KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF HEALTH EDUCATION AND PROMOTION

RISK OF HIV INFECTION AMONG ADOLESCENTS IN ASOKORE MAMPONG MUNICIPALITY.

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NOVEMBER, 2019

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

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SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF COMMUNITY HEALTH

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RISK OF HIV INFECTION AMONG ADOLESCENTS IN ASOKORE MAMPONG MUNICIPALITY

A DISSERTATION SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF DEGREE IN MPH HEALTH EDUCATION AND PROMOTION

BY

AGYEMAN, CHARLOTTE

NOVEMBER, 2019

DECLARATION

I hereby do declare that except for references to other people‟s work which have been duly acknowledged, this piece of work is my own composition and neither in whole nor in part has this work been presented for the award of a degree in this university or elsewhere.

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DEDICATION

This thesis is dedicated to Mr. George Owusu Ansah who through his encouragement and guidance made this work a success.

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ABSTRACT

This study sought to identify risk factors for HIV/AIDS among Junior High School students in the Asokore Mampong Municipality through assessing the knowledge of adolescents on HIV/AIDS and sex education, identifying risky sexual behaviours and also exploring cultural practices which could increase adolescents‟ risk of contracting HIV. A cross-sectional school-based design using simple random sampling technique was employed. Data collection was done using self-administered questionnaires among 403 adolescent High School students and analyzed using STATA version 14.0. The results were presented in frequencies, percentages for descriptive analysis and logistic regression were also used to determine the relationship between selected independent variables on the dependent variables with $p < 0.05$ being the threshold to measure statistically significant association. The results indicated that majority (50.2%) of the students between the age group 10-14 years and are mostly in JHS 2 (49.8%) had more knowledge on HIV with internet their major source of their knowledge than their counterparts. Majority (51.4%) of the students between the age group 10-14 years and are mostly in JHS 2 (62.5%) indicated not having sex before and majority of students who have had sex before between the age group 10-14 years representing (55.3%) had sex partners between 1-3 and are mostly in JHS 2 (67.1%). A significant number of students (51.1%) between age group 10-14 years indicated that cultural practices in their communities exposed them to blood contact or bodily fluids and the most dominant cultural practice as indicated by the students was male circumcision.

Results from the logistic regression shows that, socio-demographic factors such as age (p=0.385), religion (p=0.435), class (p=0.615), were not found to be associated respondent‟s perceived of having HIV , level of knowledge of perceived risk of HIV were found not statistically significantly associated with the perceived risk of having HIV which indicated no significant influence(p=0.770) on perceived risk of HIV. Respondents who indicated that they had ever had sex had a significantly (p = 0.016) higher perceived risk of having HIV.

DEFINITION OF TERMS

HIV – It is a virus that attacks the immune system, our body‟s natural defence against illness.

AIDS – It is a syndrome caused by virus called HIV.

ADOLESCENCE – Is a transitional stage of physical and psychological development that generally occurs during the period from puberty to adulthood.

INFECTIONS – It is a disease caused by microorganisms that invade tissues.

SEX EDUCATION – It is the instruction of issues relating to human sexuality, including emotional relations and responsibilities, human sexual anatomy, reproductive health, sexual activity, sexual reproduction, age of consent, reproductive rights, safe sex, birth control and sexual abstinence.

RISKY SEXUAL BEHAVIOUR– It is commonly defined as behaviour that increases one‟s risk of contracting sexually transmitted infections and experiencing unintended pregnancies.

CULTURAL PRACTICES – It refers to the manifestation of a culture or sub-culture, especially in regard to the traditional and customary practices of a particular ethnic or other cultural group.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Anti-Retroviral Treatment
BHSS	Behavioural Health Survey Study
CHPS	Community Health Planning Service
GDHS	Ghana Demographic Health Survey
GSS	Ghana Statistical Service
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
JHS	Junior High School
KMA	Kumasi Metropolitan Assembly
KNUST	Kwame Nkrumah University of Science and Technology
LI	Legislative Instrument
M/A	Metropolitan Assembly
NGOs	Non – Governmental Organisations
NHIS	National Health Insurance Scheme
R/C	Roman Catholic
STI/STD	Sexually Transmitted infections/Diseases
UNAIDS	Joint United Nations Programme on HIV and AIDS (UNAIDS)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNIFEM	United Nations Development Fund for Women
UNICEF	United Nation Children‟s Education Fund
WHO	World Health Organisation

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CHAPTER ONE

1.0 Introduction

Acquired Immune Deficiency Syndrome (AIDS), caused by Human Immune Deficiency Virus (HIV), is one of the diseases for which no cure has been found yet. HIV has become a health concern globally since its discovery in 1981 (Joint United Nations Programme on HIV and AIDS & World Health Organization, 2003). HIV/AIDS is one of the most imperative public health trials facing both developing and developed countries (Frimpong, 2016).

The rapid increase in the proportion of sexually active adolescents is exposing large numbers of youths to the risks of unwanted pregnancies and sexually transmitted infections (STIs), including Human Immune Virus (HIV) / Acquired Immune Deficiency Syndrome (AIDS) (Mung'ong‟o *et al*., 2010).

Even though HIV affects all the social sectors of the population, the epidemic among adolescents is the fastest growing, partly because of young people‟s susceptibility and because of low usage of preventive services. In spite of this, adolescents are also seen as a „window of hope‟ because they have great potential for positive change of attitudes and behaviours (Guiella *et al*., 2007).

In 2016, about 2.1 million adolescents between the ages of 10 and 19 were living with HIV worldwide. Adolescents account for about 6 percent of all people living with HIV and about 15 percent of new adult HIV infections. The region with the highest numbers of HIV-positive adolescents is sub-Saharan Africa. Of the 2.1 million adolescents living with HIV, about 1.7 million (84 percent) live in sub-Saharan Africa (United Nations International Children‟s Emergency Fund [UNICEF], 2016).

Adolescents are sexually active and tend to engage in risky sexual behaviours. These estimates include both adolescents who acquired HIV behaviourally through unprotected sex or by sharing non-sterile injecting equipment.

According to UNICEF 2016 report, adolescents aged 15 to 19 accounted for an estimated 15 percent of new adult HIV infections worldwide; however, adolescent girls accounted for two thirds of all new HIV infections among adolescents (UNICEF, 2016). In sub-Saharan Africa that year, nearly three times as many adolescent girls were newly infected with HIV than adolescent boys. The prevalence among the 15-19 and 15-24 age groups was also 0.7% and 1.3% respectively (Ghana AIDS Commission [GAC], 2014). The main mode of transmission is having unprotected sex with an HIV carrier. In our setting, most young girls do not have control over their sex lives. The decision to use condoms is normally controlled by their partners, exposing them to HIV.

1.1 Background Information

Universally, the HIV/AIDS pandemic poses a great challenge to all. It threatens the wellbeing of the continent like no other single challenge. According to Piot (2008), HIV is viewed as an extraordinary development challenge in Africa, requiring a longterm sustained response, and that after 25 years, it is time to apply the lessons of experience and scale up what is working. The best way to stop people from dying from AIDS is to reduce new infections in the first place. HIV remains the leading cause of premature deaths and is a major threat to development in Africa (Ezekwesili, 2008). To-date, the most reliable means of combating the disease in developing countries has been predominantly built around sensitizing people, especially the youth, to develop positive sexual behaviour (Ezekwesili, 2008).

This article focuses on adolescents, defined as aged 10-19 years. Adolescence is the period when many people begin to explore their sexuality. As a result, access to sexual and reproductive health information and services becomes increasingly important (Idele *et al*., 2014). Despite the well-known need for protection from HIV infections and other reproductive health risks, their age and their social and cultural status limit adolescents‟ access to information and services in many settings. Therefore, adolescence is typically a period of experimentation, new experiences, and vulnerability. Some adolescents may experiment with injecting drugs, sexuality, and sexual orientation, and some are abused sexually. This heterogeneous group of pubertal children and young adults are more vulnerable and at an increased risk of HIV acquisition (Dawood, 2015).

Adolescents are wide-open to risk behaviours which include unsafe sex, drug abuse and alcoholism, and also, there are different factors which are associated with their risk behaviours. Thus, there is a need to firmly assess the issue of adolescents‟ risky behaviours, since it is a multidimensional construct comprising heterogeneous psychological and social factors (Dawit, 2017). Additionally, factors such as parent‟s socioeconomic status have been identified as influencing adolescents‟ health behaviour. More than half of all new HIV infections occur in 10 to 19 years. Members of this age group feel less susceptible to adverse outcomes associated with risk behaviours and are, therefore, at greater risk for HIV/AIDS.

Overall, these risky sexual behaviours are predominantly higher in boys, compared to girls of the same age, partly because of the high level of testosterone in boys, which increases early disposition to sexual activities. In addition, adolescents‟ brain structures are less developed and less well equipped to make rational judgments on complex

sexual relationships, thereby predisposing them to heightened risk of HIV (Adedapo *et al*., 2014).

In many settings, adolescent girls face a high risk of sexual violence and rape, both inside and outside of marriage. Child marriage, though often intended by families to shield girls and young women from physical and sexual risks, often fails to protect them from HIV and other sexually transmitted diseases because condom use tends to be lower in long-term relationships. Moreover, the available evidence indicates that adolescent girls in child marriages and women, in general, have less say than their partners over the use of contraception or over whether sex takes place at all. For example, a Behavioural Health Survey Study (BHSS) among the school-going adolescents in eight selected African countries found that 38.1% of boys, compared to 15.8% of girls, reported sexual activities before the age of 15 years. However, condom use, measured by condom use for the last sexual encounter, was lower in girls (73.1%) compared to boys (87.4%). The lower proportion of girls who use condoms during sexual activities could be related to the fact that many girls have a sexual relationship with men who are 5–10 years older and might not have the needed skills to negotiate safe sex.

Peltzer (2010) found that parent-child communication about sex and parental connectedness influenced safe sexual behaviours in adolescents. Conversely, Sneed *et al*. (2009) found no association between parent communication about sex and changes in the behaviour of adolescents. Similarly, the evidence regarding the association between HIV knowledge and risky sexual behaviours is also mixed. Some studies found a positive relationship between high HIV knowledge, HIV testing and consistent condom use in adolescents. In contrast, some studies found no associations between HIV knowledge and sexual behaviours.

However, there is less information on factors that influence the dominance of risk behavioural factors in adolescents. There is inadequate information on the factors associated with risky sexual behaviour that predict risky sexual behaviours and the lack of studies among adolescents in Asokore Mampong Municipality underscore the need for further research in this area. This observation underlines the need to identify the factors to decrease the risk of adolescents for HIV infections.

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1.2 Statement of the Problem

HIV infections in Ghana have recorded an alarming 70.15% increase in just one year. (National AIDS Control Programme, 2016). The figure increased from 12,000 new infections in 2015 to 20,148 in 2016. The increase in new infections is a matter of concern because Ghana recorded significant gains in the key target areas of ending HIV/ AIDS for five years (National AIDS Control Programme, 2016). HIV prevalence among the young population (15-24 years), a proxy for new infections, remained unchanged at 1.1%. HIV prevalence by age group 45-49 is highest at 5.6%, followed by 35-39 at 3.5% with 15-19 being the lowest at 0.6%. The regional HIV prevalence ranged from 2.7% in the Volta and Brong Ahafo regions as the regions with the highest prevalence followed by Ashanti Region (2.6 %) and to 0.7% in Northern region (HIV Sentinel Survey Report, 2016).

