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SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA

DETERMINANTS OF RISKY SEXUAL BEHAVIOUR AMONG SENIOR HIGH SCHOOL STUDENTS, IN LA DADE-KOTOPON MUNICIPALITY

PRESENTED BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON
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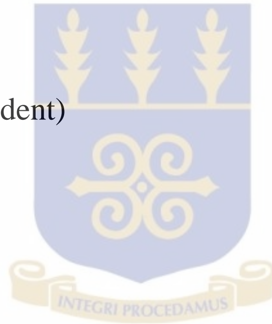
DECLARATION

I, hereby declare that this work is the result of my own research, carried out in the school of public Health, university of Ghana, Legon under the supervision of Dr Ayaga Bawah.

I also declare that, except for the references to other authors in any form that have been duly acknowledged, this dissertation has neither in whole nor in part been presented either in soft or hard copy anywhere for another degree.

Signed…………………….. Date………………………

Ameh Emmanuel Ogbada (student)



Signed……………………………. Date....................................

Dr. Ayaga A. Bawah (supervisor)

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DEDICATION

I dedicate this work to God Almighty for His mercies and grace ever present: to my lovely wife Dr (Mrs.) Juliana Oye Ameh and my children Enuwa and Ada-Ihotu for their patience and support always. To my Dad and Mum (Mr. &Mrs. Nathaniel Abah Ameh) who gave value to my life.

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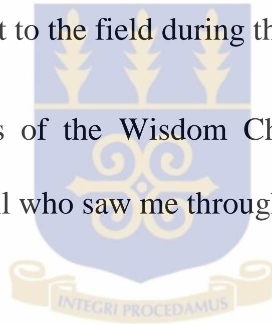

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ABSTRACT

This was a cross-sectional study that investigated the determinants of risky sexual behaviour among senior high school students in La Dade-Kotopon Municipality in the Greater Accra region of Ghana.

A total of 422 adolescents between the ages of 14-19 years in two senior high schools were selected using a multi stage stratified random sampling technique with probability proportion to school size. An interviewer administered questionnaire was used to obtain data on determinants of risky sexual behaviour of the students. Quantitative data were obtained on their socio-demographic status, family structures, sexual and contraceptive history along with their source of information on sexuality, sexual reproductive health programmes in their schools. The data were processed and analysed using SPSS software version 16. Frequencies, chi square and logistic regression were used in the analyses.

The median age at sexual debut was 16.0 (2.3) years. The sexually active were 29.4% of all respondents, of which 83.1% of them were engaged in higher risk sex. The proportions of higher risk sex by gender were 77.9% of the sexually active males, and 91.5% of the females. Logistic regression showed that religiousity was the only predictor of risky sexual behaviour. The main source of information on sexuality was non parental i.e. school teachers (34.7%). Only 9.5% of respondents were aware of youth friendly reproductive health services, although only 20.7% of those who were aware have actually utilised the services.

Religiousity is an important predictor of risky sexual behaviour among senior high school adolescents in the area. Appropriate interventions are needed to curb the high proportion of higher risk sexual behaviour among the students.

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CHPS	Community-Based Health Planning and Services
GAC	Ghana AIDS Commission
GHS	Ghana Health Service
GOG	Government Of Ghana
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MOH	Ministry Of Health
SHS	Senior High School
SPSS	Statistical Product and Service Solutions
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
UNFPA	United Nations Population Fund

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UNICEF United Nations Children's Fund

USA United States of America

WHO World Health Organisation

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DEFINITION OF TERMS

For the purpose of this research, the following operational definitions were used.

ADOLESECENCT: Refers to a person between the ages of 10 and 19 years.

CHILD: Refers to a young person aged between 10 to 24 years.

COMPREHENSIVE KNOWLEDGE OF HIV/AIDS: Is 1) knowing that both condom use and limiting sexual partners to one HIV-negative person are HIV/AIDS prevention methods, 2) being aware that a healthy-looking person can have HIV, and 3) rejecting the two most common local misconceptions (i.e. AIDS can be transmitted through mosquito bites and by supernatural means) and safe sexual behaviour.

FATHER: A male biological parent, stepparent, adoptive parent, foster parent, or any other adult who functions as a parent to the child.

HIGHER RISK SEXUAL BEHAVIOUR: Involvement in more than one of the following activities (1) Sexual intercourse with a non-marital, non-cohabiting partner (2) non condom use at sexual intercourse (3) multiple sexual partner in last 12 months.

MOTHER: A female biological parent, stepparent, adoptive parent, foster parent, or any other adult who functions as a parent to the child.

PARENT: Refers to biological parents, stepparent, adoptive parent, foster parent, or any other adult who functions as a mother or father to a young person.

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RELIGIOUSITY: A composite score of religious affiliation, self reports of importance of religion, church attendance, frequency of prayer and involvement in religious activities.

RISKY SEXUAL BEHAVIOUR: Involvement in any the following activities (1) Sexual intercourse with a non-marital, non-cohabiting partner (2) non condom use at sexual intercourse (3) multiple sexual partner in last 12 months.

SEXTING: Refers to sharing sexually suggestive photos or messages through cell phones and any other mobile media.

SEXUAL BEHAVIOUR: Involvement in any the following activities (1) ever had sexual intercourse (2) age at sexual initiation (3) having more than one than one lifetime sexual partner (4) failure to use condom at first sexual intercourse (5) ever been pregnant/made someone pregnant (6) contraceptive use in the past one year.

YOUTH: Refers to persons aged between 15 years and 24 years.

YOUNG PEOPLE: Refers to people aged 10–24 years.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

The world's population attained a new milestone in 2011 when it reached 7 billion (UNFPA, 2011). Young people aged between 10-24 years make up about a quarter of the total world population. However, in the developing countries these young people between the ages of 10-24 years make up about 25% of the population, a far greater proportion than in the developed countries because of the high fertility rates (Sawyer et al., 2012a). The latest population and household census for Ghana 2010 indicates that like in most developing countries the population is largely youthful, with young people between the ages of 15-24 making up 30.2% of the total population of Ghana. Those between the ages of 15-19 years made up 10.6% (GSS, GHS, & ICF Macro, 2009) . This unique group forms the next generation of the country's leadership and economic workforce which needs to be well equipped to meet the challenges of the future.

The increase in young peoples' (10-24 years) population coincides with a reduction in death from infectious diseases, malnutrition, infant and early childhood mortality shifting attention to sexual and reproductive health, substance misuse, mental health, injury and chronic diseases which becomes prominent during adolescence.

This group of people which is supposed to be the driving force for economic growth of the nations is at the centre of the global HIV epidemic. Globally, reports on HIV epidemics have indicated that young people between the ages of 15 and 24 years

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accounted for about 45% of new cases in 2009 (UNAIDS, 2009). Most of the infection among this age group occurs mainly through risky sexual behaviour. HIV has contributed substantially to reducing the chances of young people reaching the age of 60 years in many countries. Despite this, most national HIV programmes neglect this group of people in the planning and implementation of their national AIDS programmes. Though most young people are largely healthy, a greater number still engage in behaviours that jeopardize not only their current state of health, but often their health for years to come (UNAIDS, 2009). Some of these behaviours include unprotected sex, illicit drug use and violence.

Sub-Saharan African is home to two-third of young people (15-24years) living with HIV/AIDS (UNAIDS, 2009). The age of initiation of sexual intercourse is heavily dependent on local cultural situations and is often very different for males and females. Most of the HIV cases in the sub-Saharan region of Africa resulted from unprotected heterosexual activity which is usually started during mid-adolescence (Singh, Bankole, & Woog, 2005) exposing them to the triad of HIV infection, unplanned pregnancy and sexually transmitted infection.

Adolescents are a distinct population in a transitional period from childhood into adulthood, they are no longer children and yet not adults. The major physical, psychological and sociological changes which occur during this period shape their entire lives. It is a period when their decisions, behaviour and relationships determine their health and development. Some of these decisions may bring them into conflict with themselves, family and the society at large (MOH, 2009). The decreasing age at menarche and puberty noticed largely in the 20th century seem to be related to

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improvements in childhood hygiene, nutrition, and health. The combination of children beginning puberty earlier and taking on characteristically adult roles at an older age than they did historically has increased the length of completion of education and also late marriage. All of these coupled with decreasing influence of culture on behaviour provides ample opportunity to explore sexual activities of all kind (Sawyer et al., 2012b).

The 2008 Ghana demographic and health survey (DHS) showed that in the general population of Ghana, the awareness of HIV is almost universal (98% for women and 99% for men) (GSS et al., 2009). However, this has not translated into comprehensive knowledge which refers to the following; 1.knowing that both condom use and limiting sexual partners to one HIV-negative person are HIV prevention methods, 2. Being aware that a healthy looking person can have HIV infection, and 3. Rejecting the two most common local misconceptions (i.e. HIV can be transmitted through mosquito bites and by supernatural means) and safe sexual behaviour. There has been little change in the overall comprehensive knowledge of HIV. In 2006, 25% of females and 33% of males aged 15 - 24 years had comprehensive knowledge of HIV compared with 28.3% of females and 34.2% of males in 2008.

A major goal of the national preventive AIDS programme is to delay the age of sexual debut and premarital sexual activity because it reduces their potential exposure to HIV (Ghana AIDS Commision, 2012). From the DHS 2008, 8.2% and 3.6% of young women and men aged 15-24 respectively had sexual intercourse before the age of 15 years.

There is high awareness on the dangers of HIV infection in Ghana by young people, this awareness has not been accompanied by a significant decline in potential risk taking

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behaviour among them. They continue to indulge in this risky behaviour leading to teenage/adolescent pregnancy, unsafe abortion and parenting, school drop-out, STI and HIV infection. In 2011 five regions, namely, Central, Eastern, Greater Accra, Ashanti and Volta recorded an increase in HIV prevalence with central region recording the highest figure of 4.7%.The prevalence rate for young people between the ages of 15-24 years increased marginally from 1.5% in 2010 to 1.7% in 2011 (Ghana AIDS Commision, 2012).

Unintended pregnancy is high among teenagers resulting from risky sexual behaviour or early marriage. Globally, childbearing occurs in 20-30% of girls before they reach the age of 18 years. In Ghana 13% of adolescents aged between 15-19 years had begun childbearing (GSS et al., 2009) with the rate varying between 16% in rural areas and 11% in urban areas. The wide disparity between HIV infection awareness among adolescents and the recent increase in HIV prevalence (especially in the urban areas) form the basis for conducting this study. It is therefore l useful to assess the determinants of risky sexual behaviour among senior high school students, a good cohort of adolescents in an urban area of Ghana.

1.2 Statement of the problem

The population of Ghana is generally a youthful one, young people between the ages of 15-19 years make up 10.6% of this population (GSS 2012). This youthful generation in Ghana begins their sexual debut early, by 15 years of age, 8.2% of females and 3.6% of males have had their first sexual experience. By 18 years of age, 44%and 26% of females

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and males are sexually active respectively, (GSS et al., 2009) with females initiating their debut earlier than males.

About two third 63% of females and 78% of males by ages of 15-19 years have never had sex. However, there is a trend of increasing age at sexual debut in women. Younger women less than 25years are likely to experience their sexual debut at an older age than older women. In contrast, the trend in men less than 24 years is that of a decreasing age at sexual debut when compared with men in the older age group (GSS et al., 2009). The DHS also showed that 12.6% of females between the ages of 15-19 years had engaged in sexual activity in the last 4 weeks before the survey, most of the time unplanned and unprotected (GSS et al., 2009).

The availability of a national health policy for adolescent health and that for reproductive health in Ghana has not been backed by implementation widely. Programmes focusing on adolescent sexual and reproductive health are largely driven by Non Governmental Organisation (NGO). They may vary in their goals which may not necessarily address all the reproductive needs of this age group. Where they are available, they may not be utilised adequately because they may not be truly youth friendly or tailored to meet the local needs.

The health hazard associated with sexual risk taking among young people are well documented, but little is known about the factors associated with sexual behaviour among adolescents in developing countries(Blanc & Way, 1998; Ilika & Anthony, 2004). The works that have been done in the sub region and in Ghana on risky sexual behaviour, often focused on individual characteristics as predictors of behaviour such as condom

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use (Slap et al., 2003;Eaton, Flisher, & Aarø, 2003; Meekers & Klein, 2002). Some are community based works and little has been done on adolescents in school. Other studies have focused on specific factors such as age at sexual debut, influence of wealth, and family communication and peer pressure. Other emphases of some of the works carried out were on either or both men and women of reproductive age and not specifically on adolescents. These young people bear a large burden of the outcome of their risky sexual behaviour throughout life. Therefore while there appears to be high level of knowledge this is not translated into actual behaviour.

