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RELATIONSHIP BETWEEN RISK PERCEPTION OF HIV/AIDS AND SEXUAL BEHAVIOURS AMONG SENIOR HIGH SCHOOL STUDENTS IN THE TEMA METROPOLIS

BY

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DECLARATION

I hereby declare that apart from specific references which have duly been acknowledged, this work was produced from research undertaken by supervision.

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DEDICATION

This work is proudly dedicated to everyone who ever believed in me and contributed to making me who I am today

ABSTRACT

HIV/AIDS is still a big public health issues as adolescents today have not known a world without AIDS. The school environment offers great opportunity for HIV high risk behaviours. Despite a great awareness of the dangers of the disease and the abundance of knowledge, young people continue to engage in behaviours that place them at risk of contracting the disease. The main objective of the study is to determine the relationship between HIV risk perception and sexual behaviours among senior high school students in the Tema Metropolis.

Using a quantitative approach, a self-administered semi-structured questionnaire was used in soliciting responses about the knowledge, risk perception, self-efficacy and sexual behaviours from 220 senior high school students. The data collected was processed using the software Statistical Package for Social Sciences (version 16.0). Univariate analysis was used to determine the Correlations between perceived of risk of HIV/AIDS other variables sexual behaviours. Results from the study show that male students generally have high self-efficacy regarding the practice of safe sex, a relationship also exists between knowledge and risk perception, knowledge and self-efficacy and self-efficacy and reported sexual behaviour.

Findings of the research call for innovative/creative ways to empower young people to take control of their lives by making the right decisions concerning their sexual behaviour. Parents are also encouraged to openly discuss HIV and sexual related matters with their children. And finally, including HIV education into the academic curriculum for

children to have protective information and equipped with the necessary skills before they become sexually active.

TABLE OF CONTENTS

Contents **Pages**

LIST OF TABLES & FIGURES

LIST OF APPENDICES

APPENDIX **PAGE**

LIST OF ACCRONYMS

AIDS – Acquired Immune Deficiency Syndrome

HIV – Human Immunodeficiency Virus

GHS – Ghana Health Service

MOH- Ministry of Health

NGOs – Non Governmental Organizations

TB - Tuberculosis

WHO – World Health Organization

NACP – National AIDS Commission Programme

GAC – Ghana AIDS Commission

ARRM – AIDS Risk Reduction Model

CHAPTER ONE

1.0 INTRODUCTION AND BACKGROUND

HIV continues to be one of the challenges facing many sub Saharan African countries and poses one of the most urgent public health challenges. According to UNAIDS's 2012 global AIDS epidemic update, of the estimated 33 million people living with HIV worldwide; sub-Saharan Africa continues to harbour about 67% of the world's HIV/AIDS. Women constitute more than half of those infected with HIV; and young people aged 15–24 accounted for an estimated 45% of all new HIV infections with about 6,000 of them becoming infected every day (UNAIDS, 2006). The reports also indicated that AIDS is also the leading cause of death worldwide among adults 15 to 59 years. An estimated 13 million children under age 15 are reported have lost one or both parents to AIDS. Life expectancy has dropped dramatically from the levels they would have been without AIDS in some of the countries mostly affected while infant and child mortality is increasing (UNAIDS, 2008).

Though Ghana is one of the earliest countries to attempt stem to spread of HIV/AIDS when the first cases were identified in March 1986; the number of cases increased steadily reaching a peak median prevalence of 3.6% in 2003 at the HIV sentinel sites (National AIDS/STI Control Programme [NACP], 1998, 2004). Current national HIV prevalence is said to be 1.5% (NACP, 2011 & UNAIDS, 2010). Women account for

about 54% of all infections. Prevalence among young people 15 – 24 years is also estimated at 1.2%; and account for 30% of all new infections (NACP, 2011).

The two main type of HIV (HIV-I and II) are found in Ghana. HIV- I is the main infecting agent accounting for 94.8% of the infections and a mere 0.4% are infected exclusively with HIV-II while 4.8% of the cases are infected with both HIV I and II (NACP, 2006) report indicated that sexual transmission of HIV accounts for 75 - 80% of all HIV/AIDS infections; mother to child transmission accounts for 15% while other modes of transmission including the use of blood and blood products account for the remaining 5%.

Although the epidemic has stabilized globally, there are still high levels of infections as Sub-Saharan Africa, and Ghana in particular; national HIV prevalence has remained above 1%. Studies have confirmed that young people are the most vulnerable to HIV/AIDS especially in Sub-Saharan Africa (Fatusi & Hindi, 2010; Akinyemi & Okpechi, 2011). There was a steady increase in the prevalence among young people (15-24 years) during 2006 and 2008. In 2006, the prevalence rate among this age group was 2.0%; shot up to 3.5% in 2008, but has now dropped to 1.7% in 2011 (Ghana AIDS Commission, 2012; National AIDS/STI Control Programme/ Ghana Health Service 2010).

Unsafe sexual behaviours

A number of studies have reported that HIV infection among this age group occurs mainly through unsafe sexual practices (Agyeman, 2009; Akwara, Madise & Hinde,

2003; Avortri, 2004; Awusabo-Asare, Biddlecom, Kumi-Kyereme & Patterson, 2006; Baah-Odoom, 2009; Riley & Baah-Odoom, 2010; Fayorsey, 2002). Fayorsey (2002) reported that 66% of students claimed to have changed their sexual behaviours (had either deferred sexual initiation, assume secondary virginity or reverted to use of condoms) as a result of HIV/AIDS. Zaba, Pisani, Slaymaker & Boerma (2004) reported a significantly increase in age at first sex together with a decline in premarital sexual activity among Ghanaians including young people. Another researcher corroborated the finding and claimed the consistent decreases in the risky sexual behaviours were similar to those seen among gay men in the United States (Oster, 2006). Takyi (2001) found that religion and education were important factors of the male's sexual behaviour change, although not for condoms use. Nonetheless, unsafe sexual practices were also found among the participants of some of the studies such as (Agyeman, 2009; Akwara et al., 2003 Baah-Odoom, 2009, Avortri, 2004; Awusabo-Asare, et al., 2006; (Riley & Baah-Odoom, 2010). Higher levels of risky sexual behaviours were found to be more common among young people aged 15 – 24; 50% of females and more than 75% of males (GSS, 2004). Fayorsey (2002) reported that only 40% of the sexually active students she studied used a condom in their last sexual encounter. Adu-Mireku (2003) reported similar findings. Karim et al. (2003) found that only 24% of the sexually active males and 20% of females reported consistent condom use with their sexual partner. Baah-Odoom (2009), Fobil & Soyiri, (2006) and Riley and Baah-Odoom (2010) all reported sexual risk taking behaviours such as, multiple sexual partners, non-use inconsistent use of condom and having high risk sex (sex with people they do not know well, including prostitutes)

without condoms. Among those who engage in higher risk sex, less than one-third of females and half of the males used condoms during their last episode of unsafe sex. Global AIDS (2008) reported that during 2003 and 2006, 9.9% and 8.4% Ghanaian males aged 15 to 49 had sex with more than one partner. Among the females in the same age group and periods 1.1% and 1.2% did same. Consistent condom use among sexually active young males and females who had more than one sexual partner was 22% and 38% in 2003 and 2006 respectively for the males. For the females, they were 33% and 35% in 2003 and 2006 respectively.

With almost universal of knowledge of HIV/AIDS among the youth, one would expect that the increased knowledge will translate into behaviour change. Although education attainment has been found to be the predictor of condom use in Ghana; it is also the consistent predictor of premarital sexual activity (Adu-Mireku, 2003; Akwara et al., 2005; Awusabo-Asare et al., 2004; Karim et al., 2003; Oster, 2006; Takyi, 2001; Zaba et al., 2004). Increased educational attainment was associated with an elevated likelihood of being sexually experienced and with having had a greater number of partners, but the effects varied by gender. For females, having a primary education was the key factor, whereas for males, only having a higher education resulted in a significant association (Karim et al., 2003). However, Takyi (2001) found that religion was associated with protective behaviour for men. These reports suggest that safe sexual practices among Ghanaians are still very low albeit the high levels of awareness about HIV/AIDS.

In a study of adolescent sexual and reproductive health behaviour among junior and senior secondary school students and out of school youth in the Dodowa district,

Afenyadu & Goparaju, (2003) found that 60% of the respondents, who have ever had sex, use condoms selectively. (Amuyunzu-Nyamongo et al.,, 2005), in a study of adolescents' views about sexual and reproductive health, found that young people in Ghana think condoms are affordable but were embarrassed to purchase them. Some however just did not like to use condoms (Aheto & Gbesemete, 2005); Awusabo-Asare et al., 2004). Anarfi, (1999) and Awusabo-Asare et al. (2004) reported that condom use were associated more with pregnancy than STI prevention among young people. Conversely, Hoffman, Norgbe and Asante (2008) reported that 63% of students in their study preferred abstinence compared to 26% who preferred condom use as a means of reducing risk of HIV infection. From the above it can be concluded that although condom use also went up by more than 50% (GDHS, 2005), the levels are still low to effect any significant improvement in HIV infection reduction. According to Tenkorang et al, (2009) the school environment offers great opportunity for HIV high-risk behaviour because students, especially those who fall within this age group tend to be adventurous. HIV/AIDS risk perceptions is important predictor of safer sexual behaviours (Becker, 1974), Becker & Joseph, 1988); Ijadunola et al., 2007). Risk Perceptions, Awusabo-Asare et al. (2004) claimed behaviour change in Ghana has been very difficult to achieve because of the people's low risk perception. Fayorsey (2002) found that despite the fact that young people do not use condom consistently, the majority of pupils in first and second cycle schools in urban towns in Ghana did not perceive themselves to be at risk of HIV; only 7.3% students perceived themselves to be at risk of HIV infection. These observations

were not very different from what pertained in the late 1980s to 1990s (Anarfi, 1993; Anarfi & Antwi, 1995; Tweedie and Witte, 2000).

Many studies reports (Adjei-Mensah, 2001; Aheto & Gbesemete, 2005) suggested that a significant proportion of Ghanaians believe HIV/AIDS affect mainly the promiscuous, prostitutes and people who have ever travelled outside the country. This erroneous belief could be a contributory factor to the current level of HIV/AIDS prevalence among young people. At the beginning of the epidemic nearly 80% of those diagnosed with HIV were perceived to be female prostitutes who had returned from outside the country (Yankah, 2004). Since then, AIDS was thought to be a disease of prostitutes and people with a history of travel abroad (Adjei-Mensah, 2001; Aheto & Gbesemete, 2005). This trend has since changed with almost all of the new cases of HIV positive occurring among people without a history of previous travel (GAC, 2005), yet the perception still persists. The fact that CSWs contribute disproportionately to the number of new infections in Ghana reinforces such beliefs. The consequences of these associations are that some people discount their own risk because they may not identify with these high-risk groups (Riley & Baah-Odoom, 2010).

There is the need to understand what informs an individual's decisions and the effect of their decision and knowledge on their risky sexual behaviour. This research therefore seeks to improve on previous studies by other researchers by examining risk perceptions of HIV/AIDS and its link to young people's risky sexual behaviours. The findings will aid in more appropriate interventions that will go a long way to reduce the

risk of infection since changing sexual behaviour among this group is crucial in tackling the pandemic (Marston & King, 2006).

Risk perception of risk is an important component of The AIDS Risk Reduction Model ([ARRM], (Catania, Coates, & Kegeles, 1990)); and thus plays a central role in the Prevention of HIV/AIDS. This study therefore employed the AIDS Risk Reduction Model to study the link between Risk perception and sexual behaviour. The ARRM was specifically developed for HIV/AIDS. It is a three staged model that combines variables from the Health Belief Model (Hochbaum, 1958 and Rosenstock, 1966), Diffusion of Innovation Theory (Rogers, 2000) and Bandura's (1977) self-efficacy model.

