

**ASSESSMENT OF KNOWLEDGE AND ATTITUDE OF
SEXUAL RISK BEHAVIOUR AMONG SENIOR
SECONDARY SCHOOL STUDENTS IN BAUCHI STATE**

BY

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**A THESIS SUBMITTED TO THE DEPARTMENT OF HUMAN
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NOVEMBER, 2018

DECLARATION

I declare that the work in the dissertation entitled, “**Assessment of Knowledge and Attitude of Sexual Risk Behaviour among Senior Secondary School Students in Bauchi State, Nigeria**” has been written by me in the Department of Human Kinetics and Health Education under the supervision of Prof. V. Dashe and Prof. M.A. Suleiman. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at any University.

Augustine Ubandoma SONGPET

Date

CERTIFICATION

This dissertation entitled “**Assessment of Knowledge and Attitude of Sexual Risk Behaviour among Senior Secondary School Students in Bauchi State, Nigeria**” meets the regulations governing the award of degree of Master of Education in Health Education of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my entire family the Arbe family.

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ABSTRACT

The purpose for this study was to assess knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State, Nigeria. An ex post facto research design was used. A total of 76,279 constituted the number of respondents used for this study. A multi stage sampling procedure which included stratified and proportionate sampling procedures were used to draw the sample size from the senior secondary schools within the three (3) senatorial zones of the state, which are Bauchi north, Bauchi central and Bauchi south. The instrument used was a close-ended questionnaire. Three hundred and seventy eight (378) copies of the questionnaire were administered using simple random sample technique to the respondent. The data collected were analyzed using simple frequency and percentages to describe the demographic characteristics of the respondents, descriptive statistics of mean and standard deviation were used to answer the research questions. One sample t-test, independent sample t-test and ANOVA were used to test the formulated hypotheses. The finding of the study revealed that knowledge of sexual risk behaviour among senior secondary school students in Bauchi State is significant ($t = 4.120$; $p = 0.021$), attitude towards sexual risk behaviour among senior secondary school students in Bauchi State is not significant ($t = 1.341$; $p = 0.81$), demographic characteristics of the respondents such as age and gender do not significantly influence the knowledge and attitude towards sexual risk behaviour among senior secondary school students in Bauchi State. On the basis of the conclusion drawn that senior secondary school students in Bauchi state have significant knowledge of sexual risk behaviour and that attitude towards sexual risk behaviours among senior secondary school students in Bauchi State is negative. It was recommended among others that continuous education through organizing of seminars and workshops by the school management should be made to sustain and promote the knowledge the students have acquired. Enlightenment campaign should be embarked upon by both government and school authority for students to enable them overcome their negative attitude towards sexual risk behaviour.

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LIST OF ABBREVIATIONS

AIDS	-	Acquired Immune Deficiency Syndrome
ART	-	Assisted Reproductive Technology
ARV	-	Anti Retroviral Drugs
BSS	-	Behavioural Surveillance Survey
CDC	-	Center for Diseases and Control
CIA	-	Central Intelligence Agency
FGM	-	Female Genital Mutilation
HBM	-	Health Belief Model
HIV	-	Human Immuno-deficiency Virus
MDGs	-	Millennium Development Goals
NDHS	-	Nigeria Demographic Health Survey
NGO	-	Non Governmental Organization
NMCP	-	National Malaria Control Program
NMSP	-	National Malaria Strategic Plan
NPC	-	National Population Commission
SPSS	-	Statistical Package for Social Sciences
SSA	-	Sub Sahara Africa
STIs	-	Sexually Transmitted Infections (STIs)
UN	-	United Nation
UNDP	-	United Nations Development Programme

- UNESCO - United Nations Educational, Scientific and Cultural Organization
- UNFPA - United Nation Population Funds
- UNICEF - United Nations Children’s Emergency Fund
- VCT - Voluntary Testing and Counselling
- WHO - World Health Organization

OPERATIONAL DEFINITION OF TERMS

Knowledge: refers to understanding of information required by the students on sexual risk behaviour such as multiple sex partners, unprotected sex and early sexual initiation.

Attitude: is the positive or negative thinking or beliefs of secondary school students towards the perceived sexual risk behaviour.

Sexual risk behaviour: refers to having sex at an early age, having multiple sexual partners, and having unprotected sexual behaviour.

Senior Secondary School Students: refers to students or respondents who are in upper or senior level of secondary school i.e. SS I, SS II and SS III.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Sexual risk is concerned with those sexual activities that expose an individual to the possibility of contracting any sexually transmitted infections (STIs) including HIV/AIDS and unplanned pregnancies (Centres for Disease Control and Prevention, 2010). Sexual risk behaviours are commonly defined as behaviours that increase one's risk of contracting sexually transmitted infections and experiencing un-planned pregnancies (Caldwell and Orabuloye, 2009; Diala, Oluyimi, Harris and Feyisetin, 2011). These behaviours include having sex at an early age, having multiple sexual partners, having sex under the influence of alcohol or drugs and having unprotected sexual (Centres for Disease Control and Prevention, 2010).

According to Ladebo and Tanimowo (2012), sexual behavioural change is the most effective means of preventing sexual risk behaviour. In addition, Ladebo and Tanimowo (2012) further stated that the only way to prevent sexual risk behaviour is to avoid behaviour that can put an individual at the risk of contracting STIs/HIV/AIDS. Many people infected with STIs/HIV/AIDS have no signs and symptoms, as such there is no way of knowing with certainty whether a sexual partner is infected or not infected unless he/she has repeatedly tested negative and has not engaged in any sexual risk behaviour between the tests (Weiner, 2013; Adekeye, 2009). According to Caldwell and Orabuloye (2009); Diala, Oluyimi, Harris and Feyisetin (2011), the health of secondary school students is of paramount

importance, therefore, it is imperative to assess how knowledgeable they are with respect to sexual risk behaviour.

Secondary School Students at senior school level are confronted with developmental and adjustment challenges, whereby sexual issues are the most prominent challenges (Omoegun, 2008). Furthermore, majority of secondary school students overexpress their sexual desire; engage in a spectrum of sexual behaviour ranging from fantasy and self-stimulation to various forms of intercourse. Odunsaya and Bankole (2009) stated that secondary school students are often known to be adventurous and sometimes engage in lesbianism, homosexuality and sexual orgies because they want to experiment. The students who engage in sexual experimentation are at increased risk of contracting STIs/HIV/AIDS and unwanted pregnancies (Odunsaya and Bankole, 2009).

There are so many factors which contribute to students engagement in sexual risk behaviour which among others are the negative media images, the internet which promote lustful and irresponsible sexual behaviour, parental abuse, battering, social stigmatization, child abandonment and child abuse, sexual abuse, early sexual experimentation, drug and alcohol use and peer pressure to engage in adult-like activities (Peltzer and Promtussananon, 2011). However, these students may not be aware of the social and emotional implications of their sexual activities, since majority of them do not use safe sexual practices. According to Carey and Schroder (2009), sexual behaviour such as delaying initiation to sexual intercourse, choosing and respectful partners, increased use of condoms, and using

effective contraceptions among others are important public health issues which should be disseminated to secondary school students.

Secondary school students might be knowledgeable about ways to prevent sexual risk behaviour, however, this knowledge does not reflect in their attitude towards reducing these sexual risks (Odunsaya and Bankole, 2009). To reduce sexual risk behaviour and related health problems among students, the school can help students adopt life-long knowledge and attitude that support their health and wellbeing including behaviour that reduce their risk for HIV/AIDS, other STIs and unplanned pregnancies (CDC, 2010). Abstaining entirely from sexual activity will completely eliminate these risks. Assessing the knowledge and attitude of secondary school students in respect to sexual risk behaviour will contribute to sound policy making and decision making appropriate for the needs of the students. Thus, this study strive to assess the knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State, Nigeria.

1.2 Statement of the Problem

Sexual risk behaviour are global health problems that threaten human existence. These risky habits have destroyed quite a number of lives both young and old in Nigeria (Borawski, 2010). Unsafe sexual practices are still occurring with sufficient frequency due to lack of accurate knowledge on sexuality, so that sexually transmitted infections, unwanted pregnancies and abortion remain significant public health concerns. World Health Organization (2012) stated that unsafe sex was

second among the top ten risk factors in the global burden of all diseases caused globally.

The prevalence of secondary school students sexual risk behaviour has increased drastically in recent time due to lack of information and guidance about sex and sexuality (CDC, 2010). This is demonstrated clearly in their sexual behaviour where they are found in different areas of the country, along the street and secluded places at night engaging in sexual activities without the use of any protective means. Furthermore, Adamu (2015) asserted that secondary school students sexual activity in Nigeria has been on the increase since the last decade and sexual activities among unmarried students in Africa is high and also on the increase.

Secondary school students in Bauchi State are faced with the risk of unhealthy sexual behaviour such as early sexual initiation, unprotected sex and multiple sexual partners among others which are responsible for the spread of STIs including HIV/AIDS, high rate of unplanned pregnancies and abortions. This may be due to peer pressure from friends and classmates, advertisement of irresponsible sexual behaviour by the mass media. It is quite a pity that high profile promiscuity is advertised over the mass media, thereby exposing these students to wrong information about sex. Other reasons are ignorance and unwillingness of parents and teachers to address sexual health issues which increase the tendencies of students engagement in sexual risk behaviour. Open discussion of sex is frowned upon and not encouraged. Discussing sex with students is not approved and sexual education

which is supposed to help avoid sexual risk behaviour among these adolescents is opposed by some religion and culture. This situation is made worse by many parents and adults who believe that sexual health education will expose students to undesirable sexual activities.

Nayar (2011) asserted that the teaching of sexually education to students helps in delaying sexual activities and reduce the rate of sexual risk behaviour. Furthermore, the researcher stressed that sexuality education offered at the right age and time reduce the vulnerability of students to HIV and other sexually transmitted infections. Imparting proper sexual health information to students on sexual risk behaviour is important in the prevention of STIs, including HIV/AIDS because even at present, there is no known immunization or inoculation against the diseases. Proper knowledge about sex and the right attitude toward sexuality is important for healthy and happy life of students and the society at large. On the basis of these concerns this study therefore, assessed the knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State, Nigeria.

1.3 Purpose of the Study

The main purpose of this study was to assess the knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State. The specific purposes are to assess:

1. the knowledge of sexual risk behaviour such as unprotected sex, multiple sex partner and early sexual initiation among senior secondary school students in Bauchi State.

2. the attitude towards sexual risk behaviour such as unprotected sex, multiple sex partner and early sexual initiation among senior secondary school students in Bauchi State.
3. the influence of demographic characteristics of the respondents (such as age and gender) on knowledge of sexual risk behaviour among senior secondary school in Bauchi State.
4. the influence of demographic characteristics of the respondents (such as age and gender) on attitude towards sexual risk behaviour among senior secondary school students in Bauchi State.

1.4 Research Questions

The study answered the following research questions;

1. What is the knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State?
2. What is the attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State?
3. Do demographic characteristics of the respondents (such as age and gender) influence knowledge of sexual risk behaviour among senior secondary school student in Bauchi State?

4. Do demographic characteristics of the respondents (such as age and gender) influence attitude towards sexual risk behaviour among senior secondary school students in Bauchi State?

1.5 Basic Assumptions

On the basis of the available research evidence, the following basic assumptions were made;

1. the knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not good.
2. the attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not positive.
3. Demographic characteristics of the respondents (such as age and gender) do not influence knowledge of sexual risk behaviour among senior secondary school in Bauchi State.
4. Demographic characteristics of the respondents (such as age and gender) do not influence attitude towards sexual risk behaviour among senior secondary school students in Bauchi State.

1.6 Hypotheses

On the basis of the research questions, one major hypothesis and four (4) sub-hypotheses were formulated and presented as follows;

Major Hypothesis

The knowledge and attitude of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiations) among senior secondary school students in Bauchi State is not significantly positive.

Sub Hypotheses

Ho₁: Knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significant.

Ho₂: Attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significantly positive.

Ho₃: There is no significant influence of demographic characteristics of the respondents (such as age and gender) on the knowledge of sexual risk behaviour among senior secondary school students in Bauchi State.

Ho₄: There is no significant influence of demographic characteristics of the respondents (such as age and gender) on the attitude towards sexual risk behaviours among senior secondary school students in Bauchi State.

1.7 Significance of the Study

The findings of this study will go a long way to helping senior secondary school students in the following ways;

It will contribute in creating awareness among secondary school students about the risks and consequences of involving in risky sexual behaviour through the teaching of sex education in schools.

It is hoped that the results of this study will encourage the government to put to use all the formulated policies and implementation strategies to reduce or prevent widespread of sexual risk behaviour. This could be achieved through the teaching of sexuality education in all senior secondary schools in Bauchi State

The findings of this study will help the parents of students to see the relevance of sexuality education in senior secondary schools when information is passed to them during Parent Teachers Association through seminars and workshop organized by the school management. Hence, creating a positive environment for interaction with the parents, health educators and health professionals.

It will also contribute to the existing knowledge of sexuality education and enhance the development of strategies that will positively influence the attitude of senior secondary school students to take positive decision regarding sex related matters. Which can be used to develop and review school curriculum on sexuality education.

The finding of this study will be useful to health education curriculum planners to see the need of including sexuality education as a subject.

This study will help to sensitize and empower senior secondary school students on sexual issues and reduce the risk sexual behaviour. It will stimulate Bauchi state government to pay attention to prevention of sexual risk behaviour among students in the state through enlightenment campaigns to the students.

1.8 Delimitations of the Study

This study was delimited to;

1. the knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State.
2. the attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State.
3. the knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State according to their demographic characteristics.

4. the attitude of sexual risk behaviour(unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State according to their demographic characteristics.
5. Generally, the study is delimited to all the senior secondary school students in Bauchi State, Nigeria.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The main purpose of this study is to assess the knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State. In order to achieve this, available and relevant literature are reviewed and presented under the following sub-headings;

2.2 Concept of Sexual risk behaviour

2.2.1 Forms of Sexual risk behaviour

2.3. Concept of Sexual Transmitted Infections

2.4 Knowledge of Sexual risk behaviour among secondary students

2.5 Attitude toward Sexual risk behaviour among secondary students

2.6 Factors Influencing the Sexual risk behaviour among Secondary School Students

2.7 Demographic Variables and Sexual Risk Behaviour

2.8 Empirical studies

2.9 Summary

2.2 Concept of Sexual Risk Behaviour

Sexual risk behaviour are defined as sexual activities that may expose an individual to the risk of sexually transmitted infections (STIs) including HIV and unplanned pregnancies (Omoegun, 2008). Some of these behaviour include

unprotected sexual intercourse, multiple sexual partners, forced or coerced sexual intercourse and sexual intercourse for reward. However, lack of knowledge about consequences of these negative behaviour and poverty has been identified as factors that increase the chances of secondary school students engaging in risky sexual behaviour (Rothspan and Read, 2017). Secondary school students face different challenges related to their sexuality which have an influence on their perception of the world and themselves. There has been increasing public health concern about the reducing age of initiation of secondary school students into sexual activities. The rate of risky sexual behaviour and the spread of STIs continue to be on the increase due to many factors including dearth of information regarding secondary school studentssexuality. Each year, approximately one million young women aged 15 – 19 become pregnant; the vast majority of these pregnancies are unplanned. Abstaining completely from sexual activity will eliminate these risks and where abstinence choice or goal, preventive measures are imperative. WHO (2009) observed that unsafe sex was second among the top ten risk factors in the global burden of all diseases globally.

