UNIVERSITY OF CAPE COAST

SEXUAL BEHAVIOUR AMONG SENIOR HIGH SCHOOL STUDENTS IN THE CAPE COAST METROPOLIS

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature: ……. Date: …….

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Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast

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ABSTRACT

Adolescence is a period of transition characterised by risk taking behaviours, including sexual behaviour, which may have implications on the health of the adolescent. The study examined sexual behaviour among Senior High School students in the Cape Coast Metropolis. The data were obtained from a cross-sectional survey. Through the multi-stage sampling method, 400 students were selected from three Senior High Schools whose ages ranged from 10-19 years. Chi-square, binary logistic regression and independent samples T-test were statistical techniques used to analyse the data.

Fourteen percent of the respondents had ever had sexual intercourse. Fifty three percent of the respondents who had ever had sex, had it with multiple sexual partners and had had sex more than twice; the majority of students who had ever engaged in sexual intercourse did not use contraception. Sixty nine percent of the sexually active students who used contraceptives used condoms, which they purchased from pharmacies and chemical shops. Form one students were less likely to engage in sexual intercourse than students in Form two, (OR= 0.30, 95% CI=0.15-0.63). Students who lived with both parents were less likely to engage in sexual intercourse than those who did not live with both parents, (OR=0.480, 95% CI=0.240-0.963). Students who visited health facilities for sexual and reproductive health services were faced with negative attitude from providers.

Students, who have not already engaged in sexual activities, should be encouraged to abstain until they are of age. Those who are sexually active should be encouraged to use contraceptives to prevent STIs and unplanned pregnancies.

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DEDICATION

To my family

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CHAPTER ONE

INTRODUCTION

Background to the Study

Sexual behaviours adopted by adolescents have critical implications for their future health, morbidity, as well as mortality (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2012; Population Reference Bureau, 2012). Unprotected sex is one of the riskiest sexual behaviours among young people, particularly in settings where HIV and AIDS is highly prevalent (McRee et al., 2010; NRC-IOM, 2005). Educational attainment among adolescents have been rising rapidly throughout the developing world (Putnam, Frederick, & Snellman, 2012; Myer et al., 2007). At the same time, sexual and reproductive health behaviours among adolescents have been changing within rapidly shifting environments in terms of health risks and health services and in terms of changing fertility preferences, delays in the timing of marriage, and changing opportunity structures with respect to education and employment (McFarlane, Younger, Francis, Gordon-Strachan & Wilks, 2014; Putnam et al., 2012).

Adolescents are young people aged 10 to 19 years (World Health Organisation, 2012). Adolescents are becoming more sexually active in recent times than in the past (Wusu, 2013). Sex among these adolescents is usually unprotected and this could lead to risks of unplanned pregnancies that result in unsafe abortions and also the risk of contracting sexually transmitted

infections (STIs) such as syphilis, gonorrhea, chlamydia, chancroid, genital herpes, candidiasis and trichomoniasis (Snoek et al., 2014).

There are more than one billion adolescents 10-19 year worldwide, 70 percent of whom live in low income countries (UNESCO, 2014; Centres for Disease Control and Prevention [CDC], 2012). It is, therefore, critical for countries to engage with this significant portion of the population and be able to address their health needs. Health services need to move beyond adolescent pregnancy and HIV to address the full range of adolescents' health and development needs (UNFPA, 2014). Adolescents develop more self-consciousness indicated in their self-assessment of how others see them (World Health Organisation, 2012). In many cases adolescents consider themselves grown up and mature enough to have sex yet they have inadequate knowledge about the consequences of unprotected sex. These consequences include unplanned pregnancy, complications of unsafe abortion, and sexually transmitted infections (UNAIDS, 2008). In many cases, they do not reveal their reproductive health problems and tend not to use the healthcare services they actually need (UNAIDS, 2008). This may be due to inadequate information, limited access to financial resources or negative attitudes of health workers (Yankah & Aggleton, 2008).

Adolescents are quite explicit about what they want from health-care providers especially when their sexual behaviours issues are involved. They value their privacy and identity, and want to make decisions for themselves based on correct information. WHO and UNICEF (2008) stipulate a number of elements that stimulate adolescents to seek sexual and reproductive healthcare. These elements include: confidentiality, provision of required information and

services, considering and respecting adolescents' opinions, allowing adolescents to make their own decisions, ensuring that adolescents feel welcome and comfortable, being non-judgmental, and provision of services at a time that adolescents are able to come (WHO & UNICEF, 2008).

Adolescents experience numerous developmental challenges at varying pace, including: increasing need for independence; evolving sexuality; transitioning through education and commencing employment; consolidating advanced cognitive abilities; and negotiating changing relationships with family, peers and broader social connections (Hair, Park, Ling, & Moore, 2009). The adolescent period is also marked by increased involvement in risk behaviours that may predispose adolescents to poor long-term outcomes **(**Guttmacher Institute, 2012; Hipwell, Stepp, Keenan, Chung, & Loeber, 2011; Hair et al., 2009)**.**

A growing number of adolescents are becoming sexually active before marriage and as a consequence the rate of unplanned pregnancies among adolescents, particularly among those with unmet need for contraceptives increases. The damaging consequences of child bearing at a young age pose health threats to both the adolescent mother and infant. Adolescent sexual activity, within or outside of marriage, can lead to negative reproductive health outcomes (UNESCO, 2013).

In sub-Saharan Africa, adolescents are frequently reluctant to seek health services for sexual and reproductive health (Guttmacher Institute, 2012). This is as a result of judgmental attitude of health workers, lack of supplies, equipment, materials and private workspace at health facilities and lack of training for and in understanding of adolescent reproductive needs by

health care providers (Gordon, 2007). In countries such as Ethiopia and Uganda, early marriage often fuels high incidence of complications from pregnancy and delivery (UNESCO, 2014). Although there are favourable policies for adolescent health and development in Uganda, translating these policies into practice has been the main limiting factor. Many African countries have Adolescent Health Policy Guidelines and Service Standards, National Minimum Healthcare Package which includes sexual and reproductive health (SRH) and rights for adolescent, and the Health Sector Strategic and Investment Plan (HSSIP) their successful implementation is a very big challenge (Hall, Moreau, & Trussell, 2012b).

Adolescents are at risk of a broad range of health problems. Among these problems are early sexual debut, unplanned pregnancies, unsafe abortions, pregnancy-related complications, sexually transmitted infections (STIs) and HIV/AIDS (Konadu, 2010). Adolescents are especially vulnerable to these problems because they are more likely to engage in unplanned and unprotected sex, they lack the skills necessary to negotiate for safer sex, they engage in sexual activities with multiple partners, and they have limited awareness of STI prevention (CDC, 2014; Glover et al., 2002).

Konadu (2010) noted that owing to fears that there will be community resistance in rendering Youth Friendly Services (YFS), the government of Ghana has over the years been willing to let Non-Governmental Organization (NGO) take the lead in providing Sexual Reproductive Health (SRH) information and services to adolescents. However, many Ghanaians (49.1%) live in rural areas (Ghana Statistical Service, 2013); where there are few NGOs that have the capacity to run district-wide interventions. Most of the

NGO-run youth SRH programmes are urban based and donor dependent, making them less sustainable than public health facilities (Hensel et al., 2011). In Ghana, like in any other Sub-Saharan African country, pregnancy related school drop outs have become a matter of concern. Many of the girls who become pregnant in most cases, either resort to illegal unsafe abortion or face official school dismissal **(**Awusabo-Asare, Bankole, & Kumi-Kyereme, 2008; Khan & Mishra, 2008). Konadu (2010) indicates that many adolescents in Ghana engage in sexual risk-taking, including early initiation of sexual activity, unprotected sex, and low levels of contraceptive use, as well as multiple concurrent sexual partners**.** Twenty two percent of Ghanaian women age 25-49 had given birth before reaching age 18, while 39 percent have given birth by age 20 (GSS, 2015). An understanding of the sexual experiences of Senior High School students, their level of contraceptive use, as well as factors that influence sexual behaviour among them, is therefore critical in proffering solutions to their sexual and reproductive health needs.

Statement of the Problem

Risky sexual behaviour of adolescents is a major concern globally as it leads to transmission of STIs including HIV and AIDS as well as unintended pregnancies (UNAIDS, 2012). Sub-Saharan Africa suffers the greatest toll, where adolescents in many parts of the region face fast growing rates of HIV and other STIs (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2012; United Nations Children's Fund [UNICEF], 2012; Mash & Mash, 2012). Evidence from the UNAIDS report of 2012 suggests that the proportion of recent births to adolescent women that were either mistimed or unplanned was 23 percent in Burkina Faso, 40 percent in Ghana and Malawi and 39

percent in Uganda (McFarlane, 2014; UNAIDS, 2012; United Nations Population Fund [UNFPA] & UNAIDS, 2012; Hair et al., 2009).

Adolescent sexual behaviour is critical in these times especially with the increase in sexually transmitted infections (STI) and Human Immune Deficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) on the one side and the fast rate at which adolescents are becoming sexually active globally on the other side (Sychareun et al., 2013; Hensel, Stupiansky, Orr, & Fortenberry, 2011). HIV is increasingly affecting youth worldwide (CDC, 2014; World Health Organisation, 2012). In 2010, nearly half of all new HIV infections occurred among adolescents and it is estimated that about seven million people in this age group are now infected (Hipwell, Stepp, Chung, Durand, & Keenan, 2012). Understanding the sexual and reproductive behaviours of adolescents, especially females, who are at particularly high risk, and the factors that protect or put them at risk of HIV infection, STI's and unplanned pregnancy is critical (Hipwell et al., 2012).

Sexual behaviour of adolescents is dependent on several complex and often independent factors including social-cultural influences (such as family, peers and communities), and access to health services, education and employment opportunities in Africa (Guttmacher Institute, 2012). In Uganda, abortion is legally restricted and post abortion care (PAC) services are provided by doctors, clinical officers and midwives in all facilities (Maticka-Tyndale, 2010). The provision of PAC services is always limited by inadequate trained staff and lack of other resources. Although both male and female adolescents have many reproductive health challenges, the female adolescents have additional burdens that are gender and sex specific. For example, in the year

2011, 24 percent of adolescents between 13 and 19 years were already mothers or pregnant with their first child in Uganda. Even though adolescent pregnancy has been steadily declining (41% in 1995, 31% in 2000, 25% in 2006 and 24% in 2011), it is still visibly high. Pregnancy among adolescents is important because it is associated with higher morbidity and mortality not only for the mother but also the child. It also has the psycho-social consequences that affect their wellbeing.

The median age at first sexual intercourse for Ghanaian women, aged between 25 and 49 was 18.4 years, compared to 19.8 years for men (GSS, GHS & ICF International, 2015). Sexually active adolescents are often at a higher risk of contracting STIs than their adult counterparts. Condom use at first sex serves as an indicator of reduced risk of exposure at the beginning of sexual activity. It was however lowest among the youngest women age between 15 and 19 years (19 percent) (GSS et al., 2015).

Much research has been conducted on sexual reproductive health of adolescents. These studies have mainly focused on unmet needs of adolescents with regards to their sexual and reproductive health needs which include contraception and comprehensive abortion care (Snoek, 2014; Hipwell et al., 2012; Guttmacher Institute, 2012; Population Reference Bureau [PRB], 2012; UNFPA & PRB, 2012; UNFPA & UNAIDS, 2012; Hensel et al., 2011; Hipwell et al., 2011; Gribble, 2010; Ringheim & Gribble, 2010; Hair et al., 2009; UNFPA; 2009; World Health Organisation [WHO], 2009; Awusabo-Asare et al., 2008; Khan & Mishra, 2008; Inter-agency working group [AIWG] on the Role of Community involvement in Adolescent Sexual and Reproductive Health [ASRH], 2007; Glover et al., 2002).

Risky sexual behaviours and the implications of such behaviours among adolescents have also been widely investigated (Aninanya, Debpuur, Awine, Williams, Hodgson, & Howard, 2015; Awang, Wong, Jani, & Low, 2013; Baird, Garfein, McIntosh, & Ozler, 2012; Putnam et al., 2012; Awusabo-Asare, Bankole, & Kumi-Kyereme, 2008). Aninaya et al. (2015) for instance examined the effects of an adolescent sexual and reproductive health intervention on health service usage by young people in northern Ghana. Their study was, however, community based, making use of twenty-six communities. Awang et al. (2013) examined knowledge of sexually transmitted diseases and sexual behaviours among Malaysian male youths. Their study was also community-based. Baird et al. (2012) also assessed the effect of a cash transfer programme for schooling on prevalence of HIV and herpes simplex type 2 in Malawi in a cluster randomised community-based study.

The Central Region (7%) records the highest rate of adolescents with first child and ranks second (21%) in terms of adolescents who have begun childbearing among 15-19 year old females in the country (GSS et al., 2015). HIV prevalence among Ghanaian youth (15-24 years) is highest in Central Region (2.9 %) and young women in Central region have the highest HIV prevalence (4.4 %) (GSS et al., 2015). The present study therefore sought to examine sexual experiences of Senior High School students, level of contraceptive use among them and factors influencing their sexual behaviour.

Objectives of the Study

This study generally sought to examine sexual behaviour among senior high school students in the Cape Coast Metropolis.

Specific objectives of the study were to:

1. Examine the sexual experiences of Senior High School students.
2. Assess contraceptive use among Senior High School students.
3. Examine factors influencing sexual behaviour of Senior High School students.

Hypotheses of the study

1. There is no statistically significant difference in age at sexual debut by sex
2. There is no statistically significant difference in number of sexual partners by sex.

Significance of the Study

The study provides knowledge on sexual behaviour among adolescents in senior high schools in Cape Coast Metropolis and serves as a source of secondary material for future research on the topic. As such it is significant in contributing to the body of knowledge available in the literature on the topic. Knowledge generated will inform stakeholders such as the Ministry of Health and the Ghana Education Service which are responsible for sexual behaviour among adolescents to institute interventions targeted at the SRH needs of adolescents in Ghana. Such interventions may include improved contraceptive use and utilisation of reproductive health services and facilities.

The study findings will guide future research on adolescent reproductive health, not only in the Cape Coast Metropolis, but in Ghana at

large. Thus, persons or groups of people interested in conducting studies in future on adolescent reproductive health could consult the findings produced by this research, as a source of secondary information to guide them.

Organisation of the Study

The study was organised into five chapters. Chapter One was the introduction to the study. It included background to the study, problem statement, objectives of the study and significance of the study. Chapter Two of the study reviewed literature relevant to the study. This mainly included the empirical, theoretical and conceptual underpinnings of the study. Chapter Three presents the methods which were adopted in conducting the study. It included the research design, setting, sources of data, sample size and sampling procedure, methods of data collection and data analysis. Chapter Four presented findings of the study and discussed those findings with works done by other researchers. The final chapter (Chapter Five) summarised the study, drew conclusions on the major findings and made recommendations for policy and practice as well as suggestions for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter reviews literature relevant to the study. The literature review is divided into theoretical, empirical and conceptual reviews. The empirical review covers relevant previous studies on sexual experiences of adolescents, utilisation of contraceptives and factors that influence sexual behaviour. Theoretical review of the study comprises Stages of Change (Transtheoretical) Model, Precaution Adoption Process Model, Health Belief Model (HBM), Nola Pender's Health Promotion Model and Theory of Planned Behaviour.

In the study of the available literature on sexual experiences, the use of contraceptive and factors influencing sexual behavour among students, the researcher looked at various studies and reports conducted all over the world. To review the evidence of sexual behaviour among young adolescents, articles were located by searching Google Scholar, Ebscohost, Medline, Pubmed, Hinari, Cochrane Database of Systemic Reviews, and the Combined Health Information Database. Keywords used in the search for the literature were; risky sexual behavour, adolescents, young people, students and contraceptive use among adolescents or students.

Adolescent Reproductive Health

Reproductive health may be considered as the ability to regulate and control fertility (fertility and family planning) for all women in reproductive age, to have a safe pregnancy and childbirth and for the newborns to experience healthy infancy and freedom from sexually transmitted infections (STIs) (Gebremichael & Chaka, 2015; Tung, Ding, Farmer, 2008). Adolescent reproductive health refers to mortality, morbidity and quality of life attributable to the reproductive system, process and events experienced by men and women of all ages (Mukhopadhyay, Chaudhuri, & Bhaskar, 2010). According to WHO (2012), reproductive health is a state of physical, mental and social well-being in all matters relating to the reproductive system at all stages of life.

Adolescent sexual and reproductive health issues have globally become increasingly prominent and aroused widespread international concern. It is estimated that 14 to 15 million adolescent women between the age of 15 and 19 years give birth every year, whereas more than 40 percent of all new HIV infections are among young people between 15 and 24 years of age and more than 6000 contract the virus daily (Zhang, Bi, Maddock, & Li, 2010).

Zhang, Bi, Maddock and Li (2010) noted that in developed countries where the age of sexual maturity occurs earlier and continued delay in the age at marriage, and where there is also rapid modernization, economic development and expanded exposure to media, the attitudes of adolescents towards sexuality are becoming much more liberal. Research according to Zhang et al. (2010), also indicates the fact that an ever increasing number of adolescents are having sex before marriage, and the age of sexual debut keeps

reducing. This is associated with significant increases in the quantum of unplanned pregnancies as well as induced abortions among unmarried young people. Moreover, an upsurge in the incidence rate of Sexually Transmitted Infections (STIs) and HIV infection have occurred unabated.

The inadequacy of public education and family planning service in developing countries usually results in increased rates of unplanned pregnancies at grave socio-economic and emotional costs (Ugoji, 2004). It is abundantly clear that unplanned pregnancies among young people results from reasons not readily discernable by parents and other interested and concerned adults, nor is it the result of the lack of adequate birth control devices (McIntyre, 2006). Rather, there is a combination of factors which teenagers lack in preparation for sexual intimacy.

Among the key reasons why so many sexually active adolescents in developing countries are becoming pregnant is that many do not want to assume any responsibility for birth control measures (Ugoji, 2004). Other adolescents are simply ignorant of the whole process of reproduction and do not associate sex with pregnancy, and so without adequate information about the body, especially in the reproductive area, teenage pregnancies will continue to rise and the epidemic of unwed teenage mothers will grow to ever alarming proportions (Ugoji, 2004). These factors show that the role of ignorance of sound knowledge of sexual functioning and reproduction as well as adequate birth control information is a significant contributory in the occurrence of unplanned pregnancies among young people. Parents as well as educators, who are reluctant in informing young people about the facts of life concerning sex and all its consequences, play a significant role in the ever

increasing numbers of such unplanned pregnancies (Hall, Moreau, & Trussell, 2012a).

Ugoji (2013) conducted a study of tertiary students and found out that half of the respondents have low level of reproductive health knowledge. Female tertiary institution students however, appeared to be more knowledgeable on reproductive health than their male counterparts. From the total number of students who participated in a study conducted by Gebremichael and Chaka (2015), majority showed interest in the use of reproductive health service in the future and also wanted the establishment of reproductive health services within the school. Most of them started sex before the age of 18 years and only one tenth of the students started sex after 24 years. Most of the students were also not using contraceptives during the survey period. Conversely, Simbar, Tehrani and Hashemi (2005) in a study conducted among university students reproductive health behaviour, indicated that less than one-tenth of the participants in the study reported having sexual intercourse before marriage, while about half of them had used condoms. The majority of students believed that the risk of AIDS and other sexually transmitted infections was moderate but that youth had a low ability to practise healthy behaviour. The majority believed in the benefits of reproductive health knowledge for youth but felt that services were inadequate.