This work is intended to research into the factors that impede or tends to inhibit behavioral change in order to help to interventions to help address the social and cultural barriers to improve behavioral responses to the knowledge gathered from previous works. It is hoped that findings from this will help improve adolescent sexual and reproductive services/curriculum in schools and in their community. It may also contribute to strategic planning of programmes which would address the gaps between their knowledge and sexual practices, with a holistic view at the numerous contributory factors beyond the individuals, who engage in risky sexual behaviour.

1.3 Conceptual framework

This section discusses the mechanism through which various factors influence an adolescent to engage in risky sexual behaviour. Figure1.1 below describes how the various factors operate as predictors to influence risky sexual behaviour in adolescents in senior high school.

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The framework shown below in figure 1.1 conceptualises risky sexual behaviour using the Ecological model. This theoretical model designed by Bronfenbrenner (1979) defines the social ecology of human development as involving the study of mutual transactions between human beings, and the properties of the environmental systems in which they interact. The goodness-of-fit between the person and the environment influences whether outcomes are successful or strained. He identified four system levels which are

1. **Microsystem;** The roles and characteristics of the developing individual, adolescent in this case.

2. **Mesosystem;** The settings with which the developing person (adolescent) interacts e.g. with family, friends, social network and persons who influence key decisions.

3. **Exosystem;** Settings with which the individual does not interact but nevertheless have an effect on the persons' development.

4. **Macrosystem;** Cultural values and larger societal factors that influence the individual.

This model recognises the importance of a perspective that expands investigational and intervention for sexual risky behaviour effort beyond the individual level. These diverse arrays of factors that represent a web of causality influence an adolescent risky behaviour. Thus, we cannot hope to optimise changes in adolescents' sexual behaviour without addressing both the proximal and distal environmental factors that influence adolescents' decision-making process (Maton, 2000). In essence, the distal and proximal elements mutually influence each other as well as the adolescent, thereby making the adolescent the victim or the benefactor of these larger influences.

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Applying an ecological approach to sexual risky behaviour would entail first examining their sexual behaviours within the context of their social and physical environments, and then designing concurrent interventions aimed at multiple relevant, modifiable levels. The use of an ecological approach may provide a more efficacious strategy for influencing numerous leverage points of long-term behaviour change and address the issue of the limited sustainability of intervention effects observed in risky sexual behaviour. It is quite noteworthy that applying an ecological approach to adolescents' sexual risk behaviour of all kinds is quite consistent with the growing tendency of health promotion programs (of all types and for people of all ages) to be based on expansive theoretical models that greatly exceed constructs that comprise the individual-level (Crosby, Yarber, DiClemente, Wingood, & Meyerson, 2002). This framework views the adolescent as nested within multiple contexts (e.g. nation, community, family, etc).

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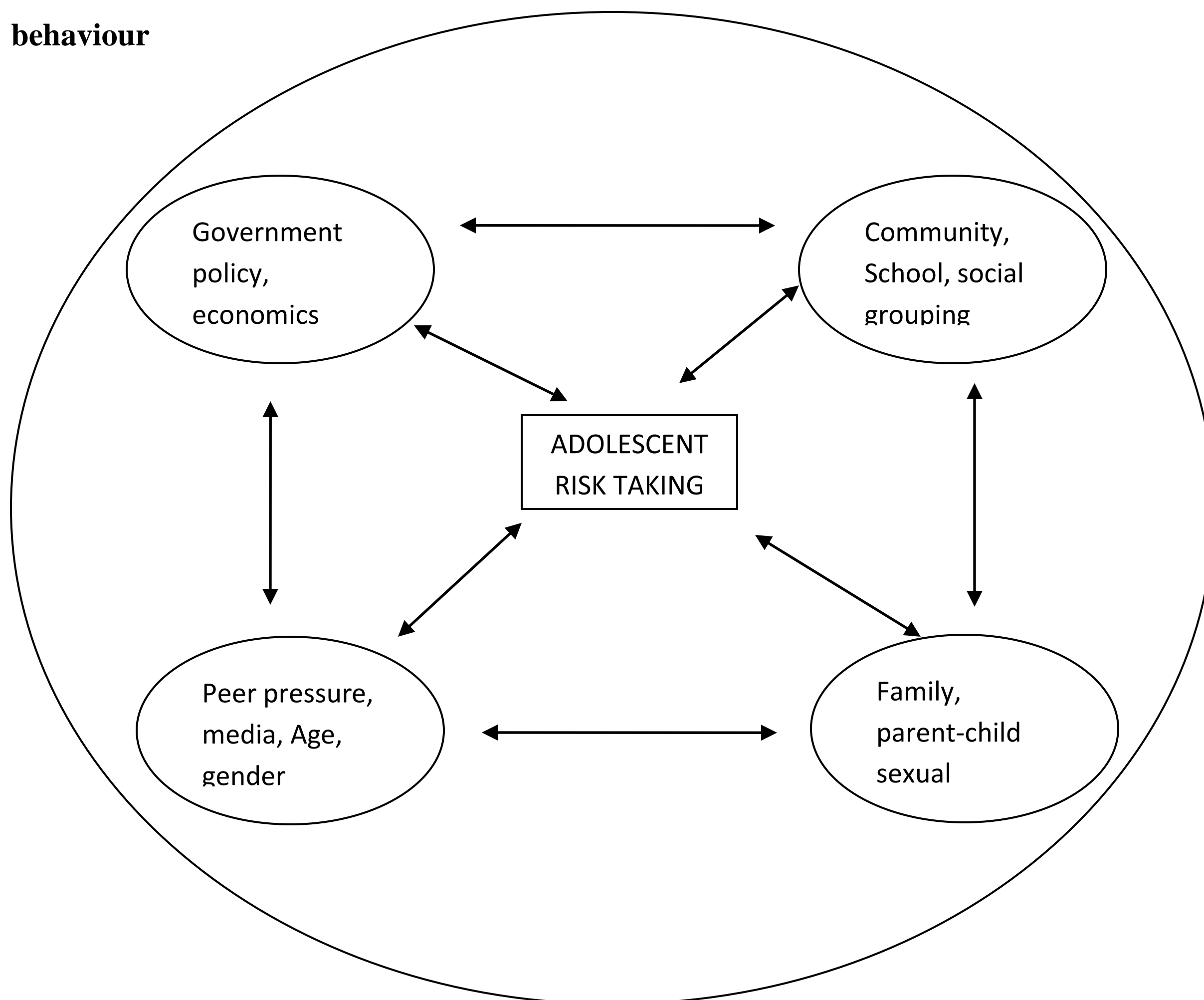
Figure1.1 Conceptual framework for determinants adolescent risky sexual behaviour



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1.4.0 Objectives of the study

1.4.1 General objective

The general objective was to identify the factors that influence sexual risk behaviour among senior high school students in La Dade-Kotopon municipality.

1.4.2 Specific objectives

The specific objectives were to:

1. Identify the sexual risk taking behaviour among senior high school students in La Dade-Kotopon Municipality Accra.

2. Identify factors influencing this risk taking behaviour among senior high school students in La Dade- Kotopon Municipality.

3. Determine their sources of information on sexuality.

4. Determine possible levels of exposure and availability of youth friendly reproductive health programmes among senior high school students in La –Dade-Kotopon municipality.

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CHAPTER TWO

2.0 LITERATURE REVIEW

Adolescents are a distinct population in a transitional period from childhood into adulthood. They are no longer children and yet not adults. The major physical, psychological and sociological changes which occur during this period shape their entire lives. It is a period when their decisions, behaviour and relationships determine their health and development. Some of these decisions may bring them into conflict with themselves, family and the society at large (MOH, 2009).

This period poses challenges such as relative vulnerability and pressure from society including peer pressure to adopt risky sexual behaviour. Their desire to develop an individual identity and dealing with one's sexuality have been identified to be challenging also.

The combination of children beginning puberty earlier and taking on characteristically adult roles at an older age than they did historically has increased the length and indeed changed the shape of adolescence, leading to late age at completion of education and marriage. All these coupled with decreasing influence of culture and parental influence on behaviour among others provides an amble opportunity to explore sexual activities of all kind (Sawyer et al., 2012b).

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2.1.0 Adolescent sexuality

This refers to sexual feelings, behavior and development in adolescent and is a stage of human sexuality. Sexuality is often a vital aspect of teenagers' lives. The sexual behavior of adolescents is, in most cases, influenced by their culture's norms and values, their sexual orientation, and socialization, the issues of social control such as age of consent laws (Sawyer et al., 2012a).

Sexuality is defined as "A central aspect of being human throughout life encompassing sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships" (WHO, 2006). While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors.

Sexuality, sexual relationship and sexual behaviour are important and necessary part of human development. Responsible sexual behavior (e.g. delaying initiation of sexual intercourse, choosing caring and respectful partners, increasing the use of condoms, and using effective contraception) is an important public health issue. Since adolescents are at a stage of experimentation, this becomes an issue as they encounter several pressures from society, peers and the media especially in this age where the world has become a global village.

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This has prompted the United States Healthy People goal 2020 to include the issues of promotion of healthy sexual behaviour in their plan. The World Health Organization (WHO) and other interested agencies in health have also identify adolescent-friendly health services as a worldwide priority (Koh, 2010) , with 70 percent of more than 1 billion youth (10 to 19 years) living in developing countries. It has been identified that educating the adolescent on matters relating to sex can be used as a strategy to delay sexual initiation. This is used to equip them to make an informed choice.

2.2.0 Adolescent risky sexual behaviour

The kinds of sexual behaviours that adolescent are engaged in, is influenced by their mores, values and cultural orientations. Several factors are known to influence the sexual risky behaviours of adolescents, which are not just individual factors. They are discussed under the following topics:

2.2.1 Age at sexual debut

Globally, the age at which young people commence sexual initiation is said to be decreasing (Rose et al., 2005).This age varies widely in countries and depends on the acceptable cultural practices which may have negative influences on their sexual behaviour. In Ghana, the median age of sexual debut for women and men between the ages of 20-24years is 18.4years and 20years respectively. However, some young people start their sexual initiation as young as 10years in some societies although earlier ages of onset have been reported (Boislard P & Poulin, 2011; Lawoyin & Kanthula, 2010).

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The age at which adolescents begin sexual debut is of significant public health importance, as it has been found to expose them to potential risky outcome both in the short and long term (Sandfort, Orr, Hirsch, & Santelli, 2008). Involvement with multiple sex partners is significantly more likely among men and women who live in societies in which early sexual debut or "polygyny" is most prevalent. Early sexual activity leads to a long period of premarital sexual activity during which partner changes are relatively common, resulting in development of higher risk sexual orientations (Bongaarts & Watkins, 1996). This suggests that early age at first sex is likely to increase coital frequency and to virtually eliminate a man's and/or woman‘s ability to abstain from sex.

People who begin having intercourse at younger ages are more likely to engage in sexual intercourse with casual partners and to have multiple and concurrent partnerships (Uchudi, Magadi, & Mostazir, 2010a). Other outcomes noticed among adolescent who engage in early sexual debut are involvement in several types of social vices such as in stealing, fighting, use of controlled substances, school absenteeism and increased number of friends (Sawyer et al., 2012c).

Most early sexual debut has also been found to have been non consensual because of the lack of negotiation skills for protective coitus and lack of assertive ability by the adolescent (Harrison, Cleland, Gouws, & Frohlich, 2005). In Ghana and in the sub region, females initiate sexual debut earlier, 8.2% of young women and 3.6% of young men had their first sexual initiation before the ages of 15years. The age at sexual debut is increasing in the younger females, 27% by the ages of between 15-19 years have initiated sexual coitus. Males however are showing a decreasing age at sexual debut (GSS et al., 2009, Fatusi & Blum, 2008).The increasing age in female is not unrelated to female

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education, late marriage and programmes at increasing female education on reproductive health issues.

2.2.2 Peer pressure

Adolescents are at a stage of experimentation, a stage of exploration, with lots of energy to use, there is a desire to discover themselves and the society. This has become an issue as they encounter several pressures from society including their peers. The heightened sensitivity to peer pressure at this stage affects their experimentation with health –related behaviours such as substance use and sexual risky behaviour.

In a review of adolescent health by Sawyer et al, they suggest that adolescents can make surprising decisions despite knowledge of risks. Adolescents seem to be more affected than adults by exciting or stressful situations when making decisions the so-called "hot cognitions" especially in the presence of peers.. This is consistent with the notion of sensation seeking, the willingness to take risks to attain new, varied, and stimulating experiences—an important mediator for risky behaviour and which increases between age 10 and 15years, suggesting this behaviour is affected by puberty (Sawyer et al., 2012a).