Limited access to guidance and counselling, leading to late reporting of the disease has affected mortalities associated with HIV (World Health Organisation [WHO], 2013). Notwithstanding these challenges, adolescents in the sub-region are exposed to HIV through injection, drug use, sexual abuse, sex work, unprotected heterosexual lifestyle, among others (Ferrand, 2010).

Availability and access to illicit drugs, alcohol, peer pressure and curiosity influence the adoption of risky behaviours to contracting HIV (Fox *et al*., 2013). In Ghana, HIV prevalence in young adults (15-24 years) for new infection is 1.1%. There has not been any significant change in the rate of infection from 2014 statistical review (Ghana Aids Commission, 2016).

Studies have shown that focusing on high transmission areas and the population at risk, together with implementing effective preventive initiatives, has the potential to reduce infection rate (UNAIDS, 2004). This study seeks to find out the knowledge of adolescents, their lifestyle and their potential risk of exposure to contracting HIV. Findings from this study will inform the health sector on the formulation of policies that will address HIV infection rates among adolescents.

1.3 Rationale of the Study

Adolescents are the great asset any nation can have because they are the future leaders. The negative impact of HIV/AIDS on adolescent health is huge. The devastating negative effect of HIV and AIDS has called for attention from policy makers. Currently, Ghana, through the AIDS Commission, has instituted some measures to reduce infection rate and deaths associated with AIDS. They include

ART centers, periodic training of health staff on ART, Free NHIS registration for HIV clients, health education on HIV through the media platforms, among others. Nonetheless, the exposure of adolescents to unsafe sex, coupled with alcohol abuse, seems to be on the increase. These and other risky behaviours are believed to contribute the high incidence of HIV/AIDS.

The study will be beneficial to researchers, the Ghana AIDS Commission, NGOs, Adolescent Health Care Providers and the Health sector of Ghana. The study will

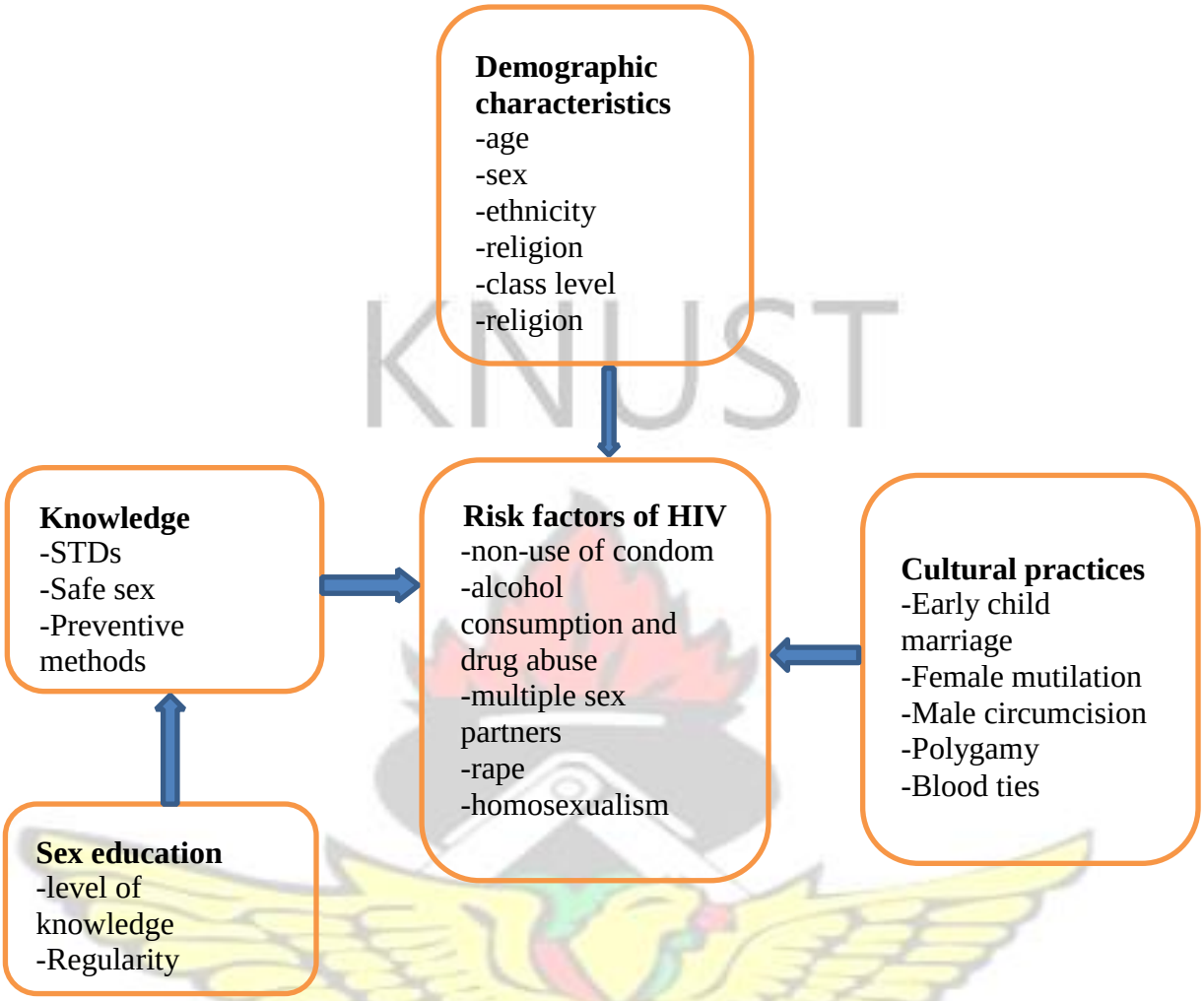
provide insight into the exposure of the adolescents in Asokore Mampong Municipal on HIV issues. The study will also provide empirical evidence on HIV infections among the adolescents and provide information as to whether programs geared towards preventing HIV infections are effective. In addition, the study will reveal the risk factors for contracting HIV peculiar to the adolescents, and provide insights to policy makers on how to reduce new infections.

Much research has been carried out on the determinants and consequences of sexual behaviour among adults, but until recently, adolescents have received little attention in Asokore Mampong municipality. Gaps in knowledge regarding adolescents‟ sexual behaviour persist. For example, not much is known about what motivates young people to initiate first sex, to have multiple sexual partners, or to use protection such as condoms.

1.4 Conceptual Framework

Figure 1 is a conceptual framework showing the relation between HIV and risky sexual behaviour factors among adolescents**.**

Figure 1: Conceptual Framework



Source: *Author's construct*

There are diverse issues that influence the risky sexual behaviours of adolescents and these factors are closely related and complex. The interaction amongst them is intended to shape positively the behaviour of adolescents towards a healthy sexual life that would prevent them from contracting HIV. Unhealthy sexual behaviour could expose adolescents to HIV infections.

Knowledge on HIV would result from exposure through tuition and guidance from the schools, coupled with support from other community or societal organisations such as churches and schools. With the knowledge about safe sex practices, preventing HIV

would inform the practices that would be built by the adolescents. Adequate knowledge would consequently lead to healthy sexual life of the adolescents into adulthood whereas poor or inadequate knowledge would result in making the adolescents susceptible to bad sexual influences, including multiple sexual partners, alcoholism and dugs addictions (Adjaloo, 2001).

Drug abuse and alcoholism influence adolescents into early sexual acts that are usually unsafe and pose a risk to contracting STDs including HIV. Adolescents who have the right training from schools and society and who are able to control themselves from the use of drugs and alcohol could less likely be at risk of HIV.

In the JHS institutions, an effective organisation of sex education through effective instruction designs and planning could influence positively but not absolutely on the adolescent. This is intended to stimulate their awareness and also inculcate in them hard facts about certain practices that could expose them to HIV (Adedapo *et al.,* 2014).

On the other hand, ineffective organisation of educational instruction on sexual health could affect them negatively, creating general unawareness and lack of sensitisation to sexual knowledge, experiences and risks. This would pose great problems to the adolescents as they would become vulnerable and susceptible to misinformation, peer influence and other influences.

The relation between school instruction and organisation of sexual and reproductive health issues influences the knowledge level of students, thereby affecting their behaviour relative to better and safe sex practices that limit their vulnerability to HIV (Idele *et al*., 2014).

1.5 Research Questions

1. What is the knowledge of adolescents on HIV/ AIDS and sex education in the Asokore Mampong Municipality?
2. What are the risky sexual behaviours associated contracting HIV among adolescents in Asokore Mampong Municipality?
3. What are the cultural practices that could increase adolescent‟s risk of contracting HIV infection in Asokore Mampong Municipality?

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1.6 General Objective

The purpose of the study is to identify the risk factors for HIV infection among adolescents in the Asokore Mampong Municipality of the Ashanti Region - Ghana.

1.6.1 Specific Objectives

1. To assess the knowledge of adolescents on HIV/AIDS and sex education in the Asokore Mampong Municipality
2. To identify risky sexual behaviours associated with contracting HIV among adolescents in the Asokore Mampong Municipality
3. To explore cultural practices which could increase adolescents‟ risks of contracting HIV in the Asokore Mampong Municipality

1.7 Profile of Study Area

1.7.1 Background

The Asokore Mampong Municipal Assembly is one of the thirty (30) Administrative districts in the Ashanti Region. It was carved out of Kumasi Metropolitan Assembly due to the growing population of the Kumasi Metropolis. This was aimed at allowing government to implement her policies of local governance for the benefit of the entire citizenry. The Municipal Assembly was created under the Government‟s

Decentralization Programme in 2012 under Legislative Instrument (L.I) 2112 on June 29, 2012, with Asokore Mampong as its capital.

1.7.2 Location and Size

The Asokore Mampong Municipality covers a total land area of 23.91 km^2 and it is located in the North-Eastern part of the Kumasi Metropolis. It shares boundaries with Kumasi Metropolitan Assembly (KMA) to the East, South and West, Kwabre East District to the North-West and Ejisu-Juabeng Municipal Assembly to the North-East. It falls on Longitude -1.565 and latitude 6.715. The electoral areas include Aboabo No.1 and No. 2, Akorem, Sepe Timpom, Adukrom, Dote, Asawase, New Zongo, Sawaba, Asokore Mampong and Akwatia line community (Ghana Statistical Service [GSS], 2013).

1.7.3 Language and Ethnic Diversity

The Asokore Mampong Township can be described as a community of heterogeneous ethnic groups. The ethnic groups are people from Northern Ghana (43.4%), followed by Akan (40.9%), the Guans (10.7%), Ewes (3.0%), Ga-Adangme (1.2%) and others (0.8%).

1.7.4 Religion

Islamic religion is most dominant among all the religious groups in the municipality with 55.4 percent representation. Christianity follows, with 41.8 percent, and other religious groups constitute 2.8 percent.

