FACTORS ASSOCIATED WITH SEXUAL BEHAVIOUR AMONG ADOLESCENTS IN CHIPATA DISTICT EASTERN PROVINCE OF ZAMBIA

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A Dissertation submitted to the University of Zambia in partial fulfillment of the requirements of the Master of Public Health in Population Studies

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DECLARATION

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APPROVAL

This dissertation by **Christopher Zimba** is approved as a partial fulfillment for the requirements for the award of the degree of Master of Public Health in Population Studies by the University of Zambia.

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Date……...

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Chairman Board of Examiners Signature…….
Date……...

Supervisor ……. Signature…….
Date……...

DEDICATION

This thesis is dedicated to my wife Gwendoline, my daughters, Given and Watipaso and my amazing son Mwatusanga Zimba.

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I would like mostly to acknowledge my principal supervisor Dr. Likwa and the co-supervisor Dr. Khusantan for their limitless efforts in supervising my work.

ABSTRACT

Sub-Saharan Africa accounted for over 80% of adolescents living with HIV worldwide, while teenage pregnancy was 78% among adolescents. In Zambia, the situation is not very different, with 12.8% for HIV prevalence and 29% for teenage pregnancy demonstrating increased exposure to sexual behaviour. The purpose of the study was to determine factors associated with sexual behaviour among adolescents.

A cross-sectional study design employing use of quantitative approach was applied. A sample size of 225 adolescents comprising 113 females and 112 males aged 15 -19 years was determined. The study was conducted in Chipata Rural District of Eastern Zambia. Data was collected using a structured interview questionnaire for quantitative data and a follow-up focus group discussion for validation of data. Participants were selected by using Simple random sampling in the purposively selected schools. Quantitative data was analyzed using STATA 11.

The findings show a varied difference in the sexual behavioural practices among the adolescents. Female adolescents were highly sexually active with 52.4% compared with the male adolescents indicating 47.6% ($P<0.026$). This was attributed to factors such as; religion attendance of adolescents at, 94% ($P<0.030$).Peer pressure would have influenced 59.6 % of the respondents compared to 41% ($P<0.005$). Alcohol abuse also influenced sexuality among adolescents at 75.5 % compared to 24.5% ($P<0.039$). On the other hand, the study established that, 65.8 % of respondents wouldn't deny having sex with familiar persons compared to 34.2% ($P<0.017$). Additionally, 85.7% of adolescents wouldn't refuse to have sex with persons who have influence over them such as their teachers and employers compared to 14.7% ($P<0.032$). Furthermore, 2.5 % females contracted STIs in the last three months, indicating that females are at high risk of contracting HIV/AIDs compared to male adolescents to 0.4 %($P<0.002$).It was found during the study that majority of adolescents 59.6% preferred withdrawal method rather than use of condoms as contraceptives during sex, making them more vulnerable to infections, compared to 41%($P<0.034$). However, findings show no correlation on the adolescent level of education and sexuality, as well receiving of gifts among adolescents would lead to sexuality.

Therefore, a specific focus on further sensitization will be required. Ministry of General education should encourage schools to educate female adolescents about their sexuality and developmental processes since they lack understanding of their sexuality compared to their male counterparts. Furthermore, Ministry of Health should scale up adolescent-friendly services to meet the needs of both boys and girls. Additionally, religious leaders should also play an active role in educating the young people on sexuality.

Key Words: Adolescents, Sexual Behaviour.

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ABBREVIATIONS

ACT	Artemisinin-based Combination Therapy
ARV	Antiretroviral
BMGF	Bill and Melinda Gates Foundation
CHAI	Clinton Health Access Initiative
GHSC	Global Health Supply Chain
GFATM	Global Fund for AIDS, Tuberculosis and Malaria
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IDIQ	Indefinite Delivery Indefinite Quantity Contract
IUD	Intrauterine Device
MoH	Ministry of Health
PEPFAR	President's Emergency Plan for AIDS Relief
PMI	President's Malaria Initiative
PRH	Population and Reproductive Health
PSM	Procurement and Supply Management
QA/QC	Quality Assurance/Quality Control
RDC	Regional Distribution Center
RDT	Rapid Diagnostic Test
RHGATG	Reproductive Health Global Advisory Traceability Group
RHSC	Reproductive Health Supplies Coalition
SCMS	Supply Chain Management System
UNICEF	The United Nations Children's Fund
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
UNAIDS	United Nations Programme on HIV/AIDS
USG	United States Government
VMMC	Voluntary Medical Male Circumcision
RMNCH	Reproductive Maternal Neonatal Child Health
NHSP	National Health Strategic Plan
NSP	National Strategic Plan
CHAZ	Churches Health Association of Zambia
TOCA	Technical Organizational Capacity Assessment
WHO	World Health Organization
ZAR	Zambia AIDS Report
ZHDS	Zambia Health Demographic Survey
ZSBS	Zambia Sexual Behaviour Survey

CHAPTER ONE: INTRODUCTION

1.1Background

The onset of adolescence age from 10 to 19 years brings about several vulnerabilities, Oyediran, et al. (2010) Millions of girls are coerced into unwanted sex or marriage, putting them at risk of unwanted pregnancies, unsafe abortions, sexually transmitted infections including HIV and dangerous child birth. At the same time, it is during this period that,most the young begin to experiment with sexuality and sexual orientation, in the face of extreme levels of ignorance on sexual and reproductive health and protection measures, thus the consequences.

Early sexual initiation poses health risks for both young men and women. Most young adults who enter sexual relationships for the first time do not use any form of contraception (Magnani et al. (2008), leaving them vulnerable to unintended pregnancies and unplanned parenthood. For instance, Magnani et al. (2011) in a study of adolescent sexuality in Peru observed that only 38 per cent of the male youth reported that they used condoms at the time of first intercourse. In addition, Oyedian et al. (2012) observed a significant percentage of 43.9 of in-school adolescents in Ibadan did not know that first coitus can result into pregnancy.

Before, sex education was obtained in families. However, social change, caused by modernization and urbanization has led to broken family ties, leaving many young people unable to rely on intergenerational relationships for information and guidance on responsible sexual behaviour. As the gap between the generations is reinforced by cultural globalization, young people are increasingly left to learn about sex from their peers and mass media, where the message is sugar coated (UNFPA, 2012)

The UNAIDS (2014) report on the status of the global AIDS epidemic indicates that adolescents, and increasingly girls, account for most cases of new HIV/AIDS infections in sub-Saharan Africa. In addition, cases of unwanted teenage pregnancy and unsafe abortion are rife (UNAIDS, 2002), and consequences can be perilous. Realizing this, governments and other relevant stake holders across the globe have made massive investments to address adolescent sexual and reproductive health needs, however, challenges continue unabated (Amazigo, et al.2007; Smith, 2010; UNAIDS, 2012; Arowojolu, et. al. 2012; Slap, et. al., 2012; the Allan Guttmacher Institute, 2003; NPC/ORC Macro, 2004). Millions of adolescents are still engaging in early sexual activities, and becoming victims of early pregnancy, HIV, and other sexually transmitted infections. In 2014, 3.9 million people aged between 15 and 24 years were living with HIV and 620,000 became newly infected with the HIV (UNAIDS, 2015), a statistic which was said to have risen by 28% between 2005 and 2015 (UNICEF, 2016). In 2014, 79% of new HIV infections among adolescents occurred in Africa.

Many African countries already have youthful populations of over 51 per cent. It is estimated that the number of 10 to 24-year-old Africans is set to rise to more than 750 million by 2060. This means that, even if current progress is maintained, new HIV infections among young people are expected to increase. If progress stalls, the results could be devastating. Estimates suggest that as many as 740,000 additional adolescents could become infected between 2016 and 2030.

In Zambia, more cases of HIV infection take place among older than young adults. However, the statistics of the young living with HIV are still high (6.3%). At the same time, statistics of early pregnancy and unsafe abortion are extremely high. Several efforts have been made; including the development of a reproductive health policy, but the challenge continues. Researches have been done on the perpetuating factors world over, but very few in Zambia. According to World Health Organisation report (1998), parents attributed early sexual activities to sex videos and films, observing immoral behaviour among adolescents, lack of parental role models and guidance, peer pressure, alcohol and drug abuse. Also, adolescents are reported to have sex in exchange for money or other forms of payments were common in Zambia, WHO (2012). Based on the findings of these reports and more, several measures have been put in place to sensitise adolescents on the dangers of early sexual encounter, but this has not solved the problem.

The dissertation is arranged as follows; Chapter one, comprises of the introduction and background, statement of the problem, conceptual framework, justification of the study, definition of terms, research questions and research objectives. Chapter two comprises of literature review, at global, regional and national perspective. Chapter three looks at the research methodology and Chapter four highlights the research findings arranged according to the research questions and objectives of the study.