1.2 STATEMENT OF THE PROBLEM

The period between the age of 15 and 24 is very critical and has been regarded as the period of intense sexual drive, sexual and drug experimentation and therefore a vulnerable group at risk of HIV infection. Special attention is paid to this group because it accounts for half of new HIV cases worldwide (Ross et al., 2006). In Ghana, 30% of new infection occurred among that age group in 2007 (NACP 2008), most of the infection occurred mainly through sexual intercourse. Knowledge of HIV and its infection is widespread due to multi-sectorial effort and collaboration by the Ministry of health MOH), Ghana Health Service (GHS), Ghana AIDS Commission (GAC), National AIDS Control Programme (NACP), Non-Governmental Organizations (NGOs) and some religious bodies in order to control the spread of the disease. These were measures put in place to help implement effective interventions.

Despite a great awareness of the dangers of the disease and the abundance of knowledge, young people continue to engage in behaviours that place them at risk of contracting the disease (Kohler, Behrman, & Watkins, 2007). This can be attributed to the incorrect or lack of assessment of risk and to their inability to appreciate the risks involved in their risky behaviour even though they may think they are protected by these behaviours which rather predisposes them to being infected with HIV/AIDS. For example, when we talk about protection from sexually transmitted infections (including HIV/AIDS) "the use of protection" may have a different meaning to the sexually active adolescent because the use of the contraceptive pill and condom are grouped together. So an adolescent girl may pick an option, (the pill) over the use of condom, thinking the pill will also protect her against HIV/AIDS even though in reality, it only protects them against unwanted pregnancy. That was the result of a cross sectional study carried out in a Secondary School in South Dehli, India where about 41% of 251 adolescent girls were confused about whether the contraceptive pill could protect against HIV/AIDS (McManus & Dhar, 2008). This may also be the reason why some people engage in homosexuality thereby having anal sex thinking one can only get infected through unprotected heterosexual sex.

According to NACP report in 2007; the prevalence of HIV/AIDS among the age group in the urban areas is higher than in the rural communities (NACP, 2008). This may be due to urbanization since we are gradually catching up with the western world in terms of changes in lifestyles where having casual sex and other forms of experimentations is the norm.

"Hooking up" with friends, strangers and acquaintances has become a norm; where young people experience sexual intimacy without commitment or investing in a relationship which usually involve engaging in risky behaviours that put one's health in jeopardy (Downing-Matibag & Geisinger, 2009). Also, the exposure to ICT may also be a factor as people within the group because of frequency in seeking health information from the internet. In a study conducted in Uganda, the desire and actual use of the internet to seek sexual health and HIV/AIDS information is high among Senior Secondary School Students (Ybarra, Kiwanuka, Emenyonu, & Bangsberg, 2006). In a study in Ghana, 53% sought information on health from the internet as they reported great interest in high levels of efficacy of online health information (Borzekowski, Fobil, & Asante, 2006). This may source of information may be accurate or inaccurate depending on the site and thus may be doing more harm than good even though the explosion of the new technology can be avenues for providing sex health education.

In most families in Ghana, discussions of sexual matters is almost absent as such these young people resort to unreliable sources especially from peers. Also, the sexually active among young people face the problem of accessibility to the means of protection as condoms are generally out of their reach due to traditional negative attitudes, myths and feelings of shyness associated with securing them.

Another factor is an increase in socialization events and socialization centres such as Barcadis, Vienna City, T Havanna, Monte Carlo all located in the heart of the city which are the most popular hangout for young people in Tema and other places outside of Tema such as the Accra Mall where "Mall day" is usually organized during vacations for

these in-school young people, particular those in the second cycle institutions. These and other social events provide opportunities for young people to experiment with alcohol and drugs which influences them to engage in risky behaviours such as unprotected sex.

Although many studies have been done on young people's sexual behaviour and have helped increased the understanding of the pandemic and have even led to some policy interventions, there is the need to find out more about in-school young people in an urban area in Ghana, to determine why they continue to engage in risky behaviours despite the awareness. Some basic questions that come to mind include, what is their level of perceived threat of HIV/AIDS? What are the risky sexual behaviours/practices that predispose them to HIV infection? How confident are they with regards to the practice of safe sex (self-efficacy)? Does their level of knowledge influence their risk perception? Does their level of knowledge influence their self-efficacy regarding safe sex practice? Does their level of self-efficacy influence their actual sexual behaviours? This will help come out with more pragmatic policies that will be enforced to reduce the incidence of the disease.

1.5 JUSTIFICATION

The study to be undertaken is very important because of the fact that HIV/AIDS is still a global issue and young people today have not known a world without HIV. With no specific cure or developed vaccines, preventive measures based on information and programmes remain the most effective means of controlling the disease. Also young people are the future workforce of the nation who will contribute to the national economy and development, therefore as the rate of infection continues to increase among the age

group, it spells doom for the nation and world at large. Therefore there is the need in finding out why they engage in risky behaviours that put endangers their health. For better understanding of their behaviours, there is the need to find reasons why they indulge in such HIV risky behaviours despite the awareness; in order to come up with a more pragmatic policy on prevention.

The Tema Metropolis is chosen as the geographical area because it is one of the country's major cities and located in the Greater Accra Region comprising of people of diverse background with mixed sex public schools. Another reason can be attributed to the fact that as urban communities are quickly catching up with the fast paced living in the western world in terms of privileges in education, socio-economic background, exposure to ICT among others as compared to people living in the rural communities, the young people are more likely to engage in risky behaviours. The findings of the study will aid in the planning and implementation of the prevention programmes for the youth in the country.

OBJECTIVES

General Objective

The general objective of the study is to determine the relationship between risk perception of HIV/AIDS and sexual behaviours among Senior High School students.

Specific Objectives

The specific objectives are as follows:

1. To determine students' level of HIV/AIDS risk perception
2. To determine students' level of self-efficacy regarding safe sex practice
3. To determine students' sex practices
4. To determine the relationship between knowledge and risk perception
5. To determine the relationship between self-efficacy and risk perception
6. To determine the relationship between self-efficacy and actual/reported sexual behaviour

Research Questions

1. What is the level of HIV/AIDS risk perception among the students?
2. What is the level of self-efficacy regarding safe sex practice among senior high school students?
3. What are the various sexual practices among the students?
4. What is the relationship between knowledge and risk perception?
5. What is the relationship between self-efficacy and risk perception?
6. What is the relationship between self-efficacy and actual/reported sexual behaviour?

CHAPTER TWO

2.0. LITERATURE REVIEW

This chapter seeks to position the study within the context of literature. It focuses on previous works done in relation to the research topic, reviewing their results and methodology and identifying the gaps in them in light of this study. It also examines some factors and determinants of sexual behaviours and identifying gaps found in the previous studies in the light of the current study. The chapter concludes with various theories and models that are used in studying HIV-related sexual behaviour and the main one selected for this research.

2.1 THE NATURE AND IMPACT OF HIV/AIDS

Acquired Immune Deficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency Virus (HIV) which works by depleting the body's making way for opportunistic infections such as pneumonia, tuberculosis (TB), thrush and Kaposi's sarcoma (an aggressive skin cancer). Other signs and symptoms include prolonged fever, prolonged and chronic diarrhoea, shingles as well as significant weight loss. These symptoms eventually lead to death. The first case was identified in 1986 in Ghana with significant variations in prevalence rates with respect to gender, age, rural/urban distribution which is similar to findings in a 2009 study that indicated prevalence of 1.4% and 3.4% respectively among males and females (youth) in sub-Saharan Africa but differed within countries in terms of sex, urban/rural location and economic status (Napierala Mavedzenge, Olson, Doyle, Changalucha, & Ross, 2011).

HIV has some impacts on victims and caretakers alike. In terms of health, the treatment of opportunistic infections associated with HIV/AIDS puts a strain on the country's health system as millions goes into maintenance of HIV/AIDS patients (Fredricksson and Kanabus, 2005). The increasing need for funds on the care of AIDS often divert spending from other important health care needs or leave many AIDS patients with inadequate care. HIV/AIDS also affects the educational sector as teachers are not immune to the disease. Scares resources would have to be found to replace teachers lost to the disease. A study in Swaziland shows that 13,000 new teachers need to be trained to cover the next 17 years.

2.2. PATTERNS OF SEXUAL BEHAVIOURS AND GENDER VARIATION

Since sexual intercourse is the main mode of transmission of HIV/AIDS in sub-Saharan Africa, it is necessary to explore the dimensions of sexual activities that have implications for HIV/AIDS. Sexual behaviours have been associated with various factors such as religiosity, perceived parental attitudes towards living arrangements and school characteristics (Kabiru & Orpinas, 2009). One of the first studies on sexual risk taking among high school students in Turkey found that there were differences between gender groups regarding attitudes and behaviours as it is higher in males than in females which reflected their social structure (Aras, Semin, Gunay, Orcin, & Ozan, 2007). Transactional sex can also be attributed to the increased rate of HIV infection as younger people are at greater risk of engaging in transactional sex than older people (Chatterji, Murray, London, & Anglewicz, 2005). Lower levels of perceived risks were associated with early

sexual initiation, adolescents who felt they were at no risk were most likely to postpone initiation.

Patterns of association across gender also suggested that males are likely to be pressured into early sex to prove their masculinity (Tenkorang & Maticka-Tyndale, 2008). Men are influenced by cultural norms regarding manhood, some of which are very negative in the context of the subject matter since their "macho" attitudes encourage them to have multiple sexual partners that put them and their partners at risk of HIV infection. A study in Ghana revealed that there are conflicts between fertility motives and condom use as certain practices disempowered females in negotiation for condom use (Teye, 2005). However, females who are confident in getting their partners to wear condoms were more likely than those who were not to have used a condom at last sex even though the same study showed that 11% of male respondents had sex with more than two partners and did not use condoms (Guiella & Madise, 2007). Attitudes, anticipated affective reactions and habits play an important role in determining the frequency of safe sex practice such as condom use because precautionary measures are often affected by self-efficacy especially among girls (Richard & Van der Pligt, 2006). One's socioeconomic status also contributes to his/her risk of being infected with HIV since poverty enables people to engage in risky sexual behaviours. Evidence from a study on poverty as a driver for risky sexual behaviour in four countries in sub-Saharan Africa shows that although the link between wealth status and sexual behaviour is inconsistent, poor females are vulnerable to infection because of their early sexual debut and no condom use (Madise, Zulu, & Ciera, 2007)

The social pressure to remain a virgin may also contribute in a number of ways to the risk of infection of HIV among women as some may engage in anal sex as a means of protecting their virginity (Eckman, Huntley, & Bhuyan, 2004). This cultural expectation may cause parents to keep young women ignorant about sexual matters which often are viewed as a sign of purity and innocence whereas having too much knowledge about sexual matters symbolizes lack of virtue (Eckman et al., 2004.).

2.3. DETERMINANTS OF SEXUAL BEHAVIOUR

2.3.1. Early sexual debut

The age of sexual debut is an important determinant of a person's risk of contracting HIV/AIDS. Those who become sexually active at an early age are at higher risk of being infected (Monasch and Mahly, 2006). Select behaviours such as number of sexual partners a person has, low levels of condom use, and age of sexual debut among this age group also elevates his or her risk of contracting HIV/AIDS (Dancy, Kaponda, Kachingwe, & Norr, 2006). Although there is no universal trend for these patterns of behaviours, the shift towards later marriage in most countries has led to premarital sex (Wellings et al., 2006). Regardless of the importance of sexual debut for the risk of HIV infection, only a few studies have examined postponement of first sex as a strategy to prevent infection.

Results for a study among people aged 9 to 17 years in 160 schools in Kenya to understand the factors that influenced the timing of first sex indicated that adolescents who felt they were at no risk were most likely to postpone the initiation of first sex.

Results of that same study indicated the patterns of associations across gender suggests that males were pressured into early sex to prove their maturity (Tenkorang & Maticka-Tyndale, 2008b). Another research also indicated that female youth who perceive their risk as very small and males with higher knowledge experience their sexual debut later. For both sexes, socioeconomic and familial factors also influence the timing of sexual debut (Tenkorang, Rajulton, & Maticka-Tyndale, 2009).