1.7.5 Culture

The chief of Asokore Mampong, Nana Boakye Ansah Debrah, is the head of the traditional area in the municipality. He is also the custodian of the land and traditional head of the people. The major festival in the municipality is Akwasidae. Akwasidae is

celebrated every forty days. Therefore, there are nine Akwasidae in every one year. The last Akwasidae in the year is called Akwasidae Kese where it is celebrated on a high note to climax the yearly activity. The Zongo communities are also led by their traditional/religious leaders like the Imams. Despite the diversity of cultures, coexistence has prevailed in the municipality.

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1.7.6 Education

The municipality has 277 different educational facilities, 137 of which are private and 139 publics. Pre-schools number up to 93, Primary schools are 101, and Junior High schools are 76, with five (5) Senior High schools, one Tertiary school and one Special school. However, there are no Vocational/Technical Institutions. The municipality has two (2) community ICT Centres located at Asawase and Adukrom. That notwithstanding, almost all the primary to tertiary educational institutions have ICT laboratories.

1.7.7 Health Facilities

Health care is accessible to residents in the Municipality. The Assembly has one Public health facility (Sepe Dote Health Centre) located at Sepe Timpom and ten (10) private hospital/clinics. Also, there are six (6) Community Health Planning and Services (CHPS) zones and twenty-nine (29) outreach sites.

1.8 Scope of Study

The study is intended to find out the adolescents‟ risk factors on HIV in Asokore Mampong Municipality. The research would, therefore, be carried out using adolescents (10 to 19) in Junior High Schools in the Asokore Mampong Municipal. Primary data will be collected from respondents on knowledge on HIV, risky sexual

behaviours, cultural factors with regard to HIV and level of knowledge on sex education.

1.9 Organization of Report

This report will be organized into six chapters. Chapter One consists of the background of the study, statement of the problem and its objectives whereas Chapter Two reviews related literature and presents objectives of the study. Chapters Three, Four, and Five respectively present the methodology, results and discussion of the findings. Chapter Six provides the conclusions and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter seeks to review the literature of the various authors in relation to the risk of HIV infections among adolescents and it was deliberated under the following: the adolescents‟ knowledge on HIV and sex education, the risky sexual behaviours related in contracting HIV, and cultural practices which could upsurge adolescent‟s risk of contracting HIV.

2.1 The Nature of HIV

Acquired Immune Deficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency Virus (HIV). The virus works by destroying the body‟s immune system, thereby paving the way for a wide range of opportunistic infections like pneumonia, tuberculosis, thrush, herpes, chronic diarrhoea, and Kaposi‟s sarcoma to attack the person, eventually causing death (Ghana AIDS Commission, 2005a; Ghana AIDS Commission, 2004; National AIDS/STI Control Programme, 2001a). Although

the source of the AIDS virus is unclear, some researchers trace it to monkeys and chimpanzees in Africa (Holmes, 2003; The University of Arizona, 2004). AIDS was first recognized as a disease in 1981 (Isaksen, Songstad & Spissøy, 2002).

In Ghana, as in the rest of Sub-Saharan Africa, the major mode of HIV transmission is heterosexual sex, accounting for 80%-85% of transmissions. The National HIV Prevalence amongst pregnant women who went to antenatal clinic in 2016 is 2.4% while transfusion by blood and blood products account for less than 2% (Ghana AIDS Commission, 2016). Between 94% and 96% of HIV infections are triggered by the HIV-1 strain (Concern Worldwide, 2003; Family Health International, 2005; Ghana AIDS Commission, 2005a; National AIDS/STI Control Programme, 2001a). Shortly, following infection, a person may experience mild flu-like symptoms, but these vanish soon afterwards (Agyeman, 2009). This initial stage is followed by a long incubation period of up to twenty years, during which the infected person may not show any sign of the disease at all and hence may unintentionally transmit the virus to others (Buor, 2006; Isaksen, Songstad & Spissøy, 2002). Factors which effect the development of AIDS include health status and health-related behaviours (UNESCO, 2005a).

In general, countries where the overall health of the population is poor may have shorter incubation periods than countries with better health conditions (Ghana AIDS Commission, 2004). Having a sexually transmitted infection also makes a person more vulnerable to getting HIV (Isaksen, Songstad, & Spissøy, 2002).

Some of the signs and symptoms of AIDS comprise prolonged fever (lasting more than one month), prolonged and chronic diarrhoea (lasting over a month), significant weight loss (over a period of time and more than ten percent of body weight), persistent cough for more than one month, persistent skin infections, aggressive skin cancer (Kaposi

Sarcoma), oral thrush (candidiasis), recurrent shingles ("Ananse"), enlargement of the lymph glands, and tuberculosis (National AIDS/STI Control Programme, 2014).

2.2 Knowledge of Adolescents on HIV

Adolescence, a stage such as that of students of JHS, is a significant stage of life for establishing healthy behaviours, attitudes, and lifestyles that contribute to current and future health (Adjaloo, 2001). Adolescents‟ lack of knowledge on early sexual development and reproductive health poses a risk through unprotected sex in young people. This is imitated in disproportionately high rates of STD infection (Clark *et al*., 2002).

Higher rates of HIV infection have been linked with earlier initiation of sexual intercourse (Jejeebhoy, 2006). Knowledge on HIV is very low across board but, again, tends to be even lower among females and, thus, basic understanding of HIV and how it spreads is an essential component of prevention, although this is not sufficient to change behaviour and reduce risk (Adjaloo, 2001).

Discrepancies in knowledge about HIV among adolescent girls and boys are connected to gender, education, household wealth, and place of residence (Idele *et al*., 2014). Thus, adolescent girls and boys in poor households and in rural areas are less likely to have comprehensive knowledge about HIV.

According to UNICEF global database 2013, based on demographic health survey, consistent with the higher rates of HIV among girls in the most pretentious regions, girls tend to have worse knowledge levels than boys of the same age. In sub-Saharan Africa, only 26% of adolescent girls aged 15-19 years and 36% of adolescent boys of the same age have a comprehensive and correct knowledge of HIV (UNICEF, 2013).

For example, knowledge on correct use of the male condom, which is the most common method of protection among young people, is also very limited (AwusaboAsare *et al*., 2006).

Amazigo*et al*. (2001) conducted a school-based study among Mexican young people on condom use, other sexual behaviours, and HIV/AIDS knowledge. Students (n=13,293, 11-24 years of age) from a random sample of public schools in the central Mexican state of Morelos completed a self-administered questionnaire. The results acquired were that the average age at sexual first appearance was 13.6 ± 1.9 years among young men and 14.2 ± 2.2 years among young women; 34.5% of sample participants reported using condoms during their first sexual intercourse; more students had intermediate knowledge on HIV (46%, 95% confidence interval [95% CI], 45.2-46.9) than high levels (37%, 95% CI 36.2-37.8, p <0.01); students knew more about HIV transmission than about prevention of HIV infections. The results also indicated that among young men, high levels of HIV/AIDS knowledge increased likelihood of condom use (odds ratio [OR] 1.4, 95% CI, 1.11.7), while among young women, high levels of knowledge reduced likelihood of using condoms (OR 0.7, 95% CI, 0.5-1.0). Additionally, it was found that adolescents with high levels of HIV/AIDS knowledge were more likely to have had three or more sexual partners (OR 1.7, 95% CI, 1.3-2.2), but young women with high knowledge levels were more likely to have only one lifetime sexual partner. It was lastly noticed that levels of knowledge with regard to HIV/AIDS were low in Mexican youth. The authors, therefore, recommended that HIV/AIDS education programs for Mexican students should focus on conveying knowledge on HIV prevention. Because knowledge is not directly correlated with condom use among young women, prevention strategies that deal with

social acceptability of condoms and social skills related with condom negotiation are also needed (Tapia *et al*., 2004).

2.3 Risk Factors Associated in Contracting HIV among Adolescents

High proportions of adolescents between the ages of 10-19 years in Sub-Saharan Africa are progressively sexually active and at higher risk of contracting sexually transmitted diseases, especially HIV(Adedapo *et al*., 2014). Thus, risky sexual behaviours, including sexual intercourse before the age of 15 years, multiple sexual partners, sex without condoms, and alcohol consumption are now rife among adolescents.

Risk-taking sexual practices have become a common practice among young people (Achigibah, 2018). It is not uncommon to catch them engaging in sexual intercourse at an early age, having multiple sexual partners, unprotected sexual intercourse and unsafe abortions (Ogbada, 2013). Risk sexual behaviours are a characteristic of the adolescence phase of life, a normal phase of human development characterized by intensified curiosity, experimentation and exploration of the ideals of life which includes sexuality (Steingber as cited in Krugu, 2016). A research conducted in Gondar town, it was found that 25% of all respondents had at least one risk behavior associated to HIV and other STIs transmission. 65% of males and 35% of females already commenced sexual intercourse at mean age of 17.3 and 17.1 years respectively. About 39% reported having unprotected sex (sex without condom); 43.3% of sexually active students had more than one sexual partner; 5% reported having sex with sex workers; 15% reported having sex under the effect of alcohol; 31.7% undergo sexual intercourse in unusual route and 5% shared sharps. The findings that over 40% of the sexually active respondents had multiple sexual partners comprising commercial sex workers

indicate that such risky behaviour can predispose the students to acquisition of STDs, including HIV.

The number of sexual partners a person has had is also related to elevated risk of contracting HIV/AIDS (GSS & MI, 2003). For example, in their study of adolescent sexual networking and HIV transmission in rural Uganda, Konde-Lule, Sewankambo and Morris (2017) found higher levels of HIV infection among adolescents with more sexual partners in the preceding twelve months than among those with fewer partners.

Similarly, in Tanzania, Mwakagile *et al*. (2001) also found that 41% of females with more than five lifetime partners were HIV-infected likened with just 14% among those with only one partner.

In many parts of Sub-Saharan Africa, young women have sexual relations with much older partners (so-called "sugar daddies"), which also upturns their risk of HIV/AIDS (Agyemang, 2009). A study in Zimbabwe projected that the risk of HIV infection increases with every year of age difference between partners (Kiragu, 2001). Age difference with sexual partner was correlated with HIV positive status in a survey in rural Zimbabwe (Gregson *et al.*, 2002). Another study in the mid-1990s in 56 communities in rural Rakai District, Uganda, established that the risk of HIV infection doubled for adolescent women with male partners who were ten or more years older than they were, compared with women whose partners were closer in age (Kelly & Gray, as cited in Bankole *et al*., 2004).

Another worrying trend with respect to sexuality and HIV/AIDS is the issue of rape and violence in relationships (Wood, Maforah & Jewkes, 2008). The risk of STIs is higher among adolescents that are poor and marginalized as they succumb to unprotected sex

through coercion, force, violence and transactional reasons (Agyemang, 2009). Thus, some poor adolescent women engage in transactional sex, replacing sex for money or gifts such as soap, perfume, meals, jewellery, school fees and help to their families. Once in these relationships with teachers, drivers, shopkeepers or even policemen, girls have little power to negotiate the use of condoms. Forced vaginal penetration as it occurs during rape could cause abrasions and cuts that can allow the HIV virus to cross the vaginal wall more easily (UNGASS,
2001). People under such circumstances also have less power and time to negotiate for condom use (MacPhail &Campbell, 2001). Women in Uganda who had coerced sex had eight times higher risk of acquiring HIV, likened to those who had not been abused, and in Peru and Ethiopia, young women who had experienced forced sex were more likely to report symptoms of sexually transmitted infections or vaginal discharge than women who had not been abused (UNICEF, 2004).