Kost and Henshaw (2012) define a risk factor as “a measurable characterisation of each subject in a specified population that precedes the outcome of interest and which can be used to divide the population into two groups (the high–risk and the low–risk groups that comprise the total population)”. The subject in this case can refer to an individual or specific groups (for example school learners), with “characterisation” also referring to the individual’s or subject’s

context. Within the current study, sexual risk behaviour refer to activities that place an individual or group directly at risk of contracting STIs.

Engelbrecht, Kriegler and Booysen (2008) found thatsexual risk behaviour as engaging in unprotected vaginal, oral or anal intercourse. Masanja and Honorati (2011) stated that risky sexual behaviour also include engaging in sexual encounters at an early age, non or inconsistent use of condoms, and multiple sex partners. These risky sexual practices are influenced by many factors including the lack of accurate information on the modes of transmission of HIV/AIDS, ignorance of own or sex partner(s)' HIV status, economic conditions, mobility and gender inequalities (Merrill, 2009),

Adekeye (2009) assert that, majority of these teenagers over express their sexual desires; engage in a spectrum of sexual behaviour ranging from fantasy and self-stimulation to various forms of intercourse. These groups of individuals are often known to be adventurous and sometimes engage in lesbianism, homosexuality, and sexual orgies because they want to experiment. It was observed that the early-maturing secondary school students s engage in early sexual experimentation than the later-maturing secondary school students. They confront their emerging sexuality at younger ages than their peers do, and are more likely to be pursued by older peers in social settings because they appear physically older than their chronological age.

Moreover, risk for early sexual experimentation is associated with other high-risk behaviour in secondary school students, including sexual abuse, drug and

alcohol use, and emotional adjustment. Peer pressure to engage in adult-like activities can encourage secondary school students to engage in various levels of sexual experimentation. Secondary school students who engage in sexual experimentation are at increased risk for sexually transmitted infections, including HIV/AIDs, pregnancy and abortions. Teenage mothers suffer a lot of complications during delivery which in most cases result in high morbidity and mortality for both mother and infants (Rothspan and Read, 2017).

Multiple sexual partnership is defined as the number of partners with whom secondary school students s had intercourse without means of protection, since having multiple sex partners without using means of protection put secondary school students at risk. So many factors are contributory to this risk behaviour, which among others are the negative media images, the internet, which promote lustful, irresponsible sexual behaviour. Again, the risky sexual behaviour are often complicated by high school dropout, parental abuse, battering, social stigmatization, child abandonment and child abuse among others.

Peltzer and Promtussananon (2011) report that the period of secondary school students coincides with sudden increase of sexual feeling which results from such factors as, physical body change, hormonal increase and the secondary school students 's necessary rehearsal for adult roles. These changes propel the intense preoccupation with sexual exploration and experimentation. These sex-crazed and hormone driven individuals get involved in a lot of high-risk sexual behaviour which are detrimental to them, their families and the society.

Engagement in sexual behaviour is considered to be a high-risk behaviour for students because of the potential physical and socio-emotional risks they present. Secondary school students may not be aware of the social and emotional implications of sexual activity, and majority do not use safe sexual practices. According to Charine and Glen-Spyron (2009), responsible sexual behaviour such as: delaying initiation of sexual intercourse, choosing caring and respectful partners, increased use of condoms, and using effective contraception among others are important public health issue which should be disseminated to these secondary school students.

2.2.1 Forms of Sexual Risk Behaviour among Secondary School Students

Unprotected sex

Rising rates of premarital sexual activity, escalating numbers of unmarried women terminating unplanned pregnancies, and increasing prevalence of HIV infection and other STIs among students are critical as they are related to risky sexual behaviour, such as unprotected sex (Mensch, Weley, Clark and Anh, 2013). Unprotected sex is related to an increased potential of contracting STDs and unwanted pregnancies (Kost and Henshaw, 2012). Approximately 19 million STDs cases were diagnosed in 2012, and 13 percent of these cases were student ages 13-24 with HIV/AIDS (Kost and Henshaw, 2012). These infection cases were in the main attributed to unprotected sex. Although already mentioned, it is important to re-state that unprotected sex is a significant contributory factor to the rising global

student pregnancy. This has huge implications relating to students dropping out of school and lowered level of educational achievement. Unprotected sex is also closely associated with alcohol and substance use. Data obtained from a study conducted among students in Southern Africa confirm this. The data revealed that drunkenness tends to reduce the likelihood of men using condoms with their steady partners as well increases their potential of engaging in sexual relationships with multiple sex partners (Mohale, 2013).

The rate of unprotected sexual activity, STIs, pregnancy and child bearing continue to be substantially high among secondary school students because many of them seem unaware that STIs can be acquired through unprotected oral and vaginal sex (WHO, 2012). In a study conducted by Astatke (2010), it was reported that prevalence of condom use among students was just above 50%. Approximately 52% of the students reported using condom 48% had sexual intercourse without using condom, putting themselves at the risk of contracting HIV and STIs including unwanted pregnancies. The study reported low level of contraception use among the students (CDC, 2010). This involuntary sexual act is typically unprotected and thus put its victims at high risk of pregnancy and STIs.

The physiological changes in reproductive organs that occurs in the life of adolescent students often serve as a motivating force in their quest to experiment with sex. Some naturally explore and take risk in many aspects of their lives including sexual relationships. Those who have sex may change partners frequently and engage in unprotected sex (CDC, 2010). Majority of secondary school students

engage in sexual activities without protection where these practices usually resulted in sexually transmitted infections including HIV/AIDS, unwanted pregnancies and unsafe abortion (Menseh, Weley, Clerk & Anh, 2003).

According to Mohammed, Suleiman and Umar (2013) many adolescent students still go about engaging in loose unprotected sex as a result of their non – challant attitude which pose a major threat in the prevention and control of HIV/AIDS and other sexually transmitted infection. World Health Organization report recently showed that many students engage in risky sexual activity without protection and most had their sexual debut through a subtle coercion by their partners which usually resulted to sexual transmitted infections and unwanted pregnancies (WHO, 2015).

In a report of a study released by institute for Health and Development communication in 2011 on unprotected sex and condom use among students in south Africa showed that the prevalence of condom use among students was just above 50% approximately 51.7% of the respondents reported using condom during their last sexual intercourse, meaning that 48.3% had sexual intercourse without using condom, putting them at the risk of contracting HIV and other sexually transmitted infections. There was no significant differences in the non-use of condom during last sexual intercourse across all the demographic characteristics considered. However, there was a higher report of non – use of condoms during last sexual intercourse among respondents who had attained secondary school education (65.8%) when compared to those with lower than secondary education. Condom

non – use was also higher amongst respondents who had received life skill or life orientation education during formal education (76.7%) when compared to those who had not. There was also a low use of contraceptions amongst the respondents. The condom was the most common used method of contraception 45.5% followed by injectable contraceptives (19.3%) and some respondents 17.6% reported not having used any contraceptive method.

Multiple sex partners

Multiple sexual partnerships are risk sexual behaviour because of their tendency to increase the risk of STD transmission through sexual networks (Berry and Hall 2009). It is therefore important to know the extent to which students are engaging in multiple sexual partnerships. Sexually transmitted diseases are often associated with sexually active students with multiple sexual partners. In agreement, Astatke (2010) asserted that 9.2% of sexually active student students in his study reported of STD and this was attributed to students` frequent contact with commercial sex workers and the use of multiple sex partners. In a similar study in 2011, the second HIV/AIDS Behavioural Surveillance Survey (BSS), about 9.9% school students were found to have had sexual experience with multiple sex partners (BSS,2011). Males were more likely to have multiple sex partners and experience early sexual initiation than females, and thus they are at an increased risk of contracting and transmitting STDS from partner to partner.

Multiple sex partners is a measure and incidence of engaging in sexual activities with two or more people within a specific time period. It can also mean that one person have a long term relationship or relationships and when the second relationship begins, the person can be send to have multiple sex partners. Sexual activity with multiple sex partners can happen simultaneously (Encyclopedia, 2013).

According to WHO (2015) students who have multiple sex partners possess a higher risk of HIV transmission than those who do not have multiple sex partners increases the risk of developing vagarious (CDC, 2016). HIV is strongly associated with having multiple sex partner. Having multiple sex partners is associated with high incidences of STIs (Teachman& Jerry, 2013). In a study conducted in Jamaica by United States Agency for International development in 2008, it was reported that one of the primary contributing factors to the HIV/AIDS epidemic is the risk behaviour of having multiple sex partners. If you or your partner have sex partner who overlap in time; your risk for getting or transmitting HIV or other sexually transmitted diseases increases. This is because the more sexual partners. You have in life time, the more likely you are to have a sex partner who has HIV or another STIx. (Cardona and Amber, 2016). STIs spread rapidly in population where people have multiple sex partners who overlap in time. This happen because newly infected person can transmit an STI to more than one uninfected partners (WHO, 2011).

Engaging in multiple sex partner relationship is considered as a sexual risk beahviour because it is responsible for the spread of STIs, HIV/AIDS. Sheff, and Elisabeth (2016). In study conducted by Massanja and Honorati (2011) in Tanzania

among secondary school students, it was reported that 81.4% of the respondents had sex with one or two sexual partners, 14% had three to four sexual partners and 5% had five and more sexual partners. The study support the facts that multiple sexual partnership exist support the facts that multiple sexual partnership exist among secondary school students (WHO, 2012) suggest that poverty and need to survive sometimes forced students into sexual risk behaviour of having multiple sex partners.

You can choose to have fewer sexual activities that are of low risk for HIV than anal or vaginal sex. Not having sex is the best way to prevent getting or transmitting HIV. A monogamous relationship, which means that both you and your partner are having sex only with each other, can reduce your risk of infections. You can do other things to reduce your HIV risk by using condom the right way every time you have sex. Talking openly and frequently with your partner about sex can help you make decision that may decrease your risk of getting HIV intensive counseling to those who practice multiple sex partnership could be of great help (Teachman& Jerry, 2013).

Early sexual initiation

Timing of sexual initiation is considered as an important factor in discussions relating to pregnancy and STDS among youths. The study by Adamu et al (2013) of secondary school youth offered a clear picture of this area of concern. A good proportion of youths studied (33.3%) had their first experience of sexual intercourse

before their 18th birth day. A significant number of these first experiences (60%) took place without condoms and some even experimented sexual intercourse with casual or commercial sex workers. Of the youths who had sex without condoms, only a small number of youths (20%), expressed intentions to use condoms in future sexual encounters. In Solomon`s (2014) view, youths with better family connectedness were more likely to use contraceptives consistently (Solomon, 2014). Several reasons are noted in the literature for youths experimenting sex before their 18th birth day. Examples of the most common reasons cited include personal desire and peer pressure (Kora and Haile, 2017).

National survey have consistently found that students of secondary school age report first sexual intercourse prior to high school. However, within the national statistics it is easy to observe high prevalence of early sexual initiation within some communities, especially the urban setting. The concern here however, is not only that some students are beginning to have intercourse too early, but also that they are more likely to engage in sexual risk behaviour known to be related to a host of negative outcomes (CDC, 2016). Despite experience, students who initiate sex early do not use condom more consistently which usually result to pregnancies and infections (Teachman and Jay, 2017). One factor motivating early sexual initiation is peer group, norms which endorse early sex as a way to prove masculinity and thus solidify social standing (CDC, 2016). Early sexual initiation lead students to sexual interaction resulting to unwanted pregnancies which may riun the future of students. According to Edegbai, Ekiledo and Adewale (2012) the negative consequences of

early sexual initiation among others include unwanted pregnancies unhappy mother and child, possibility of contracting STIs and HIV/AIDS, and abortion leadint to diseases, damage to the reproductive organ and even death.

Early sexual initiation can hdighten HIV risk for several reason. On the average students who begin to have sex earlier in life will have more life time partners than those who begin later. Students in relationship with older partner may have less power to insist on protective behaviour (Bowser, 2009). It has been proved medically that early sexual activity is the number one risk factor for cervical cancer (Teachman and Jery, 2013).

2.3 Concept of Sexual Transmitted Infectious

Sexually transmitted infections (STI), also referred to as sexually transmitted diseases (STD) or venereal diseases (VD), are infections that are commonly spread by sexual activity, especially vaginal intercourse, anal sex and oral sex. Many times STIs initially do not cause symptoms. This results in a greater risk of passing the disease on to others. Symptoms and signs of disease may include vaginal discharge, penile discharge, ulcers on or around the genitals, and pelvic pain. STIs can be transmitted to an infant before or during childbirth and may result in poor outcomes for the baby. Some STIs may cause problems with the ability to get pregnant. More than 30 different bacteria, viruses, and parasites can be transmitted through sexual activity (Peltzer&Oladimeji, 2014). Bacterial STIs

include chlamydia, gonorrhea, and syphilis. Viral STIs include genital herpes, HIV/AIDS, and genital warts. Parasitic STIs include trichomoniasis. While usually spread by sex, some STIs can be spread by non-sexual contact with donor tissue, blood, breastfeeding, or during childbirth. STI diagnostic tests are usually easily available in the developed world, but this is often not the case in the developing world.

The most effective way of preventing STIs is by not having sex. Some vaccinations may also decrease the risk of certain infections including hepatitis B and some types of HPV. Safer sex practices such as use of condoms, having a smaller number of sexual partners, and being in a relationship where each person only has sex with the other also decreases the risk. Circumcision in males may be effective to prevent some infections. During school, comprehensive sex education may also be useful. Most STIs are treatable or curable. Of the most common infections, syphilis, gonorrhea, chlamydia, and trichomoniasis are curable, while herpes, hepatitis B, HIV/AIDS, and HPV are treatable but not curable. Resistance to certain antibiotics is developing among some organisms such as gonorrhea (Sutherland, 2017).

