer wealth quintile practised safe sexual behaviour whilst 14.2 per cent within the same wealth quintile practised risky sexual behaviour. 83.8 per cent from the middle wealth quintile practised safe sexual behaviour whilst 16.2 per cent practised risky sexual behaviour. Adolescent males from the richer wealth quintile who practised safe sexual behaviour are 78.8 per cent whilst 21.2 per cent practised risky sexual behaviour. 85.3 per cent from the richest wealth quintile also practised safe sexual behaviour whilst 14.7 per cent practised risky sexual behaviour. Even though a small proportion of the adolescent males are into risky sexual behaviour, a higher proportion in the richer wealth quintile engaged in risky sexual

behaviour. Since the wealth quintile of adolescents was computed based on household assets and wealth which they have no control over (Marrone, Abdul-Rahman, De Coninck, & Johansson, 2014), they would therefore not have full financial control over resources that would enable them have access to sexual and reproductive health services. The greater proportion of adolescent males practising safe sexual behaviour irrespective of their wealth status and some engaging in risky sexual behaviour is indicative that wealth status does not necessarily influence adolescent male's sexual behaviour. This could be explained by Madise et al. (2010), which found that wealth does not influence sexual behaviour among adolescents but their main objective could be out of curiosity and experimentation.

**Table 5.3: Percentage Distributions of Adolescent Males by Wealth Index and Sexual Behaviour**

Wealth Index	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Poorest	85.5	14.5	166 (100)
Poorer	85.8	14.2	191 (100)
Middle	83.8	16.2	178 (100)
Richer	78.8	21.2	203 (100)
Richest	85.3	14.7	164 (100)
Total	83.7	16.3	902 (100)
$\chi^2= 4.862$	df= 4	P-value= 0.302	

**Source: GSS, 2009.**

Table 5.4 shows the percentage distributions of adolescent females by wealth quintile and sexual behaviour. As with the adolescent males, greater proportion of adolescent females across the various wealth quintiles engaged in safe sexual behaviour representing 72.2 per cent as against 27.8 per cent who practised risky sexual behaviour. There is however an association between wealth quintile and sexual behaviour among adolescent females ( $\chi^2=$

28.745,  $p$ -value= 0.000). In all 76.2 per cent from the poorest wealth quintile practised safe sexual behaviour whilst 23.8 per cent practised risky sexual behaviour. Out of 169 adolescent females from the poorer wealth quintile, 66.3 per cent practised safe sexual behaviour whilst 33.7 per cent practised risky sexual behaviour. 63.4 per cent of adolescent females from the middle wealth quintile practised safe sexual behaviour as against 36.6 per cent who practised risky sexual behaviour. 70.5 per cent as against 29.5 per cent and 84.7 per cent against 15.3 per cent from the richer and richest wealth quintiles practised safe sexual behaviour as against risky sexual behaviours respectively. This explains the fact that majority of adolescent females are abstaining from sex irrespective of their wealth status. The higher proportion of adolescent females from the richest wealth quintile engaging in safe sexual behaviour could further be explained by the findings of Madise et al. (2010), in which greater proportion of female adolescents from the wealthiest status were using condom as a form of protection as compared with those from the poorest wealth status. This finding also support the findings of Sommer (2010), in which adolescent females from lower wealth quintile resort to commercial sex and other risky sexual behaviours in order to financially support themselves in school and to provide other basic needs for their families. Also, adolescent females from higher wealth quintiles were found to have access to quality health care services and are more likely to secure and consistently use condom (Fatusi & Hindin, 2010).

**Table 5.4: Percentage Distribution of Adolescent Females by Wealth Index and Sexual Behaviour**

Wealth Index	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Poorest	76.2	23.8	126 (100)
Poorer	66.3	33.7	169 (100)
Middle	63.4	36.6	202 (100)
Richer	70.5	29.5	217 (100)
Richest	84.7	15.3	215 (100)
Total	72.2	27.8	929 (100)
$\chi^2= 28.745$	df= 4		p-value= 0.000

Source: GSS, 2008.

#### 5.4 Age of Adolescent and Sexual Behaviour

The age of the adolescent determines their level of risk awareness, knowledge of protection, ability to access information and services related to sexuality (Doyle et al., 2012).