At this stage they begin to interact more with their peers. They also shift their reliance on their parents to their peers due to increased socialization. Values begin to change and in order to be accepted by their peers they engage in activities that would make them conform to the group to avoid rejection. One of such activities is engagement in

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substance abuse which has a positive correlate with engaging in increased sexual risky behaviours which was noted to occur concurrently (Cooper & Guthrie, 2007).

Ali and Dwyer (2011) found out that peer pressure increases the chances of an adolescent engaging in sexual debut. They also found that for every 10% increase in the proportion of close friends who initiate sex, it increases the probability that an individual chooses to initiate sex by 5%. A 10% increase in number of sexual partners among close friends increases an individual's sexual partner by 5% (Ali & Dwyer, 2011).

In Ghana it was found that boys who perceived that their friends engaged in sexual risk behaviour were more than 2 times likely to engage in such themselves. There was even more greater influence of peer in female adolescent to engage in sexual intercourse (Karim, Magnani, Morgan, & Bond, 2003,Magnani et al., 2002). It is important to note however that other studies have shown that peer can also have positive protective influence on the young people.

2.2.3 Gender

Gender has been shown to have a definite influence on sexual risk behaviour of young people. Early onset of puberty is known to expose especially female to interest by those of the opposite sex which may end up in early onset of intercourse which is usually non-consensual, unplanned and unprotected this expose them to injuries , risk of STI, Human Papilloma Virus (HPV) infection possible long term risk of cervical cancer later in life among so many others(Norman & Uche, 2002,Robert & Kristin, 2005,Kritz & Gurak, 1989).

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The patriarchal nature of most societies and the less economic power of female further influence this risk. In Ghana, among young people between the ages of 15-25years about 8.2% of female and 3.6% of male had sex before the age of 15years.. As the ages increase the reverse holds where more males engage in risky sexual behaviour than females. The Ghana DHS showed that in young people between 15-24years 6% of males and 3% of females had multiple sexual partners in the 12months before the survey. Also it indicated that in adults 25yeras and above, that 14% of males and 2% of females had multiple sexual partners in last 12months before the survey (a two fold increase for males (Ghana Statistical Service, 2012Afenyadu & Goparaju, 2003a).

2.2.4 Parent-child sexual communication

A good parent child relationship has significant influence on the kind of sexual activity an adolescent would engage in, it has been found that a good sexual education by the parent reduce the risk of risky sexual activities.

Parents play a role as being the most dominant educator in their children's life including sexual education (Babalola, Tambashe, & Vondrasek, 2005). Parents involvement in the lives of their young children is a significant predictor for positive healthy development (Longmore, Manning, & Giordano, 2004). Parents transmit sexual values and information to their children. Parents when they play their role well have positive association on when they engage in sexual debut (Jerman & Constantine, 2010a).

The sex of the parent who is delivering the message is equally important. It has been found that girls consider their mother to be elaborate and good sexual educator compared to boys. With regards to father both boys and girls consider fathers to do fairly well in

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this regard (Feldman & Rosenthal, 2000). With openness on the part of the parents to disclose and discuss sexual and reproductive issues, the issues that influences the sexual risk attitude and behaviour of young people. The adolescent appreciate openness in sexual discussions with their parents which help them to make informed decision (Phetla et al., 2008).

In some countries several programmes have been initiated to improve parent and parent figure ability to communicate with adolescent or where difficult make materials for such information available. Such programmes include the Uganda's Straight Talk campaign and the Kenya's Family matters (Biddlecom, Awusabo-Asare, & Bankole, 2009; Kiragu K et al.,, 2007).

2.2.5 Family structure

The family structures in which adolescents exist or live in influence their sexual behaviour. Studies have shown that girls who are living with single parents especially mothers are likely to engage in premarital sex than those who have both parents living together (Ramrakha et al., 2007; Peres et al., 2008). Adolescent who felt minimally connected to their parents tend to be associated with sexual activity. Young people from polygamous homes are more predisposed to risky sexual behaviour than those from monogamous homes (Slap et al., 2003; Huang, Murphy, & Hser, 2011).

In a study in USA it is the maternal discussions about sex that have the greatest negative effect on sexual behaviors; a ten percent (10%) increase in maternal discussion about sex is associated with an 8% decrease in the probability of initiating sex and an approximately 3% decrease in the number of sexual partners. Maternal approval of sex at

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the current age is positively correlated with sexual behavior, whereas approval of sex only with romantic partners is negatively related to both sexual initiation and number of partners.

Living in a two-parent household also decreases the initiation and the number of sexual partners. Having both parents who work fulltime outside the home is positively related with risky sexual behaviours (Ali & Dwyer, 2011).In a study in Jos, Nigeria among adolescents, it was found that those who lived with both parent were less likely to have experienced sexual intercourse at baseline than those who lived with single parents and other relations (Daboer, Ogbonna, & Jamda, 2008).

In Ghana boys in particular were more uncomfortable talking with a mother or father about sexual matters than were girls, and fathers were in general perceived as being less available and less patient than mothers (Tweedie & Witte, 2000).Parental monitoring especially high level was found to reduce risk of engaging in sexual activity in the last one year among Ugandan female (Biddlecom et al., 2009).

2.2.6 Media

In this age of technological advancement, there is rapid development and wide availability of information on different platforms such as magazines, radio, television, internet, mobile phone and other social media. Young people are the earliest adopters of information and communication technology such as mobile phones, the internet, instant messaging, and social networking sites including Facebook and Twitter, both in low-income and middle-income countries as well as high-income regions. The ease of access to all these forms of information makes the youth to be readily prone to the positive and

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negative influence which may make or mar the adolescent's future depending on the type of message been carried.

Mass media are an important context for adolescents' sexual socialisation, its influences take on special significance during adolescence, particularly for sexual risk behavior. A recent survey found that on average, U.S. adolescents spend six to seven hours per day using media, three hours watching television, two hours listening to music, one hour watching videotapes and movies, and three- fourths of an hour reading (Roberts & Foehr, 2003).

Several data have shown that even though adolescents are frequent media users and consumers of numerous unhealthy media messages about sexual behavior. Yet the mass Medias' influence is not considered as important contexts for adolescent's sexual socialization. The majority of sexual content in the media depicts risk-free, recreational sexual behavior between non married people. Media programming rarely depicts negative consequences from sexual behavior, and depictions of condom and contraception use are extremely rare (L'Engle, Brown, & Kenneavy, 2006). Media users (including adolescents) are more likely to adopt behaviors depicted by characters who are perceived as attractive and realistic, and who are not punished but rewarded for their behavior so messages about sexuality in the media may be especially compelling to adolescents (Brown, Halpern, & L'Engle, 2005;Cruz, Laguna, Mejia-Raymundo, & Center, 2001).

There is a wave of sexting which describes sharing sexually suggestive photos or messages through cell phones and other mobile media. An increase in sexting has been noticed with availability of picture and video sharing service via mobile phone and the

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other social network platforms. Most recently, Lenhart in USA found that 13% of those aged 18 to 29 years had sent sexually suggestive nude or semi nude images via cell phones and 31% had received these messages. Researchers also found that men were more likely to have received sexts (21%) than women's' 11% (Amanda Lenhart, 2010).

In an MTV-sponsored study, researchers found that 45% of youth (aged 14–24 years) who reported having sex in the past week also reported sending at least one sext (MTV,, 2009). Similarly in a recent work by Gordon-Messer et al (2012) they reported that sexual activities in the past 30 days before the study, was also associated with sexting behavior. They found that 30% of the Young Adults in their sample had sent a sext and 41% had received a sext, their results also suggest that sexting is most often a reciprocal behaviour (Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2012). Boys where the highest solicitors of sexting (46%) while girls (86%) received the highest request to send a sext from boys in another study (Temple et al., 2012).

In search of literature for this study, work in Africa and the sub region were scares, very little work was found on this emerging area which has certainly changed the speed at which socio cultural norms are affected and has contributed to the rise of what were previously less common attitudes, aspirations, and behaviour (Sawyer et al., 2012a)

2.2.7 Education

Education is a useful tool to give adolescents the foundation and equip them for the future. The broad government policy on education, as enshrined in Article 25 of the 1992

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Constitution, seeks to achieve free and universal basic education and to introduce functional literacy programs among other goals.

Though the literacy level for those 15 years and above as at 2010 is about 74%, (who have had some form of school attendance), only 16.6% of them are currently in school. Male sex dominates making up more than half of this figure (55.4%) in 2010.Those in senior high school (SHS) or senior secondary school (SSS) were only 31.2% (GSS 2012). In Ghana, like most countries, those currently in senior high school are largely in their late adolescent years.

Evidence elsewhere shows that the education sector plays a critical role in preventing HIV among young men and women and in mitigating the effects of HIV infection on individuals, their families and communities. The Global Campaign for Education has estimated that education would prevent 700,000 new cases of HIV each year, and the World Bank states that education is an effective "social vaccine" against HIV.

There is need to indentify the effectiveness of this protective role of education on adolescent sexual behaviour in urban Ghana where the last HIV sentinel survey showed an increase in the prevalence of HIV/AIDS.

2.2.8 Adolescent policy

Ghana has a national policy and programme which specifically address Adolescent health and reproductive health need. The first was published in the year 2000 with a broad objective of promoting a healthy environment and policy framework within which young

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people can obtain information and services on reproductive health and exercise their reproductive rights.

The target of this policy was to delay age at sexual debut, increase female education thus decrease early marriage rate and decrease the incidence of sexually transmitted infection among the adolescent population.

There is presently a document that has been produced for the health and development of adolescents and young people for 2009-2015. This is a seven year plan to address holistically the health need of this population including sexual and reproductive health among other needs. This policy requires a multi-sectoral approach to meeting these needs. This multi-sectoral approach involves the Ghana education service among others, which has programmes to promote HIV/AIDS education in schools to reduce the incidence of HIV among schools in Ghana through awareness, education and behavioural change. An example is the HIV ALERT school model programme.

As part of the response to the HIV/AIDS epidemic at the onset, the government of Ghana produced a policy in 2001 to guide programs and activities. The policy established the Ghana AIDS Commission (GAC) under the Office of the President and charged the new body with the responsibility of coordinating all activities on HIV/AIDS in the country. The Reproductive health strategy plan (2007-2011) recognizes that advocacy for adolescent reproductive health is the key to tackling the myriad of problems associated with the sexual and reproductive needs. The document promotes responsible and healthy sexual and reproductive health behaviour, adolescent rights and the removal of barriers to

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access of service. However a gap exists between policy and implementation of this wonderful policy document.

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CHAPTER THREE

3.0 METHODS

3.1.0 Type of study

This is a cross sectional study that was designed to elicit the determinants of risky sexual behaviour among senior high School students in the La Dade-Kotopon municipality in the Greater Accra region.

3.2.0 Study area

This study was conducted in La Dade-Kotopon Municipality in the Greater Accra region with its capital in La. The Municipality was carved from Accra Metropolitan Assembly and forms part of the 46 districts and municipalities created in the year 2012 by an Executive Instrument (E.I) issued by the late president His Excellency Prof john Evans Attah Mills and was established by Local Government Act, 1993 (Act 462) with Legislative Instrument 2133.

It was inaugurated on the 28th June, 2012. The Municipality covers an area of 360 square kilometers.

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3.2.1 Location of the Municipality

La Dade-Kotopon Municipality is located between longitude 05^0 35'N and on Latitude 00^0 06' W. It is about 4.83km east of the centre of Accra. The municipality is bounded both in the North and West by Accra Metropolitan Assembly, on the East by Ledzokuku Krowor Municipal Assembly and on the South by the Gulf of Guinea. It includes areas like La, Labone, La-Abese, La Abafum-Kowe, Airport Residential, Cantonments and Nyaniba estate.

3.2.2 Population Structure

According to the 2010 Population and Housing Census of Ghana, the population of the municipality was 306,424 with total number of houses being 10,372 and 30,925 households. Given an annual growth rate of 2.6% per annum, it is currently is estimated at 465,620.

The population of the municipality like that of most urban areas in Ghana is very youthful with 56% of the population under the age of 24 years. The population structure is 51% females and 49% males. The sex ratio of female to male is 1.04 to 1.00. The dependency ratio is approximately 60%.