Another pattern of sexual behaviour that has implications for HIV/AIDS is low levels of condom use. Studies show that although many people are aware of condoms, only a few people really use them. In the 2003 GDHS, only 22% of women and 37% of men aged 15-24 years reported condom use at first sex. Condom use at first sex was more common among women aged 15-19 than among those aged 20-24, although the opposite was the case among men. It was also more common among young women and men who have never married, those residing in urban areas, and young men and women living in Greater Accra and the Volta Region (GDHS, 2003). It also rose steadily and theatrically with increasing education and wealth quintile among both young women and men (GSS &ORC Macro, 2004).

In rural Tanzania, having ever practiced oral sex was significantly associated with

HIV seropositivity among adolescent women (Tengia-Kessy, Msamanga & Moshiro, 2008).

2.4 Cultural Practices Associated with HIV

Culture gives meaning to life and is made up of beliefs, morals, traditions and social and historical inheritance. Culture is firm by history, religion, organisations and the family of which adolescents are part (Van denBerg, 2004).

Culture thus shapes how adolescents reason about the world and about themselves, and influences the way they develop and organize aspects of their social lives. In SubSaharan Africa, sexual activity appears to be driven largely by cultural beliefs and practices (Madise & Hinde, 2003). Cultural expectations encourage men to have multiple partners, while women are predictable to abstain or be faithful (Marcovici, 2002; UNAIDS/UNFPA/UNIFEM, 2004). As a result, men are more likely to engage in risky behaviour, often without protection (Gupta, 2000; Rivers & Aggleton, 2001; Weitz, 2003).

This social censor proceeded to instil fear in adolescents to even approach parents to ask anything bothering on their sexuality (Asampong *et al*., 2013). In a qualitative study in rural Hanover, Jamaica, Smith *et al*. (2003) found that the sexual attitudes and behaviours of the adolescents were formed by cultural and gender norms that imposed different standards on males and females.

The cultural practices of early marriage and female circumcision expose girls to high HIV risks (UNICEF, 2002). Both female and male circumcision can be risk factors for HIV/AIDS through sharing of knives and casual sex during initiation ceremonies (Neema, Musisi, & Kibobo, 2004; Rivers & Aggleton, 2001). However, once

completed, male circumcision may decrease the risk of HIV infection, a factor attributed to the removal of the foreskin, which contains a high density of HIVspecific cellular targets (Auerbach, Hayes & Kandathil, 2006). In the United States, one study found that uncircumcised homosexual men had a twofold increased risk of HIV infection (Newman, 2004). A study in South Africa also established that circumcised men were at least 60% less likely to become infected than uncircumcised men (UNAIDS/WHO, 2005).

In Ghana, available data does not support a direct link between polygamy and HIV/AIDS, conflicting to popular opinion. This is because the Northern Region which has the highest polygamy levels also has the lowest HIV/AIDS rates of 0.7% while the Eastern Region which has the lowest polygamy levels display the highest HIV/AIDS prevalence rates of 2.6% in the country (Ghana AIDS Commission, 2016). Research has also established that in Africa, the HIV/AIDS prevalence is lower in areas where the Islamic religion is practised (Oppong, 2008). Using data from the 1993 Ghana Health Demographic and Health Survey, Addai (2000) found that women belonging to the liberal religious groups (Protestants and Catholic) were more probable to experience premarital sex than those from the more conservative traditional religions. Muslim women were significantly less likely to report premarital sex compared to any group (National Institute of Health, 2002).

2.5 Level of Knowledge on Sex Education

Schools are considered to be playing important roles in the prevention of HIV infection (Van den Berg, 2004). Sex education programs are usually school-based (Askew *et al*., 2004). Under the sex education, peer education is possibly the most elusive program

concept. According to Van den Berg, young person reaching out to each other with information as friends is logical and appealing, but has been subject to little evaluation.

Educating adolescents on contraception, HIV, and STD prevention has been shown to be effective in dropping these unintended consequences (Bloodindex, 2007). Unfortunately, parents, although keen to help their adolescents, still do not communicate adequately with them about sex, mainly due to the fact that many parents are often embarrassed and uncomfortable to approach their children with the topic (DeJong *et al*., 2007). In recent times, adolescents have turned, particularly, to more formal sources of sexual health education such as school-based lessons (Wellings *et al*., 2005).

Knowledge levels have hardly improved over the past 15 years and 70% of adolescents (15–19) in sub-Saharan Africa do not have comprehensive HIV knowledge (UNICEF, 2015). Despite consistent calls for improving knowledge, in general, levels of knowledge of HIV among adolescents and young adults are terribly low, especially in the worst affected countries.

The effectiveness of sex education has been recognized to be dependent on the content of the program and the level of implementation. It has been well-known that programs that are implemented with sufficient completeness (quantity of the program) and fidelity (implementation according to the program guidelines) may result in positive health outcomes (Kalafat, 2007).

In spite of the palpable importance of sex education to both young people and teachers, school-based sexual health education has had its share of challenges. Although many societies recognise the threats to young people‟s sexual health and the significance of

schools in addressing these threats, they uphold traditions and beliefs, including the expectation that young people abstain from sexual activity until marriage. This makes it very problematic for society, especially traditional and religious leaders, including parents, to wholeheartedly endorse school-based sexual health education as they are often in the forefront of opposition to sex education in schools (Rosen *et al*., 2004).

Findings from a sex education program in the Netherlands revealed that completeness and fidelity of a sex education programme associates significantly with teacher benefits, instrumentality, subjective norms, social support and self-efficacy and student response. Teachers from the study were seen be more likely to implement sex education programme if they saw benefits in its use for themselves, if they found the programme practical to use, if they believed that others appreciate and support the delivery of sex education and if they believed they are capable of delivering lessons. They were also more likely to implement it completely if students answered positively to the programme (Schutte *et al*., 2014).

2.6 Theoretical Concept

The Health Belief Model (HBM) is developed to deliver a framework to explain why some people take specific actions to avoid illness, while others fail to protect themselves (Polit & Beck, 2004). Stanhope and Lancaster (2000: 252) state:

The HBM is beneficial in assessing health protection or disease prevention behaviours. It is also valuable in organizing information about clients‟ views on the state of health and what factors may influence them to change their behaviours. The HBM provides organized assessment data about clients‟ abilities and motivation to change their health status. Health education programs can be developed to better fit the needs of clients.

The HBM assumes that health-seeking behaviour (knowledge on HIV/AIDS) is influenced by a person‟s perception of the threats stood by a health problem (the perceived risk of contracting HIV), and the value associated with the actions aimed at reducing the threat (consistent sex education on HIV). The HBM is based on the understanding that a person will take a health-related action: feels that a negative health condition can be avoided; has a positive expectation that by taking a suggested action, the negative health condition will be avoided; and believes that one can successfully take the recommended action (University of Twente, 2005).

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CHAPTER THREE

METHODOLOGY

3.1 Study Methods and Design

This was a quantitative research and employed cross-sectional study design which was used to identify the risk factors of HIV infections among adolescents in the Asokore Mampong Municipality. The study was conducted in May 2018 to August, 2019 in the Asokore Mampong Municipality, focusing on the adolescents‟ knowledge on HIV and sex education, the risky sexual behaviours associated in contracting HIV, and cultural practices which could increase adolescents‟ risk of contracting HIV.

3.2 Data Collection Techniques and Tools

Structured questionnaires were designed to extract the socio-demographic parameters as well as the students‟ knowledge on HIV and sex education, risky sexual behaviours, and cultural practices associated contracting HIV in Asokore Mampong municipality. The questionnaire administrations were conducted by the researcher personally together with three (3) experienced research assistants that were recruited and trained for the purpose of the data collection. The questionnaire administration took place in the selected communities using the local dialects of the respondents and English depending on which language the respondent is more conversant with.

The questionnaire was adapted from an unpublished thesis and tailored according to the objectives of the study (Ahiavi, 2017). The questionnaire was also structured into four sections based on the objectives of the study. The section A covered questions on relevant background information of the respondents. Section B covers questions on the knowledge of adolescents on HIV and sex education, section C cover questions on risky

sexual behaviours, whereas section D captures cultural practices which could increase adolescents‟ risks of contracting HIV in Asokore Mampong.

3.3 Study Population

All sexually active male and female adolescents of at least 10 years to 19 years and who are in form 1 to 3 in Junior High schools in Asokore Mampong Municipality were eligible for inclusion into the study.

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3.4 Study Variables

Table 3.1: Definition and Scale of Measure of Study Variables

Variables	Operational Definitions	Scale of measure
Age	Number of years at the time of the study	Ordinal
Religion	Religious belief of the respondents (Christianity, Islamic and traditional)	Nominal
Living status	Living under supervision of someone (eg. parents, Guardian)	Nominal
JHS class	Class in which respondent is in (e.g. JHS one, JHS two, or JHS three)	Nominal
Knowledge on HIV	Responses to several question including: - hearing about STIs - description of the symptoms of STDS in both men and women - state the mode of spread of STIs	Nominal
Risk factors of HIV	Responses to several questions including: - drinking of alcohol - taking of hard drugs e.g.: cocaine - having had sexual intercourse in the last 12 months - number of sex partners - use of protective measures e.g. condom - having sex with commercial sex workers	Nominal
Cultural practices	-child marriage -female genital mutilation -male circumcision -polygamy -blood ties	Nominal

Sex education	-level of knowledge -regularity	Nominal/ordinal

3.4.1 Dependent variables

3.4.1.1 Risk factors of HIV

Non-use of condom

Alcohol consumption and drug abuse

Multiple sex partners of HIV

Rape

Homosexualism

3.4.2 Independent variables

Socio-demographic (age, sex, ethnicity, religion, class level)

Knowledge (STDs, safe sex, multiple sex partners)

Sexual behaviours (use of condom, alcohol consumption and drug abuse, sex partners)

Cultural factors (child marriage, female genital mutilation, male circumcision, polygamy, blood ties)

Sex education (level of knowledge, regularity)

3.5 Inclusion and Exclusion Criteria

Actively enrolled regular students from both public and private schools whose ages were between 10years to 19 years and gave their consent to participate in the study were included and primary school pupils (1-6) were excluded in this study.

3.6 Sample Size

Eligible respondents numbering 403 were used for this study. The calculation was based on the formula put forward by Cochran and Biswas (2013) in the calculation of the sample size. Thus:

$$n = \frac{Z^2 p(1-p)}{d^2}$$

n = required sample size

Z = Confidence level of 95% = 1.96

p = The proportion of the adolescents with the attribute of interest in the study is 50% expressed in decimal = 0.5

q = probability of the event not occurring, in this case q = 1 - p q = 1- 0.5

d = Margin of error of 5% expressed in decimal = 0.05

$$n = \frac{1.96 \times 0.5(1-0.5)}{(0.05)^2}$$

$$n = \frac{0.9604}{0.0025}$$

n = 384.16

n = 384 (the actual sample size)

Adding a 5% non – response rate: $\frac{5}{100} \times 384 = 20$

n = 384 + 20 = 404

Hence, the determined sample size was 404.