2.3.2. Parental influence

The family as an agent of socialization also exerts a strong influence on adolescent sexual behaviour; therefore, in order to successfully implement and design effective programmes for adolescents, researchers have studied the role of the family in terms of adolescents' sexual behaviour. Communication about HIV/AIDS between the adolescents and parents increased the odds of using a condom at last sexual intercourse (Adu-Mireku, 2006).

A study undertaken on adolescents in rural Malawi also supports this assertion as adolescents acknowledged peer pressure and lack of parental supervision as factors that influenced such behaviours (Dancy et al., 2006;Bauermeister, Elkington, Brackis-Cott, Dolezal, & Mellins, 2009). In Ghana, adolescents showed high levels of connectedness to their families but communication on sex related matters was not as high as with non-family members, thus showing a negative relationship between parental monitoring and recent sexual activities for both males and females (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). Another study also found that those from homes with broken

marriages were much more vulnerable to high risk sexual behaviours than the other adolescents (Kibombo, Neema, & Ahmed, 2007) whereas another found that students from a polygamous family structure are more likely to engage in sexual activity than students from monogamous family structure (Slap et al., 2003). In a cross-sectional correlational study among young people aged 18 to 25 years in a University in Soeul, the quality of parent-adolescent communication significantly predicted a higher condom efficacy for men but not women (Cha, Kim, & Patrick, 2008). African-American and Hispanic adolescents reported on parent-adolescent discussions about initiation of sex and condoms which was related to sexual behaviour especially among teens naming a parent as their best source of information about sex. Results suggested that a lack of communication may cause adolescents to turn to peers (Whitaker & Miller, 2000), therefore the higher the family connectedness, the less likely young people are to engage in unprotected sex as it may be a protective factor related to sexual risk taking even among high risk youth (Markham et al., 2003). Parental monitoring and control are therefore important predictors of adolescents' sexual behaviours and therefore call for the attention of the need to target parents and guardians to promote responsible sexual behaviours among adolescents through effective communications about sexual issues (Babalola, Tambashe, & Vondrasek, 2005).

2.3.3. Peer influence

The influence of peer pressure on premarital sex as well as other risky HIV related behaviours cannot be underestimated as relationships with their peers is central to their

lives and hence very important in understanding their engagements in various behaviours (Crosnoe & McNeely, 2008, Maluwa-Banda, 2003). This is usually the case especially when there is lack of communication about sexual issues in the family as peer norms have been found to be strongly related to adolescents who had not discussed sex or the use of condoms with a parent (Whitaker & Miller, 2000). Sexual norms of peers can influence youth's individual attitudes and behaviours. Young people as a vulnerable group are often left out in the discussion of sexual matters and in their curiosity, they resort to discussions and obtaining distorted information from their peers.

In an exploratory study carried out in a French high school, results from data collected revealed that the perception of peers is associated with higher frequency of sexual initiation and commitment including oral sex permissiveness of peers is associated with high frequency of risky sexual practices. Young people whose friends are sexually active are more likely to engage in sexual activities (Mmari & Blum, 2009). Perceptions of best friends' behavior were significantly associated with adolescents' own oral sex behavior, but not intercourse. Adolescents who reported sexual activity had high levels of reputation-based popularity, but not likeability among peers; however, sex with more partners was associated with lower levels of popularity (Prinstein, Meade, & Cohen, 2003).

2.3.4. Socio-cultural practices and HIV transmission

The spread of HIV has also been linked to some social and cultural practices. Social factors exert their greatest influence through the social clock which involves major

events in the lives of young people in a given culture. Some cultural norms and practices relating to sexuality contribute to the increase in the prevalence of HIV infection (Rose-Innes, 2006). In most traditional societies in Ghana, there were strict norms and practices that controlled premarital sex which these societies frowned upon until the appropriate puberty rites and rites of passage were performed for example Dipo among the Krobos and Bragoro among the Akans (Buor, 2006).

In the modern era however, a combination of factors including population increase, migration, urbanization, education and disintegration of the extended family have contributed in weakening the traditional constraints on premarital sexual activity (Buor, 2006). A National survey on adolescents in 2004 indicated a sharp decline in the practice of puberty rites as only 5% of females were found to have gone through the rite (Awusabo-Asare et al., 2006). This is the same for other societies in Africa. For example, in southern part of Africa, some traditional practices such as initiation ceremony similar to puberty rites are organized for young girls where in some instances those who initiate these girls will have to demonstrate at a point in the orientation how to please their husbands and even going to the extent of playing a game the night before the wedding, the girls are naked or almost naked for their fiancés to find them in dark places (Ndile & Bashemera, 2007).

Other traditional practices such as polygamy, sex partner exchange, relatives helping to impregnate barren women, widow inheritance and female genital mutilation. According to Rose-Innes, 2006, some men in South Africa have negative attitude towards

the use of condoms because they believe that “flesh-to-flesh” sex is equated to masculinity and also necessary to male health. They also believe in dry sex which may also increase the risk of infection due to the abrasions caused to the linings of the vagina (Rose-Innes, 2006).

Tattooing has always been a very common social practice among both sexes and has been practiced for centuries. It is a form of body modification made by inserting indelible ink to the skin. It is not uncommon to find a number of young people today with these beautiful inscriptions and floral marks on their bodies; however it comes with a price such that instruments may be unsterilized or the fact that one instrument may be used for a number of people.

Secret societies as an agent of socialization have also contributed to the spread of HIV in the form of cultism in senior high schools and colleges. Initiation into these kind of societies may include group sex or orgies in dark rooms where one may not know whom he is having unprotected sex with. Other risky practices may also include cutting oneself with a knife and mixing blood with water for the members to drink

With an increase in socialization events and socialization centres, social activities such as clubbing or visiting of brothels and night clubs, and going to the movies have become very common for young people today. Opportunities are provided for young people to experiment with alcohol and drugs which has been identified as social lubricants and as such influences them to engage in risky behaviours such as unprotected

sex which increases one's risk of getting infected with HIV (Asiimwe, Kibombo, & Neema, 2003)

Education

Although HIV/AIDS has been characterized as a disease of poverty and lack of education, some studies have shown that a greater number of infections occur among the more educated as they are likely to engage in risky behaviours as a result of greater mobility and higher socioeconomic status (Hargreaves & Hargreaves, 2002). However, other studies have shown that the association between infection rate and education has changed over time since some countries have reported a decline on prevalence among the most educated and the opposite among the less educated as other studies have also shown that people who had not completed high school were more likely to be infected with HIV compared to those who have completed High School (Pettifor et al., 2008). This can be attributed to the faster adoption of protective behaviours by the more educated which also includes greater level of condom use (De Walque, Dow, Medlin, & Nathan, 2012; Glynn et al., 2011).

According to a research among young people in rural South Africa, it was found out that school attendance maybe associated with lower risk sexual behaviours and among young men, lower prevalence. In other words, attendance may influence the structure of sexual networks and reduce HIV risk therefore maximizing school attendance may influence the attendance among this age group (Hargreaves et al., 2008).

KNOWLEDGE AND SEXUAL BEHAVIOUR

Some sources of information on HIV/AIDS and sexuality also contribute to how the knowledge acquired is utilized. Findings from a study on young adolescents in sub-Saharan Africa indicated that though there is an increased awareness on HIV, they had little in-depth knowledge about pregnancy and HIV prevention. They also indicated the mass media as one of their main source of information (Bankole, Biddlecom, Guiella, Singh, & Zulu, 2007).

Knowledge of HIV implies the ability to recall facts pertaining to its causes, transmission and prevention, it is expected that when one has knowledge, it will lead to behaviour change. However that is usually not the case as research has shown that young people typically score high on the knowledge of HIV but are at risk because they change partners regularly than any other age group (Coulter, 2007).

A researcher reported a 100% awareness rate among respondents in his study and among those who were aware of the consequences; however, no serious preventive efforts are taken towards avoiding the infection. Therefore higher knowledge is not a constraint for young people to engage in risky sexual behaviours such as non-use of condoms and having more than one sexual partners (Oluwagbemiga, 2008)).

A study in Nepal assessing knowledge, attitude and behaviour on STI/HIV/AIDS among young people using both quantitative and qualitative approaches for systematic review, results indicated that the overall knowledge regarding STI and HIV is high but varied according to gender, education and residence. Knowledge about condom was high

but practice and consistent use is lower thus making the overall sex behaviour among young people is unsafe (Upreti, Regmi, Pant, & Simkhada, 2009). Results from a descriptive research by Odu and Akanle among youth in South West Nigeria also revealed that most respondents who were sexually active had high knowledge of HIV/AIDS (Odu & Akanle, 2008)

Results from a 2003 study in Ghana which sought to explore whether a woman's knowledge of HIV is associated with religious activities and religious affiliation and whether they influenced preventive/protective attitudes, showed that religious affiliation has significant effect on knowledge of AIDS but not associated with changes in specific protective behaviour particularly condom use (Takyi, 2003).

Knowing someone who has died of AIDS has also been associated with risk perception and sexual debut (Anderson, Beutel, & Maughan-Brown, 2007), as it helps informs ones decision in terms of engaging in sexual behaviours which when defined to include activities such as petting, anal and vaginal intercourse is too vague and does not give proper insight into sexual behaviour. Therefore has been limited to the number of partners a person has had sexual intercourse with within the last 12 months. However, despite the above average knowledge of HIV/AIDS and its consequences, some people still engage in risky sexual behaviours (Bamidele, Abodunrin, & Adebimpe, 2011; Wong, Chin, Low, & Jaafar, 2008) . High level of knowledge has also been linked predicting the likelihood of non-use of condoms.

Knowledge of HIV can also be linked to personal risk as some studies also revealed that majority of youth are aware of its existence but are also likely to underestimate their personal risk (Omorepie, 2003). This is because they believe in their own invulnerability to the disease. This is further discussed under the sub-topic of risk perception of HIV/AIDS.

RISK PERCEPTION AND SEXUAL BEHAVIOUR

Perceived risk, is defined as a subjective assessment of the probability of an event and its seriousness (Michaelson, 2003), and comprises of perceived seriousness and perceived severity, both constructs from the health belief model. According to Beck, 2006, risk presents the anticipation of a catastrophe and HIV/AIDS is a typical example of a modern day catastrophe. Understanding what risk actually means is could provide the necessary data for public health interventions to create conditions that will help reduce the risk (Rhodes, 1997).

Risk has been found to be negatively or positively associated with adolescents' sexual behaviours. Some studies have found that risk perception increases with age and that is expected considering that young adolescents may not have acquired the cognitive maturity that enables them to anticipate long term consequences (Patino et al., 2005). This could also be attributed to optimism bias which can be defined as a positive illusion of invulnerability on the part of the adolescent. When people believe they are not at risk or have low perception (optimism bias), they engage in risky behaviours thus treating HIV infection as a distant problem (Adefuye, Abiona, Balogun, & Lukobo-Durrell,

2009). They may appear to control fear by denying the threat because acknowledging one's own risk means putting one's self in a stigmatized group and may avoid this by downplaying their personal risk leading to low risk perception (Macintyre, 2004).

Osho and Olayinka (1997) revealed that there is a significant positive relationship between risk perception of HIV and their sexual behaviour because whatever perception they have about the disease will influence how they behave sexually (Olayinka & Osho, 1997). That is, the way they interpret about HIV-related issues is responsible for the behaviours. Studies in some sub-Saharan African countries show that young people often perceive their risk of HIV to be low even if they engage in high risk behaviour and are knowledgeable about HIV (Barden-O'Fallon et al., 2004). However, others have also found high levels of perceived risk to be associated with low levels of sexual risk taking behaviours (Anderson et al., 2007). In another study finding the relationship between HIV risk perception and condom use, 27% of women and 80% of men who considered themselves to have no risk or small risk of contracting HIV were actually at moderate or high risk (Prata, Morris, Mazive, Vahidnia, & Stehr, 2006). Others also found significant positive association between perceived risk and risky sexual behaviours among males but not females even though most female adolescents felt at great risk of infection (Kibombo et al., 2007).

A study in Mozambique using the country's 2001 Adolescent and Young Adult Reproductive Health and Behaviour Risk survey compared young adults' assessment of their HIV risk with assessment based on their current and past sexual behaviour. 27% of

women and 80% of men who considered themselves to have no risk or small risk of contracting the disease when they were actually at moderate or high risk (N. Prata, Morris, Mazive, Vahidnia, & Stehr, 2006).