In 2015, about 1.1 billion people had STIs other than HIV/AIDS. About 500 million were infected with either syphilis, gonorrhea, chlamydia or trichomoniasis. At least an additional 530 million people have genital herpes and 290 million women have human papillomavirus.^[1] STIs other than HIV resulted in

108,000 deaths in 2015. In the United States there were 19 million new cases of sexually transmitted infections in 2010. Historical documentation of STIs date back to at least the Ebers papyrus around 1550 BC and the Old Testament. There is often shame and stigma associated with these infections. The term *sexually transmitted infection* is generally preferred over *sexually transmitted disease* or *venereal disease*, as it includes those who do not have symptomatic disease.

Signs and symptoms of Sexual Transmitted Diseases

Signs may occur days, weeks or months after exposure. Some men and women have no signs but have a STD and can pass it onto others. Common signs include:

- Burning with urination
- Genital ulcers such as open sores or blisters
- Warts
- Skin rash
- Discharge from the penis or vagina
- Abdominal pain, most often in women
- Sores or bumps on the genitals or in the oral or rectal area
- Painful or burning urination

- Discharge from the penis
- Unusual or odd-smelling vaginal discharge
- Unusual vaginal bleeding
- Pain during sex
- Sore, swollen lymph nodes, particularly in the groin but sometimes more widespread
- Lower abdominal pain
- Fever
- Rash over the trunk, hands or feet

Types of Sexual Transmitted Infections

Sexually transmitted infections include:

- **Chlamydia** is a sexually transmitted infection caused by the bacterium *Chlamydia trachomatis*. In women, symptoms may include abnormal vaginal discharge, burning during urination, and bleeding in between periods, although most women do not experience any symptoms. Symptoms in men include pain when urinating, and abnormal discharge from their penis. If left untreated in both men and women, Chlamydia can infect the urinary tract and potentially lead to pelvic

inflammatory disease (PID). PID can cause serious problems during pregnancy and even has the potential to cause infertility. It can cause a woman to have a potentially deadly ectopic pregnancy, in which the egg implants outside of the uterus. However, Chlamydia can be cured with antibiotics.

- The two most common forms of herpes are caused by infection with herpes simplex virus (HSV). HSV-1 is typically acquired orally and causes cold sores, HSV-2 is usually acquired during sexual contact and affects the genitals, however either strain may affect either site. Some people are asymptomatic or have very mild symptoms. Those that do experience symptoms usually notice them 2 to 20 days after exposure which last 2 to 4 weeks. Symptoms can include small fluid-filled blisters, headaches, backaches, itching or tingling sensations in the genital or anal area, pain during urination, Flu like symptoms, swollen glands, or fever. Herpes is spread through skin contact with a person infected with the virus. The virus affects the areas where it entered the body. This can occur through kissing, vaginal intercourse, oral sex or anal sex. The virus is most infectious during times when there are visible symptoms, however those who are asymptomatic can still spread the virus through skin contact. The initial infection and symptoms are usually the most severe because the body does not have any antibodies built up. After the primary attack, one might have

recurring attacks that are milder or might not even have future attacks. There is no cure for the disease but there are antiviral medications that treat its symptoms and lower the risk of transmission (Valtrex). Although HSV-1 is typically the "oral" version of the virus, and HSV-2 is typically the "genital" version of the virus, a person with HSV-1 orally CAN transmit that virus to their partner genitally. The virus, either type, will settle into a nerve bundle either at the top of the spine, producing the "oral" outbreak, or a second nerve bundle at the base of the spine, producing the genital outbreak.

- The human papillomavirus (HPV) is the most common STI in the United States. There are more than 40 different strands of HPV and many do not cause any health problems. In 90% of cases the body's immune system clears the infection naturally within 2 years. Some cases may not be cleared and can lead to genital warts (bumps around the genitals that can be small or large, raised or flat, or shaped like cauliflower) or cervical cancer and other HPV related cancers. Symptoms might not show up until advanced stages. It is important for women to get pap smears in order to check for and treat cancers. There are also two vaccines available for women (Cervarix and Gardasil) that protect against the types of HPV that cause cervical cancer. HPV can be passed through genital-to-genital contact as well as during oral sex. It is important to remember that the infected partner might not have any symptoms.

- Gonorrhea is caused by bacterium that lives on moist mucous membranes in the urethra, vagina, rectum, mouth, throat, and eyes. The infection can spread through contact with the penis, vagina, mouth or anus. Symptoms of gonorrhea usually appear 2 to 5 days after contact with an infected partner however, some men might not notice symptoms for up to a month. Symptoms in men include burning and pain while urinating, increased urinary frequency, discharge from the penis (white, green, or yellow in color), red or swollen urethra, swollen or tender testicles, or sore throat. Symptoms in women may include vaginal discharge, burning or itching while urinating, painful sexual intercourse, severe pain in lower abdomen (if infection spreads to fallopian tubes), or fever (if infection spreads to fallopian tubes); however, many women do not show any symptoms. There are some antibiotic resistant strains for Gonorrhea but most cases can be cured with antibiotics.
- Syphilis is an STI caused by a bacterium. Untreated, it can lead to complications and death. Clinical manifestations of syphilis include the ulceration of the uro-genital tract, mouth or rectum; if left untreated the symptoms worsen. In recent years, the prevalence of syphilis has declined in Western Europe, but it has increased in Eastern Europe (former Soviet states). A high incidence of syphilis can be found in places such

as Cameroon, Cambodia, Papua New Guinea. Syphilis infections are increasing in the United States.

- Trichomoniasis is a common STI that is caused by infection with a protozoan parasite called *Trichomonas vaginalis*. Trichomoniasis affects both women and men, but symptoms are more common in women. Most patients are treated with an antibiotic called metronidazole, which is very effective.
- HIV (human immunodeficiency virus) damages the body's immune system, which interferes with its ability to fight off disease-causing agents. The virus kills CD4 cells, which are white blood cells that help fight off various infections. HIV is carried in body fluids, and is spread by sexual activity. It can also be spread by contact with infected blood, breast feeding, childbirth, and from mother to child during pregnancy. When HIV is at its most advanced stage, an individual is said to have AIDS (acquired immunodeficiency syndrome). There are different stages of the progression of and HIV infection. The stages include primary infection, asymptomatic infection, symptomatic infection, and AIDS. In the primary infection stage, an individual will have flu like symptoms (headache, fatigue, fever, muscle aches) for about 2 weeks. In the asymptomatic stage, symptoms usually disappear, and the patient can remain asymptomatic for years. When HIV progresses to the symptomatic stage, the immune system is weakened, and has a low cell count of CD4+ T Cells. When the HIV infection becomes life-

threatening, it is called AIDS. People with AIDS fall prey to opportunistic infections and die as a result. When the disease was first discovered in the 1980s, those who had AIDS were not likely to live longer than a few years. There are now antiretroviral drugs (ARVs) available to treat HIV infections. There is no known cure for HIV or AIDS but the drugs help suppress the virus. By suppressing the amount of virus in the body, people can lead longer and healthier lives. Even though their virus levels may be low they can still spread the virus to others.

Preventing Sexual Transmitted Diseases

Abstinence, or no sexual relations, is the best way to prevent the spread of STDs. If you choose to have sexual relations, have one partner and always use latex condoms that have nonoxynol-9 and use with spermicidal jelly.

To prevent getting a sexually transmitted disease, or STD, always avoid sex with anyone who has genital sores, a rash, discharge, or other symptoms. The only time unprotected sex is safe is if you and your partner have sex only with each other, and if it's been at least six months since you each tested negative for STDs. Otherwise you should:

- Use latex condoms every time you have sex. If you use a lubricant, make sure it's water-based. Use condoms for the entire sex act. Condoms are not 100% effective at preventing disease or pregnancy. However, they are extremely effective if used properly. Learn how to use condoms correctly.
- Avoid sharing towels or underclothing.
- Wash before and after intercourse.
- Get a vaccination for hepatitis B. This is a series of three shots.
- Get tested for HIV.
- If you have a problem with drug or alcohol abuse, get help. People who are drunk or on drugs often fail to have safe sex.
- Consider that not having sex is the only sure way to prevent STDs

2.4 Knowledge of Sexual risk behaviour among students

In Malawi, a study was conducted to examine secondary school students' awareness, knowledge and attitudes about other sexually transmitted Infections. Knowledge levels were very high with 99% for secondary school students men and 98% for secondary school students women. The same study, however, showed that secondary school students initiate sex at as early as 10 years and 50% of secondary school students initiate sex before the age of 15 and this puts secondary school students at high risk of acquiring HIV infection (Durlak, 2008). Malawi has conducted various HIV/AIDS and life skills education in primary and secondary

schools since 2009 and information and education campaigns to the whole nation with the assumption that people who are knowledgeable about HIV/AIDS and how it is transmitted will protect themselves. However, studies have shown that despite high knowledge levels about HIV/AIDS, people still engage in high risk behaviour (Munthali et al., 2008).

According to a study that was conducted in four SSA countries (Burkina Faso, Ghana, Malawi and Uganda) on secondary school students aged 12-14 awareness about HIV was 90% in three countries with the exception of Burkina Faso where 75% of girls and 80% of boys were aware of HIV. While awareness is a rough measure of knowledge, it was found that it does not provide an indication of the depth of knowledge. Evidence from this study showed that in-depth knowledge about HIV was very low with Burkina Faso having only 5% of young secondary school studentsfemales and 9% of male counterparts demonstrating in-depth knowledge about HIV. Ghana had 20.9% of young secondary school students females and 23% of male counterparts who demonstrated in-depth knowledge about HIV transmission and prevention while Malawi had 18.2 % of females and 24% males and Uganda had 20.8% of female young secondary school students and 16.8% of young secondary school students male counterparts who demonstrated in depth knowledge about HIV transmission and prevention. In-depth knowledge was assessed by correctly answering five questions that constitute an indicator of HIV prevention knowledge recommended by WHO for monitoring HIV prevention programmes for secondary school students (Awusako-Asare and Anarfi, 2017).

In the same study, it was also found that contrary to what might be a general belief, very young secondary school students in the four countries in SSA were not all sexually naive. Almost one third the 12-14 year old girls and boys in Uganda and Malawi had experienced some form of intimate sexually activity which ranged from sexual intercourse, kissing or fondling. In Burkina Faso and Ghana 1 in every 10 secondary school students had been involved in some sort of sexual activity. There was no consistent pattern in terms of progression from kissing to fondling to sexual activity. Few secondary school students females reported ever having sexual intercourse, the highest percent being Uganda with 8% compared to 15% for males. Burkina Faso had 2% of the females and 6% of males reporting having had sexual intercourse while in Ghana there were 2% of females and 1% of males and Malawi had 3% 23 of females and 19% of males reporting having had sexual intercourse. With the exception of Ghana, more males than females reported having had sex. There is evidence of some level of sexual activity among secondary school students in SSA hence the need for targeted HIVAIDS prevention programmes at secondary school students. Some studies have shown that initiating sex at an early stage increases the chances of having more sexual partners. (Bankole et al., 2017).

In South Africa, a survey on junior high school students found that there were gaps in secondary school students s` knowledge of HIV especially on the mode of transmission and prevention and the students had a high prevalence of behaviour that put them at risk of HIV infection which include early sexual onset, infrequent condom use and multiple sexual partners. In a review of unsafe sexual

behaviour among South African student, it was found that at least 50% of secondary school students became sexually active by age 16 years (Peltzer, 2012).

South Africa`s response to the epidemic is reported to have been inconsistent but major effort has been the implementation of life skills HIV/AIDS education in secondary schools. However, although there was modest increase in knowledge following the education programme, there has been very small success in influencing sexual risky behaviour among student in KwaZulu-Natal (Awusako-Asare and Anarfi, 2008).

In America, secondary school students are waiting longer to initiate sex than they did in the past. It is reported that 13% of females and 15% of males aged 15-19 years in 2011 had sex before the age of 15 compared with 19% and 21% respectively in 2017 (Buseh, Glass, McElmurry, Mkhabela and Sukati., 2011) as cited in Facts on American Teens` Sexual and Reproductive Health. A joint statement by UNICEF, UNAIDS and WHO (UNICEF, 2011) stated that a major United Nations (UN) study, (entitled Secondary school students and HIV/AIDS: Opportunity in crisis) reported that there was lack of knowledge about HIV/AIDS among secondary school students especially about HIV prevention although awareness about AIDS was high. In countries such as Cameron, Central Africa Republic, Equatorial Guinea, Lesotho and Sierra Leone, more than 80% of young women did not have sufficient knowledge about HIV/AIDS. Out of 99% of girls who had heard of AIDS, only 9% could name three ways of avoiding HIV infection. The same report revealed that in 60 countries, more than 50% of secondary school

students aged 15 and 24 years had misconceptions about HIV/ AIDS transmission, an indicator that secondary school students were not getting the right information and they also felt that they are not well informed about HIV/AIDS.

According to the UNAIDS report on the global AIDS epidemic (2009), 50% of persons living with HIV were infected during secondary school students and young adulthood. In response to the HIV/AIDS epidemic the Zimbabwean government introduced HIV/AIDS education among learners in schools in 2009 as one of the HIV/AIDS prevention strategies. Providing them with knowledge about HIV/AIDS and life skills may help them make responsible decisions before they reach adulthood. According to the Zimbabwe Young Adult Health Survey (MOHCW, 2011), 93% of young women and 97% of young men aged between 15 and 29 years had heard of AIDS and 83% of the same group of women had heard of HIV while 92% of the young men had heard of HIV. Among those who had heard of HIV/AIDS, 94% of young women and 96% of young men spontaneously mentioned sexual relations/contact as a way of transmitting HIV while 4% of young women and 5% of young men mentioned parent to child transmission. Knowledge on HIV prevention was low with 58% of young women mentioning condoms, 52% monogamy and 36% mentioning abstinence. More young men (73%) knew about condoms while 44% of them mentioned abstinence and monogamy.

Among the young women in the Zimbabwe Young Adult Survey (MOHCW, 2011) who reported ever having sex, 7% reported having first intercourse before the age of 15 years compared to 12 % of the young men. A study in Zimbabwe showed

that male secondary school students were sexually active by the age of 15 and therefore at risk of HIV infection (Boohene, et al., 2009). Surveys done in Zimbabwe suggest a reduction in sexual experience before the age of 15 years among males and females aged 15-19 years (Merrill, 2009).