1.2 Statement of the Problem

The HIV/AIDS pandemic has been a devastating public health problem in Zambia and has drastically hindered the country's economic development. HIV prevalence in adults aged 15-49 years was estimated at 12.3%, (COP 2017). Whilst Chipata district of eastern province, 37,000 people between 15 -49 ages are living with HIV in population of 475,837 (COP 2017). Among adolescents aged 15-19, a larger proportion of adolescent females (41%) than males (30%) have had sex. Eight percent of youths aged 15-24 have had 'early sex' or sex by age 15, declining from about 17% in 2000 to about 8% in 2009. Just over a quarter (26%) of never- married youths aged 15-24 had sex in the 12 months prior to the survey. Among young respondents reporting sexual activity in the 12 months prior to the survey, two thirds of adolescents aged 15-19 and one third of young adults aged 20-24 reported having sex with a non-marital, non-cohabitating partner, and of these respondents, only 32% of adolescents and 41% of young adults used a condom the last time they had sex with a non-regular partner. The median age at first penetrative sex among young people aged 15-24 was 19.5 years for males and 17.5 years for females, (ZSBS2009). Furthermore, sexual behaviour plays an important role in the spread of this and other sexually transmitted infections (STIs), much of this effort in adolescent's reproductive health education has focused on promoting sexual practices and other behaviours known to reduce the risk of contracting the virus. Determinants of sexual behaviour among adolescent's remains an understudied area, especially from the perspective of adolescents. It is not clear why adolescents indulge in sex in the first place and why they find themselves in compromising situations despite the sensitization on condom use and contraception. Given Zambia's very young population (66% under age 24 in 2014), identifying the factors surrounding adolescent sexual behaviour could assist in the overall decline in HIV prevalence and early pregnancy. Therefore, the researcher felt it obligatory to conduct a study on

the Factors associated with Sexual Behaviour among Adolescents in Chipata District of Eastern Province of Zambia

1.3 Justification of the Study

Adolescent inappropriate sexual activity poses serious economic, social, cultural, religious, health and moral defy. Not only do they query the moral fabric of society, but they also predispose adolescents to risks of unwanted pregnancies as well as sexually transmitted infections/diseases including HIV/AIDS, ultimately leading to loss of life. This is putting the future of the young generation at stake, considering the numerical magnitude of the young population in Zambia (66% under age 24 in 2014), and the great contribution that these young people contribute towards Zambia's development. This research report will therefore inform policy makers and adolescents on the way forward to thwart risky sexual behaviour among adolescents

1.4 Conceptual Frame Work

Factors associated with sexual behaviour among the adolescents: Case study of Chipata District, Eastern Province, Zambia.

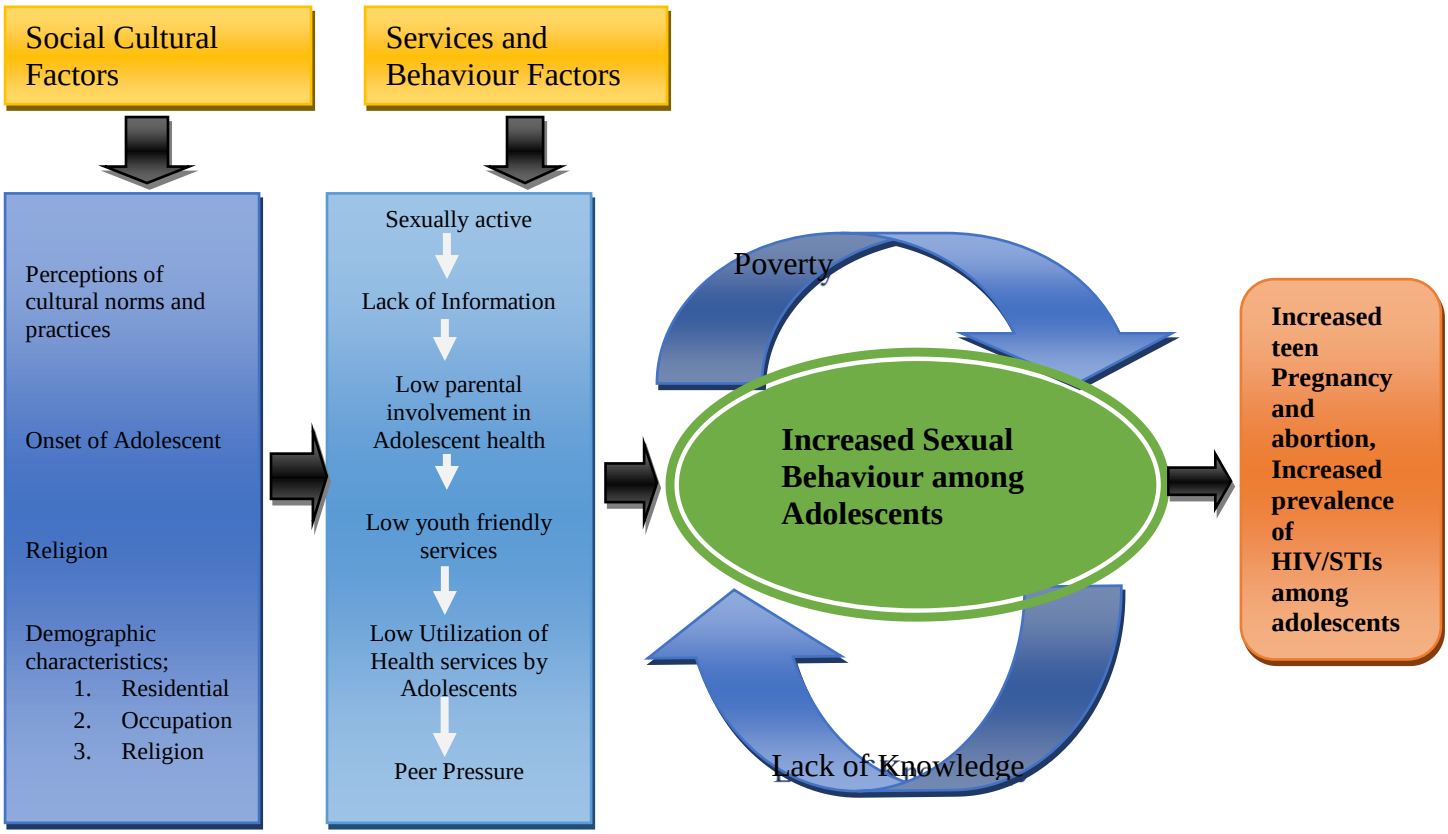


Figure 1: Conceptual frame work for the factors associated with sexual behaviour among the adolescents: Case study of Chipata District, Eastern Province, Zambia. Non-adopted conceptual framework illustrates how social cultural factors and service and behaviour factors necessitated with lack of knowledge/poverty influences increase sexual behaviour practices among adolescents which in turn results into increased teen pregnancy and abortions, increased prevalence of HIV/STIs necessitated.

1.5 Research Questions

1. What is the level of sexuality and factors associated with risky sexual behaviour among adolescents?
2. What are the effects of demographic characteristic such as age, sex education and religion on sexual practice among adolescents?
3. What is level of knowledge and perception towards reproductive health risks as well as level of self – efficacy towards condom use among adolescents among adolescents?

1.6 Research Objectives

1.6.1 General Objective

To determine factors associated with sexual behaviour and practice among adolescents in Chipata District.

1.6.2 Specific Objective

1. To determine the level of sexual behaviour among adolescents the extent to which cultural norms, practice and religion influence onset of adolescent occurrence and sexual behaviours.

2. To assess the demographic characteristics in relation to age, gender, sex, education and religion in relation to sexual practice among adolescents.

3. To ascertain thelevel of knowledge and perception towards reproductive health risks as well as level of self – efficacy towards condom use among adolescents.

CHAPTER TWO: LITERATURE REVIEW

The literature review identified relevant theoretical and conceptual framework for defining the research problem, lay the foundation for this study, inspired new research ideas, and determined gaps and inconsistencies in the body of research (Polit, Beck & Hungler, 2004). Information gathered from previous studies was used to provide an understanding of the factors that could contribute to risky Sexual Behaviour among adolescents. This literature review focused on global perspective, regional perspective and national perspective; To factors associated with sexual behavior and practice among adolescentsamong Adolescents, the attitudes and practices towards sexuality, condom use self-efficacy,demographic characteristics of adolescents and reproductive health risk associated with sexual behaviour.

2.0 Global Perspective

Since 2000, various global declarations and commitments, with specific goals and targets, have been made. And set by world leaders and governments to respond to the HIV and AIDS epidemic. Most are general in nature; however, the United Nations General Assembly Special Session on HIV and AIDS (UNGASS) in 2001 specifically included a target to reduce the prevalence of HIV in young people aged 15–19 years globally by 25% by the end of 2010 and to increase young people's access to essential HIV prevention information, skills, and services to reach 95% of those in need by the same date, (UN 2001). More recently, for the countdown to 2015, the UN Secretary General's High-Level Advisory Panel on the Post Millennium Development Goals Agenda released recommendations for post-2015. The report emphasizes equity, empowerment, and engagement of adolescents and youth and strengthening of data as core drivers of transformation in the next development agenda. Although these global commitments, goals, and targets are relevant for adolescents, the implications and accountabilities are rarely specific to this age group. In addition, adolescent-specific data are limited, which present a serious impediment to measuring and monitoring progress. Although the international reporting process recommends reporting on disaggregated data on adolescents and youth, little of these data are collected or published in global or national progress reports. As a result, compared with infants and adults, less is known about the

burden of HIV and AIDS among adolescents and progress to date in addressing their needs for HIV prevention, care, and treatment services, (UNAIDS 2014)

Furthermore, the burden of HIV and AIDS in Adolescents Globally, an estimated 35.3 million people were living with HIV at the end of 2012; of these, 2.1 million were adolescents aged 10–19 years, of which the majority was girls (56%). The gender disparity has persisted over time, with this number remaining largely unchanged over the past 5 years. These estimates include both adolescents who acquired HIV through mother-to-child transmission (perinatal and postnatal transmission through breast-feeding) and who acquired HIV behaviorally through unprotected sex or by sharing non-sterile injecting equipment. Most HIV infections are in sub-Saharan Africa, where 85% of all adolescents living with HIV were in 2012 (1.7 million). About 1.3 million adolescents living with HIV in sub-Saharan Africa were in Eastern and Southern Africa and 390,000 in the West and Central Africa. Outside sub-Saharan Africa, South Asia had the highest number of adolescents living with HIV (130,000), accounting for 6% of the global burden of HIV among adolescents, followed by East Asia and the Pacific(110,000), Latin America and the Caribbean (81,000), Eastern Europe and Central Asia (22,000), and the Middle East and North Africa (17,000),(UNICEF2013).

