

**AWARENESS OF HIV/AIDS AND SEXUAL BEHAVIOUR AMONG
SECONDARY SCHOOL STUDENTS IN NJOMBE DISTRICT, TANZANIA**

BY

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ABSTRACT

Despite several campaigns that have been conducted for HIV/AIDS reduction and the knowledge about HIV/AIDS people have from campaigns and seminars, the rate of HIV infection is still high due to risky sexual behaviour among sexually active adults who include secondary school students. Therefore, the broad objective of this study was to determine the level of awareness of HIV/AIDS and sexual behaviour among secondary school students in Tanzania. The specific objectives were to assess the level of awareness about HIV/AIDS among secondary school students, determine the sexual behaviour among secondary school students, determine the correlation between awareness about HIV/AIDS and sexual behaviour, and identify barriers to behavioural change. Data for this study were collected in Njombe District through structured interviews using a questionnaire, focus group discussions, and key informant interviews. A total of 240 secondary school students from form one to form three in four selected schools were interviewed in October and November 2010. The study revealed that the awareness of HIV/AIDS transmission and prevention among secondary school students was high, and the mean number of points scored on awareness of HIV/AIDS was 82.3 out of 100 on an index scale. The study findings on sexual behaviour showed that 69 (32.9%) of all 240 respondents had worse sexual behaviour, based on an index scale of sexual behaviour which had a maximum of 110 points, and 71 to 110 denoted bad sexual behaviour while less than 71 denoted good sexual behaviour. The results indicated that there was positive correlation between awareness about HIV/AIDS and sexual behaviour ($r = +0.050$) but the correlation was not significant ($p = 0.680$). Findings on barriers to behavioural changes showed that factors that were perceived to contribute to students' involvement in

sexual intercourse were sexual desire, parents/guardians giving them too little money, lack of knowledge on HIV/AIDS, to get money, and persuasion by peers. Based on the correlation results which showed that there was no significant correlation between awareness of HIV/AIDS and sexual behaviour, it is concluded that awareness of HIV is not the only determinant of sexual behavioural change, and that secondary school students with lower and higher awareness of HIV/AIDS are likely to have the same sexual behaviour. In view of that conclusion, it is recommended that education on HIV/AIDS should be given continuously to secondary school students so that they can always remember the risk of HIV infection and hence avoid bad sexual behaviours.

DECLARATION

I, STELLA JILAONEKA MWANI, do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work and has never been submitted and nor concurrently being submitted for any degree award in any other University.

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DEDICATION

This work is dedicated to my lovely parents Mr. and Mrs. Jilaoneka Mwani for their wise decision to educate me; to my spouse Carlos Kidenya and our daughters Winnie and Megrine, and our son Meckson who missed my love during the course of this study.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical and Research Foundation
CBO	Community Based Organization(s)
FBO	Faith Based Organisation(s)
FHI	Family Health International
HIP	Health Information Project
HIV	Human Immunodeficiency Virus,
IEC	Information, Education and Communication
MCF	Mama Clementina Foundation
MDGs	Millennium Development Goals
MTP	Medium Term Plan
NACP	National Aids Control Programme

NGO	Non-Governmental Organisation(s)
PAPER	President's Emergency Plan for AIDS and Relief
SNAL	Sokoine National Agricultural Library
SPW	Students Partnership Worldwide
STRADCOM	Strategic Radio Communication for Development
TACAIDS	Tanzania Commission for Aids
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNCTN	United Nations Clubs Tanzania Network
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
URT	United Republic of Tanzania
WHO	World Health Organisation
YUNA	Youth United Nations Association

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Tanzania is among the sub-Saharan African countries having relatively high prevalence of HIV/AIDS. The first cases of HIV/AIDS in Tanzania were reported in 1983 in Kagera Region (TACAIDS *et al.*, 2008). Thereafter, the pandemic spread so fast that by 1986 all regions of Tanzania Mainland had reported HIV/AIDS cases (URT, 2007a). Surveys in the United Republic of Tanzania detected an increase in the rates of sexually transmitted infections, genital discharges or sores from 5% among women and 6% among men in 2003–04 to 6% and 7%, respectively, in 2007–2008 (TACAIDS *et al.*, 2008). The leading regions in HIV/AIDS prevalence in Tanzania are Iringa (15.7%), Mbeya (9.2%), Dar es Salaam (9.3%) and Mara (7.7%) (TACAIDS *et al.*, 2008).

About twenty percent (20.0%) of the Tanzanian population is between the ages of 15 and 24 years, and each year about 60% of new HIV infections occur in this demographic group (URT, 2005a). In addition, 4% of women and 3% of men aged 15 to 24 are HIV positive (TACAIDS *et al.*, 2005). These young men and women are the future labour force of Tanzania; therefore, it is necessary that their health and well-being be protected. About 39% of females aged 15 to 24 years and 42% males aged 15 to 24 years in Tanzania have comprehensive knowledge about AIDS (TACAIDS *et al.*, 2008). The knowledge is higher among youth in urban areas than in rural areas (TACAIDS *et al.*, 2008). It is clear that programmes are needed that

move youth from awareness and knowledge to actual behaviour change.

Njombe District is among the 6 districts of Iringa Region with high HIV/AIDS prevalence; it is the third among the six districts of the region. According to Njombe District HIV/AIDS Coordinator, the prevalence of HIV/AIDS in the district was 15.6% in 2009. The high prevalence is partly explained by the district being found along the travel routes from and to Zambia, Malawi, Congo DRC, and southern regions of Tanzania where drivers of heavy trucks and other workers on the trucks rest. Njombe District also is a famous shopping centre which receives people from different areas with different backgrounds; this has led to increase in HIV infection among adults, youth and children.

Secondary school students are among the most vulnerable people to HIV/AIDS infection. In general, the youth exhibit low condom use, show low use of modern pregnancy prevention methods, and continue to engage in risky sexual behaviour. About one-third of young females and 80% of males aged 15 to 24 years engage in risky sexual activities. Involvement in risky sexual activities is more common in urban areas (TACAIDS *et al.*, 2008). However, surveys consistently find that awareness of these issues and of HIV prevention amongst youth is fairly high even in rural areas.

The aim of this study was to find out the level of awareness and associated sexual behaviour of secondary school students towards HIV/AIDS. As it has been argued on the fact that about 20% of the Tanzanian population is between the ages of 15 to

24, and they contribute to 60% of new HIV infections yearly; secondary school students fall under the same group. These young women and men are the future labour force of Tanzania. If this group is not reached with plans, programmes and policies that address youth health issues, the country and parents will waste resources because HIV/AIDS will draw away the expected labour force through mortality. Also, HIV/AIDS is eroding access to education and interfering with the capacity of key institutions to function. And many resources will be wasted in caring for the sick and mourning the dead.

1.2 Statement of the Problem

Since 1983, when the first three AIDS cases in Tanzania were reported (TACAIDS, 2009), Tanzania has undertaken many different approaches aimed to slow down the spread of HIV infection and minimize its impact on individuals, families and the society in general. However; despite several campaigns on HIV/AIDS reduction and the knowledge people have from campaigns and seminars conducted by the government, NGOs, FBOs, and CBOs; the rate of HIV infection is still high due to risky sexual behaviour among sexually active adults who include secondary school students. This is probably caused by high sexual desire, pleasure, need for money, or other reasons. However, effective behaviour change is still very slow, and accurate knowledge on HIV/AIDS at the individual, household and community level is limited (TACAIDS *et al.*, 2008). Whether any of the above factors was relevant was not known. Even if that knowledge existed the extent to which each of them did so was not known.

Prevention campaigns have succeeded in raising people's awareness, but this has not been translated into required behavioural changes. HIV/AIDS affects the labour force in terms of supply, skills and productivity (URT, 2005a). It is estimated that an increasing number of Tanzania's population is infected with the deadly HIV/AIDS disease. This problem, if not addressed, is likely to erode discipline and spoil learning in which parents and Government resources will be wasted and the country will lose labour force. The aim of this study, therefore, was to find out the level of awareness about HIV/AIDS and associated sexual behaviour.

1.3 Research Justification

Efforts have been made by the government to control the spread of HIV/AIDS. While the initial efforts were mainly implemented by the Ministry of Health, overtime, there has been involvement of other public sectors, NGOs, CBOs and FBOs to contain the problem through campaigns and other means. Such campaigns include International HIV Day, which is commemorated on the first day of December every year when messages from guests of honour are delivered, and some from different groups of performing arts. Other programmes are National HIV testing campaigns which advocate that "*Tanzania bila ukimwi inawezekana*" (i.e. "Tanzania without AIDS is possible"); television programmes like the Fema TV Talk show and peer education conducted in some schools by NGOs. However, despite all the campaigns, the prevalence of risky sexual behaviour is still high among secondary school students and other sexually active adults.

Though there is a significant increase in awareness about HIV/AIDS towards minimizing the risk of HIV transmission, it is also necessary to advise the victims on how best they can be safe from HIV/AIDS. It is also important to build a deeper understanding of the pandemic through awareness campaigns so as to halt further spread and minimize impacts of AIDS. Sufficient knowledge on HIV transmission and prevention can contribute to adoption of behaviour that reduces the risk of HIV transmission (TACAIDS *et al.*, 2008). Youths constitute a large proportion of the society; youths are exposed to infections due to biological transformation which makes them sexually active and psychological changes which make them less risk averse.

Many researches related to this one have been done in other areas, most of them being based in urban areas. For example, Julian (2007) assessed the knowledge, attitude and practice towards HIV/AIDS prevention among secondary school students in Morogoro Urban and Peri urban areas, and Masasi (2000) conducted a study on knowledge, attitude and practice towards HIV/AIDS prevention among secondary school students in Iringa Municipality. Also, Jeckoniah (2007) conducted a study on knowledge, attitude and sexual behaviour of university students concerning HIV/AIDS in public universities of Tanzania. However, no research has determined the correlation between HIV/AIDS awareness and sexual behaviour among secondary schools students in Njombe District.

This study had high potential to generate specific information about the level of awareness and associated sexual behaviour on which interventions could be based to

mitigate behaviour among secondary school students. The results of the research will also provide empirical information on which strategies may be based to improve learning environment in secondary schools. This research was important to generate that empirical information and add value to the existing literature on the alleviation of HIV/AIDS.

The study is in line with the Millennium Development Goal Number Six, which advocates reducing new HIV/AIDS infections and care for the already infected people (UN, 2005). On the other hand, the study is relevant to the National policy on HIV/AIDS 2001 which aims to provide a framework for leadership and coordination of the National Multi-sectoral response to the HIV/AIDS epidemic, which includes formulation by all sectors of appropriate interventions which will be effective in preventing transmission of HIV/AIDS and other sexually transmitted infections, protecting and supporting vulnerable groups, mitigating the social and economic impact of HIV/AIDS (URT, 2001).

1.4 Objectives of the Study

1.4.1 General objective

The general objective of the study was to determine the level of awareness of HIV/AIDS and sexual behaviour among secondary school students.

1.4.2 Specific objectives

In order to meet the above general objective, the specific objectives were to:

- (i) Assess the level of awareness about HIV/AIDS among secondary school students;
- (ii) Determine the sexual behaviour among secondary school students;
- (iii) Determine the correlation between awareness about HIV/AIDS and sexual behaviour; and
- (iv) Identify barriers to behaviour changes as a response to HIV.

1.5 Null Hypothesis Tested

- (i) There is no significant correlation between awareness about HIV/AIDS and risky sexual behaviour.
- (ii) There is no significant difference in sexual behaviour between secondary school students with lower and those with higher awareness of HIV/AIDS.
- (iii) There is no significant difference in sexual behaviour among secondary school students studying at various schools, studying in various classes, belonging to different denominations and those whose parents have different socio-economic statuses.

1.6 Conceptual Framework of the Study

A conceptual framework gives insights into a study and particularly when designing research instruments for the study. It also guides literature review and designing data collection methods. This study was guided by the conceptual framework presented in Fig.1, according to the researcher's conceptualization about sexual behaviour among secondary school students. Individuals' statuses (age, sex, and class level at school), family economic background, residence location, religion and type of school (day or

boarding school) were conceptualized to explain some patterns in sexual behaviour and awareness of HIV/AIDS among students in secondary schools.

Family backgrounds were thought of having an important bearing on facilitating certain types of protective or awareness of HIV/AIDS and sexual behaviour among students. The family backgrounds may affect the opportunity for timing of and patterns of behaviours, such as sexual, social, or recreational that can impact on the risk of HIV infection. Experience shows that students' family background factors such as living together with both biological parents, higher socioeconomic status, participating in sports, helping at home (indicative of a connection relationship to the family), and speaking with their parents or relying on them for information have been positively associated with HIV/AIDS awareness. On the other hand, living with a single parent within a mixed or polygamous family; talking about sexuality with peers of both sexes; carrying out activities such as going to parties, visiting friends, and watching pornographic videos; reading pornographic magazines; and use of tobacco, alcohol and drugs; are found to be associated with being sexually active.

Residence location (rural or urban) may expose students to risky sexual behaviour and HIV/AIDS awareness or the opposite. Also, type of school can have a positive or negative impact on awareness of HIV/AIDS and sexual behaviour among students. Moreover, students with strong religious belief (born again Christians) may not engage in sexual behaviour and may be more conscious and aware of HIV/AIDS because of fearing God, but this may not be the case among their counter parts.