The population of the La Dade -Kotopon like most urban dwelling is made up of different ethnic groups. The ethnics groups in the municipality is predominately Ga (95%), Akan, Ewe, and other ethnic groups of foreign nationals are found in this area make up the

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remaining 5%. The municipality is home to a lot of diplomatic missions and cooperate organisations whose employees live and work in the neighbourhood.

The religions of the people in the area are Christianity, Islam and the traditional religion indigenous to the Area. It has major health facilities like La General Hospital and Police Hospital. There are several private hospitals and numerous primary health care units and CHPS (Community-Based Health Planning and Services) compounds.

The Municipality has people from all strata living within it, including the high, middle and low class based on income. The occupation of the people in the area include both the formal and informal sectors of the economy including civil servant, fishermen, businessmen/women, traders, artisans, manufacturing, banking etc. The area is home to the only international airport in the country, several military installations such as Ministry of Defense (MOD) and Burma camp. Social facilities include the aviation social centre and El-Wak stadium.

The area is also endowed with several basic and senior secondary schools owned by government, private, military and faith based schools. Ten senior high schools exist in the Municipality, five public and five private senior high schools. The senior High schools in the Area include the St Thomas Aquanios Senior High school, La Presbyterian senior High school, Labonne senior High school. Others include Armed Forces Secondary Technical School, Ghana international school and Armed forces Senior High school. A tertiary institution also exists in the area called Zenith College.

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3.3 Study variable

The outcome (dependent) variable for this study is risky sexual behaviour which was measured using any of the following;

1. Intercourse with non spouse or cohabiting partner

2. Non condom use at intercourse

3. Multiple sexual partners in last 12 months

The independent (exposure) variables include the following; socio-demographic characteristics such as age, sex, place of residence, family structure and class at school were directly measured in the questionnaire. Other variables includes source of information on sexuality, the availability and usage of adolescent friendly, and SRH (sexual and reproductive health) services

3.4 Study population

The study population were young people aged 14 to 19years in Senior High Schools in the La Dade-Kotopon Municipality in the Greater Accra region.

3.5 Sampling

3.5.1 Sampling method

There are a total of ten senior high schools in the study area. Out of this number, one is exclusively male so it was excluded from the sampling frame. Of the nine that were left we randomly selected three to be included in the study. We limited ourselves to three schools for reasons of resource constraints in terms of time available for this research and

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financial constraints in covering more schools. In addition, given the sample size we were confident that we would be able to achieve the desired sample size from the three schools that were selected as well give a true reflection of the population on the basis criteria used for the stratification in the sampling frame.

A multi stage stratified sampling was used. First, the three schools were selected randomly from the list of the nine senior high schools. This was done by writing the names of the schools in pieces of paper which were folded, mixed together in a box and three schools were then selected at random with non replacement.

Based on the size of each school, we allocated the number of respondents to be enrolled into the study for each school proportionately. We then calculated the number of respondents in each class proportionately based on the class population in relation to the determined sample size for each selected school. Then using the sample size determined for each class we obtained the number of respondent in each arm of the four classes based on the population of student in that form or class.

Finally, we used the student register for each class to randomly select the required number of respondent, this we did with non replacement. Where a person selected was absent we selected the next person of same sex on the register to replace such a person only after two repeated visit to the school to locate such person proved futile. The proportionate method was used to ensure fair representation at all level and between the sexes.

However during the time of administering the questionnaire, one of the schools randomly selected declined to participate in the study. Although another school was randomly

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selected to replace the school that declined, it was difficult to administer the questionnaire to students in senior high school three and four (SHS 3 and 4) in the replacement school. This is because in all the schools they had finished their final examinations, the West African Examination Council (WAEC) Senior School Certificate Examinations (SSCE) and left the school. This challenge therefore limited the total number of respondents obtained to come from only two schools in the municipality

.

3.5.2 Sample size calculation

The sample size was determined using the formula.

Where

$$N = \frac{z_{1-\propto_2} \; 2 \; p \; 1-p}{d^2}$$

N =required sample size

$Z_{1-\alpha/2}$ =confidence level at 95% (standard value of 1.96)

P =prevalence of higher risk sexual intercourse female between ages 15- 19 years

d =margin of error

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The sample size was calculated with the following parameters. Prevalence of higher risk sexual intercourse in adolescent between the age of 15-19 years female in Ghana based on the 2008 Ghana Demographic and health survey was 21.3% (GSS & Macro, 2009a). Furthermore, a 95% confidence level (z) and a margin of error (d) of 5% were assumed. Thus the sample size for the study was calculated as follows:

$$N = \frac{1.96^2 \; x \;\; 0.213 \;\; 1 - 0.213}{0.05^2}$$

$$N = \frac{3.8416x \;\; 0.167631}{0.0025}$$

$$N = \frac{0.643971}{0.0025}$$

$$N = 257.6$$

N≈258

The above calculation was based on simple random sampling method of survey. However in this study we used a stratified sampling design, this usually suffers from loss of sampling efficiency, known as design effect (D).this would be adjusted to correct for the loss of sampling efficiency in a bid to improve the variance of the parameter estimates and the sampling error.

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3.5.3 Sample size adjustment

The sample size was adjusted upward as a result of a design effect and non response. The computed sample size of 258 was multiplied by a default design effect value of D=1.5

Thus 258 x 1.5 = 387.

To account for contingencies such as recording error and non response, a 5% upward adjustment was made, resulting in an effective size of 406. This sample size was used for students between the ages of 14 years and 19 years.

3.6.0 Study instrument

An interviewer-administered questionnaire was employed to obtain quantitative information from the respondents. The questionnaire (appendix 2) was structured to solicit information on the following areas; socio-demographic, family structure, sexual and contraceptive history, factors that are influencing sexual behaviour or likely to influence sexual behaviour, The respondents source of information on sexuality, availability of youth friendly facility at school/community, the school Curriculum on sexuality, and sexual education at school.

3.6.1 Inclusion criteria

The following were the inclusion criteria:

1. Being a senior secondary school student in La Dade Kotopon Municipality.

2. Being between the ages of 14-19 years

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3.6.2 Exclusion criteria

1. Being a student on exchange programme.

2. Being a student of the school for less than 3 months.

3. Parent/guardian reluctant to give consent for those less than 18 years.

4. Being a boarding student and consent from parent or guardian was difficult to obtain for students less than 18 years.

3.7. Data collection tools and technique

An interviewer administered structured questionnaire was utilized to obtain quantitative data from the selected students (respondents). Most of the questions were extracted from previous related studies conducted in Ghana and other developing countries. Question on contraception were adopted from the Ghana demographic and health survey questionnaire, while some of the questions were developed from literature by the researcher especially those on the use of mobile phone.

The interviewers were recruited, trained and deployed to interview respondents in the various schools. They interviewed the respondent individually in an environment where confidentiality is ensured.

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3.8 Data processing and analysis

At the end of the self administered questionnaire, the questionnaires were cross checked for completeness and internal consistency. Quantitative data were entered into Microsoft office access 2007.

The data entry sheet was designed with appropriate variable definition in place, skipping patterns and consistency check (to minimize error during the data entry).The data was doubly entered, this helped in detecting any discrepancy, this was then cross checked and the necessary correction were made for accuracy of the final entered data.

The final data from the field entered into Microsoft office access 2007 was then exported into SPSS (Statistical Product and Service Solutions) version 16 for analysis. The results are as presented in graph, (bar and pie). The categorical outcome was analysed using proportions and percentages, chi square test to compare proportion. Odds ratio and logistic regressions was used in the analysis of this work.

3.9 Quality control

To ensure quality control the research assistant were trained before pretesting of questionnaire was carried out. The training was to ensure that they understood the research topic, objectives and the sensitivity of the topic and need for confidentiality. The training was also to help ensure they are adequately equipped to administer the questionnaires. Meetings were held every day after collection of data using the administered questionnaires to identify challenges and solutions were proffered by the team.

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3. 10 Ethical considerations

Permission to conduct this research was obtained from the School of public health (SPH) University of Ghana. Ethical approval was also obtained from the Ghana Health Service Ethical Review Committee (appendix B). Permission was obtained from the headmaster/headmistress of the schools used for the study. In view of the sensitive nature of this study permission was also be obtained from students who meet the inclusion criteria and an informed written consent was obtained from each respondent for those 18years and above. While those below 18 years, consent from parents/guardian was sorted before obtaining assent from each respondent.

The objective and the rationale of this study were discussed with each of the respondents, client privacy and confidentiality was assured. Entry into this study was entirely voluntary.

3.11 Pretesting

The interviewer administered questionnaire was pretested in a mixed senior high school in the Accra metropolitan assembly which is outside the municipality used for this study. In all 25 students were pretested with the instrument which had data collected from them in all the sections covered by this study. This was done to help test the feasibility of the sampling procedure, reliability of the data collection tools, reaction of the respondents and the ability of the research team to carry out the study.

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The feedback obtained from the pretest indicated a need for some modification to the questionnaire to improve comprehension as well as logical flow. A few new questions were also added to the original questionnaire based on the observations made.

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CHAPTER FOUR

4.0 RESULTS

In this chapter the study result is presented, various statistical procedures were employed to analyse the data that are shown below.

4.1.0 Background characteristics

Between May and June 2013, 482 senior high school students between the ages of 14-19 years as at their last birthday from two schools participated in school survey in the La Dade-Kotopon Municipality in the Greater Accra region.

One school declined the participation of its students in the survey for administrative reasons. In the two other schools which participated, thirty-six (36) participants who were below 18 years were excluded because of refusal of their parents/guardian to give consent, four (4) were recently transferred in from other schools, the complete data were obtained from 422 participant. This yielded a response rate of 91.3%, the analysis in this chapter is based on the 422 who fulfilled all the criteria and had complete information.

Although we planned to obtain data from 408 respondents in three schools, due to the challenges during the data collection we limited the data obtained to two schools. A total of 422 respondents from the two schools participated.

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4.1.1 Socio-demographic characteristics of the respondents

This section presents the description of the socio-demographic characteristics of the study respondents. Intergroup differences were assessed using chi-square analysis for categorical variable and t-test or analysis of variance (ANOVA) for continuous variables as appropriate.

4.1.2 Distribution of the study respondents

These study participants comprised of 48.6% male and 51.4% female students. The characteristic of the participant stratified by the sex of the respondent are presented in table 4.1 below. About a half (49.8%) of the respondent were between the ages of 18 and 19 years of age with about equal distribution in both age.

With regards to living arrangement 81.1% of the respondents live with either one or both parent(s). The respondents who lived with both parents were 49.1%. More females (50.2%) than males (47.8%) lived with both parents. Almost twice the proportions of those living with their fathers (7.1%) are living with other family members (12.6%).

About three-fifth (65.2%) of the respondents attend school as day students, 67.3% of female respondents were day students whereas, 34.8% of all male respondents live in a boarding house. Concerning having to engage in some form of employment to support paying school fee, 14.9% of all respondents admitted that they are engaged in some of employment to be able to pay their school fees. Among the respondents Christianity (87.4%) and Islam (12.6%) were the only religion practiced by them, no other religion was recorded. Other socio-demographic characteristics are shown in table 4.1 and figure1.1.

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Table 4.1 Socio-demographic characteristics of respondents

Characteristics	Total n (%)	Male n (%)	Female n (%)	Statistical test
Mean age in years	17.4(1.3)	17.5(1.3)	17.3(1.4)	F(3,302)=0.07,*P=0.356* 0.05
Age in years				
14	8(1.9)	2(1.0)	6(2.8)	χ^2(5)=5.6,ρ=0.342
15	33(7.8)	11(5.4)	22(10.1)	
16	70(16.6)	34(16.6)	36(24.9)	
17	101(23.9)	51(24.9)	50(23.0)	
18	105(24.9)	52(25.4)	53(24.4)	
19	105(24.9)	55(26.9)	50(23.0)	
School residency				
Day student	275(65.2)	129(62.9)	146(67.3)	χ^2(1)=0.9,ρ=0.348
Boarding student	147(34.8)	76(37.1)	71(32.7)	
Educational level				
SHS 1	117(27.7)	57(27.8)	60(27.6)	χ^2(3)=0.3,ρ=0.293
SHS 2	107(25.4)	50(24.4)	57(26.3)	
SHS 3	101(23.9)	49(23.9)	52(24.0)	
SHS 4	97(23.9)	49(23.9)	48(22.1)	
Family structure				
Both parents	207(49.1)	98(47.8)	109(50.2)	χ^2(5)=1.4,ρ=0.921
Mother	105(24.9)	51(24.9)	54(24.9)	
Father only	30(7.1)	15(7.3)	15(6.9)	
Grand parents	17(4.0)	7(3.4)	10(4.6)	
Other family members	53(12.6)	28(13.7)	25(11.5)	
Others	10(2.4)	6(2.9)	4(1.8)	
Closeness to parents				
Not close	46(10.9)	17(8.3)	29(13.4)	χ^2(2)=2.9,ρ=0.242
Somewhat close	168(39.8)	83(40.5)	85(39.2)	
School type				
Mission	153(36.3)	73(35.6)	80(36.9)	χ^2(1)=0.1,ρ=0.788
Public	269(63.7)	132(64.4)	137(63.1)	
	422(100)	205(48.6)	217(51.4)	

***Note:* Statistical test compares male and female for each variable**

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4.2 Types of risky sexual behaviour

One of the objectives of this study was to determine the types of sexual risky behaviour among the sexually active adolescent in La Dade-Kotopon Municipality in greater Accra region.