Globally new HIV Infections are about 300,000 among adolescents aged 15–19 years in 2012, which accounted for about 13% of the 2.3 million new infections globally in 2012 (about 830 adolescents were infected with HIV everyday of 2012),(UNICEF2013).

However, global aggregate data on the epidemic in adolescents, and youth, mask significant regional and population differences. In 2012, approximately two-thirds of all new HIV infections in adolescents were among girls, mainly in sub-Saharan Africa. In some countries in this region, more than 80% of the adolescents newly infected with HIV in 2012 were adolescent girls—South Africa (82% female), Sierra Leone (85% female), Gabon (89% female), (UNICEF2013).

In addition, generalized epidemic countries with data on HIV prevalence among adolescent females tends to be considerably higher than among adolescent males, suggesting that context heightens adolescent girls' sexual risks and vulnerabilities. Most of the countries with the highest

HIV prevalence rates in the world are in Southern Africa. Age specific prevalence data show a clear sex disparity in HIV prevalence by the age of 15 years. For example, in Swaziland where adult prevalence is estimated to be the highest in the world at over 26% in 2012, in 2006–2007 survey found that HIV prevalence in adolescents aged 10–14 years is low and like that of young children, but prevalence begins to increase in adolescent girls aged 15–19 years where it is 5 times as high as in boys of the same age. Nearly 40% of young women are HIV positive by the age of 20–24 years, rising to nearly 50% by the age of 25–29 years (UNAIDS 2013).

In a range of relatively high HIV burden countries in Africa, such as Botswana, South Africa, and Uganda, a similar and worrying trend is evident, with low HIV prevalence in early childhood for both sexes, which shifts with entry into adolescence accompanied by increased prevalence among females compared with males. The gap continues to widen between the sexes during adolescence into young adulthood. HIV prevalence in Uganda is nearly double in adolescent girls aged 15–19 years (3.0%) compared with boys of the same age (1.7%), (Buza 2013)

None the less, their limited studies available from low and concentrated epidemic countries suggest that HIV prevalence is disproportionately high among adolescents belonging to "key populations," especially, adolescents who inject drugs and adolescents who are exploited sexually. These adolescents also face high levels of stigma, which can prevent their access to support and key services for prevention of HIV infection, (UNICEF2013).

In Ukraine where HIV prevalence was 0.9% among people between 15 and 49 years old in 2012 and is among the highest in the Eastern and Central Europe, the prevalence among young people who inject drugs, younger than 25 years in Kiev, has been reported at 7.1%. Prevalence among Male adolescents and sex workers younger than 25 years in Kiev was 4.2% and 3.0%, respectively, (UNIADS 2013).

Similarly, in the Russian estimated at 1% in 2012, the prevalence among injecting drug users (IDU) younger than 25 years in Moscow was estimated at 12%. HIV prevalence among MSM and sex workers younger than 25 years in Moscow was reported at 10.8% and 4.1%, respectively, (WHO 2013).

Local studies in Asia show that HIV transmission resulting from sexual exploitation and commercial sex has been relatively contained, although pockets of concern persist. Although these studies are not limited to adolescents, HIV transmission from unprotected sex between males seems to be a key driver of the epidemics in several countries. HIV prevalence exceeding 10% has been found in cities in China, 14 India, 15 Thailand, 16 and Vietnam.17, (TBF 2012).

In most Latin American countries, the estimated HIV prevalence in the general population is below 1%. However, it is reported to be as high in major urban areas among MSM younger than 25 years, e.g., 13% in Paraguay, 12% in Mexico, 10.5% in Peru, 9.5% in Colombia, 9% in Argentina, and more than 5% in several other countries in the region, (UNAIDS 2013).

Although IDU behaviors do not seem to be highly prevalent among adolescents, the risks are extremely high for those who do inject. There are also concerns about increasing levels of use in some parts of the world. In a 2012 survey in Myanmar, HIV prevalence was 7% among 15- to 19-year old's who injected drugs and more than double that (15%) among 20 to 24year old. Studies suggest that injecting drug use accounts for more than two-thirds of all new infections in Iran, 40% of new infections in Eastern Europe, and more than one third in Philippines. In Pakistan, where IDU is a key driver of the epidemic, studies indicate that HIV prevalence among PWID more than tripled, from 11% in 2005 to 38% in 2011, (Emmanuel et al 2012)

When it comes to knowledge of HIV/AIDS amongst Adolescents; most new HIV infections are transmitted through sex. A basic understanding of HIV and how its spreads is a necessary component of prevention, although this is not enough to change behavior and reduce risk. Despite consistent calls for improving knowledge, in general, levels of knowledge of HIV among adolescents and young adults are appallingly low, especially in the worst affected countries. Recent surveys in countries with generalized epidemics show that, in most of these countries, less than half of adolescent boys and girls, aged 15–19 years, have a basic understanding of HIV. This falls far short of the 95% target agreed in 2001 at the UNGASS. Consistent with the higher rates of HIV among girls in the most affected regions, girls tend to have worse knowledge levels than boys of the same age. In sub-Saharan Africa, only 26% of adolescent girls aged 15–19 years and 36% of

adolescent boys of the same age have a comprehensive and correct knowledge of HIV.1 Disparities in knowledge about HIV prevention among adolescent girls and boys are linked to gender, education, household wealth, and place of residence, (UNICEF 2012).

Adolescent girls and boys in poor households and living in rural areas are less likely to have comprehensive knowledge about HIV and AIDS. These differences persist in nearly all countries with available data, (UNICEF 2012).

Global and regional averages can mask individual country progress. Several countries show evidence of improved knowledge about HIV prevention. Between 2000 and 2012, Belarus, Guyana, Jamaica, Namibia, Rwanda, Serbia, Swaziland, Trinidad and Tobago, Vietnam, and Zimbabwe witnessed remarkable increases in knowledge about HIV prevention to levels above 50% or more among adolescent girls, and there were similar increases among adolescent boys in Rwanda and Namibia (UNICEF 2012).

Globally another challenge adolescent's face is early sexual debut. Early sexual debut (before 15 years of age) provides more opportunities over time for adolescents to be exposed to HIV, especially where higher risk partners or multiple partners are involved, and condom use is less likely. The lack of awareness and other social pressures and power imbalances can also conspire to put the health of adolescents at risk. Among adolescent girls, aged 15–19 years, in sub- Saharan Africa, a higher percentage of girls (13%) than boys (9%) had sex before the age of 15 years. This pattern was observed in most regions with enough data. In West and Central Africa, 16% of girls had sex before the age of 15 years compared with 7% of boys, and in South Asia, 8% and 3% of girls and boys, respectively, had sex before the age of 15 years, (UNAIDS 2012).

In most low- and middle-income countries, early sexual debut is common—almost 30% of adolescent girls aged15–19 years in Central African Republic and adolescent boys in Malawi and Lesotho reported having first sexual intercourse before they were 15 years old. Similarly, more than 10% of girls or boys in Madagascar, Cameroon, Uganda, Kenya, Guyana, Sao Tome, Principe, Senegal, Rwanda, Tanzania, and Kiribati had early sexual debut, (WHO 2015).

In addition to HIV risk, early sexual activity is associated with early marriage and early childbearing across the world, which curtails education and other opportunities for adolescent girls to reach their full potential. Indeed, in low- and middle-income countries, 90% of births to adolescents are within marriage. Almost all adolescent births occur within marriage in Asian and North African countries, as do around 70%–80% in sub-Saharan African and Latin American countries and the Caribbean, (UNICEF 2012).

The World Health Organization (WHO) reports an estimated 16 million births in girls aged 15–19 years and 2million births in girls younger than 15 years each year. Worldwide, 20% of adolescent girls have given birth and entered parenting by the age of 18 years, whereas in the least developed countries, as many as 1 in every 3 adolescent girls is a mother by the age of 18 years. More than 1 in 4 women aged 20–24 years in sub-Saharan Africa has given birth before 18 years of age. And in 3 countries with the highest prevalence of early childbearing—Guinea, Mali, and Niger—around 10% of women gave birth before 15 years of age, (WHO 2013).