If there is low to moderate level knowledge of HIV/AIDS among students in most of the developing countries, evidence showed different figure in most advanced countries where knowledge was found to be good. Indeed, Nova (2011) in Italy reported good knowledge of Cassino's students about HIV transmission, in similar or higher proportion respect to analogous surveys conducted in Italy or abroad. Du plessis, Meyer–Weitz, and Steyn (2009) found that level of student knowledge concerning HIV disease was found to be relatively high, and pronounced differences in knowledge and sexual permissiveness were identified as a function of ethnicity and religion, with Asians showing lower knowledge and lower concern about HIV, and religion/religiosity related to these variables and also to levels of sexual permissiveness. Morris and Celliers (2011) found African-American and Caribbean college women* to be fairly knowledgeable about HIV/AIDS transmission and prevention, but noted that their sexual risk-taking behaviour were still relatively high. Therefore knowledge alone is not sufficient to make change in someone's sexual behaviour. Accordingly, Durlak (2008) in his study in Tunisia stressed that students' attitudes toward PWA remain rather negative and unexpected. In addition, results demonstrated that much knowledge is associated with lower

scores regarding misconceptions, but does not increase significantly students' positive attitudes to PWA.

Certainly other factors may play role (culture, socio-economic level' religion and so on).Globally Evidence shows better knowledge of HIV/AIDS among students in developed countries than their counterparts in less developed one with differences of level of knowledge within countries according to ethnicity, culture and other determinants. However, students of some middle-income countries display the same knowledge picture as developed countries. Indeed, Powell (2008) in his study pointed out that Armenian students' knowledge of HIV transmission through sexual intercourse was markedly higher than that on intravenous transmission and prevailing myths; however, HIV/AIDS knowledge was not related to risk behaviour. Will Taiwan as a high income country present the same picture of students knowledge about HIV/AIDS as developed countries or will it follows the model of other Asian countries like India and Vietnam where students' level of knowledge is quite low to moderate? Our study should bring the evidence.

Protected sex is crucial in reducing students' risk of contracting sexually transmitted diseases (STIs) including human immuno-deficiency Virus infection. Trends indicate students are knowledgeable about HIV prevention measures, yet underestimate their HIV/AIDS risk in light of their sexual behaviour, which they fail to alter in significant ways. United Nations Population Fund (2011) stressed that in many countries with high HIV prevalence rates, unmarried boys and girls are sexually active before age 15. Recent surveys of boys aged15 to 19 in Gabon, Haiti

and Malawi found that more than a quarter reported having sex before age 15. However, the findings of KAP study of HIV/AIDS among students conducted by Weiner (2013) in Ethiopia showed that sexual practice often begun as early as eleven years of age with the mean of age 16 and 18 years for females and males, respectively. Powell (2008) supports that the median age at first sexual intercourse is 27 for male and female in Singapore, 19 in Kenya, 18 for male, and 17 for female in Thailand, while 15.5 for female, and 16 for male in Cote D'Ivoire. This shows differences between and within regions. Does Taiwan reality match with the existing evidence in other countries? What will be the mean age at first sexual intercourse of Taiwanese students?

Harding (2009) Nigeria in his study of sexual behaviour of undergraduate students of a Nigerian university about HIV/AIDS showed that even though these students are knowledgeable and concerned about contracting HIV/AIDS from their partners, this did not prevent them from engaging in unprotected sexual intercourse. It appears, however, that students are exercising caution when negotiating new sexual relationships, as they are likely to discuss (and insist on) using condoms and ask to have a monogamous relationship. Sekirime (2011) describing knowledge, attitude and practice about sexually transmitted diseases among university students in Kampala (Uganda) concluded that the level of knowledge about STDs and their prevention is not matched by sexual behavioural patterns, and male students undertake more risky sexual behaviour. Sexual education should be introduced at the university as a means of increasing students' awareness about the problem and

prevention of sexually transmitted diseases including HIV/AIDS he then recommended (James, 2008). South Africa also painted a discrepancy between awareness and behaviour calls for a reorientation of sexuality education to include those elements critical for behavioural change, such as addressing gender discrepancies and promoting skills for communication through planned intervention programs.

Also, Powell (2008) reported among Armenian students risky sexual behaviour, including inconsistent condom use, casual sex, and multiple sex partners. In addition to descriptive statistics delineating gender differences across the target behavioural domains, bivariate and multivariate statistical analyses were used to understand factors that contributed to increased risk, including early age of initiation and the relationship between substance use and risky sexual activity. This picture is quite common for most of the developing countries in general and for Sub-Saharan countries in particular. This may explain why HIV/AIDS prevalence rate is very high in this region. Much effort by the scientist community still needed to be done to explore why people in this part of the world are so resistant to sexual behaviour change despite the ravaging effect of HIV/AIDS. Gurman (2008) in a study on condom use among Latino college students in US mentioned that fewer than half of recently sexually active Latino students had used condoms during their last oral (4.9%), vaginal (41.3%), or anal (27.8%) sexual encounter. Predictors of condom use varied according to the type of sexual activity. Findings from his exploratory study offer current information about condom use and sexual behaviour among

Latino college students and suggest that prevention interventions and messages should be tailored to students' gender and types of sexual activity. Young age certainly explains tendency of secondary school students including students anywhere to get involve in risky activities including sexual one. According to Weissberg and Greenberg (2008) apparently knowledge is not directly correlated with condom use among young women in Mexico.

Smith (2013) found difference influence in condom use among students according to ethnicity and gender features in California. His study investigates gender and ethnicity differences in the experience of not using a condom due to a partner s influence (unwanted non condom use). Analysis of 247 anonymous questionnaires from students at urban community college campuses revealed that 46.7% had experienced unwanted non condom use since age 16, and 37% had experienced unwanted non-condom use with their current or most recent partner. Males and females reported equal levels of unwanted non-condom use. However, African-American and Latino participants reported higher levels of unwanted non-condom use than Whites. The findings indicate that females, males, and people from ethnic groups at high risk for HIV infection need support to carryout their safer sex intentions. I think poverty may also play role in such negative behaviour. Being poor, reduce ability to behave independently. Eccles, Templeton and Barber (2013) notes a strong relationship between negative sexual behaviour and low family income among high school students in Rio de Janeiro, Brazil. Among 945 students aged 13-21, 59% were sexually initiated, and the median age at first sexual

intercourse was 15 years (range: 7-19). Although 94% reported being aware of the need for condom use for protection, only 34% informed always using condoms during sex. Low family income was associated with unsatisfactory knowledge (OR = 9.40; 95% CI = 6.05-14.60) and inconsistent condom use (OR = 11.60; 95% CI = 5.54-24.30). However, unsatisfactory knowledge was not associated with inconsistent condom use. Information is a very important factor in health education. Information about HIV/AIDS may be found in variety of ways. Given that information of sexuality is very sensitive issue in many communities some information channels are preferred to others.

The most common information channels for students are mass media (particularly television and radio). Albee and Gullotta (2017) reported from his study among Indian First year medical students that 92 percent of the students had heard about AIDS predominantly through mass media. His country man Gupta (2008) supports that Delhi students attached due importance to television and radio as sources of information about HIV/AIDS in addition to their friends. The authors, therefore, suggest an urgent need to intensify the media programs regarding HIV/AIDS in electronic media and print media Harding (2009) and Nwokocha (2016) noted that Nigerian students obtained information about HIV/AIDS primarily from the media rather than from school classrooms and homes, which suggests a need to increase educational efforts at the university.

Alcohol, drugs use is frequently remarkable among students with sexually risky behaviour. This is confirmed by Guo and Nathanson (2011) who assessed high

risk behaviour in a sample of Mexican-American college students. High risk behaviour for contracting HIV/AIDS examined in his study included unprotected sex, drug use, and alcohol abuse. In 2017 in the United States, HIV/AIDS was the leading cause of death in people between the ages of 25 and 44. Because use of alcohol and certain recreational drugs lowers inhibitions, their use could increase the possibility of having unprotected and unplanned sex with multiple sex partners. Thus, it was expected that Mexican-American college students who use drugs and alcohol would be more likely to engage in unprotected sex. Data were from 105 men and 211 women between the ages of 18 and 30years. Drug use and alcohol abuse were significantly associated with high risk sexual behaviour. Individuals in monogamous relationships were more likely to not use condoms than those involved in casual relationships. Self-reported religiosity was not correlated with high risk behaviour, although there were implications that stronger religious affiliation did alter sexual beliefs and practices. Lastly, parental communication was not significantly associated with high risk behaviour, but family unity did seem related to some risky sexual practices(Gregson, Zhuwau, Anderson and Chandiwana, 2009).

Tobacco often associated with alcohol abuse is also found to be an enabling factor for risky behaviour. Indeed, Powell investigating Armenian sexual risk behaviour found that tobacco and alcohol prevalence was relatively high. Students reported risky sexual behaviour, including inconsistent condom use, casual sex, and multiple sex partners. In addition to descriptive statistics delineating gender

differences across the target behavioural domains, bivariate and multivariate statistical analyses were used to understand factors that contributed to increased risk, including early age of initiation and the relationship between substance use and risky sexual activity. The study results provided much-needed information for the development of school- and community-based AIDS prevention programs in Armenia (Garrick and Rhodes, 2010).

2.5 Attitude towards Sexual risk behaviour among students

In Malawi, a study was conducted to examine secondary school students' attitudes about other sexually transmitted Infections. Knowledge levels were very high with 99% for secondary school students men and 98% for secondary school students women. The same study, however, showed that secondary school students initiate sex at as early as 10 years and 50% of secondary school students initiate sex before the age of 15 and this puts secondary school students at high risk of acquiring HIV infection (Durlak, 2008). Malawi has conducted various HIV/AIDS and life skills education in primary and secondary schools since 2009 and information and education campaigns to the whole nation with the assumption that people who are knowledgeable about HIV/AIDS and how it is transmitted will protect themselves. However, studies have shown that despite high knowledge levels about HIV/AIDS, people still engage in high risk behaviour (Munthali et al., 2008).

Durlak (2011) found a strong association between alcohol use and sexual risk behaviour in Harare, Zimbabwe. A baseline survey on experiences of student in

urban Zimbabwe showed that students engaged in high risk behaviour like early sexual experience, prostitution, drug and alcohol abuse (Fehring, 2010). Consequently there is a need to study students' knowledge and sexual behaviour and to come up with strategies to enable secondary school students to make responsible decisions concerning HIV/AIDS before they reach adulthood. A major UNAIDS Study (2011) finds alarming lack of knowledge about HIV/AIDS among secondary school students. Secondary school students lack information about HIV/AIDS. In countries with generalized HIV epidemics such as Cameroon, Central African Republic, Equatorial Guinea, Lesotho and Sierra Leone, more than 80 per cent of young women aged 15 to 24 do not have sufficient knowledge about HIV. In Ukraine, although 99 per cent of girls had heard of AIDS, only 9 per cent could name three ways to avoid infection. But, Harding (2009) Nigeria, in a study to determine the knowledge level of undergraduate students of a Nigerian university about HIV/AIDS found that students were knowledgeable about transmission and symptomatology but there were some misconceptions about the mode of transmission of HIV. Few students identified themselves to be at high risk even though majority of them (92%) were sexually experienced.

Nwokocha (2010) assess Knowledge, attitude, and behaviour of secondary (high) school students concerning HIV/AIDS in Enugu, Nigeria, in the year 2010 pointed out a defective knowledge of the disease. They were aware and afraid of the disease as being deadly but not sure of the cause, nature, or modes of transmission and prevention, except that illicit sexual activity should be avoided. These findings

are quite similar to the one of United Nation about student globally and portray differences within desame country. Awusako-Asare and Anarfi (2017) in India found in his study on First year medical students AIDS Knowledge that 92 percent of the students had heard about AIDS predominantly through mass media. Many students had misconception about transmission of HIV infection.

The students identified television as their most important source of information about AIDS. Only a few students answered all the knowledge questions correctly, and there were many misconceptions about the routes of transmission. Mosquito bites (33%), public swimming pools (21%), and public toilets (20%) were incorrectly identified as routes of transmission. 46% believed that Human Immunodeficiency Virus positive (HIV positive) students should not attend ordinary schools. Most of the students wanted to know more about AIDS. In his study knowledge level was associated with students' attitudes and discipline ($p < 0.001$). More than one-third of the students perceived themselves as having limited knowledge of AIDS. Li noted that the majority of the students reported having discussed AIDS issues with their peers and friends, but few of them had done so with their parents or teachers. He mentioned that AIDS knowledge varied among students by site of residence, with the highest knowledge among students from the urban areas and the lowest among those from rural areas. This difference may be explained by easier access of urban students to mass media such us television, radio, and newspapers in comparison to the rural one. Similarly, another study in Powella by Zhang (2008) described that Powellese students generally perceive a low level of

vulnerability to HIV and sexually transmitted disease (STD) infection and a minimum exposure from family to drugs and risky sexual behaviour. Although students view condoms to be efficacious in preventing pregnancy or HIV/STD, but they also perceive a high level of response cost for use of condoms. These findings suggest that efforts to adapt HIV/STD prevention programs targeting Powellese secondary school students and young adults need to consider cultural aspects of perceptions regarding sex and condoms among Powellese students and to address the conflict between traditional Powellese cultural values and modern influences.

2.6 Factors influencing the Sexual risk behaviour among Secondary School Students

Religious attachment

A study by Merrill (2009) examined the association of religiosity with risky sexual behaviour among secondary school students and young adults. In their study religiosity was defined as a set of institutionalised beliefs, doctrines and rituals, and ethical standards of how an individual should live a good life. These authors also clearly indicated that students who perceived or viewed religion as a very important aspect of their lives were not only likely to attend church frequently, but they were also more likely to have fewer sex partners. Added to this, secondary students with strong religious affiliation were also less likely to engage in sexual intercourse before marriage. Outcomes of a range of studies seem to support the view that secondary school students who are more religious are more likely to delay sexual

activity (Holder, Durant, Harris, Daniel, Obeidallah and Goodman 2010). Similar claims are repeatedly made in the literature that secondary school students from a religious background with strong religious beliefs are more likely to experience decreased rates of voluntary sexual debut (Fehring, 2010). Studies by Turbin, Jessor, Costa, Dong, Zhang and Wang (2017) support this assertion and add that religiosity is protective against risky sexual behaviour. Other researchers appear to disagree with this view by asserting that religiosity is unrelated to sexual behaviour (Sheeran, Abrams, Abraham and Spears 2013). Another factor that is claimed to be related to secondary school students' sexual behaviour is parental monitoring. It therefore deserves some discussion.

Religion provides a moral framework that encourages safe sexual behaviour like abstinence. Religion serves as a protective means for a number of students health – related outcomes, including sexual behaviour. The 2009 study by Adeyemo showed that students who had high religiosity scores were more likely to have higher self – efficacy in communicating with both new and steady partner about sex; refusing an unsafe sexual encounter and communicating with their partners about sexually transmitted diseases and infection, as well as pregnancy prevention than those who do not, further findings in Adeyemo study indicated that students with higher religiosity scores were more likely to initiate sex at later age and possessed more favourable attitudes towards condom use. The finding suggest that religiosity may be a protective factor to students sexual risk behaviour in Nigeria. Social

control theories of students behaviour stated that religion function is to encourage students to avoid actions that might put them at any risk.