Table 5.5 shows the percentage distribution of adolescent males by age and sexual behaviour. From the table, the age of the adolescent male is associated with sexual behaviour ( $\chi^2= 77.952$ , p-value= 0.000). As illustrated from the table, 96.3 per cent of adolescent males aged 15 years practised safe sexual behaviour whilst 3.7 per cent practised risky sexual behaviour. 91.9 per cent aged 16 years against 8.1 per cent, 86.7 per cent aged 17 years against 13.3 per cent, 77.1 per cent aged 18 years against 22.9 per cent and 66.0 per cent aged 19 years against 34.0 per cent engaged in safe against risky sexual behaviours respectively. As indicated from the table, the proportion of adolescent males who practised safe sexual behaviour decreases with age while the proportion into risky sexual behaviour increases with age. This finding agrees with that of Biddlecom et al. (2009) in which the number of adolescent males who experience sex increased by 8 per cent from ages 16 to 19 years. This according to Awusabo-Asare et al. (2006) usually happen spontaneously without

the use of condom as a form of protection. Younger adolescents are less likely to engage in risky sexual behaviour since a greater proportion of them would have abstained and would have stayed under the strain eyes of their parents or guardian. As they increase in educational level, they therefore become sexually active as the school environment creates the opportunity and influence through friends and sometimes teachers (Darteh & Nnorom, 2012).

**Table 5.5: Percentage Distribution of Adolescent Male by Age and Sexual Behaviour**

Age of Adolescent	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
15	96.3	3.7	162 (100)
16	91.9	8.1	209 (100)
17	86.7	13.3	150 (100)
18	77.1	22.9	231 (100)
19	66.0	34.0	150 (100)
Total	83.7	16.3	902 (100)
$\chi^2= 77.952$		df= 4	p-value= 0.000

**Source: GSS, 2008.**

Table 5.6 illustrate the percentage distribution of adolescent females by age and sexual behaviour. From the table, the age of the adolescent female also shows an association between age and adolescent sexual behaviour ( $\chi^2= 115.350$ , p-value= 0.000). 91 per cent against 9 per cent of adolescent females aged 15 years practised safe against risky sexual behaviour respectively. 84 per cent against 16 per cent aged 16 years also practised safe against risky sexual behaviour respectively. Adolescent females aged 17 years who practised safe sexual behaviour makes up 73.7 per cent as against 26.3 per cent who practised risky sexual behaviour. 59 per cent against 41 per cent aged 18 years practised safe against risky sexual behaviours respectively and 46 per cent aged 19 years practised safe sexual behaviour

as against 54 per cent who practised risky sexual behaviour. As with the adolescent males, the proportion of adolescent females who engaged in safe sexual behaviour decreases with age and there is an increase in risky sexual behaviour with a greater proportion aged 19 years. This finding implies that greater proportions of younger adolescent females are abstaining from sex (GSS, 2013). Some could also be using condom consistently as in the findings by Bankole et al. (2007), in which quite a number of adolescent females use condom consistently. The greater proportion of adolescent females aged 19 years who engaged in risky sexual behaviour could be explained by their inability to negotiate sex since at that age they would have been in secondary school and are likely to engage in sex in exchange for money or gift.

**Table 5.6: Percentage Distribution of Adolescent Females by Age and Sexual Behaviour**

Age of Adolescent	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
15	91.0	9.0	211 (100)
16	84.0	16.0	181 (100)
17	73.7	26.3	190 (100)
18	59.0	41.0	210 (100)
19	46.0	54.0	137 (100)
Total	72.3	27.7	929 (100)
$\chi^2= 115.350$		df= 4	p-value= 0.000

Source: GSS, 2008.

### 5.5 Place of Residence and Adolescent Sexual behaviour

The place of residence of adolescents is an important factor in determining the type of sexual behaviour an adolescent would practice. Adolescents from urban residence are thought to practise safe sexual behaviours compared with their rural counterparts because of the available health and educational facilities in the urban areas (Madise *et al.*, 2007).

Table 5.7 shows the percentage distribution of adolescent males by place of residence and sexual behaviour. From the table, there was no association between place of residence and sexual behaviour among adolescent males ( $\chi^2= 0.000$ , p-value= 0.992). The table shows that similar result of 83.6 per cent of adolescent males from both urban and rural residence out of a total of 366 and 536 adolescents respectively practised safe sexual behaviour, whilst 16.4 per cent practised risky sexual behaviour from both urban and rural residence alike. There is therefore no difference in proportion between adolescent males in the urban areas practising safe or risky sexual behaviour and those in the rural areas. This is indicative that irrespective of their places of residence; adolescent males are likely to have similar sexual behaviours in Ghana as a result of the similarities in gender socialisation across the country.