Poignant enough, on Condom Use and Multiple Sexual Partners, Condoms are one of the most efficient means available to reduce sexual transmission of HIV; yet, their use remains abysmally low in several countries with high HIV prevalence. Survey data from 2006 to 2012 show that condom use among adolescents aged 15–19 years who reported multiple sexual partners in the last 12 months before the survey was at least 60% or more in only 2 countries among adolescent girls and in 20 countries among adolescent boys. Recent survey data show that having multiple sexual partnerships among adolescent boys, 15–19 years, is common in both low and high HIV prevalence countries, up to 39% in Jamaica and 18% in Mozambique (UNAIDS 2013).

However, a lower proportion of adolescent girls than boys reported having had multiple sexual partners across nearly all countries, which ranged from 9% in Congo and Gabon to 16% in Jamaica. In interpreting these data, consideration should be given to the possibility of individual response bias to sensitive and personal questions. Even though most countries are still falling short of the 2001 UNGASS target of 95% condom use among those who reported to have had multiple sexual partners, recent survey data in some countries show substantial improvements in this indicator. Between 2000 and 2012, increases of 10 or more percentage points in condom use at last sexual

activity among adolescents aged 15–19 years who reported multiple sexual partners occurred in 9 of 22 low- and middle-income countries among adolescent girls and in 10 of 19 countries among adolescent boys, (UNICEF 2012).

In most countries, adolescent girls were less likely than boys to use condoms in their most recent sexual experience among those who reported multiple sexual partners. Condom use is also much less common among adolescents in poorer households and in rural areas, (UNICEF 2012).

Another worry issue is on HIV testing. Most adolescents do not know their HIV status. Although most adolescents know of a place where they can get tested for HIV, the proportion who reported ever having had an HIV test remains low across most countries; yet, this is a critical step toward access to HIV care and treatment, (Strove 2012).

Although access and coverage vary greatly by country, survey data from 2008 to 2012 in most sub-Saharan African countries indicate that less than 1 in 3 adolescent girls aged 15–19 years reported having ever been tested for HIV and having received the results. Tragically, this is not only a missed opportunity for a well-known entry point to access care and treatment but also a means of preventing HIV infection, (Rosenberg 2012).

In Eastern and Southern Africa, 29% of adolescent girls aged 15–19 years reported having ever had an HIV test and having received the results, which is higher than adolescent boys (20%), perhaps because of early pregnancies that led them to seek maternal health services and HIV testing linked to antenatal care. In some countries in Asia, the limited data available suggest that over 60% of young key populations initiate sexual activity early in life (by 15–19 years) and yet HIV testing is low, (UNICEF 2012).

Furthermore, when it comes to HIV Care and treatment, Age-disaggregated data on coverage of antiretroviral treatment (ART) among adolescents are lacking. Nearly half (1 million) of adolescents living with HIV in low- and middle-income countries needed ART at the end of 2012 according to 2010 WHO ART eligibility guidelines. The increased CD4 threshold to 500 for initiation of ART recommended in the 2013 guidelines raises even further the number of

adolescents in need of treatment. Given the fact that there continue to be large numbers of perinatally infected children growing into adolescence (long-term survivors), the number of adolescents living with HIV in need of treatment is likely to continue to grow for some time. Although global data on ART coverage for adolescents are not available, low ART coverage among children aged 0–14 years provides an indication of the inequities in the global response, (UN2013).

In 2012, ART coverage among children aged 0–14 years in need of HIV treatment was only 34% compared with 64% of all eligible adults 15 years and older, (UNAIDS 2013).Both the increasing AIDS-related deaths among adolescents and the limited studies that exist suggest that adolescents do not have adequate access to ART. Retention and adherence rates also seem to be poor even when enrolled in care and treatment.25–29 Retaining adolescents in care is particularly challenging. Dealing with the prospect of lifelong treatment is daunting at any time in life, but for adolescents, this comes on top of navigating the usual challenges of their developing maturity—emotionally, psychologically, physically, and sexually, (UNAIDS 2013).

The remarkable progress made in decreasing new infections from mother-to-child transmission indicates that a concerted global effort, strong political commitment and leadership at the country level, and resource allocation can lead to significant results. The same kind of dedicated attention over time is long overdue for adolescents. The launch of the "global plan toward the elimination of new HIV infections among children by 2015 and keeping their mothers alive"30 in 2009 has led to rapid reductions in new HIV infections among children in low- and middle-income countries overall and in the 22 priority countries. Globally, 52% fewer children were infected with HIV in 2012 (260,000) than in 2001 (550,000), with an accelerated pace of reduction between 2009 and 2012 compared to the preceding decade. Although declines in new infections have been marked among young children largely because of progress in preventing mother-to-child HIV transmission, the 36% decline in adolescent new infections has been much more modest, (UNICEF 2012).

The increase in HIV prevalence during the transition from childhood to adolescence provides clear evidence of the increasing HIV vulnerability in the second decade of life. The package of high-

impact interventions that reduce HIV infections, morbidity, and mortality has been clearly laid out in the UNAIDS investment approach, (Lancet 2011) However, without improved data gathering, analysis, and reporting systems specific to adolescents, the international community currently can neither measure the progress in a standardized way nor use the knowledge that comes from such systems to implement the most efficacious programs that can improve health outcomes for adolescents, (UNAIDS 2013).

HIV prevention among adolescents is particularly important given their evolving needs—socially, physiologically, and psychologically—as they transition from childhood through adolescence to adulthood. Lack of attention to their reproductive and sexual health rights and related services at this age can have irreparable consequences in the trajectory of the HIV and AIDS epidemic globally, (UNAIDS 2013).

Epidemiological, knowledge, and behavioral data from UNAIDS and surveys show modest progress in global prevention efforts and confirm that we are still far from ensuring universal access to critical prevention services and support for adolescents, including provision of age-appropriate information, access to condoms, HIV testing and counselling, and essential sexual and reproductive health and treatment services, (UNAIDS 2013).

Globally Conclusively, HIV epidemic among adolescents and progress made toward addressing the prevention, care, and treatment needs to mitigate risk, infection, and mortality among them. It does neither assess the programmatic effectiveness and scientific evidence of different high-impact interventions nor deal with interventions designed to mitigate the impact of HIV, e.g., interventions with orphans and other children infected or affected by HIV and AIDS, that are beyond the scope. Various development sectors and their program interventions, beyond those that are HIV specific, play a critical role in reducing vulnerability to HIV infection among adolescents. Just as critical are the political commitments and policy and legal environments that address the issues of poverty, low levels of education, marginalization of population groups, stigma, and discrimination attached to groups or behaviors, among others. Policy and program efforts across the development sectors along with the enabling environment are factors that have significant influence on the effectiveness

and success of HIV-specific interventions that enhance HIV knowledge and improve access to testing, care, and treatment services. However, analysis of these factors is beyond the scope.

The data presented in show simple aggregate or percent differences in selected outcomes by age and sexed do not control for the interactive effects of various variables, such as education level of respondent, household wealth, rural or urban residence, ethnicity, and other factors. A multivariate (regression) analysis would be more useful in determining the factors most associated with desired outcomes across adolescent subgroups. The findings, however, suggest areas for further research and analysis.

2.1 Regional Perspective

The developmental, physiological and behavioural changes that take place during adolescence can contribute to an increased risk of contracting HIV and other sexually transmitted infections (STIs) and of experiencing unplanned pregnancy (Lloyd 2005; Dixon-Mueller 2008). Nonetheless, broad patterns are worth considering given the severe course that the HIV epidemic has taken in Sub-Sahara Africa (SSA), especially among young people. Much of our knowledge about adolescent sexual behaviour in SSA came from Demographic and Health Surveys (DHS) and AIDS Indicator Surveys (AIS). In these surveys, routinely estimated youth sexual behaviour indicators included those related to sexual activity (e.g. primary ⁄ secondary abstinence, age at first sex, sex among unmarried youth); condom use (e.g. at first sex, last sex, ever); and sexual partnerships (e.g. multiple partners, age mixing). Many of the indicators collected for adults (aged >15 years) were presented separately for adolescents aged 15–19 years, but rarely presented disaggregated by key determinants of behaviour, such as marital or socioeconomic status (Mahy & Gupta 2002).

Furthermore, sexual behaviour data had not been collected for adolescents aged <15 years, although 30% of 15- to 19-year-olds in some countries report sex before the age of 15 (Dixon-Mueller 2009). Several reviews examined the patterns and trends in adolescent sexual behaviour in SSA using nationally representative survey data (WHO 2007).

National surveys provided some evidence of a trend over time towards later age at first sex, first marriage and first birth, although changes were often limited to subgroups of adolescents (e.g. gender, urban/rural, education, wealth) (Mahy & Gupta 2002). Condom use appeared to be

increasing but overall levels of use remained low (Cleland & Ali 2006). The aim of this review was therefore to provide an update on national survey findings on sexual and reproductive behaviour of adolescents in SSA, with focus on the often-neglected 15- to 19-year-old age group. With Focuses, on adolescent's sexual behaviour in these indicators such as, sexual before the age of 15 years, marriage before the age of 15 years, multiple sexual partners in the past year, partner 10 or more years older in the past year, condom use at last sex, Pregnancy, use of modern contraceptives at last sex, HIV test in the past year, and adult support for condom education for 12 to 14 years old.