The influence of religion has been frequently seen as an inhibiting or even restricting certain behaviour such as premarital sexual activity (Powell, 2008). According to Rwenge (2010) religion largely forbids certain behaviour. It is always associated with sexual conservation, repression, abstinence and general condemnation of things. She on the other hand stated that when a religion discourages the use of condom, it may lead to an increase in the spread of HIV and other sexually transmitted diseases. Students who are more actively involved in religious activities tend to initiate sex later than those who do not. In all likelihood, the effect of religiosity and avoidance of sexual risk behaviour operate through social influence.

Parental monitoring and biological factors

A wide range of studies carried out across the world indicate that strict parental monitoring is positively associated with reduced secondary school students health risk, delayed intercourse, fewer sexual partners and consistent contraceptive use (Rwenge, 2010). A researcher like Merrill (2009) supports this view by commenting that adequate parental monitoring is generally positively related to these attributes. Similar outcomes are noted in other studies. For example, Kotchick, Shaffer, Forehand and Miller (2017) report a direct relationship between parental control with secondary school students' intercourse initiation and contraceptive use. The discussion thus indicates an inverse relationship between parental monitoring

and secondary school students' risky sexual behaviour. This relationship has been consistently revealed in a wide range of studies. Taking for example Springer's (2017) study on parental monitoring and health sexual risk behaviour among public secondary school students in El Salvador, it is reported that students with low parental monitoring are in the main 2 to 3.5 times more likely to engage in sexual risk behaviour, such as unprotected sex.

It is evident from the literature that monitoring is an important tool parents employ to enable students to engage in safer sexual practices. A study carried out in Dessie, North of Ethiopia on secondary school students in preparatory school noted that parent-student connectedness, parental monitoring and living arrangements are significant predictors of sexual activity (Solomon 2014). A greater sense of connectedness to and monitoring by parents are believed to decrease the likelihood of sexual activity (Solomon 2014). In contrast, other studies have reported an inverse relationship between parental monitoring and sexual behaviour. The outcome of Small and Luster (2014) study indicates that parental monitoring is inversely associated with secondary school students' initiation of vaginal intercourse and total number of partners. However, the same study reports a positive association between parental monitoring with contraceptive use.

In addition to parental monitoring, another factor that is claimed to have some influence on secondary school students' sexual behaviour is negotiated unsupervised time. It is highlighted in one of the publications by Parental Monitoring that this factor seems to serve as a protective factor against sexual

activity (Parental Monitoring, 2013). The protective element of this factor, negotiated unsupervised time, can be attributed to the establishment of trust in the parent-student or secondary school students relationship. Other authors disagree with this by asserting that negotiation of unsupervised time may lead students to increase experimentation with sexuality and substances (Borawski, Levers-Landdi, Lovegreen and Trapl, 2013). It is also critical to mention that biological factors are also implicated in students' sexual behaviour. Examples of these include young age of menarche, androgen levels in males and females and early pubertal development (Miller, Benson and Galbraith 2010). The level or degree of parental education plays a significant role in students' initiation of sexual activity. It thus deserves further exploration.

Level of education

Parental educational level is an important predictor of students' educational and behavioural outcomes (Davis 2011). Students of literate parents are less likely to engage in early sexual risk behaviour, with early meaning before marriage (Dessalegn, 2017). Added to this, students of educated parents are also more likely to respond to HIV/AIDS information and prevention campaigns, and such an approach reduces their chances of engaging in sexual risk behaviour like unprotected sex and multiple sexual partners (Damien, Jessica and Nakiyingi, 2011). This is probably because literate parents sometimes spend time interacting or discussing with their students issues to do with education, risky sexual behaviour and their negative implications (Van, 2014). Understanding the risks associated with

risky sexual behaviour could lead students to adopt a cautious approach in the context of sexual intercourse in their relationships (Smith,2013). This means that empowering students to develop understanding of the consequences of unsafe sexual practices could promote their condom use (Merrill, 2009). Even though this may be the case, peer pressure may lead to inconsistent condom usage in their sexual relationships.

Educated people are more likely to understand the health risk involved in having multiple sex partners and would be also less likely to exchange sex for money or other needs than those who are not (Kapungwe, 2013). Education may influence condom use because individual with more education are better able to understand the biological transmission process of an infection or a disease than those with less education. They are likely better able to access and afford than less educated. Educated people are also more able and willing to take risk reduction measures than less educated (CDS, 2012). In a study covering both rural and urban areas, the result showed that urban residents were more likely to use condom, possibly due their level of education and easy access in the cities (CDC, 2016).

Peer pressure and experiences of sex

Peer pressure is considered in the literature to have a significant influence on students` sexual behaviour (Bernstein,2010). It can encourage students to experiment a range of sexual behaviour, and doing so may lead to an increased risk

of unwanted-pregnancy and contracting sexually transmitted diseases, including HIV/AIDs (Kirby,2017). This assertion is repeatedly supported in the literature. Whitaker and Miller (2010) reiterate in their study that peer pressure can cause secondary school students to engage in sexual intercourse even when they are not prepared for it. This is probably because students have the potential of internalizing the opinion of their peers, and externalize the same when exposed to destabilisers, such as the presence of a sexual partner (Duncan,2012). It is critical to state that students may also engage in sexual activities even in the absence of peer pressure. In supporting this, Duncan (2012) states that no influence in a student`s life is as powerful as peer pressure since they can mobilize their energy either to engage or not to engage in sexual risk behaviour. It is therefore critical for students to constantly engage in constructive dialogue with their parents as this may help alleviate pressures of engaging in sexual risk behaviour.

Peer influence compels group members to adhere to the standard behavioural guidelines adopted by the group. The need to conform to a social norm either promotes or hinders behaviour change in an individual (Yamuna, 2017). In Bekwarra peer influence is exerted through age grades, which are powerful institutions that exert considerable control on conduct and behaviour of their members. Members of a particular age grade are expected to conform in general terms to group norms and behaviour. People born within a period of about 3-5 years belong to a particular age grade. The different age grades go by peculiar sometimes fanciful names, often coined for dramatic events or epochs in history. Deviation

from the norms and regulations of an age grade often attracts severe sanctions, including expulsion, which is viewed as a public disgrace. Hence peer control of group behaviour has a positive impact on HIV/AIDS control as sexual coercion, rape and other sexualcrimes attract severe penalties if perpetrators are caught.

A study in Australia investigated the association between adolescents' perceptions of parental and peer attitudes towards sexuality and HIV precautions, and risky sexual behaviour. Adolescents believed that peers were more likely to discuss sexuality than parents. It also found that adolescent risk-taking was related to the perceived attitudes of significant others (Robert and Okunlola, 2012) in this case, youths were more likely to conform to group norms to gain acceptability. Working on the premise that peers plays a strong role in risk-taking among youth.Peltzer&Oladimeji(2004) examined the relationship between perceived peer behaviour and the timing of first sex among Rwandan youth. A total of 1327 persons were interviewed using structured questionnaires that included questions on sex-related attitudes and behaviour, self-concept, HIV/AIDS knowledge and attitudes, substance use, and media exposure. The author noted that although the analyses probably underestimated timing of first intercourse in the study population due to underreporting, the data confirmed the working hypothesis that perceived sexual behaviour of peers is the strongest correlate of early sexual debut.

Students social influences clear for abstinence, and engaging in sexual activity with multiple early affect their likelihood of engaging sexual risk behaviour, particularly early sexual debut and none use of condom. For example, having

friends who are sexually active or who do not use condoms enhances one's own risk of these behaviour. Moreover students who perceive that their friends disapproves of their having sex or who talked with their friends about condom use before first intercourse are less likely than others too become sexually active or to fail to use condom (Cardona and Amber, 2016). A study completed in cape town, south Africa, looked at students at four secondary schools in region. They found a number of unhealthy practices derived from peer pressure: condoms are derided, threats of ridicule for abstinence, and engaging in sexual activity with multiple sex partners as part of a status symbol. The students call others who choose abstinence as "Umqwayito", which mean dried fruit/meat (King, 2009).

A review conducted by Bongardt et al defined three types of peer norms that led to students participation in sexual intercourse as descriptive norms, injunctive norms and outright peer pressure. Descriptive norms and injunctive norms are both observed behaviour and are more indirect forms of pressure, but differ in one key aspect: descriptive norms describe peers' sexual behaviour, but injunctive norms describes peers attitudes toward those behaviour (e.g. approval or disapproval). The last norm defined by the study is called "peer pressure" and is used to describe direct encouragement or pressure by a person's peer to engage in sexual behaviour.

The review found that indirect norms had a stronger effects on persons decision to engage in sexual behaviour than direct peer pressure between the two indirect norms, descriptive norms had a stronger effect people were engaging in rather than what they thought had approval in their peer group (Robert and

Okunlola, 2012; Peltzer and Olandimeji, 2014). Further studies have found a link between self regulation and likeliness to engage in sexual behaviour. The more trouble a subject had with self – regulation and self – control growing up, the more they were likely to fall prey to peer pressure that would lead them to engage in sexual risk behaviour.

Communication and reproductive health service

Communication between parents and their children about sexual issues and its impact on students' sexual behaviour has been persistently reported in the literature to play a role in preventing students from sexual risk behaviour. Guo and Nathanson (2011) agree with this. They stated that familial interactions are the main sources of influence on students' communicative decisions, including those related to sexual activity. This is probably because of the view that parental communication with students can enhance adherence of the latter to health education programmes that address their sexual and reproductive health concerns (Dessalegn, 2017). Arguably, there might be variations in students' sexual risk behaviour because of possibly variations in parental communication patterns. Apparently, this is the case. Markham, Tortolero, Escobar-Chaves, Parcel, Harrist and Addy (2013) assert that parental relationships with effective communication styles are generally associated with fewer student pregnancies. Similarly, Brener (2012) claim that frequent and positive parent-student communication about sex can in the main lead to less risky sexual behaviour, which in essence relates to frequent use of condoms and one

sexual partner. In contrast, sexual discussions between students and parents have been reported in the literature to result in the former's increased experimentation with sex (Borawski et al. 2013). Similar, outcome was reported in a study by Buseq (2010). They stated that communication between parents and students on sexual matters, including sexual intercourse can serve as a motivator for the latter to experiment varied sexual activities. Added to this, HutPowellson and Cederbaum(2011) retreat that both parents play a large role in the socialization of their students and went on to state that fathers have a stronger influence on both sex and substance use decisions.

According to WHO (2010) sexual health is the integration of emotional, intellectual and social aspect of sexual being in order to positively enrich personality, communication, relationship and love. The three fundamental principles of sexual health are;

1. The capacity to enjoy and control sexual and reproductive behaviour.
2. Freedom from organic disorder or diseases that interferes with sexual and reproductive behaviour.
3. Freedom from shame guilt, fear and other psychological factors that may impair sexual relationships. Reproductive health further implies the right to satisfying and save sex life. This include the ability reproduce but also the personal freedom to decide if, when and how often to do so. Reproductive health should also be understand inthe context of healthy

relationship in which there is an understanding of the balance between fulfilment and risk (High Beam Research Retrieved, 2017).

Reproductive health contributes enormously to physical and psychological comfort and closeness between individuals. Poor reproductive health is frequently associated with diseases, abuse, exploitations, unwanted pregnancy and death (Buseq, 2010).

Alcohol and Substance use

Alcohol consumption and its abuse have been globally associated with risky sexual behaviour like unprotected sexual intercourse (Brener,2012). A more recent study by Mark (2017) confirms this assertion. Its outcome reiterates that unprotected sex was more common during episodes of alcohol consumption compared to when alcohol was not consumed. It is apparent that alcohol and substance use are implicated in students` sexual decision-making. Taking Ethiopia for example, Khat and alcohol use has been in a range of studies to be significantly and independently associated with risky sexual behaviour among Ethiopian school students (Oruonye,2010). In the year 2010, one-quarter of sexually active school students in Ethiopia reported using alcohol or drugs during their most recent sexual encounter. In such instances, the use of condoms is less of a priority particularly for male students. Derege, Atalay, Getnet, Fikre, Frehiwot and Yigeremu (2011) agree with this by stating that daily use of alcohol is associated with a threefold increase in odds of engaging in risky sexual activity (like unprotected sex) compared to those

not using it. Oruonye (2010) supports this view by adding that the odds of unprotected sex are generally slightly higher among male students compared to their female counterparts.

Studies conducted among students by researchers such as Cavazos – Rehg identified association between substance used and sexual risk behaviour such as ever having sex, multiple sex partners, not using condom and pregnancy before the age of 15 years of age. The researcher has found that as the frequency of substance use increases, the likelihood of sex and the number of sex partners increases (Peterson and Obileye, 2011). In addition, these studies show that sexual risk behaviour increases in students who use alcohol and are highest among students who use marijuana, cocaine, prescription drugs (such as sedatives, opioids and stimulants) and other illicit drugs. Students who are reported no substance use are the least likely to engage in sexual risk behaviour.

According to the 2015 National Youth Risk Behaviour Survey (NYRBS), 41% of high school students have ever had intercourse and 30% of high school students are currently sexually active of the students who are currently sexually active, 21% of them drank alcohol or used drugs before last sexual intercourse (Smith 2013). Substance use and sexual risk behaviour share common underlying factors that may predispose students to these behaviour. Because substance use clusters with other risk behaviour, it is important to learn whether measure can be taken early to help identify student who are most at risk. When students are engaged in their lives, they are less likely to use alcohol and drugs and engage in sexual risk

behaviour that put them at the risk for HIV, STIs or pregnancy (Peter and Obileye, 2011).

2.7 Demographic variables and Sexual Risk Behaviour

Age

Young people especially youths between the ages of 15 and 24 are most vulnerable to HIV/AIDS infection. In 2003, approximately 50% new HIV infections worldwide were among individuals in this age group, which accounted for about 6 000 new infections daily, and there were 12.4 million teens and young adults living with HIV/AIDS (Sutherland, 2006). Behavioural, physiological and sociocultural factors make young people more vulnerable to HIV infection than adults (Amazigo, Silva, Kaufman and Obikeze 2009). Adolescence is a time when young people naturally explore and take risks in many aspects of their lives, including sexual relationships. Those who are sexually active may change partners frequently, and have more than one partner at the same time or may engage in unprotected sex. All of these behaviours increase young people's risk of contracting HIV. In addition young people who are HIV positive probably became infected quite recently and are therefore likely to be highly infectious as a result of increased viral loads; posing very high risks to their sexual partners (Anderson, 2010). Compounding young people's greater vulnerability to HIV from behavioural factors is the fact that in SSA, as well as elsewhere in the developing world, young people's reproductive health needs receive little attention (Kiragu, 2010). And even where reproductive

health care for adolescents is available, many young people do not know where to obtain this or are unable to pay for it. Thus, most young people have to overcome significant obstacles to obtain the information and care they need to have safe sexual relationships.