Since knowledge and perceptions about HIV/AIDS have been found to influence people's sexual behaviours, the emphasis on the management and reduction of the rate of infection is laid on education which is a social vaccination against the disease since there is no cure for HIV/AIDS (Anarfi and Appiah, 2004).

SELF EFFICACY OF SAFE SEX PRACTICE

As already mentioned, young adulthood is a time marked by experimentation which includes engaging in risky sexual behaviours. Self-efficacy has been defined as the individual's believe in their capability of carrying out a goal directed behaviours within an activity context and in this case is how confident one feels about tackling certain tasks and challenges (Chilisa et al., 2012). Perceived self-efficacy has been suggested to be a strong predictor of carrying out a recommended deed (Bandura, 1977). In general, it has been reported that people who have confidence in their ability to carry out these tasks tend to view it as a meaningful challenge whereas others just find it discouraging. Bandura recognized the importance of applying the concept of self-efficacy to the control of sexuality among young people and hypothesized that just providing people with information on the dangers of HIV will not work in the face of sexual decision making. He explained that the weaker the perceived self-efficacy, the more likely it is for one to participate in risky sexual behaviour.

It is therefore important that one's belief in the ability to use condoms effectively and to practice safe sex may be an important factor that has to be taken into account in designing HIV interventions (Lescano, Brown, Miller, & Puster, 2007). From literature, it was gathered that not much has been documented on self-efficacy's role on other safe sex practice besides condom use. The current research goes beyond condom efficacy to include other safe sex practices such as abstinence and staying with one sexual partner.

Self-efficacy has also been identified among other variables as an important predictor of intended condom use and actual condom use. Researchers such as Outlaw et al, 2010 also came up with similar findings that young people who exhibit higher self-efficacy are more likely to utilize condoms (Outlaw et al., 2010). The degree of self-efficacy in avoiding risky sexual behaviours has a significant predictive value on actual sexual behaviour among Taiwanese adolescents aged 16 to 18 years; which means the higher the self-efficacy, the less likely it is that they engage in actual risky sexual behaviour (Li, Lee, Thammawijaya, Jiraphongsa, & Rotheram-Borus, 2009). A meta-analysis involving 134 people estimating self-efficacy and response efficacy of condom uses, it was found out that self-efficacy is more predictive than response efficacy for reduction of risk intended; where risk outcomes included condom use intention, self-reported condom use and number of sexual partners (Casey, Timmermann, Allen, Krahn, & Turkiewicz, 2009),

In a sample of 399 secondary school students, including students with and without sexual experience, it was found that intended condom use was not sufficient to ensure

that adolescents plan and prepare for condom use. Many adolescents fail to use condoms, even when they are motivated to do so. Failure to use condoms was attributed to the fact that they do not prepare themselves for potential sexual encounters. It was found that having the goal of condom use did not necessarily result in preparatory behavior, such as condom buying and condom carrying. (van Empelen & Kok, 2008).

A cross-sectional correlational study among young people aged 18 to 25 years in a University in Soeul, Korea who completed a background and sex behaviour questionnaire conceptualized out of the theory of planned behaviour. Though the components of the theory significantly predicted condom use for men, condom attitude and condom efficacy significantly predicted condom use among the women (Cha et al., 2008). A similar study among African-American and White college students, investigating potential differences in terms of current and future sexual behaviours and safer sex behaviours using a convenience sample of 156 college students from three public universities, of those who were sexually active, more African American reported that they used condoms frequently and also indicated that they would use it regularly in the future (Davis, Sloan, MacMaster, & Kilbourne, 2007).

However, inconsistent condom use was more likely in relationships in which the male partner has ever used threat or force to engage in sex or the use of alcohol (Hoffman, O'Sullivan, Harrison, Dolezal, & Monroe-Wise, 2006). In a study among South African sexually active youth, men and women having talked to a partner about using condoms was the most significant predictor of consistent condom use and those

who reported being in their most recent relationship for more than one year and reported having had sex one or more times in the last month were more likely to report inconsistent condom use (Moyo, Levandowski, MacPhail, Rees, & Pettifor, 2008).

THEORETICAL FRAMEWORK

This study applied the AIDS Risk Reduction Model (ARRM) (Catania, et al., 1990; Fisher & Fisher, 1992). The ARRM is a three staged framework for explaining and predicting the behaviour change efforts of individuals in relationship to the sexual transmission of HIV/AIDS. It is specific to safer sex behaviours. Catania et al. (1990) posit that change, is a process, and that individuals move from one step to the next as a result of a given stimulus. They hypothesised that for change to take place, one has to first recognize and label ones behaviours as high risk. That is, acknowledge sexual behaviour to be associated with HIV transmission; believe that one is personally susceptible to contracting HIV and believe that having AIDS is undesirable. The second stage is making a commitment to changing high risk behaviours, and seeking and enacting solutions directed at reducing high risk activities. Catania et. al., (1990) claimed that this stage is influenced by the cost and benefits changed behaviour: enjoyment, response efficacy and self-efficacy. These include knowledge of the health utility and enjoy-ability of a sexual practice, as well as social factors (group norms and social support), influence an individual's cost and benefit and self-efficacy beliefs. The third stage is taking action which involves three phases: information seeking; obtaining remedies; and enacting solutions. This phase is influenced by the social networks and

problem-solving choices and involves prior experiences with problems and solutions; level of self-esteem; resource requirements of acquiring help; ability to communicate verbally with sexual partner; sexual partner's beliefs and behaviours. In addition to the above stages of change, Catania et al., (1990) identified other internal and external factors that may motivate the individual's progress across the stages. For instance, aversive emotional states (e.g., high levels of stress associated with HIV/AIDS may facilitate or hinder the labelling of one's behaviours. External motivators, such as public education campaigns, an image of a person dying from AIDS, or informal support groups, could also cause people to examine and potentially change their sexual behaviours. The theorists suggest that interventions are more likely to be successful if the target the audience are at the relevant stage.

Catania et al., (1994) reported that labelling one's sexual behaviour as risky was associated with having a history of sexually transmitted diseases, particularly genital herpes, and fewer stereotypic health beliefs. They reported that for those with primary partners, high levels of condom use were associated with greater condom commitment, greater enjoyment, and health protective sexual communication. Again, greater condom commitment was associated with increased supportive condom norms, greater enjoyment, and having genital herpes among this group of people. Whereas for people with secondary sexual partners, high levels of condom use were related to greater condom commitment, supportive norms, greater enjoyment, and health protective sexual communication; and greater condom commitment correlated with greater enjoyment, supportive condom norms and increase labelling.

A number of researchers have used this model to understand behaviour change associated with HIV/AIDS among different populations and found support model. This includes Morisky, Ang, Coly, & Tiglao, (2004), Conner, Stein, & Longshore, (2004), Parpan-Blaser, Nideröst, Gredig, & Deringer, (2004) and Odutolu, (2005)). They reported that AIDS-risk reduction is a function of people's information about AIDS transmission and prevention, their motivation to reduce AIDS risk and their behavioural skills for performing the specific acts involved in risk reduction

Conner, Stein and Longshore (2004) used theoretical frameworks of the AIDS risk reduction model (ARRM) in a cognitively-based AIDS prevention programs and concluded that the AIDS risk-reduction models is equally applicable among high- and low-risk seekers. However, multiple group models that contrasts high- risk and low-risk seekers on relationships among the constructs yielded a significant decrease in fit, suggesting that key relationships among the constructs vary for the two groups. Conner et al. (2004) reported that safe sex intentions predicted safer behaviour in the low-risk group and self-efficacy predicted condom use in the high-risk group. Therefore, different ARRM constructs may be more salient and relevant for high versus low-risk seekers. Although motivation for change may differ between two groups, the overall explanatory power of model is similar for both groups.

Parpan-Blaser, Niderost, Gredig, Deringer (2004) tested the model empirically, using a sample of heterosexual men between the ages of 25 and 65 in Switzerland and found a positive significant correlation between enactment and commitment but found no

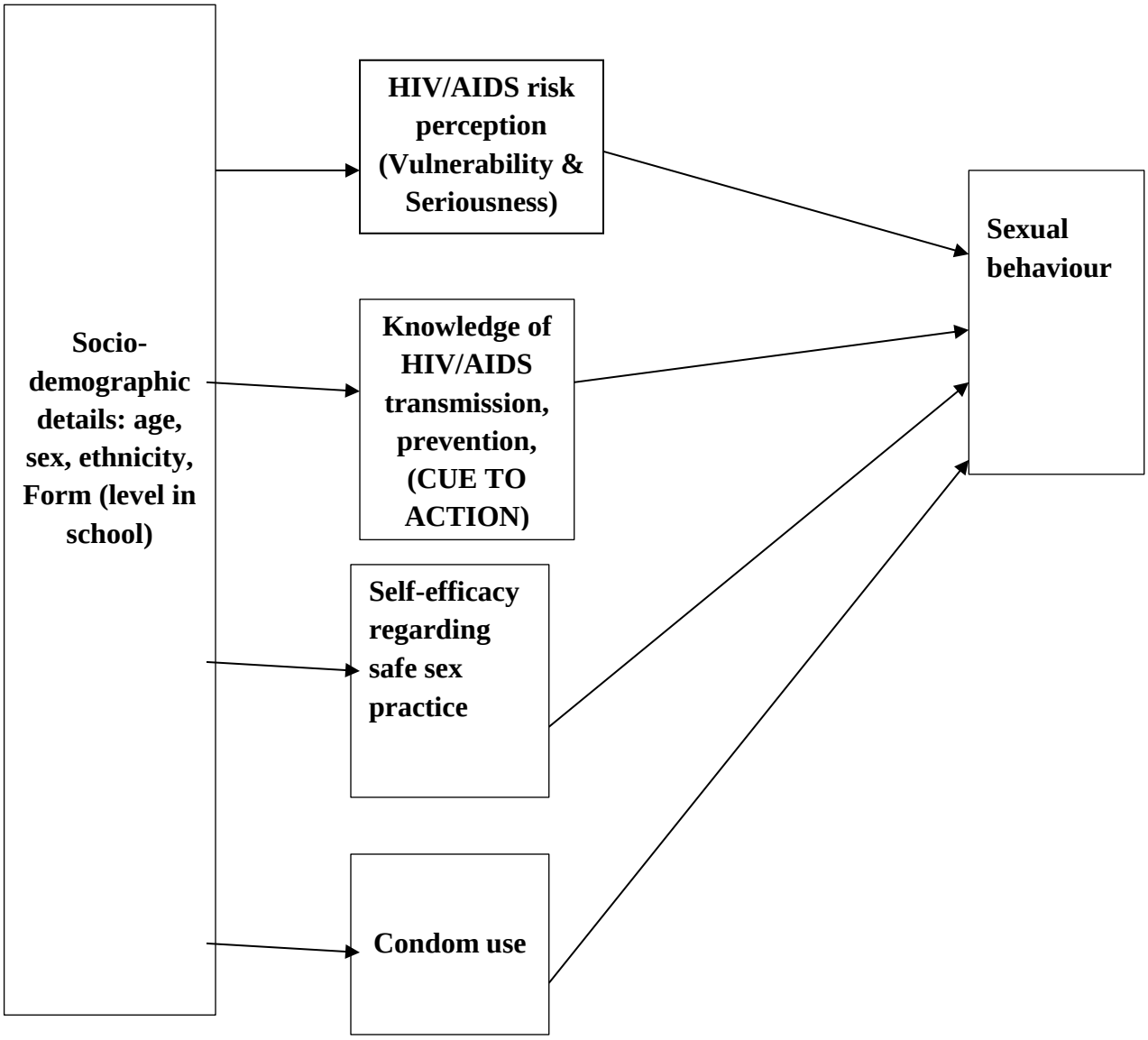
significant correlation between labelling and commitment and sexual behaviour. Parpan et. al., (2004) again reported a significant relationship between labelling, self-efficacy and perceived readiness of the partner to use condoms.