Three specific sexual risk behaviour (1) Intercourse with non spouse or cohabiting partner, (2) Non condom use at intercourse, and (3) multiple sexual partners in last 12 months were investigated in the respondents to determine the types (level) of risk i.e. higher risk sex or low risk sexual behaviour.

A two point Likert scale (1, 2) with sum score ranging from 3-6 was created. A higher sum score indicated a high risk sexual behaviour. The values were dichotomised into higher risk a score of (4-6) and low risk a score of three (3).

The findings showed 29.4% of all respondents were currently sexually active, the gender distribution of the sexually active shows that 62.1% are males and 37.9% are females. About three-quarter (83.1%) of the sexual active adolescents are engaged in higher risk sexual behaviour. A high proportion of higher risk sex was observed in sexes, 77.9% in males and 91.5% in females. The gender distribution is as shown in table 4.2.

4.3.0 Determinants of adolescent Sexual behaviour

This study sought to know about the factors which influence the sexual risk taking behaviour of adolescents in senior high schools in the municipality. Some of the socio-demographic factors have been discussed above

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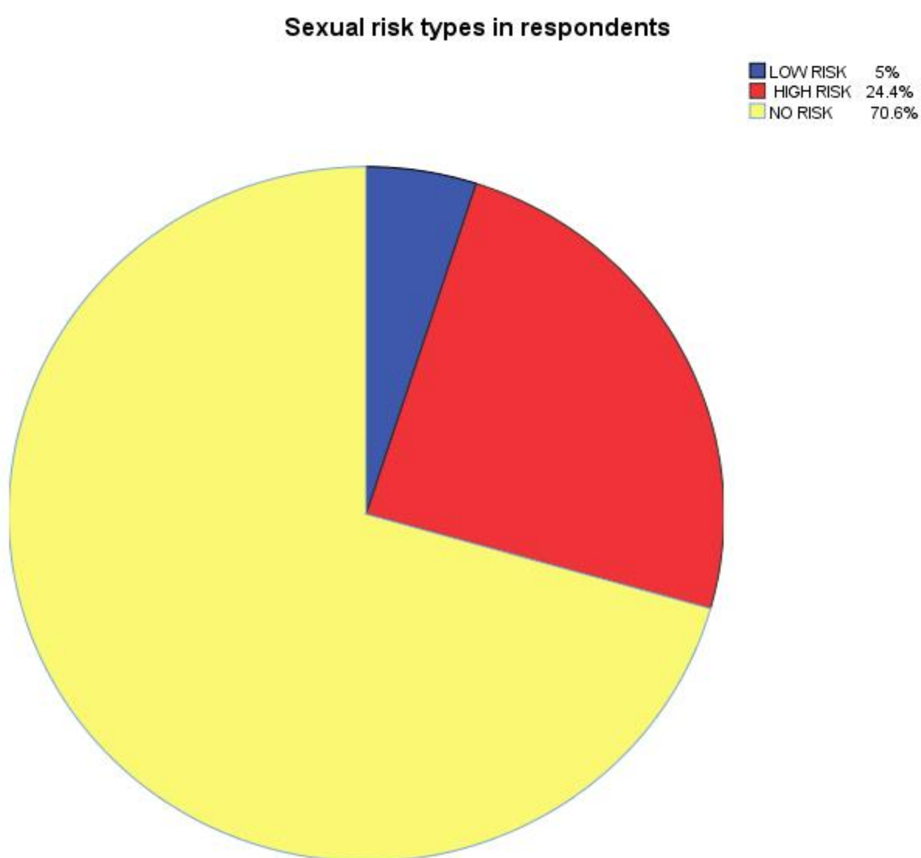
Figure 4.1 Distribution of sexual risk types in all respondents.



4.3.1 Age at sexual debut

Just less than a third (29.4%) of the students indicated they have had sex in their life time (table 4.2), 62.1% of these respondents were males and the rest were females. The median age at sexual debut among all the study respondents who admitted to have had sex ("sexually actives" is 16.0 years [Mean age 15.3, SD=2.4] years. The lowest age at

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sexual debut was 5 years (0.2% of all respondents) and the highest age is 19 years (0.8% of all respondents). Only 2.6% of all respondents had initiated coitus by the age of 14 years, increasing to 29.4% by the age of 19 years.

In this study, as shown in table 4.2 that, irrespective of the age group at which sexual debut occurs, the respondents in this study sexual practice' was predominately higher risk (83.1%) in nature. Higher risk sex occurred in 77.4% of early sexual debutants (14years or earlier) and 84.9% of late sexual debutants (15-19 years). No significant difference was observed between age groups at sexual debut and the sexual risk type (χ^2 (1) =0.9, $\rho>0.05$).

About sixty two percent (62.1%) of the sexually actives' are males. However, with regards to sexual risk types indulged in by each gender (table 4.2) indicates that both male and females where engaged in higher risk sex 91.5% of females and 77.9% of males among the sexually active, in the one year preceding the survey. This result shows that a larger proportion of females compared to their male counterparts were engaged in higher risk sex. It was not clear whether the sexual risk behaviour type is determined by gender $\chi2$ (1) =3.8, $\rho=0.05$.

4.3.2 Adolescent religiousity

In the sexually actives, 21.8% indicated that they were irregular religious service attendants irrespective of their religious inclination. Ninety six percent (96.3%) of the irregular religious service attendants in this survey were found to have been engaged in a high risk sexual behaviour when compared to only 3.7% in the same group who engaged

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in low risk sexual behaviour. An equally high proportion (79.4%) of those who were regular religious service attendants79.4% was engaged in higher risk sexual behaviour. The bivariate analyses in table 4.3 showed the finding that irregular religious service attendants reported were involved in higher risk sexual behaviour in the one year preceding the survey

Table 4.2 Age group at sexual debut, gender and sexual risk type `

Characteristics	Total n (%)	Low risk n (%)	Higher risk n (%)	Statistical test
Age at sexual debut				
14 years or earlier	31(25.0)	7(22.6)	24(77.4)	$\chi^2(1)$=0.9,ρ=0.333
15 to 19years	93(75.0)	14(15.1)	79(84.9)	
Gender				
male	77(62.1)	17(22.1)	60(77.9)	$\chi^2(1)$=3.8,ρ=0.051
Female	47(37.9)	4(8.5)	43(91.5)	
Total (%)	124(100)	21(16.9)	103(83.1)	

Source: school survey May/June 2013

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Table 4.3: Factors influencing the types of risky sexual behaviours

Characteristics	Total n (%)( )	Low risk n (%)	High risk n (%)	Statistical test
Religiousity[a]				**ρ=0.043b**
Regular attendance	97(78.2)	20(20.6)	77(79.4)	
Irregular attendance	27(21.8)	1(3.7)	26(96.3)	
Adequacy of SRH class				**ρ=0.809b**
Yes	79(63.7)	14(17.7)	65(82.3)	
No	4.5(36.3)	7(15.6)	38(84.4)	
Source of information on SRH				**ρ=0.074b**
Parent(s)[c]	17(13.7)	0(0)	17(100)	
Others[d]	107(86.3)	21(19.6)	86(80.4)	
Mobile phone ownership				**ρ=0.648b**
Yes	115(92.7)	19(16.5)	96(83.5)	
No	9(7.3)	2(22.2)	7(77.8)	

Note a: frequency of prayer, involvement in religious activities and regular attendance at religious services, (include daily and once a week)

b: Fischers exact test performed c: Includes single parents d: Includes grandparents, relatives and others

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4.3.3 Parent -child sexual communication

In all respondents in this study, about four-fifth (81.0%) of the respondents are living with either parents or at least a parent. The finding on closeness to parent(s) is shown in table 4.1. Most respondents also indicated that they would prefer their main source of information on sexual and reproductive system to come from their mothers (35.8%).

Among the sexually actives, 83.1% indicated they are close to their parents despite their living arrangement. About half of all the sexual actives were living with both parents as at the time of the survey. About a third (32.0%) was living with a single parent and the rest with other people. In all categories of living arrangements, higher risk sex was more practiced.

In all category of living arrangement i.e. with both parents, a single parent and others, about four-fifth in each of the group (79.2%, 88.1% and 80%) respectively were involved in a higher risk sex. However with regards to their main source of information on sexuality, sexual and reproductive issues 86.3% obtained most of their information from others sources rather than from their parents. Four-fifth (80.4%) of the users of a non parental means as a source of information for sexual and reproductive health (SRH) issues were involved in higher risk sex. All respondents whose main source of information on SRH was from their parents were engaged in higher risk sex.

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4.3.4 Media

Table 4.3 shows the distribution of mobile phone ownership in all respondents. Nearly all (92.7%) of all sexually active owned a mobile phone and about half (49%) spend an average duration of 4 hours daily The activity which they engage in mostly is social networking 52.2% (popular sites of networking including, facebook, twitter and whatsapp). Making calls follows closely with 26.1%. , More than half (63.5%) of mobile phone users have been involved in sexting, 30.7% are still soliciting for sexts.

More than three quarter (81.1%) of sexters said it has an influence on their sexual desire. Within the sexters, 80.6% indicated it increases their desire to have sexual intercourse, while another 27.8% indicated that sexting reduces their sexual desire. Despite this nearly two-third 63.9% of all current "sexters" wants to stop this habit. Males are the major solicitors of sexting services accounting for 77.1%, there is a significant association between those who are involved in sexting and who have a current sexual partners $\chi^2(1) = 7.7, \rho < 0.05$. About half (57.8%) of all sexts are sent by friends. However, when this association was subjected to further analysis it was not significant.

4.3.5 Peer pressure

About half (57.3%) of the sexually actives in this survey indicated that they had experienced sexual pressure (demand to indulge in sexual intercourse) before. This pressure was exerted on them mostly by their friends (53.2%). Those who were under pressure from friends were largely involved in higher risk sex 81.8%. Other sources of pressure were responsible for only 18.3% of higher risk sexual behaviours. However those who were not under any pressure, about half (43.7%) were involved in higher risk sex.

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4.3.6 Factors influence risky sexual behaviour in respondents

Bivariate analysis carried out on all the variables showed that the variable religiosity was found to be the only significant variable that showed an association with the sexual risky behaviours. However, from literature review age and sex were also found to be very significant, and they were therefore included in the model used for the logistic regression. Table 4.5 shows the results of the regression model.

Table 4.5: Binary logistic regression of significant variables

Variables	B	S.E	P-value	Exp B	95%confidence intervals
religiosity	2.092	1.060	0.048	8.097	1.015, 6.461
Sex	1.093	0.612	0.074	2.982	0.898, 9.906
Age	0.042	0.255	0.870	1.043	0.633,1.772

Note: β- regression coefficient constant, exp B-odds ratio

Summary of model:-2log likelihood=96.340, Cox & Snell's R2= 0.124,, Nagelkerke's R2 =0.208

4.4 Sources of information on sexuality

In this survey all the respondents were asked to indicated their main source of obtaining information on sexuality, sexual and reproductive health (SRH). The finding indicated

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that 35.8% would prefer their mothers, 21.6%, their teachers and 11.1%) their friends. Others preferences are as shown in figure 4.2.

Those respondents who engaged in higher risk sex order of preferences for information on SRH are; teachers (30.1%), mothers (23.3%), and friends (10.7%). In the low risk category the order of preference was, 33.3% preferred their friends, 19% preferred their mother and another 19% their teachers.

The finding on their present source of information on SRH is as shown in figure 4.3, on the availability of information on sexual and reproductive health issues, about a third (36.3%) indicated that the classes did not address all their need in this area with about 93.5% requesting for more classes. Among the respondent the preferred media to pass information on adolescent reproductive health issues were through television (50%) followed by both drama sketches (11.9%).