**Table 5.7: Percentage Distribution of Adolescent Males by Place of Residence and Sexual Behaviour**

Place of Residence	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Urban	83.6	16.4	366 (100)
Rural	83.6	16.4	536 (100)
Total	83.6	16.4	902 (100)
$\chi^2= 0.000$	df= 1	p-value= 0.992	

**Source: GSS, 2008.**

Table 5.8 shows the percentage distribution of adolescent females by place of residence. From the table, there was no association between place of residence and sexual behaviour among adolescent females ( $\chi^2= 1.750$ , p-value= 0.186). From table 5.8, 74.2 per cent of adolescent females from urban residence practised safe sexual behaviour whilst 25.8 per cent practised risky sexual behaviour. 70.3 per cent from rural residence practised safe sexual behaviour whilst 29.7 per cent practised risky sexual behaviour. Disparities in educational and health facilities, to the disadvantage of the rural residence could better explain this higher proportion of adolescent females from urban residence practising safe sexual behaviour and

lower proportion practising risky sexual behaviour as compared with those from the rural areas. This finding is in agreement with that of Madise et al. (2007) and Marrone et al. (2014) who found limited access to condom accounting for the low usage among female adolescents from rural areas of Ghana.

**Table 5.8: Percentage Distribution of Adolescent Females by Place of Residence and Sexual Behaviour**

Place of Residence	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Urban	74.2	25.8	461 (100)
Rural	70.3	29.7	468 (100)
Total	72.2	27.8	929 (100)
$\chi^2= 1.750$	df= 1		p-value= 0.186

**Source: GSS, 2009.**

### **5.6 Region of Residence and Adolescent Sexual Behaviour**

This analysis present results of region of residence by adolescent sexual behaviour in order to bring out the regional variations in the proportion of adolescents practising safe sexual behaviour as against those practising risky sexual behaviour.

The result from Table 5.9 shows an association between region of residence and sexual behaviour among adolescent males ( $\chi^2= 22.803$ , p-value= 0.007). The table illustrate the percentage distributions of adolescent males by region and sexual behaviour, in which Upper East region recorded the greater proportion of adolescent males practising safe sexual behaviour (91.7%) whilst 8.3 per cent practised risky sexual behaviour. Brong Ahafo has the lowest percentage of adolescent males practising safe sexual behaviour representing 65.7 per cent but the highest percentage of 34.3 per cent practising risky sexual behaviour. The other regions reported similar proportion of adolescent males practising safe sexual behaviour ranging from 83.1 per cent to 89.4 per cent, with Northern region recording the highest while Central region recorded the least, out of their total proportions. Although the proportion of

adolescent males practicing risky sexual behaviour is small, adolescent males from Upper East Region recorded the least representing 8.3 per cent engaging in risky sexual behaviour, out of the total proportion. Brong Ahafo recorded the highest proportion of adolescent males engaging in risky sexual behaviour (34.3%). The other regions recorded proportions ranging from 18 per cent from the Ashanti region to 10.6 per cent from the Northern region. The higher proportion of adolescent males from the Upper East region practising safer sexual behaviour and the least practising risky sexual behaviour, is in agreement with the 2008 Ghana Demographic and Health Survey (GDHS) report in which unmarried adolescents from Upper East region were more likely to use condom during their first sexual intercourse and are more likely to continue its usage throughout their sexual experiences (GSS, 2009).

**Table 5.9: Percentage Distribution of Adolescent Males by Region and Sexual Behaviour**

Region	Sexual behaviour		Total (%)
	Safe (%)	Risky (%)	
Western	83.2	16.8	101(100)
Central	83.1	16.9	72 (100)
Greater-Accra	85.8	14.2	106 (100)
Volta	84.2	15.8	114(100)
Eastern	85.7	14.3	91 (100)
Ashanti	82.0	18.0	172 (100)
Brong Ahafo	65.7	34.3	69 (100)
Northern	89.4	10.6	85 (100)
Upper East	91.7	8.3	60 (100)
Upper West	87.9	12.1	32 (100)
Total	83.6	16.4	902 (100)
	$\chi^2= 22.803$	df= 9	p-value= 0.007

**Source: GSS, 2008.**

The result from the Table 5.10 shows an association between region of residence and sexual behaviour among adolescent females ( $\chi^2= 24.210$ , p-value= 0.004). The table illustrate the percentage distributions of adolescent females by region and sexual behaviour, in which Northern and Upper East regions recorded 82.6 per cent as against 17.4 per cent and 82 per cent as against 18 per cent practising safe sexual behaviour against risky sexual behaviour respectively. Adolescent females from Brong Ahafo who practised safe sexual behaviour against risky sexual behaviour are 60.9 per cent against 39.1 per cent. The other regions reported proportion of adolescent females practising safe sexual behaviour as against risky sexual behaviour ranging from 80.9 per cent against 19.1 per cent from Greater-Accra region to 61.4 per cent against 38.6 per cent from Eastern region of Ghana. Although the proportion of adolescent females practicing risky sexual behaviour is small, adolescent females from Northern Region recorded the least of 17.4 per cent engaging in risky sexual behaviour out of the region's total proportion. Brong Ahafo recorded the highest proportion of adolescent females engaging in risky sexual behaviour (39.1%) followed by Eastern region representing 38.6 per cent out of these region's total proportion. The difference in risky sexual behaviour among adolescent females from Northern, Greater-Accra and Upper East regions were insignificant. This could be attributed to the increasing use of condom among unmarried adolescent females (GSS, 2009) and accessibility to health and educational facilities in Greater-Accra region (Marrone et al., 2014).