It is important to note that as a psychological concept AIDS Risk Reduction Model (Cantania et al., 1990) has the limitation of focusing on the individual with no consideration of socio-cultural norm. For instance Schumann, et. al., (1994) examined the applicability of the model to a selected population in Uganda and concluded that the AIDS Risk Reduction Model was applicable to the urban Ugandan population but in the same country McGrath, et. al., (1993) found that many women felt at risk for HIV, not due to their own behaviour but because of the behaviours of their sexual partners. The women asserted that safer sex behaviour was outside of their control. It is therefore important that the ARRM take into greater consideration the socio-cultural issues that may influence and limit an individual's behaviour choices and ability to take action.

2.9. CONCEPTUAL FRAMEWORK

Conceptual framework for the current study is coined out of the AIDS Risk Reduction Model. In the top left corner is the variable for socio-demographic details of the respondents which includes age, gender, ethnicity, religious affiliation, level of education (SHS 1,2,3 &4) among others. The socio-demographic details is associated with all the variables used in the study; that is risk perception, knowledge, self-efficacy and condom use all of which is also associated with the outcome variable, sexual behaviour.

Figure 1: AIDS RISK REDUCTION MODEL



CHAPTER THREE

3.0 METHODS

This chapter covers the methodological approach to the study. The section also covers the measurements of the variables in the research, the sampling design, data collection procedures, methods of data collection as well as ethical issues.

3.1 STUDY DESIGN

The study is a quantitative approach and cross-sectional survey that seeks to establish the relationship between HIV/AIDS risk perception and sexual behaviours among senior high school students in the Tema Metropolis.

The dependent variable of the research is sexual behaviour, defined as the number of partners that the respondent has ever had sexual intercourse with. The independent variables are demographics (sex, age, ethnicity, religious affiliation, level of education), self-efficacy, knowledge (cue to action) and risk perception.

3.2 STUDY LOCATION:

Tema is located in the greater Accra region about 25km east of Accra. The Greenwich Meridian (00 Longitude) passes through the city of Tema and the metropolis shares common boundaries with the Accra Metropolis on the west, and the Dangme West District on the northern and eastern borders. It is bordered to the south by the Gulf of Guinea. Until 1952, when the Government of Ghana decided to develop a deep seaport there, Tema was a small fishing village called Torman. Tema became an Autonomous Council in 1974 and was elevated to the status of a Metropolitan Assembly in December,

1990. It is the eleventh most populous settlement in Ghana and has the largest seaport in Ghana. Tema grew into the industrial hub of Ghana and one of the best-planned cities in West Africa, with a carefully constructed road layout featuring landscaping and street lights. It is grouped into twenty six communities with a high concentration of skilled labour. It boasts of modern recreational centers and other social amenities rare. It is has about six public Senior High Schools (Tema Senior High, Tema Methodist, Tema Presbyterian High, Our Lady of Mercy Senior High, Tema Technical Senior High and Manhean Senior High Schools) and six private schools (Deks Senior High, Datus Senior High, Corpus Christi Senior High, SOS Heimann Gmeiner College, Tema International School).

3.3 STUDY POPULATION:

The study population was Senior high school students in some public Second Cycle Institutions in the Tema Metropolis

3.4 SAMPLE SIZE DETERMINATION:

Minimum sample required is 118 using the formula

$$N = \frac{Z^2 * P * (1 - P)}{d^2}$$

95% confidence level (z=1.96), 5% as the margin of error and a 96% prevalence of high risk sexual behaviour among the age group. A design effect of 2.0 was included.

0.147/0.0025*2.0 =118. But overall sample used was 220.

3.6 SAMPLING TECHNIQUE:

Proportionate sampling by the relative populations of the public Senior High schools and class levels was used. The sample selection was carried out in two stages. A class was selected randomly from each level in each school. Secondly, a random selection of respondents was chosen from class registers using random number assignment generated with Microsoft excel. This was repeated to get the right number from each level within each school. Two out of five public schools in Tema was used.

3.7 MEASURE

The questionnaire, which consisted of forty seven questions including demographic information, was adapted from the Knowledge Attitudes, Practices and Behaviours Survey (World Health Organization, 1990). This has been adapted and used on similar researches in diverse societies such as China (Maimaiti, Shamsuddin, Abdurahim, Tohti, & Memet, 2010). The questionnaire was modified since the original survey was done in a setting totally different from the Ghanaian setting. The questionnaire was in five sections which are the knowledge of HIV/AIDS, Risk perception, self- efficacy, sexual behavior and socio-demographic details. Reliability analysis was run on SPSS version 16 and shows that the Cronbach's alpha was for knowledge, for risk perception, for self-efficacy and for sexual behaviours. For knowledge, each right response for the eight questions was given a score of 1 while the wrong response was scored 0. Total knowledge scores ranged between the minimum score of 2 and a maximum score of 14. Risk perception was scored on a 3 point likert scale; no chance, small chance and high chance whereas follow-up questions were scored on a 5 point likert scale ranging from strongly disagree 1

to strongly agree 5. Self-efficacy was scored based on four questions also on a likert scale; not confident was given a score of 1, somewhat confident was given a score of 3, very confident was given a score of 3 and "don't know" given a score of 0. The minimum score given to the set of self-efficacy questions was 2 and the maximum was 12. Sexual behaviour was based on six questions with a minimum score of 1 indicating whether the respondent has ever had sex to the maximum score of 8. Condom behaviour was based on four questions with answers either "Yes" or "No", where the answer yes is given a score of 1 and No a score of 0.

3.9 DATA COLLECTION:

This took place at the schools. The researcher distributed the questionnaires to the students as they sat at their desks. The students completed the questionnaires on the own; and without discussion with their mates. An average time of twenty minutes was used to complete the questionnaires. The researcher was available to answer any question from the students. In all, the response rate was over 90%.

3.9 DATA PROCESSING AND ANALYSIS:

The data collected was processed using the software Statistical Package for Social Sciences (version 16.0). The data was cleaned and coded using SPSS version 16. Univariate analysis was used to determine the Correlations between perceived of risk of HIV/AIDS other variables sexual behaviours.

3.1.0 QUALITY CONTROL

The reliability of the tool was ascertained. The participants completed the questionnaires independently. The data was checked to determine the distributions, and for outliers

before the analyses were conducted. There were no outliers, and the distributions were not skewed and so parametric tests were used to test the relationships between the variables of interests.

3.1.1 ETHICAL CONSIDERATION:

Letters of approval was sought from School of Public Health and Ghana Health Service Ethical Review Boards. Also, letters were sent to the heads of the schools used for the research. The objectives and details of the study was clearly explained to the participants as well as benefits of the study after a letter of consent them and letter of assent were given to parents/legal guardians whose children/wards were below the age of 18years. Participants whose parents'/guardians did not give consent when child gives consent were excluded. Participants whose parents'/guardians gave consent for their child but their children refused to participate in the study were also be excluded. This is to say that both parties had to agree to take part in the study before the participants are enrolled in the study. Their right to withdraw from the study at any point in the study without any coercion was also explained as their participation in the study is voluntary. The students' identity remained anonymous to ensure confidentiality as these identities will not be disclosed during and after the study. Data collected was password protected, stored on the computer and backed on an external hard drive. Hard copies were locked in file cabinets with access limited to only the principal investigator and supervisors of the study. The research was self-sponsored and there was be no form of compensations for participants of the research. However, it needs to be clearly spelt out that the principal investigator had no conflict of interest in this study

CHAPTER FOUR

4.0 RESULTS

This chapter presents the data analysis and results. The report is in three parts. The first part is about the demographic details of the respondents. The second part deals with the frequencies regarding the responses of the variables of interest. The third part is about the relationship between certain the variables.

4.1 Demographic details of respondents

The sample was made up of 220 senior high school students in Tema. Females made up 40% of the total population whereas males made up about 60%. The percentage of respondents aged 15 and below was (11.4%), those between the ages of 16 to 18 years made up (57.3%) and those 19 and above was (28.6%).

In terms of religion, Christians dominated; constituting (81.4%) of the sample, Muslims forming about (6.8%) and other religions such as traditional African religion and Buddhist forming (1.8%). A large proportion of the students were Akans (42.8%) and small proportion (10.5%) of the students making up ethnic groups mostly from Northern Ghana.

Students in their 2nd year formed the majority of the population (34.5%), followed by 4th year (23.6%) then the first year students (23.2%) and the least, 3rd year (16.4%).

Table 1: Socio-demographic background of Respondents

Characteristic	Female	Male	Total
Age (years)			
Mean ± Standard deviation	17.4 ± 1.5	17.6 ± 2.0	17.5 ± 1.8
15 and below	5 (5.9)	19(14.5)	25(11.4)
16-18	61 (71.8)	64(48.9)	126(57.3)
19 and over	18 (21.2)	45(34.4)	63(28.6)
Religion			
None	8(9.4)	10(7.6)	19(8.6)
Christian	74(87.1)	104(79.4)	179(81.4)
Muslim	3(3.5)	12(9.2)	15(6.8)
Other	0(0)	4(3.1)	4(1.8)
Ethnicity			
Akan	26(30.6)	43(32.8)	69(31.4)
Ewe	14(16.5)	18(13.7)	33(15.0)
Fante	8(9.4)	17(13.0)	25(11.4)
Ga/Dangbe	18(9.4)	27(20.6)	45(20.5)
Other	7(8.2)	16(12.2)	23(10.5)
Level in school			
Form 1	14(16.5)	36(27.5)	51(23.2)
Form 2	36(42.4)	39(29.8)	76(34.5)
Form 3	20(23.5)	16(12.2)	36(16.4)
Form 4	14(16.5)	38(29.0)	52(23.6)
Total	85 (100.0)	131 (100.0)	220 (100.0)

Table 2: Reliability analysis

Variable	**N**	**Min**	**Max**	**Mean**	**SD**	**cronbach's alpha**	**No of items**
Self-efficacy	220	2	12	6.33	3.116	0.711	4
Knowledge level	218	2	14	10.81	2.936	0.601	8
Risk Perception	217	11	23	21.04	3.014	0.763	6
Sexual Behaviour	89	1	8	4.74	1.788	0.641	6
Condom use	86	0	4	1.75	1.588	0.719	4

4.2 Reliability analysis

This table shows the mean, standard deviation, minimum and maximum scores, and the Cronbach's alpha for each of the subscales used for the study. The Cronbach's alpha for two of the subscales was below the normal value of 0.7; meaning the results should be interpreted cautiously. The means in the table show that the knowledge level of HIV/AIDS is high among the students, with a generally low perception of risk, and an average self-efficacy. Sexual behaviour(s) among students is on the high side whereas their condom use is lower than average.

4.3. Descriptive Reports

4.3.1 Sources of information on HIV/AIDS

The leading source of information on HIV/AIDS among the respondents is through Television and radio (82.3%) followed by information received from school/teachers, then health personnel. Other sources of information include books and magazines and the internet. Interestingly, information from family members was the least of the sources as more respondents identified friends as a source of information. About 40% of the respondents were sexually active, about 72% had high level of knowledge of HIV. 28.2% said they personally knew someone who had HIV or had died of AIDS.

4.3.2. Risk Perception

High risk behaviour groups were also identified in the study as respondents were asked which people they think stood a chance of getting HIV. This was also obtained from a

multiple response question. About 85% of the respondents thought people who engage in risky behaviours such as having unprotected sex and having multiple sexual partners were most likely to get HIV, followed by commercial sex workers and homosexuals.

In terms of perception, respondents perceived the prevalence of HIV in the society to be low. 90% of respondents believed there was no chance that they had HIV. About 88% disagreed with the statements that they were reasonably safe and at less risk of getting infected with HIV even if they had unprotected sex. Only 13.6% admitted that their behaviour or partner's behaviour puts them at risk of getting infected with HIV. In general, 79% of respondents had high risk perception of getting HIV.