4.5.0 Availability of adolescent and youth friendly services

This survey also sought to know if there was the availability of adolescent and youth friendly service in the school or community and if they were being utilised. Only 9.5% indicated there was the presence of such facility in their community, 4.5% of those who indicated the presence of such facility could not provide the names of the facility. Just 1.8% of the adolescent friendly programme is provided by a youth group or organisation, 1.7% of the adolescent services was provided for by religious groups and 1.0% by a health facilities. Only 6.9% of all respondents has ever visited a facility to receive reproductive health services on contraception, pregnancy, abortion or sexually transmitted infections information or care.

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With regards to number of visits among those who visited such a facility, 79.3% paid at least one to two visits in the last one year preceding the survey. Just 20.7% of them indicated they visited such facilities three or more times in the last twelve months.

About four fifth (79.3%) of those who had utilised a reproductive health services facility, they indicated that they felt comfortable enough to ask question and seek for assistance. Same proportion (79.3%) said the service providers were friendly or welcoming. It is worth noting that 82.8% indicated that the environment of the facility was conducive to them and provided for confidentiality.

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Figure 4.3: Distribution of the preferred source of information on sexual and reproductive issues

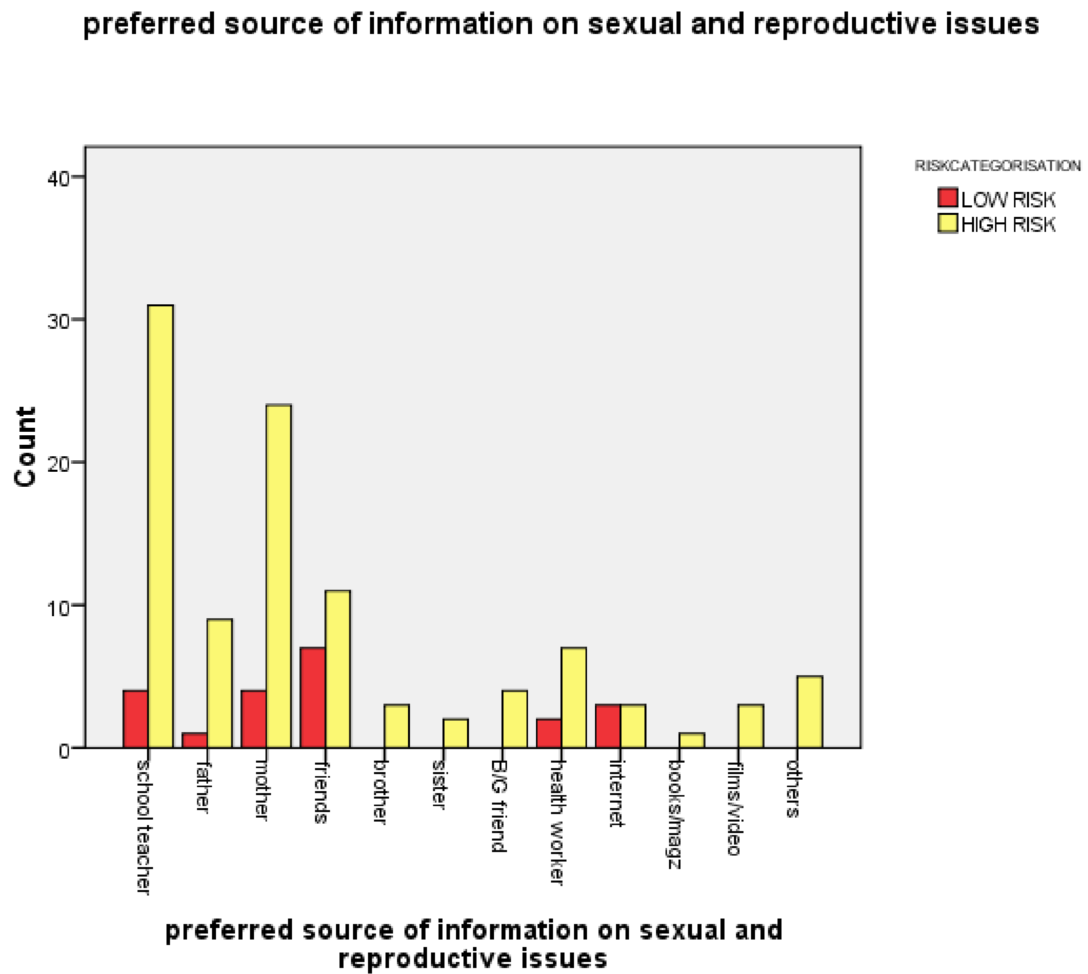

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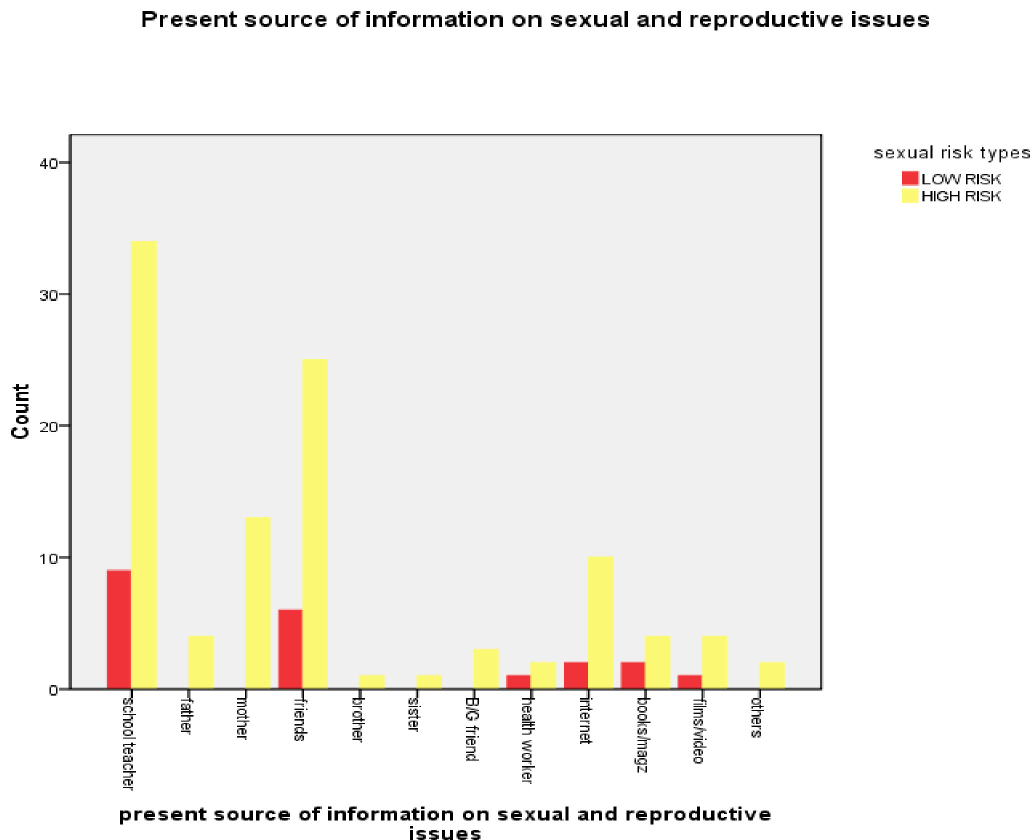
Figure 4.4 **distribution of the present source of information on sexual and reproductive issues**



4.5.1 Contraceptive use in sexual intercourse

Overwhelmingly 97.9% of all adolescents in this study are aware of a method to prevent pregnancy, HIV and sexually transmitted infections. However, close to a quarter (12.8%) of adolescents used condom at sexual debut, 83.3% of those who reportedly used a type of condom at sexual debut before the age of 14years were females whereas, 68% of male debutants between the ages of 15-19years reported condom use.

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Among those who are currently sexually active (i.e. have engaged in a sexual activity in the last one year) contraceptive users were 49.6%. About a third (63.2%) of contraceptive users at last coitus is males. At last coitus, condoms (male and female types) were the most popular method of contraception accounting for 77.6%, followed by withdrawal (2.6%) and oral pills (1.7%). Decision to use condom at last coitus was made by the respondents themselves (43.5%) and by their partner in 34.8%.

The reasons provide for the use of the condoms by their user was mainly for dual protection (55.9%) i.e. to prevent pregnancy, HIV and sexually transmitted infections collectively, the second reason in order of importance is pregnancy alone (39.7%). The least reason for their use is prevention of sexually transmitted infections alone. Females (32.1%) were more likely not to use any form of contraception at their last sexual intercourse. The main reasons provided for non contraceptive use were "they did not think of it" (50%), "not available" (16.1%) and "prevent enjoyment" (14.5%).

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CHAPTER FIVE

5.0 DISCUSSION

This survey results show that 48.6% of the study respondents were males and 51.4% females a sex ratio of 1.08 which is similar to the gender distribution for the municipality and slightly higher than the national ratio of 1.0:1.04. The median age at sexual debut among the sexually actives' is 16years for both sexes (similar to median for all respondents), that of males is 16years and the females is 15years.

This finding is consistent with other studies done in Ghana and elsewhere with regards to the fact that females initiate sexual debut at an early age compared to their male counterpart (Uthman, 2008, Mc-Question, Ahiadeke, Posner, & Williams, 2012 ; GSS & Macro, 2009b) . However the age in this study at sexual debut is less than that of other studies carried out in Ghana where the median age at debut was 18.4 for females and 20years for males which showed the age at sexual debut is on the rise (Zaba, Pisani, Slaymaker, & Boerma, 2004 ; Awusabo-Asare & Anarfi, 1999). This observation could be due to peer pressure and a poor and late initiation of parent child communication on sexuality. The lack of details in sexual education in schools as desired by the respondents may be contributory too.

The proportion of those who are engaged in higher risk sex among the whole respondents is 24.4% which is slightly higher than that in the last Ghana DHS of 21.3%. The higher proportion of higher risk sex in this study is a reflection of the decreasing age at sexual debut of the respondents which makes them more likely to have sexual intercourse with casual partners and have multiple and concurrent partnerships (Uchudi, Magadi, &

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Mostazir, 2010b).This could also be associated with the increase in HIV infection prevalence in the region among this age group.

The proportion of adolescents between the ages of 14-19years engaged in higher risk sex in this study is 77.9% in males and 91.5% in females among the sexually actives'. This is indication that females in this age range engage in higher risk sex than their males' counterpart. This finding is inconsistent with the national survey result in the Ghana DHS where more proportion of males than females (96.2% and 73.6% respectively) were engaged in higher risk sexual intercourse in the 12months before the survey. Although the survey findings were for those between 15-19years age group.

The difference in gender distribution and the figures obtained may be due to the known fact that in early and mid aged adolescents females initiate sex earlier than males (GSS et al., 2009). In this study we included respondents who were in early adolescence (i.e. those who were14year old who were 2% of the sexually actives). The declining age at puberty coupled with the decreasing influence of cultural and parental influences on adolescents among other things provides them the opportunity to explore sexual activities of all kinds (Sawyer et al., 2012c).

Engaging in sex during the adolescent period is a risk, the consequences may be seen during this period but often like other risky behaviours undertaking during adolescence, have long term implications on the individual's socioeconomic and psychological status. Higher risk sexual behaviour often result in unintended pregnancy, exposure to risk of STI, HIV infection and other long term implication on their reproductive health.

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In this study we found out that 68.8% of the sexually actives have had more than one sexual partner in their lifetime, males had more multiple partner when compared to females (80% to 34.5%) average numbers of partners in this study in males was two(2) and females one(1). This is consistent with studies in Ghana and elsewhere that females are more likely to be faithful to their partner than males. Results including the last Ghana DHS 2008 showed that males had an average number of life partner of 5 and females had 2 (GSS et al., 2009, Mabayoje et al., 2005 ; Afenyadu & Goparaju, 2003b). This lower figure in the number of partners can be accounted for by the age of the respondents in this study. The difference between the sexes can be attributable to the increase sexual drive in males, the patriarchal nature of our society and the wide acceptability of "polygyny".

My finding that 65% of the respondents were day students, yet responsible for 77.7% of all higher risk sexual behaviour is not surprising, this may be attributable to the freedom and laxity that attending school from living abode provides to them especially in an era of loose cultural and parental influence on adolescents (Sawyer et al., 2012c).

Religiousity which refers religious affiliation, worship service attendance, frequency of prayers and involvement in other religious activities was assessed to determine if it was a predictor of risky sexual behaviours. The distribution of religious affiliations by all the respondents are Christianity 87.4% and Islam 12.6%, this differs from the Ghana's distribution of religious affiliation of 71.2% Christianity and 17.6 % Islam, and 5.2% adhere to traditional religion or do not adhere to any faith (Ghana statistical service (GSS), 2012). This finding is by no means a comparison with the national survey.