3.7 Sampling Technique

A simple random sampling technique using lottery method to select the final participants for the study was used to reduce selection bias. A total of 403 participants were recruited into this study. The municipal has six educational circuits (Asawasi North, Adukrom, Asawasi South, Aboabo, Sepe, and Asokore mampong). A random selection of two circuits was done (Asokore Mampong and Adukrom). Asokore Mampong circuit has 17 schools and Adukrom circuit has 11 schools. Using the probability proportional to size, 243 students were selected from Asokore Mampong circuit and 160 students were selected from Adukrom circuit. In the selected schools, students were selected based on the probability proportional to size of sex and also the students‟ population in the three levels of JHS (i.e. JHS one, two and three). Students‟ names in each class were compiled and the representative sample was randomly chosen by calling students to pick from a pre-coded pieces of papers.

3.7.1 Asokore Mampong Circuit – 243 participants

Table 3.2: Junior High School data for the 2017 /2018 academy year at Asokore Mampong Circuit

Name of School	**Population size JHS 1 to JHS 3**	**Males**	**Females**	**Number of participants recruited**
Asokore Mampong M/A JHS	92	34	58	**92**
Passion International school	96	40	56	**32**
Parkoso R/C JHS	88	44	44	**25**
Owusuwaa Memorial school	27	14	13	**10**
Better Future International School	38	19	19	**12**
Leebon Educational complex	46	12	34	**15**
Christ Revolutary International school	112	43	69	**36**

The Best Child International school	103	52	51	**21**
Total	**515**	**258**	**344**	**243**

3.7.2 Adukrom Circuit – 160 participants

Table 3.3: Junior High School Data for the 2017 /2018 Academy Year at Adukrom Circuit

Name of School	**Population Size JHS 1 to JHS 3**	**Males**	**Females**	**Number of participants recruited**
Holy Spirit preparatory JHS	64	31	33	**21**
Saddick International school	42	20	22	**13**
Glory Baptist International JHS	49	25	24	**16**
Akrom M/A JHS	91	39	52	**24**
Grace preparatory school	32	16	16	**10**
Adukrom St. Paul JHS	142	79	63	**45**
New Generation International school	28	18	10	**10**
Adukrom Nuriya Islamic school	36	13	23	**11**
Future stars Academy	20	10	10	**10**
Total	**504**	**233**	**243**	**160**

3.8 Pre-Testing

Pre-testing of the data collection tool was carried out with 50 adolescents in JHS in the Manhyia that boarders with Asokore Mampong municipality. The participants were randomly selected. This was to assess the logical sequence of the questions on the questionnaires and the feasibility of the study design and the data processing, analysis

and the possible snags. The pre-testing acknowledged that the reaction of the respondents to questions related to sensitive issues such as sexual intercourse and experiences. Their responses were included in the final design and procedure for the study**.**

3.9 Data Handling

Prior to data feeding, the questionnaires were checked and edited for any errors. Data were fed into code book after which cleaning and analysis were carried out by exporting to Stata 14.0. The data analysis was undertaken using descriptive methods and binary logistic regression model to identify the risk factors of HIV.

Descriptive data analysis was done for variables such as socio-demographic characteristics, knowledge on HIV (STDs, safe sex, preventive methods), sexual behaviours (use of condom, alcohol consumption and drug abuse, multiple sexual partners), cultural factors (child marriage, female genital mutilation, male circumcision and polygamy blood ties) and level of knowledge on sex education (level of knowledge, regularity). The Mean, Frequency, Percentages, Cross tabulation and Chi-square test of association were used.

3.10 Ethical Statement

In view of the fact that the study was carried out on humans, ethical approval was sought from KNUST Ethics Committee before the study was conducted. The proposal of this study was approved by School of Public Health, KNUST, following introductory letter issued for the implementation. The municipal educational office gave its consent to the implementation of the study. Moreover, the purpose of the study was explained to adolescents who attend JHS in the Asokore Mampong Municipality.

3.11 Study Limitations

Holidays of long vacation for JHS schools caused a delay in data collection and form three students were excluded from the data collection.

3.12 Assumptions

Respondents provided exact and accurate information on each subject matter. Most of the respondents were not able to recollect intensely their experiences and provided them. The study design and the data collection tool were accurate in capturing the required data.

3.13 Data Analysis

Data were coded and entered using MS Excel version 2010 for Windows and then exported to Stata version 14.0 for analysis. The mean, standard deviation and percentages and cross tabulation were used for descriptive analysis of sociodemographic characteristics of study participants. To assess the adolescent knowledge on HIV and sex education, risky sexual behaviours and perceived cultural practices. Correct answer on the knowledge question of the questionnaire attract 2 marks, incorrect answer attracted 0 mark. Total cumulative score of 60% and above is regarded as good knowledge, 59% and below was is regarded as poor knowledge (Faremi et al, 2014).

Multiple logistic regression was performed to examine the simultaneous effects of multiple factors whilst controlling the effects of confounding factors. Univariate logistic regression analysis was used to compare the associations between the outcome variable (risk factors of HIV) and independent variables such as age, class level, religion, sex of the student, knowledge, risky sexual behaviours and perceived cultural

practices. Crude and adjusted Odd Ratio (OR) and 95% Confidence Interval (CI) and p-values were computed.

The fitness of the logistic model was assessed using the Pearson‟s chi-squared goodness-of-fit test, The Fisher‟s exact was only used for tables in which the cell is less than 5 percent. To form the best fitting model which is parsimonious but biologically sound, variables with $p < 0.25$ from the Univariate analysis, variables that risk factors of HIV as well as variables that had a significant association variable that risk factors of HIV were all included into the multivariate model. (Apanga & Awoonor-williams, 2018).

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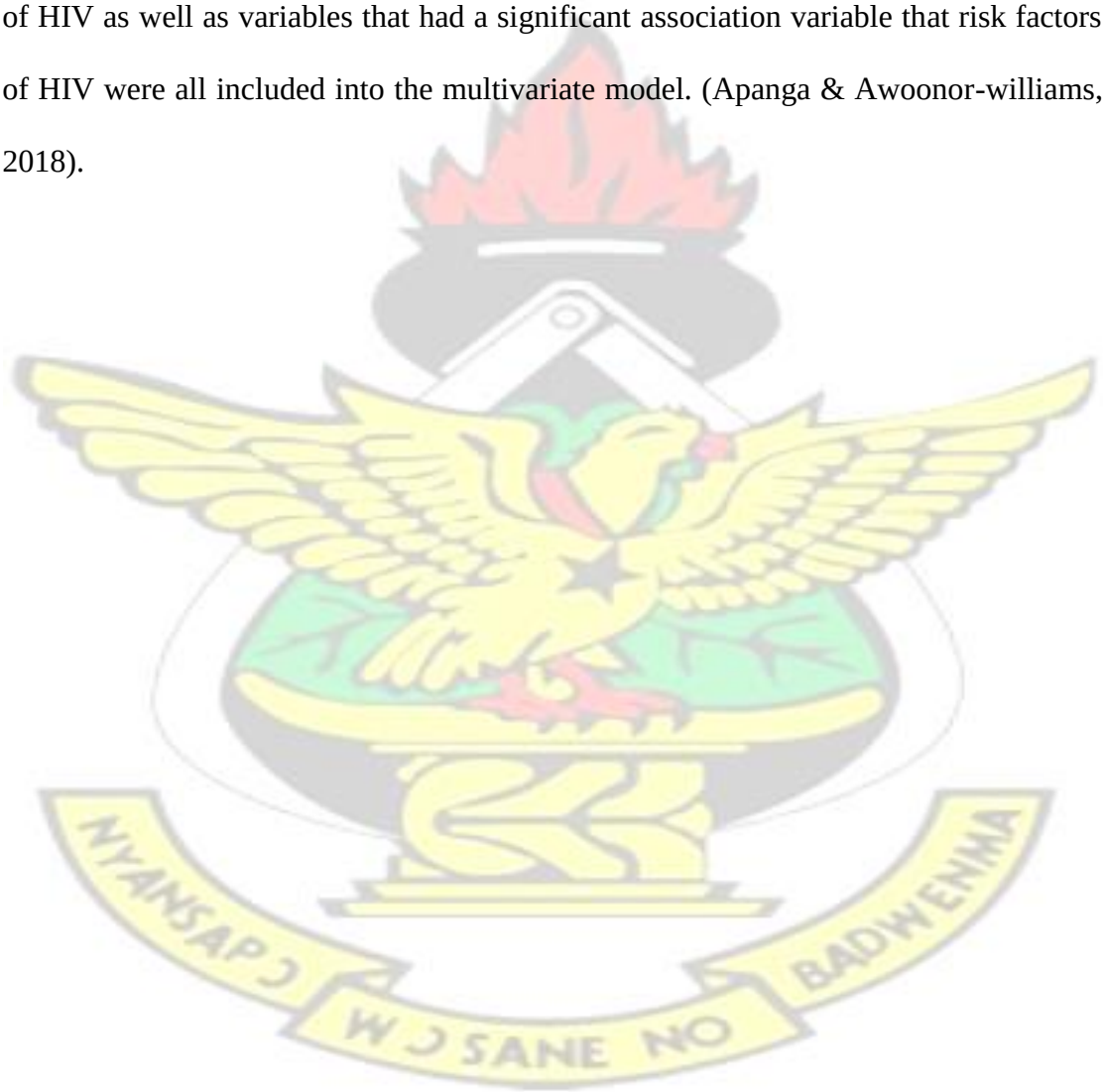

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the findings of the study. All tables in this chapter are computed from data collected from the field (Asokore Mampong Municipal Junior High Schools). This is based on the responses of the four hundred and three adolescents who were asked questions to identify the risk factors for HIV infections among adolescents in the Asokore Mampong Municipality of the Ashanti Region of Ghana.

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4.1 Demographic profile of respondents

Table 4.1: Socio-demographic Characteristics

Variables	N=403	Percent (%)
Circuit		
Asokore Mampong	243	60.3
Adukrom	160	39.7
Age of Respondents 10-14	212	52.6
15-19	191	47.4
Class JHS 1	60	14.9
JHS 2	259	64.3
JHS 3	84	20.8
Religion Christian	327	81.1
Islam	52	12.9
Traditional	11	2.7
No religion	13	3.2
Ethnicity Akan	272	67.5
Ga	39	9.7
Ewe	30	7.4
Dargaati	27	6.7
Kusasi	14	3.5
Frafra	15	3.7
Others	6	1.5
Whom they are staying with		
Mother Only	72	17.9
Father Only	56	13.9
Both Parents	208	51.6
Guardian	30	7.4
Friend	3	0.7
Alone	5	1.2
Relative	29	7.2

Source: Field work, 2018

From Table 4.1, majority of the respondents 243 (60.3%) who participated in this study were from Asokore Mampong circuit. Few of the respondents 160 (39.7%) who participated in this study were from Adukrom circuit. Most of the respondents 191

(47.4%) who participated in this study indicated that they were aged 15 to 19 years old. A high number of the respondents 327 (81.1%) who participated in this study were Christians. Most of the respondents 272 (67.5%) were Akans, and it was also indicated that most 208 (51.6%) of the respondents were staying with both parents.