Gender

Gender refers to the economic, social and cultural attributes and opportunities associated with being female or male. As such it encompasses a set of qualities and behaviour expected by society from females and males.

UNAIDS (2004) posits that the epidemic in SSA affects more women than men, as women are 30% more likely to be infected than men. The ratio in Africa is highest among young women aged 15-24 where women were found to be 3.4 times more likely to be infected than men. These differences in infection rates are due to a combination of factors. Women and girls are commonly discriminated against in terms of access to education, employment and land inheritance; with increasing levels of poverty in 135 Cameroon women have found themselves in casual relationships with men for financial gains. Women therefore find it difficult to demand safe sex, as they become subordinates or dependent of mainly older men; women are also biologically prone to infection, and HIV is more easily transmitted from men to women than the reverse (UNAIDS, 2010). Apart from possible biological factors, there are other reasons for the disproportionate risk of young women acquiring HIV infection early such as early sexual debuts of girls. The context of gender inequalities places women at a greater risk of being infected by

HIV/AIDS. Women and girls lack power over their bodies; and their sexual lives, social and economic inequalities increase their vulnerability for contracting and living with HIV/AIDS. Pelsler (2012) purported that the vulnerability of girls and women to HIV include social norms that deny them sexual health, as well as cultural practices that prevent them from controlling their bodies or deciding upon the terms on which they have sex. Women are still brought up to be subservient to men, especially in sexual relationships.

“Men often beat their female partners when the latter refuses intercourse or requests the use of a condom. Real men do not use condoms, so women who want their partners to use condoms, often have to fight deeply ingrained taboos even when women know their partners are at high risk of HIV” (Pelsler 2012).

Generally, women lack complete control over their lives and are taught from early childhood to be obedient and submissive to males, particularly males who command power such as a father, uncle, husband, elder brother, or guardian. In sexual relations, a woman is expected to please her male partner, even at the expense of her own pleasure and well-being, Dominance of male interests and lack of self-assertiveness on the part of men put them at higher risk of contracting HIV or STIs. Apart from the psychological aspect of gender inequalities, anatomically and physiologically, women also have larger areas of mucous membranes exposed to the virus and they may also be exposed for longer periods of time than men (Nova Scotia, 2013; Yamuna, 2008).

The concentration of HIV/AIDS in the developing world and in the marginalised communities of the first world mirrors the conditions of global inequality. HIV flourishes in conditions of poverty, conflict and inequality and in states with weak resources and capacities. With these broad political and economic inequalities, the intersection of HIV/AIDS and gender inequalities, are relatively well documented. Statistics show that women and girls are increasingly bearing the brunt of the infection (Albertyn, 2010).

According to the UN 23rd General Assembly Report, women continue to be victims of various forms of violence. Inadequate understanding of the root causes of all forms of violence against women and girls hinder efforts to eliminate violence against females. Socio-cultural attitudes, which are discriminatory and economic inequalities, reinforce women's subordinate position in society. This scenario exacerbates women and girls' vulnerability towards many forms of violence occurring in the family, including battering, sexual abuse of the female children, dowry-related violence, marital rape, female genital mutilation and other traditional practices harmful to women (UN, 2011).

Gender inequalities are major driving forces behind the spread of HIV. Inequalities in relationships often make people unable to act on what they know. Some researchers and policy makers have identified gender inequality as the number one obstacle preventing women from protecting themselves against HIV infections. Gender-based inequalities often overlap with other social, cultural, economical and political inequalities between men and women. In Southern Africa

in particular, women face a greater risk of HIV infection than men, because their diminished socio-economic status compromises their ability to choose safer and healthier life styles (Pelser 2012). As previously indicated in this section, 57% of adults who were living with HIV/AIDS in SSA in 2005, 137 were women (UNAIDS 2010). During 2008, women reportedly constituted 61% of people living with HIV/AIDS in SSA. The latest official demographic estimate for the South-West region of Cameroon shows a 1.01 male/1.00 female in the general population. However in Cameroon, secondary school enrolment as a gross percentage of school age population is 34% for males and 29% for females (UNAIDS/WHO, 2017).

Religion

As the HIV/AIDS crisis has spread throughout the world, the HIV rates among Christian populations have remained significantly higher than among Muslim populations. This trend can be shown within Nigeria. With an HIV population of over 3 million, Nigeria has the second highest burden of HIV infection in SSA (Nigeria 2005). Within Nigeria, the highest prevalence rates are found in Christian areas of the country such as Benue where 10% of the population is HIV positive (Mack 2017). All of the states with an HIV prevalence rate above 6% are in the Christian areas of the country. The prevalence rates within Muslims states on the other hand, generally fall within 2-4% (Mack 2017). In Cameroon, the highest prevalence of HIV/AIDS is found in the Christian dominated provinces of the country.

Religion does play a large role in shaping the HIV/AIDS crisis in Cameroon, but not because of underlying differences in beliefs and moral choices between Christians and Muslims. Christians and Muslims have similar views on why the HIV epidemic continues to spread: both groups see promiscuity as the root cause of HIV/AIDS (Mack, 2017). Promiscuity is frowned upon heavily because of religious and because of underlying cultural traditions. Leaders in both the Christian and Muslim communities discourage their followers from pre-marital and extra-marital sex. With this similar aversion to risky sexual behaviour that could lead to contraction of HIV, it would seem that the infection rates between both groups should be comparable. To explain the discrepancy, it could be said that the Muslims put their beliefs into practice much more than do Christians. Many Christians in Nigeria and elsewhere are of the opinion that Islam is more repressive and less forgiving than Christianity. The lower rates are therefore not a reflection of merits of the religion, but rather of the inherent oppressive nature of the religion (Mack, 2017).

2.8 Empirical Studies

Knowledge in the current study refers specifically to issues relating to HIV/AIDS; including topics such as modes of transmission, preventative measures, sexual risk behaviour and implications. Knowledge differs from simple awareness and is highly differential and multifaceted (Du plessis, Meyer–Weitz, and Steyn, 2009). Even simply creating awareness and acquiring knowledge are influenced by

different intermediate variables, such as “selective perception, the interpretation of messages and selective access to sources of information” (Du Plessis et al 2009). According to Burns and Grove (2011), knowledge is an awareness or perception of reality acquired through insight, learning or investigation expressed in a form that can be shared. In the current study, knowledge of the mode of transmission of HIV/AIDS and knowledge of protection against HIV/AIDS were articulated through the practice of safer sex and true knowledge on the issues of transmission and prevention. In support of this, Garrick and Rhodes (2010) highlight the fact that knowledge is not only about reciting memorised facts concerning a phenomenon but the “authentic” demonstration of knowledge in relevant situations. Peoples’ health seeking behaviour to a large extent depend upon their understanding and interpretation of the causes of illness, in this regard, the causes of HIV/AIDS. Where people accept the germ theory of disease causation, their attitudes to the search for a cure to a disease will be different from the attitudes of those who attribute the disease to supernatural causes (Awusako-Asare and Anarti, 2017).

Oyo-Ita, Ikpeme, Etokidem, Offor, Okokon and Etukn (2011) in knowledge of HIV/AIDS among secondary school students in Calabar – Nigeria. The study was sited in Calabar comprising Calabar South and Calabar municipality. Information about the schools was obtained from the State Ministry of Education. There are 25 government secondary schools and 21 private secondary schools in the study area. Three secondary schools were selected based on single sex school or mixed school. The schools were grouped into boys’ only school, girls’

only school and co-educational school. The boys' only school and the girls' only school were each two in number while the co-educational schools were 42. One school was randomly selected from each of the three groups of schools to study the impact of gender mix on uptake of HIV/AIDS education. The study concludes that general awareness on HIV/AIDS may be there but the specific knowledge of the disease is still poor. This has contributed to erroneous beliefs and poor attitude towards those living with AIDS. This may be attributed to the source of information which does not allow in-depth knowledge of the disease. Parents and teachers have a role to play to educate the students on the pandemic and thus help in prevention and control of the disease. The students should also be encouraged to read by making literature on HIV/AIDS available in their schools. Peer health educators could also be trained to educate their peers on HIV/AIDS issues.

True knowledge and understanding of HIV/AIDS is a necessary condition for behavioural change although it is not per se the only condition (Gregson, Zhuwau, Anderson and Chandiwana, 2009; Uwalaka and Matsuo 2012). In order to assess the prospects of effective behaviour change, it is crucial to ascertain the depth of the object, whether it prevails to be hazardous to one's health or presents itself positively to one's own mind, attitudes and behaviour. Being aware therefore, provokes one's realisation of risks that pose a danger to one's life. Mytton (in Mohale 2013) purports that people may learn from campaigns on HIV/AIDS about its causes and may even change their sexual behaviour, while their basic and deep-rooted attitudes may change little. This gratification that one seeks from a particular

phenomenon is determined by attitudes towards that particular phenomenon, therefore people orientate themselves according to their own attitudes or a cluster of beliefs.

Despite the knowledge of protective measures, studies in SSA have shown that secondary school students rarely subscribe to them (Smith 2013; Amazigo, Silva, Kaufman and Obikeze 2009). Many secondary school students do not consider their behaviour or that of their sexual partners to be risky. This lack of risk perception is more challenging than the negative outcomes thereof; as the consequences of the lack of risk perception are not immediately obvious. Moreover risk perception may be based on insufficient knowledge and information. Kiragu and Zabin (2011) report that secondary school students' sexual activities are based on insufficient knowledge and misconceptions rather than on a rational consideration of the consequences; and secondary school students may not have enough understanding as to how to protect themselves, and if they do, they may not have the capacity to act on the knowledge of prevention in view of several cultural and economic constraints. Several studies have reported a level of awareness and knowledge of HIV/AIDS among secondary school students (Peterson and Obileye, 201), and average and low level of awareness and knowledge of HIV/AIDS among women college students and secondary school students (Aggarwal and Rous, 2017; Sharma and Mukherjee, 2017). Peterson and Obileye (2014) noted that despite the knowledge of HIV/AIDS, secondary school students' risky sexual activities are on the increase. The rise in risky sexual behaviour and early initiation

of sex, has led to an exponential rise in the spread of HIV/AIDS infection among students, especially school-going secondary school students (Peterson and Obileye, 2014).

Brieger and Oladepo (2009) found among most students of the University of Ibadan, a degree of aversion to AIDS victims. Caldwell, Orubuloye and Caldwell (2009) found among American college undergraduates that they generally expressed sympathy for AIDS victims, the tendency to work with AIDS patients was weak and subjects endorsed statements that promoted isolation of victims.

Studies from around the globe have established that the vast majority of secondary school students have no idea how HIV/AIDS is transmitted or how to protect themselves from the disease. For example, in countries with generalised HIV epidemics, such as Cameroon, Central African Republic, Equatorial Guinea, Lesotho and Sierra Leone, more than 80% of young women age 15 to 24 do not have sufficient knowledge about HIV (UNICEF/UNAIDS/WHO 2012). In the Ukraine, although 99% of girls had heard of AIDS, only 9% could correctly identify the three primary ways of avoiding sexual transmission of HIV/AIDS. Two thirds of secondary school students in their last year of primary school in Botswana thought they could tell if someone was infected with HIV by looking at them. By secondary school a fifth of the pupils still believed they could screen out risky partners by looks alone (UNICEF/UNAIDS/WHO,2012). This misinformation is especially dangerous in a country where one in three of their potential sex partners are infected with HIV. This may also have a negative bearing on stigmatisation. A number of

studies for example, in Kuwait and elsewhere, show engagement in unsafe sexual behaviour such as a average number of partners, sex with unknown persons, as well as less than positive views about condom use, and a low rate of behaviour change, even after learning about HIV (Al-Owaish, Moussa, Anwar, Al-Showner and Sharma 2009; Buysse2009).

Merrill (2009) found that more than 40% of their respondents, who had knowledge of HIV/AIDS, were engaging in risky sexual behaviour. This emphasises that a moderate to level of knowledge about AIDS may not be a predictor of safe sexual practices. Knowledge of HIV/AIDS had implications for the current study as it was hypothesised that learners who have true knowledge on the mode transmission of HIV/AIDS, will have correct perceptions and attitudes regarding the disease, and will engage in safer sexual practices. During the current study the attitudes of learners regarding HIV/AIDS were investigated. Correlations between knowledge, attitudes and sexual behaviour were also investigated.

Kost and Henshaw (2012) define a risk factor as “a measurable characterisation of each subject in a specified population that precedes the outcome of interest and which can be used to divide the population into two groups (the high–risk and the low–risk groups that comprise the total population).” The subject in this case can refer to an individual or specific groups (for example school learners), with “characterisation” also referring to the individual’s or subject’s context. Within the current study, sexual risk behaviour refer to activities that place an individual or group directly at risk of contracting HIV.

2.9 Summary

The literature review has shown that there is information knowledge and attitude of sexual behaviour among senior secondary school students. STI prevention strategies targeted at this group before they get infected may reduce the spread of HIV infection. These infection cases were the main attribute to unprotected sex. Although already mentioned, it is important to re-state that unprotected sex is a significant contributory factor to the rising global student pregnancy. This has huge implications relating to students dropping out of school and lowered level of educational achievement. Unprotected sex is also closely associated with alcohol and substance use. Multiple sexual partnerships are risk sexual behaviour because of their tendency to increase the risk of HIV transmission through sexual networks (Berry and Hall 2009). It is therefore important to know the extent to which students are engaging in multiple sexual partnerships.

According to Quinn (2010) the ABC HIV prevention strategy, which became famous because of its success. 'A' stands for abstinence, which means a delay in sexual initiation among students. 'B' stands for being faithful to ones' partner or having a monogamous relationship. 'C' stands for consistent and correct condom use especially for casual sexual activities or other sexual risk behaviour. Life skills training originated from an educational perspective, and it is based on a humanistic, cognitive and behavioural frame of reference (Ebersohn and Jacobs, 2010). In this context an individual is seen as consisting of multiple sub-systems such as the

physical, affective, cognitive, interpersonal, moral and behavioural – all in close relationship and part of the whole – functioning within a family and social context (Ford and Lerner, 2012; Nelson-Jones, 2013). Life skills programmes focus on the development of various subsystems of the individual with the aim of facilitating change in the individual, often observed through behavioural processes. The school teachers' knowledge about Sexual risk behaviour is very important so that they can impart accurate knowledge about the disease to the school children who ultimately serve as catalytic agent to propagate accurate information about the disease in the community in the long run. It is easy to establish protective behaviour that will last into adulthood at young age

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The purpose of this study was to assess knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State. To achieve the above purpose, research design, population, sample and sampling procedure, instrumentation, validity of the instrument, procedures for data collection and procedure for data analysis used for the study are described and presented in this chapter.