A high prevalence of multiple concurrent partner relationships has been reported in tertiary institutions in Zimbabwe, and other research shows that many young women have multiple partners who provide for them financially. These kinds of relationships are key drivers of the HIV/ AIDS epidemic (SAYWHAT, 2010) among young people, especially those in

universities. Research shows that many young women also tend to believe men have a need for sex and the right to coerce women into sex.

According to Mengistu and Melku (2013), majority of adolescents surveyed did not have adequate awareness on sexual and reproductive health risks and had exhibited high risk reproductive health behaviours. With regards to the magnitude of sexual and reproductive health problems among the students, almost all focus group discussant and in-depth interview participants in Mengistu and Melku's study acknowledge the fact that it is a serious problem. Risky behaviour such as substance abuse, high alcohol consumption, multiple sexual relationships and early sexual initiation; low level of knowledge/awareness, HIV/STIs infection, unplanned pregnancy, abortion and gender based violence/sexual harassment were the identified sexual and reproductive health problems that prevailed among students in the university where the study was conducted (Mengistu & Melku, 2013).

Chen et al. (2008) also noted that university students generally have inadequate and fragmented knowledge on sexual and reproductive health. As a result, most of them are not sufficiently skilled in making informed and responsible decisions to minimize their involvement in risky sexual practices such as early sexual debut, having multiple sexual partners, non-use or inconsistent use of condoms and other contraceptives, to stay healthy. A considerable number of university students have been exhibiting high risk reproductive health behaviours that would predispose them to reproductive health problems. A wide array of high-risk activities and arrangements such as sexual experimentation, practicing sex for any kind of benefits (in kind/cash), unprotected casual sex, frequent serial partner change, and considerable

physical and psychological violence against female students are prominent predisposing factors (Chen et al., 2008). Young people's sexual and reproductive health information and services utilization are significantly low which might have fueled the occurrence of sexual and reproductive health problems (UNAIDS, 2007).

Gebremichael and Chaka (2015) acknowledged that adolescent's sexual and reproductive health needs are generally not well addressed to protect them from unwanted pregnancies, complications of unsafe abortions and sexual transmitted infections including Human Immunodeficiency Virus/AIDS. Although the number of young people who need information and services are enormous, services are scarce, fragmented and non-existent. Gebremichael and Chaka (2015) noted that most young people in universities do not know the reproductive health components, problems and also prevention methods. A great number of students as noted by the authors, used reproductive health services during the survey period. There was however high demand to utilize reproductive health services. This indicates high levels of unmet needs for such services. The WHO (2010) distinguishes three dimensions of reproductive health: as a human condition (including the level of health and related areas of well-being); as an approach policy, legislation and attitudes and as a service (the provision of services, access to them, and their utilization).

Sexual Experiences of Adolescents

Globally, adolescents generally begin sexual activities before marriage (WHO, 2012). In the United States of America, nearly half of all high school students report ever having had sexual intercourse in 2011, a decline from 54

percent in 1991 (Gribble, 2010; Agudelo & Belizan, 2000). Males are slightly more likely than females, to report having had sex. There are racial/ethnic differences in sexual activity rates among adolescents. Black high school students are more likely to have had intercourse compared to white and Hispanic students. According to Blanc, Windrey and Ross (2012), more black high school students and Latino students initiate sex before age 13 compared to white students.

Nelson and Howitt (2013) revealed that among sexually experienced adolescents, majority of women had their first intercourse with a steady boyfriend with marriage in mind, while a significant proportion of males had their first sexual experience with a commercial sex worker or casual friend.

In Malaysia, Goicolea, Wulff, Sebastian and Ohman (2010) in a study on the reproductive health of adolescents (aged 13-19) revealed that 40 percent of respondents had begun dating from the age of thirteen years. By the age of eighteen, eighty-four percent of adolescents had started holding hands, eighty-five percent kissing and eighty-three percent petting. Of these, eighteen percent had first sexual contact between 15 and 18 years. In Argentina, it is the belief that male sexual urges are uncontrollable and explains the greater need that men have for casual sexual relationship (Goicolea et al., 2010).

In India, according to Moore, Sacks, Manlove and Sawhill (2014), it is reported that there is rising incidence of pre-marital sex of up to 28 percent among female and male adolescents. The study also revealed that young men are under pressure to perform and prove their virility. In Canada, adolescents are reported to be sexually active, with sexual experience at early age (Ball & Moore, 2008). In the Canadian Youth and Aids National study conducted

among grade 7, 9 and 11, and first year college and university students, 26 percent of grade 9 and slightly less than 50 percent of grade 11 students had had sexual intercourse at least once.

By age 18, at least 80 percent of sub-Saharan African adolescents are sexually experienced (Blanc, Windrey & Ross, 2012). Seventy-three percent of all Liberian adolescents ages 15 to 18 have had intercourse, as have 53 percent of Nigerian, 49 percent of Ugandan, and 32 percent of Botswana girls. In many sub-Saharan countries, first sexual activity takes place before marriage. Among Kenyan women, the median age at first marriage is 18.8 years, while the median age of first intercourse is 16.8 years. Data also show that four percent of Kenyan men are married by age 18, although 64 percent report sexual intercourse before that age. Factors that influence the median age at first intercourse in Kenya, include residence and education. In Kenya, rural young women engage in intercourse earlier than urban women, and the median age at first intercourse for women with no education is three years earlier than women with at least a secondary school education.

In Ghana, according to the 2014 Ghana Demographic and Health Survey, adolescents generally begin their sexual activity in their middle to late teens and the median age for first sexual intercourse being 18.4 years for females and 19.8 years for males (GSS, et al., 2015). It further states that among the 25 to 59 aged women many had pre-marital sex as adolescents.

Younger women are likely to experience first sexual intercourse at a later age than older women, suggesting that age at first sexual intercourse is rising among women. For example, the proportion of women aged 20-24 who were sexually active by age 18 is 41 percent, compared with 51 percent among

women aged 45-49 (GSS, et al., 2009). In contrast, the trend among men is towards younger age at first sexual intercourse. Among men aged 20-24, 27 percent were sexually active by age 18 compared with 23 percent among men aged 45-49. Another demographic health survey conducted in Uganda showed that young people in Uganda started sexual activities at an early age, with an increase in the median age for first sex among adolescent of 16 years in 1998-1999 to 18 years in 2000-2001 (Neema, Musisi & Kimbobo, 2004; Neema, Ahmed, Kibombo & Bankole, 2006).

Studies show that eight percent of students are physically forced to have sexual intercourse, females however are more likely than males to report this experience (CDC, 2012; Parker & Parker, 2009; American Medical Association, 2006). Young women experience the highest rates of rape and sexual assault. More than 1 in 5 senior high school girls have been victims of physical abuse, sexual abuse, or threats of physical violence (Mash & Mash, 2012; Höglund, Tydén, Hannerfors & Larsson, 2009). About 13 percent of 14-18 year olds report having shared a naked photo or video of themselves via digital communication such as the internet or text messaging (Mason-Jones, Mathews & Flisher, 2011; Arbab et al., 2009; Gottvall, Larsson, Högkund & Tydén, 2009).

In Korea, 24 percent of males and 11 percent of female secondary school adolescent students reported to have had pre-marital sexual intercourse (Nelson & Howitt, 2013). There are increasing numbers of reports of adolescents accessing commercial sex workers as well as information that there are high level of premarital sexual activity among adolescent boys inspite of the fact that social customs discourage premarital or extra marital

sexual relationships (UNICEF, 2012). In the United States, seven percent of adolescents (both married and unmarried) and 21 percent of unmarried youth report experiencing premarital sex and over 50 percent of unmarried adolescent and youth did not use condom during first premarital intercourse (Finer & Zolna, 2011; Aul-Ebhohimhen et al., 2008).

In Latin America and the Caribbean, half of young women were between 18 and 19 years at first sex. Limited data are available for men's age at sexual debut, but in Bolivia, Guyana and the Dominican Republic men were younger than women at first sex (Shah & Weinberger, 2012). Physical maturation occurs earlier in young women than in young men, but psychological and emotional readiness for the potential consequences of sexual activity occur much later than menarche. In some settings, young men have sex before reaching physical maturity; doing so is often related to engaging in high-risk or harmful behaviours (Azmat et al., 2012; Dixon-Mueller, 2008).

The pattern of age at sexual debut in Sub-Saharan Africa generally contrasts with that in other parts of the developing world (Ball & Moore, 2008). Among young men of the same age group in Sub-Saharan Africa, the median age at first sex ranges from 16 percent in Mozambique to 19 percent in Ghana (Pacqué-Margolis, Cox, Puckett & Schaefer, 2013; Biney, 2011; Hallfors, Cho, Rusakaniko, Iritani, Mapfumo & Halpern, 2011).

One-fifth of female and male adolescents and of male teens had more than one sexual partner in their lives. The percentage of high school students who report having had four or more sexual partners declined from 18 percent in 1995 to 15 percent in 2011 (CDC, 2012; Peltzer, Ramlagan, Chirinda,

Mlambo & McHunu, 2012). Adolescent girls are less likely than the boys, to engage in high-risk sexual behaviours. In Latin America, five percent of adolescents or fewer report multiple partners except in Colombia, where 8 percent of adolescents report multiple partners in the past year. In contrast, 19 percent of Guyanese adolescents, and more than 30 percent of Bolivian and Dominican men, report multiple partners (Daniels, Jones & Abma., 2013). Among adolescent boys, who had ever had sexual intercourse in Sub-Saharan Africa, more than 20 percent of them had had multiple partners in the past 12 months, compared with fewer than 10 percent of adolescent girls (Goicolea, Wulff, Sebastian & Ohman, 2010). According to Moore, Sacks, Manlove and Sawhill (2014), evidence from sub-Saharan Africa and Latin America suggests that condom use at last sex has increased among adolescents, but levels of use are still not sufficient to substantially reduce the spread of HIV (Birdthistle et al, 2011).

Unprotected sexual activity can expose adolescent girls to the risks of unintended pregnancy, unplanned childbearing and abortion, as well as HIV and other STIs (Bury et al., 2007). In addition to being a human rights concern, coerced or unplanned sex is associated with adverse reproductive health outcomes (Miller, Hallfors, Cho, Luseno & Waehrer, 2013; Cameron & Karabanow, 2003). Findings from a nationally representative sample of females aged 13–24 in Swaziland, for example, indicated that 33 percent had experienced sexual violence before the age of 18 (Reza et al., 2009).

The effects of early sexual activity are not just health-related but are often complex (Daniels et al., 2013; Dick et al., 2006). For example, at least in some settings, adolescents who stay in school longer are less likely to engage

in sexual risk behaviours (UNESCO, 2012a). It is unclear, however, whether adolescents who stay in school are less likely to engage in risky sex or whether sexually active adolescents who engage in risky sex are more likely than others to drop out of school, and are missed in school based studies. In some settings where premarital sex is taboo, sexual activity may be distracting or provoke negative responses from teachers or adversely affect school performance and lead to dropout (UNESCO, 2011).

The risks for young girls conferred by early marriage may involve older male partners who have often been sexually active for many years "bringing" HIV to the marriage (Global Library for Women's Medicine, 2008). Adolescent sexual activity, within or outside of marriage, can lead to negative reproductive health outcomes (Moore, Sacks, Manlove & Sawhill, 2014; Gordon, 2007). This prevalence falls within the reported range for other sub-Saharan African countries. Marriage may also lead to school dropout, even if the adolescent girl does not become pregnant. Most men and women become sexually active during adolescence (Hatcher et al., 2011; Indongo, 2008).

Moreover, sexual activity may result in adolescent pregnancy and birth, and thereby lead to school dropout or expulsion (Institute of Medicine, [IOM], 2011). This is because school policies in many developing countries frown upon adolescent pregnancy (Engebretsen, 2012). Thus teenage sexual activity; whether or not it leads to pregnancy or birth, may have a negative impact on young women's future educational attainment through school dropout.

Early marriage and early marital sexual activity present reproductive health risks for young adolescent women (Inter-Agency Working Group [AIWG], 2007). Early marriage can for instance, lead to pregnancies that put these adolescents at risk for obstetric fistulae (Nelson & Howitt, 2013) and can be a risk factor for HIV infection (Goicolea, Wulff, Sebastian, & Ohman, 2010; Kirby, 2007). Save the Children (2009) noted that sexual coercion has also been reported by boys in Africa and other developing country settings.

Recent evidence from the Demographic and Health Surveys and the AIDS Indicators Surveys show that median age at first sex among 20–24-year-old women ranges from a low of 16 years or younger in Mali and Mozambique to a high of 19 in Ghana (GSS et al., 2015). Overall, the median age in the rest of Sub-Saharan Africa is about 18.5 years (Khan & Mishra, 2008).

In 2008, globally an estimated 500 million new (incident) cases of curable STIs (gonorrhoea, chlamydia, syphilis and trichomoniasis) occurred (Owusu-Edusei, Chesson & Gift, 2013). In addition, 536 million people are estimated to be living with incurable herpes simplex virus type 2 (HSV-2) infection. Approximately 291 million women have an HPV infection at any given point in time, and it is likely that the numbers of HPV-infected men are similar. Further, STIs result in a large global burden of sexual, reproductive, and maternal–child health consequences. For instance, syphilis in pregnancy leads to 305 000 fetal and neonatal deaths, and leaves 215 000 infants each year at increased risk of dying from prematurity, low birth weight or congenital disease (UNESCO, 2014).

Daniels, Mosher & Jones (2013) investigated the parental role in relation to sexual education. The study showed that most Thai parents had not discussed sex education issues with their adolescent children. Sex is, in Thailand as well as globally, considered a sensitive and controversial issue, which complicates the discussion and education of it. Barriers that prevent parents from providing information on this issue were found. For example, the parents stated that they believed sex is an issue, which brings awkwardness and embarrassment and therefore did not speak of it at home (Gottvall et al., 2009; Haque & Soonthorndhada, 2009; Höglund et al., 2009; Kirkconnell et al., 2006; Garside et al., 2001).

Across countries, majority of adolescents report that they acquire their information on sexual health in general, and on STIs in particular, primarily through formal health education in schools (Mallesshappa et al., 2011UNFPA, 2008; Clark et al., 2002). While 10 sexually active adolescents might acquire (more) information on STIs through contact with their gynecologist or physician, those not yet sexually active are less likely to have had in-depth STI discussions with health care professionals (Hauser, 2008). Other sources of information which are frequently mentioned by the adolescents include parents, peers, and different media such as the radio, television or internet (McNamara et al., 2013; Seto & Lalumiere, 2010).

With particular reference to chlamydia, the proportion of adolescents able to identify chlamydia as an STI from a list of diseases, ranged from 34 percent in the study conducted in England by Garside et al. (2001) to 96 percent in a Swedish study by Andersson-Ellström, Forssman & Milsom (1996). In the Garside study, the proportion was higher among year 9 than

among year 11 pupils. In another Swedish study by Höglund et al. (2009), 86 percent of the surveyed adolescents mentioned chlamydia as one of the STIs known to them in response to an open question. In the two studies which reported on awareness among boys and girls separately, girls were observed to have higher awareness proportions than boys. Not many adolescents knew that chlamydia can be symptom-free. In one Swedish study where the level of knowledge in the same study population was assessed at age 16 and 18, a statistically significant increase in knowledge was observed over time. Only the Garside (2001) study reported on the subjective rating of risk of contracting chlamydia.

With regards to knowledge of gonorrhoea, the STI was identified as an STI from a given list, by most adolescents included in studies by Garside, Ayres, Owen, Pearson & Roizen (2001) and Andersson-Ellström et al. (1996). In the former, the difference between year 9 and year 11 pupils was more pronounced among boys: 53 percent among year 9 and 60 percent among year 11 than the former. A statistically significant increase in knowledge over time was observed in a group of girls surveyed at age 16 and 18. Only 50 percent of the adolescents surveyed in the study by Höglund et al. (2009) mentioned gonorrhoea in response to an open question on known STIs.

Awareness of syphilis was surveyed in the study conducted in England where 45 percent of the participating adolescents correctly identified the disease from a given list as an STI. The proportion was slightly higher among year 11 compared to year 9 pupils and awareness was slightly higher among girls than among boys. In the Tyden et al. (1991) study, 56 percent of the surveyed adolescents identified herpes as an STD from a given list. The

proportion was 90 percent in the survey by Andersson-Ellström et al. (1996) and 59 percent in the Garside et al. (2001) study. In a study by Tyden et al. (1991), considerable differences were observed between year 9 and year 11 pupils, but not between girls and boys in the same school year. Herpes was mentioned as an STD by 64 percent of the adolescents surveyed in the study by Höglund et al.

A study conducted by White and Smith (2009) among adolescents, showed that 28 percent of females and 53 percent of males had never been tested for any STI. Two-tenths of the males and one tenth of the females stated that they were not worried about contracting HIV or chlamydia when having unprotected intercourse with a new partner. Zablotska, Gray, Koenig, Serwadda, Nalugoda, Kigozi and Wawer (2009) conducted a study on 194 female adolescents and found that STD-related shame and stigma is a barrier for adolescents seeking treatment and help with STD-diagnosis. Especially those who presented with higher STI-related stigma were less likely to seek help. Yet, authors found that a person presenting a high level of shame would initiate health-promoting behaviour changes, such as using condom during intercourse, to prevent getting an STI. Even though STI-related shame is an unpleasant feeling, it might be an important motivation to prevent the spreading of STIs.

In a study carried by Cleland et al. (2011), girls who had been diagnosed with an STD and those who had not been diagnosed with an STI were questioned twice with a six-month interval. Results showed that the girls who had been diagnosed the first time were as likely to have contracted a new STI as the women without a previous STI diagnosis. Having previously

contracted a disease did not change these girls' attitudes and did not decrease their sexual risk taking.

A study conducted by Aninanya, Debpuur, Awine, Williams, Hodgson and Howard (2015) in secondary schools in Ghana, showed that 70.9 percent of the males and 75 percent of the female students were worried about and thought about HIV/AIDS. Regarding the students' attitudes towards protecting themselves from STIs, they showed a significant barrier towards condom use. The female students would not purchase condoms, due to fear of being judged as bad girls and the male students claimed that they would not accept a condom from a girl, because 'the girl is not to be trusted'.

Risk perception also plays a large role in the extent to which precautions are taken and is often described differently by boys and girls (Jahanfar, Lye & Rampal, 2009). Additionally, boys and girls seem to distinguish their level of perceived risk differently for pregnancy and STI infection. In a study conducted in Uganda assessing reproductive health risk perception among youth, participants, particularly young women, offered very detailed and personal assessments describing perception of their own risk or that of their peers for pregnancy while male participants claimed they did not even consider pregnancy when having sex because they 'did not intend to get the girl pregnant (Aul-Ebhohimhen, Poobalan, & van Teijlingen, 2008).