Regarding sex before the age of 15, in 24 SSA countries with a DHS/AIS survey since 2005, there was a large variation in the proportion of 15- to 19- year-olds who reported having had sex before the age of 15 years, with values ranging between countries from 2% to 27% for males and 5% to 26% for females. In general, a significantly larger proportion of females compared to males reported having had early sex (before the age of 15) in countries in West Africa. In Central, East and Southern Africa, the pattern was mixed with a higher proportion of males reporting early sex in many countries. Except for Rwanda and Lesotho, early sex among females (15–24 years) was significantly more common in rural than in urban areas. Among males, there were few significant differences in reporting between urban and rural areas. Less educated females were significantly more likely to report having had sex at an early age. In most countries, the proportion of 15- to 19-year-olds reporting sex before the age of 15 significantly decreased over time. (WHO 2007)

As for marriage before the age of 15, the proportion of 15- to 19-year-old females who were married before the age of 15 ranged from 0.2% (Rwanda 2005) to 28% (Niger 2006). In 5／14 countries, marriage before the age of 15 significantly decreased over time. However, in Mali and Madagascar, early marriages significantly increased over time. Sexual activity of never-married adolescents in the past year approximately one-quarter of never-married 15- to 19-year-olds reported sex in the 12 months prior to the survey. The prevalence of this indicator varied widely between countries ranging from 4% (Ethiopia 2005) to 55% (Mozambique 2009) among males and 0.8% (Niger 2006) to 60% (Liberia 2007) among females. Reporting was significantly more frequent among males than among females in 9／14 countries, whereas in Ghana and Nigeria, the opposite was the case. The prevalence of this indicator for never-married 15- to 24-year-olds was

significantly higher in urban areas than in rural areas for both males (7／14) and females (9／14). Among females, in most of countries (8／14), reports of sexual activity were significantly more common for those with higher levels of education; however, in Madagascar and Tanzania, the opposite trend was seen. Among never-married males, no consistent pattern was seen and sex in the past year was significantly associated with higher levels of education in only 3／14 countries. (Marston & King 2006)

The Adolescents having multiple sexual partners in the past year, that is the proportion of 15- to 19-year-olds who reported more than one sexual partner during that time ranged from 4% (Ethiopia 2005) to 32% (Cote d'Ivoire 2005) among males and from 0.4% (Ethiopia 2005, Niger 2006) to 12% (Liberia 2007) among females. A significantly higher proportion of males than females reported multiple partners in the past year. In almost all countries, a higher proportion of 15- to 24-year-olds in urban than in rural areas reported multiple partners; however, this difference was only significant among females in 4／11 countries. In most countries, and significantly so in 4／11 countries, better educated females were more likely to report multiple partners than those with less education. Among males, there was no consistent pattern per education level. There was limited evidence of a decline in reporting of multiple sexual partnerships over time, although in Ethiopia and Mozambique significant declines were seen among both sexes and in Nigeria among males only, (Cleland & Ali 2006).

Furthermore, in most countries, 2–6% of 15- to 19-year-old females who had sex in the past year had a partner who was 10 or more years older during that time. Overall, this ranged from 0.1% (Ethiopia 2005, Niger 2006) to 13% (Zimbabwe 2005–2006). Such age-disparate sex was significantly higher among urban compared to rural females in 6／10 countries and was associated with a higher level of education in 5／10 countries. Some difference in reporting of this indicator per marital status was seen, for example, in Lesotho in 2009 ever-married females were 2.5 times more likely than sexually experienced never-married females to report age-disparate sex, (Cleland & Ali 2006).

None the less, condom use at last sex, proportion of never-married 15- to 19-year-olds who had sex in the past year and reported condom use at last sex ranged from 8% (Madagascar 2008–2009)

to 81% (Namibia 2006–2007) among males and from 5% (Madagascar 2008–2009) to 67% (Namibia 2006–2007) among females. Female reporting of this indicator in the selected countries varied widely by region, from an average of 22% in West Africa and Central Africa to 35% in East Africa and 60% in Southern Africa. Condom use was significantly higher among males compared to females in 2/4 of the West African countries, but only 2/10 of the East and Southern African countries Reported condom use was significantly higher among urban compared to rural youth, for both males (14/14) and females (10/13). For males (13/14) and females (12/14) in almost all countries, condom use was positively associated with a higher level of education. Some countries have seen a significant increase in condom use by never-married males (3/14) and/or females (6/14) over time. However, reporting significantly decreased among females in Uganda from 54% in 2001/2002 to 38% in 2006 ($P < 0.01$), (Izugbara & Nwabuawele Modo 2007).

As far as condom education and use was concerned, young people's reports of condom and other contraceptive use increased over time in many but not all countries. However, reported condom use within non-marital relationships remained well below 50% in most countries. Reported condom use was highest in the high HIV prevalence countries of Southern Africa and lowest in lower prevalence countries of West Africa. Whether, reflecting actual use or reporting bias, higher exposure to condom promotion campaigns in Southern African countries may have led to higher reported condom use. In national surveys, the commonly used indicator of condom use for young people was the proportion reporting condom use at last sex with a non-marital, non-cohabiting partner in the last 12 months, (Ferguson et al. 2004).

However, condoms are most effective at reducing risk if they are used consistently over time, and this indicator was limited as a proximate measure of consistency of use (WHO 2004). Increasingly, survey researchers are using additional indicators to better assess the consistency of young people's reported condom use. Such studies should be drawn upon to try to improve the condom use indicators in national surveys, (Jama Shai et al. 2010).

As for Pregnancy, the proportion of 15 to 19-year-olds who were mothers or currently pregnant ranged from 4% (Rwanda 2005) to 39% (Niger 2006). Childbearing was slightly more common in West Africa than in East and Southern Africa. Experience of pregnancy increased with age, with

values of 0–11% among 15-year-olds and rising to 13–65% among 19-year-olds. Childbearing among 15- to 24-year-olds was significantly higher among those with no education (13 ⁄ 13 countries) and those living in rural areas (11 ⁄ 13 countries), but the difference between these subgroups varied considerably between countries, (Bankole et al. 2007)

Regarding use of modern contraceptives at last sex ,the current use of modern contraceptives by never-married females (15–19 years) who had sex in the last 30 days ranged from 0% (Rwanda 2005, Niger 2006) to 76% (Namibia 2006–2007). Reporting for this indicator increased in most of countries between the last two DHS rounds. However, significant increases were seen only in Benin and Zambia, (UNAIDS 2007).

In terms of HIV test in the past year, the proportion of 15- to 19-year-olds who had sex in the last year and who were tested for HIV during that period and knew their results ranged from 0% (Ghana 2008) to 23% (Kenya 2008–2009) among males and from 0.9% (Niger 2006) to 49% (Lesotho 2009) among females. In many countries (6 ⁄ 7 females; 4 ⁄ 7 males), testing had significantly increased over time. For example, among 15- to 24-year-old females in Tanzania, this indicator increased from 6% in 2004–2005 to 24% in 2007–2008 and 39% in 2010. HIV testing was significantly higher among females compared to males in 8 ⁄ 14 countries but significantly higher among males in Nigeria and Ethiopia. In almost all countries, testing was significantly higher in urban compared to rural areas (8 ⁄ 14 for males; 11 ⁄ 14 for females) and significantly increased with education level (10 ⁄ 14 males; 12 ⁄ 14 females). Nonetheless, Sub-Saharan Africa experienced a rapid scale-up of HIV testing and antiretroviral therapy services during the period considered in this review, although the timing and intensity of campaigns have varied widely between and within countries (Padian et al. 2011).

Encouragingly, it was found that HIV testing among adolescents had increased substantially in many countries in recent years. However, in many countries, levels of HIV testing remained relatively low among males, younger youth, those with less education and those living in rural areas. Routine disaggregation of this and other youth indicators per Sociodemographic variables would allow more careful monitoring of access to services and progress towards the UNGASS goals (United Nations 2001).

Adult support for condom education for 12- to 14-year olds; The proportion of females aged 18–49 years who were in favour of 12- to 14-year-olds being educated about condom use ranged from 30% (Sierra Leone 2008) to 84% (Namibia 2006–2007). The proportion of 18- to 49-yearold males supporting this ranged from 47% (Nigeria 2008) to 85% (Namibia 2006–2007), with male support significantly higher than female support in 10／12 countries. Urban females in 11／12 countries and urban males in 6／12 countries were significantly more likely than their rural counterparts to support such education. Approval for condom education has increased significantly over time in some East and Southern African countries. However, significant decreases were observed in each of the three West African countries for which there were data from two surveys, largely because of decreases among females, (WHO, 2007).