3.2 Research Design

The research design that was used for this study was ex-post facto research design. Ex-post facto research design is a non-experimental research design. It does not involve any form of manipulation or measurement by the researcher before the fact occurs (Lammers, and Badia, 2011). The design was used because the information needed is already in existence with the respondents and did not require any form of manipulation of the independent variables by the researcher.

3.3 Population

The population for this study comprised of 76,279 senior secondary school students in Bauchi State, Nigeria. According to EMIS Department Enrolment Document of Bauchi State Ministry of Education (2015), there are one hundred and

thirty four (134) senior secondary schools with a total population of 40,198 male and 36,218 female students. Hence, a total of 76,279 senior secondary school students in Bauchi State, Nigeria was the population for this study.

3.4 Sample and Sampling Procedure

The sample size for this study was 400 respondents drawn from the population. To obtain a sample size from the total of 76,279, the Krijcie and Morgan (1970) procedure was adopted. They observed that as the population increases, the sample size increases at a diminishing rate. To them for a population size of about 75,000 – 100,000, a sample size of 400 could be used. To arrive at this sample size, multi stage sampling procedure was employed.

A multi-stage sampling procedure which involved the stratified random sampling, simple random sampling and proportionate sampling procedure was used for this study. The first stage involved the use of stratified random sampling procedure, where the senior secondary schools in Bauchi State was stratified into three (3) strata (zones) which are Bauchi North, Bauchi Central and Bauchi South. Secondly, the use of simple random procedure was used to select four (4) senior secondary schools from each stratum by writing all the names of the senior secondary schools in each stratum on pieces of paper, folded, dropped in a container, shuffled, and picked. The name of each school picked was written down. The researcher continued with the process until the number of secondary schools are selected. The final stage involved the use of proportionate sampling procedure to select the respondents (senior secondary school students).

With the sample size been determined at 400, the number of respondents drawn from each secondary school is shown in Table 3.1 below using proportionate sampling procedure as follows;

$$\text{Proportionate Sample} = \frac{\text{Population size of each school}}{\text{Total population}} \times \text{Sample size}$$

Table 1: Sampled Respondents from each Sampled Senior Secondary School per zone

School	Population	Male	Female	Sample of male	Sample of Female	Total Sample
Bauchi North Zone						
Govt. Day Secondary School, Azare	139	80	59	26	18	44
Govt Day Secondary School, Dambam	125	56	68	18	22	40
Govt Day Secondary School, Madara	79	50	29	16	9	25
Govt Day Secondary School, Yana	105	46	59	15	18	33
Bauchi Central Zone						
Community Day Secondary School, Lanzai	92	46	46	15	14	29
Govt. Secondary School, Sade	99	43	55	14	17	31
Govt. Day Secondary School, Gabarin N/Konkiel	86	50	36	16	11	27
Govt. Day Secondary School, Nasarawa	92	40	52	13	16	29
Bauchi South Zone						
Government Day Secondary School, Gokaru	115	53	62	17	19	36
Govt. Day Secondary School, Alkaleri	102	46	55	15	17	32
Govt. Secondary School, Duguri	122	70	52	23	16	39
Govt. Day Secondary School, Kundak	109	56	53	19	16	35
Total	1265					400

3.5 Instrument for Data Collection

The instrument that was used for data collection was a researcher structured questionnaire in which a set of statements that are related to the purpose of the study was made. It is a close-ended and worded unambiguously in order to elicit the correct responses from the respondents. It consisted of three (3) sections (sections A – C) and comprised of twentythree (23) items. Section A consisted of three (3) items designed to obtain information on the demographic characteristics of the respondents. Section B contained ten (10) items on the knowledge of sexual risk behaviour among senior secondary school students. Section C consisted of ten (10) items on the attitude of sexual risk behaviour among senior secondary school students.

Therefore, for this study, 4 point Likert scale was used as follows;

SA - Strongly Agree	4
A - Agree	3
D - Disagree	2
SD - Strongly Disagree	1

Hence, mean score of any response was considered positive, if it was 2.5 and above and mean score of any response less than 2.5 was regarded as negative or not acceptable.

3.5.1 Validity of Instrument

In order to establish the face and content validity of the research instrument, the questionnaire was vetted by three (3) Jurors in the Department of Physical and

Health Education, Ahmadu Bello University, Zaria. Their comments and observations were incorporated in the final draft. After incorporating all the suggestions made by the jurors, a final draft of the questionnaire was prepared.

3.6 Procedure for Data Collection

The instrument used for data collection for this study was a close-ended questionnaire. For the purpose of data collection, Four hundred (400) copies of questionnaire were distributed to the sampled respondents. A letter of introduction was obtained from the Department of Human Kinetics and Health Education, Ahmadu Bello University, Zaria, for the administration of the questionnaire to the respondents in the selected sampled senior secondary schools. The researcher and his two (2) research assistants visited the sampled schools, obtained permission from the schools principals and teachers and thereafter followed up with administering the instrument on the student in their classes and simple random sampling was used to administered the questionnaire to the respondents to fill and return on the spot after being briefed by writing Yes and No on pieces of paper and folded, the students who picked Yes were given questionnaire to fill. Four hundred (400) copies of questionnaire were administered. Out of the Four hundred (400) copies of the questionnaire administered, three hundred and seventy eight (378; 94.5%) copies were adequately filled and returned. However, twenty two (22; 5.5%) copies of the questionnaire were not properly filled and therefore, these copies of questionnaire were not used. The administration of the questionnaire took the researcher and his

research assistant two (2) weeks to administer and retrieve the copies of the questionnaire from the respondents.

3.7 Procedure for Data Analysis

The completed copies of the questionnaire were coded and analysed using the followings statistical tools;

1. Simple frequencies and percentages were used to describe the demographic characteristics of the respondents.
2. Descriptive statistics of mean and standard deviation was employed to answer the research questions.
3. One sample t- test was used to analyzed hypothesis one and two, independent sampled t test was used to analysed hypothesis three and four and analysis of variance (ANOVA) was used to analyzed hypothesis two and three.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The purpose of this study was to assess the knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State, Nigeria. To achieve this purpose, ex-post facto research design was used. Out of four hundred (400) copies of questionnaire administered, three hundred and seventy eight (378) copies of questionnaire were valid and used. Data collected were analysed using frequency and simple percentages for responses in section A on the demographic characteristics of the respondents, descriptive statistics which comprised of mean and standard deviation was used in answering the research questions, while one sample t-test, independent sampled t-test and analysis of variance (ANOVA) was used to test the formulated sub - hypotheses. The data was analysed, interpreted and discussed in this chapter

4.2 Results

4.2.1 Demographic Characteristics of the Respondents

Table 2: Demographic Characteristics of the Respondents

S/N	Variable	Option	Frequency	Percentage %
1.	Age range	10 – 12 years	86	22.8
		13 –15 years	116	30.6
		16 years and above	176	46.6
		Total	378	100.0
2.	Gender	Male	198	52.4
		Female	180	47.6
		Total	378	100.0

Observation of Table 2 above, shows that majority (176; 46.6%) of the respondents were of ages 16 years and above, 116 (30.6%) of the respondents were of ages 13 – 15 years while 86 (22.8%) of the respondents were of ages of 10 – 12 years. Concerning gender, many (198; 52.4%) of the respondents were male students while the remaining 180 (47.6%) of the respondents were female students.

4.2.2 Answering of the Research Questions

Research Question One: What is the knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State?

Table 3: Mean Score of Responses on Knowledge of Sexual Risk Behaviour among Senior Secondary School Students

Item	Mean	Std. Dev.
I know that unprotected sex can increase the rate of contracting sexually transmitted infections	2.61	1.20
I know that unprotected sex can lead to unplanned pregnancy	2.84	1.04
Unprotected sex has implications relating to youths dropping out of school and lowered level of educational achievement	2.91	.88
Sex is safe with the use of condom	3.30	.72
It is good to abstain from sex before marriage and stick to only one uninfected partner for life	2.55	.87
Keeping multiple sexual partners is a risky sexual behaviour because it can increase the risk of STI transmission through sexual networks	3.30	.79
It is good for one to know his/her HIV status and adopt necessary precautionary measures against its transmission	3.21	.75\
Personal desire is responsible for initiation of the first sexual intercourse of students	2.92	1.01
Peer pressure is responsible for initiation of the first sexual intercourse of students	2.59	.71
I find sex interesting and there is no problem attached to it.	2.94	1.22
Aggregate Mean	3.84	

A careful look at Table 3 shows the mean score of the responses about knowledge of sexual risk behaviour among senior secondary school students in Bauchi State. The responses for each item was computed. The highest mean score of the respondents with responses was 3.30, indicating that the majority of the respondents agreed that keeping multiple sexual partners is a risky sexual behaviour because it can increase the risk of STIs' transmission through sexual networks. The table shows that all the items from the responses were positive. This implies that the senior secondary school students were knowledgeable of sexual risk behaviour as all the mean scores for all the items were above 2.5.

Research Question Two: What is the attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State?

Table 4: Mean Score of the Responses on the Attitude of the respondents towards Sexual Risk Behaviour

Item	Mean	Std. Dev.
I like protected sex in order to prevent infections	2.11	.35
I prefer unprotected sex than protected sex	1.54	.54
I dont like sex with the use of condom	2.23	.58
I prefer having one sex partner than multiple sex partners	2.10	.52
I always ignore having protected sex	2.25	.61
Males are more likely to have multiple sex partners and experience early sexual initiation than females	2.20	.79
I always feel afraid anytime I remember STI	2.56	.75
Students have first experience of sexual intercourse before their 18th birthday	2.12	.51
Peer pressure do compel me into having sexual intercourse of students	2.21	.63
It is good to avoid sex in order not to contact STIs	1.74	.72
Aggregate Mean	2.11	

A careful look at Table 4 shows the mean score of the responses of the respondents' attitude towards sexual risk behaviour. The responses for each item was computed taking into account that 4 for strongly agree, 3 for agree, 2 for disagree and 1 for strongly disagree. The highest mean responses with mean score 2.56 indicated that the majority of the respondents agreed that they always feel afraid anytime

they remember STI. The table shows that all the items from the responses were disagreed except item 2.56 that says that I always feel afraid anytime I remember STIs.

Generally, Table 4 reveals that the attitude of the respondents towards sexual risk behaviour was negative as almost all the mean score of responses were below 2.5 which was the fixed mean score. Hence, though, the respondents had knowledge of sexual risk behaviour, their attitude did not reflect this knowledge suggesting that knowledge does not essentially translate to positive attitude.

Research Question Three: Do demographic characteristics of the respondents (such as age and gender) influence their knowledge of sexual risk behaviour among senior secondary school in Bauchi State?

Table 5: Mean score of Responses on Knowledge of Sexual Risk Behaviour according to age

Variable	Mean	Standard Deviation	Mean Difference
10 – 12 years	21.62	3.13	
13 – 15 years	23.38	3.81	0.68
16 years and above	23.01	3.41	0.40

A look at Table 5 above shows that knowledge of sexual risk behaviour among senior secondary school students according to age did not differ, because respondents of 10 – 12 years had a mean of 21.62 and standard deviation of 3.13, 13

– 15 years had a mean of 23.38 and standard deviation of 3.81 while 16 years and above has a mean of 23.01 and standard deviation of 3.41 with mean difference of 0.68 and 0.40 respectively. However, from the results above, even though there was no significant difference in the knowledge of sexual risk behaviour among the different age groups, the age group of 10 – 12 years seemed to be less knowledgeable about sexual risk behaviour when compared to the remaining the age groups.

Table 6: Mean score of Responses on the differences between male and female students in their Knowledge of Sexual Risk Behaviour among Senior Secondary School Students.

Gender	Mean	Standard Deviation	Mean Difference
Male	37.78	4.95	0.52
Female	37.26	4.78	

Looking at Table 6, reveals that knowledge of sexual risk behaviour among senior secondary school students was not influenced by their gender. This is because the male respondents had has a mean of 37.78 and standard deviation of 4.95 while the female respondents had a mean of 37.26 and standard deviation of 3.78 with the mean difference of 0.52. However, though there was no significant difference between the males and their female counterparts, the male respondents were more knowledgeable (Mean = 37.78 and 37.26) than the female respondents.

Research Questions Four: Do demographic characteristics of the respondents (such as age and gender) influence attitude towards sexual risk behaviour among senior secondary school students in Bauchi State?

Table 7: Mean score of responses on attitude towards sexual risk behaviour according to age

	Mean	Standard Deviation	Mean Difference
10 – 12 years	10.9401	2.1007	
13 – 15 years	11.0527	2.4138	0.1126
16 years and above	11.5104	2.3019	0.4573

Observation of Table 7 above, shows that the attitude of sexual risk behaviour among senior secondary school students according to age did not differ. This is because respondents of 10 – 12 years have a mean of 10.9401 and standard deviation of 2.1007, 13 – 15 years also have a mean score of 11.0527 and standard deviation of 2.4138 while 16 years and above has a mean of 11.5104 and standard deviation of 2.3019 with mean difference of 0.1126 and 0.4573. From the result presented in the above Table, it means that age did not have any influence on attitude towards sexual risk behaviour among senior secondary school students in Bauchi State.

Table 8: Mean score of the responses on the influence of attitude towards sexual risk behaviour according to gender.

Age group	N	Mean	SD	Mean difference
Male	198	31.07	3.14	0.81
Female	180	30.26	3.10	

A careful look at Table 8 shows that the attitude of male and female students towards sexual risk behaviour is not influenced by the gender. This was because the male has a mean of 31.07 and standard deviation of 3.14 while female has a mean of 30.26 and standard deviation of 3.10 with the mean difference of 0.81. From the result presented in the above Table, it means there is no influence of attitude towards sexual risk behaviour according to gender.

4.2.3 Hypotheses Testing

Hypothesis One: Knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significant.

Table 9: One sample t-test Analysis on knowledge of Sexual Risk Behaviour among Senior Secondary School Students in Bauchi State.

	Mean	Std. Deviation	t-value	Df	P-value
Actual mean	3.84	.92	4.12	377	0.02
Constant mean	2.50	0.0			

$t(377) = 1.97, P < 0.05$

From the above result of analysis presented, it shows that the probability value 0.02 is less than 0.05 level of significance. The t-value is 4.12 higher than the t-critical is 1.97 at degree of freedom 377 using two tailed significant level. The null hypothesis which stated that knowledge of sexual risk behaviour among senior secondary school students in Bauchi State is not significant is therefore rejected.