4.3.3 Sexual Behaviour

About 40% of the respondents were sexually active with about 90% of the sexually active respondents admitting that they have had sex in the last 12 months. The minimum age of sexual debut is 12years and the maximum 20years with the mean age being 15.8 years. 40% of those who had had sex in the past 12 months have had sex with two or more partners within that period. Interestingly, 63% of the sexually active respondents admitted having had sex with someone other than a steady boyfriend or girlfriend. About 56% of the sexually active respondents have ever used condoms during sexual intercourse and almost 50% admitting using condoms at last sexual intercourse. Response on questions on carrying condoms indicated that only 19% out of the respondents actually do carry condoms to social gatherings or when with boyfriend or girlfriend.

However the figure increased to 34% when asked if they would like to carry condoms to social gatherings or when with boyfriend/girlfriend.

4.4. Level of self-efficacy

The first objective was to identify the general level of self-efficacy pertaining to safe sex practice such as abstinence, staying with one sexual partner, refusing to have sex with anyone if one does not want to and insisting on condom use even if partner does not want to use one. Based on the mean score of 6.33 and standard deviation of 3.190, it can be observed that respondents have an average level of self-efficacy. However data collected for the study shows that self-efficacy among male is higher (59.5%) than their female counterparts.

Correlation is computed to find out the relationships between risk perception of HIV/AIDS and sexual behaviour among the students.

Table 3: relationship between knowledge and risk perception

Variable	Frequency	Pearson correlation	p-value
Knowledge level	218	0.288**	0.000
Risk perception			

**. Correlation is significant at the 0.01 level (2-tailed).

4.5. Relationship between knowledge of HIV/AIDS and Risk perception

The table above shows a relationship between respondents' level of knowledge of HIV/AIDS and their risk perception of HIV/AIDS using Pearson Correlation Coefficient.

Findings show that there is a significantly positive correlation between knowledge of HIV/AIDS and Risk perception (R=.288, p<.001). This indicates that respondents with high knowledge of HIV are able to appreciate the risks associated with the disease rather than downplaying it. That is, the higher the knowledge, the higher the risk perception of HIV/AIDS.

Table 4: Relationship between risk perception and self-efficacy

Variable	Frequency	Pearson correlation	p-value
Risk Perception	213	0.424**	0.000
Self-Efficacy			

**. Correlation is significant at the 0.01 level (2-tailed).

4.6. Relationship between risk perception and self-efficacy

The table above shows a relationship between respondents' level of risk perception of HIV/AIDS and their self-efficacy using Pearson Correlation. Results indicate that there is a positive relationship between the two variables (R=-.424, p<.001). This indicates that higher risk perception of HIV/AIDS among the respondents associated with higher beliefs in their ability to practice safer sex (to abstain from sexual intercourse until marriage, stay with one sexual partner, refuse to have sex with anyone if he/she does not want to and to insist on condom use during intercourse whether the partner wants to use it or not).

Table 5: Objective Four: relationship between Self-efficacy and Sexual Behaviour

Variable	Frequency	Pearson correlation	p-value
Self-efficacy	86	0.251*	0.021
Sexual Behaviour			

**. Correlation is significant at the 0.05 level (2-tailed).

4.7. Relationship between self-efficacy and Sexual Behaviour

The table above shows the relationship between self-efficacy and sexual behaviour among the respondents. Findings show that there is a positive relationship (R=-.251*, p<.05). The positive correlation indicates that higher self-efficacy regarding the practice of safe sex results in higher or risky sexual behaviours which include the number of sexual partners had in a year, whether respondent has had sex with anyone other than steady partner and condom use.

4.8. Other findings from the study

Table 6: Self-efficacy and condom use

Variable	Frequency	Pearson correlation	p-value
Self-efficacy	86	0.184	0.021
Condom use			

Self-efficacy and condom use

Condom use was based on four questions; “ever used condoms for sexual intercourse”, used condoms at last sex, “Do you carry condoms with you when you go to social gatherings or when with your boyfriend/girlfriend?” and would you like to carry condoms with you when you go to social gatherings or when with your boyfriend/girlfriend?”

Results indicate a poor relationship between respondents’ self-efficacy regarding safe sex practice and their actual condom use (R=.184).

4.9. Summary of the findings of the study is outlined below:

- Apart from the above average level of knowledge of HIV/AIDS among respondents, findings reveal that not only do they also have a high risk perception but they continue to engage in high risk behaviour
- In terms of the level of self-efficacy regarding the practice of safe sex, male respondents generally have a higher self-efficacy unlike their female counterparts.
- There is also a positive relationship between knowledge of HIV/AIDS and risk perception of HIV/AIDS among the respondents. In other words, the higher the knowledge one has, the more one is able to appreciate the risks associated with the disease either subjectively or objectively.
- The third finding was that a positive relationship exists between risk perception of HIV/AIDS and self-efficacy. This indicates that high knowledge of HIV/AIDS among the respondents has an influence on respondents’ confidence in their

ability to abstain from sexual intercourse until marriage, stay with one sexual partner, refuse to have sex with anyone if he/she does not want to and to insist on condom use during intercourse whether the partner wants to use it or not.

- The fourth finding was that there is a positive relationship between self-efficacy and reported sexual behaviour among the respondents. This is surprising because as already mentioned the ability to carry out a task depends on the confidence in one's ability to do it. But findings in this study suggest otherwise; because obviously, their level of self-efficacy doesn't necessarily translate into the appropriate behaviour.
- The fifth finding of the study shows a poor relationship between respondents' self-efficacy and reported condom behaviour.

CHAPTER FIVE

5.0. DISCUSSION

The current research seeks to find if there exists a relationship between risk perception of HIV and sexual behaviours among Senior High School students in the Tema Metropolis. The study revealed that there is almost a universal awareness of HIV among young people in Ghana. Knowledge about the disease has increased over the years and this can be attributed to awareness campaigns and educations through the media which has been media; the television and radio in particular since about 82% of respondents received information through these sources. With the internet being the "in-thing" now, about 60% of respondents also mentioned it as a source of information of HIV. Four objectives regarding level of self-efficacy, relationship between knowledge and risk perception, the relationship between knowledge and self-efficacy and the relationship between self-efficacy and actual/reported sexual behaviour. The results of these findings are thoroughly explored and interpreted in this chapter.

5.1. Source of information of HIV/AIDS

Like most researches in this area, the leading source of information for young people is the media, which is the television and radio. The media has been known to be one of the fast route of disseminating information, and since the average Senior High School student in Ghana spends a lot of time listening to the radio, watching TV or browsing on the internet, it is no wonder they indicated that it is their main source of information. Core subjects such as social studies and Religious and Moral Education also

provide some form of information on HIV/AIDS; it is no wonder that respondents chose the school/teachers as a source of information. Other sources of information include billboards and posters, Hospital/health workers and Church/religious leaders.

Similar to the findings of Blum and Mmari, 2004, young people prefer getting information on matters relating to sex and HIV/AIDS from their peers than their family even though research has shown that communication about HIV/AIDS between the adolescents and parents increased the odds of using a condom at last sexual intercourse (Adu-Mireku, 2006). Sexual norms of peers can influence youth's individual attitudes and behaviours. In the typical Ghanaian society, any discussion on "sex" is frowned upon and thus not openly discussed. Questions on sex meant one was planning to have sex, so parents unknowingly condemn those who are bold enough to ask. Perhaps, the problem is that, the typical Ghanaian parent has not fully grasped the fact that physical changes in their children goes hand in hand with emotional turbulence especially among those in their teens; hormones are raging and new desires abounding. It takes a while before their cognitive and emotional maturity catches up with their physical maturity, therefore during this period of "stress and storm" as coined Stanley Hall, 1964, young people often need the information and the guidance to make healthy decision. But that is not the case as young people as a vulnerable group are often left out in the discussion of sexual matters and in their curiosity, they resort to discussions and obtaining distorted information from their peers who may provide them with information based on what they think or from their experiences. It can also be said that, the type of information provided by peers is what influences young people's sexual behaviours.

5.2. Pattern of sexual behaviour

The data collected show that about 42% of the sexually active respondents have had two or more sexual partners within the past 12months and 62.7% of the same respondents admitted having had sex with someone other than a steady boyfriend or girlfriend.

The data from this study indicates that respondents' general level of knowledge regarding HIV/AIDS is above average yet their reported sexual behaviour is on the high side. This is contrary to the findings of Adewole & Lawoyin, 2004 whose research reveals that those who had high knowledge were less likely to have multiple partners. It needs to be noted however that females are not open about their sexual encounters because society condemns it, whereas males are likely to exaggerate their sexual conquests because that is how society defines masculinity and are likely to be applauded for their risky behaviours. However, because of power inequalities among males and females and despite the cautious nature of women, females may also engage in risky behaviours for either socio-economic reasons or because they do not want to lose their partners/lovers, although their such behaviours goes against their judgment. Their submissiveness towards the opposite sex also gives them less power to negotiate safe sex.

5.8. Education and sexual behaviour

Contrary to the findings of other researches that the higher the educational level, the less likely it is that people engage in risky sexual behaviours, this study reveals that increased level of education is associated with the elevated likelihood of engaging in risky sexual behaviours such as having multiple sexual partners (Karim, Churchyard,

Karim, & Lawn, 2009, Karim et al., 2003, Cogneau & Grimm, 2008). Now more than ever, young people spend more years in school than before. As the world is evolving, societal norms concerning pre-marital sex is becoming less stringent and access to the use of contraceptives has increased. However the education is not so clear cut especially among young people. Despite a great awareness of the dangers of the disease and the abundance of knowledge, young people continue to engage in behaviours that place them at risk of contracting the disease (Kohler et al., 2007). This can be attributed to the incorrect or lack of assessment of risk and to their inability to appreciate the risks involved in their risky behaviour (Patino et al., 2005) even though they may think they are protected by these behaviours which rather predisposes them to being infected with HIV/AIDS. For instance some may believe abstaining from sexual intercourse until marriage means avoiding vaginal intercourse thus engaging in anal sex. The issue of staying with one sexual partner may also be misinterpreted to mean having sex with one person at a time especially in terms of dating and not necessarily mean dating and sleeping with a string of people within the same period. For example, when we talk about protection from sexually transmitted infections (including HIV/AIDS) “the use of protection” may have a different meaning to the sexually active adolescent because the use of the contraceptive pill and condom are grouped together. So an adolescent girl may pick an option, (the pill) over the use of condom, thinking the pill will also protect her against HIV/AIDS even though in reality, it only protects them against unwanted pregnancy. That was the result of a cross sectional study carried out in a Secondary School in South Dehli, India where about 41% of 251 adolescent girls were confused

about whether the contraceptive pill could protect against HIV/AIDS (McManus & Dhar, 2008).

5.4 Level of self-efficacy regarding the practice of safe sex

The current research goes beyond condom efficacy to include other safe sex practices such as abstinence, staying with one sexual partner and refusing to have sexual intercourse with anyone if one does not want to do so. Results for the first objective indicate that the general level of self-efficacy among the respondents is high however, between males and females, males have higher self-efficacy than their female counterparts. Some researches such as Kvalem & Træen, 2000 found a reverse among young women in a Norwegian study where women had higher efficacy in contraceptive use than men. However, most females in our society are not open about issues concerning their sexuality. Women are less likely than men to speak their minds in intimate relationships. Other factors such as the issue of love and sex for money also have an influence on young women's low level of self-efficacy regarding the practice of safe sex. For instance; a young woman who is in love may go against her better judgment on the insistence of condom use and abstinence, but will lack the ability to carry out the task especially when the pressure is from a desired partner to engage in unprotected sex. Another reason could be due to the increased prevalence of sex with older men in the society, whereby young women with poor socio-economic backgrounds are often motivated to engage in this activity so that their financial and other material needs would be met. In such cases, they have little power to negotiate in terms of safe sex because they will also have to give out something in order to gain something. This potentially puts

them at risk of getting infected with HIV. This may attributed to the fact that females are particularly vulnerable due to unequal power during gender relations and the lack of ability to negotiate on sexual and reproductive rights (Singh, Bankole, & Woog, 2005).