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This finding may be due to the fact that one of the schools used in this study is owned by a Christian group. In religious grouping 93.8% of those who profess to be Muslims were engaged in higher risk sex, in the Christians 81.5% were involved in higher risk sex. This is consistent with other work in the sub region among Nigerian women in the North-west which showed that Muslim women are likely to initiate sex at an early age than Christian counterpart (Uthman, 2008).

With regards to effect of religiousity among the sexually actives those who were irregular attendants were 21.8% only but, 96.3% of them were involved in higher risk sex. This study showed an association between religiousity and higher risk sexual behaviour (even with further analysis). This is consistent with the work of Thornton and Camburn (1989) that found that young people who attend their religious services regularly and value religion in their life have less permissive attitudes and are less experienced sexually. They develop sexual attitude consistent with religious teachings (Thornton & Camburn, 1989).

It is a fact the two prominent religions (Christianity and Islam) both have a tenet of abstinence until marriage for spirituality and physical well being. Sex is an exclusive preserve of marriage by them. Premarital sex is greatly frowned at by these religions, they also provide opportunity for members to engage the inquisitive minds and provide them with ways to abstain from premarital sex through religious education of youths and organisation of premarital forum. This is supported by the finding of this study which shows that about a fifth (17%) of the sexual and reproductive health (SRH) services is provided by religious organisations.

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The advent of AIDS epidemics has strongly strengthened the teachings of the religious groups on abstinence. The ABC (Abstain, Be faithful, and use Condoms) programme promote abstinence. "Abstinence is said to remain the best protection against HIV infection" (Kabiru & Ezeh, 2007). Regnerus (2005) in USA reported that the influence of family religiousity may also be contributory although this was beyond the scope of this study. He found out that family that that are highly religious tend to concentrate their communications effort on sexual morality. However, religious morality alone may not enforce adherence.

This study showed a difference between the adolescents' preferences with regards to sources of obtaining information on sexual and SRH messages and the main source through which they have acquired this information.

While 30.6% of the sexually active prefer their parents especially mothers as the main source of this information, the survey showed that this role is been played by others like the school teachers providing (34.7%) of information on issues such as sexual and SRH. An absolute proportion (100%) of those who prefer their parents are engaged in higher risk sex compared to 83.5% who prefer others.

Although 83% of respondents indicated they are close to their parents this does not reflect in the finding. This may be attributable to poor communication skills, poor timing of the communication and content of the messages by the parents. The new wave of transferring parental role to "significant others" like teachers and relatives may also be a contributory factor (Jerman & Constantine, 2010b).

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Mobile phone ownership is high among the respondents 92.4% and slightly higher in sexually active 92.7%.The average duration they spend on their mobile phone per day is 4hours, mostly on social networking site. More than half (63.5%) and 14.4% of all respondents have been involved in sexting. and half (50%) are still active "sexters" which they acknowledge increase their desire for sex in 80.6% of them. About two third (63.7%) of sexually active males solicit for sexting services. This is found to be consistent with Lenharts work in USA and other that 13% of young people have been engaged in sexting and males were the highest solicitor of sextings (Lenhart, 2010).

Limited literature was found for review on sexting in Africa to be compared with. A study in South Africa revealed that 16.95% of high school student have received sexting messages and males are the highest solicitors involved (Youth Research Unit, 2011). No significant association between sexting and higher risk sex was established. The finding may be due to the relative newness and usage of smart phone and its applications in Ghana.

In this study only 9.5% of all respondent were aware of a youth friendly reproductive health service or programme they can access. The presence of government facility or progamme is low just 1% and patronage was also low 20.7% of sexually active utilised such services. Though the access was low, this is not surprising as the low availability of this service denies the adolescent an opportunity to get required information and make informed decision when faced with issues of his or her SRH. Therefore, it may contribute to the high proportion of higher risk sex with only 49.6% contraceptive usage among respondents.

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Condom was the contraceptive of choice used, 77.6% usage at last coitus by those who were sexually active. Condom was use at last coitus by72.7% of males, compared to 27.3% in females. This is consistent with the finding in Ghana that males tend to practice safer sex compared to females. This finding in females may be due to low negotiating skills of female adolescents for safer sex, transactional sex and the fact that sex is seen as a sign of love and intimacy with the male partner by the females.

The low awareness of SRH services may be due to government not backing its policies on adolescent health with the needed action to make the necessary changes. The services were acceptable to most adolescent clients who utilised the services, with regards to confidentiality. Respondents' satisfaction with the SRH environment was93.8%, comfortable environment was 93.8% and friendliness 87.5%. This fiding reflects the importance of these services on adolescent SRH and could make an impact on reducing the risky sexual behaviour.

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CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

The finding of this study establishes that religiousity has a predictive influence on the risky sexual behaviour among adolescents in senior high school in La Dade Kotopon municipal area.

The low age at sexual debut, in both sexes is worrisome and a concern with the increase in HIV prevalence as well as increase in adolescent pregnancy as reported in the most media and regional health report and surveys.

The declining role of parents in communication with adolescents on sexual and reproductive health is an issue of concern. The replacement of parental role by others in sexual communication may influence early initiation of coitus. Proper timing of parent-child sexual communication may have a role in reducing higher risk sex.

Notwithstanding an almost universal awareness on methods to prevent pregnancy, STI including HIV infection, there is a high proportion of higher risk sexual behaviour among the sexually active adolescents. This calls for an effective and pragmatic action to curb this tide which is likely to have both short and long term consequences on the adolescents' sexual and reproductive health in the municipality.

There is a low contraceptive use among the adolescent, especially the dual protection methods. Also the scarce availability and utilisation of adolescent friendly service in the area is not desirable to reduce the higher risk sexual behaviour in the municipality.

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6.1.0 Recommendations

The findings of this study have important implications on the sexual and reproductive health of Adolescents in La Dade-Kotopon Municipality in particular and greater Accra region.

Since issues which concern adolescent risky behaviour are multi hydrad and are beyond the individual, it calls on government and concerned authorities to use multiplicity of approaches which are usually beyond the identified factor(s) to achieve a long term and effective interventions. The following recommendations are been suggested to the appropriate authorities they are:

6.1.1 Government and Society

There is a need for collaboration between government, adolescent friendly organisations and religious bodies to work together to come up with an efficient, timely and appropriate interventions to reduce the higher risk sexual practices in the Municipality.

It is needful that the adolescent friendly services in the area are well integrated into the communities through awareness campaigns due to its low partronage. The working hours of these services need to be youth friendly to achieve meaningful impact.

6.1.2 Family

There is an urgent need for families to involve adolescents early in regular religious activities, frequent prayers and attendance at religious services of their faith, since

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religiousity has been shown to reduce the risk of higher risk sexual behaviour in the Municipality. They should also and make materials and participation such activities easy for them this can channel their energy in the right directions. Appropriate and timely initiation of communication on reproductive issues is a key and should be strongly encouraged by parents. It is important to restore useful cultural and family values and practices that would improve adolescent SRH.

6.1.3 School and community

An appropriate revision of curriculum, training of teachers, use of trained youth and peer educators on SRH in schools will empower the adolescents with the right tools with regards to their sexual practices.

There is the need to allocate more time in schools on topics that address basic sexual and reproductive health needs of adolescents. Such periods should interactive; it should be a forum where answers to questions by adolescents are provided freely with little or no inhibition by the educators.

6.1.4 Adolescent

Even though all the other measures are put in place there is the need for the adolescents themselves to take advantage of all these resources at their disposal. Religiousity and religious forum can be used to equip them with good sexual and reproductive health practices such as abstinence, responsible sexual behaviour, and engagement of their abundant energy in other meaningful recreation that would "lure" them away from factor

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which influences sexual risky behaviour. This includes efforts at having a meaningful relationship with their God.

6.2 Future research

It is recommended that further research be carried out to further investigate the influence of telecommunication especially mobile technology on adolescent reproductive health especially with more applications been brought on board regularly.

A further qualitative study would help to give an in depth understanding to the association between religiousity and higher risk sex.

Research work on the parent- child sexual communication initiation in early adolescence would be useful in understanding how early sexual debut may be delayed.

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APPENDICES

APPENDIX 1: Questionnaire

Project Title: Determinants of risky sexual behaviour among SHS students in La-Dadekotpon municipality

Respondent's ID.........................

Date of Interview (dd/mm/yy)..../..../......

SECTION A: DEMOGRAPHIC AND BACKGROUND INFORMATION

Please circle the number corresponding to the appropriate answer for each question

NO	QUESTION	CODING CATEGORY	SKIP TO
A1	Sex of respondent	Male 1 Female 2	
A2	Type of residency in school	Day student 1 Boarding student 2	
A3	How old were you at your last birthday?	Age in completed years -- --	
A4	What class are you in presently?	SS 1 1 SS 2 2 SS 3 3 SS 4 4	
A5	Is your school run by a particular religious group?	Yes 1 No 2	
A6	Are you currently working for pay in	Yes 1	

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	addition to schooling?	No 2	
A7	What is your religion?	None 1 Christianity 2 Islam 3 Traditionalist 4 Others 5	
A8	How often do you usually attend religious services?	At least once a year 1 At least once a month 2 At least once a week 3 Never 4 Daily 5	
	FAMILY CHARACTERISTICS		
A9	Whom do you live with?	Both parents 1 Mother 2 Father 3 Grandparents 4 Other family members 5 Others 6	
A10	Do you currently live with your parent(s)?	Yes 1 No 2	
A11	How /close are you to your parents?	Not close 1 Somewhat close 2	

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NO.	QUESTION	CODING CATEGORY	SKIP TO
		Very close 3	
	SECTION B:ADOLESCENT SEXUAL BEHAVIOUR AND CONTRACEPTIVE USE		
NO.	**QUESTION**	**CODING CATEGORY**	**SKIP TO**
B1	Have you **EVER** been in a relationship with a male or female (boyfriend/girlfriend)?	Yes 1 No 2	
B2	Do you **CURRENTLY** have a sexual partner (boyfriend/girlfriend)?	Yes 1 No 2	
B3	**HOW MANY** sexual partners (boyfriend/girlfriend) have you had in your **lifetime**?	None 1 One 2 Two to four 3 Five or more 4	
B4	Within the **last 3 months**, how many sexual partners (boyfriend/girlfriend) have you had?	None 1 One 2 Two to four 3 More than five 4	
B5	Within **the last 12 months**, how many sexual partners have you had?	None 1 One 2 Two to four 3 More than five 4	

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B6	Have you **EVER** had sexual intercourse?	Yes. 1 No. 2	If no skip to B12
B7	If Yes, what was your **age** when you first had sexual intercourse?	(Age in completed years)......	
B8	How will you describe your first sexual relation?	Own will 1 Coaxed 2 Forced 3	
B9	Within the past 3 months, how many times have you engaged in sexual intercourse?	None 1 One 2 Two to four 3 More than five 4	
B10	Within the last 12 months, how many times have you engaged in sexual intercourse?	None 1 One 2 Two to four 3 More than five 4	
B11	Have you **EVER** had sexual intercourse in exchange for cash, favours or gift?	Yes 1 No 2	
B12	Do you feel any pressure from others to have sexual intercourse? If YES, a great deal or a little?	None 1 A little 2 A great deal 3	
B13	From whom do you feel the pressure the most?	Friends 1 Relatives 2	

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		Partner/special friend 3 Other 4 Specify……………………	
	CONTRACEPTIVE USE		
B14	Have you ever heard of anything or method to prevent pregnancy, HIV/sexually transmitted infection?	Yes 1 No 2	
	IF **NO** TO QUESTION **B6** SKIP TO **B26**		
B15	The **FIRST TIME** you had sexual intercourse ,did you or your partner use a condom?	Yes 1 No 2	
B16	If yes which type of condom did you use	Male condom 1 Female condom 2	
B17	If **NO** to question B15, did you use any of these methods?	Emergency CP 01 Injectables 02 Pills 03 withdrawal 04 IUDs 05 Periodic abstinence 06 Other................. 07	

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B18	Who suggested the use of a condom/contraceptive during sex?	Myself 1 My partner 2 Joint decision 3	
B19	Why did you use a condom/contraceptive?	To prevent Pregnancy 1 To prevent STI&HIV/AIDS 2 To prevent both pregnancy & STIs/HIV/AIDS 3 No particular reason 4 Other 5 specify……………………	
B20	Did you use a contraceptive **the last time** you had Sexual intercourse?	Yes 1 No 2	IF NO SKIP TO B23
B21	If yes, state the type of contraceptive you used.	Male condom 1 Female condom 2 Emergency CP 3 Injectables 4 pills 5 withdrawal 6 IUDs 7	