Hypothesis Two: The attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significant.

Table 10: One sample t-test analysis of attitude towards sexual risk behaviour among senior secondary school students

	Mean	Std. Deviation	t-value	df	P-value
Actual mean	2.16	.60	1.34	377	0.81
Constant mean	2.50	0.00			

$t(377) = 1.97, P < 0.05$

A careful look at Table 9 above shows the probability value of 0.81 which is higher than 0.05 level of significance. The t-value value is 1.34 is less than the t-critical is 1.97 at degree of freedom 377 using two tailed significant level. The null hypothesis which stated that attitude towards sexual risk behaviour among senior secondary school students in Bauchi State was not significant was therefore retained.

Hypothesis Three: There is no significant influence of demographic characteristics of the respondents (such as age and gender) on the knowledge of sexual risk behaviour among senior secondary school students in Bauchi State.

Table 11: Analysis of ANOVA on Knowledge of sexual risk behaviour among senior secondary school students in Bauchi State is not significant influenced by their age

Variable	Sum of Squares	Df	Mean Square	F	P-value
Between Groups	17.62	2	1.33	1.13	0.21
Within Group	100.71	375	1.77		
Total	118.33	377			

$f(2, 375) = 2.06, P < 0.05$

Observation of Table 11 shows that result wasnot significant, because P value of 0.21 observed is greater than P value of 0.05. The observed F-value of 1.13 is less than the critical value of 2.06 at degree of freedom 2, 375. This means that the null hypothesis which stated that knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significantly influenced by their age was therefore retained.

Table 12: Independent sample t-test analysis on the differences between male and female students in their knowledge of sexual risk behaviour among senior secondary school students.

Age group	Mean	SD	df	t	P-value
Male	37.78	4.95	377	1.30	0.17
Female	37.26	4.78			

$t(377) = 1.97, P > 0.05$

Concerning differences between male and female students in their knowledge of sexual risk behaviour, the table reveals that differences did not exist among the respondents. This was because the calculated p value of 0.17 is greater than the 0.05 alpha level of significance while the calculated t value of 1.30 is lower than the 1.97 t critical at df 377. Therefore, the null hypothesis which state that Knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significantly influenced by their gender, was retained.

Hypothesis Four: Attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significant influenced by their demographic characteristics.

Table 13: Analysis of ANOVA statistics on attitude towards sexual risk behaviour among senior secondary school students in Bauchi State is not significant influenced by their age

Variable	Sum of Squares	Df	Mean Square	F	P-value
Between Groups	10.02	2	2.04	1.05	0.1
Within Group	81.30	375	2.07		
Total	91.32	377			

$f(2, 375) = 2.06, P < 0.05$

Table 13 above shows that, the hypothesis was analyzed using one way Analysis of Variance (ANOVA) test statistics. The test is not significant because P value of 0.1 is greater than P value of 0.05. The observed F-value of 1.05 is less than the critical value of 2.06 at degree of freedom 2, 375. This means that the null hypothesis which stated that attitude of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significant influenced by their age was therefore retained.

Table 14: Independents sample t-test analysis the differences between male and female students in their attitude towards sexual risk behaviour among senior secondary school students.

Age group	Mean	SD	df	T	P-value
Male	31.0731	3.1404	377	1.301	0.174
Female	30.2613	3.1016			

$t(377) = 1.97, P > 0.05$

Results of the independent t-test statistic showed that there is no significant differences between male and female students. This was because the calculated p value of 0.174 is lower than the 0.05 alpha level of significance, while the calculated t value of 1.301 is lower than the 1.97 t critical at df 377. This showed that the gender status of the students did not reveal any difference in the sexual risk behaviour. Therefore, the null hypothesis which state that attitude of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State is not significant influenced by their gender, thus was retained.

4.3 Discussion

The findings showed that there was significant knowledge of sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State. This finding is consistent with Kiene and Subramanian (2013) stated that lack of knowledge of unprotected sex is related to an increased potential of contracting STDs and unwanted pregnancies. Approximately 19 million STDs cases were diagnosed in 2012, and 13 percent of these cases were student ages 13-24 with HIV/AIDS (Kost and Henshaw, 2012). These infection cases were in the main attributed to unprotected sex. Although already mentioned, it is important to re-state that unprotected sex is a significant contributory factor to the rising global student pregnancy. This has huge implications relating to students dropping out of school and lowered level of educational achievement. Unprotected sex is also closely associated with alcohol and substance use. Data obtained from a study conducted among students in Southern Africa confirm this. The data revealed that drunkenness tends to reduce the likelihood of men using condoms with their steady partners as well increases their potential of engaging in sexual relationships with multiple sex partners. True knowledge and understanding of HIV/AIDS is a necessary condition for behavioural change although it is not per se the only condition (Gregson, Zhuwau, Anderson and Chandiwana, 2009; Uwalaka and Matsuo 2012). In order to assess the prospects of effective behaviour change, it is crucial to ascertain the depth of the object, whether it prevails to be hazardous to one's health or presents itself positively to one's own

mind, attitudes and behaviour. Being aware therefore, provokes one's realisation of risks that pose a danger to one's life. Mytton (in Mohale, 2013) purports that people may learn from campaigns on HIV/AIDS about its causes and may even change their sexual behaviour, while their basic and deep-rooted attitudes may change little. This gratification that one seeks from a particular phenomenon is determined by attitudes towards that particular phenomenon, therefore people orientate themselves according to their own attitudes or a cluster of beliefs.

The finding also showed that attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State was not significant. This finding is consistent with Astatke (2010) that lack of attitude towards multiple sexual partnerships are risk sexual behaviour because of their tendency to increase the risk of HIV transmission through sexual networks (Berry and Hall 2009). It is therefore important to know the extent to which students are engaging in multiple sexual partnerships. Sexually transmitted diseases are often associated with sexually active students with multiple sexual partners. In agreement, Astatke (2010) asserted that 9.2% of sexually student students in his study reported of STD and this was attributed to students' frequent contact with commercial sex workers and the use of multiple sex partners. In a similar study in 2011, the second HIV/AIDS Behavioural Surveillance Survey (BSS), about 9.9% school students were found to have had sexual experience with multiple sex partners (BSS,2011). Males were more likely to have multiple sex partners and experience early sexual initiation than females, and

thus they are at an increased risk of contracting and transmitting STDS from partner to partner.

Sutherland (2006) that young people especially youths between the ages of 15 and 24 are most vulnerable to HIV/AIDS infection. In 2003, approximately 50% new HIV infections worldwide were among individuals in this age group, which accounted for about 6,000 new infections daily, and there were 12.4 million teens and young adults living with HIV/AIDS. Behavioural, physiological and sociocultural factors make young people more vulnerable to HIV infection than adults (Amazigo, Silva, Kaufman and Obikeze 2009). Adolescence is a time when young people naturally explore and take risks in many aspects of their lives, including sexual relationships. Those who are sexually active may change partners frequently, and have more than one partner at the same time or may engage in unprotected sex. All of these behaviours increase young people's risk of contracting HIV. In addition young people who are HIV positive probably became infected quite recently and are therefore likely to be highly infectious as a result of increased viral loads; posing very high risks to their sexual partners (Anderson, 2010). Compounding young people's greater vulnerability to HIV from behavioural factors is the fact that in SSA, as well as elsewhere in the developing world, young people's reproductive health needs receive little attention (Kiragu, 2010). And even where reproductive health care for adolescents is available, many young people do not know where to obtain this or are unable to pay for it. Thus, most young people have

to overcome significant obstacles to obtain the information and care they need to have safe sexual relationships).

Finding revealed that attitude towards sexual risk behaviour (unprotected sex, multiple sex partner and early sexual initiation) among senior secondary school students in Bauchi State was not significantly influenced by their demographic characteristics. This finding was consistent with Serovich and Greene (2009) that more than 40% of their respondents, who had knowledge of HIV/AIDS, were engaging in sexual risk behaviour. This emphasises that a moderate level of knowledge about AIDS may not be a predictor of safe sexual practices. Knowledge of HIV/AIDS had implications for the current study as it was hypothesised that learners who have true knowledge on the mode of transmission of HIV/AIDS, will have correct perceptions and attitudes regarding the disease, and will engage in safer sexual practices. During the current study the attitudes of learners regarding HIV/AIDS were investigated. Correlations between knowledge, attitudes and sexual behaviour were also investigated.

Sekirime (2011) describing knowledge, attitude and practice about sexually transmitted diseases among university students in Kampala (Uganda) concluded that the level of knowledge about STDs and their prevention is not matched by sexual behavioural patterns, and male students undertake more risky sexual behaviour. Sexual education should be introduced at the university as a means of increasing students' awareness about the problem and prevention of sexually transmitted diseases including HIV/AIDS the then recommended. James (2008) South Africa

also painted a discrepancy between awareness and behaviour and calls for a reorientation of sexuality education to include those elements critical to behavioural change, such as addressing gender discrepancies and promoting skills for communication through planned intervention programs.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The purpose of this study was to assess knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State, Nigeria. Four (4) purposes of the study, research questions and hypotheses respectively were formulated and tested for this study. Related literature was reviewed under the conceptual framework, theoretical framework and empirical studies. Ex-post facto research design was adopted for this study. The population of this study comprised of all senior secondary school students in Bauchi State with one hundred and thirty four (134) secondary schools with 40,198 male students and 36,218 female students totalling of 76,279 senior secondary school students in Bauchi State. A multi-stage sampling approach that involved a stratified random sampling technique, simple random sampling technique and convenient sampling techniques were used to select three hundred and eighty four (384) senior secondary school students who were drawn from the population out of which three hundred and seventy eight (378) students were used for the study. The instrument used for data collection was a researcher-developed questionnaire. Data collected was analyzed with Statistical Package for Social Science (version 22) using frequencies, percentages, mean, standard deviation, one sample t-test and Independent sample t-test.

The findings of this study were summarized as follows:

1. Knowledge of sexual risk behaviour among senior secondary school students in Bauchi State was significant ($t = 4.120$; $p = 0.021$).
2. Attitude towards sexual risk behaviour among senior secondary school students in Bauchi State was not significant ($t = 1.341$; $p=0.81$)
3. Knowledge of sexual risk behaviour among senior secondary school students in Bauchi State was not significantly influenced by their demographic characteristics ($t=1.131$; $p = 0.21$).
4. Attitude towards sexual risk behaviour among senior secondary school students in Bauchi State was not significantly influenced by their demographic characteristics ($t=1.053$; $p = 0.1$).

5.2 Contribution to Knowledge

This study has contributed to knowledge in that it was established that;

- Knowledge of sexual risk behaviour among senior secondary school students in Bauchi State is significant.
- Attitude towards sexual risk behaviour among senior secondary school students in Bauchi State is not significant
- Knowledge of sexual risk behaviour among senior secondary school students in Bauchi State is not significantly influenced by their demographic characteristics.

- Attitude towards sexual risk behaviour among senior secondary school students in Bauchi State is not significantly influenced by their demographic characteristics.

5.3 Conclusions

Based on the findings of this study, the following conclusion were drawn;

- Senior secondary school students in Bauchi State have knowledge of sexual risk behaviour.
- Senior secondary school students in Bauchi State have negative attitude towards sexual risk behaviour.
- Knowledge of sexual risk behaviour among senior secondary school students in Bauchi State is not influenced by their demographic characteristics.
- Attitude towards sexual risk behaviour among senior secondary school students in Bauchi State is not influenced by their demographic characteristics.

5.4 Recommendations

Based on the conclusions of this study, the following recommendations were made;

1. Government should organize workshop for school Administrators and counsellors should put more emphases into the teaching of sex education in school.

2. Although the respondents have adequate knowledge of sexual risk behaviour, continuous education through organizing of seminars and workshops by the school administrators should be organized to sustain and promote the knowledge that students have acquired
3. More emphasis on counselling, encouragement and advice should be made by the school authorities in order to enable the students to have a good attitude towards sexual risk behaviour.

5.5 Suggestions for Future Research

1. Assessment of the practice of sexual risk behaviour among senior secondary school students.
2. Socio demographic determinants of sexual risk behaviour among senior secondary school students.

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APPENDICES

APPENDIX I

QUESTIONNAIRE ON ASSESSMENT OF KNOWLEDGE AND ATTITUDE OF SEXUAL RISK BEHAVIOUR AMONG SENIOR SECONDARY SCHOOL STUDENTS IN BAUCHI STATE

Dear Respondent,

This questionnaire is designed to enable the researcher conduct his research on assessment of knowledge and attitude of sexual risk behaviour among senior secondary school students in Bauchi State. The data collected will be used specifically for academic pursuit, hence, the information you will give will be treated confidentially.

Your response and time in filling this questionnaire is highly valued and appreciated. Thanks you.

Instruction: Do tick the option which best describes your opinion.

Section A: Demographic Characteristics of the Respondents

1. Age:

- a. 10 -12 years
- b. 13 - 15 years
- c. 16 years and above

2. Gender:

- a. Male
- b. Female

Instruction: Please tick () the appropriate option which best describes your opinion

Note that:

SA: Strongly Agree **D:** Disagree

A: Agree

SD: Strongly Disagree

Section B: Knowledge of Sexual Risk Behaviour

S/N	Statement	SA	A	D	SD
1	I know that unprotected sex can increase the rate of contracting sexually transmitted infections				
2.	I know that unprotected sex can lead to unplanned pregnancy				
3.	Unprotected sex has implications relating to youths dropping out of school and lowered level of educational achievement				
4.	Sex is safe with the use of condom				
5.	It is good to abstain from sex before marriage and stick to only one uninfected partner for life				
6	Keeping multiple sexual partners is a risky sexual behaviour because it can increase the risk of STI transmission through sexual networks				
7	It is good for one to know his/her HIV status and adopt necessary precautionary measures against its transmission				
8	Personal desire is responsible for initiation of the first sexual intercourse of students				
9	Peer pressure is responsible for initiation of the first sexual intercourse of students				
10	I find sex interesting and there is no problem attached to it.				

Section C: Attitude towards Sexual Risk Behaviour

S/N	Statement	SA	A	D	SD
1	I like protected sex in order to prevent infections				
2.	I prefer unprotected sex than protected sex				
3.	I don't like sex with the use of condom				
4.	I prefer having one sex partner than multiple sex partners				
5	I always ignore having protected sex				
6	Males are more likely to have multiple sex partners and experience early sexual initiation than females				
7	I always feel afraid anytime I remember STI				
8	Students have first experience of sexual intercourse before their 18th birthday				
9	Peer pressure do compel me into having sexual intercourse of students				
10	It is good to avoid sex in order not to contract STI				