However, this analysis of national survey data from 24 countries in SSA found that a high proportion of 15- to 19-year-olds were sexually active and at risk of contracting HIV, other STIs or of unplanned pregnancy because of lack of condom and other contraceptive use, and through having multiple sexual partners. There were some residency and education risk patterns common to most of the surveyed countries. For example, in comparison with urban populations, rural populations had relatively high reports of early sex and childbearing (especially for females), as well as low condom or other contraceptive use among young people in general. In contrast, in urban areas, never-married males and females were more likely to report sex in the past year, and females were more likely than their rural counterparts to report age-disparate relationships and multiple partnerships. Across the surveyed countries, youth with low education levels were more likely than those with higher education to report early sexual debut, marriage and childbearing, and they were less likely to have used condoms or to have received an HIV test result, (WHO, 2007)

In terms of early sex, pregnancy and marriage, in many countries, sizeable minorities of adolescents became sexually active before the age of 15, suggesting that there is a need for interventions to target young people before that age. However, one promising finding of this review is that reported sex before the age of 15 has decreased over time in most of countries. In general, adolescents living in the lower HIV prevalence region of West Africa commenced sexual activity and got married at an earlier age than their Eastern or Southern African counterparts. Reported early sex was more common among females compared to males in West Africa, possibly

due to girls marrying earlier and/or having older sexual partners. In contrast, early sexual debut and sexual activity among never-married youth were more commonly reported by males than by females in some of the countries of East and Southern Africa. Reporting biases may contribute to these differences, as adolescent sexual activity was often considered socially undesirable or unacceptable. Young people and especially females often under-report sexual behaviour, but males sometimes over-report it (Catania et al. 1990). Countries reporting the highest levels of early marriage did not always report the highest levels of early childbearing and vice versa. Importantly, however, this analysis was unable to determine the sequence of these events. It was possible that the high rates of early sex and pregnancy in West Africa mainly happened after marriage, and this may represent a different type of risk than early sex and pregnancy out-of-wedlock there or elsewhere, (Plummer & Wight 2011).

Finally, decreases in the level of adult support for condom education for 12- to 14-year-olds in some countries in West Africa reflected the controversial nature of such education in SSA. Nonetheless, the review finding that two-thirds of adults supported condom education for 12- to 14-year-olds is an important contribution to existing debates about youth condom education in general and for early adolescents, who may not yet have become sexually active and established sexual risk behaviours Partnership characteristics and numbers (Sawers & Stillwaggon 2010).

In most of the countries reviewed, 2–6% of 15- to 19-yearold females who had sex in the past year had a partner who was 10 or more years older than them during that time, but it was difficult to examine trends in this practice over time as only four surveys had repeated measurements in the last decade. Males aged 15–19 years were more likely than females to report more than one partner in the previous 12 months in all countries surveyed, but one promising finding of this review was a decrease in reported multiple partners among males in four countries and among females in two countries. Risks associated with various types of partnerships have been the subject of intense debate in the field of HIV prevention (Lurie & Rosenthal 2010). The risks for individuals within a sexual relationship may be influenced by the partnership's duration, overlap with other partnerships and the frequency of sexual encounters within it. At the time of the research, the main national survey indicator related to young people's multiple partnerships (sex with >1 partner in the last 12 months) was insufficient to assess such risks. The characteristics of partners and

partnerships can be challenging to measure for many reasons, including social desirability bias, limited recall accuracy and difficulties semi-literate populations may have calculating large numbers or averages, (UNAIDS 2010).

In conclusion, to better inform the development and to monitor the effectiveness of intervention programmes, more detailed data had to be collected on all adolescents, including 10- to 14-year-olds (WHO 2004, Dixon-Mueller 2009). Where feasible, of more detailed data on the type, duration and overlap of sexual partnerships, as well as the frequency of sex and the consistency of condom use within partnerships. Where possible, data had to be disaggregated by small age–sex groups and by demographic characteristics and interpreted alongside data on the economic and social determinants of sexual risk behaviour. Given the challenges with accurate measurement of adolescent sexual behaviours, further research on more appropriate and effective ways to collect valid survey data was also valuable.

2.2 National Perspective

Adolescent's sexuality was an increasing concern in Zambia. The last decade saw a charging pattern of sexuality among this population group. It was found that urbanisation was accompanied by a shift in the traditional values associated with sexuality with the result that more young people were having sexual relations prior to marriage. According to CSO (2008), by the age of 18 years, 70% women had been involved in sexual intercourse and by the age of 20 years 85% had experienced sexual intercourse with median age of first sexual intercourse being 11 years. In case of men 24% aged 15-19 years had been involved in sexual intercourse, while 90% of them have had sexual intercourse by age 22. Although contraceptives awareness in Zambia was reported high (97%), Contraceptives use was only 15.2% for all the methods among married women. CSO (2004) indicated that family planning services are less than adequate and currently meet only one third of the potential demand for family planning. In view of the above inadequate health care services, it was likely that teenage girls had no access to family planning services as well as being well informed.

Zambian Economical Factors affecting Adolescents were mainly due to the need for financial assistance. A lot of girls unfortunately found themselves with unwanted pregnancies. The introduction of privatization of companies led to massive retrenchments of a significant number of parents. SAFAIDS (1999) stated that a lot of children turned to the oldest known profession, 'Prostitution' as a means of raising funds for their wellbeing. With this scenario, adolescents were made vulnerable to unintended pregnancy, STIs, including HIV and unsafe abortions all in search of monetary gain. Additionally, there was a breakdown in cultural values and family ties have decayed. The value of adolescents express often differs from their behaviour. There, 'ideal 'sexual code places emphasis on waiting until marriage to have sex on the practical dangers of being pregnant. These values however needed to be stretched because of the pressure of everyday life.

Due to the tremendous number of youths just reaching reproductive age, the number of adolescents having births increased, which had serious implications for Zambia's future. UNICEF (1997), reported that large number of adolescent's pregnancies would contribute to the region's rapid population growth, limit young women's education opportunities and expose risks associated with illegal abortions and too early child bearing teen.

Furthermore, Adolescents needed realistic, accurate and appropriate reproductive and sexual health information to prepare them for healthy adult's relationships. Most adolescents learned about sex from their peers or media and this information was often inaccurate or incomplete. The media bombard them with massages glorifying unsafe sex behaviour. Parents frequently were unwilling or unable to engage in open and direct discussion of sexuality, even though many young people say that they would most like to learn about sexuality from their parents. Understanding and meeting the information and contraceptive needs of adolescents was a growing challenge for scientist and policy makers. (UNAIDS 2004)

In Zambia, majority of young people begin sexual relations during adolescence. The ZDHS (2000) reported that 56% of women aged between 15 and 24 years had sex before the age of 18 years, while only 24% of women between 15-24 years of age used a condom at first sex. Similarly, 51% of men between 15-24 years had sex before age of 18 years, and only 22% of them used a condom at first sex. This practice significantly exposed adolescents to HIV and other STIs, teenage pregnancies, unsafe abortions and dropping out of school. Sexual Transmitted Diseases /HIV

among Adolescents are a major risk to sexually active adolescents. In Zambia rising trends in the incidence and prevalence of STD/HIV among adolescents present a serious challenge to their health and wellbeing.

In addition, Poverty prevalence in Zambia was high. Poverty was one of the major determinants of health and development for children and adolescents. Poverty lead to failure to meet the basic needs and nutrition, with significant implications on health, growth, morale and self-esteem. It also had potential to expose the adolescents to bad practices, such as prostitution, early pregnancies and other life-threatening behaviours. Poverty also impacted on the ability of the families to support the educational needs of their children/adolescents, and contributed to creating environments for drug abuse, violence, commercial sex and sexual abuse, particularly among the adolescents, CSO (1996).

In Zambia, it was estimated that more than 6 in 10 women (64%) and 8 in 10 men (82%) were literate. Urban areas had higher literacy levels than rural areas. Literacy rates among men were high across all provinces, ranging from 71% in Eastern to 90% in Copper-belt provinces. Whilst there were no clear patterns of literacy by age, however, for women, literacy was highest among young women aged 15-19 years (73%), while for men it was highest among the 15-19 years and 40-44 years (84% each). According to the 2008 Economic Report, pupil enrolment at basic education level (grade 1-9) increased by 5.4% to 3,336,009 from 3,166,310 in 2007. The GPI stood at 0.957. As with literacy, education rates were higher among males than females. (CSO, 2000)

However, education and literacy levels had significant impact on adolescent health and development. Literacy was an important asset for promoting adolescent health, as it presented individuals with the capacity to read and write materials relevant to the promotion of adolescent health and development, including relevant Information, Education and Communication (IEC) materials, (ZDHS 2000). Education was also a critical factor for understanding various issues on adolescent health and development and was an important tool for accessing better jobs and household wealth status, which all had direct impact on the socio-economic well-being of individuals, (ZDHS 2000)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

This study was conducted using a cross-sectional design using of quantitative methods. Quantitative methods were used when testing the relationships, differences causes, effects and interactions among and between variables using numerical values and multiple logistics regressions

3.2 Research Settings

The study was conducted in the urban area of Chipata District of Eastern Province, Zambia. The researcher decided to conduct the study in Chipata District because it is a natural setting and very little has been done on the proposed topic. The place is appropriate as it the third highest in the country affected with HIV among the adolescents in Zambia (COP 2017). Above all, the researcher is a resident of the District. Chipata District has a population of 475,837 of which 7,613 are Adolescents aged between 15 -19. The HIV prevalence rate in Chipata District stands at 12.8% per 1000 for all ages (ZHDS 2010).