In 2010, about 22 million unsafe abortions were estimated to have occurred, accounting for half of all induced abortions in that year (McRee, Haydon, & Halpern, 2010). Approximately 47, 000 pregnancy-related deaths (13%) were attributable to complications of unsafe abortion; moreover, a recent study estimates that every year in low- and middle income countries, 5

million women are admitted to hospital as a result of unsafe abortion. Nearly all unsafe abortions (98%) occur in low- and middle-income countries (Dehlendorf, & Weitz, 2011). Young women are especially vulnerable where access to effective contraceptive methods is restricted to married women, and where the incidence of non-consensual sexual intercourse is high. For example, in Africa, young women below the age of 25 years account for nearly two thirds of all unsafe abortions (Shah & Weinberger, 2012).

Between 1990 and 2010, maternal mortality worldwide dropped by almost 50 percent (Temmerman, Khosla & Say, 2014). However, every day, approximately 800 women die from preventable causes related to pregnancy and childbirth; 99 percent of these deaths occur in low- or middle-income countries. Maternal mortality is higher in women living in rural areas and among poorer communities. Young adolescents face a higher risk of complications and death as a result of pregnancy than older women. Skilled care before, during and after childbirth can save the lives of women and newborn babies (Dehlendorf & Weitz, 2011).

One in three women aged 15–49 years are estimated to have experienced physical and/or sexual violence by an intimate partner, or non-partner sexual violence (UNFPA, 2014). Thirty per cent of all women aged 15–49 years who have been in a relationship have experienced physical and/or sexual violence by an intimate partner in their lifetime. Twenty-nine per cent of adolescent girls aged 15–19 years who have been in a relationship are estimated to have experienced physical and/or sexual violence by an intimate partner in their lifetime (UNESCO, 2013). The prevalence of intimate partner violence varies by geographic region, ranging from 24.6 percent in the World

Health Organization (WHO) Western Pacific Region, up to 37.7 percent in the WHO South-East Asia Region. The prevalence among high-income countries is 23.2 (Fleming, Tu & Black, 2012; Institute of Medicine. 2011; Dick, Ferguson, Chandra-Mouli, Brabin, Chatterjee & Ross, 2006).

Concepts of Contraceptives

Contraceptives are devices or methods for preventing pregnancy by either preventing the fertilization of female egg by a male sperm or preventing implantation of fertilized egg (Rahamefy, Rivard, Ravaoarinoro, Ranaivoharisoa, Rasamindrakotroka, & Morisset, 2008). Contraception involves one or more actions, devices, sexual practices or medications followed to intentionally prevent or reduce the likelihood of pregnancy or childbirth (Byamugisha, Mirembe, Faxelid, & Gemzell-Danielsson, 2006). With the advancement of scientific knowledge, the traditional based methods such as the separation of husband from wife after delivery, herbal enemas, prolonged breastfeeding, coitus interfermoralis, among others, give way to practical proven methods of preventing fertility. This includes the use of injectable, implants and mechanical barriers (Biddlecom, Munthali, Singh, & Woog, 2007).

Contraception could be short term, long-term reversible and long-term irreversible (permanent) (Ndifon, Ogaji, & Etuk, 2006). These methods can achieve their purpose through three main routes, this includes contraception (the prevention of fertilization of the ovum by the sperm cell), contragestion (preventing the fertilized egg from implantation), and the chemical or surgical induction of abortion of the development embryo/fetus. According to Masoda and Govender, (2013), choosing the right contraceptive method varies from

individuals. Contraceptives could be grouped into barrier, hormonal, sterilization, natural, emergency methods among others.

Abramowicz (2007) also categorized contraceptive methods into two main groups; non-prescription and prescription methods of contraception. Non-prescriptive methods of contraception do not need prescription and supervision to practice. These include barrier methods such as the condoms (male and female), spermicides, foams and periodic abstinence and withdrawal or coitus-interruptus. Prescription methods are those contraceptives that require prescription and supervision. Some forms of such contraception require the client to go through series of interviews, physical examination and sometimes laboratory investigations. They include the hormonal therapy, diaphragms (Cervical cap) and intrauterine devices (Abramowicz, 2007).

Contraceptive methods can also be classified as either traditional or modern contraceptive methods (Abiodun & Baloqun, 2009). Modern contraceptives include oral contraceptives, intrauterine devices (IUDs), female and male sterilization, injections, female and male condoms, and diaphragm. Traditional methods include withdrawal, periodic abstinence and use of herbs. Other practices which have a direct impact on fertility that have been included is prolonged breastfeeding and postpartum sexual abstinence, which are probably used by mothers more for recuperating between births, child survival and child spacing rather than for limiting family size. These methods have not been considered as contraceptive methods although their fertility inhibiting characteristics are well recognized (Abiodun & Baloqun, 2009).

Barrier Contraceptive Methods

Barrier contraceptives are devices that attempt to prevent pregnancy by physically preventing sperm from entering the uterus (Arowojolu, Ilesanmi, Roberts, & Okunola, 2002). These include: condoms (male and female), cervical caps, diaphragms and spermicides. Condoms (male and female) – this device made of polyurethane or latex and it acts as a mechanical barrier which prevent pregnancy by stopping sperm from entering the vagina (Akani, Enyindah, & Babatunde, 2008). The male condom is placed over the erected penis before sexual intercourse begins. It looks like a long thin deflated balloon. The female condom has a flexible ring at each end. The ring is fixed securely behind the pelvic bone to hold the condom in place while the other ring stays outside the vagina. The condoms are the only method which has a dual purpose of preventing pregnancy as well as protecting sexual partners from Sexually Transmitted Infections (STIs) (Akani et al., 2008).

Vaginal spermicides provide physical and mechanical barriers that prevent viable sperms from entering the cervix (Ebuehi, Ekanem, & Ebuehi, 2006). The effect is local within the vagina and may be used alone, or in combination with a physical barrier. It comes in the form of aerosol foams, foaming tablets, suppositories, films, gels and creams. Diaphragm is fixed into a place behind the women's pubic bone and has a firm but flexible ring, which helps it press against the vaginal walls. It is a rubber dome shaped device which is placed over the cervix (Wegene & Fikre, 2007). When it is combined with spermicides it becomes a very effective contraceptive device. The cervical cap fits over the cervix and blocks sperm from entering the uterus through the external orifice of the uterus. The cervical cap is a thimble-shaped

latex rubber barrier device. A spermicide fills about 1/3 of the cap. The cap should then be carefully positioned in the vagina, covering the cervix (Ebuehi et al., 2006).

Hormonal Contraceptive Methods

Hormonal contraceptives inhibit female ovulation or fertilization and are available in several forms (Hoff, Greene, & Davis, 2003). Formulations include combined estrogen-progestin steroidal medications or progestin only. The formulation can be administered orally, parenteraly, by implantation or intrauterine insertion. Hormonal contraceptive options are available only to females. Oral contraceptives (The pill) ; combined contraceptive pills have two hormones; an estrogen and progestin. They stop the release of the egg (ovulation) and also make the lining of the uterus thinner by suppressing the release of Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH). When used correctly, about 3 in every 1.000 women become accidentally pregnant in the first year (Nordquist, 2009). Contraceptive injectables (shot) (Depo-Provera) is a progestin – only long – acting reversible hormonal contraceptive or birth control drug (Hoff et al., 2003). It is administered intramuscularly every 3 month to prevent the women from releasing an egg and alters the endometrial maturation and cervical mucus. It is very effective, long lasting, does not affect lactation and helps prevent ectopic pregnancies.

Implant/Norplant is a rod with a core of progestin (etonogesttrel) (Hardon, Hodgkin, & Fresle, 2004). It is inserted under the skin of the upper arm of a woman through minor surgical procedure. The progestin is released slowly and it prevent some of the ovulation cycle (not all) as well as

thickening of the cervical mucus. The implant is effective for 3 years. It is a set of six small plastic capsules containing progestin. Each capsule is about the size of match stick. It is effective within 24 hours after insertion and fertility returns as soon as the capsules are removed (Hardon et al., 2004).

Vaginal ring is a flexible (ethylene vinyl acetate copolymer) ring that releases a low dose of a progestin and an estrogen over a period of 3 weeks (Ndifon et al., 2006). The woman continues to ovulate but contraception is achieved by making the cervical mucus impermeable to sperms. The women inserts the Nuva Ring into the vagina for a 3 week period and then removes it for one week, during which she will experience a menstrual period. Intrauterine devices (IUD) – an intrauterine device is a smaller plastic T-shaped device that is inserted into the uterine cavity through minor surgical procedure (Ndifon et al., 2006). Its action begins as soon as the device is placed in the uterus and stops as soon as it is removed. Once the device is removed, the woman regains her fertility. It is one of the safest, least expensive and its effectiveness rate is close to 100 percent (Rahamefy et al., 2008). Post-coital contraception is often referred to as the emergency contraception and it refers to all methods that can be used to prevent pregnancy after unprotected sex or intercourse. It consists of two tablets of ethinyl estradiol or levonogestrol oral contraceptives given twice every 12 hours apart within 72 hours of unprotected sex (Nordquist, 2009).

Permanent Irreversible Contraceptive Methods

Sterilization method is a long-term irreversible method which is a surgical procedure (Masoda & Govender, 2013). In males it is called

vasectomy and tubal ligation in females. Vasectomy is a surgical procedure designed to make a man sterile. The right and left vas deferens (the tubes through which sperm passes to be ejaculated are cut or blocked. Although a vasectomy is sometimes reversible (vasovasostomy) the likelihood of an abundance of abnormal sperm is higher, resulting in lower fertility. Tubal ligation is a permanent form of female sterilization. The fallopian tubes are disconnected and sealed (pinched shut) in order to prevent fertilization (Masoda & Govender, 2013).

Natural Contraceptive Methods

The natural female planning methods include sexual periodic abstinence, withdrawal and Lactational Amenorrhea (Aziken et al., 2003). Sexual abstinence means avoiding penis-in-vagina intercourse during presumed fertile days of the menstrual cycle to prevent pregnancy. It employs combination of the following methods; rhythm or calendar method, Basal Body Temperature (BBT) method, cervical mucus method, symptothermal method, fertility awareness method and predictor test for ovulation method. The effectiveness of these methods depends greatly on careful and continuous observation and recording of events of the menstrual cycle (Sychareun et al., 2013).

With the withdrawal method (coitus-interuptus), when the man is about to have on orgasm he pulls his penis out of the vagina (Takkar et al., 2005). In this instance, ejaculation occurs outside of the vagina. According to some organizations this method is about 90 percent effective if used correctly (Takkar et al., 2005). Lactational Amenorrhea (LAM) refers to the temporal

cessation of ovulation during lactation. It is more effective as a family planning method when a child is exclusively breastfed and it can be depended upon for a period of about six months postpartum (Seutlwadi et al., 2012).

Contraceptive Use among Adolescents

Contraceptive knowledge and use among adolescents across a number of developing countries in Africa, Asia and Latin America reveals some unexpected regional patterns in sexual activity and marriage in the majority of countries, and a greater tendency for contraceptive use among adolescents which result in method discontinuation due to failure or reasons like side effects that leave the user in need of a method (GSS et al., 2015). In spite of this high level of knowledge, contraceptive use remains low with 22 percent of all women using any method and only five percent of men relying on a modern method (Jeckoniah & Mwageni, 2007).

According to Shannan, Rector and Pardue (2004), countries for which contraceptive knowledge have been studied, the majority of adolescent women recognize at least one contraceptive method, and in 21 countries, eight in ten or more young women know about at least one method. Greater variability is found in the levels of knowledge among adolescent women in Sub-Saharan Africa than in the other regions. Levels are low in Madagascar and Nigeria, where fewer than half of all teens know about any method, and highest in Kenya, Rwanda and Zimbabwe where at least 90 percent have knowledge about contraceptives based on reproductive health surveys conducted by local institutions with technical assistance from the centres for disease control prevention.

Shannan et al. (2004) reported that the use of modern contraceptive method is highest in Kenya and lowest in Tanzania. In Africa, current use of contraceptive is much higher among adolescent males than females. For males, it ranges from 7 percent in Zambia to 25 percent in Kenya. In general, the use of modern methods of contraception is higher than that of traditional methods. Among females, the predominant contraceptive method in Zambia is the condom while in Kenya and Tanzania it is the pill. The most predominant method used by males in Kenya, Zambia and Tanzania is condom.

According to Renju, Andrew, Medard, Kishamawa, Kimaryo, Changalucha and Obasi (2011), adolescents' indulgence in unsafe sexual activities is on the increase as sex plays an important role in their feelings, fantasies and social relationships. Many teenage pregnancies are the result of inadequate or no contraception. One factor contributing to the high rate of teenage pregnancies and births is the relatively low level of contraceptive use. Less than half of all adolescents regularly use some form of contraceptive. Ott, Rouse, Resseguie, Smith and Woodcox (2011) reported that adolescents believe that condoms are unnatural. They reduce pleasure or sensation, meaning they do not get the desired satisfaction since it is artificial.

Ott et al. (2011) said another key concern in considering contraceptive use pattern among adolescents is the extent to which sexually active, unmarried ones use contraceptive methods. The level of current use is frequently higher among married teenagers. For example, in most countries in sub-Saharan Africa, current use rates are generally substantially higher among sexually active unmarried adolescents than among those who are married. In fact, in ten of 19 Sub-Saharan African countries, unmarried women constitute

more than 50 percent of all teenage users of contraceptive. In contrast, in Latin America and the Caribbean (except Haiti), married adolescents are substantially more likely to be practicing contraception than are sexually active, unmarried teens (Duvan, Turhan, Onaran, Gums, & Yuvaci, (2010).

According to UNESCO (2011), there are many brands of oral contraception used throughout the world that generally contain both synthetic oestrogen and progesterone. Oral contraceptive may be categorized as either monophasics, which contain a constraint amount of hormones, or multiphasics which vary the amount of progestin and sometimes oestrogen over the course of a 21- days cycle. The multiphasics (also called triphasics) offer no significant advantage over monophasics pills (UNESCO, 2011). Condom was the most reported method known (77% of males and 66% of females knew the method). Vaginal foaming tablets, secure pills (oral contraceptives), withdrawal, and vasectomy have variously been acknowledged by adolescents as some types of contraceptive or birth control mechanisms, (Afenyadu & Goparaju, 2003). 0244764738 yaw owusu asare

Sahin (2008) in a study conducted among university students revealed that more than 90 percent of adolescents admitted having heard of one modern method of contraceptives such as condom, the pill, and vasectomy. Natural methods such as withdrawal, calendar or rhythmic method and abstinence were scarcely acknowledged. Consistent with the knowledge patterns, condoms were the most known and used contraceptive among the adolescents. Use of condom is inconsistent and they were at best selectively used (Sahin, 2008). From the point of view of adolescents, condom use negotiation is not always feasible for certain types of partners, given the wide sexual networks

within which many of the adolescents operated. Young men often used condoms for their irregular partners, but not for their regular partners because they expected their regular partners to be faithful. Even when men had other partners, they did not hesitate to refuse condom use with regular partners (UNESCO, 2011).

Furthermore, condom use among adolescents was intended more to prevent pregnancies than Sexually Transmitted Infections (STIs), (Maticka-Tyndale, 2010). The inconsistent and selective use of condoms within the context of a high-risk sexual environment could have hazardous consequences for the adolescents and their partners. Many teenage pregnancies are results of inadequate or no contraception. According to UNESCO (2012), many teenagers do not use contraceptives the first time they have sex and many, particularly, younger adolescents delay for a year or more after first intercourse before using contraceptive.

Most teenagers also believe that contraceptives can guard against unwanted pregnancies, yet the sexually active ones do not use contraceptives (Yadav et al., 2008). Adolescents' inability to access contraceptive is as a result of socio-cultural factors that serve as a disincentive for them to patronize contraceptive use as has been mentioned earlier. Misconceptions about the risks of contraceptive methods, fear of the pelvic exam, and concerns about confidentiality keep many teenagers from seeking advice from their physicians (Jeckoniah & Mwageni, 2007). Better communication with adolescents within families, at school, and within the medical system can help them overcome these barriers. Clinicians usually don't bring up the issues of sexually transmitted diseases and contraception but these are subjects that

most teens would like to discuss with their providers. Adolescents will discuss their sexuality and contraceptive needs with their physician if they know that these discussions are confidential (Puri, Bhatia, Swami, Singh, Sehgal, & Kaur, 2007).

According to Mangham and Hanson (2010), barriers to contraceptive use by the adolescent include lack of information about methods, difficulties in obtaining services from providers influenced by cultural mores which prohibit use among young women, concerns about side effects, and inability to negotiate with partners. Another barrier that serves as disincentive to adolescent use of contraceptive is lack of knowledge about sexual and reproductive health issues, especially family planning (GSS et al., 2015). In some countries, unmarried teens are denied access to contraceptive services and information, leaving them without support when making reproductive health decisions.

A report from the 2014 Ghana Demographic and Health Survey indicated that irregular use of contraceptives is common with adolescents because of poor communication with parents, lack of knowledge of parental contraceptive experience, experience of friends who become parents, low educational achievement and aspirations, low self-esteem and feelings of fatalism and alienation (GSS et al., 2015). The traditional and cultural stereotyped idea that sex is for the adult makes it practically difficult for adolescents to freely communicate and discuss with parents issues concerning sex and contraception use. Similarly, because of the stereotyped idea that family planning clinics are the domain of women, counsellors lack experience in conveying information on sexuality and contraception to men.

Mangham and Hanson (2010) reported that contraception is often inaccessible to teens due to social taboos, financial or geographical barriers, a lack of confidential services and inadequate knowledge about contraceptives and where to obtain them. Other factors such as cultural based gender roles that reinforce male control over sexual and productive decision-making may contribute in an important way to young girls' inability to make decisions about condom and contraceptive use and also their vulnerability to the risk of manifested pregnancy and sexually transmitted disease (including AIDS).

In a study conducted by Hauser (2008) economic and social inequality and age disparity between partners can create a situation of unequal power within relationships which can in turn, reduce girls ability to negotiate whether intercourse should take place and whether condom or contraceptives should be used. In many instances, the threat of male violence also puts pressure on teenage girls to acquiesce to unsafe sexual practice.

Gordon (2007) postulated that adolescents find talking about sex with parents and adult family members uncomfortable or impossible therefore, peers often constitute the reference group for transmitting information about sexual activity and birth control. Teens may not feel comfortable discussing their reproductive health needs with female providers. There is also the fear of lack of confidential services.

The objectives of family planning programmes are to provide information, education and counseling to individuals and couples to enable them decide freely and responsibly the number and spacing of their children and to provide affordable contraceptive services and make available a full range of safe and effective methods of contraceptives usage (Asimedi, 2010).

By reducing unintended pregnancies and abortions, and facilitating family planning, effective contraception provides both health and social benefits to mothers and their children. Contraception is an important factor in the sexual and reproductive life of an individual (Darroch & Singh, 2013). Utilisation of contraception differs based on varying needs and stages of life continuum of not only women in their reproductive age group, but also for men (Finer & Zolna, 2011; WHO, 2011).