**Table 5.10: Percentage Distribution of Adolescent Females by Region and Sexual Behaviour**

Region	Sexual behaviour		Total (%)
	Safe (%)	Risky (%)	
Western	69.6	30.4	92 (100)
Central	69.8	30.2	86 (100)
Greater-Accra	80.9	19.1	157 (100)
Volta	72.5	27.5	80 (100)
Eastern	61.4	38.6	101(100)
Ashanti	70.1	29.9	184 (100)
Brong Ahafo	60.9	39.1	69 (100)
Northern	82.6	17.4	86(100)
Upper East	82.0	18.0	50 (100)
Upper West	70.8	29.2	24(100)
Total	72.2	27.2	929 (100)
$\chi^2= 24.210$	df= 9	p-value= 0.004	

Source: GSS, 2008.

### 5.7 Ethnicity and Adolescent Sexual Behaviour

Ghana is ethnically heterogeneous but the ethnic groups share similar characteristics with respect to their ways of life, including methods of socialisation which influences adolescent sexual behaviour. Guided by cultural norms and values, adolescent males in Ghana were found to engage in sexual intercourse to show their masculinity and maturity while the adolescent female is socialised to be submissive to men hence unable to negotiate for safer sex (Ampofo, 2001).

The result from table 5.11 shows that there is no association between ethnicity and sexual behaviour among adolescent males ( $\chi^2= 6.427$ , p-value= 0.169). This means that ethnicity do

not have any significant relationship with sexual behaviour among adolescent males in Ghana.

**Table 5.11: Percentage Distributions of Adolescent Males by Ethnicity and Sexual Behaviour**

Ethnicity	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Akan	81.6	18.4	424 (100)
Ga/Dangme	88.1	11.9	59 (100)
Ewe	83.7	16.3	147 (100)
Mole-Dagbani	88.0	12.0	208 (100)
Others	78.5	21.5	64 (100)
Total	83.6	16.4	902 (100)
$\chi^2 = 6.427$ $df = 4$ $p\text{-value} = 0.169$			

**Source: GSS, 2008.**

Table 5.12 shows the percentage distributions of adolescent females by ethnicity and sexual behaviour. From the chi-square result, there is no association between ethnicity and sexual behaviour among adolescent females ( $\chi^2 = 8.960$ ,  $p\text{-value} = 0.062$ ). In other words, ethnicity and sexual behaviour among adolescent females in Ghana is not statistically related.

**Table 5.12: Percentage Distributions of Adolescent Females by Ethnicity and Sexual Behaviour**

Ethnicity	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Akan	69.3	30.7	479(100)
Ga/Dangme	67.7	32.3	62 (100)
Ewe	70.9	29.1	110 (100)
Mole-Dagbani	77.9	22.1	204 (100)
Others	81.1	18.9	74 (100)
Total	72.2	27.8	929 (100)
$\chi^2= 8.960$	df= 5	p-value= 0.062	

Source: GSS, 2008.

### 5.8 Religion and Adolescent Sexual Behaviour

This analysis present results by religion and sexual behaviour among adolescents in order to bring out the religious variations in adolescent sexual behaviour. Religion is found to positively influence adolescent sexual behaviour through its teachings, practises and sanctions meted out on adolescents who engages in premarital sex (Addai, 2000). Religion in a general sense promotes abstinence among unmarried adolescents.

The results from table 5.13 shows no association between religion and sexual behaviour among adolescent males ( $\chi^2= 7.221$ , p-value= 0.205). This means religion in itself does not have any relationship with sexual behaviour among adolescent males. This finding agrees with that of Wusu (2011), who also found no significant relation between religious affiliation and adolescent sexual behaviour in Ghana. Odimegwu (2005) however explained that religious affiliation alone does not influence adolescent sexual behaviour but religious practices such as reading the Bible or the Quran daily and been active in religious activities greatly influence adolescent sexual behaviour.