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		Others 8 specify...............	
B22	Who suggested the use of contraceptives during sex?	Myself 1 My partner 2 Joint decision 3	
B23	**If no to B20**, what prevented you and your partner from using a contraceptive device?	Not available 1 Didn't think of it 2 Too expensive 3 Partner objected 4 Don't like them 5 It was not necessary 6 Prevents enjoyment 7	
B24	Are you living with your current sexual Partner?	Yes 1 No 2	IF NO SKIP TO B26
B25	How long have you been living with your partner?	Less than one year 1 One year or more 2	
B26	How old is your current partner?	………years	
	MOBILE PHONE USE		
B27	Do have a mobile phone?	Yes 1 No 2	

B28	Do you use your mobile for the receiving calls	Yes 1 No 2	
B29	Do you use your mobile for chatting with friends on facebook, twitter, whatsapp etc	Yes 1 No 2	
B30	Do you use your mobile for texting	Yes 1 No 2	
B31	Do you use your mobile for music	Yes 1 No 2	
B32	Do you use your mobile for movies	Yes 1 No 2	
B33	Do you use your mobile for the radio services	Yes 1 No 2	
B34	What else do What else do you do with your phone Specify...........................		
B36	How long **averagely** do you spend on your mobile phone in a day?	Less than 1 hr 1 1 to 2hours 2 More than 2hours to 4hours 3 More than 4hours 4	
B37	What do you do **mostly** with your mobile phone	Receive calls 1 Chat with friends on	

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		facebook, twitter,Whats app etc 2 Texting 3 Others 4 Specify…………….	
B38	Have **you EVER RECIEVED/VIEWED** pornographic pictures on your mobile phone ?	Yes 1 No 2	
B39	Have you EVER been asked to send semi-naked or naked picture of yourself ?	Yes 1 No 2	
B40	Have you EVER sent pornographic picture (s) to your boyfriend or girlfriend through mobile phone?	Yes 1 No 2	
B41	Do you still receive such messages/picture up till now?	Yes 1 No 2	
	IF NO TO QUESTIONS B 31,B32, B33 THEN SKIP TO SECTION C		
B42	Does it have any influence on your desire to have sex?	Yes 1 No 2	

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B43	Does this pictures make you to want to have more sex	Yes 1 No 2	
B44	Does this pictures make you not to want to have more sex	Yes 1 No 2	
B45	Do you want to stop receiving such messages	Yes 1 No 2	
B46	Are you able to stop receiving such messages	Yes 1 No 2	
B47	Who sends you such Messages **the Most**	Your boy/girlfriend 1 your schoolmate 2 Friends 3 You don't know the person 4 others 5 Specify………………	

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C	**SOURCE OF INFORMATION ON SEXUALITY**		
C1	From whom **do you prefer** to receive information about sexual or reproductive system of women or men ?	School teacher 01 Father 02 Mother 03 Friends 04 Brother 05 Sister 06 Boyfriend/girlfriend 07 Health workers 08 Internet 09 Books/magazine 10 Films/video 11 Others 12 Specify……….	
C2	What is **PRESENTLY** your **MAIN** source to receiving the information about sexual or reproductive system of women or men?	School teacher 01 Father 02 Mother 03 Friends 04	

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		Brother 05 Sister 06 Boyfriend/girlfriend 07 Health worker 08 Internet 09 Books/magazine 10 Films/video 11 Others 12 Specify……….	
C3	Does your school have classes on sexual and reproductive system and on relationships between boys and girls?	Yes 1 No 2	
C4	Do you attend such classes on sexual and reproductive system and on relationships between boys and girls?	Yes 1 No 2	
C5	Do you think such classes address your need on sexual and reproductive system and on relationships between boys and girls	Yes 1 No 2	
C6	Do you think More of such classes on sexual and reproductive system and on relationships between boys and girls should be organised.	Yes 1 No 2	

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C7	What do you think in your opinion is **the BEST** way to pass such information on sexual and reproductive system and on relationships between boys and girls should be organized?	T.V 1 radio 2 mobile phone 3 drama sketch 4 others 5 specify……………	
D	**ADOLESCENT AND YOUTH FRIENDLY SERVICES**		
D1	Is there any programme, organisation or group in the place where you live that give information on contraception, pregnancy, abortion or sexually transmitted diseases?	Yes 1 No 2	If NO skip to
D2	If **YES** to question **D1** Pls can you give name of such programme, organisation or group?	………………………… …………………………..	
D3	Have you ever visited a health facility, hospital,clinic etc to receive reproductive health services on contraception, pregnancy, abortion or sexually transmitted diseases before?	Yes 1 No 2	If NO then end here
D4	How many times in the **last twelve months** have you visited such facility to	None 1 One to two times 2	

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	receive services or information on contraception, pregnancy, abortion or sexually transmitted diseases?	Three or more 3	
D6	Did you feel comfortable enough to ask questions?	Yes 1 No 2	
D7	Were the health providers friendly or welcoming?	Yes 1 No 2	
D8	Was the environment conducive and confidential enough?	Yes 1 No 2	

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APPENDIX 2: INFORMED CONSENT FORM
Project Title

Determinants of risky sexual behaviour among SHS students in La Dade-kotopon municipality

Institutional affiliation

Department of Population, Family and Reproductive Health, School of Public Health, College of Health Sciences, University of Ghana, Legon

Background

Hello! My name is Ameh Emmanuel Ogbada (Principal Investigator). I am a Masters in Public Health (MPH) student from the School of Public Health, University of Ghana. I am conducting a study on the determinants of risky sexual behaviour among SHS students in the La Dade-kotopon Municipality. The purpose of the study is to determine factors that influence risk taking behaviour in senior high school students, the source of information on sexuality and possible levels of exposure and availability of youth friendly reproductive health programmes among high school students in La-Dadekotopon municipality. This is purely an academic research which forms part of my studies for the award of an MPH.

Procedures

You will be asked some questions about your family background; whether your parents have ever talked to you about sexual and reproductive health; sexual history and contraceptive use; source of information on reproductive health issues. You will be given self-administered questionnaire to complete.

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Risks and Benefits

The study does not involve any risks. However, you may feel uneasy with some of the questions we will be asking you. Your responses will be very helpful to the study. The information you provide will contribute toward efforts to reduce risky sexual behaviours like unprotected sex and multiple sexual partners among young people in La-Dadekotopon municipality. The findings of the study will inform the regional health and education directorate about what norms are transmitted to young people that shape their sexual behaviour. The study will also add to existing knowledge on young peoples' health and help to improve adolescent friendly programmes.

Right to refuse

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study any time. However, I will encourage you to participate and complete the questions since your opinions are important to help design strategies to improve young peoples' sexual behaviour.

Anonymity and Confidentiality

I would like to assure you that whatever information you will provide will be handled with strict confidentiality and will be used purely for research purposes, and will not be used against you. Your responses will not be shared with anybody who is not part of the study team. Data analysis will be done at the aggregate level to ensure anonymity.

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Data Security

All study materials (questionnaires, informed consent forms) will be stored in locked file cabinets of the Principal Investigator. Data will be entered in SPSS software by the research assistants and principal investigator, and electronic files will be made accessible only to the researcher.

Plan for record keeping

Study materials (questionnaires, informed consent) will not be labeled and will each have a unique study identification number.

Person responsible and telephone number

The person responsible for data storage will be Ameh Emmanuel Ogbada, a student of the School of Public Health, University of Ghana, and Legon. Tel: 0204333110

Where data will be stored for data security

During data collection, all materials related to the study will be stored in a locked cabinet in the PI's office.

Who will have access to the data

Only members of the research team (principal Investigator and research assistants) will have access to the data.

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Compensation

Eligible persons who consent to participate in this study will not be given any monetary or non monetary compensation.

Before taking consent

Do you have any questions you wish to ask about the study? Yes ☐ No ☐

(If yes, questions to be noted below)

If you have questions later, you may contact Ameh Emmanuel Ogbada: 0204333110, email: emmameh_w@yahoo.co.uk

Consent

I--, declare that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me and I have understood. I hereby agree ☐ disagree ☐ to participate in the study.

Signature of Participant ---

Date................./................./.......................

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APPENDIX 3: INFORMED CONSENT FORM(FROM PARENTS OF THOSE LESS THAN 18 YEARS)

Project Title

Determinants of risky sexual behaviour among SHS students in La Dade-kotopon municipality

Institutional affiliation

Department of Population, Family and Reproductive Health, School of Public Health, College of Health Sciences, University of Ghana, Legon

Background

Hello! My name is Ameh Emmanuel Ogbada (Principal Investigator). I am a Masters in Public Health (MPH) student from the School of Public Health, University of Ghana. I am conducting a study on the determinants of risky sexual behaviour among SHS students in the La Dade-kotopon Municipality. The purpose of the study is to determine factors that influence risk taking behaviour in senior high school students, their source of information on sexuality and possible levels of exposure and availability of youth friendly reproductive health programmes among high school students in La-Dadekotopon municipality. This is purely an academic research which forms part of my studies for the award of an MPH.

Procedures

Your child will be asked some questions about his/her family background; whether any of his/her parents have ever talked to him/her about sexual and reproductive health;

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sexual history and contraceptive use; source of information on reproductive health issues. He/She will be given self-administered questionnaire to complete.

Risks and Benefits

The study does not involve any risks. However,He/She may feel uneasy with some of the questions we will be asking him/her. His/Her responses will be very helpful to the study. The information that is provide will contribute toward efforts to reduce risky sexual behaviours like unprotected sex and multiple sexual partners among young people in La-Dadekotopon municipality. The findings of the study will inform the regional health and education directorate about what norms are transmitted to young people that shape their sexual behaviour. The study will also add to existing knowledge on young peoples' health and help to improve adolescent friendly programmes.

Right to refuse

Participation in this study is voluntary and he/she can choose not to answer any individual question or all the questions. He/She are at liberty to withdraw from the study any time. However, I will encourage you to consent for your child to participate and complete the questions since his/her opinions are important to help design strategies to improve young peoples' sexual behaviour.

Anonymity and Confidentiality

I would like to assure you that whatever information that would be provide will be handled with strict confidentiality and will be used purely for research purposes, and will not be used against you or your child. His/Her responses will not be shared with anybody

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who is not part of the study team. Data analysis will be done at the aggregate level to ensure anonymity.

Data Security

All study materials (questionnaires, informed consent forms) will be stored in locked file cabinets of the Principal Investigator. Data will be entered in SPSS software by the research assistants and principal investigator, and electronic files will be made accessible only to the researcher. All Data file will be password protected and known only to the investigator and the supervisor of this study.

Plan for record keeping

Study materials (questionnaires, informed consent) will not be labeled and will each have a unique study identification number.

Person responsible and telephone number

The person responsible for data storage will be Ameh Emmanuel Ogbada, a student of the School of Public Health, University of Ghana, and Legon. Tel: 0204333110

Where data will be stored for data security

During data collection, all materials related to the study will be stored in a locked cabinet in the PI's office.

Who will have access to the data

Only members of the research team (principal Investigator and research assistants) will have access to the data.

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Compensation

Eligible persons who consent to participate in this study will not be given any monetary or non monetary compensation.

Before taking consent

Do you have any questions you wish to ask about the study? Yes ☐ No ☐

(If yes, questions to be noted below)

If you have questions later, you may contact Ameh Emmanuel Ogbada: 0204333110,

e-mail address: emmameh_w@yahoo.co.uk

Consent

I---, declare that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me and I have understood. I hereby agree ☐ disagree ☐ for my child to participate in the study.

Signature or thumb print of parent --

Date................./................../......................

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APPENDIX 4: SCHEDULE OF ACTIVITY (PLAN OF WORK).

	TASK NAME	PERSON RESPONSIBLE	MONTH	START	FINISH	YEAR 2013
1	Submission of draft proposal to SPH	Principal investigator	January			
2	Finalised proposal with academic supervisor	Academic supervisor	January			
3	Submission of final proposal to SPH	Principal investigator	February			
4	Secure permission/clearance to conduct study	Principal investigator	February			
5	Training of research assistance	Principal investigator	April			
6	Pretesting of tool	Research Team	April			
7	Data collection	Research Team	May			
8	Data entry	Research Team	May			
9	Data analysis	Principal investigator	May			
10	Report writing and submission	Principal investigator	June			
11	Dissemination of finding	Principal investigator	August			