5.5. Knowledge and risk perception

The second objective was to determine the relationship between knowledge and risk perception. Findings of this research indicate a positive relationship between the two variables which is significant. In other words, high knowledge of HIV/AIDS influences the risk perception of the respondents. Risk assessment is the product of one's knowledge. However evidence that having a certain level of correct information does not necessarily eliminate the possibility of holding other beliefs, thus leading to young people underestimating their personal risks of getting HIV. Though findings from this study show that respondents have moderate to high risk perception, their reported sexual behaviours suggest that they seriously do not consider the risk. A 19 year old male reported at the open ended section about whether he thinks he is reasonably safe from HIV/AIDS even if he has sex without a condom that: *"I have had unprotected sex a number of times and know there is the probability that I have HIV so I am not safe; but that is not the issue, the main issue is going for the test and the doctor confirming that you are HIV positive; that alone can kill you."* Another also reported: *"Although it is a known fact, I think condoms don't protect you 100% because they can break so why not do it raw?"* Responses from several others are *"HIV is no respecter of persons and can happen to anyone at all"* and *"You never know the status of your partner."* Reasons

given by those who believed that they were reasonably safe and at less risk of getting infected with HIV even if they had unprotected sex and at less risk of getting infected compared to their age mates in the open ended section include: "*Because my and I are faithful to each other", "I am not a prostitute", "because I am not an illiterate"* and *"because I am from a religious family and God will protect me."* Responses from others only indicated that they were in denial or probably due to optimism bias: *"I have had unprotected sex a number of times but I know it is impossible for me to have HIV"*

However, in terms of personal risk based on the question "what are the chances that you have HIV?" most of the respondents indicated that they had small or no risk even though their reported sexual behaviours showed that they were at moderate to high risk. This supports the findings of a study by Smith et al, 2003 who suggested that risk assessment is based on general perception of risk rather than individual vulnerabilities. Reasons for underestimated personalized risk may be due to the inability of young people to calculate risk or may not have acquired the cognitive maturity that enables them to anticipate long term consequences (Patino et al., 2005). Emotional factors may also influence the calculation of risk especially in because of trust. Again from the data gathered in this study 63.6% believe their behaviour or partners behaviours did not put them at risk of getting infected with HIV. Reasons given at the open-ended section of the questionnaire by those who believed their actions or that of their partners did not put them at risk are: "*Because my partner is faithful to me"* and *"I really trust my partner."* Only 13.6% admitted that their behaviour or partner's behaviour puts them at risk of getting infected with HIV. Reasons include *"I have more than one sexual partner", "my*

partner is unfaithful" and *"I don't trust her just as I don't trust myself because we both have had unprotected sex."* In general, 79% of respondents had low risk perception of getting HIV, obviously because HIV is either treated as a distant problem or associated with high risk groups such as commercial sex workers (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009b).

5.6. Risk perception and self-efficacy

There was a positive relationship between the two variables among respondents. Risk assessment of HIV is the product of one's knowledge about the disease; that is once a person knows all that there is to know concerning a particular phenomenon, they have an idea and appreciate the risks associated with that phenomenon, which in this case is HIV/AIDS. The appreciation of risk associated with HIV is what informs one's level of confidence in the ability to carry out certain tasks; in this case abstinence, staying with only one partner, refusing to have sex with anyone if he/she does not want to and insisting on condom use; that will lead to appropriate behaviour change to reduce the risk of getting HIV/AIDS. As the world is developing, young people, now more than ever want legit and easily accessed information that address their questions and concerns about their sexuality in order to have the necessary skills to make sound and healthy decisions. Knowledge does not only provide people with the necessary information but may help them appreciate the risks. The interplay of these two factors may help boost up one's confidence in carrying out a desired task to achieve the desired outcome. It is typical of humans to believe in their confidence once they have the facts and appreciate

the risks that go with it, hence exaggerate their confidence level until they find themselves in certain peculiar situations. As already mentioned, respondents have moderate to high level of risk perception but tend to treat it as a distant problem (Adefuye et al., 2009b) or personally, do not believe that they are vulnerable. Taking into consideration the response of the 19 year old student, it can be said that some of them know that there is a possibility that they have HIV; they would rather like to live in a blissful denial until reality hits or have not fully grasped the consequences. *"I have had unprotected sex a number of times and know there is the probability that I have HIV so I am not safe; but that is not the issue, the main issue is going for the test and the doctor confirming that you are HIV positive; that alone can kill you."* Obviously, they have not taken into consideration the fact that intention to practice safe sex does not necessarily guarantee that one will actually practice safe sex in real life situations.

5.7. Self-efficacy and sexual behaviour

Results for the last objective indicate that there is a positive relationship between self-efficacy and sexual behaviour. This is not surprising because as already mentioned the ability to carry out a task depends on the confidence in one's ability to do it. This does not correspond with the findings of a study on Taiwanese adolescents that the higher the self-efficacy the less likely it is that respondents engage in risky sexual behaviour and vice versa (Li, Lee, Thammawijaya, Jiraphongsa, & Rotheram-Borus, 2009, Lee et al., 2009). Ideally, the confidence to carry out safe sex practice should lead

to appropriate behaviour change, in this case, prompt one to either to abstain from sex, stay with one partner, use condoms during sexual intercourse and also refuse to engage in casual sex. But in reality, the decision to have sex is mostly unplanned especially among many young people. Rather, they take that chance to engage in sexual activities when the opportunity arises especially at social functions because they may think that when the mood strikes, you go for it and therefore making the need for safer sex the last thing on their minds. Their unpreparedness for potential sexual encounters makes it less likely for them to say no or to insist on condom use especially when one does not carry one to these functions. The argument here is that young people's knowledge of HIV is quite high and this has a link to the confidence in their ability to carry out safe sex practice since they have the facts but unpreparedness for potential sexual encounters does lead them into engaging in risky sexual behaviours such as having casual sex with someone other than steady partner as findings indicate that 62.7% of sexually active respondents have had sex with someone other than steady partner. In short it can be concluded here that just because a person believes in his or her confidence regarding safe sex practice does not necessarily imply that it is applied in real life situations especially when it pertains to the issue of love. Other reasons may also include the fact they find spontaneous unprotected sex more exciting than safe sex as a respondent's reason for not using condom at last sex is that at the open-ended section of that multiple response question is that *"it is sweet."*

5.6. Self-efficacy and Condom use

As already mentioned, "self-efficacy" in the current research goes beyond condom efficacy to include other safe sex practices such as abstinence and staying with one sexual partner. From the results section, it can be observed that there is a poor relationship between self-efficacy regarding safe sex practice and the condom behaviour of respondents, that is whether they respondent and partner used condom at last sexual intercourse, whether they carry condoms to social gatherings or with boyfriend/girlfriend and whether they would like to do so in the future. This is contrary to the finding of some researchers such as Outlaw et al., 2010 who indicated that young people who exhibit higher self-efficacy are more likely to utilize condoms. Casey, Timmermann, Allen, Krahn, & Turkiewicz, 2009 also found a positive correlation for intended condom use and self-reported condom use in his study among young people (Ndola Prata, Morris, Mazive, Vahidnia, & Stehr, 2006).

Other researchers such as van Empelen & Kok, 2008 also believe otherwise as findings from their study indicated that having the goal of condom use did not necessarily result in preparatory behavior, such as condom buying and condom carrying. Several issues that impact upon the use of condoms among young people may include cost, availability. There is also the issue of power relations among men and women including socio-economic status of partners which to an extent may influence negotiation of condom use. Also social definition of masculinity and femininity plays a role in the condom behaviour of young people. In most cultural settings, women are expected to be naïve about sexual

related matters; therefore there is a reluctance to carry condoms with them or for the fear of being labeled as promiscuous. Young men believe it interferes with enjoyment Rose-Inness, 2006 found that men in South Africa did not use condoms because of their belief that flesh-to-flesh sex is equated with masculinity and necessary for male health. From the current study, about 56% indicated that they had ever used condoms and 49% admitting that they used condoms at last sex. Failure to use condoms or carry it may be due to the fact that they do not prepare themselves for potential sexual encounters as indicated by van Empelen & Kok, 2008. However, some reasons for not using condoms on a multiple response question indicate that majority of the sexually active respondents believed that condoms reduced the pleasure you get from sex while others also said they feel embarrassed buying condoms. Others also believe that the use of condoms suggests promiscuity or mistrust of one's sexual partner. Only about 7.7% believe that condoms do not protect you from HIV because they sometimes do not work properly and 8.8% admitting that they did not think about it. One reason given for non-use of condoms by a 17 year old female sexually active respondent at the open-ended section of that question is *"using condoms is equivalent to killing a child and therefore is a sin"*. Other reasons also given by sexually active female respondents include *"using condoms creates disrespect", "I was young"* and *"I was raped."*

Only 48.8% of sexually active respondents do carry condoms when attending social functions or when with partner, but the good news is that 75% indicated that they would like to carry condoms to social functions or when with partner in the future (intended condom use). In short it can be said that the poor relationship between reported self-

efficacy regarding the practice of safe sex and condom behaviour has several factors influencing it such as respondents' perception of unwritten societal roles for males and females as well as certain myths and misconceptions associated with condoms.

From the above discussions, it can therefore be concluded that young people today, especially those in school know what HIV is, are aware of its transmission and prevention methods. They are also aware of the risks associated with the acquiring the disease even though some downplay their personal vulnerabilities. Their knowledge and risk-perception informs their belief in their confidence that they can carry out safe sex practices. Theoretically, risk perception and self-efficacy should be enough to carry out desired behaviour; which is engaging in less risky behaviours. However, their intentions do not inform their actual behaviours. This is because they have not fully grasped the implications of their risky behaviours or may not have matured cognitively to enable them to anticipate long term effects their actions will have on them. Reasons attributed to this may be because either they do not plan potential sexual encounters or lack the will to control themselves under such circumstances. In certain cases, some may misunderstand and misinterpret the various concepts associated with safe sex practice such as abstinence, staying with only one partner or even the term "protection." Other situational and social factors such as "love" "trust" and socio-economic issues on which ones survival is based also come to play because the individual is a social being and other environmental factors influences both their thinking and actions regardless of what they know and the risks associated with it. This results in some young people go against their better judgment in order to gain what they think is better, which may be acceptance by

significant others or peer groups, money or maintaining relationship. Others also find engaging in spontaneous sex is more exciting than safe sex. One important concept directly linked to self-efficacy is self-esteem. For someone to be able to successfully negotiate condom use, they need to be able to know they can deal with any potential negative consequences of trying. If they are more afraid of losing their partner by bringing up the topic of condom use than worried about the dangers of unprotected sex, it may prevent them from even making an attempt. It is also important for people to be confident in their ability be assertive enough to bring up the topic of condom use and to convince their partner using their verbal skills. Similarly, people need to know they can control their sexual urges well enough to ask for condoms, even under such intoxicating influences as love. Their poor condom use due to misconceptions and myths associated with it also puts them at risk and also makes them vulnerable to getting infected with HIV.

CHAPTER SIX

6.0. CONCLUSIONS AND RECOMMENDATIONS

This chapter focuses on the general overview of the research as well as limitations and recommendations for future research in this area. The main purpose of the study was to find out if a relationship exists between the risk perceptions of HIV/AIDS and sexual behaviours among Senior High School students in the Tema Metropolis. This main objective was further broken down to find out if any relationship exists between the variables used for the study, that is knowledge of HIV/AIDS, risk perception of HIV/AIDS, self-efficacy and sexual behaviours.

6.1 CONCLUSIONS

From the above discussions, it can therefore be concluded that young people today, especially those in school know what HIV is, are aware of its transmission and prevention methods. They are also aware of the risks associated with the acquiring the disease even though some downplay their personal vulnerabilities. Their knowledge and risk-perception informs their belief in their confidence that they can carry out safe sex practices. Theoretically, risk perception and self-efficacy should be enough to carry out desired behaviour; which is engaging in less risky behaviours. However, their intentions do not inform their actual behaviours. This is because they have not fully grasped the implications of their risky behaviours or may not have matured cognitively to enable them to anticipate long term effects their actions will have on them. Reasons attributed to this may be because either they do not plan potential sexual encounters or lack the will to

control themselves under such circumstances. In certain cases, some may misunderstand and misinterpret the various concepts associated with safe sex practice although other situational and social factors such as “love” “trust” and socio-economic issues on which ones survival is based are involved Their poor condom use due to misconceptions and myths associated with it also puts them at risk and also makes them vulnerable to getting infected with HIV.