**Table 5.13: Percentage Distribution of Adolescent Males by Religion and Sexual Behaviour**

Religion	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Catholic	88.0	12.0	109 (100)
Orthodox	86.4	13.6	177 (100)
Pentecostal/Charismatic	82.5	17.5	395 (100)
Muslim	82.6	17.4	131 (100)
Traditional	86.4	13.6	44 (100)
No Religion	72.9	27.1	47 (100)
Total	83.6	16.4	902 (100)
$\chi^2= 7.221$	df= 5	p-value= 0.205	

**Source: GSS, 2008.**

Table 5.13 shows the percentage distributions of adolescent females by religion and sexual behaviour. As with the adolescent males, the result from the table illustrated that there is no relationship between religion and sexual behaviour among adolescent females ( $\chi^2= 3.956$ , p-value= 0.556). This result agrees with the findings by Marrone et al. (2014) who studied the predictors of contraceptive use among female adolescents in Ghana and found no association between religion and condom use among female adolescents. It was further explained that religion no longer influence and shape the behaviours of contemporary adolescents in Ghana.

**Table 5.14: Percentage Distribution of Adolescent Females by Religion and Sexual Behaviour**

Religion	Sexual Behaviour		Total (%)
	Safe (%)	Risky (%)	
Catholic	76.2	23.8	122 (100)
Orthodox	70.1	29.9	167 (100)
Pentecostal/Charismatic	70.3	29.7	458 (100)
Muslim	75.6	24.4	135(100)
Traditional	79.3	20.7	29 (100)
No Religion	77.8	22.2	18 (100)
Total	72.2	27.8	929 (100)
$\chi^2= 3.956$	df= 5	p-value= 0.556	

**Source: GSS, 2008.**

## CHAPTER SIX

### SOCIO-ECONOMIC DISPARITIES AND ADOLESCENT SEXUAL BEHAVIOUR

#### 6.1 Introduction

The chapter presents the results of the binary logistic regression analyses conducted to examine adolescent sexual behaviour as an outcome of the differences in socio-economic characteristics in Ghana.

The results of the models are presented in two tables and a test for significance and odd ratios indicated. Model 1 presents the socio-economic characteristics as predictors of adolescent males' sexual behaviour while model 2 presents the socio-economic characteristics as predictors of adolescent females' sexual behaviour. Other control variables were also included in the two models.

The aim of Model 1 is to ascertain the influence of socio-economic variables in predicting adolescent male sexual behaviour while controlling for other socio-demographic variables. Model 2 also seeks to examine the differences in socio-economic characteristics as predictors of adolescent female sexual behaviour. Two separate Models were run because controlling for gender would not give a better explanation to how socio-economic difference predicts sexual behaviour among males and females. The models also show the Nagelkerke  $R^2$  which explains how the variations in the independent variables predict the outcome variable, sexual behaviour.

## 6.2 The influence of socio-economic variables on adolescent males' sexual behaviour

Table 6.1 shows the Nagelkerke  $R^2$  value for Model 1 which explains how much variation in the predictor variable explains sexual behaviour among adolescent males. The table also presents the significant predictors of sexual behaviour among adolescent males.

The findings from Model 1 (Table 6.1) shows that the variables used in the model explained about 19 per cent of the variation in sexual behaviour among adolescent males in Ghana. From the model, the variable age is significant at  $p$ -value=0.000. Adolescent males' age 19 years were about 14.8 times more likely to engage in risky sexual behaviour compared to those aged 15 years. Younger adolescents are less likely to engage in risky sexual behaviour since a greater proportion of them would have abstained and would have been under the protective eyes of their parent(s) or guardian(s). The older ones are likely to be in higher level of education with the available opportunity to engage in risky sexual behaviours through peer and teacher influence (Darteh & Nnorom, 2012). They are therefore curious to experience sex for the first time which mostly happens without protection according to Awusabo-Asare et al. (2006).

Region of residence in Model 1 shows up as a significant predictor of risky sexual behaviour among adolescent males at a  $p$ -value of 0.002. Adolescent males from Brong Ahafo region are about 3.5 times more likely to engage in risky sexual behaviour compared with adolescent males from Western Region of Ghana.

Educational level of the adolescent male was not statistically significant which Marrone et al. (2014), who also found no significant between adolescent educational level and condom use

explained to be the result of inadequate education and knowledge on sexual and reproductive health in Ghanaian schools. Adolescent males with at least secondary education would have found it difficult to obtain a job and be financially sound to access sexual and reproductive health services. Wealth quintile was also not significant, place of residence was also not significant, ethnicity and religion were also not statistically significant at the logistic regression level, as with the bivariate analyses level in Chapter Five.