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4.2 Association of socio-demographic characteristics, knowledge and education on HIV/AIDS

Table 4.2: Socio-demographic characteristics, knowledge and education on HIV/AIDS

	Age		P value	Class			P value
Variables	**10-14**	**15-19**		**JHS 1**	**JHS 2**	**JHS 3**	
Have you heard of HIV/AIDS							
Yes	113 (50.2)	112 (49.8)	0.281	41 (18.2)	112 (49.8)	72 (32.0)	<0.001
No	99 (55.6)	79 (44.4)		19 (10.7)	147 (82.6)	12 (6.7)	
Where did you hear it from							
Internet	103 (54.5)	86 (45.5)	0.090	28 (14.8)	127 (67.2)	34 (18.0)	*0.018
School	20 (40.8)	29 (59.2)		7 (14.3)	31 (63.3)	11 (22.4)	
Television	64 (48.9)	67 (51.1)		22 (16.8)	71 (54.2)	38 (29.0)	
Home	8 (66.7)	4 (33.3)		0 (0.0)	12 (100.0)	0 (0.0)	
Hospital	6 (100.0}	0 (0.0)		3 (50.0)	3 (50.0)	0 (0.0)	
Magazines	7 (70.0)	3 (30.0)		0 (0.0)	9 (90.0)	1 (10.0)	
Textbooks	1 (100.0)	0 (0.0)		0 (0.0)	1 (100.0)	0 (0.0)	
What is HIV/AIDS							
A disease	32 (34.8)	60 (65.2)	*0.006	14 (15.2)	33 (35.9)	45 (48.9)	<0.001
A virus	1 (100.0)	0 (0.0)		14 (15.4)	71 (78.0)	6 (6.6)	
Causative agent of AIDS	52 (57.1)	39 (42.9)		0 (0.0)	10 (83.3)	2 (16.7)	

Human immune virus	5 (41.7%)	7 (58.3)		8 (12.7)	52 (82.5)	3 (4.8)
How is HIV transmitted						
Sharing Razor Blades	129 (47.3)	144 (52.7)	0.015	46 (16.8)	158 (57.9)	69 (25.3)
Bathing in the same water with an HIV positive person	5 (100.0)	0 (0.0)		1 (20.0)	4 (80.0)	0 (0.0)
Receiving Blood transfusion infected with HIV	75 (63.0)	44 (37.0)		11 (9.2)	95 (79.8)	13 (10.9)

From table 4.2, majority of students in JHS 2 representing 112 (49.8%) indicated that they have heard about the disease called HIV/AIDS. There was a significant difference when it comes to class of students and hearing about the disease $x^2 = 50.9$, p value = 0.000. However, there was no significant difference between hearing about HIV/AIDS and the age of respondents, $x^2 = 1.16$, p value = 0.281. Majority of the students 127 (67.2%) in JHS 2 indicated the internet as their primary source of hearing about HIV/AIDS. There was a significant difference between source of hearing about the disease and class of respondents $x^2 = 27.15$, p value = 0.018. On the contrary, there was no significant difference between age and source of hearing about the disease $x^2 = 12.32$, p value = 0.090. When it came to the understanding of what HIV/AIDS was, majority of students between 15-19 years representing 60 (65.2%) indicated it as a disease likewise majority 45 (48.9%) in JHS 3 indicated as same. However, there was a statistical difference between knowing what HIV/AIDS was among age and class of students, $x^2 = 19.7$, p value = 0.006; $x^2 = 83.9$, p value = 0.000 respectfully. Majority of students 144 (52.7%) between 15-19 years indicated that HIV/AIDS was transmitted through sharing of razor blade likewise majority of students 158 (57.9%) in JHS 2 indicated same.

4.3 Association of socio-demographic characteristics and common cultural practices on HIV/AIDS

Table 4.3: Socio-demographic characteristics and common cultural practices on HIV/AIDS

	Age		P value	Class			P value
	10-14	15-19		JHS 1	JHS 2	JHS 3	
Variables							
Common cultural practices in your community							
Early child marriage	57 (55.9)	45 (44.1)	0.420	12 (11.8)	72 (70.6)	18 (17.6)	0.213
Polygamy	54 (50.9)	52 (49.1)		15 (14.2)	65 (61.3)	26 (24.5)	
Male circumcision	66 (49.3)	68 (50.7)		19 (14.2)	84 (62.7)	31 (23.1)	
Female genital mutilation	8 (44.4)	10 (55.6)		1 (5.6)	14 (77.8)	3 (16.7)	
Blood tie/covenant	4 (44.4)	5 (55.6)		3 (33.3)	5 (55.6)	1 (11.1)	
Others	23 (67.6)	11 (32.4)		10 (29.4)	19 (55.9)	5 (14.7)	
Has any cultural practices exposed you to blood contact or bodily fluids							
Yes	91 (51.1)	87 (48.9)	0.474	29 (16.3)	114 (64.0)	35 (19.7)	0.532
No	61 (55.5)	49 (44.5)		13 (11.8)	72 (65.5)	25 (22.7)	

Source: Field work, 2018

*Note: *Indicates significance at p < 0.05, all numbers in brackets are in percentages*

From table 4.3, majority of students representing 68 (50.7%) aged between 15-19 years indicated the most common cultural practices in their communities was male circumcision likewise majority of students 84 (62.7%) in JHS 2 indicated same. There was no statistical difference between common cultural practices in student communities

among age and class of students, $x^2 = 4.97$, p value = 0.420; $x^2 = 13.20$, p value = 0.213 respectfully. Also, majority of students representing 91 (51.1%) aged between 10-14 years indicated that cultural practices in their communities had exposed them to blood contact or bodily fluid likewise majority of students 114 (64.0%) in JHS 2 indicated same. There was no statistical difference between common cultural practices in student communities that exposed them to blood contact or bodily fluid among age and class of students, $x^2 = 0.512$, p value = 0.474; $x^2 = 1.26$, p value = 0.532 respectfully.

4.4 Summary of logistic regression of the associated factors on HIV/AIDS among respondents

Table 4.4: Respondents socio demographic characteristics and its association with knowledge on HIV/AIDS using bivariate and multivariate logistic regression

		COR	95% CL	P value	AOR	95%CI	P value
Variables							
Age							
	10-14	1					
	15-19	1.24	0.84 - 1.84	0.28	0.77	0.48 - 1.22	0.27
Class							
	JHS 1	1			1		
	JHS 2	0.35	0.19 – 0.64	0.001	0.38	0.21 -0.69	0.002
	JHS 3	2.78	1.23 – 3.72	0.014	3.39	1.39 – 8.23	0.007

Table 4.4 displays the socio-demographic characteristics and its association with knowledge on HIV/AIDS using bivariate and multivariate logistic regression to estimate the odds ratio, adjusted odd ratio and 95% confidence interval. The crude odds ratio of students aged between 15 -19 years was 1.24 times more as compared to those students aged between 10 -14 years in terms of their knowledge on HIV/AIDS, but there was no statistical association between age and knowledge on HIV/AIDS (COR = 1.24,

95% CI =0.84 – 1.84, p value = 0.28). After adjusting for age and class, the adjusted odd ratio of students in class (JHS 3) was 3.39 times more as compared to those students in class (JHS 1) in terms of knowledge on HIV/AIDS (AOR = 3.39, 95% = CI = 1.39 – 8.23, p value = 0.007). Thus, there was a statistically significant association between class and knowledge on HIV/AIDS.

Table 4.5: Respondents socio demographic characteristics and its association with risky behaviours on HIV/AIDS using bivariate and multivariate logistic regression

	COR	95% CL	P value	AOR	95%CI	P value
Variables						
Age						
10-14	1			1		
15-19	0.79	0.49 – 1.29	0.36	0.99	0.58 – 1.69	0.97
Class						
JHS 1	1			1		
JHS 2	1.01	0.52 – 1.97	0.97	1.01	0.51 – 1.99	0.97
JHS 3	0.49	0.20 – 1.18	0.11	0.49	0.19 – 1.29	0.15

Table 4.5 displays the socio-demographic characteristics and its association with risky sexual behaviours on HIV/AIDS using bivariate and multivariate logistic regression to estimate the odds ratio, adjusted odd ratio and 95% confidence interval. The crude odds ratio of students aged between 15 -19 years is reduced by 21% as compared to those students aged between 10 -14 years in terms of ever having sex on HIV/AIDS, but there was no statistical association between age and ever having sex on HIV/AIDS (COR = 0.79, 95% CI =0.49 – 1.29, p value = 0.36). After adjusting for age and class, the adjusted odd ratio of students in class (JHS 3) was reduced by 51% as compared to those students in class (JHS 1) in terms of ever having sex on HIV/AIDS (AOR = 0.49, 95% = CI = 0.20 – 1.18, p value = 0.11). Thus, there was no statistically significant association between class and ever having sex on HIV/AIDS.

Table 4.6: Respondents socio demographic characteristics and its association with cultural practices on HIV/AIDS using bivariate and multivariate logistic regression

		COR	95% CL	P value	AOR	95%CI	P value
Variables							
Age							
	10-14	1			1		
	15-19	1.17	0.75 – 1.81	0.48	1.38	0.84 – 2.29	0.21
Class							
	JHS 1	1			1		
	JHS 2	0.72	0.36 – 1.40	0.33	0.66	0.33 – 1.30	0.24
	JHS 3	0.65	0.30 – 1.41	0.28	0.51	0.22 – 1.21	0.13

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Table 4.6 displays the socio-demographic characteristics and its association with common cultural practices on HIV/AIDS using bivariate and multivariate logistic regression to estimate the odds ratio, adjusted odd ratio and 95% confidence interval. The crude odds ratio of students aged between 15 -19 years is 1.17 times more as compared to those students aged between 10 -14 years in terms of their exposure to common cultural practices on HIV/AIDS, but there was no statistical association between age and exposure to common cultural practices on HIV/AIDS (COR = 1.17, 95% CI =0.75 – 1.81, p value = 0.48). After adjusting for age and class, the adjusted odd ratio of students in class (JHS 3) was reduced by 49% as compared to those students in class (JHS 1) in terms of exposure to common cultural practices on HIV/AIDS (AOR = 0.51, 95% = CI = 0.22 – 1.21, p value = 0.13). Thus, there was no statistically significant association between class and exposure to common cultural practices on HIV/AIDS.

Results from the logistic regression shows that, socio-demographic factors such as age (p=0.385), religion (p=0.435), class (p=0.615), were not found to be associated respondent‟s perceived of having HIV , level of knowledge of perceived risk of HIV

were found not statistically significantly associated with the perceived risk of having HIV which indicated no significant influence(p=0.770) on perceived risk of HIV.