6.2. LIMITATIONS OF THE STUDY

There was the issue of social desirability bias due to the sensitivity of the issues being discussed. Issues relating to sex are personal, as such respondents answered questions especially those pertaining to their sexual behaviours in a manner that will be viewed favorably by others; that is over reporting good behaviour.

Also, access to final year students was a problem since they were writing their final exams because the school heads reluctant to allow them to participate until they had completed.

6.3 RECOMMENDATIONS AND FUTURE RESEARCH

Based on the conclusions given in the previous chapters on why young people continue to engage in their risky behaviours despite what they know which is supposed to serve as a cue to action, the risk associated with their actions and their reported level of confidence, the following recommendations are given to reduce the risky behaviours among this vulnerable group.

Findings from the study show that females have low self-efficacy regarding the practice of safe sex than their male counterparts. This was attributed to poor negotiating skills and other situational factors such as love and socio-economic problem as well as societal imbalances for both males and females. It is therefore recommended that avenues be created for young women to be more open in soliciting advice from role models in order build their self-esteem and to be empowered to take firm and active decisions regarding their sexuality. Monthly programmes should be organized in schools or at other social events for young women to equip them with the necessary skills to take charge of their sexuality.

Youth friendly centres with trained personnel of both sexes should be available at the community level; in order to bring health and counseling services at the doorstep of these young people. These counselors should also be given refresher courses not just to keep them updated on current developments in the HIV front, but to also come up with more creative ways of guiding these young people to address their sexual and reproductive needs.

From the findings, respondents' perception of risk is attributed to their high knowledge although this does not translate into their reported sexual behaviour. Reasons associated included the fact that, respondents do not necessarily consider the seriousness of their risk. Theoretically speaking, one's assessment of risk and then self-efficacy in eliminating it should be enough to effectively change ones behaviour as programmes designed to build self-efficacy which in turn helps to adopt protective behaviours. However that is not the case for the respondents in the study as the next three objectives

suggest that their high knowledge influences their risk perception, high knowledge also influences their self-efficacy. Yet these do not translate into their reported sexual behaviours. Behaviour change is not as easy as theories postulate; especially when other social and environmental factors come to play. However, I recommend behaviour modification strategies which focuses on self-control using both positive and negative reinforcements. This should be structured in such a way that individuals can learn new skills with little or no supervision, and appropriate rewards doled out so that young people become more motivated for the desired changes. These rewards should not be time-bound or fixed thus not anticipated. Gradually, the desired behaviour (engaging in less risky behaviours) will become a part of them.

From the study, it is obvious that HIV awareness is 100% among in-school young people in Tema. Their moderate to high knowledge level of HIV/AIDS and high risk perception does not enable them to grasp the implications of their reported sexual behaviour. There is therefore the need to consider additional factors such as religion, influence of family and friends, influence of place of residence which could be associated with young people's sexual decision making to develop applicable conceptual models using the social ecological model.

In view of the low level of communication between parents and young people as indicated by this survey and work done previously on the subject, parents and other family members should also be encouraged to be comfortable and more open discuss matters relating to sexual health and HIV/AIDS with their children. This can be done by breaking cultural barriers that put parents in superior position and passing judgments, and

the child being at the mercy of the parents. Since friends and peers also serve as a source of information for these young people, there is the need for properly trained peer educators with adequate information and skills in order to influence their colleagues who look up to them.

One of the reasons why people do not patronize condoms is because they feel embarrassed. Young people should be taught that buying condoms is really not a big deal. Although most people might disagree with the availability of condoms either free or subsidized at popular places where young people hang out because it encourages premarital sex, the advantage here is that, it will reduce the infection rate among this vulnerable group. This is because sexual intercourse has become the norm of young people as societal rule against premarital sex have become less stringent over the years. Myths regarding the use of condoms should also be dispelled through constant education that promotes condom use.

HIV/AIDS should be embedded into academic curriculum as children need to have protective information and equipped with skills before they become sexually active in order to reduce the infection rate. These should also include negotiation skills that will help them make sound and rational decisions regarding their sexual and reproductive health rather than focusing on the dangers and risks of engaging in sexual intercourse.

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8.0 APPENDICES

ASSENT FORM

My name is Abena Okyerewa Obuobi and I am a student from School of Public Health, University of Ghana, Legon. I am conducting a survey on HIV/AIDS risk perception and sexual behaviours among Senior High School Students in the Tema Metropolis.

This research is being conducted to better understand the health behaviours associated with individuals your **daughter/son's/ward's** age. In particular, I am interested in finding association between HIV risk perception and sexual behaviours to help implement better interventions. The information will help me in partial fulfillment for my Masters' degree. As a participant, your child will be helping health educators and public health professionals to identify factors that contribute high risk sexual that lead to an increase in the rate of HIV infection.

The survey will take an average of 20 minutes and your child/ward's participation is completely voluntary and you have the right to refuse him/her from participation or withdraw from the study at any time. No penalties or negative consequences will result from withdrawal. All responses will be treated as confidential as no names will be placed on the testing instrument; neither will it be shown to **ANYONE** without **YOUR (AND YOUR CHILD/WARD'S)** permission. However, I hope that you allow him/her to participate fully since their views on the subject are important. If you want to ask anything more about the exercise, I would be ready to answer.

Please confirm your participation by ticking in the box below.

1. By ticking inside this box, ☐ I give my informed consent for my son/daughter/ward to be interviewed, with full awareness of the purpose and terms and conditions of the information given

Signature_____ Date_____

P.I/Research Assistant's name _____Signature _____Date_____

INFORMED CONSENT FORM

My name is Abena Okyerewa Obuobi and I am a student from School of Public Health, University of Ghana, Legon. I am conducting a survey on HIV/AIDS risk perception and sexual behaviours among Senior High School Students in the Tema Metropolis.

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Please confirm your participation by ticking in the box below.

1. By ticking inside this box, ☐ I agree to be interviewed. The purpose, terms and conditions of the survey have been explained to me and I willingly agree to participate

Signature_____ Date_____

P.I/Research Assistant's name _____Signature _____Date_____

ASSENT FORM

My name is Abena Okyerewa Obuobi and I am a student from School of Public Health, University of Ghana, Legon. I am conducting a survey on HIV/AIDS risk perception and sexual behaviours among Senior High School Students in the Tema Metropolis.

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Please confirm your participation by ticking in the box below.

1. By ticking inside this box, ☐ I agree to be interviewed. The purpose, terms and conditions of the survey have been explained to me and I willingly agree to participate

Signature_____ Date_____

P.I/Research Assistant's name _____Signature _____Date_____

APPENDIX B

RESEARCH QUESTIONNAIRE

Name of Research Assistant/P.I: _____ Date: _____

School: _____ Time: _____

SECTION 1: KNOWLEDGE OF HIV/AIDS

1. Have you heard of AIDS? [1] Yes [2] No

2. Mention all the ways you know a person can get HIV/AIDS
   [1]_____
   [2]_____
   [3]_____
   [4]_____

3. Mention all the ways in which you know a person can avoid getting HIV/AIDS
   [1]_____
   [2]_____
   [3]_____
   [4]_____

What do you think about each of the following concerning HIV/AIDS?

4. A healthy looking person can have the AIDS virus
   [1] True [2] False [3] Don't know

5. HIV/AIDS can be spread through mosquito bites
   [1] True [2] False [3] Don't know

6. HIV/AIDS can be spread by witchcraft or other supernatural means
   [1] True [2] False [3] Don't know

7. HIV/AIDS can be cured
   [1] True [2] False [3] Don't know

8. One can be infected with HIV/AIDS by eating from the same bowl with an infected person
   [1] True [2] False [3] Don't know

9. Have you ever seen anyone who has HIV/AIDS or has died from AIDS?
   [1] Yes [2] No

10. Do you personally know of someone (relative, friend or community member) who has AIDS or has died of AIDS?
    [1] Yes [2] No

11. From which sources do you obtain information about HIV/AIDS? (Indicate all applicable responses)
    [1] School
    [2] Health personnel/hospital
    [3] Friends
    [4] Family
    [5] Television
    [6] Radio
    [7] Internet
    [8] Other (Please specify_____)

SECTION 4: SEXUAL BEHAVIOUR

12. Have you ever had sexual intercourse?
    [1] Yes [2] No

13. How old were you the first time you had sexual intercourse? _____

14. Have you had sex in the past one year?
    [1] Yes [2] No

15. How many sexual partners have you had in your lifetime?
    [0] None [1] 1 [2] 2 or more [3] don't remember

16. How many sexual partners have you had in the past one year?
    [0] None [1] 1 [2] 2 or more [3] don't remember

17. Have you ever had sex with someone you didn't know very well or just met?
    [1] yes [2] No

18. Have you ever had sex with someone other than a steady boyfriend/girlfriend?
    [1] Yes [2] No

19. Have you ever used a condom for sexual intercourse? [1] Yes [2] No

20. Did you use a condom with your partner the last time you had sexual intercourse?
    [1] Yes [2] No

21. My boyfriend/girlfriend will not like me to keep condoms on me.
    [1] true [2] false

22. I will feel ashamed buying condoms. [1] true [2] false

23. Condoms do not protect you from HIV because they do not work properly. [1] true
    [2] false

24. Condoms reduce the pleasure you get from sex. [1] true [2] false

25. Abstinence from sex will make one sick or look stupid or odd in the society.
    [0] Don't know [1] Strongly agree [2] Agree [3] Disagree [4] Strongly disagree

26. A person who maintains virginity until marriage will encounter problems in marriage during sexual intercourse.
    [0] Don't know [1] Strongly agree [2] Agree [3] Disagree [4] Strongly disagree

27. The use of condoms suggests sexual promiscuity or mistrust of one's sexual partner.
    [0] Don't know [1] Strongly agree [2] Agree [3] Disagree [4] Strongly disagree

28. I think condoms are effective in preventing HIV/AIDS?
    [1] Yes [2] No [3] Don't know

SECTION 2: RISK PERCEPTION OF HIV/AIDS

29. How do you perceive the prevalence of HIV/AIDS in the society?
    [0] Don't know [1] Very low [2] low [3] High

30. Which people do you think stand any chance of getting HIV/AIDS?
    [1]_____
    [2]_____
    [3]_____
    [4]_____

31. People like me are reasonably safe from HIV/AIDS even if we have sex without a condom
    [0] Don't know [1] strongly disagree [2] disagree [3]Agree [4] Strongly Agree

32. Compared to most people my age, I think I am at less risk of getting infected with HIV from unprotected sex
    [0] Don't know [1] strongly disagree [2] disagree [3]Agree [4] Strongly Agree

33. HIV/AIDS does not happen to people like me
[0] Don't know [1] strongly disagree [2] disagree [3]Agree [4] Strongly Agree

34. If I had unsafe sex, I would be worried afterwards that I might be infected with HIV
[0] Don't know [1] strongly disagree [2] disagree [3]Agree [4] Strongly Agree

35. Even if you have sex without a condom, your chances of getting HIV are not that high
[0] Don't know [1] strongly disagree [2] disagree [3]Agree [4] Strongly Agree

SECTION 3: SELF EFFICACY

36. How confident are you that you abstain from sexual intercourse until you marry?
[0] Don't know [1] Not confident [2] confident [3] very confident

37. How confident are you that you can stay with only one sexual partner?
[0] Don't know [1] Not confident [2] confident [3] very confident

38. How confident are you that you can refuse to have sex with someone if you don't want to?
[0] Don't know [1] Not confident [2] confident [3] very confident

39. How confident are you that you can insist on condom use during sexual intercourse even if your partner does not want to use one?
[0] Don't know [1] not confident [2] confident [3] very confident

SECTION 5: BACKGROUD CHARACTERISTCS OF RESPONDENT

40. Age at last birthday _____

41. Sex : [1] Male [2] Female

42. Religion: [1] Christian [2] Muslim [3] Other

43. Ethnicity: [1] Akan [2] Ga [3] Ewe [4] Northern Ghana [5] Other

44. Level and course of study:

45. Place of residence: _____