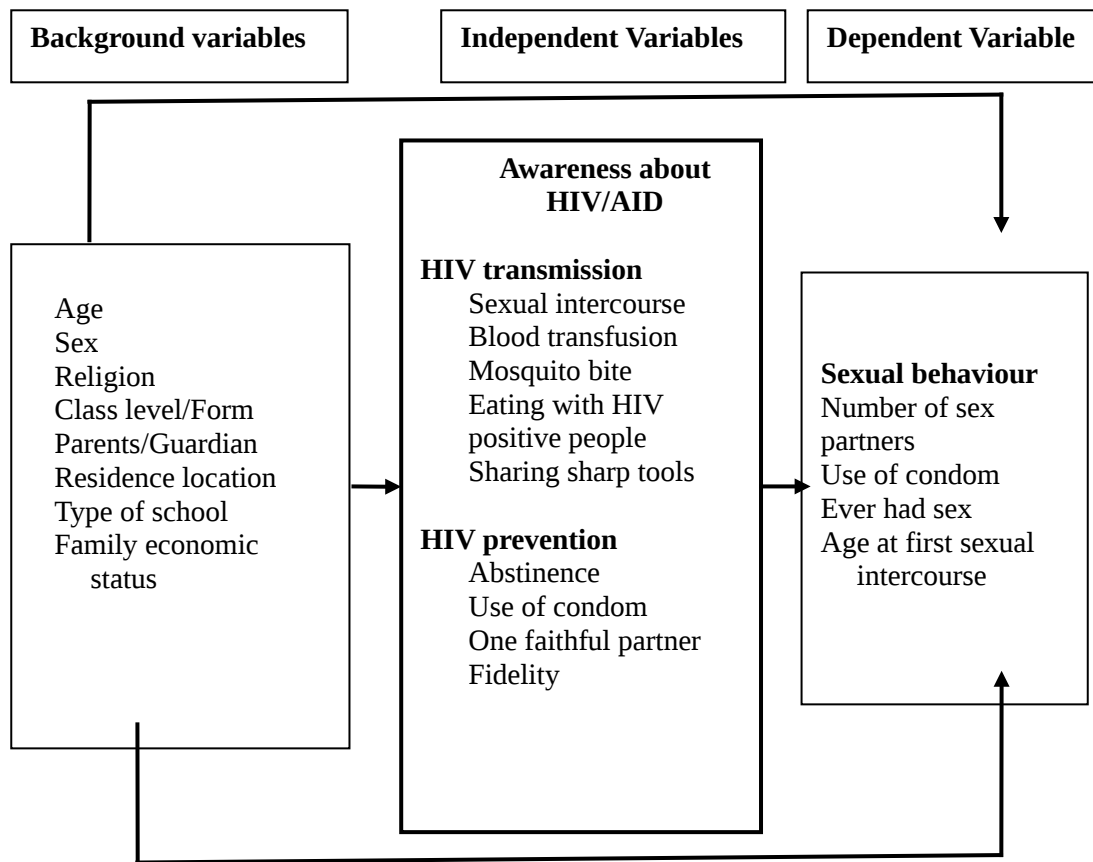


Figure 1: The conceptual framework of the research

CHAPTER TWO

2. LITERATURE REVIEW

2.1 General Overview on HIV/ AIDS Globally

The HIV/AIDS epidemic is a threat to the whole world. It was first diagnosed in the USA in 1981 (Gottlieb, *et al.*, 1981). Human Immunodeficiency Virus (HIV) is the virus that causes Acquired Immune Deficiency Syndrome (AIDS); AIDS develops as HIV weakens the body's immune system and its ability to fight off infections and fatal illnesses (FCI, 2000). The body becomes susceptible to diseases and opportunistic infections. These opportunistic infections may develop into illness, which would normally occur in healthy people; death is not caused directly by HIV but by one or more of these infections (Panos, 1992).

HIV Mainly spreads through sexual intercourse and exchange of some body fluids; women can pass HIV to their infants during pregnancy, delivery or breast feeding. Over 15,000 men, women and children are infected with HIV each day; half of all the people who acquire HIV become infected before the age of 25 years. FCI (2000) argues that 95% of people living with HIV/AIDS live in developing countries where the spread is primarily through heterosexual intercourse. In 2007, the number of people living with HIV/AIDS globally was 33.4 million and the number of those who died from HIV in 2007 was 2.0 million. The number of newly infected people globally was 2.7 million, and 45% of all new infections among adults were young people aged 15 to 24 (UNAIDS and WHO, 2008). The epidemic appears to have stabilized in most regions, although prevalence continues to increase in Eastern Europe and Central Asia and in other parts of Asia due to high rates of new HIV

infections.

Table 1: Global statistics about the HIV/AIDS pandemic

Group category	Estimate (million)	Range (million)
People living with HIV/AIDS in 2007	33.0	30.3-36.1
Adults living with HIV/AIDS in 2007	30.8	28.2-34.0
Women living with HIV/AIDS in 2007	15.5	14.2-16.9
Children living with HIV/AIDS in 2007	2.0	1.9-2.3
People newly infected with HIV in 2007	2.7	2.2-3.2
Children newly infected with HIV in 2007	0.37	0.33-0.41
AIDS deaths in 2007	2.0	1.8-2.3
Child AIDS deaths in 2007	0.27	0.25-0.29

Source: UNAIDS and WHO (2008)

2.2 HIV Situation in Sub-Saharan

Sub-Saharan Africa remains the region most heavily affected by HIV/AIDS (UNAIDS and WHO, 2008). The problem began to surface in the late 1980s, Uganda being reported the first in 1982. By the end of 1987, the epidemic had become concentrated in most countries in Sub-Saharan Africa (URT, 2007a). However, the rate of new HIV infections in sub-Saharan Africa has slowly declined with the number of new infections in 2008, approximately 25% lower than at the epidemic's peak in 12 years in the region.

In 2008, sub-Saharan Africa accounted for 67% of HIV infections worldwide, 68% of new HIV infections being among adults. The region also accounted for 72% of the world's AIDS-related deaths in 2008 (UNAIDS, 2009). In 2008, an average of 1.9 million people living in Sub-Saharan

Africa became newly infected with HIV, bringing the total number of people living with HIV to 22.4 million from the former 20.5 million people living with HIV by 2001 (UNAIDS, 2009). In 2008, an estimate of 1.4 million AIDS related deaths occurred in Sub-Saharan Africa. This number represents 18% decline in annual HIV-related mortality in the region since 2004 (UNAIDS 2009).

Table2: HIV and AIDS statistics in Sub – Saharan Africa, in 2003 and 2005.

YEARS	Adults and children living with HIV (Million)	Number of women living with HIV (Million)	Adults and children newly infected with HIV (Million)	Adult prevalence (%)	Adult and child deaths due to AIDS(Million)
2005	25.8 [23.8–28.9]*	13.5 [12.5–15.1]	3.2 [2.8–3.9]	7.2 [6.6–8.0]*	2.4 [2.1–2.7]
2003	24.9 [23.0–27.9]	13.1 [12.1–14.6]	3.0 [2.7–3.7]	7.3 [6.7–8.1]	2.1 [1.9–2.4]

Source: URT (2005a)

*Numbers in parenthesis mean ranges between which the percentages are.

2.3 Awareness of HIV/AIDS

Knowledge of HIV and risk reduction is a key factor in the ability of an individual to be protected against HIV infection. As already highlighted, in most societies, age, sex, religion, class level, residence location, type of school and family economic status influence how and what secondary school students are expected to know about HIV/AIDS and sexual matters.

The main sources of information about HIV/AIDS are the television talk shows like femina, radios, and public lectures on AIDS. Other sources include school education programmes, national newspapers, and magazines such as fema magazine, class teachers, friends, and parents. More than a half (55.5%) of men and 45.5% of women aged 15 to 19 have watched or heard HIV education programmes on TV or radios. In urban areas more people (about 68.6% of women and 77.4% of men) have watched or heard HIV education programmes on Television or Radios, while in rural areas only few people (39.3% of women and 59.7% of men) have watched the programmes or heard about the programmes over the radio (TACAIDS *et al.*, 2008).

HIV/AIDS awareness has been increasing since 1983 when HIV/AIDS was reported for the first time in Tanzania: over 98% of Tanzanians aged 15 to 49 years have heard of HIV/AIDS, and awareness is very high among women and men in all age groups and across background characteristics in both Mainland Tanzania and Zanzibar (TACAIDS *et al.*, 2008). National wise, about 97.2% of women aged 15 to 19 and 97.3% of men have heard about HIV; 99.6 % of women and men of the same age in urban areas have heard about HIV while 97.9% of women and 98.7% of men in rural areas have heard about HIV. Correct knowledge of how HIV is transmitted enables people to protect themselves from contracting the virus. Avoiding HIV is critically important for youths who are often at greater risk because they may have multiple partners or engage in risky sexual behaviours.

Surveys on comprehensive knowledge of HIV/AIDS show that 35.1% of women and 38.8% of men aged 15 to 19 have comprehensive knowledge on HIV, and there

is difference in knowledge of HIV between rural and urban young people; about 51.7% of women and 50.8% of men from urban areas have comprehensive knowledge about HIV, but only 34.5% of women and 38.5% of men from rural areas have heard about HIV (TACAIDS *et al.*, 2008).

Knowledge of HIV, according to the level of education, indicates that 59.2% of men and 59.3% of women with secondary education have comprehensive knowledge about HIV while men and women with no formal education have lower comprehensive knowledge of HIV; it is about 70% and 20.7%, respectively (TACAIDS *et al.*, 2008). Surveys have shown that fewer girls than boys aged 15 to 19 have basic knowledge about how to protect themselves from HIV/AIDS (UNDP, 2004). Hamelmann *et al.* (1996) provided evidence to show that general awareness regarding HIV/AIDS was high among secondary school pupils. But again, correct perception regarding preventive measures was quite low.

2.4 Misconceptions about HIV Transmission

Misconceptions about HIV/AIDS transmission, such as transmission via mosquito bites, transmission through supernatural means or sharing a meal with an infected person, are commonly found among rural adolescents. Concerning the transmission of HIV by mosquitoes, 21.3% of boys and 22.5% of girls aged 15 to 19 believed that mosquitoes transmit HIV (TACAIDS *et al.*, 2008). Misconceptions about HIV transmission through sharing a meal with an infected person are also present among the adolescents, with 20.5% of adolescent boys and 22.3% of adolescent girls thinking that HIV can be transmitted by sharing a meal with the effected person.

More than one-tenth (11.5%) of adolescent boys and 16.6% of adolescent girls believed that HIV can be transmitted by super natural means (TACAIDS *et al.*, 2008).

Many misconceptions that can lead to the creation of myths harmful to girls are common in areas with limited access to accurate information (UNDP, 2004). These misconceptions among adolescents are not specific to Tanzania; surveys from 40 countries indicated that more than 50% of young people aged 15 to 24 years had serious misconceptions about how HIV/AIDS is transmitted (UNICEF, 2002). Some of these misconceptions and lack of knowledge are not easy to fix, because the African culture does not encourage parents to discuss the details of all aspects of sexual and reproductive health with their children (Mturi, 2001).

According to UN (2005), the level of awareness about HIV/AIDS is higher in over half of African, Asian, and Latin American countries whereby at least 90% of the population has heard of HIV/AIDS. However, in most countries awareness is higher among men than in women. Urban residents are also known to be much more aware than rural residents and more education is associated with greater awareness and better knowledge (Sudha *et al.*, 2005; Shrotri *et al.*, 2003). It is obvious that awareness and appropriate knowledge may play an important role in preventing further spread of HIV/AIDS (Li *et al.*, 2004).

2.5 Risky Sexual Behaviour

Risk taking behaviour is part and parcel of adolescence, and experimentation is part

of their way of exploring reality. WHO defines a risky sexual behaviour as one that increases the likelihood of adverse sexual and reproductive health consequences such as unwanted pregnancies, unsafe abortion, HIV/AIDS, STIs and includes sexual activity under the influence of substances, sexual intercourse with drug users, unprotected sexual intercourse, commercial sex and unprotected sex with a same sex partner (WHO, 2000).

In most countries the HIV epidemic is related to behaviours that expose individuals to the virus and so increase the risk of infection. Information on knowledge about HIV and the level and frequency of risky behaviours related to the transmission of HIV is important in identifying and better understanding populations most at risk for HIV infection. Many prevention programmes focus on increasing people's knowledge about sexual transmission, hoping to overcome the misconceptions that may be acting as a hindrance to behaviour change toward safer behaviours. Information on behaviours is also critical for assessing changes over time as a result of prevention efforts (WHO and UNAIDS, 2008). Adolescents make up 20 % of the world population and 85% of these live in developing countries. Adolescence is a period of experimentation which exposes the youths to health risk through irresponsible sexual behaviour, drug, alcohol, and tobacco abuses. The fact is that adolescents are disproportionately affected by the reproductive health morbidity, including HIV/AIDS (Olugbenga-Bello *et al.*, 2008).

Young people are more vulnerable to HIV infection because they are more likely to engage in risky sexual behaviours. These risky sexual behaviours are often

influenced by societal factors that determine people's vulnerability to infection (Ojieabu *et al.*, 2008). Among the causes of sexual behaviour to youths are physiological status, sexual desire, idleness, poor economic status, parental sexual behaviour, parents' economic status and teacher-students relationship. Sub-Saharan Africa's urbanization, social and cultural disrupts, has been identified as the main source of risky practices among urban young men (Ndubani and Hojer, 2001).

The prevalence of risky sexual behaviour amongst adolescents is partly fuelled by the western media that promote a message of liberation, self-development, and marginality from traditional ways of life. Unfortunately, these messages implicitly or explicitly encourage sexual freedom without putting much weight on responsibility for sexual behaviour (Chirinos *et al.*, 2000; and Indralal de Silva, 1998, cited by Menda, 2006).

The main components of sexuality, whose expression and experience are determined by the power underlying them, are practices, partners, pleasure, social and economic pressure, pain, power relations and procreation. Adolescent boys' sexual activity, considered as natural, appears to be driven by the desire to experience unprotected penetrative sexual intercourse in order to prove their manhood and to be like other men. Adolescent girls, on their side, have sex to express or prove love, to strengthen relationships, and have a marriage partner (Idele-Ikwara, 2002). Surveys show that all unmarried men and women aged 15 years who are sexually active are engaging in higher risky sex. Involvement in higher risky sex is more common in urban areas; thirty two percent of women aged 15 to 24 years and 80% men of the same age are

engaged in higher risky sexual activity (TACAIDS *et al.*, 2008).

2.5.1 Age at first sexual intercourse

Age at first sexual intercourse is an important indicator of exposure to risk of pregnancy and sexually transmitted infections during adolescence (Zaba *et al.*, 2004). Surveys show that about 10.7% of women aged 15 to 19 had sexual intercourse before the age of 15 while 10.8 % of men of the same age had sexual intercourse before the age of 15. According to level of education, more women with no formal education engage in sexual behaviour before the age of 15 while those with secondary education delay in engagement in sexual behaviour by 21.5% and 4.0% respectively, Among men with no formal education about 11.8 % engage in sexual behaviour before the age of 15 while among those with secondary education only 5.3% engage in sexual behaviour before the age of 15 (TACAIDS *et al.*, 2008).

With respect to residence type, 44.8% of young women aged 15 to 24 from urban areas had higher risky sexual intercourse in previous 12 months while 87.9% of young men of the same age from urban areas had higher risky sexual intercourse. Higher risky sexual intercourse are sexual intercourse, including unprotected sex, that make someone more susceptible to infections or diseases, In rural areas 26.8% of young women of the same age had higher risky sexual intercourse and 77.7% young men of the same age had higher risky sexual intercourse. Education wise, 66.8% of men aged 15 to 24 with no formal education were engaged in higher risky sexual intercourse while those with secondary education, 91.5% of them, were engaged in higher risky sexual intercourse. Women with no formal education, about

18.3% of them, engaged in higher risky sexual intercourse while among women with secondary education, about 58.4% of them, were engaged in higher risky intercourse (TACAIDS *et al.*, 2008).

2.5.2 Condom use

Surveys show that 48.2% of women and 41.3% of men aged 15 to 19 used condoms at last higher risky sexual intercourse. Education-wise, only 30.3% of men and 35.1% of women aged 15 to 24 with no formal education used condoms at last higher risky sexual intercourse, while 67.6% of men with some formal education and 64.7% of women with some formal education aged 15 to 24 used condoms (TACAIDS *et al.*, 2008). A study conducted by Olugbenga-Bello *et al.*,(2008) on HIV/AIDS – Related Knowledge and sexual behaviour among Secondary School Students in Benin City found that the majority (55%) of the students who had been engaged in sexual intercourse, had not used condoms, and the sex was for earning some money. Homosexual activities were reported across all the secondary schools by 4.2% of the male students, 45.9% of women aged 15 to 19, but 40.6% of men of the same age did not recognize that condom use and having one uninfected partner could reduce chances of getting HIV/AIDS.