Respondents who indicated that they had ever had sex had a significantly (p = 0.016) higher perceived risk of having HIV. This is represented on the table below.

Table: 4.7 shows Multivariate analysis of factors influencing Risk of HIV

Variables	Risk of HIV	No Risk of HIV	AOR (95% CI)	P value
Age				
10-14	147 (37.41)	31 (13.74)	1	
15-19	150 (38.17)	26 (10.43)	0.75 (0.42-1.52)	0.39
Class				
JHS 1	34 (8.48)	8 (6.48)	1	
JHS 2	204 (50.87)	40 (13.22)	0.80 (0.34-1.88)	0.62
JHS 3	65 (16.21)	12 (4.74)	0.67 (0.24-1.86)	0.45
Level of Knowledge on HIV risk				
Good knowledge	218 (54.09)	94 (23.43)	1	
Poor knowledge	59 (13.53)	32 (8.95)	1.09 (0.59-2.05)	0.77
Ever had sex (ref =no) Yes	86(21.3)	37 (9.0)	2.32 (1.274 – 10.301)	0.02

CHAPTER FIVE

DISCUSSION

5.0 Demographic Characteristics

Most of the respondents 191 (47.4%) who participated in this study indicated that they were aged 15 to 19 years old with the mean age being 14.50. A high number of the respondents 327 (81.1%) who participated in this study were Christians. Most of the

respondents 272 (67.5%) were Akans, and it was also indicated that most 208 (51.6%) of the respondents were staying with both parents. These results affirm the study which states that adolescence, a stage such as that of students of JHS, is an important stage of life for establishing healthy behaviours, attitudes, and lifestyles that contribute to current and future health (Adjaloo, 2001). Adolescents‟ lack of knowledge on early sexual development and reproductive health poses a risk through unprotected sex in young people. This is reflected in disproportionately high rates of STD infection (Clark *et al.,* 2002).

5.1 Knowledge on HIV and Sex Education

Majority of students in JHS 2 representing 112 (49.8%) indicated that they have heard about the disease called HIV/AIDS. Majority of the students 127 (67.2%) in JHS 2 indicated the internet as their primary source of hearing about HIV/AIDS. When it came to the understanding of what HIV/AIDS was, majority of students between 1519 years representing 60 (65.2%) indicated it as a disease likewise majority 45 (48.9%) in JHS 3 indicated as same. However, there was a statistical difference between knowing what HIV/AIDS was among age and class of students, $x^2 = 19.7$, p value = 0.006; $x^2 = 83.9$, p value = 0.000 respectfully. Majority of students 144 (52.7%) between 15-19 years indicated that HIV/AIDS was transmitted through sharing of razor blade likewise majority of students 158 (57.9%) in JHS 2 indicated same. There was a statistical difference between students knowing what the route of HIV/AIDS transmission was among age and class, $x^2 = 14.2$, p value = 0.015; $x^2 = 26.3$, p value = 0.003 respectfully. Also, majority of students 158 (60.1%) between the age group 10-14 years indicated sex education to be teachings about sex likewise majority of students 200 (76.0%) in JHS 2 indicated same. There was a statistical difference between students knowing sex

education to be teachings about sex among age and class of respondents, $x^2 = 31.24$, p value = 0.000; $x^2 = 105.3$, p value = 0.000 respectfully.

This is significant as it totally agrees with a study which states that Acquired Immune Deficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency Virus (HIV). The virus works by destroying the body‟s immune system, thereby paving the way for a wide range of opportunistic infections like pneumonia, tuberculosis, thrush, herpes, chronic diarrhoea, and Kaposi‟s sarcoma to attack the person, eventually resulting in death (Ghana AIDS Commission, 2005a; Ghana AIDS Commission, 2004; National AIDS/STI Control Programme, 2001a).

Some of the respondents (74.2%) who answered this question on when does HIV person show signs for HIV stated the signs and symptoms of HIV which showed a strong significance as the same signs and symptoms were realized in a study by National AIDS/STI Control Programme (2014) which states some of the signs and symptoms of AIDS include prolonged fever (lasting more than one month); prolonged and chronic diarrhoea (lasting over a month), significant weight loss (over a period of time and more than ten percent of body weight), persistent cough for more than one month, persistent skin infections, aggressive skin cancer (Kaposi Sarcoma), oral thrush (candidiasis), recurrent shingles (“Ananse”), enlargement of the lymph glands, and tuberculosis. 37.7% of the respondents answered the question on some of the early signs as more than one as stated in the above study, with a very strong significance.

The National HIV Prevalence amongst pregnant women attending antenatal clinic in 2016 was 2.4%, while transfusion by blood and blood products account for less than 2% (Ghana AIDS Commission, 2016). Between 94% and 96% of HIV infections are caused by the HIV-1 strain (Concern Worldwide, 2003; Family Health International,

2005; Ghana AIDS Commission, 2005a; National AIDS/STI Control Programme, 2001a).

Majority of students 163 (54.0%) between the age group 10-14 years indicated sex education had led to a change in their lifestyle likewise, majority of students 208 (68.9%) in JHS 2 indicated same. However, majority of students 182 (50.6%) between age group 15-19 years indicated that they hadn"t exchanged sex for any gift likewise majority of students 226 (62.8%) in JHS 2 indicated same.

The important role of the school as an institution serving society and its important role in the prevention of HIV infection emerged very clearly in this study (Van den Berg, 2004). Sex education programs are usually school-based (Askew *et. al.*, 2004). Under the sex education, peer education is possibly the most elusive programme concept. Young person reaching out to each other with information as friends is logical and appealing, but has been subject to little evaluation (Van den Berg, 2004). Most of the respondents (74.5%) said sex education was organised in their schools once a month and most of them (74.9%) said the sex education changed their lifestyles and explained that it has advised them to abstain from sex.

5.2 Risky Sexual Behaviour

Most of the respondents (80.1%) who answered this question on what they understand by having sex said sex is the penetration of the male sex organ into the female sex organ and 86.7% of the respondents also indicated that they had ever had sex. Of the entire respondents, 13.4% who answered this question on the number of times they had sex the past year indicated within the range of 1 to 5 times while 85.6% of them further explained that they had had one sex partner. This result affirms a study which states that it is not uncommon to find adolescents engaging in sexual intercourse at an early

age, having multiple sexual partners, unprotected sexual intercourse and unsafe abortions (Ogbada, 2013). Risky sexual behaviours are a characteristic of the adolescence phase of life, a normal phase of human development characterized by heightened curiosity, experimentation and exploration of the ideals of life which include sexuality (Steingber, as cited in Krugu, 2016). Another study in the mid1990s in 56 communities in rural Rakai District, Uganda, found that the risk of HIV infection doubled for adolescent women with male partners who were ten or more years older than they were, compared with women whose partners were closer in age (Kelly & Gray, as cited in Bankole *et al.*, 2004).

Most of the respondents (93.1%) said they had ever used condoms, which is very significant, and it is affirmed by a finding which states condom use at first sex was more common among women aged 15-19 than among those aged 20-24, although the opposite was the case among men. It was also more common among young women and men who have never married, those residing in urban areas, and young men and women living in Greater Accra and the Volta Region (GDHS, 2003).

Majority of the respondents (92.6%) who answered the question on where they got the condoms from responded that they got it from pharmacy. 98.8% of the respondents also answered the question on the number of times they have used the condom and they answered ranging from 1 to 5 times. 97.0% of the respondents said they know there is something called female condom. Most of the respondents (90.1%) who answered the question on whether female condoms can help decrease a woman‟s chance of getting HIV responded „Yes‟ to that fact. 83.6% of the respondents also answered the question on whether they have exchanged money (gift) for sex and they said that they had never done that before. This disagrees with a study which found that some poor adolescent

women engage in transactional sex, exchanging sex for money or gifts such as soap, perfume, meals, jewellery, school fees and help to their families. Once in these relationships with teachers, drivers, shopkeepers or even policemen, girls have little power to negotiate the use of condoms. Forced vaginal penetration as it occurs during rape could cause abrasions and cuts that can allow the HIV virus to cross the vaginal wall more easily (UNGASS, 2001). Also a study of another pattern of sexual behaviour that has implications for HIV/AIDS is low levels of condom use. Studies show that although many people are aware of condoms, only a few people actually use them. In the 2003 GDHS, only 22% of women and 37% of men aged 15-24 years reported condom use at first sex. It also rose steadily and dramatically with increasing education and wealth quintile among both young women and men (GSS & ORC Macro, 2004).

5.2.1 Alcohol Consumption and Drug Use

Majority of students 164 (50.6%) between the age group 15-19 years indicated to have taken alcohol before likewise majority of students 196 (60.5%) in JHS 2 indicated same. Also, majority of students 184 (50.5%) aged between 15-19 years indicated not to have used any aphrodisiac before likewise majority of students 229 (62.9%) in JHS 2 indicated same. There was a statistical difference between students taken of aphrodisiac among age and class of respondents, $x^2 = 15.02$, p value = 0.000; $x^2 = 8.92$, p value = 0.012 respectfully.

The above result disagrees with the finding that some of the risky behaviours such as alcohol consumption are now rife among adolescents. Risk-taking sexual practices have become a common practice among young people (Achigibah, 2018).

5.3 Cultural Practices Associated with HIV

Majority of students representing 68 (50.7%) aged between 15-19 years indicated the most common cultural practices in their communities was male circumcision likewise majority of students 84 (62.7%) in JHS 2 indicated same. The above finding confirms the finding which says cultural practices of early marriage and female circumcision expose girls to high HIV risks (UNICEF, 2002). Both female and male circumcision can be risk factors for HIV/AIDS through sharing of knives and casual sex during initiation ceremonies (Neema, Musisi, & Kibobo, 2004; Rivers & Aggleton, 2001). However, once completed, male circumcision may reduce the risk of HIV infection, a factor attributed to the removal of the foreskin, which contains a high density of HIVspecific cellular targets (Auerbach, Hayes & Kandathil, 2006). In the United States, one study found that uncircumcised homosexual men had a twofold increased risk of HIV infection (Newman, 2004). A study in South Africa also found that circumcised men were at least 60% less likely to become infected than uncircumcised men (UNAIDS/WHO, 2005).

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter deals with the summary of the findings of the study based on the objectives of the study, conclusion drawn from it and the recommendations made to improve further knowledge on HIV among adolescents.

6.1 Summary

The study was conducted at Asokore Mampong Municipality in the Ashanti Region of Ghana. It sought to find out the risk of HIV infections among adolescents.

It was concluded that most of the respondents were aged 10 – 14 years old, Christians, Akan and belonged to the class of JHS 2, which agrees with most of the literatures reviewed in the discussion to support this results.

It was noticed that majority of the respondents had heard of HIV and got to know all they know from various sources but not particularly from one source. They defined HIV as sexually transmitted disease that is caused by virus and gave the full meaning of the acronym for HIV as human immunodeficiency virus. Most of the respondents knew the signs and symptoms of HIV and stated most the early signs as more than one which corresponded with most the previous researches. It was also realized that a significant number of respondents were able to identify more than one of the modes of transmission.