Globally, issues of contraception have attracted much attention from various stakeholders including governments of countries, non-governmental organisations like the Guttmacher Institute and international bodies such as the United Nations Organisation over the past decades. Much data have therefore been collated globally on contraception. In the United States of America for instance, the Guttmacher Institute (2013) indicates that out of about sixty-two million women in their reproductive years (15–49), about forty-three million of them, constituting about seventy percent are at risk of having unintended pregnancy. Thus, even though they are sexually active, they do not want to become pregnant but could get pregnant if they and their sexual partners do not use contraceptives consistently and correctly. Guttmacher Institute (2013) contends that couples who do not practice contraception have about eighty-five percent chance of becoming pregnant within a year.

With regards to particular contraceptives used by adolescents, about nine percent of young women who use contraceptives rely on long-acting reversible contraceptives such as the Intrauterine Device (IUD) (Guttmacher Institute, 2013). Guttmacher institute also argues that the pill is the widely

used contraceptive mostly by female adolescents while males generally use the male condom.

In Ghana, although the proportion of adolescents reporting the use of condoms at first and at most recent sexual intercourse has increased over the last years (Wusu, 2013), quite a number still report not using them at all (Arnold et al., 2012). Reasons given for non-use are, for example, that they are difficult to use for sexually inexperienced, are embarrassing to suggest, and are too expensive to buy on a regular basis (Esere, 2008).

The prevalence of unprotected first sexual intercourse among young people in Sweden is steadily increasing, particularly among females aged 16-19 years: it went up from about 12 percent in 2000 to 22 percent in 2007 (Baird, Garfein, McIntosh & Ozler, 2012). When condoms are used, then this is done primarily as a protection against pregnancy and not STIs, and their use becomes irregular when other contraceptives are used (Burnett, Weaver, Mody-Pan, Thomas & Mar, 2011). In addition, many adolescents do not perceive themselves to be at risk of contracting an STI. A survey of young people in England aged 16-21 years found that although a large proportion was concerned about STIs, lower proportions thought themselves to be at risk.

Moore, Biddlecom and Zulu (2007) investigated condom use amongst vocational students in Thailand. Condom use amongst the students was low. Seven percent of the students had contracted sexually transmitted diseases. One third of the participants who stated that they never used condoms claimed there was no risk of them contracting an STI. The researchers argued that the low rate of condom use was explained by the students' attitudes, which is dependent on their knowledge on STIs and HIV. Amongst the students that

did use condoms during intercourse, less than half of them used it to prevent contracting STIs and HIV.

Promoting access to contraceptives is one of the main methods of reducing unsafe abortion, STIs and maternal mortality and morbidity among adolescents. The deaths of girls between ages 15-19 years worldwide are related to pregnancy and diseases and account for 70,000 deaths each year. Making contraceptive services available to individuals may therefore contribute to the reduction of deaths (Centres for Disease Control and Prevention, 2010; Asimedi, 2008).

Factors that influence Sexual Behaviour of Adolescents

On average, one in four of 15 year olds who took part in a survey by Chen, Wen, Fleming, Demissie, Rhoads and Walker (2007) reported having had sexual intercourse, with a higher prevalence being observed for boys than for girls (29 vs. 23%) In addition to increasing the chances of contracting an STI, an early onset of sexual activity also increases the probability of having various sexual partners over a lifetime (Chen et al., 2007). In Sweden, the percentage of 16-17 year old females who report to have had three or more sexual partners went up from 8 percent in 2000, to 17 percent in 2007, and in males from 11 to 17 percent during the same period (UNESCO, 2013).

Environmental factors

A study conducted by Afenyadu and Goparaju (2003) in Dodowa in Ghana, found that the economic, social and cultural environment, accounted for high risk sexual behaviour of adolescents. The main factors influencing risky sexual behaviour, according to the authors, were; poverty, lack of educational and training opportunities beyond JSS, unemployment, perversion

of the dipo puberty rites, high costs of marriage; negative role models/lack of positive role models, lack of mentoring and counselling, lack of open communication about HIV/AIDS, inadequacies of school regulatory environment and difficulties of parenting in a rapidly changing social economic and cultural environment (Afenyadu & Goparaju, 2003).

Research on adolescents' sexual behaviour carried out in other countries has shown that a range of factors including lack of reproductive health and HIV/AIDS information and services contribute to the reproductive health behaviours of adolescents. The single most important determinant of reproductive health behaviour among adolescents according to Guiella and Nyovani (2007) is environmental influence. To quote the Measure Evaluation Program, "Any number of other factors may influence who has sex with whom and whether they use condoms, but the act that spreads the virus, in the overwhelming majority of cases, is an act of unprotected sex" (p.10).

In spite of efforts by national HIV prevention programs to reduce or eliminate the cost of condoms in many African countries, adolescents still report affordability as a reason for non-use. Negotiation to use condoms for instance, is also difficult since suggesting the use of condoms is often seen as a sign of mistrust in a sexual relationship. Furthermore, the ability by female adolescents to negotiate the use of condoms is made difficult if they have received gifts or money (Guiella & Nyovani, 2007). Other reasons for non-use of condoms among adolescents include dislike of condoms, and embarrassment to purchase or ask for condoms from adult providers, which stems from disapproving attitudes from health providers. The result therefore, is unprotected sexual activities, which lead to contraction of STIs.

Socio-demographic characteristics

A study by Regmi, Simkhada and Teijlingen (2008) showed that sexual behaviour in Nepal is affected by socio-demographic factors such as age, sex, education, ethnicity, culture and religion. Regmi et al. further noted that early sexual experimentation, with multiple partners, and low and irregular use of condoms, which are greatly influenced by the socio-demographic characteristics, are not uncommon in Nepalese society and unsafe sexual behaviour is one of the most common ways of HIV and other STIs transmission in Nepal.

It has been shown that strengthening connections between sex education and family planning services can both delay sexual intercourse in nonsexually active students and increase contraceptive use in those who are sexually active (Blanc et al., 2012). To benefit from family planning, STD treatment, and prenatal care, many young adults depend on the same service centers used by people of all ages in the community. Unfortunately, numerous barriers impede their access to such facilities. Community-based health services often restrict service to youth who are married, those who already have children, or those of a certain age (Hoffman, Freeman & Swann, 2009).

Consent requirement for the use of services which may call for the presence of a parent, or a husband, in order for the adolescent girl to have access to family planning methods or safe abortion services where it is legal, is also a great deterrent to young people. Such regulations frequently put the lives of young people at risk by this major hindrance to service accessibility (Baird et al., 2010). Other constraints for youth include attitudes from service providers, inconvenient locations, lack of confidentiality, and the perception

that health centers do not serve adolescents. Finally, young people are even more financially restricted than others in their community, so that if reproductive health and contraceptive services are not cost free or low cost, then they will probably be totally inaccessible (Baird et al., 2010).

Health service related factors

School-based health clinics (SBHC) or school-linked health clinics (SLHC) have over the years shown to be facilitating student access to requisite services that support behavior change. Research on multiservice health centers in schools indicates that students use them not only for primary care but for more sensitive issues, such as mental health, sexual abuse, and reproductive health (WHO, 2012). Furthermore, some SBHCs/SLHCs have yielded positive changes in sexual/reproductive health outcomes. Baird, Garfein, McIntosh and Ozler (2012) showed that girls enrolled in a school-linked pregnancy prevention program postponed sexual involvement seven months longer than girls not enrolled. Reports and commentaries from educators and health care providers also indicate that school health centers can improve school attendance, school suspension, and dropout rates (Baird et al., 2012).

The evidence is not clear regarding the effects of SBHCs/SLHCs on pregnancy rates. In a study of six school-based health centers, Khan and Mishra (2008) found no statistically significant effect on school wide pregnancy rates. In the school-linked pregnancy prevention program studied by Shah and Ahman (2012), however, pregnancy rates reduced by 30 percent among participating girls who received sexual education complemented by individual and group counselling and medical and contraceptive services

during a three-year period. Pregnancy rates among girls in a comparison group increased by 58 percent.

Many societies disapprove of premarital sex as a result, young people have limited or no access to education and information on reproductive sexual health care. Modern contraceptive use among adolescents is generally low, and decreases with economic status. Fewer than five percent of the poorest young use modern contraception. Young women consistently report less contraceptive usage than men, evidence of their unequal power in negotiating safer sex or restrictions on their access to services (such as lack of information, shame, laws, health provider attitudes and practices, or social norms).

Young people may hesitate to visit clinics because of lack of privacy and confidentiality, inconvenient locations and hours, high costs, limited contraceptive choices and supplies, and perhaps most importantly, negative or judgmental provider attitudes. Laws and policies also may restrict adolescents' access to information and services, for example, by limiting family planning to married people or requiring parental or spousal consent. A basic challenge in advocacy, especially in traditional societies, is the taboo on public discussion of sexual issues, including the fact that many young people are sexually active before marriage (Ott, Rouse, Resseguie, Smith & Woodcox, 2011).

A number of studies have been carried out in order to establish how much adolescents access the reproductive health services in view of their knowledge regarding contraceptives and the risks of premarital sexual indulgency. Fear of disclosure is one factor surfacing. Young females and males fear disclosing their sexual activity and this results in reluctance among

this target group to report sexual experience. For example the leading reason cited by pregnant women in Shanghai, China for non-use of contraception was fear of disclosure or embarrassment (Bennett & Assefi, 2005).

Recent studies from Ghana show that adolescents often frequent private services to obtain contraceptives, such as pharmacies and chemists (known locally as 'chemical sellers'). A large part of the literature on adolescents and sexual and reproductive health services has focused on adolescents' perceived barriers to obtaining services. Major barriers that adolescents say they face are fear that others might get to know of their visit, shame about their needs, negative attitudes of providers, lack of privacy and confidentiality and age restrictions. National, comprehensive information on adolescents' views of and preferences for sexual and reproductive health services is much less common (Afenyadu & Goparaju, 2003).

Lack/inaccessibility of SRH services and facilities

As with RH education, there is widespread concern that school contraceptive availability programs will promote sexual activity among young people. Among the six school-based health centers, Khan and Mishra (2008) did not find greater levels of sexual activity or increased frequency of intercourse in schools with SBHCs that made contraceptives available compared with those that did not. Similarly, in Buns and Groove's (2005) assessment of whether condom promotion and distribution increases sexual activity among Latino teenagers in the United States, no effect was found on the onset of sexual activity for females or the frequency of intercourse for males or females. Vocational school students in Thailand who received health

education training and contraceptive services did not increase sexual activity but increased contraceptive use when they did have sex (Hatcher et al., 2011**).**

Although substantial proportions of sexually experienced students do obtain contraceptives from the [school-based] centers, as Khan and Mishra (2008) pointed out, it is not clear whether SBHCs providing contraceptives encourage students to actually use them. Evaluations have shown that school-based clinic users are more likely to use contraceptives than students from schools without a clinic. However, the majority of data concerning the relationship between school-based clinics and the use of condoms is inconclusive. Burnett et al. (2011) found that providing contraceptives was insufficient to significantly increase their use; the researchers did not find greater condom use among students in the three schools with school based clinics providing condoms. This may be because students in the United States have a wide variety of sources other than schools from which to obtain condoms and contraceptives.

In 1994, Khan and Mishra (2008) noted that a panel of experts that reviewed the research on school-based clinics concluded that there is no sufficient evidence to determine whether or not school-based clinics providing contraception significantly increase the use of the contraception by adolescents. To this date, there have been no published studies of the effect of condom availability programs (using mechanisms other than the school clinic to provide condoms) alone on student sexual behavior or condom use (Ball & Moore, 2008).

Theoretical Issues

Stages of Change (Transtheoretical) Model

The Stages of Change Model was developed by Prochaska, DiClemente and Norcross, in 1983. The theory evolved out of studies that compared the experiences of smokers who quit smoking on their own with those who received professional treatment. The basic premise of the model is that behaviour change is a process, not an event. As a person attempts to change a behaviour, he or she moves through five stages: pre-contemplation, contemplation, preparation, action, and maintenance. Definitions of the stages vary slightly, depending on the behaviour in question. People at different points along this continuum have different informational needs, and benefit from interventions designed for their stage (Prochaska, DiClemente & Norcross, 1992).

Whether individuals use self-management methods or take part in professional programs, they go through the same stages of change. Nonetheless, the manner in which they pass through these stages may vary, depending on the type of behaviour change (Prochaska et al., 1983).

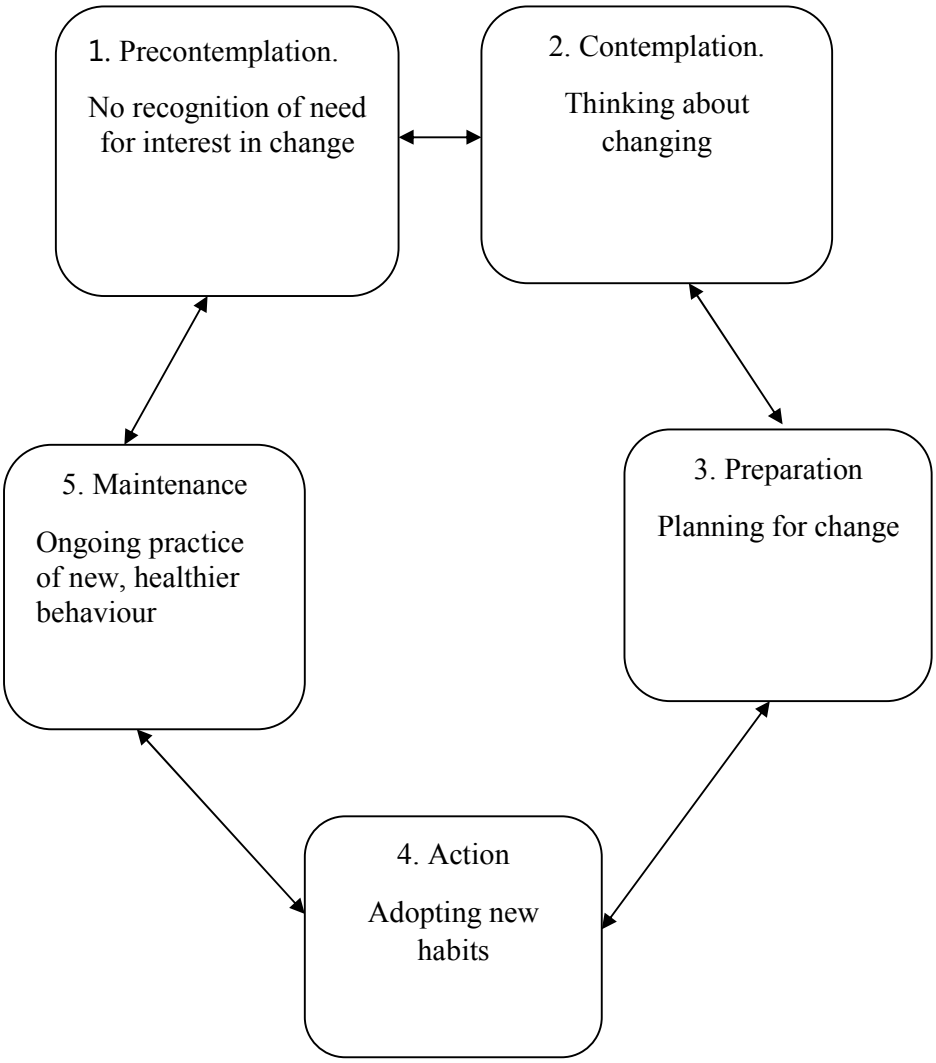

Figure 1: Stages of Change (Transtheoretical) Model

Source: Prochaska et al. (1983).

The Stages of Change Model has been applied to a variety of individual behaviours, as well as to organizational change. The Model is circular, not linear. In other words, people do not systematically progress from one stage to the next, ultimately "graduating" from the behaviour change process. Instead, they may enter the change process at any stage, relapse to an earlier stage, and begin the process once more. They may cycle through this process repeatedly, and the process can truncate at any point.

There are several limitations of TTM, which include the fact that the theory ignores the social context in which change occurs, such as SES and income. The lines between the stages can be arbitrary with no set criteria of how to determine a person's stage of change. The questionnaires that have been developed to assign a person to a stage of change are not always standardized or validated (Hall & Rossi, 2008). There is no clear sense for how much time is needed for each stage, or how long a person can remain in a stage. Finally, the model assumes that individuals make coherent and logical plans in their decision-making process when this is not always true (Hall & Rossi, 2008).

Precaution Adoption Process Model

The Precaution Adoption Process Model (PAPM) was propounded by Neil, Weinstein, Sandman and Blalock (2008). The theory specifies seven distinct stages in the journey from lack of awareness to adoption and/or maintenance of a behaviour. It is a relatively new model that has been applied to an increasing number of health behaviours, including: osteoporosis prevention, colorectal cancer screening, mammography, hepatitis B vaccination, and home testing for radon gas (Neil et al., 2008).

In the first stage of the PAPM, an individual may be completely unaware of a hazard (e.g., the link between unprotected sex and HIV). The person may subsequently become aware of the issue but remain uninvolved in it (Stage 2). Next, the person faces a decision about acting (Stage 3), may decide not to act (Stage 4), or may decide to act (Stage 5). The stages of action (Stage 6) and maintenance (Stage 7) then follow. According to the PAPM, people pass through each stage of precaution adoption without skipping any of

them. It is possible for people to move backwards from some later stages to earlier ones, but once they have completed the first two stages of the model they do not return to them. For example, a person does not move from unawareness to awareness and then back to unawareness (Neil et al., 2008).

The PAPM bears similarities to the Stages of Change model, but differs in important ways. Stages of Change offers insights for addressing hard-to-change behaviours such as smoking or overeating; it is less helpful when dealing with hazards that have recently been recognized or precautions that are newly available. The PAPM recognizes that people who are unaware of an issue, or are unengaged by it, face different barriers from those who have decided not to act. The PAPM prompts practitioners to develop intervention strategies that take into account the stages that precede active decision-making (Neil et al., 2008).