**Table 6.1: Binary Logistic Regression of Socio-economic Variables and Adolescent Males Sexual Behaviour**

<b>Variables</b>	<b>OR (95% C.I)</b>
<b>Educational level</b>	
No Education (RC)	1.000
Primary	1.149 (0.391, 3.377)
Middle/JHS	0.938 (0.323, 2.725)
Secondary or higher	1.128 (0.357, 3.568)
<b>Wealth Quintile</b>	
Poorest (RC)	1.000
Poorer	0.72 (0.353, 1.472)
Middle	0.761 (0.361, 1.606)
Richer	1.214 (0.552, 2.671)
Richest	0.78 (0.310, 1.965)
<b>Age of Adolescent</b>	
15 (RC)	1.000
16	2.24 (0.859, 5.839)
17	3.966 (1.519, 10.350)**
18	7.801 (3.206, 18.982)**
19	14.758 (5.944, 36.645)**
<b>Region</b>	
Western (RC)	1.000
Central	1.046 (0.445, 2.459)
Greater-Accra	1.118 (0.458, 2.731)
Volta	1.111 (0.425, 2.906)
Eastern	0.972 (0.407, 2.322)
Ashanti	1.404 (0.690, 2.857)
Brong Ahafo	3.507 (1.556, 7.904) **
Northern	0.649 (0.216, 1.954)

Upper East	0.612 (0.156, 2.404)
Upper West	0.993 (0.234, 4.209)
<b>Place of residence</b>	
Urban (RC)	1.000
Rural	1.323 (0.798, 2.193)
<b>Ethnicity</b>	
Akan (RC)	1.000
Ga/Dangme	0.700 (0.274, 1.790)
Ewe	1.060 (0.490, 2.295)
Mole-Dagbani	0.552 (0.244, 1.251)
Others	0.962 (0.413, 2.238)
<b>Religion</b>	
Catholic (RC)	1.000
Orthodox	0.951 (0.432, 2.095)
Pentecostal/Charismatic	1.331 (0.665, 2.665)
Moslem	1.538 (0.617, 3.832)
Traditionalist	2.186 (0.637, 7.509)
Others	1.720 (0.657, 4.498)

(RC)= Reference Category; OR= Odds Ratio; \*Significant at  $\alpha$  (p-value) <0.05; \*\*Significant at  $\alpha$  (p-value) <0.01

**Source: GSS, 2008.**

### **6.3 The influence of socio-economic variables on adolescent females' sexual behaviour**

Table 6.2 shows the Adjusted R<sup>2</sup> value for Model 2 to find out how much variation in the predictor variable explains sexual behaviour among adolescent females. The table also presents the significant predictors of sexual behaviour among adolescent females.

The result from Model 2 (Table 6.2) shows that about 29 per cent variations in sexual behaviour among adolescent females, was explained by all the variables used in the model. The findings from Model 2 shows that the variable age was a significant predictor of risky sexual behaviour among adolescent females at a p-value= 0.000 as with the adolescent males. Adolescent females aged 19 years were 22.9 times more likely to engage in risky sexual behaviour compared with those aged 15 years. This is consistent with the bivariate analysis level where age of the adolescent female was associated with sexual behaviour and there was

an increase in risky sexual behaviour as age increases. This finding is consistent with that of Afenyadu and Goparaju (2003) in which older adolescent females in secondary schools engages in risky sexual behaviour mostly to finance their schooling or apprenticeship, and to provide basic needs for themselves and sometimes for their families.

The model also shows that wealth quintile was a significant predictor of risky sexual behaviour among adolescent females. Adolescent females from the richest wealth quintile were 60 per cent less likely to engage in risky sexual behaviour compared with adolescent females from the poorest wealth quintile. In a study, Biddlecom et al. (2009) found that adolescent from wealthier households were more likely to delay sex and consistently use condom compared with those from poorer households. Sommer (2009) also found that adolescent females from poorer households usually resort to commercial sex in exchange for gifts in the form of money to sustain themselves through school. Findings from Tanzania by Fehringer et al. (2012) also confirm these findings as parents from poor households were found to encourage and arrange their adolescent girls into practising concurrent sexual partnerships in order to send money home. These girls therefore become powerless and cannot negotiate for protection. They however become vulnerable and prone to unintended pregnancies and STIs.

Ethnicity in Model 2 shows up as a significant predictor of risky sexual behaviour among adolescent females at a p-value of 0.019. Adolescent females belonging to other minor ethnic groups in Ghana are about 61 per cent less likely to engage in risky sexual behaviour compared with the Akans.