Residence-wise, 32.7% of women and 30.1% of men from urban areas do not know that condom use and having one uninfected partner can reduce the chances of getting HIV/AIDS while in rural areas 39.6% of women and 31.6% of men do not know that condom use and having one uninfected partner can reduce chances of getting HIV (TACAIDS *et al.*, 2005). Therefore, there is a need to fill the knowledge

gap among youths in secondary schools.

2.5.3 Number of sex partners

Pettifor *et al.* (2004) argued that the greater the numbers of sexual partners' young people have, the greater there is potential exposure to HIV/AIDS. TACAIDS *et al.* (2008) show that women are far less likely than men to report having had two or more sexual partners in the past 12 months. Only three percent of women reported having had sex with more than one partner in the 12 months preceding the survey, compared with 18 % of men. It is widely accepted that those that have more than one sexual partner are more likely to be infected with HIV/AIDS, and a number of studies have supported this view (Gregson *et al.*, 2000, cited by Chigali, 2006).

Partner reduction is therefore, one of the key factors of most HIV prevention programmes (Pettifor *et al.*, 2004). Generally, improved knowledge and sexual behavioural change are needed in developing response against HIV/AIDS among youths. It is, therefore, important that the knowledge and sexual behaviour of the population is occasionally reviewed as the social and economic conditions that nurture the spread of the virus have to be confronted as essential elements to stem its spread and create effective solutions to halt the epidemic.

2.6 Relationship between HIV/AIDS Awareness and Sexual Behaviour

In most countries the HIV epidemic is related to behaviours that expose individuals to the virus and so increase the risk of infection. Information on knowledge about HIV and the level and frequency of risky behaviours related to the transmission of

HIV is important in identifying and better understanding populations most at risk for HIV infection. Many prevention programmes focus on increasing people's knowledge about sexual transmission, hoping to overcome the misconceptions that may be acting as a disincentive to behaviour change toward safer behaviours. Information on behaviours is also critical for assessing changes over time as a result of prevention efforts (WHO and UNAIDS, 2008).

Surveys show that young men and women from urban areas have more knowledge on HIV than youth from rural areas; also young people who are formally educated have more comprehensive knowledge of HIV than young people who are not formally educated. Sufficient knowledge of HIV/AIDS transmission and prevention can theoretically contribute to adoption of behaviour that reduces the risk of HIV transmission (TACAIDS *et al.*, 2008). Surveys show that 66.8% of men aged 15 to 24 with no formal education had been engaged in high risky sexual intercourse while among those with secondary education 91.5% had been engaged in high risky sexual intercourse. Among women with no formal education 18.3% had been engaged in high risky sexual intercourse while among women with secondary education 58.4% had been engaged in high risky sexual intercourse (TACAIDS *et al.*, 2008).

In a study by Kapiga (1992), which assessed knowledge levels on HIV/AIDS among secondary schools pupils in Bagamoyo Town and Dar-es-salaam City, it was found that there was inconsistency between knowledge and behaviour; although most of the respondents who were sexually active were aware of methods of HIV/AIDS

prevention and had positive attitudes towards them, only a small proportion had adopted them. Hence it is not surprising to find out that knowledge alone, even if it is necessary for behaviour change, is not sufficient to enable behaviour change.

2.7 Barriers to Positive Behaviours Change

Misconceptions regarding the effect of sex information act as barriers to behaviour change among secondary school students as they are part of the society which nurtures them. Misconceptions regarding condom use pose barriers to safe sex; it was found that the adolescents are aware of the effectiveness of condoms but have negative attitudes towards using them for some or all of the following reasons: the nature of sex as being unplanned and spontaneous; the unavailability of condoms; the stigma attached to using condoms, as well as the idea that condoms decrease sexual sensation and pleasure (Karim *et al.*, 1992, cited by Isaacs, 2008). Talking about individual sexual behaviours is seen as a private and a confidential matter to the general public, hence worsen the situation. Some cultural and beliefs are often a barrier to information in behaviour change. In some situations HIV/AIDS-related symptoms are given cultural relevance far removed from biomedical. These beliefs hinder certain groups from using proper preventive and management procedures, thus predisposing individuals to HIV/AIDS and hampering containment of the virus (Slap *et al.*, 2003).

Education on AIDS and safer sex should be directed particularly to school children of age 14-25 years because of the cohort's demographic and economic significance. In the Tanzanian context this group is the most susceptible to various social and

economic problems, including HIV/AIDS and drug abuse (Kapinga *et al.*, 1993).

2.8 Tanzania's Efforts to Contain the Epidemic

Since 1983 when the first three AIDS cases in Tanzania were reported, Tanzania has undertaken many different approaches in attempting to slow down the spread of HIV infection and minimize its impact on individuals, families and the society in general. The HIV epidemic has progressed differently in various population groups while national response has developed in phases of programme activities led by the National AIDS Control Programme since 1985. The programme phases started with a two-year phase called Short Term Plan (1985-1986). Subsequent phases were termed Medium Term Plans lasting for five-year periods beginning with MTP-I (1987-1991), followed by MTP-II (1992-1996) and now the MTP-III, which began in 1998 and was given a unique boost in 1999 when the president of the United Republic of Tanzania declared AIDS to be a national disaster calling for a concerted multi-sectoral response to address it (URT, 2007b).

Following the reviews of the national AIDS control programmes, it was recommended to have a national policy on HIV/AIDS and a national coordinating body to oversee the multi-sectoral response. In 2000, the President of the United Republic of Tanzania formally established the Tanzania Commission for AIDS (TACAIDS) under the Prime Minister's Office which was later ratified by Government Act No. 22 in 2001 to coordinate the Multi-sectoral response and provide strategic leadership (TACAIDS, 2009).

From 2003 to 2007 the first National Multi-sectoral Strategic framework (NMSF) on

HIV and AIDS was formed. Through this framework the public and private sectors, local and international NGOs and institutions were urged to initiate interventions aimed at addressing the four major thematic areas: prevention, care and treatment, impact mitigation and the enabling environment. Other sectors also developed their HIV/AIDS strategic plans. The Ministry of Education and Vocational Training developed the education sector strategic plan for HIV/AIDS (2003-2007) as well as guidelines to implement comprehensive HIV and life skills training in schools and teachers' colleges. All secondary schools are at different stages of implementing the strategy; in many schools carrier subject teachers have been trained, and HIV/AIDS has been incorporated in secondary education curriculum and is being taught as part of the diseases in Biology. Also, peer education and various campaigns are being conducted in secondary schools by NGOs under the Ministry of education (URT, 2007b).

Another multisectoral strategic plan was established in 2007 which covers the year 2008 to 2012 (URT, 2007b). This multi-sectoral response to the HIV/AIDS/STDs problem has involved, among others, Information, Education and Communication (IEC) activities for the prevention of HIV transmission, care for AIDS patients in hospitals and at home, family life education, government budgetary allocation for AIDS activities, condom procurement distribution and STD management activities (TACAIDS, 2009).

One of the campaigns is fataki. The Fataki Campaign uses radio and visual media,

such as banners, to promote awareness and discussion about cross-generational sex in Tanzania. The campaign was piloted in one region from February to October 2008 by the Strategic Radio Communication for Development (STRADCOM) and was then launched nationally in November 2008. The idea behind the campaign was to challenge the acceptance of cross-generational relationships as the norm, and to introduce an element of ridicule and stigma of older men who seek to sex with young girls. The primary audiences of the campaign were the families and friends of girls and young women and the secondary audiences were females aged 14 to 25 years. The campaign's call to action was: Protect your loved ones from “Fataki” (Karam, 2009). An example of a campaign material against fataki is given in Figure 2.

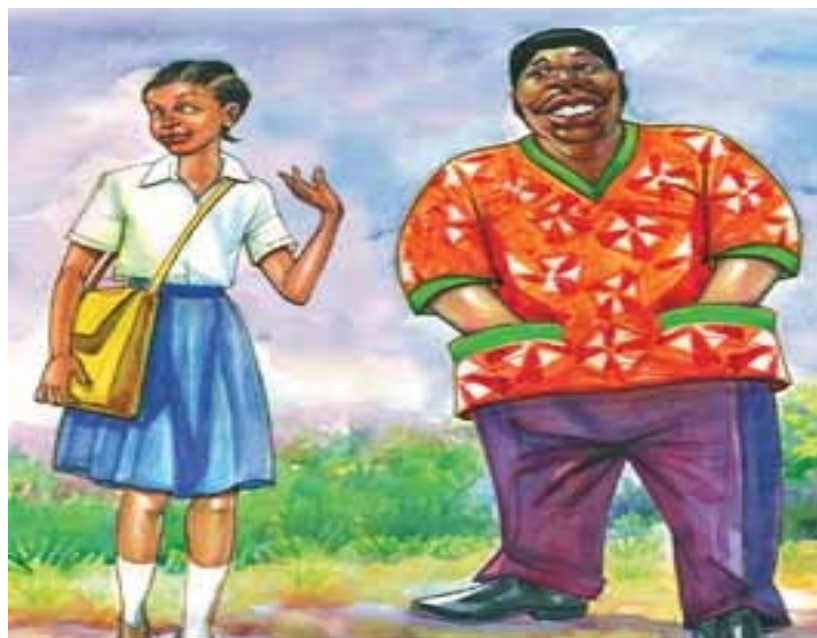


Figure 2: An image of Fataki and a school girl

Source-<http://www.comminit.com/en/node/306105/2781>)

Another campaign is conducted by Femina Health Information Project (HIP),

Femina HIP is a Tanzanian multimedia initiative established in 1999 to communicate information on sexuality and reproductive health and rights. Femina reaches the entire country with *Si Mchezo!* and *Fema* magazines, other print materials, chezasalama website (www.chezasalama.com), and radio and TV programming on youth issues, positive living, life skills, and HIV prevention, care, and treatment.

TUSEME a swahili word for “Let’s speak out”, is an empowerment process designed to enable girls to understand the gender construct of the society they live in, identify and analyze the emergent problems and how such problems hinder their academic and social development. Thus, *TUSEME* aims at giving the girls a voice to speak out, find solutions and take initiatives to solve their academic and social problems. In 2004 the Ministry of Education decided to mainstream *TUSEME* into the national education system and included it in the Secondary Education Development programme whereby the youths (girls in secondary schools in Tanzania) are empowered and involved in examining and analysing their own situations and take initiatives in communicating the results of their analysis as well as using the obtained information to influence changes. The *TUSEME* process was geared to combating HIV and AIDS in schools. It was carried out in all the *TUSEME* schools. The emphasis was put more on researching the circumstances or conditions that put girls at risk of contacting HIV and AIDS at home and at school. From seven schools in 1997, *TUSEME* grew to thirty schools in Tanzania in 2004.

Family Health International (FHI) is a leading organization which has more than 30 years of global experience developing and managing programmes in HIV

prevention, care and treatment, reproductive health, and adolescent and maternal health. FHI has worked in Tanzania since 1990. *UJANA* is a five-year project led by Family Health International (FHI) with support from the US President's Emergency Plan for AIDS Relief (PEPAR) through the US agency for International Development in Tanzania. *UJANA* joins HIV prevention efforts of the Government of Tanzania and builds on the foundation of the Youth Net/Tanzania Project of 2003 to 2006. *UJANA* (a Swahili word for youth) delivers technical assistance, capacity building, resources, and advocacy to prevent HIV/AIDS infection among youth aged 10 to 24 years which began in 2006. Its youth HIV prevention interventions are conducted in every region of the country, with a special focus on Dar es Salaam, Iringa, Morogoro, Coast, and Zanzibar.

FHI implements *UJANA* with three strategic partners: AMREF and Femina HIP. *UJANA* is one of the projects supported by national and international technical assistance partners with expertise in gender, peer education, the performing arts, and other areas of youth HIV prevention programming. *UJANA* awards small and large grants to over 30 Tanzanian NGOs, faith-based organizations, and community-based groups. *UJANA* has three primary objectives: To support youth to reduce their risk of HIV infection, to increase social and community support for youth HIV prevention, and to strengthen the quality and coordination of youth HIV prevention programmes.

African Medical and Research Foundation (AMREF) is an international African NGO with more than 50 years of experience working in African communities,

including over 20 years in Tanzania. AMREF implements adolescent sexual and reproductive health programmes and is one of the country's fastest-growing providers of voluntary counselling and testing services, with a strong focus on youth.

UN clubs are clubs formed by youth inside schools (mainly secondary school students). The UN clubs are open to students who are interested in learning about the work of the United Nations and international issues such as environment, poverty eradication, culture of peace, human rights, eradication of diseases and drug control. In Tanzania, the UN clubs are coordinated by the UN clubs Tanzania Network (UNCTN), which was established in 2006. UNCTN is a network/ programme facilitated by the Youth United Nations Association (YUNA) of Tanzania. Funding as well as support is provided by UNA Tanzania and United Nations Information Centre (UNIC). In coordination with UNCTN/YUNA and UNIC, a teacher plans and directs the club's activities, which may include educational workshops, roundtables, video screenings, exhibits, or competitions (essay writing, painting and drawing, photography, etc.). The UN club members also benefit from the collections and multimedia services of UNIC's library, which is based in Dar es Salaam.

UN club offers the following things: dissemination of UN information; (enhancing education through teaching of UN and other international issues); encouraging students to participate in discussions and events; promoting the Millennium Development Goals (MDGs); participating in various training workshops and conferences (for example, the Model UN, EARAMUN); improving students' skills

(negotiating, presentation, etc); and confidence enhancement. There are more than 110 UN Clubs in Tanzania for young people.

Another campaign is conducted by SPW (Students Partnership Worldwide), which is the largest programme with over 240 Tanzanian volunteer peer educators working on our new '*Kijana ni Afya*' (Swahili for youth is health) programme. SPW Tanzania is widely recognised as a leading secondary school HIV/AIDS (Adolescent Sexual & Reproductive Health) education intervention by a non-governmental organisation in the country. Significant impact in sensitizing young people about HIV/AIDS as well as teen pregnancy, STIs and general health issues, with indicators such as decreasing teen pregnancies and increased health clinic usage has been recorded.

Since youths are a high risk group, HIV/AIDS prevention education programmes encouraging good health, good behaviour and communication skills are needed. Global Services Corps (GSC), a U.S. based volunteer organization registered as an NGO in Tanzania and Kenya, has provided AIDS prevention education campaigns in East Africa since 1994. Despite the efforts made by the government, NGOs, FBOs, and CBOs to contain the epidemic it is still persistent.

CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Description of the Study Area and Justification

The study was conducted in Njombe District, which is one of the six districts of Iringa Region. The district will change to a region as soon as government officially launches the newly created regions announced earlier in 2010. The reasons for choosing this area were that the district is among districts with high HIV/AIDS prevalence of 15.6% while the national prevalence is 5.7% (as it is found along some travel routes in and out of the country) and has a daily direct link with people from different areas, especially those who go there to seek employment in tea factories, wattle company and others. Also, no study had been done in the district to assess the awareness of HIV and sexual behaviour among secondary school students.

Njombe is located in the southern highlands of Tanzania between 8.8° and 8.9° latitudes South - East of Equator and between 34.8 ° and 35.8 ° longitudes East. The District borders with Ludewa District to the south-west and with Ruvuma Region to the south. To the East it is bordered by Morogoro Region, while to the West it is bordered by Makete District and Mbeya Region to the North- West. In the North the district is bordered by Mufindi District. The district has a total land area of 10,242 sq. km that is equivalent to 1,024,100 Hectares (URT, 2003a).

Njombe District has the highest population in Iringa Region. According to the National Population and Housing Census of 2002 (URT, 2003b), Njombe District

has a total population of 419,115 people; the population density is 41 per sq km, which is higher than the national average of 37.4 per sq km. Administratively, the district is divided into seven (7) divisions, five (5) wards each, 208 villages, and one (1) township authority. The district is inhabited by different ethnic groups especially Wabena, Wakinga and Wahehe. Wabena constitute about 90% of the population while Wakinga and Wahehe constitute 6% and 3% respectively. Members of other ethnic groups constitute about 1%.

3.2 Topography and Climate

The climatic conditions of the district vary from one zone to another. There are 3 climatic zones, which are: Highland zone, which lies between 2000 - 2500 metres above sea level. The highland zone receives rainfall ranging between 1200 and 1400 mm annually and average temperatures of 14 to 20°C. This zone covers Lupembe and Imalinyi Divisions. Mostly the area is covered by evergreen timber forests, fruit trees, and grassland and non-timber trees.

There is also a midland zone which covers Mdandu and Makambako Divisions. The zone lies between 1200 and 2000 metres above sea level. Annual rainfall recorded is 1000 to 1200 mm and annual temperatures range between 15 and 21°C.

The lowland zone comprises Wanging'ombe and part of Mdandu and Makambako Divisions. The zone lies between 900 and 1200 metres above sea level. The zone receives annual rainfall between 900 and 950 mm. The average temperature is 25°C annually. The lower zone experiences hot and dry climate with unreliable rainfall.

The land is covered by short thorny bushes, mainly used for firewood and for building materials.

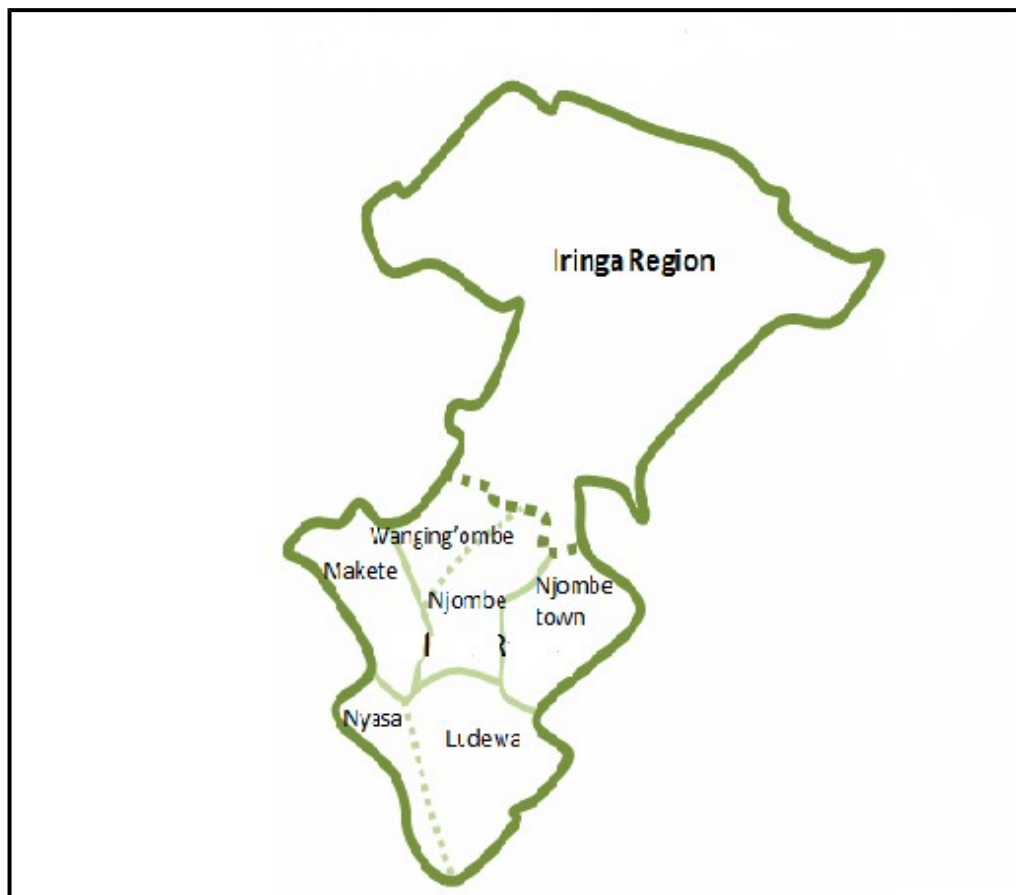


Figure 3: Map of Iringa Region showing Njombe District

Source: [<http://www.mapsofworld.com/tanzania/tanzania-political-map.html>].

3.3 Economic Activities in the Study Area

Agriculture is the major economic activity in Njombe District. About 78.1% of the population in the district depend on agriculture and livestock for their economy and livelihood; 11.5% depend on business and 10.4% are employed in the government and private organizations (URT, 2002). Various crops are produced such as maize,

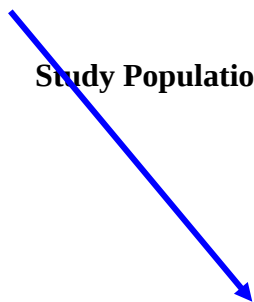
beans, round potatoes, ground nuts, sunflowers, tomatoes, cabbages, coffee and wheat. Moreover, various species of livestock are kept, especially beef and dairy cattle, sheep and goats, pigs, chickens and Ducks.

In the district, there are big companies such as Kibena Tea factory and Lupembe Tea Factory. Agricultural products produced in the district do attract many businessmen from Dar es Salaam, Songea, Dodoma, Mbeya, Zambia and Malawi. Makambako town is the focal point for farm produce collection to several parts of the country and outside the country. Other economic activities carried out in the district include trade, which is a typical business in Makambako Township. Sold items include industrially processed products and farm products, such as round potatoes, tomatoes, maize, beans, cabbage, ground nuts, sunflowers, tea, coffee, pyrethrum and wheat.

3.4 Research Design

The research design was a cross-sectional descriptive survey of secondary school students. Detailed information on the awareness of HIV/AIDS and sexual behaviour among secondary school students was obtained from a representative sample of four secondary schools, two of which were girls only schools, one being from an urban centre and the one being from rural areas. Two of the four schools were co-education schools, one being from an urban centre the other from rural areas. This research design was adopted because it enables collection of data at a single point in time and is relatively cheap (Bernard, 1994).

3.5 Study Population



According to Kombo and Tromp (2008), a population is a group of individuals, objects or items from which a sample is taken for measurement. The population for this study was all secondary school students in the district, but they were represented by a sample which was chosen in four secondary schools.

3.6 Sampling Procedures

Simple stratified sampling was employed in this study. First, four secondary schools out of 59 schools were selected purposively. Two of them were co-education schools; another two were girls only schools. Sub-sampling frames were obtained from school heads who gave the researcher form one to form three names of all students. Form four students were excluded because they were busy doing their national examinations. Selections of respondents from the sub-sampling frames were done by simple random sampling. After getting the complete list of all students, respondents were chosen using a table of random numbers using the number of digits in the random number table that was equal to the serial numbers of the students. Students that had numbers that corresponded to the random numbers selected were included in the sample.

3.6.1 Sample size

A sample size refers to the number of items to be selected from the universe to constitute a sample (Kothari, 2004). A total of 240 respondents were selected. The sample was considered to be big enough basing on Bailey's (1998) argument that 30 is the bare minimum for a study in which statistical data analysis is to be done.

3.6.2 Names of schools and numbers of respondents sampled

The study was conducted in Njombe District; four secondary schools were selected out of 59 secondary schools. The selected schools were Mpechi, Mtwango, MCF and Manyunyu. Mama Clementina Foundation (MCF) and Manyunyu were girls only while Mtwango and Mpechi were co- education schools. A total of 240 students participated in the study. In the two girls only schools 30 students from each of the schools participated to represent others while in the co-education schools 90 students participated to represent others. The number and proportions of respondents are presented in Table 3 and figure 4.

Table 3: Respondents' schools and sex categories

Name of School	Boys		Girls		All	
	Number	Percent	Number	Percent	Frequency	Percent
Mtwango	60	25.0	30	12.5	90	37.5
MCF	0	0.0	30	12.5	30	12.5
Manyunyu	0	0.0	30	12.5	30	12.5
Mpechi	60	25.0	30	12.5	90	37.5
Total	120	50.0	120	50.0	240	100.0

3.7 Methods of Data Collection

Data for this study were gathered through secondary and primary data collection methods. The combination of the methods was used to enrich this study.

3.7.1 Primary data

Primary data were gathered through structured interviews, Focus Group Discussions and key informant interviews.

3.7.1.1 Structured interviews

Structured interviews were conducted using a questionnaire which comprised closed

and open-ended questions. Copies of the questionnaire were administered to the selected respondents. This type of instrument was used because of the nature of the study which required confidentiality (Kombo and Tromp, 2008). Most of the questions used an index scale to measure awareness of HIV and sexual behaviour, demanding respondents to select an answer from the list provided. Open ended questions were used because they allowed respondents to express their views independently and reduced researcher's bias and subjectivity (Kothari, 2004). The questions focused on awareness on HIV and sexual behaviour. The questions were distributed to each member of the selected sample, and the respondents filled in the questionnaire copies under close guidance and supervision of the researcher and one of the students' teachers.

3.7.1.2 Focus group discussions

Focus group discussions were used to supplement the information collected using the questionnaire. This was done in the form of meetings with 8 to 12 people. The study used this method because it helped to gather extra data that were relevant to the research objectives. This explored more ideas referring to the objectives of the study. It was applied to secondary school students who did not participate in filling in the questionnaire copies.

3.7.1.3 Key informants interviews

Checklists of items for discussion were used to obtain information from key informants, particularly the discipline masters/mistresses. The key informants were involved in order to reveal information, which students might not reveal.

3.7.2 Secondary data

Secondary data were collected by accessing and reviewing various documents, both published and unpublished, which had information about awareness on HIV/AIDS, sexual behaviour, interventions in relation to HIV/AIDS and barriers to behaviour change. These documents included reports by the Government, International Organizations, and Non-Governmental Organizations; Internet; journals; and books. The literature sources were reviewed with interest in relationships between the available data on the subject and the primary data which were collected. These were obtained from various libraries of Sokoine National Agricultural Library (SNAL), TACAIDS, NACP, Tanzania National Archives, and Tanzania National Bureau of Statistics.

3.8 Data Processing and Analysis

After data collection, the data were edited, coded, and summarized; then the process of data entry into a computer was undertaken. The data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 16. Descriptive statistics; particularly frequencies, percentages, means, maximum and minimum values; were computed. Moreover, inferential analysis was done using Pearson's product moment correlation coefficient to determine the relationship between number of points scored on an index scale to measure awareness about HIV/AIDS and those scored on an index scale to measure sexual behaviour. By so doing the hypothesis of the research was tested. According to Bryman (2004) the formula for correlation is:

$$r = \frac{N \sum xy - \sum x \cdot \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$\sqrt{N\sum x^2 - (\sum x)^2 (N\sum y^2 - (\sum y)^2)}$$

Where:

r = Pearson correlation coefficient

$\sum x$ = sum of scores in x distribution

$\sum y$ = sum of scores in y distribution

$\sum xy$ = sum of products of paired x and y scores

$\sum x^2$ = sum of squared scores in x distribution

$\sum y^2$ = sum of squared scores in y distribution

N = number of pairs

The null hypothesis was rejected if the probability (p-value) was greater than 0.05, or the alternative hypothesis was confirmed if the probability was less or equal to 0.05 (Bryman, 2004).

Also T-test was used to determine the difference in sexual behaviour among secondary school students with lower awareness and those with higher awareness by testing the significance of difference between means. According to Bryman (2004) the formula for T-test is

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where \bar{x}_1 = mean of sample 1
 \bar{x}_2 = mean of sample 2
 n_1 = number of subjects in sample 1
 n_2 = number of subjects in sample 2
 s_1^2 = variance of sample 1 = $\frac{\sum(x_1 - \bar{x}_1)^2}{n_1}$
 s_2^2 = variance of sample 2 = $\frac{\sum(x_2 - \bar{x}_2)^2}{n_2}$

Further inferential analysis was done using one-way ANOVA to determine the difference in sexual behaviour among secondary school students studying at various schools, studying in various classes, belonging to different denominations and those whose parents have different socio-economic statuses. One-way ANOVA is used to compare means of multiple groups. A One-Way Analysis of Variance is a way to test the equality of three or more means at one time by using variances.

Like for correlation above, in both t- test and one-way ANOVA the null hypothesis was rejected if the probability was greater than 0.05, or the alternative hypothesis was confirmed if the probability was less or equal to 0.05 (Bryman, 2004).

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Demographic Characteristics of Respondents

The study assessed distributions of demographic characteristics of the respondents and how they were associated with awareness of HIV/AIDS and sexual behaviour. These included age, sex, type of school, class level, religion, parents/guardians the respondents lived with, and parents'/guardians' economic status.

4.1.1 Ages of respondents

The ages of the respondents are presented in Table 4, which shows that the minimum and maximum ages were 13 and 25 years respectively. The modal age was 15 years, and the youngest respondent was a female while the oldest one was a male. The average age was 16.4 years. This is the active age and is the target of HIV/AIDS prevention programmes because 45% of all new HIV infection among adults are young aged people with 15 to 24 years (TACAIDS *et al.*, 2008).

Table 4: Ages of respondent by sex

Age of respondent	Sex of respondent		Total
	Male	Female	
13	0	6	6
14	7	14	21
15	26	32	58
16	26	31	57
17	25	22	47
18	19	7	26
19	6	3	9
20	3	1	4
21	4	1	5
22	2	2	4
24	1	1	2
25	1	0	1
Total	n =120	n =120	N =240

4.1.2 Denomination of respondents

Denomination of a respondent can have positive or negative effect on his/her awareness and sexual behaviour. Two-fifths (40%) of the respondents were Roman Catholics followed by 26.7% Lutherans while others were as shown in the Table 5.