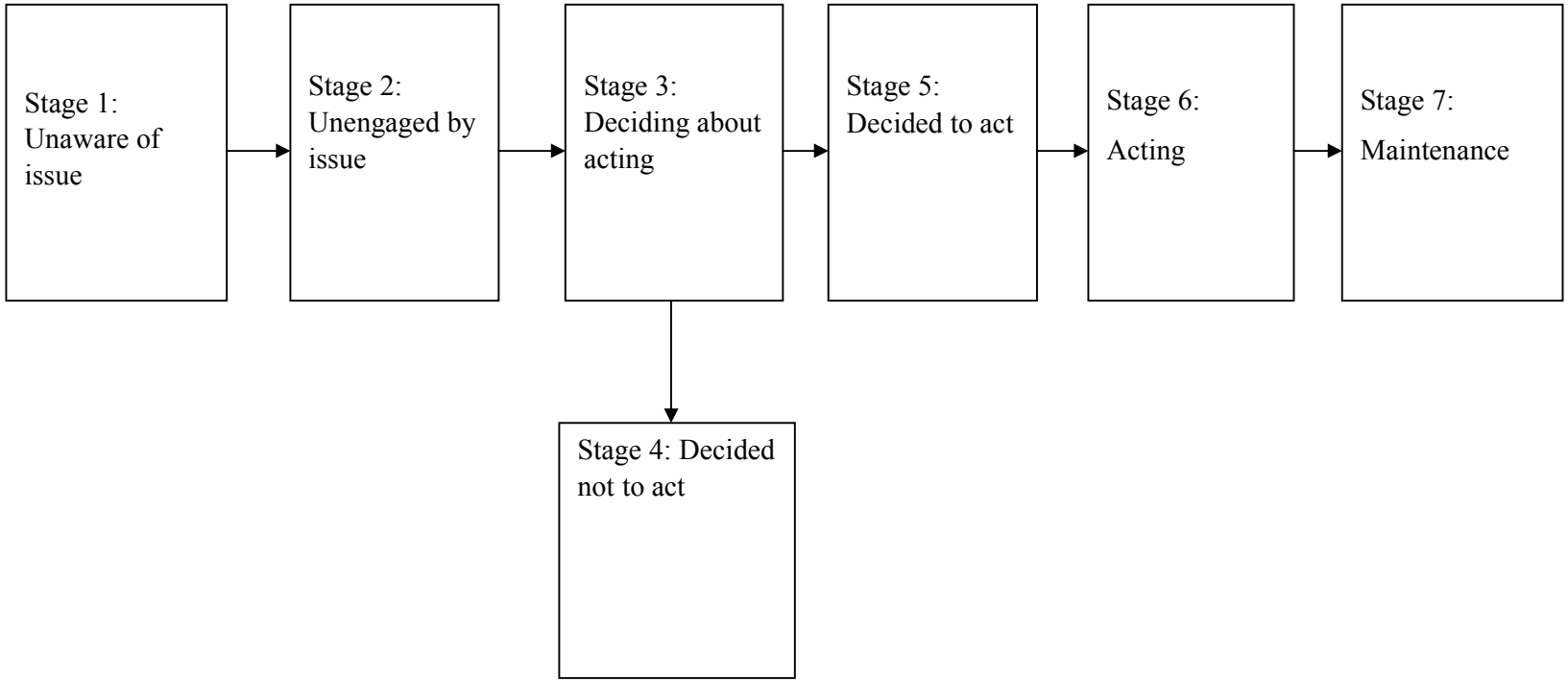

Figure 2: Precaution Adoption Process Model

Source: Neil et al. (2008).

There are several limitations associated with PAPM. First, with regard to health behaviours it has not been tested a lot. As such the empirical evidence is limited and confined to a few behaviours. Second, the model does not lend itself easily to actions that require gradual development of behavior such as exercise or diet (Weinstein & Sandman, 2002). The third limitation of PAPM is that the constructs corresponding to each stage of the model that need to be modified for progression along the stages have not been delineated. Finally, the stage based interventions are more expensive and resource intensive when compared to a standard intervention geared toward the entire population.

Health Belief Model (HBM)

The model was developed by Irwin Murray Rosenstock in 1966. According to this model, health seeking behaviour is influenced by a person's perception of the threat posed by a health problem and the value associated with the action aimed at reducing the threat. The components of this model are perceived susceptibility, perceived severity, motivation and enabling or modifying factors (Rosenstock, 1974). The Health Belief Model addresses individual's perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy).

According to Rosenstock (1966), people are ready to adopt a health promoting behaviour if they believe they are susceptible to a health condition (perceived susceptibility) and if the condition has serious consequences for their health (perceived severity). A health behaviour may also be adopted if

people believe that taking action would reduce their susceptibility to the condition or its severity (perceived benefits) while believing that the costs of taking such an action (perceived barriers) are outweighed by the benefits (Rosenstock, 1966).

Other factors influence the perceived susceptibility, perceived severity, perceived benefits and perceived barriers to adopting a health promoting behaviour. These comprise modifying factors, cue to action and self-efficacy. Self-efficacy refers to an individual's ability to successfully perform an action. Cues to action are factors that individuals are exposed to, which prompt action. They include mass media campaigns, advice from others, reminder postcards, illness of a family member/friend and newspaper/magazine articles (Rosenstock, 1974).

The health belief model has been criticised for several reasons. The model is for instance characterised by a lack of adequate combinatorial rules and inconsistent application (Bury et al., 2007). The model's main components have weak effect sizes, and its predictive capacity is limited as compared to that of other social cognition models (Bury et al., 2007).

Despite its limitations, the Health Belief Model (HBM) was one of the first theories of health behaviour, and remains one of the most widely recognized in the field as it theorized that people's beliefs about whether or not they were susceptible to disease, and their perceptions of the benefits of trying to avoid it, influenced their readiness to act (Cottrell & McKenzie, 2005). Since health motivation is its central focus, the HBM is a good fit for addressing problem behaviours that evoke health concerns (e.g., high-risk sexual behaviour and the possibility of contracting HIV). Together, the six

constructs of the HBM provide a useful framework for designing both short-term and long-term behaviour change strategies (Cottrell & McKenzie, 2005).

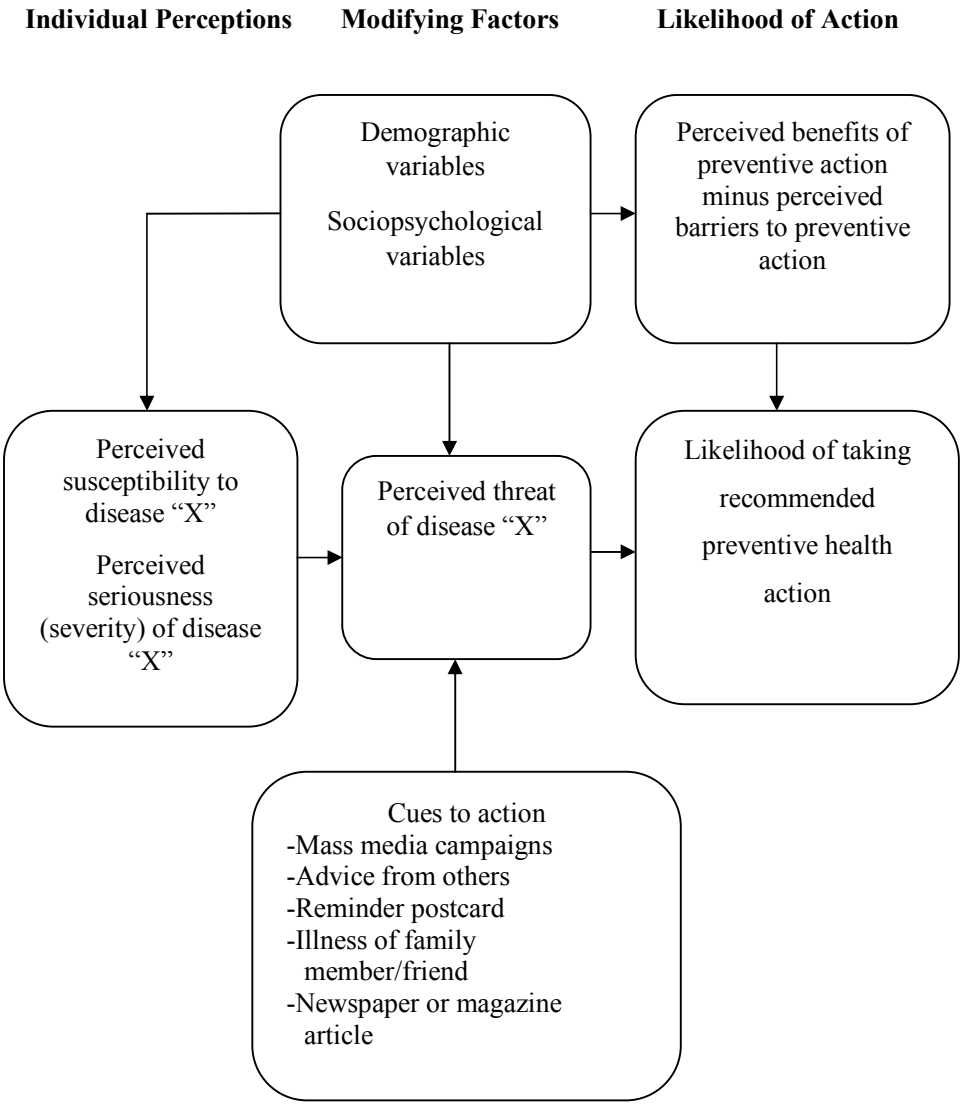

Figure 3: Health Belief Model

Source: Cottrell and McKenzie (2005).

The model has as such being applied to various fields of research. Baghianimoghadam, Hogafard, Sanati, Baghianimoghadam, Mazloomy and Askarshahi (2013) for instance applied the health belief model in promotion of self-care among 180 heart failure patients who were randomly selected from

patients who were referred to the Shahid Rajaee center of Heart Research in Tehran and allocated to two groups (90 patients in the case group and 90 in the control group).

Baghianimoghadam et al. (2013) found significant differences between the mean grade scores of variables (perceived susceptibility, perceived threat, knowledge, perceived benefits, perceived severity, self-efficacy perceived barriers, cues to action, self- behaviour) in the case and control groups after intervention that was not significant before the use of the health belief model. The resreachers therefore concluded that the model is effective in preventing different diseases and their complications including heart failure.

In relation to this study, the HBM consists of three distinct phases that lead up to an action related health (Butler, 1994). These are individual perceptions, modifying factors and likelihood of action. Individual perceptions are in two basic types: the individual subjective perception of the risk of contracting the health condition (perceived susceptibility) and perceived severity of the condition. Individual perceptions concern adolescents' belief of sexual indulgence and its consequences of unplanned pregnancies including sexually transmitted infections and how this would prompt them to use contraceptives or abstain from sexual intercourse (Butler, 1994).

Nola Pender's Health Promotion Model

The model was propounded in 1982 by Nola Pender. It was however reviewed in 1996. Nola Pender's Health Promotion Model (PHPM) was created to serve as a "multivariate paradigm for explaining and predicting health promoting component of lifestyle" (Pender, 1990, p. 326). There are three major concepts in Pender's model which are further subdivided into

narrower, more specific concepts (Pender, 1996). The major concepts are individual characteristics and experiences, behaviour-specific cognitions and effect, and behavioural outcome. These concepts have been sub-divided into sub-concepts. The sub-concepts of the theory, however, comprise personal factors, immediate competing demands and preferences, perceived barriers to action, perceived self-efficacy, activity related effect, interpersonal influences, situational influences, commitment to plan of action, perceived benefits of action (Pender, Murdaugh & Parsons, 2011).

Personal factors are grouped as biological (comprising variables such as age, gender, body mass index, pubertal status, aerobic capacity, strength, agility, or balance) psychological (comprising variables such as self-esteem self-motivation personal competence perceived health status and definition of health) and socio-cultural (includes variables such as race ethnicity, acculturation, education and socioeconomic status). These factors are predictive of a given behaviour and shaped by the nature of the target behaviour being considered (Michener, DeLamater & Myers, 2004).

Perceived benefits of action according to Pender (1996) have to do with anticipated positive outcomes that will occur from health behaviour while perceived barriers to action are anticipated, imagined or real blocks and personal costs of understanding a given behaviour. Perceived self-efficacy deals with judgment of personal capability to organize and execute a health-promoting behaviour (Robbins, Gretebeck, Kazanis & Pender, 2006). Perceived self-efficacy influences perceived barriers to action so that higher efficacy results in lowered perceptions of barriers to the performance of the behaviour (Shin, Yun, Pender & Jang, 2005).

Activity related effect entails subjective positive or negative feeling that occur before, during and following behaviour based on the stimulus properties of the behaviour itself (Lusk, Kerr, Ronis & Eakin, 1999). Interpersonal influences have to do with cognition concerning behaviours, beliefs, or attitudes of the others. Interpersonal influences include norms (expectations of significant others), social support (instrumental and emotional encouragement) and modeling (vicarious learning through observing others engaged in a particular behaviour). Primary sources of interpersonal influences are families, peers, and healthcare providers (Pender et al., 2011).

Situational influences according to Pender (1996), refer to personal perceptions and cognitions of any given situation or context that can facilitate or impede behaviour. Such influences include perceptions of options available, demand characteristics and aesthetic features of the environment in which given health promotion is proposed to take place. Situational influences may have direct or indirect influences on health behaviour (Pender, Walker, Stromborg & Sechrist, 1990). Commitment to plan of action refers to the concept of intention and identification of a planned strategy that leads to implementation of health behaviour. Immediate competing demands and preferences comprise competing demands which are those alternative behaviours over which individuals have low control because there are environmental contingencies such as work or family care responsibilities while competing preferences are alternative behaviours over which individuals exert relatively high control (Robbins, Pis, Pender & Kazanis, 2004; Pender, 1996).

Pender (1996) outlines specific assumptions. Her model is based on the fact that the patient has an active role in their health behaviour. It is assumed that a patient can self-reflect, actively seek to regulate behaviour, and initiate behaviours that modify their environment (Ronis, 2006). Another assumption is that health professionals exert an interpersonal influence on an individual throughout their life (Pender, 1996). The health promotion model therefore suggests that each person has unique personal characteristics and experiences that affect subsequent actions (Kerr, Lusk & Ronis, 2002). Health promoting behaviour is the desired behavioural outcome according to Pender and is therefore the end point in the HPM. Health promoting behaviours, as noted by Pender, should result in improved health, enhanced functional ability and better quality of life at all stages of development.

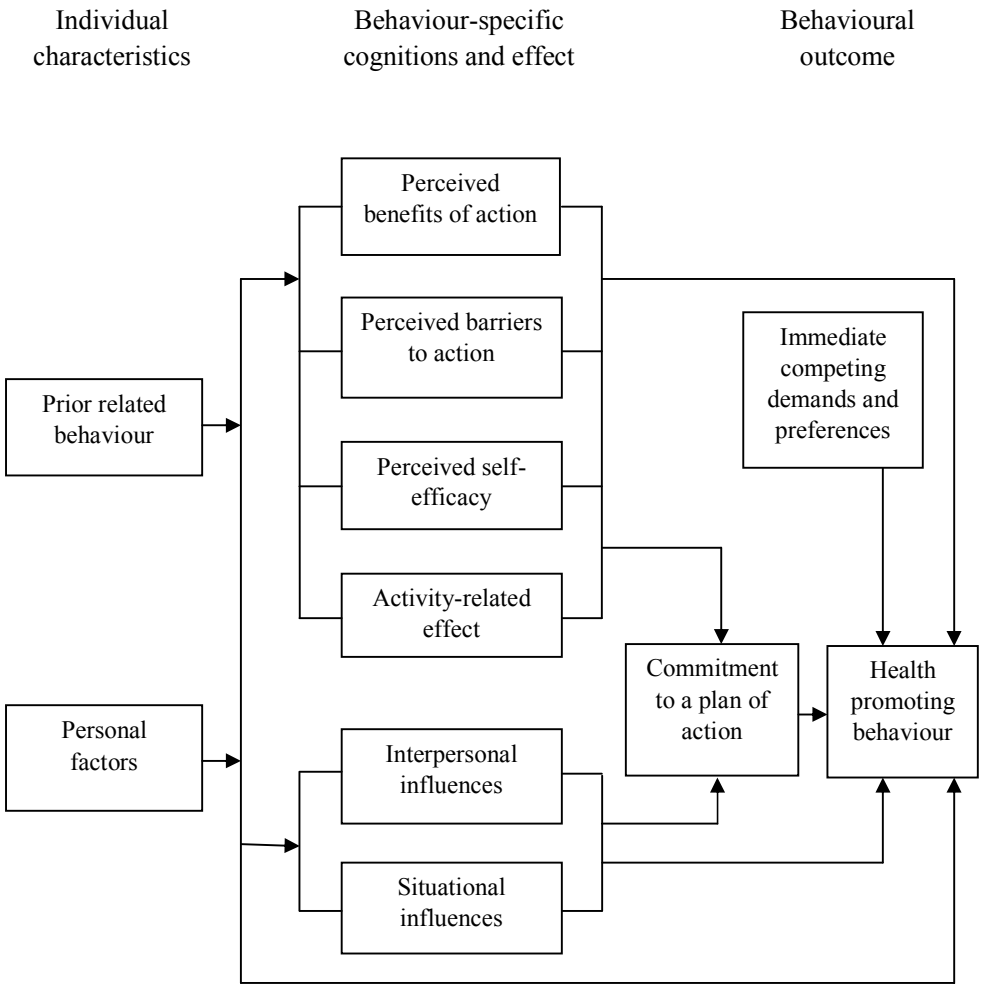

Figure 4: Nola Pender's Health Promotion Model

Source: Pender (1996)

Pender's health promotion model has been criticised for focusing attention only on perceptual and cognitive factors as influencing health while identifying situational, environmental and interpersonal factors as being only important to the extent that they modify perceptual and cognitive influences. Pender emphasized the decision making ability of individuals, their perception of control, and their definition of health as being critical factors. Little attention was however given to the relevance of economic or socio-political context. In addition, the theory was not specific on whether perceptual factors precede behavioural change or result from change (King, 1994). The model

has also been critiqued for being focused on preventative, disease-centered, behavioural, and lifestyle-oriented concepts of the health education paradigm rather than addressing broader concepts of the health promotion paradigm (Whitehead, 2009).

Conceptual Framework (Theory of Planned Behaviour)

The Theory of Planned Behaviour (TPB) was developed by Ajzen in 1988 (Ajzen, 1991). TPB explores the relationship between behaviour and beliefs, attitudes, and intentions. The TPB assumes that behavioural intention is the most important determinant of behaviour. According to this model, behavioural intention is influenced by a person's attitude toward putting up a behaviour, and by beliefs about whether individuals who are important to the person approve or disapprove of the behaviour (subjective norm). The TPB assumes that all other factors (e.g., culture, the environment) operate through the models' constructs and do not independently explain the likelihood that a person will behave in a certain way (Ajzen, Albarracín & Hornik, 2007).

Developed from the Theory of Reasoned Action, TPB includes one additional construct which is, perceived behavioural control. This construct has to do with people's beliefs that they can control a particular behaviour. Ajzen added this construct to account for situations in which people's behaviour, or behavioural intention, is influenced by factors beyond their control. Ajzen argued that people may try hard to perform a behaviour if they feel they have a high degree of control over it. It has applications beyond these limited situations, however. People's perceptions about controllability may have an important influence on behaviour (Ajzen et al., 2007).

The TPB's explanation for how behavioural intention determines behaviour, and how attitude toward behaviour, subjective norm, and perceived behavioural control influence behavioural intention. According to the model, attitudes toward behaviour are shaped by beliefs about what is entailed in performing the behaviour and outcomes of the behaviour. Beliefs about social standards and motivation to comply with those norms affect subjective norms. The presence or absence of things that will make it easier or harder to perform the behaviour affect perceived behavioural control. Thus, a causal chain of beliefs, attitudes, and intentions drives behaviour (Ajzen, et al., 2007).