Region of residence was not significant in the logistic regression analyses in Model 2 but was significant at the bivariate level in chapter five. Educational level of the adolescent female is

also not significant, which agrees with the findings of Marrone et al. (2014), who found no significance between education and condom use among adolescent girls in Ghana. This was explained to be a result of the inadequate exposure to sexual and reproductive health education and knowledge in Ghanaian schools. Moreover secondary education would have been inadequate to obtain a job to be financially sound in order to access sexual health services. Place of residence and religion were also not significant at the binary logistic regression level from Table 6.2.

**Table 6.2: Binary Logistic Regression of Socio-economic Variables and Adolescent Female Sexual Behaviour**

<b>Variables</b>	<b>(OR) (95% C.I.)</b>
<b>Educational level</b>	
No Education (RC)	1.000
Primary	1.903 (0.731, 4.952)
Middle/JHS	1.394 (0.552, 3.516)
Secondary or higher	0.666 (0.237, 1.871)
<b>Wealth Quintile</b>	
Poorest (RC)	1.000
Poorer	1.291 (0.669, 2.488)
Middle	1.134 (0.566, 2.274)
Richer	0.867 (0.407, 1.849)
Richest	0.398 (0.170, 0.929)*
<b>Age of Adolescent</b>	
15 (RC)	1.000
16	2.179 (1.146, 4.143)*
17	4.775 (2.608, 8.743)**
18	10.724 (5.941, 19.357)**
19	22.85 (11.893, 43.902)**
<b>Region</b>	
Western (RC)	1.000
Central	1.145 (0.556, 2.357)
Greater-Accra	0.601 (0.291, 1.238)

Volta	0.913 (0.378, 2.206)
Eastern	1.634 (0.804, 3.319)
Ashanti	1.204 (0.649, 2.236)
Brong Ahafo	1.711 (0.815, 3.591)
Northern	0.489 (0.184, 1.302)
Upper East	0.909 (0.288, 2.874)
Upper West	1.456 (0.412, 5.141)
<b>Place of residence</b>	
Urban (RC)	1.000
Rural	0.783 (0.498, 1.232)
<b>Ethnicity</b>	
Akan (RC)	1.000
Ga/Dangme	1.493 (0.717, 3.110)
Ewe	1.039 (0.534, 2.020)
Mole-Dagbani	0.591 (0.283, 1.234)
Others	0.393 (0.181, 0.856)*
<b>Religion</b>	
Catholic (RC)	1.000
Orthodox	1.020 (0.547, 1.899)
Pentecostal/Charismatic	1.124 (0.654, 1.931)
Moslem	1.524 (0.732, 3.176)
Traditionalist	0.733 (0.240, 2.239)
Others	1.069 (0.282, 4.060)

(RC)= Reference Category; OR= Odds Ratio; \*Significant at  $\alpha$  (p-value) <0.05; \*\*Significant at  $\alpha$  (p-value) <0.01

## CHAPTER SEVEN

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 7.1 Introduction

This study sought to examine adolescent sexual behaviour as an outcome of the differences in socio-economic characteristics in Ghana. The unit of analysis were unmarried adolescents aged between 15 and 19 years. A sample of 902 adolescent males and 929 adolescent females were used for the study. The specific objective of the study was to examine the relationship between educational level and sexual behaviour, examine the differences in household wealth and sexual behaviour and to study the differentials in age and sexual behaviour separately for adolescent males and females in Ghana.

In analysing the data, three techniques were used. These include the univariate, bivariate and the multivariate techniques. At the univariate level, frequencies and percentages were used to describe the distributions of adolescents by the variables used in the study. At the bivariate level, chi-square test was used to examine the association between the independent variables and sexual behaviour. At the multivariate level, binary logistic regression technique was employed to examine the influence of socio-economic factors and other socio-demographic variables on adolescent sexual behaviour. This study therefore used sexual behaviour as its dependent variable.

In measuring sexual behaviour, a composite measure was created using the age at first sex to derive the variable “ever had sex”, which was re-coded as no and yes. In order to measure the effectiveness of condom use among adolescents in Ghana, condom use every time with last sexual partner, next to last and second to last sexual partners were combined to derive the variable “condom use consistency”. This was also re-coded as no and yes. To measure the

riskiness of adolescent sexual behaviour, the two variables were combined and re-categorised as “safe” representing adolescents who never had sex and those who ever had sex but used condom consistently and “risky” as adolescents who ever had sex but are not using condom consistently.