Table 5: Denominations of respondents

Denomination	Frequency	Percent
Roman catholic	106	44.2
Lutheran	64	26.7
TAG	20	8.3
Anglican	20	8.3
Muslims	17	7.1
SDA	5	2.1
Pentecosts	5	2.1
Moravian	2	0.8
Baptist	1	0.4
Total	240	100

4.1.3 Class levels of respondents

The class levels of the respondents that are presented in Table 6 show that 80 students from each class from form one to form three were selected to represent other members of the classes in their schools.

Table 6: Class levels of respondents

Class level	Frequency	Percent
Form I	80	33.3
Form II	80	33.3
Form III	80	33.3
Total	240	100.0

4.1.4 Parents/Guardians living with the respondents

Parents/guardians living with the respondents may be related positively or negatively with students' awareness and sexual behaviour. Therefore, the respondents were asked to say people with whom they were living, and 151 (62.9%) said that they were living with both parents, followed by those who were living with

mother alone 37(15.4%). And only 10 (4.2%) were living with other people like grand parents and others as shown in Fig. 5. Those who were living with both parents might have a higher level of awareness and better sexual behaviour than those who were living with other guardians like grand fathers/mothers, because they can be free to visit friends, go to parties, watch pornographic videos, use alcohol and drugs and find themselves involved in bad sexual behaviours

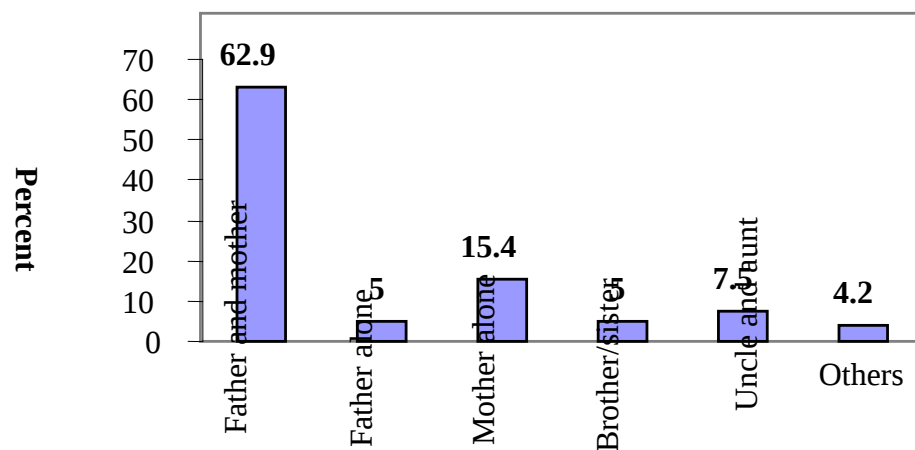


Figure 4: Parents/Guardians of respondents

4.1.5 Parents' main occupations

Table 7 shows parents' main occupations; more than a half (51.7%) of parents were farmers, followed by traders (16.2%) and teachers (12.5%). Others were as shown in Table 7.

Table 7: Parents' main occupations

Parents' main occupation	Frequency	Percent
Farmers	124	51.7
Traders	39	16.2
Teachers	30	12.5
Doctors	14	5.8
Drivers	8	3.3
Policemen/policewomen	7	2.9
Engineers (electric & mechanics)	6	2.5
Nurses	2	0.8
Carpenters	2	0.8
Lawyer	1	0.4
Secretary	1	0.4
Tailor	1	0.4
Builder	1	0.4
Bank Director	1	0.4
Accountant	1	0.4
Researcher	1	0.4
Agricultural officer	1	0.4
Total	240	100.0

4.1.6 Assets owned by parents

Assets owned by parents are shown in Table 8. The assets which were leading to be owned by parents were mattress (owned by 86.7% of the respondents), followed by bicycles (72.1%) and farmland areas (57.7%), others assets owned by few parents were dairy cattle (11.7%), beef cattle (13.8%) and cars (19.6%) of respondents..

Table 8: Assets owned by parents

Assets owned by parents	Frequency	Percent
Mattress	208	86.7
Bicycle	173	72.1
Farmland	138	57.5
Building plots	102	42.5
Poultry	101	42.1

Motorcycle	62	25.8
Goats	48	20.0
Car	47	19.6
Beef cattle	33	13.8
Dairy cattle	28	11.7

4.1.7 Number of assets owned by parents

Table 9 shows the numbers of assets owned by parents of the respondents. The leading numbers of assets owned by parents were farmland a maximum of 500 acres, followed by chickens, dairy cattle, and beef cattle 250, 195, and 192 respectively.

Table 9: Number of assets owned by parents

Number of assets owned	Minimum	Maximum	Sum	Mean
Chickens	0	250	2 879	12.00
Farmland	0	500	1 068	4.45
Mattress	0	30	961	4.00
Goats	0	60	449	1.87
Beef cattle	0	195	383	1.60
Dairy cattle	0	192	333	1.39
Bicycle	0	5	276	1.15
Building plots	0	10	222	0.93
Car	0	6	80	0.33
Motorcycle	0	3	74	0.31

4.1.8 Parents'/Guardians' economic statuses

The respondents were asked to rank their parents'/guardians' economic status by stating whether they were of low, medium or high income in their places of residence. It was found that about two-thirds (67%) of the respondents were from households with medium income, followed by 30% of them being from households with low income. Only 2.9% of them were also from households with high income.

The economic statuses of respondents were also determined by using the monetary value of assets owned by parents. Those from high economic status had a mean income of Tsh 76 497 000; those with medium income had Tsh 5 781 300; and those with low income had Tsh 1 861 200. The maximum income in high income group was 198 million and minimum income was Tsh 29 800 000. The maximum income in the medium income group was Tsh 26 500 000, and the minimum income was Tsh 230 000, as detailed in Table 10.

Those from high economic status might have high social interaction which contributes to awareness about HIV/AIDS. Also they might be at risk of contracting HIV because of luxurious life, but the opposite might hold true for those with low economic statuses.

Table 10: Monetary value of assets (Tshs) and economic status

Economic status	n	Minimum	Maximum	Mean
High income	7	29 800 000	198 000 000	76 497 000
Medium income	161	230 000	26 500 000	5 781 300
Low income	72	70 000	13 900 000	1 861 200
All	240	70 000	198 000 000	6 667 800

4.2 Awareness about HIV/AIDS Transmission and Prevention among Secondary School Students

This part discusses results that meet objective one of the study which was about the assessment of the level of awareness about HIV/AIDS among secondary school students by their sex, school, class level, denomination and economic status, and

qualitative analysis of awareness statements. Awareness about HIV/AIDS was determined by using an index scale which comprised 20 statements as seen in Table 11. The minimum and maximum numbers of points one could score were 0 and 100 respectively, and at most 80 points represented lower awareness while 81 to 100 points denoted higher awareness. The mean score was 82.8, and this implies that, overall, the respondents had higher awareness. The minimum and maximum scores were 35 and 100 respectively, and 49% of respondents had lower awareness of HIV/AIDS while 57.1 % had higher awareness.

Correct knowledge of how HIV/AIDS is transmitted enables people to protect themselves from contracting the virus; avoiding HIV is critically important for youths who are often at greater risk because they may have multiple partners or engage in more risky sexual behaviours (TACAIDS *et al.*, 2008).

Table 11: Awareness of HIV/AIDS transmission and prevention

Awareness statements	Total points scored on the awareness statements		
	Male (n = 120)	Female (n = 120)	All (N =240)
1. Being witched	580	575	1155
2. Receiving blood contaminated with HIV	580	565	1145
3. Sharing toilets with AIDS patients	560	580	1140
4. Sharing a bed with an AIDS patient	565	565	1130
5. By cleaning sexual reproductive organs thoroughly after sexual intercourse	550	570	1120
6. Sharing food with an AIDS patient	560	555	1115
7. By abstaining from sex	550	565	1115
8. Having sex with a HIV infected person	555	550	1105
9. Sharing unsterilized needles/blades with a HIV positive person	540	555	1095
10. Being bitten by insects	515	530	1045
11. From an HIV infected mother to the child during breast feeding	520	505	1025
12. By having sex with one HIV uninfected & faithful partner	505	515	1020
13. Having sex with a virgin can cure HIV/AIDS	485	525	1010
14. By not sharing unsterilized sharp tools	505	490	995
15. Avoiding bad peer group members	465	505	970
16. By using condoms appropriately during sexual intercourse	460	450	910
17. A healthy looking person can be HIV infected	425	445	870
18. From an HIV infected mother to the unborn baby	425	420	845
19. Kissing with HIV infected person	355	435	790
20. By sharing food with a HIV positive person	165	115	280
Total	9865	10015	19880

4.2.1 Awareness of HIV/AIDS transmission and prevention statements

Each of the awareness statements seen in Table 11 had a maximum score of 5 points and the minimum score was 0. The total scores on each awareness statement were obtained by taking the sum of scores obtained by all the 240 respondents on each statement. The maximum possible sum score on each statement was 1200 points

Using the total number of scores on the awareness statements, the item on which respondents' were more knowledgeable was "being witched" being not a means for HIV/AIDS transmission from one person to another one, and "receiving blood contaminated with HIV/AIDS" from an infected person to an uninfected person. The items on which the respondents were less knowledgeable were "sharing food with a HIV positive person" and "kissing with a HIV positive person"; they believed that it was possible to transmit HIV/AIDS from an infected person to an uninfected one through these means. The sum of scores in all awareness statements shows that female students were more aware than male students, and their total scores were 10 015 and 9 865 respectively. Details on other awareness statements and their overall scores are as seen in Table 11.

4.2.2 Awareness on HIV/AIDS by sex

The awareness of HIV/AIDS transmission and prevention among secondary school

students was analysed by descriptive statistics and t-test. The minimum scores for male and female respondents were 35 and 60, respectively; while the maximum score for both sexes were 100 out of 100 on the index scale used. Results in Table 12 show that, male and female respondents' scores on lower awareness were 45% and 40.8%, respectively. However, male and female respondents' scores on higher awareness were 55% and 59.2%, respectively.

Besides the above descriptive analysis, inferential analysis was used to find if there was any significant difference in awareness between female students and male students using a t-test; the results show that the mean numbers of points scored on an index scale of awareness by male and female students were 82.2 and 83.5, respectively out of 100.0. Female students were more aware of HIV/AIDS than male students although the difference in their levels of awareness was not significant ($p = 0.322$).

These results correspond to those of a study conducted by Isaacs (2008) on adolescents' knowledge, attitudes and behaviour regarding HIV/AIDS in Valhalla Park-Zambia; he found that a very large percentage of the scholars had 'high knowledge' of how HIV is transmitted, as they drew information on HIV and sexual related matters from a very broad variety base such as the television, parents, teachers and magazines. Also, TACAIDS *et al.* (2005) reported that HIV/AIDS awareness among Tanzanians is as high as 96%. The findings suggest that efforts made by the government to educate people have had positive effects on awareness of HIV/AIDS.

Table12: Two categories of HIV awareness by sex

Sex	Levels of awareness	
	Lower awareness (%)	Higher awareness (%)
Male	45.0	55.0
Female	40.8	59.2

4.2.3 Awareness of HIV/AIDS by schools

Awareness of HIV/AIDS by schools was analysed using descriptive statistics and one-way ANOVA. The maximum score for Mtwango, MCF and Mpechi secondary schools was 100, while Manyunyu scored 95 out of 100. The minimum score for Mtwango was 35, followed by 55 for Mpechi, while Manyunyu and MCF had scores of 65 and 70, respectively.

The overall awareness was categorised into two groups; the lower awareness which ranged from 0 to 80 and the higher awareness which ranged from 81 to 100 out of 100. The results show that 66.7% of MCF and 61.1% of Mpechi respondents had higher awareness, and 48.9% of Mtwango students had higher awareness. Others are as shown in Table 13.

Table 13: Two categories of awareness by schools

School name	Two categories of awareness		Total
	Lower awareness (%)	Higher awareness (%)	
Mtwango	51.1	48.9	100
MCF	33.3	66.7	100
Manyunyu	40.0	60.0	100
Mpechi	38.9	61.1	100
Pearson Chi-Square =(4.292)(P=0.232), Likelihood Ratio =(4.299)(p=0.231)			

Table 14 shows differences in awareness of HIV/AIDS transmission and prevention which were analysed using one-way ANOVA. The results show that the leading school in awareness was MCF followed by Mpechi; their mean points were 85.8 and 84.1, respectively out of 100. The school with the lowest awareness was Mtwango secondary which scored a mean of 80.8. The points scored by the other school are as seen in Table 14. The mean points by all schools were 82.8. The awareness of HIV/AIDS transmission and prevention by schools was significantly different ($p = 0.039$).

Table 14: Awareness of HIV/AIDS transmission and prevention by schools

Name of school	n	Mean	Sum of Squares	df	Mean Square	F	Sig.
Mtwango	90	80.78	Between Groups 792.2	3	264.1	2.835	0.039
MCF	30	85.83	Within Groups 21981.1	236	93.1		
Manyunyu	30	82.33					
Mpechi	90	84.06					
ALL	240	82.83	22773.3	239			

4.2.4 Awareness of HIV/AIDS by class levels

Awareness about HIV/AIDS was analysed descriptively by their class levels. The minimum score for form II students was 35, followed by form I students whose minimum score was 55 and form three students who scored 65. The maximum score for all three classes were 100 out of 100 of the index scale used. Moreover, overall awareness was grouped into two categories: the lower awareness which ranged from 0 to 80 and higher awareness which ranged from 81 to 100 scores on the index scale. About two-thirds (63.8%) of form one students scored below 80 and 38.2% of them scored above 81, two-thirds (66.2%) of form II students scored below 81 and 33.8% of them scored above 80% while 70% of form III scored less than 81 and 30% of them scored above 80.

Further analysis about the awareness of HIV/AIDS transmission and prevention by class levels was done using one-way ANOVA. The results in Table 15 show that Form III students were leading in awareness followed by Form I; the means of their points scored were 84.1 and 82.7, respectively out of 100. Form II had the lowest awareness compared to other classes although their mean differences were not

significant ($p = 0.322$). The insignificant difference in their awareness might be attributed to ages of the students, social interaction, access to information and the ability to make decision as their ages did not differ much, and they were in the same school environments.

Table 15: Awareness of HIV/AIDS transmission and prevention and class levels

Name of school	n	Mean	Sum of Squares	df	Mean Square	F	Sig.
Form I	80	82.69	Between Groups	2	108.2	1.137	0.322
Form II	80	81.75	Within Groups	237	95.2		
Form III	80	84.06					
Total	240	82.83		239			

4.2.5 Awareness of HIV/AIDS and denomination

Awareness about HIV/AIDS and denominations was analysed using descriptive statistics. Overall awareness was grouped into two categories: the lower awareness which ranged from 0 to 80, and higher awareness which ranged from 81 to 100 scores on the index scale used. Results showed that 100% of Baptists followed by 80% of SDAs had higher awareness, while 100% of Moravian and 60% of Anglicans scored below 81 out of 100 on the index scale. Others are as shown in Table 16.