There are some limitations with the Theory of Planned Behaviour. Factors such as personality and demographic variables are not taken into consideration by the theory (Godin & Kok, 1996). There is much ambiguity regarding how to define perceived behavioral control and this creates measurement problems. The theory assumes that perceived behavioural control predicts actual behavioral control. This may not always be the case. The longer the time interval between behavioral intent and behaviour, the less likely the behaviour will occur (Godin & Kok, 1996). The theory is based on the assumption that human beings are rational and make systematic decisions based on available information. Unconscious motives are not considered (Godin & Kok, 1996).

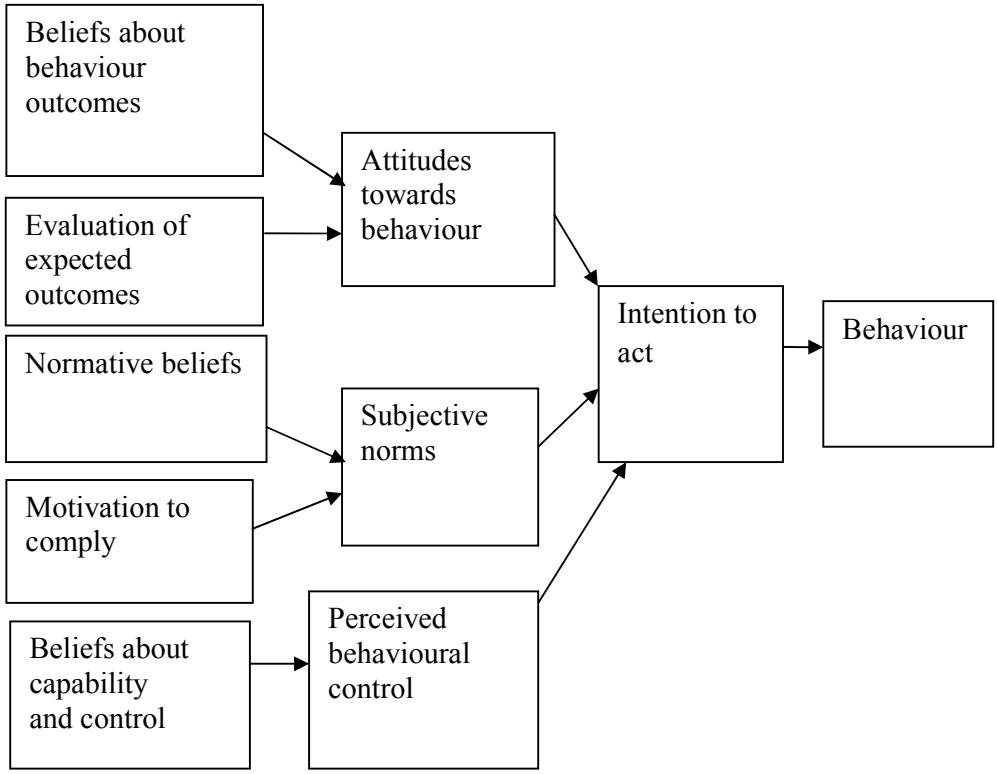

Figure 5: Theory of Planned Behaviour

Source: Ajzen (1991).

Despite its limitations, the theory of Planned Behaviour was adopted as the conceptual framework of the study due to its strength in measuring how human actions are guided. It also predicts the occurrence of a particular behaviour, provided that behaviour is intentional. It was thus relevant to this study in explaining the factors influencing the sexual behaviour of adolescents attending Senior High Schools in the Cape Coast Metropolis. Thus, the theory of reasoned action was relevant in explaining how behavioural beliefs and outcome evaluations, normative beliefs and motivation to comply as well as control beliefs and influence of control beliefs, influence behavioural

intentions regarding sexual and reproductive health, which then consequently result in the actual sexual behaviour.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter presents the methodology used in the conduct of the study. This includes the setting, design, population, sampling and methods of data collection. It also includes the research instrument, pretesting of the instruments and data analysis.

Research Design

The study was a descriptive cross-sectional survey (Buns & Groove, 2005) that quantitatively explored various aspects of the sexual behavour of the senior high school students in the Cape Coast Metropolis. The design enabled the study to also describe the characteristics of the students surveyed and their perspectives on the research questions posed (Buns & Groove, 2005).

The descriptive design enabled the researcher to observe, describe and document the situation being observed in it natural occurrence and frequency of the occurrence. Cross-sectional surveys enable the researcher to gather information on important health-related aspects of the study population. Cross-sectional studies are done on representative samples of the population if generalizations from the findings are to have any validity (Abramson & Abramson, 2000). A descriptive study is one in which information is collected

without changing the environment (i.e., nothing is manipulated) (Buns & Groove, 2005). The descriptive study involved a one-time interaction with the study participants (cross-sectional). Descriptive studies, in which the researcher interacts with the participant, involved surveys or interviews to collect the necessary information (Buns & Groove, 2005). The present study was a cross-sectional in nature as data was collected from respondents at one point in time at all the selected schools (Buns & Groove, 2005).

Descriptive research provides an accurate account of characteristics of a particular individual, event or group in real-life situations (Polit & Hungler, 2004). Descriptive design used provided stakeholders and service providers appropriate information to improve the sexual behaviour of the students (Katzellenbogen, Joubert & Abdool Karim, 2002). A descriptive design is beneficial in identifying problems with sexual experiences, contraceptive use and factors influencing the sexual behaviour of the students. This enable the stakeholders to make judgments, or determining what others in similar situations are doing. The strength of this design also lies in the fact that, it strives to confirm existing knowledge and that it is a flexible research design that provides an opportunity to examine all aspects of the problem being studied. The purpose of a descriptive design was to help describe the views of the respondents about the phenomenon studied. Cross-sectional studies are often used as a basis for health and education policy decisions, and it is important to ensure that only current, rather than obsolete, information is used for this purpose.

Study Area

The study area is the Cape Coast Metropolis. Cape Coast is located on latitudes $5^0$07 North and $5^0$20 North and between longitudes $1^0$11 West and $1^0$41 West. The Metropolis is bounded to the West by the Komenda-Edina-Eguafo-Abrem Municipality, to the East by the Abura-Asebu-Kwamankese District, to the North by the Twifu/Hemang/Lower Denkyira District and to the South by the Gulf of Guinea. There are 84 communities in the Metropolis which covers an area of 122 square Kilometers (Cape Coast Metropolitan Assembly [CCMA], 2014).

Major communities in the Cape Coast Metropolis include Abura, Pedu, Ola, UCC, Ekon, Kakumdo, Nkanfua, Effutu, Kwaprow, Akotokyere, Kokoado, Essuekyir Anto, Amamoma, Duakor, Nyinasin, Mpeasem and Amisano. Cape Coast is also the capital of the Central Region of Ghana. According to the 2010 census, Cape Coast Metropolis has a total population of 169,894. Out of this, males constitute 82,810 while females constitute 87,084 (Ghana Statistical Service [GSS], 2013).

The Metropolis has various schools which correspond to the three-tier educational system in Ghana. These are basic education schools (or first cycle institutions) comprising kindergarten, primary and junior high schools (JHS); second cycle institutions (senior high, commercial and technical); and tertiary institutions (Universities and specialist colleges or diploma awarding institutions [colleges of education and nurses training colleges]). The Metropolis has four education circuits. These are Cape Coast Zone (Eastern including Ekon), Aboom Zone (Cape Coast Central), Bakaano zone (Cape

Coast West stretching up to the University and Pedu zone (Cape Coast North) (CCMA, 2014).

The Cape Coast Metropolis is recognized nationwide as the focal point of Ghana's secondary education. Cape Coast since the colonial era has been the hub of secondary education in Ghana, priding itself on being the custodian of some of the best and most prestigious schools and has since attracted the cream of school graduates (Quist, 2003). The Metropolis boasts of best secondary schools in the country. These include; Wesley Girls' High School, St. Augustine's College, Mfantsipim School, Adisadel College, Ghana National College and Holy Child Senior High School (Cape Coast Metropolitan Education Unit, 2015). Hence, the metropolis was selected for this research.

There are 40,386 households in the metropolis of which three-quarters (30,354) reside in urban areas with the rest in rural settlements. One out of every 13 households (7.7%) in Central Region are found in the Cape Coast Metropolis. With an average household size of 3.5 compared with four persons (4.0) per household in the region, there are more households living in each house in Cape Coast (2.3) than in the region (1.5) on average. Whiles between two or three households (2.6) are found in urban areas of the Metropolis, there are one or two households per house in the rural areas (GSS, 2013).

Out of 169,894 persons in the Metropolis, 82.6 percent (140,405) of them live in households whiles the rest constitute non household population. The data shows that 28.8 percent household members are heads of the household; 37.1 percent are children, 9.8 percent are spouses whiles 8.7

percent are grandchildren of the household head. Non-relatives and other relatives to the household head constitute 3.1 percent and 7.4 percent respectively. The data also indicate that whiles more than a third (36.1%) of households are headed by males and slightly over one-fifth (22.0%) are headed by females. More female parents or parents-in-law (1.3%) live in the households than male parents or parents-in-law (0.2%). Contrarily, male grandchildren in the households are more than female grandchildren (GSS, 2013).

The extended family system is revered and widely practiced in the Metropolis with more than half (52.3%) of all household members constituting different compositions of this system, whiles 47.7 percent constitute nuclear families. Twice as many male (10.9%) single person "one man" households are found in the Metropolis than female (4.9%) single person households. The data further reveals that one-quarter (24.8%) of the household population live in nuclear families of father, mother and children, whiles about one in eight (12.9%) are in single parent nuclear families (parent and children only). A small proportion of couples live without any children in their household (2.2%) among the nuclear families. majority of the extended family households are single parent residing with other relatives (17.2%), with more females (20.3%) in this family structure than males (13.8%). An important revelation from the data is the fact that almost one third (31.9%) of all household members in the Metropolis reside in a single parent household, irrespective of whether it is nuclear or extended, with more females (37.1%) than males 26.3%) (GSS, 2013).

About 56 percent of persons 12 years and older in Cape Coast Metropolis are never married compared to the regional average of 42 percent. The married population is 29.8 percent compared to the regional average of 42.9 percent. The population in consensual union or living together as if married is 4.9 percent. The divorced and the widowed constitute 3.9 percent and 4.2 percent of the population, respectively. The number of married persons increases with increasing age and picks at age 40-49 before it starts to decline. Conversely, the proportion widowed, separated or divorced increase faster from that age group most especially among the female population. Nearly eight percent (7.7%) of the population below 20 years of age are married with slightly more male (8.2%) than females (7.3%). A significant proportion of the population (19.0%) remains unmarried after age 50 with more males (21.7%) than females (17.2%). For males, exiting from the never married category is more gradual with the proportion never married declining from 95.8 percent in the age-group 15-19 years to 73.6 percent in the age group 25 – 29 years and further to 38.6 percent in the age-group 30-34 years. The proportion of females never married declines from 94.0 percent in the age group 15-19 years to 45.9 percent and 21.3 percent among 25-29 years and 30-34 years old respectively (GSS, 2013).

Persons who have never been married have basic education are 36.3 percent, 19.3 have secondary education, and 29.7 have tertiary education, whiles only 2.7 percent have no education. On the other hand one out of every six married persons or those in informal unions has never had any education. Furthermore, whiles a quarter (24.5%) of the separated and 27.3 percent of the divorced have no education, half (49.2%) of those widowed have no

educations. Among the persons in all marital categories between 35 percent and 58 percent of males as against 34 to 59 percent of females who have attained basic education. Similarly, between four percent and 35 percent of males as against 1.3 to 24 percent of females who have attained tertiary education. The data further shows that more than one-third (34.9%) of males have never been married and about a quarter (23.8%) of their female counterparts have attained tertiary education. Twice as many married males (15.6%) than females (7.8%) have attained tertiary education (GSS, 2013).

Out of the total population 12 years and older, 51.1 percent are economically active whiles 48.9 percent are economically not active. Whiles 71.4 percent of those never married and 51.4 percent of the widowed are economically not active, only 16.7 percent of their married counterparts are economically not active. The married and widowed population 12 years and older are less likely to be unemployed compared with those in the other marital status categories. While 70 percent or more of the married, separated, divorced and persons in consensual union are employed, 46 percent of the widowed and about a quarter (23.6%) of the never married are employed. A similar trend is observed among the male and female populations. The data further show that the highest number of unemployed are in consensual union; 7.7 percent of the male population and 11.3 percent of their female counterparts. A similar pattern is observed among those who reported to be separated (GSS, 2013).

A greater proportion of the residents in the district (96.3%) are Ghanaians with 93.7 percent being Ghanaians by birth. The rest of the population is made up of persons from ECOWAS countries (1.8%), other

African countries (0.4%) and non-Africans (0.4%). There are slightly more naturalised female Ghanaians (829) and ECOWAS nationals (449) males in the Metropolis.

Christianity, which is the dominant religion in Ghana, started in Cape Coast. Table 3.7 shows the various religious groups in the Cape Coast Metropolis. Christianity is the main religion (85.1%), followed by Islam (9.7%). Traditionalist constitutes only 0.3 percent of the population. However, 3.9 percent of the population have no religious affiliation with more males than females. Christians are further categorised as Catholics (17.8%), Protestants including Methodist, Anglican, and Lutheran (28.3%), Pentecostal/Charismatic (28.7%). Other Christians constitute 10.3 percent of the population (GSS, 2013).

Nine out of 10 persons in the Cape Coast Metropolis who are 11 years and older are literate, that is, they can read and write. This is against a regional average of 78.2 percent and a national average of 74.1 percent. Literacy is nearly universal among the youth population of the Metropolis. The population in the age group 11-24 years have a literacy rate of about 97 percent. Except in the older ages of 60 years and beyond, the Metropolis have a high literate population where four out of every five persons can read and write in one language or the other. The literate population in the Metropolis can read and write in English only are 25.6 percent. About three percent (2.8%) can read and write in a Ghanaian language only, whilst 67.2 percent can read and write in both English and a Ghanaian language. One out of every 26 literate persons (3.9%) are able to read and write in English, French and a Ghanaian language (GSS, 2013).

Male literacy rate in the Metropolis is 94.1 percent compared to the female literacy rate of 85.6 percent. The table also indicate that males aged 65 and older have a higher literacy rate (71.4%) compared to females (38.7%) in that category. Whiles not much difference is observed in the proportion literate among the young male and female populations, males who are 60 years and registered many more literate persons than their female counterparts. Among the population currently in school, more than one-third (34.4%) are in tertiary institutions, 27 percent in primary, 13.1 percent in JHS and 11.4 percent in SHS education. This confirms the earlier suggestion that most of the migrants in the Metropolis are students. Whiles there are currently more males (40.4%) in tertiary institutions in the Metropolis, a relatively smaller proportion of the females (28%) are in this level of education. Contrarily, the proportion of females in primary, JHS and SHS is higher. Those who have been to school in the past, slightly more females have had basic education than males. The highest level attained by most of those who attended school in the past, is Middle/JSS/JHS (46.1%), whiles 16 percent attained secondary/SSS/SHS level. Males who attended school in the past had primary level of education are 11.7percent compared to 16.5 percent of females. Contrarily, 17.3 percent of males attained tertiary education compared to 10.5 percent of females (GSS, 2013).

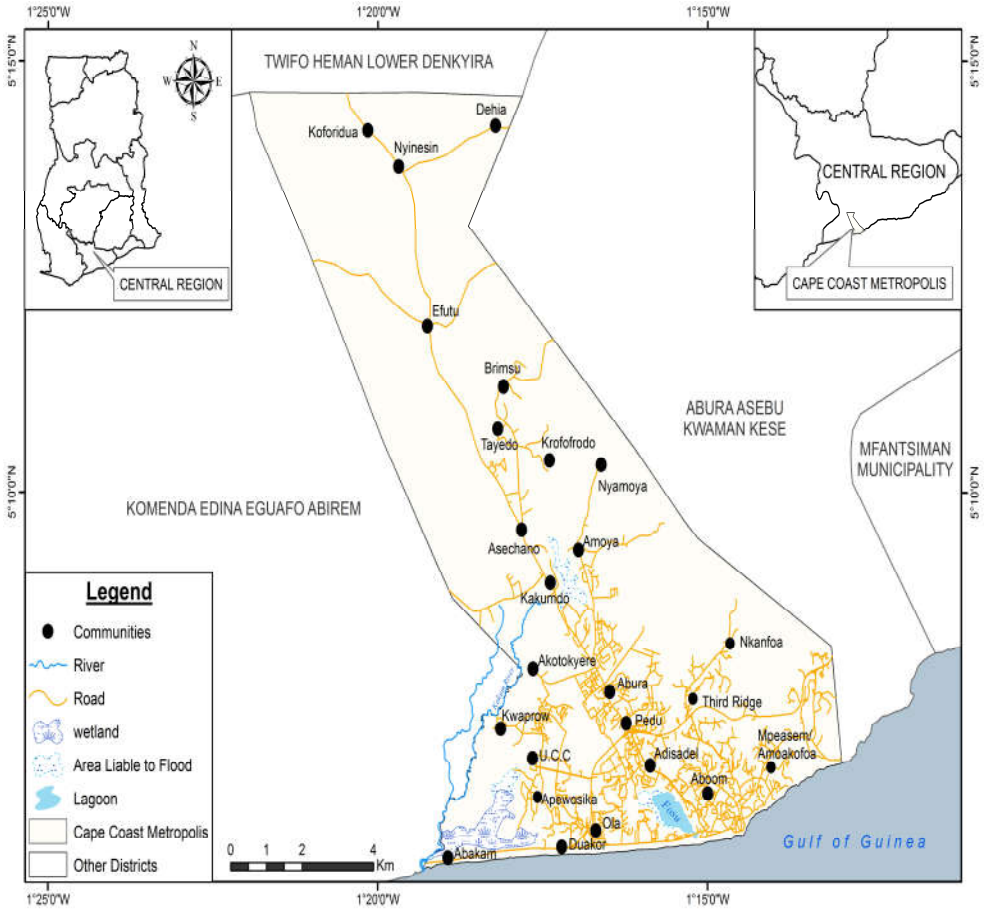

Figure 6: Map of Cape Coast Metropolis

Source: Department of Geography and Regional Planning, UCC (2015).

Study Population

The population of the study consisted of the 10 government assisted senior high schools in the Cape Coast Metropolis. The schools are St. Augustine' College, Mfantsipim School, Wesley Girls High School, Holy Child Girls School, Adisadel College, Ghana National College, Academy of Christ The King, Oguaa Secondary Technical School and Aggrey Memorial AME Zion Secondary School. Males and females in three selected senior high schools (SHS) in the Cape Coast Metropolis were included. These were St.

Augustine's College, Wesley Girls Senior High School, and Ghana National College.

Sample and Sampling Procedure

Sample size

Sample size estimation was done from the target population. The formula by Krejcie and Morgan (1970) was used for estimating the sample size. This formula was used because it is useful for estimating the sample size in a known population. It is given as:

$S = X^2NP (1 \quad P) \div d^2 (N \quad 1) + X^2P (1 \quad P)$

Where:

S = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population of adolescents aged 13-19 in selected senior high schools.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05).