It was ascertained that majority of the respondents had had no sort of sex education and that they heard about sex education from more than one source. Most of the respondents indicated that sex education involves the teachings about sex and also, some of the respondents indicated that they heard of sex education from someone outside school to educate them on HIV, adding that the educator was from the Ministry of Health.

6.2 Conclusion

The study concluded that most of the respondents said sex education was organised in their schools for them once a month and most of them indicated that the sex education changed their lifestyles and has advised them to abstain from sex, which shows a step in the right direction of preventing STDs among adolescents.

The study demonstrated that the respondents understood what is meant by having sex and it was indicated that sex is the penetration of the male sex organ into the female sex organ.

The study found out that most of the respondents said they do know whether one can get HIV through oral sex while some of them also indicated that one can get HIV through anal sex and added that the likelihood of one to get HIV through deeply kissing with an infected person is extremely high. Most of the respondents said they had ever used condoms and also indicated that they bought it from pharmacy. Majority of the respondents said the number of times they had used the condom through every sexual activity they had ever undergone ranges from 1 to 5 times and also said they know there is something called female condom. It was also indicated by most of the respondents that female condoms can help decrease a woman‟s chance of getting HIV. The respondents again said they had sex in exchange for money (gift) before.

It was concluded that a large number of the respondents do take alcohol (have they tasted it) and a hand full of the respondents said they had ever taken aphrodisiac for the sexual activities. They further made it clear that after using it, they enjoyed their sexual intercourse.

It was realized that male circumcision is the common cultural practice in the community and most of the respondents agreed to the fact that male circumcision exposes blood contact or body fluid because of the excessive bleeding.

6.3 Recommendations

There should be more of the sex education programs organized by Ghana Aids Commission for adolescents more frequently (other than once a month) on the basis

that it will serve as a reminder for them to always put in check their sex behaviours and other unhealthy lifestyles such as the consumption of alcohol and aphrodisiacs.

Sex education programs organized for adolescents should not just teach them the bases of sex; instead, it should engulf the detail of what sex is really about, and the consequences of unprotected sexual intercourse with others notwithstanding their HIV status being known or unknown.

There is the need for parents to also enlighten their adolescents of what is termed „sex talk" as done in other developed countries. In these cases, adolescents would know how essential it is because it is being talked to them and advised on both in school sex education programs and even at home. Also, most adolescents trust whatever comes out of the parents" or guardians" mouth always so it would be best if these people are also involved in sex talk or education with them.

Although most of the respondents in the study indicated the need to abstain from sex at that age, condom use should also be promoted by Ghana Health Service in as much as there would be some that cannot control themselves to abstain from sex no matter what is at stake.

There should be programs organized on any form of media (being it radio, television and others) on the basis that equipment used in male circumcision should be sterilized properly under the standard heat before use to help prevent the spread of HIV by that singular act.

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APPENDIX A

QUESTIONNAIRE

RISK OF HIV INFECTIONS AMONG ADOLESCENTS IN ASOKORE MAMPONG MUNICIPALITY, KUMASI - GHANA Circuit ……... School …… Interviewer ID

I am a final year student of School of Public Health (Department of Health Education and Promotion) of Kwame Nkrumah University of Science and Technology (KNUST) conducting research on risk of HIV infections among adolescents in Asokore Mampong Municipality.

Participation in this study is voluntary. I will much appreciate your participation. I want to assure you that the information that would be obtained from this questionnaire is for the purpose of educational research, and no part of it would be used for any other purpose without your permission. For the purpose of confidentiality and anonymity, you do not have to write your name on any part of the questionnaire.

INSTRUCTION: tick your answer in the box provided or fill in the gap provided.

Circuits	**Code**
Asokore Mampong	**01**
Asokore mampong M/A JHS "A"…….....	100
Passion International school…….……..	101
Parkoso R/C JHS. ……..…….	102
Owusuwaa Memorial school……..	103
Better Future International School…….	104
Leebon Educational complex…….	105
Christ Revolutary International school……..	106
The Best Child International school……..	107
Adukrom	**02**
Holy Spirit preparatory JHS……	001
Saddick International school……..	002
Glory Baptist International JHS…….	003
Akrom M/A JHS ……	004
Grace preparatory school……	005
Twinkle star Academy……	006
New Generation International school……	007
Adukrom Nuriya Islamic school ……	008
Future stars Academy……	009

Interviewers

Interviewer 1...……..……. 01

Interviewer 2……...…… 02

Interviewer 3…….. 03

Interviewer 4……. 04

A. <u>BIOGRAPHICAL DATA</u>

1. **How old are you? (years) _____**
2. **Religion**
   O 1= Christian O 2=Islam O 3 = Traditional O 4 = No Religion
3. **Ethnicity**
   O 1=Akan O 2 = Ga O 3 = Ewe O4=Dargaati O 5 = Kusasi O 6= Frafra O 98= Other, specify _____
4. **Which class are you?**
   O 1= JHS 1 O 2 = JHS 2 O 3 = JHS 3

5. **Whom are you staying with?**
   ○ 1= Mother only ○ 2 = Father only ○ 3= Both parents ○ 4 = Guardian
   ○ 5 = Friend ○ 6= Alone ○ 7 = Relative ○ 98=Other, specify _____

A. <u>KNOWLEDGE ON HIV AND SEX EDUCATION</u>

6. **Have you heard of HIV?**
   ○ 1 = Yes ○ 2 = No **[If No, Skip to Q16]**
7. **If yes, where? (Multiple responses allowed)**
   ○ 1 =Internet ○ 2 = Friends
   ○ 3 = School ○ 4 = Hospital
   ○ 5 = Home ○ 6 = Television
   ○ 7= Newspapers ○ 8 = Magazines
   ○ 9 = Textbooks ○ 98 = Other, specify _____
8. **What is HIV?**
   _____
9. **What does the acronym stands for?**
   H
   _____
   I
   _____
   V
   _____
10. **Do you know someone infected with HIV?**
    ○ 1= Knows someone with HIV/AIDS ○ 2 = Don"t know anyone with HIV/AIDS
    ○ 3 = Do you have a close relative with HIV/AIDS
11. **How quickly will someone who gets HIV show signs of being infected?**
    _____
12. **What are some of the early signs of HIV infections? (Multiple responses allowed)**
    ○ 1 = Headache ○ 2 =Fever
    ○ 3 =Tiredness ○ 4 = Swollen lymph nodes
    ○ 5 = Rashes ○ 6= Muscle and joint pains
    ○ 7 =Diarrhoea ○ 8= Night sweats
    ○ 98= Other, specify _____
13. **How is HIV Transmitted?**
    ○ 1 = Sharing a meal with HIV patient
    ○ 2 = Having unprotected sex
    ○ 3 = Use of used needles
    ○ 4 = Infected pregnant mother to baby
    ○ 5 = Breast feeding
    ○ 6 = Mosquito bites
    ○ 7 = Sharing razor blades that have not been disinfected.
    ○ 8 = Bathing in the same water as an HIV-positive person.
    ○ 9 = Receiving a blood transfusion that has not been screened for HIV
    ○ 98 = Other, specify _____

14. Can a person get HIV if she or he is taking antibiotics?

O 1 = Yes O 2 = No O99. Don‟t know

15. Is there a vaccine that can stop persons from getting HIV?

O 1 = Yes O 2 = No O99. Don‟t know

16. Have you heard of sex education?

O 1 = Yes O 2 = No **[If No, Skip to Q24]**

17. If YES, where did you get the information from? (Multiple responses allowed)

O 1 =Internet O 2 = Friends

O 3 = School O 4 = Radio

O 5 = Home O 6 = Television

O 7= Newspapers O 8 = Hospital

O 9 = Textbooks **18.** O 98 = Other, specify _____

What is sex education?

_____

19. Has someone come from outside school to educate you on HIV?

O 1=Yes O 2= No O 99= Don‟t know **[If No, Skip to Q22]**

20. Where did the person come from?

O 1= Teachers from this school O 2= Ministry of Health

O 3= Ghana Health Service O4= NGOs

O 5= Ministry of education O6= Church

O 7= Mosque O 99 =Don‟t know.

21. How often do they organise the sex education programme in your school? O 1=Everyday O 2= Once in a week O 3= Every two weeks O 4= Once in a month O 5=Once in a term O 6= Yearly O 99= Don‟t know

22. Has the sex education changed your lifestyle?

O 1=Yes O 2= No O 99= Don‟t know

23. If yes, how?

_____

B. <u>RISKY SEXUAL BEHAVIOURS</u>

24. What do you understand by the expression having sex?

_____

25. Have you ever had sex?

O 1 = Yes O 2 = No **[If No, Skip to Q40]**

26. At what age did you have sex? (years)_____

27. Within the past one (1) year, how many times have you had sex?

_____

28. How many sex partner(s) have you ever had?_____

29. What is the age difference between you and your last sex partner?

O 1 = 1year O 2 = 2 years O 3= 3 years O 4 =4 years O 5 = 5 years O 6 = 10years O 7 = 20 years O99 = Don‟t know

30. How long ago did you start sexual relations with this person?

O 1 = within last month O 2 = within last 6 months O 3= more than 6 months ago

31. Can a person get HIV from oral sex?

O 1 = Yes O 2 = No O99. Don‟t know

32. Can someone get HIV from anal sex?

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O 1 = Yes O 2 = No O99. Don"t know

33. Are people are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV?

O 1 = Yes O 2 = No **34.** O99. Don"t know

Have you ever used condom?

O 1 = Yes O 2 = No **35.** O99. Don"t know

If YES, where did you get it from?

O 1 = Shops O 2 = Pharmacy

O 3 = Market O 4 = Hospitals / clinics

O5 = Family planning centers O 6 = Bars / guest house / hotels

O7 = Peer educator O8 = Friends

36. How many times did you use a condom?

_____

37. Is there something called a female condom?

O 1 = Yes O 2 = No O99. Don"t know

38. Can it help decrease a woman's chance of getting HIV?

O 1 = Yes O 2 = No O99. Don"t know

39. Have you ever exchanged money or goods (gifts) for sex?

O 1 = Yes O 2 = No

C. ALCOHOL CONSUMPTION AND DRUG USE

40. Have you ever tasted alcohol?

O 1=Yes O 2= No **[If No, Skip to Q46]**

41. If yes, where did you get it from?

O 1= Bought it myself O 2= Friend O 3=Sex partner O 4= Relative

42. How often do you take alcohol?

O 1 = Everyday O 2 = Once a week O 3= Twice in a week O 4 = Never

43. Have you ever used any aphrodisiac to enhance your sexual drive?

O 1 = Yes O 2 = No O99. Don"t know

44. If yes, what was it?

_____

45. How effective was the aphrodisiac?

_____

D. CULTURAL PRACTICES ASSOCIATED WITH HIV

46. Which of the following cultural practices is common to your community?

O1 = Early child marriage O2 = Polygamy

O3 = Male Circumcision O4 = Female genital mutilation

O5 = Blood tie/ blood covenant O98 =Other, specify _____

47. Do you think any of the cultural practices exposed you to blood contact or body fluids?

O 1=Yes O 2= No O 99=Don"t know

48. If yes, how?

_____

THANK YOU FOR TAKING PART