Table 16: Two categories of awareness by denominations

Denominations	Two categories of awareness	
	Lower awareness (%)	Higher awareness (%)
Muslims	47.1	52.9
SDA	20.0	80.0
TAG	35.0	65.0
Lutheran	43.8	56.2
R/catholic	40.6	59.4
Baptist	0.0	100.0
Anglican	60.0	40.0
Moravian	100.0	0.0
Pentecosts	40.0	60.0

The awareness of HIV/AIDS transmission and prevention, according to the respondents' denominations, was further analysed using one-way ANOVA. The differences in the mean points scored by denominations were not significant ($p=0.374$), but the Baptist and SDA had mean scores of 90 and 87 respectively out of 100 on the index scale used. The scores for the other denominations are as seen in Table 17.

Religious bodies and faith based organisations are a key advocacy groups that can play a major role in helping the society to fight against HIV/AIDS; along with the efforts to reduce the spread of HIV the role of religious bodies remains a valuable part that should be sustained and even improved in their roles as the leading

advocates for worldwide action against HIV/AIDS (UNAIDS, 2002 cited by Nyange, 2008).

Table 17: Awareness of HIV/AIDS and denominations

Denomination	n	Mean	Sum of Squares	df	Mean Square	F	Sig.
Islamic	17	81.2	Between Groups	8	103.2	1.086	0.374
SDA	5	87.0	Within Groups	231	95.0		
TAG	20	83.5					
Lutheran	64	82.5					
Roman catholic	106	83.9					
Baptist	1	90.0					
Anglican	20	79.0					
Moravian	2	72.5					
Pentecosts	5	82.0					
Total	240	82.83	22773.333	239			

4.2.6 Awareness of HIV/AIDS and parents' economic statuses

Economic status and education are related to exposure to HIV/AIDS messages; women and men with more education and those from high wealth quintiles are more likely to have heard of a television/ radio message about HIV/AIDS than those with less education and lower wealth quintiles (TACAIDS *et al.*, 2008).

Awareness of HIV/AIDS and economic status was analysed descriptively. The maximum score for households with high income was 95 out of 100 on an index scale, and the minimum score was 70. However, among those households with medium income, the maximum and minimum scores were 100 and 35 respectively,

while among those with low income the minimum and maximum score was 60 and 100, respectively. Further more, inferential analysis was done to find out awareness of HIV/AIDS by economic status of parents/guardians using one way ANOVA. The results show that those from high economic status households had a mean score of 85.7 out of 100 on the index scale used, followed by those from medium income households, and those from low economic households as shown in Table 18. The awareness levels did not differ significantly ($P = 0.743$).

Table18: Awareness of HIV/AIDS by parent’s economic status

Economic status	n	Mean	Sum of Squares	df	Mean Square	F	Sig.
High income	7	85.7	Between Groups	2	26.632	0.297	0.743
Medium income	161	83.23	Within Groups	237	89.563		
Low income	72	81.67					
Total	240	82.83		239			

4.3 Sexual Behaviour among Secondary School Students

This part discusses results that meet objective two of the study which was about the determination of sexual behaviour among secondary school students to find out if there was any significant difference in awareness based on demographic backgrounds including sex, schools, class levels, denomination of respondents, economic status of parents, and qualitative analysis of sexual behaviour statements. Sexual behaviour among secondary school students was determined by using an index scale which comprised 11 statements as seen in Table 19. The maximum and minimum numbers of points one could score were 45 and 110 respectively, and at

most 70 points represented good sexual behaviour while 71 to 110 points denoted bad sexual behaviour. The mean score of sexual behaviour was 72.1 and this implies that the overall sexual behaviour was bad.

4.3.1 Sexual behaviour by statements

This part is concerned with students' responses to sexual behaviour statements which were analysed using frequencies and percentages in the following aspects: sexual relationship, age of sexual partner, age at first sexual intercourse, reasons for involvement in sexual intercourse, use of condom at the first sex and number of sexual partners in life time, frequencies of sexual intercourse during the previous 4 weeks, and number of sexual partners during the previous twelve months. The results are summarised in Table 19.

Table 19: Sexual behaviour statements

	Statements	Alternatives	Response (%)		
			Male	Female	All
1	Having a sexual partner	No	65.0	69.2	67.1
		Yes	35.0	30.8	32.9
2	Age of sexual partner	Same age	48.7	50.0	49.3
		Different age	51.3	50.0	50.7
3	Age at which the first sexual intercourse was experienced	After 15 years	79.5	93.8	85.9
		Before 15 years	20.5	6.2	14.1
4	Whether the partners used condoms during their first sex	Yes	53.8	81.8	66.7
		No	46.2	18.2	33.3
5	Number of sexual partners they had ever had in their life time	One	53.8	97.0	73.6
		More than two	46.2	3.0	26.4
6	What pushed them to have their first sex	Forced to have sex	0.0	3.1	1.4
		Peer pressure	15.4	12.5	14.1
		sexual desire	82.1	68.8	76.1
		Need for money	2.6	15.6	8.5
7	Whether they use condoms regularly	Yes	48.7	54.5	51.4
		No	51.3	45.5	48.6
8	Number of times they had sex during 4 weeks before the survey	once	76.9	100.0	87.3
		More than once	23.1	0.0	12.7
9	Whether they had ever used condoms.	Yes	76.9	63.6	70.8
		No	23.1	36.4	29.2
10	Number of sexual partners they have had for the previous 12 months	one	64.1	100.0	80.6
		More than one	35.9	0.0	19.4
11	Whether they had ever had sexual intercourse in their life time	Yes	33.6	26.9	30.3
		No	66.4	73.1	69.7

4.3.1.1 Sexual relationship

Statement 1 asked whether students had had a sexual partner. The question was

answered by all the respondents; 32.9% of them said yes and 67.1% replied negatively. This implies about two-thirds of the respondents had good sexual behaviour and the remaining 32.9% had bad sexual behaviour. The presence of so many students with good sexual behaviour might have been contributed by sound cooperation among teachers, parents or guardians at home where these students were living, religious leaders as well as the society around the school.

4.3.1.2 Age of sexual partner

The respondents were asked about the age of their partners; whether it was the same as theirs, younger or older age. About 50.7% were of different ages and 49.3% were of the same age. Similar results were found in a survey of young people aged 12 to 24 in Lesotho; the male partner was at least five years older than the female partner in more than half (53%) of all sexual relationships, and more than 10 years older in 19% of sexual relationships (Khobotlo *et al.*, 2009 cited by UNAIDS, 2009). The percentage of young women in South Africa who report having a sexual partner more than five years older than themselves rose from 18.5% in 2005 to 27.6% in 2008 (Shisana *et al.*, 2009 cited by UNAIDS, 2009).

The age difference between a female and her partner may influence relationship dynamics in ways that put the female at increased risk of unintended pregnancies and sexually transmitted diseases. Adolescent females involved with an older partner have higher odds of having intercourse with that partner than females with partners their own age. (Kaestle *et al.*, 2002)

4.3.1.3 Age at first sexual intercourse

Results on age at first sexual intercourse revealed that 85% of respondents who were involved in sexual matters had started it after the age of 15, and 14.1% had started it before the age of 15. These results comparable with those of TACAIDS *et al.* (2008) which show that 11% of women and 10% of men of age 15 to 24 in Tanzania had first sexual experience before they were 15 years old. Also, the results correspond to those of a study conducted by Menda (2006) on a sample of school girls as well as amongst those who had ever had sex; the largest group of schoolgirls (65%) amongst those who had ever had sex had their first act of sexual intercourse between the ages of 15 and 17 years. A quarter (25%) of the total sample of school girls had commenced sexual activities between the ages of 15 and 17 years and 7% had commenced before they were 15 years old. Amongst those who had engaged in sexual intercourse the median age at sexual debut was 16 years.

While the percentage of males aged 15–24 in South Africa who report sexual debut prior to the age of 15 had declined from 13.1% in 2002 to 11.3% in 2008, the percentage of young women having sex before the age of 15 rose from 5.3% to 5.9% (Shisana *et al.*, 2009 cited by UNAIDS, 2009). Women in the United Republic of Tanzania who become sexually active before the age of 16 years have higher HIV prevalence (8%) than those who delay sex until age 20 or older (TACAIDS *et al.*, 2008). Young men often begin sexual activity earlier and have more sexual partners than young women and they are likely to contract HIV/AIDS (Gorgen *et al.*, 1998 cited by Jeckoniah, 2007). Risk of HIV infection has been found to be positively associated with casual sexual partners and the initiation of sexual activity at an early

age (Kapiga, 1992, cited by Jeckoniah, 2007).

4.3.1.4 Reasons for involvement in the first sexual intercourse

As shown in Table 18, more than three-quarters (76.1%) of students reported that they had their sexual intercourse because of the sexual desire, while 14.1% had done it due to peer group pressures; 8.5% had been involved in sexual behaviour due to need for money, and 1.4% reported that they had been forced to have sexual intercourse. These results were confirmed in the focus group discussion where the discussants mentioned, poverty, alcohol taking, and drugs abuse as other factors contributing to first involvement in sexual intercourse. Menda (2006) also found that 48% of schoolgirls reported that they had their first act of sexual intercourse because of the desire to experiment, while 22% reported that they were forced into it.

4.3.1.5 Condom use at first sex

Respondents were asked if they had used condoms with their partners during their first sex; two-thirds (66.7%) of those who had sexual intercourse had used condoms during their first sexual intercourse while one-third (33.3%) of them had not used condoms. Olugbenga-bello *et al.* (2008) on HIV/AIDS, related knowledge and sexual behaviour among secondary school students in Benin City, found that the majority (55%) of the students who had been engaged in sexual intercourse had not used condoms; more females than males had used condoms during their first sexual intercourse: 81.8 % and 53.8% respectively. These findings are different from those by TACAIDS *et al.* (2008) whereby it was found that 24% women and 29 % men aged 15 to 24 had used a condom during the first time they had sex. The differences

in the use of condom might be due to lack of knowledge and skills they might use to protect themselves to be vulnerable (UNICEF, 2002).

4.3.1.6 Number of sexual partners in life time

The number of sexual partners has been observed to be positively associated with increased risk of HIV infections (Balongo et al., 1992; cited by Jeckoniah, 2007). About the number of sexual partners of respondents who had been involved in sexual intercourse, 73.3% reported having had one partner in their lifetime as shown in Table 18, while 26.4% reported having had more than two partners in their lifetime. These findings correspond to those by Menda (2006) who reported that the number of sexual partners the schoolgirls reported having had in their lifetime was 1 to 2. About three-fifths (58%) of school girls had had a single partner in their lifetime. However, 14% of those who were 19 years old had had more than 4 sexual partners in their lifetime.

4.3.1.7 Frequency of sexual intercourse in the previous 4 weeks

The results in Table 18 show that 87.3% of the respondents reported having had sexual intercourse once in the previous four weeks before data collection, especially for those who were boarding students, while 12.7% reported having had sexual intercourse more than once during the previous four weeks. The results are almost similar to those of a study conducted by Menda (2006), although the study was based on single sex, who found that 73% of school girls stated that they had not had sexual intercourse in the 4 weeks preceding the survey and that only 1.8% had been engaged in sex 4 or more times within that period.

4.3.1.8 Number of partners in previous 12 months

More than four-fifths (80.6%) of those who had been involved in sexual matters had had one partner in the previous twelve months while 19.4% had more than one partner. More males (35.9%) had more than two partners while 64.1 had one partner compared to females 100% had one partner and non had more than one partner. These findings correspond to those of a study conducted by TACAIDS *et al.*, (2005) which found that 8.7% of young women aged 15 to 19 had had sex with 2 partners in the previous 12 months and only 1.8% of women had ever had sex, while 30.1% of young men of the same age had had sex with 2 partners in the previous 12 months and 2.8% had ever had sex in their life time.

4.3.2 Sexual behaviour by sex

Sexual behaviour was analysed using descriptive statistics. The maximum and minimum scores of overall sexual behaviour for female respondents were 100 and 55, respectively on an index scale, while the maximum and minimum scores for male respondents were 95 and 60, respectively. The overall sexual behaviour was grouped into two categories: good sexual behaviour which ranged from 0 to 70, and bad sexual behaviour which ranged from 71 to 110 cut-off points. About a half (53%) of male respondents scored good sexual behaviour and 47% of them scored bad sexual behaviour, while 74% of females scored good sex behaviour and only 26% of them scored bad sexual behaviour.

The sexual behaviour was further analysed using a t-test to find if there was any significant difference in sexual behaviour between female students and male

students; the results show that the sexual behaviour by mean number of points scored on an index scale of sexual behaviour by male and female students were 74.7 and 68.7, respectively out of 110.0. This implies that male students were engaged more in risky sexual behaviour than female students, and there was significant difference between their sexual behaviour ($p = 0.009$). These results correspond to those of a study conducted by Jeckoniah (2007) in public universities who found that male students were more likely to involve themselves in high risky sexual behaviour than female students.

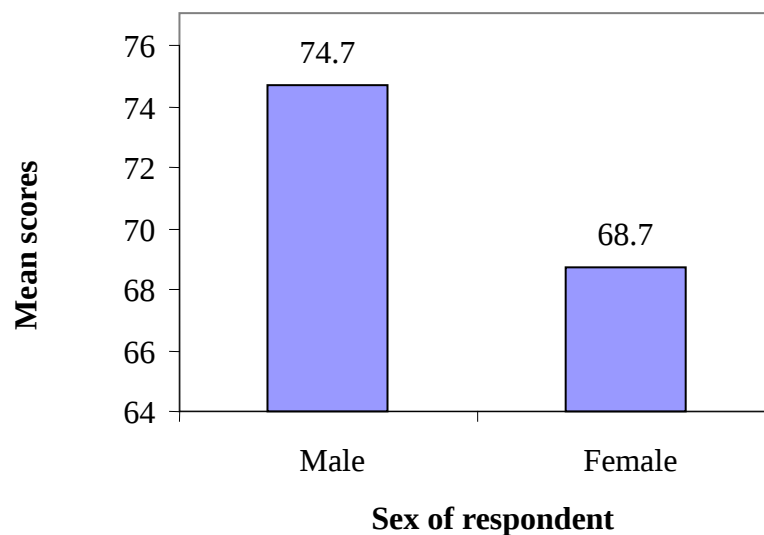


Figure 5: Mean scores of sexual behaviour by sex

4.3.3 Sexual behaviour by schools

Sexual behaviour by schools was analysed by descriptive statistics and one-way ANOVA. Based on the average of overall sexual behaviour on an index scale among the four secondary schools, the maximum scores for Mtwango and MCF secondary schools were 95 and 100, respectively while for Manyunyu the score was 80 and for

Mpechi it was 75. The minimum score for Mtwango and MCF was 65, while for Manyunyu and Mpechi the scores were 55 and 60, respectively.