Where:

$X^2 = 3.841$ N = 6031 P = 0.5 d = 0.05

s= 3.841x (6031) (.5)(1-0.5) /0.0025 (4241 - 1) + 3.841 (0.5) (1 – 0.5)

4072.42/10.6+0.96 = 385.2=386

10%= 39 + 386 = 425

An adjustment of 10 per cent was made for non-response. This yielded a sample size of 425, which was sufficient to increase the power of the study but 400 was used. The senior high schools in the Cape Coast Metropolis was categorised into female only, male only and mixed schools. One school was selected through simple random sampling. Stratified sampling was used to select respondents from the schools that were selected from among the 10 senior high schools in the Metropolis. This was achieved by adopting Babbie's (2005) formula which is given as;

$\frac{K}{N} \times n$

Where:

K = Population of students in a school

N = Total population of all three schools

n = Sample size

The same formulae (Babbie, 2005) was adopted to select the number of respondents in each school.

National 2025/4241x400 = 191

Wesley girls 956/4241x400= 90

St Augustine's 1260/4241x400 = 119

Table 1: Sampling Frame

School	Student Population	Sample size
Ghana National College		
Form One	1000	94
Form Two	1025	97
Total	2025	191
Wesley Girls High School		
Form One	429	40
Form Two	527	50
Total	956	90
St. Augustine's College		
Form One	660	62
Form Two	600	57
Total	1260	119
Grand Total	**4241**	**400**

Sampling Procedure

Purposive sampling was done to select the 10 government assisted SHSs in the Cape Coast Metropolis at the time of the study. A multi-stage sampling procedure was adopted in the study.

Stage one: the schools were classified into three strata - single sex (male), single sex (female), and mixed schools.

Stage two: simple random technique of fish bowl without replacement method was used to select one school from each stratum- Ghana National

(mixed); Wesley Girls (single sex female) and St Augustine's College (single sex male).

Stage three: purposive sampling was used to select two classes from form one and two from each selected school.

Stage four: stratified sampling was again adopted to select the respondents from each class. To achieve this, the class registers were used as the sample frame.

Stage five: systematic sampling was used to select the respondents in each class.

Depending on the population of each year group, proportional stratified sampling was used to determine the sample size from each Form (Table 1).

Method of data collection

Surveys and Questionnaires were the methods used to collect the data.The researcher administered the questionnaire with two research assistants. The researcher monitored the exercise and made sure that the students corporate, and then collected the entire completed questionnaire. The student's responses were scored and the data generated were collected for statistical analysis. Administration of questionnaire is comparatively inexpensive and easy even when gathering data from large numbers of people spread over wide geographic area. It was also reduces chance of evaluator bias because the same questions are asked of all respondents. Many people are familiar with surveys. Some people feel more comfortable responding to a survey than participating in an interview. Tabulation of closed-ended responses is an easy and straightforward process.

Research Instrument

Questionnaire was used for data collection. The questionnaire was developed based on the objectives of the study. It had five sections. Section A was based on the background characteristics which consisted of form, age, sex, religion, ethnicity, living arrangements, level of education and occupation of parents. Sections B was based on sexual experiences of participants. Issues in this section included ever having sexual intercourse and number of times one may have had sexual intercourse. Others included current relationship status, age of partner at sexual debut and use of contraception during most recent sexual intercourse.

Section C was based on level of contraceptive use. Issues under this sub-section included knowledge on the effectiveness of condoms. Section D focused on factors influencing sexual behaviour of Senior High School students. Issues included attitude of health care providers, privacy and confidentiality. While some questions were close-ended, others were open-ended. Responses of participants to the open-ended questions were, however, later categorized to make them close-ended for analysis.

Pre-testing

In order to ensure validity and reliability of the instrument, a pre-test was conducted. This was a preliminary trial performed before the final study. The test was conducted at the Winneba Senior High School located in the Winneba municipality. The school was chosen in Winneba because students in senior high schools in both Cape Coast and Winneba were likely to have

similar socio-demographic characteristics, which influence sexual behaviour greatly.

Data Collection Procedure

After explaining the purpose of the study to the students, the questionnaires were distributed to the students who consented to participate in the study. The instruments were self-administered. The respondents were given the instruments to respond to, and the instruments were taken right after completion. The data collection took three weeks; 28th August – 17th September. An instrument took about 20 minutes for each respondent to complete. To avoid information contamination, data were collected during a single day in each selected school. Data collection took place in the absence of class teachers and efforts were made to ensure maximum comfort and privacy for the participants. Students sat apart from each other, and discussion was not allowed when completing the questionnaires, both to ensure privacy and to avoid shared responses. When they had finished, students were requested to put their completed questionnaires into a sealed cartoon box instead of giving them to the researcher. All the eligible respondents selected took part in the study. The completion rate was 100 percent. All items on the questionnaire administered were completed.

Ethical Issues

Introductory letters were obtained from the Department of Population and Health of the University of Cape Coast, which was presented to authorities of the three schools. This enabled the researcher to acquire approval from the selected schools to conduct the study. It was imperative that respondents endorsed an informed consent form before they could participate

in the study. The consent form contained information on the rights of the respondents which included the fact that they could withdraw from the study at any point or decide to leave questions which sought to infringe on their privacy unanswered. All information obtained from the participants were kept confidential. The names of respondents were also not associated with responses provided to ensure their anonymity.

Data Analysis

Data collected from respondents was processed using Statistical Product for Service Solutions (SPSS) version 21. Percentages were used to present the data in the form of tables for all three objectives. A logistic regression analysis was also conducted to investigate the relationship between socio-demographic characteristics and sexual behaviour. The logistic regression analysis was presented as odds ratios at 95% CI. The dependent variable was Sexual behaviour and the independent variables were background characteristics (Sex, age, form/class, ethnicity, religion and parents education and occupation). The hypotheses of the study were also tested using independent samples t-test.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents results of data collected from respondents in the three senior High schools surveyed. In addition to the presentation of results, discussions are conducted based on the conceptual framework and previous studies conducted on the topic.

Socio-demographic characteristics of respondents

In total, 400 students participated in the study. Eighty percent of females aged 10-14 years were in Form one while the male students in the same Form and age group where 77 percent. Five three percent of the female students aged 15-19 were in Form two while their male colleagues where 60 percent. All the females aged 10-14 were Christians while 95 percent of males in the same age group were Christians. Among those between 15-19 years 97 percent of both male and female students were Christians. Christianity was the most dominant (96 %) religion among the respondents.

Eighty percent of females between the ages of 10-14 were Akans, mean whiles their male counterparts were 66 percent. Akans among the students in ages 15-19, 71 percent and 60 percent were females and male respectively.

Eighty percent of females aged 10-14 were not living with both parents. Meanwhile 64 percent of the males in the same age category were

living with both parents. Most (81 % females and 73 % males) of the respondents at all ages were also living in 1- 5 member households.

While the mothers of females aged 10-14 years were generally primary school leavers (60 %), the mothers of their male counterparts had higher than secondary school education (70 %). Fifty seven percent of the mothers of females aged 10-14 years also had higher than secondary level of education. Majority (79% of the females and 68 % of the males) of fathers of the participants for both sexes at all ages, however, had more than secondary level of education. Ninety one percent of the males and 87 percent of the females had self employed parents.

Findings of the study in relation to ethnicity and religion, are consistent with findings of the 2010 Population and Housing Census of Ghana (GSS, 2013), which found that majority (71.2%) of Ghanaians were Christians. The census also found that the most dominant ethnic group in Ghana is Akan (47.3%) (GSS, 2013). In the present study, the percentage coverage for both Akans and Christians, were higher than those recorded in the census. The finding in relation to level of education of mothers, is inconsistent with results of the 2014 Ghana Demographic and Health Survey (GDHS, 2014), which reported secondary education as the most dominant level of education among the adult female population of the country (41.1%) (GSS et al., 2015). The Ghana Demographic and Health Survey (2014), also indicated that the highest level of education among males was secondary education (42%), which also contradicts findings of the present study.

Table 2: Socio-demographic characteristics of respondents (N=400)

Variables	Female		Total		Male	Total
	10-14 (%)	15-19 (%)	(%)	10-14 (%)	15-19 (%)	(%)
Form	N=5	N=188	193	N=56	N=151	N=207
One	80	47.3	48.2	76.8	39.7	49.8
Two	20	52.7	51.8	23.2	60.3	50.2
Religion						
Christianity	100	96.8	96.9	94.6	96.7	96.1
Islam	0.0	3.2	3.1	5.4	2.6	3.4
African traditional	0.0	0.0	0.0	0.0	0.7	0.5
Ethnicity						
Ga/Dangme	20.0	10.6	10.9	10.7	20.5	17.9
Akan	80.0	70.7	71.0	66.1	60.3	61.8
Ewe	0.0	11.7	11.4	17.9	11.3	13.0
Others	0.0	7.0	6.7	5.3	7.9	7.3
Living with both parents						
Yes	20.0	72.9	71.5	64.3	71.5	69.6
No	80.0	27.1	28.5	35.7	28.5	30.4
Household size						
1-5	100	80.3	80.8	85.7	67.5	72.5
6-10	0.0	18.6	18.2	12.5	23.2	20.3
> 10	0.0	1.1	1.0	1.8	9.3	7.2

Table 2 Continued

Level of education of mother						
No formal education	20.0	4.3	4.7	3.6	7.3	6.3
Primary education	60.0	10.6	11.9	7.1	19.2	15.9
Secondary education	0.0	28.2	27.4	19.7	39.1	33.8
Higher than secondary education	20.0	56.9	56.0	69.6	34.4	44.0
Level of education of father						
No formal education	0.0	1.6	1.6	1.8	3.3	2.9
Primary education	0.0	4.3	4.1	3.6	8.6	7.2
Secondary education	40.0	14.8	15.5	10.7	25.8	21.7
Higher than secondary education	60.0	79.3	78.8	83.9	62.3	68.2
Occupation of mother						
Self employed	80	86.7	86.5	83.9	93.4	90.8

Table 2 Continued

Civil servant	20	9.6	9.8	14.3	3.3	6.3
Unemployed	0.0	3.7	3.7	1.8	3.3	2.9
Occupation of father						
Self employed	100	94.1	94.3	80.3	90.8	87.9
Civil servant	0.0	4.8	4.7	17.9	4.6	8.2
Unemployed	0.0	1.1	1.0	1.8	4.6	3.9

Source: Field work, 2015

Sexual Experiences

Fourteen percent of the respondents had ever been engaged in sexual intercourse (6% females and 21% males). Sixty-seven percent of the females who ever had sex had sex with one person whilst among the males 61 percent had more than two sexual partners. Fifty three percent of those who ever had sex had sex with two or more sexual partners. Concerning the number of times of sexual intercourse among respondents who have engaged in sex, half of the females had sex once and 67 percent of the males had had sex two or more times. Sixty four percent of the sexually active respondents had had sex two or more times (Table 3).

Seven out of every ten of those who ever had sex also had their first sexual intercourse at ages 10 to 14 years. These respondents also indicated the age of their sexual partners at their sexual debut. Sixty percent of the sexually active females said their sexual partners were between 15-19 years at the time of their sexual debut while 75 percent of their male counter parts said their

sexual partners were 10-14 years old. Overall, 71 percent of the sexual partners of those who ever had sex were 10-14 years old at their sexual debut. Independent samples T-tests conducted showed statistically significant differences between males and females who ever had sex in terms of lifetime sexual intercourse ($t=4.31$, $p=0.00$) and age at sexual debut ($t=2.41$, $p=0.02$) (Table 3).

Table 3: Sexual experiences of respondents by sex

Variable	Sex (%)		Total (%)	T-test	
	Female	Male		t	p-value
Ever had sexual intercourse (N=400)				4.31	0.00***
Yes	6.2	20.8	13.8		
No	93.8	79.2	86.2		
Number of people ever had sex with (N=55)				2.11	0.40
1	66.7	39.5	45.5		
2 or more	33.3	60.5	54.5		
Age at sexual debut (N=55)				2.413	0.02*
10-14	40.0	85.7	71.1		
15-19	60.0	14.3	28.9		
Age of partner at sexual debut (N=55)				1.73	0.09
10-14	40.0	75	71.1		
15-19	60.0	25	28.9		

Table 3 Continued

Frequency of sexual intercourse (N=55)				1.21	0.23
Once	50.0	32.6	36.4		
two or more	50.0	67.4	63.6		
Number of current sexual partners (N=26)				1.47	0.15
1	70.0	39.3	47.4		
2 or more	30.0	60.7	52.9		

Source: Field work, 2015 * P<0.05 **P<0.01 *** P < 0.001

Even though students who had sex were 14 percent, it was found that the percentage of males who had sex was more than that of the females. This finding is congruent with studies conducted by Shiferaw, Getahun and Asres (2014) and Blanc, et al. (2012) in which the authors noted that males are slightly more likely than females, to report having had sex. In a study conducted by Khatiwada, Raj Silwal, Bhadra and Tamang (2013) the authors found that only 1 percent of never-married female adolescents had ever had sexual intercourse. In contrast, the proportion of never-married male adolescents who had ever had sexual intercourse was 22 percent in Nepal. The fact that more males had sex than females may be due to the fact that males are more risk takers than females and therefore, venture into sex more than the females as opined by Doku (2012).

The percentage of adolescents who had sex in the present study is lower than a study by Centers for Disease Control and Prevention (2010) in

the USA, where 46 percent of the adolescents were sexually active as well as Doku's (2012) study were 25% (28% boys and 23% girls) reported having ever had sexual intercourse.

The percentage of adolescents who had sexual intercourse in the present study was 14 percent and this is higher than what was reported by Finer and Zolna (2011) and Ademola & Brieger (2007) where 7 percent and 10 percent of adolescents respectively reported to have had sex. In their study, majority of the respondents who had ever had sexual intercourse, had sex only once, and as such, with only one person.

Majority (71%) of the respondents who ever had sex had sexual intercourse between 10- 14 years. In respect of this finding, Doku (2012) found that about 41.3% of adolescents who were sexually experienced had sexual intercourse before age 15 years as the mean age at sexual debut was found to be 14.8 years. This may be due to the advent of social media and easy accessibility to the internet which exposes young adolescents to sexually explicit materials which they later tend to practice. This finding is consistent with data from different countries, which indicate that a considerable proportion of adolescents report sexual activity before the age of 16 years (Nelson & Howitt, 2013; Blanc, Windrey & Ross 2012; Hauser, 2008; Warenius, 2008).

Fifty three percent of the respondents, who ever had sexual intercourse, had multiple sexual partners (two or more). This finding, therefore supports a study conducted by Sychareum et al. (2013) in Sweden, where the percentage of adolescents who reported having had three or more sexual partners went up from 8 percent in 2000, to 17 percent in 2007, and in males from 11 to 17

percent during the same period, an indication of increasing number of multiple sexual partners among adolescents.

An independent-samples t-test was therefore conducted. A statistically significant difference was observed in scores for males and females (p=0.019, t=2.413) (Tables 4 & 5). The null hypothesis of the study was therefore rejected and the alternate accepted. There was no statistical significant difference in scores for males and females (p=0.47, t=1.47). The null hypothesis was therefore accepted and the alternate hypothesis rejected (Tables 6 & 7).

Table 4: Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Age at sexual	Female	12	6.08	2.843	.821
debut	Male	43	3.88	2.779	.424

Source: Field work, 2015

Table 5: T-test for the difference in age at sexual debut by sex

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Age at sexual debut	Equal variances assumed	0.260	0.612	2.413	53	0.019*	2.200	0.912	0.371	4.028
	Equal variances not assumed			2.381	17.326	0.029	2.200	0.924	0.254	4.146

Source: Field work, 2015 *Significant at p=0.05

Table 6: Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Number of current sexual partners	Female	10	1.50	0.972	0.307
	Male	28	2.11	1.166	0.220

Source: Field work, 2015

Table 7: T-test for the difference in number of current sexual partners by sex

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of current sexual partners	Equal variances assumed	0.969	0.331	1.471	36	0.150	0.607	0.413	1.444	0.230
	Equal variances not assumed			1.606	18.954	0.125	0.607	0.378	1.399	0.184

Source: Field work, 2015 Level of significance p=0.05

Contraceptive Use

Respondents were asked to indicate whether they were ever taught about contraceptives in class, since this had a likelihood of influencing their level of knowledge on contraception. Fifty-five percent of all the respondents sampled for the study were taught about contraceptives in class. Meanwhile about 47 percent of the respondents who said they had sexual intercourse used contraception the last time they had sexual intercourse. Sixty-seven percent of the females and 59 percent of the males who ever had sex used condom. Overall, 69 percent of the sexually active respondents who used contraceptives used condom the last time they had sexual intercourse. Fifty-six percent of the females and 47 percent of the males got the contraceptives from the pharmacy or chemical shop. In all, 56 percent of the sexually active participants accessed contraceptives from pharmacies/ chemical shops (Table 8).

From the results, it has been realised that majority (75%) of the participants who had ever had sex, used no contraception the last time they had sexual intercourse. The implication is that contraceptive use was low among students in the present study as also observed by Doku (2012). This confirms Finer and Zolna (2011) argument that over 50 percent of adolescents did not use any contraceptives during sexual intercourse. The percentage of participants who ever had sex and used contraceptives was higher than the 18.6 percent recorded in the 2014 Demographic and Health Survey of Ghana (GSS et al., 2015) and about 39 percent in the USA (CDC, 2010).

Majority of respondents who said they used contraceptives, however, used condoms. The high rate of condom use among contraceptive users, may be due to the availability of condoms in almost all pharmacies/chemical shops,

compared to other contraceptives. This was evident in the fact that majority of the contraceptive-using adolescents indicated pharmacy/chemical shop as their main source of contraceptives. These findings are consistent with results of studies conducted by Somba, Mbonile, Obure and Mahande (2014), Khatiwada, Raj Silwal, Bhadra and Tamang (2013) and Abiodun and Baloqun (2009) in which they found pharmacy shops as the commonest source of contraceptives for their participants.

Table 8: Contraception use and taught in class

Variable	Sex (%)		Total (%)
	Female	Male	
Being taught in class about contraception N=400			
Yes	81.9	60.2	55.3
No	18.1	39.8	44.7
Use of contraception at last sexual encounter N=55			
Yes	75	39.5	47.4
No	25	60.5	52.6
Type of contraceptive used N=26			
Condom	66.7	58.8	69.3
Oral contraceptive	11.1	11.8	11.5
Condom and oral contraceptives	11.1	17.6	7.7
Withdrawal method	11.1	5.9	11.5
Source of access to contraceptives N=26			
Store or shop	33.3	35.3	28.4
Pharmacy/chemical shop	55.6	47.1	56.3
Clinic or Hospital	11.1	-	3.8
A friend	-	17.6	11.5

Source: Field work, 2015

Factors influencing sexual behaviour of Senior High School Students

A logistic regression analysis was conducted to examine the association between socio-demographic characteristics and having sexual intercourse (Table 9). Level of education of respondents and that of their fathers were found to be statistically significant influencing factor. Form one students were less likely to engage in sexual intercourse than students in Form two (OR= 0.30, 95% CI=0.15-0.63). Students who were living with both parents were less likely to engage in sexual intercourse than those who did not live with both parents (OR=0.480, 95% CI=0.240-0.963). The probability of engaging in sexual intercourse also increased by level of education of the students' fathers. Educational background of father higher than secondary (OR=14.203, 95% CI=2.284-88.339). The education level and work experience of the parents may influence attitudes and present opportunities for sexual activity if parents are away. This could be to the fact as the fathers educational background increase they are most of the time out of home. Therefore the children are likely to do what they like mostly if they have mothers who have less control over their behaviour.