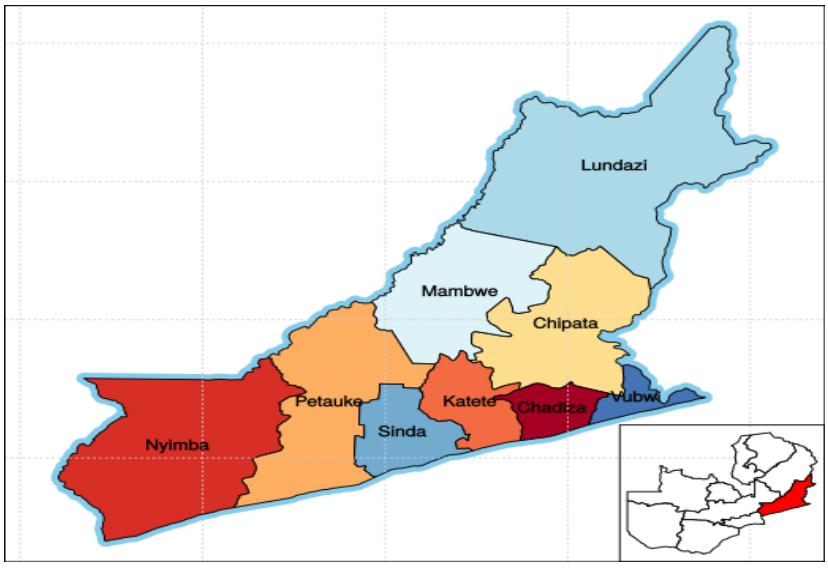


Figure 2: **Map of Chipata District of Eastern province of Zambia**
KEY
Light brown for Chipata District.

3.3 Study Population

School going adolescents either married or not of ages between 15 to 19 years.

3.4 Inclusion Criteria

School going Adolescent either married or not aged between 15 -19 who could speak coherently and give consent to participate in the study were included.

3.5 Exclusion Criteria

The exclusion criteria were as follows;

- Those ages below 15 years old.
- Those who could not read the questionnaire or visual impaired.
- Those above 19 years old
- Those who could not consent or whose parents did not sign assent forms.

3.6 Sampling Method

This research utilised the cluster random sampling methodology. This involved dividing the population into clusters and then randomly selecting from the clusters. This allowed for the research to consider individuals from different geographical settings within Chipata: low and high social density areas, while random sampling reduced the probability of biasness in the process of sampling. The study population comprised of 225adolescents aged 15 -19 recruited from school attendance register using simple random sampling in four clusters randomly selected areas; Urban (low and high social economic status urban areas), semi-urban and rural areas of Chipata Districts. Two schools from each of the four clustered areas were randomly selected for the study population.

3.7 Sample Size Determination

3.7.1 Sample size for quantitative method:

A sample size of 225 was determined using the prevalence formula:

The study was designed to tolerate an absolute error of up to 5 per cent, with the power of the study at 95 per cent.

The following formula was used to calculate the sample size;

$n = Z^2 P (1 – P)/e^2$

Where;

Z = 1.96, the factor from the Normal Distribution

P = Expected Period Prevalence

e = Absolute Sampling Error

n = Sample size

Therefore;

$n = (1.96)^2 17.6 (100 -17.6)/ 5^2$

$n = 3.84 \times 17.6 \times 84.4/25$

n = 224.7

n = 225

3.8 Data Collection Methods/Tools

A structured interview questionnaire was used to collect data from participants. The questionnaires were written in English but also translated in vernacular whenever necessary during interviews. A quantitative data collection method using closed ended questions were administered.

3.9 Pre-Testing of Questionnaires /Training of Research Assistants

A Pre-test of questionnaires was conducted on 10% sample size population away from the actual sample population of the study. This served as a means of correcting the instrument (questionnaire). The questionnaires were also pre-edited daily. This was to ensure completeness and consistency in the data collected by the interviewers. These enabled necessary adjustments to

be made to the questionnaires used for the main study. To ensure that good quality data was collected, the research assistants were trained for two days.

3.10 Validity

Validity for this study was ensured by covering all important variables under study in the interview schedule. Questions were constructed with clear instructions and explanations. Pre-test of the questionnaire also increased validity.

3.11 Data Analysis

Analysis of data involved the production and interpretation of frequencies, tables, graphs, to describe the data using Stata 11 software computer package. Additionally, Chi-Square tests were done to test the association between Variables. Also, multiple logistic regressions were employed when comparing various variables. The Statistical Significance was at 5%. Therefore, only P - values of less than or equal to 0.05 were considered, to be statistically significant and quantitative data was analysed using Stata 11.

3.12 Ethical Consideration

Permission was sought and granted from the Zambia Research Ethics Committee, and the University of Zambia. Explanation was given on the nature and purpose of the study to study participants. Participants were assured of Anonymity and Confidentiality, and no name was entered in the questionnaires. A unique numbering system was applied to represent individuals. The data was kept under, 'lock and Key'. Participants were also informed on their freedom to withdraw from Participating in the study at any time though the emphasis on their importance of participation was made.

CHAPTER 4: PRESENTATION OF FINDINGS

This chapter aims at presenting the research findings about the factors associated with sexual behaviour among adolescents. These findings are based on questionnaires that were distributed to a sample total of 225 respondents, all of which were distributed and all of them were analysed. Tables of summarized data as well as data relevant to the subject matter were displayed in this chapter.

This section covers general information on the demographic characteristics of the respondents such as sex, age, level of education, parental care and religious affiliation;

4.1 Distribution of respondents by Sex and Age.

Table 1 of the total 225 respondents that participated in the study, while 118 were female, representing the majority at 52.4%.107 were male – representing 47.6% of the total respondents.

Table 1: Sex distribution of respondent

Sex	Frequency	Percent
Male	**107**	**47.6**
Female	**118**	**52.4**
Total	**225**	**100**

Age group by sex redistribution

Table 2 shows that, when classified per age group, males younger than 16 years were 62 representing 27.6% of the respondents while females in this age group were 61 representing 27.1% of the total. Respondents between the age of 16 and 19 were grouped as follows; males were 27 representing 12% while females were 31 representing 13.8% of the total 58 at 27.8%. For the respondents that were above 19 years, the males were only 18 representing 8% whereas the females were 26 representing 11.5% of the total 44 (19.6%). A chi-square test of independence was performed to examine the relationship between age of the respondents and by sex. The relationship between these variables was not found to be significant.

Table 2: Age group by sex redistribution

Age group	Sex		Total	P-Value
	Male	Female		
<16	62 (27.6%)	61 (27.1%)	123 (54.7%)	P < 0.817
16-19	27 (12.0%)	31 (13.8%)	58 (27.8%)	
19+	18 (8.0%)	26 (11.5%)	44 (19.6%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.1.2 Level of Education

Table 3 and figure 3, shows that, in terms of education, 113 respondents, representing 50.2% were in junior secondary (24.9% male and 25.3% female) while 112 representing 49.8% were in senior secondary (47.6% male and 52.4% female). A chi-square test of independence was performed to examine the relationship between the level of education and sex of the respondents. The relationship between these variables was not found to be highly significant (P< 0.000)

Table 3: Level of Education by Sex

Education Levels	Sex		Total	P-Value
	Male	Female		
Junior Secondary	56 (24.9%)	57 (25.3%)	113 (50.2%)	P < 0.000
Senior Secondary	51 (22.7%)	61 (27.1)	112 (49.8%)	
Total	107 (47.6%)	118 (52.4)	225 (100%)	

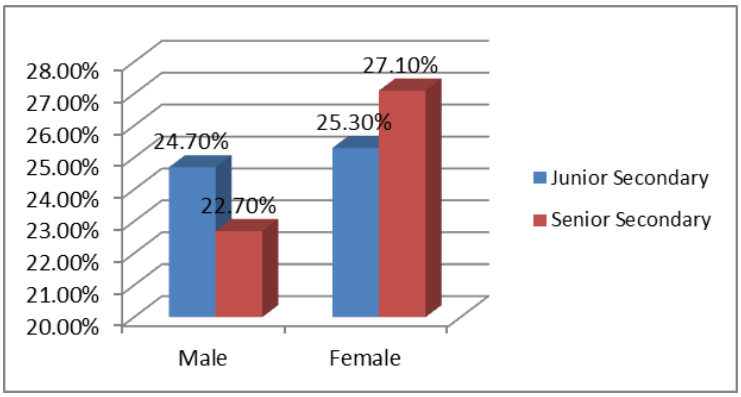


Figure 3: Level of Education by Sex

4.1.3 Respondents' Keepers

Table 4 and figure 4 shows that, 102 representing 45.3% were saying with both parents (17.8% male and 27.6% female), 50 respondents (22.2%) were staying with a mother (12.9% male and 9.3% female, 35 (15.6%) were staying with a father (10.2% male and 5.3% female), while 38 respondents, representing 16.9% were staying with other individuals. Of these, 6.7% were male and 10.2% were female. Thus, for both males and females, the majority indicated that they stayed with both parents at 45.3%. The analysis of chi-square test found that there was no significant relationship between the adolescents living with their parents by sex.