Table 19 shows the sexual behaviour of students in different secondary schools which was analysed using one-way ANOVA; the leading school in bad sexual behaviour was MCF followed by Mtwango with their mean 80.7 and 75.4, respectively out of 110 scores on a sexual behaviour index scale. The school with good sexual behaviour was Manyunyu where the respondents scored a mean of 66.9 points. The scores by respondents of the other schools are as seen in Table 20. There was significant difference among the scores ($p = 0.003$). The results indicate that MCF was leading in bad sexual behaviour which might be contributed by the nature of the institution itself being located in town, being a single sex school, or most of students coming from families with good economic status. Most of students at the school preferred to have luxurious life; this contributed to them becoming easily subjected to HIV/AIDS risks. Despite being a single sex school, Manyunyu secondary school showed good sexual behaviour following the fact that the school is located in rural areas where most of the students from families with low economic statuses and the environment did not support bad sexual behaviour among the students. However, location of the school was not associated with bad or good sexual behaviour to co-education schools; Mtwango secondary school located in rural areas still showed bad sexual behaviour compared to Mpechi secondary school located in town.

Table 20: Sexual behaviour and schools

Name of schools	N	Mean	Sum of Squares	df	Mean Square	F	Sig.	
Mtwango	35	75.4	Between groups	1242.479	3	414.160	5.176	0.003
MCF	3	80.7	Within groups	5201.000	65	80.015		
Manyunyu	9	66.9						
Mpechi	22	67.8						
Total	69	72.1		6443.478	68			

4.3.4 Sexual behaviour and class levels

The maximum score on overall sexual behaviour was 75 for Form I, 95 for Form II and 100 for Form III. The minimum score was 65 for form I, 60 for Form II and 55 for Form III. Basing on the average of overall sexual behaviour, which was 72.1; good sexual behaviour ranged from 0 to 70 while bad sexual behaviour ranged from 71 to 110. The overall sexual behaviours were 71.2, 70.9, and 73.1 for Form I, Form II and Form III students respectively. The proportions of students with good sexual behaviour were 74.1% for form II, 72.7% for Form I and 62.2% for Form III students, while the proportions of students with bad sexual behaviour were 37.8% for form III students, followed by 27.3% Form I and 25.9% for Form II students as shown in Table 21.

Table 21: Levels of sexual behaviour by class levels

Class level	Levels of sexual behaviour
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	Good sexual behaviour (%)	Bad sexual behaviour (%)
Form I	72.7	27.3
Form II	74.1	25.9
Form III	62.2	37.8

The data in Table 22 show sexual behaviour among secondary school students by their class levels which were analysed using one-way ANOVA. It shows that Form III were leading in bad sexual behaviour followed by Form I; and their means were 73.1 and 71.2, respectively out of 110 on an index scale of sexual behaviour. Form II had good sexual behaviour compared to other classes. However, there was no significant difference ($p = 0.679$) difference in the mean scores. Form three was leading in bad sexual behaviour probably because of their age and desire for sexual intercourse; they had better knowledge of HIV/AIDS and were eager to practise what they understood about HIV/AIDS. Form one was the second leading class in bad sexual behaviour; this might have been contributed by family backgrounds and experiences they had on sexual behaviour before they joined secondary education.

Table 22: Sexual behaviour and class level

Class levels	N	Mean	Sum of Squares	df	Mean Square	F	Sig.
Form I	12	71.2	Between groups	75.3	2	37.626	0.390
Form II	21	70.9	Within groups	6368.2	66	96.488	
Form III	36	73.1					
Total	69	72.1		6443.5	68		

4.3.5 Sexual behaviour and denominations

Sexual behaviour by denomination was analysed descriptively. It was found that the minimum score of overall sexual behaviour on an index scale for SDA, TAG,

Anglican and Pentecosts was 65 while the minimum scores were 70 for Muslims, 60 for Lutherans, 55 for Roman Catholics and 75 for Baptists. The maximum score for Muslims and Anglican was 85, while 70 was for SDAs, 80 for TAG, 95 for Lutherans, 100 for Roman Catholics, 75 for Baptists and 65 for Pentecosts.

Besides, one-way ANOVA was used to analyse sexual behaviour among students by denominations. The results in Table 22 show that Baptists were leading in bad sexual behaviour followed by Muslims and Lutherans; and their mean scores were 76.0 and 75.6 out of 110 respectively. Pentecosts were leading in good sexual behaviour with a mean score of 61.0. The mean scores by respondents of other denominations are as shown in the Table 22. The differences among the scores by denomination were not significantly difference ($p = 0.515$).

Table 23: Sexual behaviour and denominations

Denominations	n	Mean	Sum of Squares	df	Mean Square	F	Sig.
Muslims	7	75.6	Between	601.4	7	85.9	0.897
			Groups				0.515
SDA	2	73.0	Within	5842.1	61	95.8	
			Groups				
TAG	5	72.4					
Lutheran	17	75.5					
R/catholic	33	69.9					
Baptist	1	76.0					
Anglican	3	70.3					
Pentecosts	1	61.0					
Total	69	72.1		6443.5	68		

4.3.6 Sexual behaviour and parents' economic statuses

The overall sexual behaviour was grouped into two categories: good sexual behaviour which ranged from 0 to 70 cut off points and bad sexual behaviour which ranged from 71 to 110 cut off points. It was found that three-fifths (60%) of high income respondents scored bad sexual behaviour followed by 44% of medium income respondents and 17% low income while 83% of low income respondents scored good sexual behaviour. Others are as shown in Table 23.

Table 24: Categories of sexual behaviour by parents' economic status

Economic status	Categories of sexual behaviour	
	Good sexual behaviour	Bad sexual behaviour
High income	40%	60%
Medium income	56%	44%

Low income	83%	17%
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Sexual behaviour by parents' economic status was further analysed using one-way ANOVA to find out if there was significant difference among them. The results in Table 25 show that students who were from high economic status were leading in bad sexual behaviour; they scored a mean of 75.5 points out of 110 on an index scale of sexual behaviour. Those from low economic status were leading in good sexual behaviour; they scored a mean of 68.5 points. More details are as seen in Table 24.

Table 25: Sexual behaviour and parents' economic status

Economic status	n	Mean	Sum of Squares	df	Mean Square	F	Sig.	
High income	2	75.5	Between groups	305.4	2	152.7	1.642	0.201
Medium income	50	73.2	Within groups	6138.1	66	93.0		
Low income	17	68.5						
Total	69	72.1		6443.5	68			

4.4 Correlation between Awareness about HIV/AIDS and Sexual Behaviour

This part discusses results meeting objective three and the hypothesis of the research which were about determining the correlation between awareness about HIV/AIDS and sexual behaviour. The correlation was analysed using Pearson product moment correlation coefficient. The results show that there was positive correlation between awareness of HIV/AIDS and sexual behaviour among secondary school students ($r = +0.050$). This implies that the higher the awareness about HIV/AIDS transmission and prevention the worse there was sexual behaviour. This might be contributed by:

awareness of HIV/AIDS transmission and prevention is not a determinant of sexual behaviour or those who were more engaged in sex were also seeking more information on HIV/AIDS so that they could apply it. However, the correlation was not significant ($p = 0.680$). This implies that although the correlation was positive it was not much. Therefore, the null hypothesis was confirmed and the alternative hypothesis was rejected.

LeseJane (2004) cited by Isaacs (2008) concluded that HIV-knowledge is not sufficient to change adolescents' high-risk behaviour. According to her research, most of the cases reported from three different schools about the behaviours of learners, which were considered risky in terms of contracting HIV/AIDS, were alcohol and drug abusers, and did not use condoms. Furthermore, social influences like poverty, poor living conditions, peer group pressure (belonging to the group), lack of parental guidance and multiple sex partners were associated with adolescents' sexual and other high-risk behaviours that may result in HIV infection.

Pötsönen and Kontula (1999:7) cited by Menda (2006) argue that some adolescents did not trust the information in mass media and believed that the risk of infection was exaggerated compared to other risks of life. Knowledge and perception, regarding HIV/AIDS, STDs, risk-reduction and contraceptives are important factors in HIV infection risk.

4.5 Barriers to Behavioural Change

The fourth objective of this study was to determine barriers to behavioural change.

The research involved a qualitative assessment of factors for involvement in sexual intercourse; nine factors were used. All the 240 respondents took part in the assessment through a pair-wise ranking exercise that was based on the tool presented in Table 26. These were the factors which were identified during a pilot study to contribute to secondary school students engaging in sexual intercourse, and which act as barriers to behavioural change.

Table 26: A pair-wise ranking tool used in the study

	1.To demonstrate love	2.To get money	3.Persuasion by peers	4.Doing sex for prestige	5.Not being afraid of HIV	6.Lacking knowledge of HIV/AIDS	7. Being afraid of poor sexual performance at marriage	8. Parents giving them too little money	9. Having substantial sexual desire
1.To demonstrate love									
2.To get money									
3.Persuasion by peers									
4. Doing sex for prestige									
5. Not being afraid of HIV									
6. Lacking knowledge of HIV									
7. Being afraid of poor sexual performance									
8. Parents giving them too little money									
9. Having substantial sexual desire									

During the research, the nine statements were used to compose 36 questions on which of the two items of a pair had been a bigger factor for involvement in risky sexual behaviour. One of the questions was? ***“Between to demonstrate love and to get money, what was a bigger factor for involvement in risky sexual behaviour?”***

The pairs for the 36 questions were: (1, 2), (1, 3), (1, 4), (1, 5), (1, 6), (1, 7), (1, 8), (1, 9), (2, 3), (2, 4), (2, 5), (2, 6), (2, 7), (2, 8), (2, 9), (3, 4), (3, 5), (3, 6), (3, 7), (3, 8), (3, 9), (4, 5), (4, 6), (4,7), (4, 8), (4, 9), (5, 6), (5, 7), (5, 8), (5, 9), (6, 7), (6, 8), (6, 9), (7, 8), (7 ,9), (8, 9). The above question belonged to the (1, 2) pair. Each of the 9 factors had equal chances of winning 0 to 8 times for every respondent. Using 8 as the denominator and expressing the average scores of individuals as percentage, the extents to which the barriers were perceived to have contributed to involvement in sexual behaviour are summarized in Table 27.

For every respondent, the table was filled out with 36 choices in the 36 un-shaded cells to the right hand-side. Since the respondents were 240, the maximum number of times each of the nine factors had the possibility of being chosen was 8640, that is 36 chances times 240, which is 8640. Table 26 summarises the number of times each of the factors was chosen in the whole group of 240 respondents. Using 8640 as the denominator and expressing the scores of each contentious factor as a percentage, the extents to which each of the factors was perceived to have contributed to involvement in sexual behaviour is given in Table 27.

Table 27: Extents to which the factors contributed to involvement in sexual Behaviour

Statistics	Mean		%
	Over 8	Over 8640	Percent
To demonstrate love	2.8	677	7.8
To get money	4.4	1063	12.3
Persuasion by peers	3.9	933	10.8
Doing sex for prestige	3.6	863	10.0
Not being afraid of HIV/AIDS	2.8	670	7.8
Lacking knowledge of HIV/AIDS	4.9	1176	13.6
Being afraid of poor sexual performance at marriage	3.3	795	9.2
Parents/Guardians giving them too little money	4.9	1176	13.6
Having too much sexual desire	5.3	1287	14.9
All	35.9	8640	100.0

Therefore, from the results in Table 27, the major factors that were perceived to contribute to students involvement in sexual intercourse were having substantial sexual desire, parents/guardians giving them too little money, lacking knowledge of HIV/AIDS, to get money, persuasion by peers, and doing sex for prestige while being afraid of poor sexual performance at marriage and not being afraid of HIV/AIDS, to demonstrate love were minor factors for students involvement in sexual intercourse.

These results are in line with those by Lese Jane (2004) cited by Isaacs (2008) who found that social influences like poverty, poor living conditions, peer pressure (belonging to the group), lack of parental guidance and multiple sex partners had relationship with adolescents' sexual and other high-risk behaviours that might result

in HIV infection.

4.6 Attitudes towards Sexual Behaviour among Secondary School Students

Attitude towards sexual behaviour among secondary school students was measured using a Likert scale which had 10 statements. Every respondent was asked to say if he/she strongly disagreed (1), disagreed (2), was undecided (3), agreed (4) or strongly agreed (5) with each item of the scale. The responses were regrouped into three categories; strongly agree and agree were regrouped into agree; strongly disagree and disagree were regrouped into disagree while undecided was left intact. The scores on disagree ranged from 10 to 29 points, undecided was represented by 30 points, and agree ranged from 31 to 50 points.

About two-thirds (67.1%) of the respondents had unfavourable attitudes towards sexual behaviour (that is, they scored less than 30 out of 50), 60 (25%) had favourable attitudes towards sexual behaviour (that is, they scored more than 30 out of 50), and 19 (7.9%) had neutral attitude (that is, they scored 30 out of 50 points). The mean of overall attitudes towards sexual behaviour was 25.4 out of 50 which implies that the overall attitude towards sexual behaviour was unfavourable. Therefore, most of the students had favourable attitude towards sexual behaviour.

Table 28: Three categories of overall attitude

Attitude scales	Frequency	Percent
Unfavourable attitude	161	67.1
Indifferent attitude	19	7.9
Favourable attitude	60	25.0
Total	240	100.0

Qualitatively, respondents were given an attitude statement to find out the attitude towards condom use; 85 (35.4%) of the respondents supported the statement that condom use has bad side effects while 83 (34.6%) of them opposed the statement. Another statement was asked to respondents as whether they had been engaged in risky sexual behaviour to please their friends; 102 (42.1%) agree with the statement while 94 (39.2%) disagreed with the statement. Results on the statement about the influence of peers on one's sexuality most respondent 154 (64.1%) agreed on the statement that peers had influence on ones sexuality and only 66 (27.5%) disagreed with the statement. The results in Table 29 show that the attitudes of respondents towards sexual behaviour were negative because results of most statements did not favour sexual behaviour.

Table 29: Attitudinal statements

S/N	Attitudinal statements	Disagree	Undecided	Agree
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		(%)	(%)	(%)
1	Doing sex is a way of expressing love	47.5	10.4	41.2
2	Doing sex is a source of income	58.7	13.8	27.5
3	Sex with a condom is tasteless	44.6	37.1	18.3
4	Peers have influence on one's sexuality	27.5	8.3	64.1
5	Perceives condom use has bad side effects	34.6	30.0	35.4
6	Having many partners is prestigious	78.8	8.3	12.9
7	Students engage in risky sexual behaviour to please friends	39.2	18.8	42.1
8	HIV is similar to other diseases; so no need of taking prevention measures	84.1	5.0	10.8
9	It's not possible for girls to remain virgin until marriage	54.2	11.2	34.5
10	Students should not discuss about HIV/AIDS with parents/guardians	79.2	4.6	16.2

4.7 Respondents' Opinions/Advice for Improvement in Behavioural Practices

Different pieces of advice were given by the respondents for improvement of behavioural practices that are risky for HIV/AIDS transmission; about three-fifths

(61.2%) advised that students should abstain from sex until they finish school and are married. A quarter (25%) of all the respondents said that those who are not able to abstain from sex should use condoms to protect themselves from getting HIV. URT (2005b) suggests some prevention measures related to behavioural change that are similar to those suggested in this study including issues of sexual abstinence use of condoms and faithfulness to one uninfected partner.