Table 9: Logistic regression analysis of association between socio-demographic characteristics and sexual behavour

Socio-demographic characteristic	Odds Ratio	95% C.I.	P-value
Form			
Form Two	Ref.		
Form One	0.303	0.146-0.630	0.001***
Age			
10-14	Ref.		
15-19	1.236	0.334-4.794	0.739
Sex			
Male	Ref.		
Female	0.458	0.188-1.117	0.086
Religion			
Christianity	Ref.		
Islam	0.453	0.059-3.473	0.446
Traditional Religion	0.402	0.135-1.195	0.101
Ethnicity			
Ga/Dangme	Ref.		
Akan	0.752	0.288-1.964	0.560
Ewe	0.601	0.177-2.047	0.416
Others	2.418	0.303-19.301	0.405
Living with both parents			
No	Ref.		
Yes	0.480	0.240-0.963	0.039*

Table 5 Continued

Household size			
1-5	Ref.		
6-10	1.463	0.612-3.499	0.393
> 10	1.258	0.325-4.875	0.740
Mother's level of education			
No formal education	Ref.		
Primary	0.534	0.099-2.894	0.467
Secondary	0.322	0.061-1.694	0.181
> Secondary	0.464	0.087-2.463	0.367
Father's level of education			
No formal education	Ref.		
Primary	10.108	1.635-57.002	0.026*
Secondary	11.701	1.715-79.853	0.012**
> Secondary	14.203	2.284-88.339	0.004***

Source: Field work, 2015 * P<0.05 **P<0.01 *** P < 0.001
Ref=Reference category

Seven percent of the respondents ever visited a health facility/pharmacy to access SRH services (Table 6). For respondents who went to health facilities to access reproductive health services, it was reported that attitude of service providers towards them (57%) was negative. Seventy-five percent of the respondents who said attitude of service providers was negative towards them indicated that they were not going to access SRH services from those facilities in future (Table 10).

Table 10: Visiting a health facility/pharmacy to access SRH services, attitude of service providers and revisit decision

Variable	Sex (%)		Total
	Female	Male	
Ever visiting a health/pharmacy to access SRH services (400)			
Yes	6.2	7.7	7.0
No	93.8	92.3	93.0
Attitude of health care providers (N=28)			
Positive	28.6	47.6	42.8
Negative	71.4	52.4	57.2
Respondent visiting those health facilities in future to access SRH services (N=28)			
No	71.4	76.2	75
Yes	28.6	23.8	25
Total	100	100	100

Source: Field work, 2015

Nine percent of the respondents were ever pressurised by people to engage in sexual intercourse (Table 11). Among those who were ever pressurised by people to engage in sexual intercourse the male students were most (14 %) pressurised ascompared with 4 percent females. Those who were ever pressurised mostly (60%) indicated that they were influenced by their

sexual partners to have sexual intercourse. Seventy five percent of the females where pressurised by their sexual partners while 46 percent of males where pressurised by their sexual partners. This could be to the fact that the girls are most of the time encounter physical violence and abuse from their sexual partners.

Table 11: Sexual pressure among the respondents

Variable	Sex (%)		Total (%)
	Female	Male	
Pressure from others to have sexual intercourse (N=400)			
Yes	4.1	13.5	9.0
No	95.9	86.5	91.0
Persons who pressurised respondents to have sexual intercourse (N=36)			
Sexual partner	75.0	46.4	52.7
Friends	25.0	46.4	41.7
Teacher	0.0	3.6	2.8
Uncle	0.0	3.6	2.8
Total	100	100	100

Source: Field work, 2015

Congruent to findings of the present study are the results of a study conducted by Regmi et al. (2008) which showed that sexual behaviour is influenced by socio-demographic factors like education. Findings of the study,

however, contradict Regmi et al.'s study that revealed that age, sex, ethnicity, culture and religion influence sexual behaviour.

An important finding is that students in families with both parents were less likely to engage in sexual intercourse. This highlights the role of the nuclear family in the upbringing of children particularly in relation to sexual and reproductive health issues as opined by Doku (2012) which helps to minimise the probability of engaging in sexual intercourse. Doku, however, argued that traditionally, sex education by nuclear families is given to only girls, usually by their mothers or an elderly woman in the family during puberty rites.

Students who accessed SRH services indicated that attitude of service providers towards them was negative. This behaviour of health workers is likely to prevent adolescents from visiting health facilities in future. Negative attitude of service providers was corroborated by some of the participants as the reason why they never visited any health facility to access any SRH service. Since most of the adolescents will not visit health facilities in future due to negative attitude of service providers, they are likely to lack the information needed to make informed sexual decisions and therefore being exposed to sexual risks including STIs (Mbeba, Mkuye, Magembe, Yotham, Mellah, & Mkuwa, 2012; Afenyadu & Goparaju, 2003).

Findings of the study relate to the conceptual framework in Ajzen's (1991) argument that people perform a behaviour if they feel they have a high degree of control over it. Thus, students who engaged in sexual intercourse and other sexually related activities probably did so because they believed in their ability to carry such behaviours out and maintain control over them.

Ajzen further noted that people's perception about controllability over a behaviour may have an important influence on the behaviour. For instance, students who felt they had exceptional control over sex and sexually related activities were the ones who went in for more than one sexual partner and as such engaged in sexual intercourse with all or most of them.

Ajzen's (1991) postulation that human beings are rational and make systematic decisions based on available information, may be applied to students who either remained chaste or took one sexual partner. These students were probably rational enough to realise that engaging in sexual intercourse or taking more than one sexual partner had negative implications for unplanned pregnancy, sexually transmitted infections and even poor academic performance as it inhibits their concentration in class and ability to learn effectively.

The conceptual framework (Ajzen, 1991) also predicts the occurrence of a particular behaviour, provided that behaviour is intentional. In the present study, it is therefore argued that students who engaged in sexual intercourse, actually did so through planned processes and that the behaviours did not occur out of volition.

According to Ajzen (1991), behavioural intention is influenced by a person's attitude toward performing a behaviour, and by beliefs about whether individuals who are important to the person approve or disapprove of the behaviour (subjective norm). The theory of planned behaviour assumes that all other factors; which in the case of the present study include attitude of health care providers and sexual pressure, operate through the models' constructs, and do not independently explain the likelihood that a person will behave in a

certain way (Ajzen, Albarracín & Hornik, 2007). Socio-demographic characteristics such as living with both parents and father's level of education, as found by the present study, however, have direct implications for sexual behaviour.

Most of the participants were not forced to engage in sexual intercourse. This finding is consistent with the conceptual framework of the study. According to Ajzen (1991), the particular behaviour may occur provided that behaviour is intentional. Thus, the students needed no pressure from anybody in order to engage in sexual intercourse. This therefore corroborates stipulations of the conceptual framework that behavioural intention is the most important determinant of behaviour (Ajzen et al., 2007).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter summarizes the research process and major findings of the study. In addition, conclusions are drawn based on the findings. Recommendations are also made for policy and practice as well as for further research.

Summary

The study sought to examine sexual behaviour among Senior High School students in the Cape Coast Metropolis. The specific objectives of the study were to; examine sexual experiences of Senior High School students in the Cape Coast Metropolis; assess the level of contraceptives among Senior High School students in the Cape Coast Metropolis; and examine factors influencing sexual behaviour of Senior High School students in the Cape Coast Metropolis.

The study found that most of the study participants were aged 15-19 years, males, Christians, and Akans. Most of the students surveyed were also living with both parents and live with household size of 1-5. Most of the fathers of the respondents had more than secondary level of education. The parents of the respondents were generally, also self employed.

Majority of those who had ever had sex, however, had multiple sexual partners (two or more) and had had sex more than twice. Majority of the males who ever had sex had first sexual intercourse between ages 10-14 whilst most of the females who ever had sex had first sex between 15-19 years. Hence males had sex debut at an earlier age compared to females.

Contraceptive use among the sexually active adolescents during the last sexual intercourse was higher among the females. Those who used contraceptives however generally used condoms – which they got from pharmacies/chemical shops – the last time they had sexual intercourse. Level of education of respondents and that of their fathers were found to be statistically significant influencing factor.

Form one students were less likely to engage in sexual intercourse than students in Form two. Students who were living with both parents were less likely to engage in sexual intercourse than those who did not live with both parents. The probability of engaging in sexual intercourse also increased by level of education of the students' fathers. Few of the respondents had ever access SRH services. These respondents however, were confronted with negative attitude of service providers. Due to this, most of them decided not to visit that facility in future, to access any SRH service. Most of the respondents who ever had sex did so without force from anyone.

Conclusions

Based on key findings of the study, the following conclusions are drawn;

Majority of the study participants were Form one (515) Christians (96%), and Akans (62%). Seventy percent of the students surveyed were also living with both parents and 73% live with household size of 1-5. Sixty eight percent of the fathers of the respondents had more than secondary level of education. The parents of the respondents were generally, also self employed, 91% and 88% of mothers and fathers respectively.

Fourteen percent of the Senior High Schools students in the Cape Coast Metropolis had ever been engaged in sexual intercourse. Fifty three percent of the students who have ever had sex, however have multiple sexual partners and have had sex two or more times. This suggests that the few Senior High School students in Ghana who engage in sexual activities have two or more sexual partners and this will predispose them to sexually transmitted infections and teenage pregnancy.

Seventy five percent of the sexually active Senior High School students do not use contraception during the last time they had sexual intercourse. The implication is that these students stand the risk of contracting STIs as well as unplanned pregnancy which can lead to abortion and or school dropout. The 25 percent sexually active students who use contraceptives during sexual intercourse, however, depend on condoms, which they generally purchase from pharmacies and chemical shops, to protect themselves from STIs and unplanned pregnancies.

Socio-demographic characteristics which influence students to have sexual intercourse include their educational level, living with both parents, and the level of education of their father. Ninety three percent of the students do not visit health facilities to access any SRH services. Those who even

visited were faced with negative attitude of service providers. Future utilization of sexual and reproductive health services cannot be guaranteed for those who encounted negative attitude of health care providers. This can lead to unprotected sexual practices which can predispose them to sexually transmitted infections including HIV and AIDS and unintended pregnancies. Ninety one percent of the students were not forced by anyone to engage in sex. The implication therefore is that most of them take such decisions by their own volition.

Recommendations

1. Sexual activity at a young age may result in several implications including truncation of education prematurely. Students, who have not already been engaged in sexual activities, should therefore be supported by their parents and teachers to abstain until they are of age, while those who have engaged in sexual activities and cannot stop such acts should be encouraged by their parents and teachers, to use condoms and other contraceptives to prevent STIs and unplanned pregnancies.
2. Health care workers including nurses, medical doctors and laboratory technicians, who have direct contact with adolescents in their quest to access sexual and reproductive health care service, should be sensitized by the Ghana Health Service, and authorities of hospitals in which they work, to improve upon their attitudes, which deter young people from accessing SRH services.
3. The MOH/GHS proposed that all health facilities must establish adolescent reproductive health services. This initiative must be

strengthened and made more friendly to all adolescents. Health facilities which don't have such services must be encouraged to establish one.

4. Health workers must ensure that youth friendly health services are provided at places that will be accessible to all adolescents who will need such services. Safe and comfortable spaces should be created for adolescents in order to improve access to SRH services for them.
5. Teachers and heads of secondary schools must be trained on adolescent sexual and reproductive health issues to enable them to support the students to have positive sexual behaviour.
6. Health workers especially public and community health nurses should encourage parents and adolescents to have open discussions about SRH to enable the adolescents to adopt positive sexual behavour.

Suggestions for Further Research

There is the need to conduct a study to examine the effects of attitude of service providers on the utilization of SRH services by young people. Such study could be conducted nationwide, in order to ensure generalisability of the findings. A qualitative study on ASRH would shed more light on the subject.

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APPENDICES

Appendix A- Questionnaire

UNIVERSITY OF CAPE COAST

DEPARTMENT OF POPULATION AND HEALTH

QUESTIONNAIRE FOR STUDENTS

Hello, I am from the Department of Population and Health, University of Cape Coast, and conducting a research on **Sexual and Reproductive Behaviour of Senior High School Students in the Cape Coast Metropolis.** This questionnaire is therefore meant to solicit your views on sexual and reproductive health. Please feel free and respond to the questions based on what you know or really do. There are no rights or wrong answers. Thank you very much for accepting to be part of this research. Your responses are confidential therefore do not write your name on the questionnaire.

Instruction: Please tick (√) where appropriate and write your answers where necessary in the spaces provided.

Section A: Socio-demographic Characteristics

1. School Name …….

2. Form

   One [ ]

   Two [ ]

3. Age (in completed years)……

4. Sex

   Female [ ]

   Male [ ]

5. Religion

Catholic	[ ]
Anglican	[ ]
Methodist	[ ]
Presbyterian	[ ]
Pentecostal/charismatic	[ ]
Other Christian	[ ]
Muslim	[ ]
Traditionalist/spiritualist	[ ]
No religion	[ ]

Other (specify): ……

6. Ethnicity

Ga/Adangme	[ ]
Akan	[ ]
Ewe	[ ]
Guan	[ ]
Mole-Dagbani	[ ]
Hausa	[ ]

Other (Specify) ……

7. Do you live with both parents?

Yes	[ ]
No	[ ]

8. Level of education of mother

No formal education	[ ]
Primary education	[ ]
Secondary education	[ ]
Higher than secondary education	[ ]
Mother died	[ ]
I do not know	[ ]

9. Level of education of father

No formal education	[ ]
Primary education	[ ]
Secondary education	[ ]
Higher than secondary	[ ]
Father died	[ ]
I do not know	[ ]

Section B: Sexual experiences

10. Have you ever had sexual intercourse in your whole life?

Yes	[ ]
No	[ ]

Questions 11 – 15 are for only those who have ever had sexual intercourse

11. In your whole life, how many people have you had sexual intercourse with?

1	[ ]
2	[ ]
3	[ ]
4	[ ]

Other specify …….

12. How old were you at the time you first had sex?

Less than 10 years [ ]

10 years old [ ]

11 years old [ ]

12 years old [ ]

13 years old [ ]

14 years old [ ]

15 years old [ ]

16 years old [ ]

17 years old and above [ ]

13. How old was your partner at the time you first had sex with him/her?

Less than 10 years [ ]

10 years old [ ]

11 years old [ ]

12 years old [ ]

13 years old [ ]

14 years old [ ]

15 years old [ ]

16 years old [ ]

17 years old and above [ ]

14. How many times have you had sexual intercourse, during your life?

Once [ ]

2 times [ ]

3 times [ ]

4 times [ ]

5 times [ ]

More than 5 times [ ]

15. Have you ever experienced any of the following? (Please tick those applicable to you)

Discharge from the penis, vagina or anus [ ]

Lower abdominal pains not associated with menstruation [ ]

Pain or discomfort when urinating [ ]

Pain during sex [ ]

Abnormal or unusual vaginal bleeding [ ]

Lumps and bumps on the genitals [ ]

Genital sores [ ]

Genital itching [ ]

Genital irritation or pain [ ]

Rash on genitals [

Questions 16 – 35 are for only those who currently have a sexual partner

16. How many sexual partners do you currently have?

1 [ ]

2 [ ]

3 [ ]

4 [ ]

5 [ ]

More than 5 [ ]

17. Have you and your current sexual partner(s) ever had any physical contact, such as holding hands, hugging or kissing or touching vagina/penis?

Yes [ ]

No [ ]

18. How long ago did you last have sexual intercourse with your sexual partner?

Less than 1 week ago [ ]

1 week ago [ ]

2 weeks ago [ ]

3 weeks ago [ ]

1 month ago [ ]

2-3 months ago [ ]

4-5 months ago [ ]

More than 5 months ago [ ]

19. Do you receive or share any form of sexual messages or images from your phone/computer with your sexual partner?

Yes [ ]

No [ ]

20. Have you ever paid/been paid money or gifts in exchange for sexual intercourse?

Yes [ ]

No [ ]

21. Have you ever been told by a doctor or nurse that you have a sexually transmitted infection, such as HIV & AIDS, gonorrhea, syphilis, chlamydia, HPV, or genital warts?

Yes [ ]

No [ ]

I do not know [ ]

Section C: Contraceptive Use

22. During this school year, were you taught in any of your classes about contraceptives?

Yes [ ]

No [ ]

23. The last time you had sexual intercourse, did you or your partner use any method of birth control, such as withdrawal, rhythm (safe time), birth control pills, or any other method to prevent pregnancy?

Yes [ ]

No [ ]

24. If yes, what kind of contraception did you use in your most recent sexual intercourse?

Condom [ ]

Oral contraceptives [ ]

Condom and oral contraceptives [ ]

I did not use any contraception [ ]

Other, what? ……

25. If yes to question 23, where did you normally get the contraceptive to use?

Vending machine [ ]

Store or shop [ ]

Pharmacy/ chemical shop [ ]

Clinic, or hospital [ ]

A friend [ ]

Other specify ……

Section D: Factors which influence sexual and reproductive health behaviour of Senior High School students

26. Have you ever purchased condom to enable you prevent STIs during sexual intercourse?

Yes [ ]

No [ ]

27. What was the attitude of the service provider (s) towards you?

Hostile [ ]

Friendly [ ]

Aggressive [ ]

Abusive [ ]

Discouraging [ ]

Supportive [ ]

I have never [ ]

Others specify …….

28. What is your source of information on sexual and reproductive health?

TV [ ]

Internet [ ]

Facebook [ ]

Twitter [ ]

WhatsApp [ ]

Others specify ……

29. Have you ever visited a health facility/pharmacy to access SRH services?

Yes [ ]

No [ ]

30. If yes, what was the attitude of the service provider (s) towards you the last time you visited a health facility/ pharmacy to access SRH services?

Hostile [ ]

Friendly [ ]

Aggressive [ ]

Abusive [ ]

Discouraging [ ]

Supportive [ ]

I have never [ ]

Others specify …….

31. Will you visit that health facility/pharmacy to access any SRH service again due to attitude of providers towards you?

Yes [ ]

No [ ]

32. If no why ……

33. If you have never visited any health facility/pharmacy to access any SRH service, why?

Delay at the health facility/pharmacy [ ]

Negative attitude of the providers [ ]

I don't need any STI service [ ]

I feel shy [ ]

Lack of privacy [ ]

Lack of trust [ ]

Lack of confidentiality [ ]

Others specify ……..

34. Do you feel any pressure from others to have sexual intercourse?

Yes [ ]

No [ ]

35. If yes, who pressurizes you to have sexual intercourse?

Sexual partner [ ]

Friends [ ]

Teacher [ ]

Father [ ]

Mother [ ]

Siblings [ ]

Uncle [ ]

Other (Specify) ……

Thank you