## **7.2 Summary**

Results of the study shows that majority of adolescents are practising safe sexual behaviour: 83.7 per cent of adolescent males, 73.3 per cent of adolescent females. A smaller proportion is practising risky sexual behaviour: 16.3 per cent of the adolescent males and 27.7 per cent of the adolescent females. With regard to wealth quintile, the quintile which was highly represented is the richer wealth quintile with adolescent males representing 22.5 per cent and females representing 23.4 per cent. The least represented is the poorest wealth quintile where the adolescent males accounted for 18.4 per cent and the females accounted for 13.5 per cent. Majority of the adolescents had at least middle/JHS education: 52.1 per cent of adolescent males, 58.3 per cent adolescent females while 4.6 per cent and 5.5 per cent of males and females respectively had no education.

With respect to the control variables, the mean age of both adolescent males and females were approximately 17 years with a standard deviation of approximately 1.4. The distribution of adolescents by place of residence shows that majority of adolescents reside in the rural part of Ghana: 59.4 per cent adolescent males and 50.3 per cent adolescent females. The region most represented by adolescent males was Ashanti region (19.1%) followed by Volta region (12.6%) and for the female adolescents Ashanti region (19.8%), followed by Greater-Accra region (16.9%). The largest ethnic group in Ghana is the Akan; therefore there was no doubt when 46.9 per cent of adolescent males and 51.6 per cent of adolescent females belong

to the Akan ethnic group. In terms of religion, greater proportions of adolescent were affiliated to the Pentecostal/Charismatic faith representing 43.7 per cent and 49.3 per cent of males and females respectively.

At the bivariate level, educational level shows no association with sexual behaviour. Wealth quintile was only associated with sexual behaviour among adolescent females with 84.7 per cent of the richest practising safe sexual behaviour while 36.6 per cent of the middle wealth quintile practised risky sexual behaviour. The age of the adolescent was also associated with sexual behaviour with safe sexual behaviour decreasing with age while risky sexual behaviour increases with age. 96.3 per cent and 91 per cent of adolescent males and females aged 15 respectively, practised safe sexual behaviour while 34 per cent and 54 per cent males and females respectively practised risky sexual behaviour. Region of residence was also associated with sexual behaviour among adolescent males but not significant for the adolescent females. Upper East region reported the highest (91.7%) and Northern region reported 82.6 per cent males and females respectively who practised safe sexual behaviour. The highest record of risky sexual behaviour was reported from the Brong Ahafo region in which adolescent males reported 34.3 per cent and 39.1 per cent of adolescent females.

In predicting sexual behaviour among adolescents, age and region were the only significant predictors of risky sexual behaviour among adolescent males. Among the female adolescents wealth index, age and ethnicity were the only significant predictors of risky sexual behaviour.

### **7.3 Conclusion**

The results of the study show that age was the main predictor of risky sexual behaviour among adolescent males. But age alone was a significant predictor among both male and female adolescents. As the age of the adolescent increases, the more likely they are to engage in risky sexual behaviour. Thus, male adolescents aged 19 are 14.8 times more likely to engage in risky sexual behaviour whilst females were 22.9 times more likely to engage in risky sexual behaviour compared with those aged 15 years in Ghana. This finding confirms the third hypothesis that younger adolescents are less likely to engage in risky sexual behaviour.

Among adolescent females, wealth quintile was a significant predictor of risky sexual behaviour. Female adolescents from the richest wealth quintile were about 60 per cent less likely to engage in risky sexual behaviour whilst their counterparts from the poorer wealth quintile were 1.2 times more likely to engage in risky sexual behaviour compared with the poorest. This however confirms the hypothesis that the higher the household wealth of the adolescent, the less likely they are to engage in risky sexual behaviour. But this hypothesis was rejected with the adolescent males since the variable wealth quintile was not statistically significant.

Ethnicity also showed a significant predictor of risky sexual behaviour as females from other minor ethnic groups were about 61 per cent less likely to engage in risky sexual behaviour compared with the Akan.

However, educational level, place of residence, and religion were not significant predictors of risky sexual behaviour among adolescents. This however leads to a rejection of the first

hypothesis which states that “the higher the educational level of the adolescent, the less likely they are to engage in risky sexual behaviour.

#### **7.4 Recommendation**

Majority of adolescents engaged in safe sexual behaviours which mainly include abstinence whilst others are consistently using condoms. In order to achieve a holistic increase in safe sexual behaviour among adolescents, abstinence must be encouraged among older adolescents since they are more likely to engage in risky sexual behaviours based on the result of the study. Sexually active older adolescents need to be encouraged to effectively use condom consistently every time they have sexual intercourse, as a form of protection against pregnancy and STI's.

Preventive programmes on adolescent sexuality must target the poor and vulnerable especially the female adolescents and design ways of making condom accessible to the poorest for effective usage. In achieving this aim, social and cultural beliefs of the adolescents need to be considered.

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