Moreover, 22% of all the respondents advised that students should avoid bad peer group members which will help in improvement of behavioural practices; and 19.2% suggested that education about HIV/AIDS should be given to secondary school students by parents, school teachers, government and non-governmental organisations in order to be aware of HIV/AIDS risks. This is similar to advice given by UNAIDS and WHO (2001), cited by Julian (2007), that education and communication programmes must go beyond merely offering information to fostering risk avoidance skills as well , such as delay of sexual debut, abstinence, and negotiation with sex partners.

Students who enter sexual relationships before they finish school and marriage should be faithful to one uninfected partner. This was suggested by 6.2% of all respondents although it is more applicable to married couples. Involvement in games and sports can help to reduce risks of contracting HIV/AIDS; this was suggested by 3.8% of all respondents while 1.7% suggested avoiding using drugs and 1.2% suggested drinking alcohol can reduce risks of involvement in risky sexual behaviour. Heavy alcohol consumption is correlated with increased sexual risk

behaviours (Van Tieu and Koblin, 2009, cited by UNAIDS, 2009). TACAIDS *et al.* (2008) suggest that alcohol use reduces inhibitions and increases risky behaviour; alcohol use in conjunction with sex is associated with lower prevalence of condom use. Muheua (2007) says that when persons are under the influence of alcohol they will lose the ability to exercise self-control, make good choices and most importantly, be less likely to practise safe sex.

Table 30: Respondents' advice for improvement in behavioural practices

Advice	Male	Female	All
Abstaining from sex	61.7	60.8	61.2
Using condom	29.2	20.8	25.0
Avoiding bad peer group	20.0	24.2	22.1
Education about HIV/AIDS	15.8	19.2	17.5
Being faithful to one uninfected partner	6.7	5.8	6.2
Involvement in sports and games	6.7	20.0	3.8
Avoid using drugs being	1.7	1.7	1.7
Avoid drinking alcohol	1.7	8.0	1.2

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusions

The following conclusions are made from the findings of this study. On the basis of the findings that secondary school students have high knowledge concerning HIV/AIDS transmission and prevention. Therefore it is concluded that campaigns on HIV/AIDS have positive effects on raising awareness of HIV/AIDS.

In the light of the finding that many students did not engage in risky sexual behaviour but there was sizeable proportions (32.9%) of those who were engaged in risky sexual behaviour and a quarter (25%) who had favourable attitude towards sexual behaviour, it is concluded that some secondary school students still engage themselves in risky sexual behaviour. This habit can spoil those with good sexual behaviour if disciplinary measures will not be taken.

Based on correlation results which showed that there was no significant correlation between awareness of HIV/AIDS and sexual behaviour, it is concluded that awareness of HIV is not the only determinant of sexual behavioural change, and that secondary school students with lower and higher awareness of HIV/AIDS are likely to have the same sexual behaviour.

On the basis of factors which contribute to students' involvement in risky sexual behaviour, substantial sexual desire, parents giving them too little money, to get money, lack of knowledge on HIV/AIDS, persuasion by peers, and doing sex for prestige, it is concluded that education on body physiological changes is needed to rescue the 29% engaging in risk sexual behaviours, and also students are not satisfied with what they are given by their parents.

5.2 Recommendations

The recommendations for this study are divided into 6 main categories, and these are recommendations to the government, parents, school management, students,

religious leaders and recommendations for further studies.

5.2.1 Recommendation to the government

- The government should establish programmes/campaigns on HIV/AIDS which will reach all students in urban and rural areas from primary schools to higher learning institutions because students start sex at younger ages, and such campaigns should be sustainable.
- HIV/AIDS should be included in school curricula and be taken as a cross-cutting issue. It should be taught as a subject from primary school to the higher learning institutions.
- The government should provide financial support to different HIV/AIDS programmes set by the Ministry of Education and Vocational Training.
- Teachers should also be equipped with accurate knowledge and skills on HIV/AIDS.

5.2.2 Recommendations to school management

- School leaders should make use of the available counsellors at school in counselling the extreme cases on sexual intercourse that leads to indiscipline and hence HIV/AIDS infections.
- Students who may be found to involve themselves in risky sexual behaviour should be punished or expelled from school so that they do not pollute the larger group of students with good sexual behaviour. Hence, by expelling

them discipline at their respective schools will be maintained and conducive environment for teaching and learning will be created and maintained.

- Active clubs on HIV/AIDS and counselling services should be established at each school to be supervised by trained personnel.
- Also, subject teachers at schools should consider HIV/AIDS as a cross-cutting issue while teaching in class and therefore cases on HIV/AIDS should be integrated with any topic taught in class.
- Education on body physiological changes should be given to adolescent students so that they can control their sexual desire, and also they should be trained on the effect of sexual multi-partners and their effects on HIV/AIDS.
- A special programme needs to be addressed to the classes that show low levels of awareness about HIV/AIDS.

5.2.3 Recommendations to students

- Students should avoid bad peer group members who may drag them into risky sexual behaviour. Also they should control their sexual desire and wait until they finish schooling and get married.
- Students should change their attitudes towards sexual behaviour because the small number of students involved in sexual behaviour can spoil others. Also

those who are not involved yet in sexual matters need to avoid temptations that might lead them to engage into sexual intercourse that might lead them to HIV/AIDS infection.

- Students need to get satisfied from a little they are given from their parents and as well get familiarized with the economic status of their parents. Students should learn to say no against sexual intercourse enticements.
- Students should build the habit of reading reliable sources of knowledge on HIV/AIDS to get accurate knowledge and skills on HIV/AIDS.
- Students should spiritually find practising sexual intercourse before marriage as a severe sin before the Almighty God.

5.2.4 Recommendations to parents

- Parents should avoid giving their children a luxurious life at school that makes a big difference with those coming from poor families and subjects them to temptations and hence find themselves engaged in sexual intercourses that might lead to HIV infections
- Parents should be reminded on the role of sitting together with their children (family talk) and educate them on the effects of HIV/AIDS and the way it can affect their studies and the future as well (good behaviour of a student begins at home).

5.2.5 Recommendations to religious leaders

- There is a need for religious leaders to educate their adherents on the effects of HIV/AIDS. One way of addressing the case is through congregations where, among other religious matters for discussion, sexual behaviour and awareness on HIV/AIDS are emphasized to reduce their effect.
- In school timetables, there is an 80 minutes period a week on religious studies, and therefore through this period the religious teachers should put effort on reminding the students about the adverse effects of HIV/AIDS.

5.2.6 Recommendation for further research

An evaluative research is recommended to analyse the effectiveness of the integration of school curriculum with HIV/AIDS and its linkage to students' sexual behaviour. This will help to see whether there is change in behaviour with regard to HIV/AIDS,

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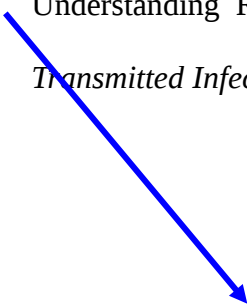
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APPENDIX

Appendix 1: Questionnaire for the research

**SOKOINE UNIVERSITY OF AGRICULTURE
DEVELOPMENT STUDIES INSTITUTE**

A Questionnaire for Research on:

**AWARENESS OF HIV/AIDS AND SEXUAL BEHAVIOUR AMONG
SECONDARY SCHOOL STUDENTS IN NJOMBE DISTRICT, TANZANIA**

By

Stella Jilaoneka Mwani

1. Name of the School.....

A. SOCIO-DEMOGRAPHIC INFORMATION

2. Type of school - Put a tick (✓)

1	2
Boarding <input type="checkbox"/>	Day <input type="checkbox"/>

3. Is your school a single sex or co-sex?

1	2
<input type="checkbox"/> Only girls	<input type="checkbox"/> Both boys and girls

4. Age of respondent (years).....

5. Sex - Put a tick (✓)

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

6. What is your domination? - Put a tick (✓)

Islamic	<input type="checkbox"/>
SDA	<input type="checkbox"/>
TAG	<input type="checkbox"/>
Lutheran	<input type="checkbox"/>
Roman Catholic	<input type="checkbox"/>
Baptist	<input type="checkbox"/>
Anglican	<input type="checkbox"/>
Moravian	<input type="checkbox"/>
Pentecosts	<input type="checkbox"/>

7. Please indicate your class level by putting a tick at the relevant number

Form	I	II	III	IV
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Whom are you living with?- put a tick (✓)

Father & mother	
Father alone	
Mother alone	
Brother/sister	
Uncle& aunt	
Others (specify)	

9. Parents’/Guardians’ economic status – Put a tick (√)

Economic status	Tick	Main occupation (Write)
1. High income		
2. Medium Income		
3. Low income		

10. Tick against all assets owned by your parents/guardians among the ones listed below

	Types of assets owned	Amounts of the assets owned	Monetary value of all assets
	1 Car		
	2 Motorcycle		
	3 Bicycle		
4	Dairy cattle		
	5 Beef cattle		
	6 Goats		
	7 Poultry		
	8 Farm land area owned		
9	House building plots owned		
	10 Mattress		

SECTION B: AWARENESS ON HIV/AIDS TRANSMISSION AND PREVENTION

11. How can HIV be passed from one person to another?

Awareness statement	Maximum scores (points)	Actual points scored by respondents

1.	Having sex with a HIV infected person (Yes, No)	5	
2.	Sharing unsterilized needles/blades with a HIV positive person (Yes, No)	5	
3.	Being bitten by insects e.g. mosquito, lice, mice, etc (Yes, No)	5	
4.	Sharing toilets with AIDS patients (Yes, No)	5	
5.	Sharing food with an AIDS patient (Yes, No)	5	
6.	Sharing a bed with an AIDS patient (Yes, No)	5	
7.	Receiving blood contaminated with HIV (Yes, No)	5	
8.	From an HIV infected mother to the unborn baby (Yes, No)	5	
9.	Being witched (Yes, No)	5	
10.	From an HIV infected mother to the child during breast feeding (Yes, No)	5	
11.	Kissing with HIV infected person (Yes, No)	5	
12.	A healthy looking person can be HIV infected (Yes, No)	5	
	TOTAL	60	

12. What can you do to protect yourself against HIV/AIDS?

S/N	Statement	Maximum scores(points)	Actual points scored by respondents
1.	By abstaining from sex (Yes, No)	5	
2.	By having sex with one HIV uninfected & faithful partner (Yes, No)	5	
3.	By using condoms appropriately during sexual intercourse (Yes, No)	5	
4.	By cleaning sexual reproductive organs thoroughly after sexual intercourse (Yes, No)	5	
5.	Avoiding bad peer groups members (Yes , No)	5	
6.	By sharing food with HIV person (Yes, No)	5	
7.	Having sex with a virgin can cure HIV/AIDS. (Yes, No)	5	
8.	By not sharing unsterilized sharp tools (Yes , No)	5	
	TOTAL	40	

SECTION C: SEXUAL BEHAVIOUR

12. Kindly answer the following questions about sexual behaviour

2.To get money									
3.Persua sion by peers									
4. Doing sex for prestige									
5. Not being afraid of HIV									
6. Lacking knowled ge of HIV									
7.Being afraid of poor sexual perform ance									
8.Parent s giving them too little money									
9.Havin g substanti al sexual desire									

13. Attitude towards sexual behaviour among secondary school students

S/N	Statements	Connot ation	1	2	3	4	5
1.	Most students do sex as a way of expressing love	+					
2.	Doing sex is a source of income	+					
3.	Sex with a condom is tasteless	-					
4.	Peers have influence on one's sexuality	+					
5.	Perceives condom use has bad side effects	-					
6.	Having many partners is prestigious	+					
7.	Students engage in risky sexual behaviour to please friends	+					

8.	HIV is similar to other diseases; so no need of taking prevention measures	-					
9.	It's not possible for girls to remain virgin until marriage	-					
10.	Students should not discuss about HIV/AIDS with parents/guardians	-					
Total							

1. Strongly disagree, 2. Disagree, 3 Undecided, 4. Agree, 5. Strongly agree.

16. Advice to secondary school students for improvement in behavioural practices that is risky for HIV/AIDS transmission

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THANK YOU FOR YOUR COOPERATION

Appendix 2: A Focus Group Discussion Guide

**SOKOINE UNIVERSITY OF AGRICULTURE
DEVELOPMENT STUDIES INSTITUTE
P.O.BOX 3024, MOROGORO.**

A Checklist for Focus Group Discussion with Secondary School Students for Research on:

Awareness of HIV/AIDS and Sexual Behaviour among Secondary School Students in Njombe District, Tanzania

By Stella Jilaoneka Mwani, M.A. (Rural Development)

1. Modes of HIV transmission
2. HIV prevention
3. Misconceptions about HIV/AIDS transmission and preventions
4. Age group that is most vulnerable to HIV/AIDS and reasons
5. Youths and secondary school students' awareness about HIV/AIDS transmission and prevention
6. Youths and secondary school students' sexual behaviour
7. Reasons for involvement in sexual behaviour
8. Extent of involvement in sexual behaviour
9. Relationship between awareness about HIV/AIDS transmission and prevention and sexual behaviour
10. Barriers to sexual behavioural change
11. Advice to secondary school students for improvement in behavioural practices that are risky for HIV/AIDS transmission.

Appendix 3: Checklist of Items for Discussion with Key Informants

**SOKOINE UNIVERSITY OF AGRICULTURE
DEVELOPMENT STUDIES INSTITUTE.
P.O.BOX 3024, MOROGORO.**

***A Checklist for Key Informant Interview with Headmasters/Headmistresses and
Discipline Masters/Mistresses for Research on:***

**Awareness of HIV/AIDS and Sexual Behaviour among Secondary School
Students in Njombe District, Tanzania**

By Stella Jilaoneka Mwani, M.A. (Rural Development)

1. Name of School.....
2. Name (and sex) of interviewee:(M/F)
3. Designation of interviewee
4. Any HIV programmes at the school
5. Whether people from any organisations have ever conducted campaigns about HIV/AIDS at the school (If Yes, who, when, how many times.
6. How the school helps to control HIV/AIDS
7. Youths and secondary school students' awareness about HIV/AIDS transmission and prevention
8. Involvement of students in risky sexual behaviour (Apparently, which sex/class leads)
9. Reasons for the class, boys/girls leading in risky sexual behaviour
10. Reasons for the class, boys/girls leading in good sexual behaviour
11. Relationship between awareness about HIV/AIDS transmission and prevention and sexual behaviour
12. Barriers to sexual behavioural change
13. Advice to secondary school students for improvement in behavioural practices that are risky for HIV/AIDS transmission