Table 4: Percentage of adolescents living with their parents by Sex

Current guardians	**Sex**		**Total**	P-Value
	Male	**Female**		
Both Parents	40 (17.8%)	62 (27.6%)	102 (45.3%)	P < 0.104
Mother	29 (12.9%)	21 (9.3%)	50 (22.2%)	
Father	23 (10.2%)	12 (5.3%)	35 (15.6%)	
Other	15 (6.7%)	23 (10.2%)	38 (16.9%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

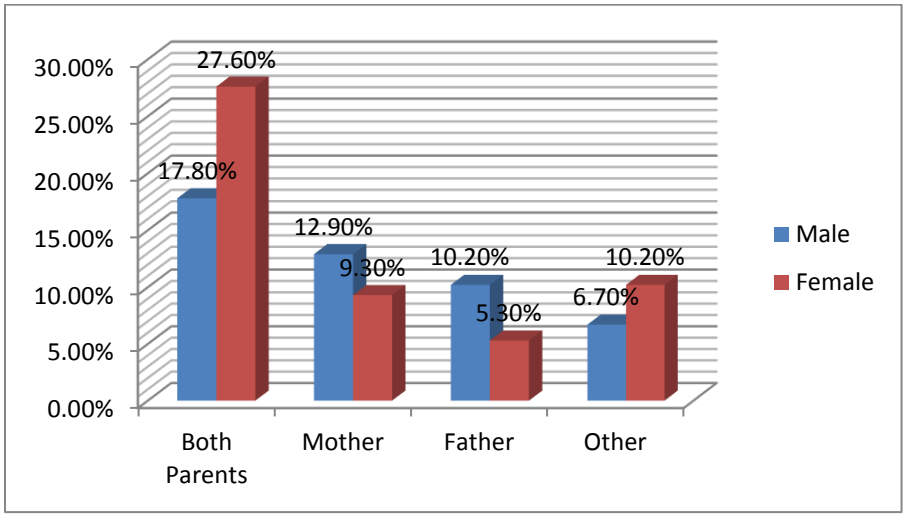


Figure 4: Percentage of adolescents living with their parents by Sex

4.1.4 Religious Affiliation of the Adolescents

Table 5 shows that, 84 representing 37.3% of the total of respondents were catholic (19.1% male and 18.2% female), 4 representing 1.8% were Anglican (0.0% male and 1.8%), 50 representing 22.2% were SDA (8.9% male and 13.3 female), 82 representing 36.4% of the total respondents (19.1% male and 17.3% female) were Pentecostal, and 5 representing 2.2% (0.4% male and 1.8% female) were Muslim. There was no significant relationship was found between the religions and sex of the respondents.

Table 5: Religious Affiliation by Sex

Religious denomination	**Sex**		**Total**	P-value
	Male	**Female**		
Catholic	43 (19.1%)	41 (18.2%)	84 (37.3%)	P < 0.418
Anglican	0 (0.0%)	4 (1.8%)	4 (1.8%)	
SDA	20 (8.9%)	30 (13.3%)	50 (22.2%)	
Pentecostal	43 (19.1%)	39 (17.3%)	82 (36.4%)	
Muslim	1 (0.4%)	4 (1.8%)	5 (2.2%)	
Total	107 (47.6%)	118 (52.4%)	225 (100)	

4.1.5 Frequency of attending religious services

Table 6 Shows that, when asked about how often the respondents attended religious services, they answered as follows: 3 males said they attended service every day representing 1.3% while females with the same response were 5 representing 2.2% of the total 8 at 3.5%. Interestingly, 97 males said they only attended service once a week representing 43.1% while females with the same response were 98 representing 43.6% of the total 195 at 86.7%. 6 males said they attended service once a month representing 2.7% while 12 females said they also attended service once a month representing 5.3% of the total 18 at 8%. Only 1 male said he attended service less often representing 0.4% while females attending service less often were only 3, representing 1.3%. Thus, most the respondents only attend service once a week representing 86.7%. A chi square test of

independence was performed to examine the relation between the frequency of attending religions services and sex of the respondents. The relationship between these two variables was found to be significant ($p < .05$)

Table 6: Distribution of respondent's responses on how often they attended religious services

Attending religious services	Sex		Total	P- value
	Male	Female		
Every day	3 (1.3%)	5 (2.2%)	8 (3.5%)	P < 0.030
Once a week	97 (43.1%)	98 (43.6%)	195 (86.7%)	
Once a month	6 (2.7%)	12 (5.3%)	18 (8.0%)	
Less often	1 (0.4%)	3 (1.3%)	4 (1.8)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

This section of findings covers general information on the research question such as; What is the level of sexuality among adolescents? What are factors associated with risky sexual behavior among adolescents? What is the perception of adolescents towards sexual behavior? What are reproductive health risks associated with sexual heavier among adolescents? What is the level of self – efficacy towards condom use among adolescents? In relation to specific objectives; To determine the level of sexual behaviour practice among adolescents. Determine the extent to which cultural norms, practice and religion influence onset of adolescent occurrence and sexual behaviours. Determine the perception of Sexual behaviour among Adolescents. To determine reproductive health risks associated with Sexual Behavioural practice among Adolescents. To determine the level of self – efficacy toward condom use among adolescentas shown in tables 7 to 24 not only depicting respondent per question but also indicating relationships between variables using a Chi-Square;

4.2 Sexual Risky Behaviors

Table 7 and figure 5, indicate that, the number of adolescents who had been sexually active and the number of sexual partners encountered by those that were sexually active. Of the 225 respondents, only 12 representing 5.2% (4.4% male and 0.9% female) had never had sex. The

remaining 213 representing 93% (43.2% male and 51% female) had experienced sex, showing that there were more females than males who were sexually active exhibiting higher sexuality levels. A chi square test of independence was performed to examine the relation between the number of sexual partners in the last three months and sex of the respondents. The relationship between these two variables was found to be significant ($p < .05$)1.3% males and 33.3% females (34.3% of respondents) said they had one sexual partner, 20% males and 16.8%% females (36.8 % of respondents) said they had two sexual partners, while 21.8% males and 1.3% females (23.1%) of respondents said they had more. Ultimately, most respondents had more than one sexual partner, with more males than females having encountered a higher number of sexual partners. This has been illustrated in the chart below.

Table 7: Number of sexual partners in the last 3 months by Sex

Number of sexual Partners had sex with during the last six months	SEX		Total	P-Value
	Male	Female		
None	10 (4.4%)	2 (0.9%)	12 (5.3%)	P < 0.026
One	3 (1.3%)	75 (33.3%)	78 (34.3%)	
Two	45 (20%)	38 (16.8%)	83 (36.8%)	
More than two	49 (21.8%)	3 (1.3%)	23.1 (2.7%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

Figure 5: Number of people had sex within the last 3 months

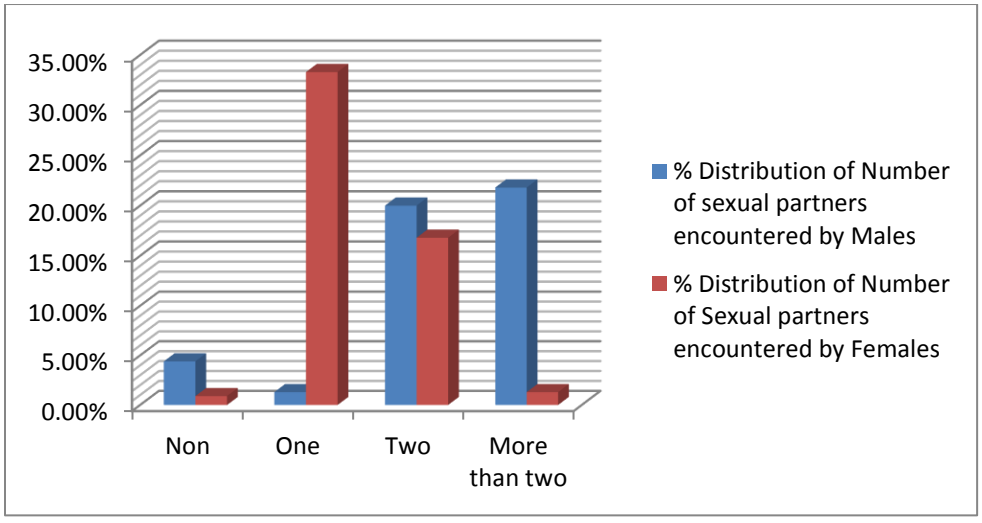


Figure 5: Number of people had sex within the last 3 months

4.2.2 Respondents' Age at first Sex

When asked about the age at which they had their first sexual experience

Table 8 shows, 6.5% males and 10.8% females (17.3% of respondents) gave no response on what age they first had sex. 14.6% males and 16.9% females (31.6% of respondents) said they had sex before 16 years, while 23% males and 18.7% females (41.8%) of respondents said they had sex between 16 and 19 years. 3.7% males and 6.1% females (9.8% of respondents) said they had sex after 19 years. Thus, majority of the youths had sex after the age of 16, before the age of 19. A chi square test of independence was performed to examine the relation between the age at first sex of the respondents by sex. The relationship between these two variables was found to be highly significant ($p < .008$)

Table 8: Percentage of Respondents' Age at First Sex

Age first had sex	Sex		Total	P-Value
	Male	Female		
No response	14 (6.5%)	23 (10.8%)	37 (17.3%)	P < 0.008
<16	31 (14.6%)	36 (16.9%)	67 (31.5%)	
16-19	49 (23.0 %)	40 (18.8%)	89 (41.8%)	
19+	8 (3.7%)	13 (6.1 %)	21 (9.8%)	
Total	97 (47.6%)	112 (52.4%)	213 (100%)	

4.2.4 Frequency of Condom use at last Sex

Figure 6 shows that, respondents who had, experienced sex were asked how often they used protection (a condom), only 58 of the 213 experienced respondents said they had used a condom, representing 27.2% of respondents (14% male and 13.1% female), 139 representing 65.1% used them sometimes (inconsistently), of which 28% were male and 27% were female, while 12 representing 5.5% (3.3% male and 2.3% female) had never used condoms.

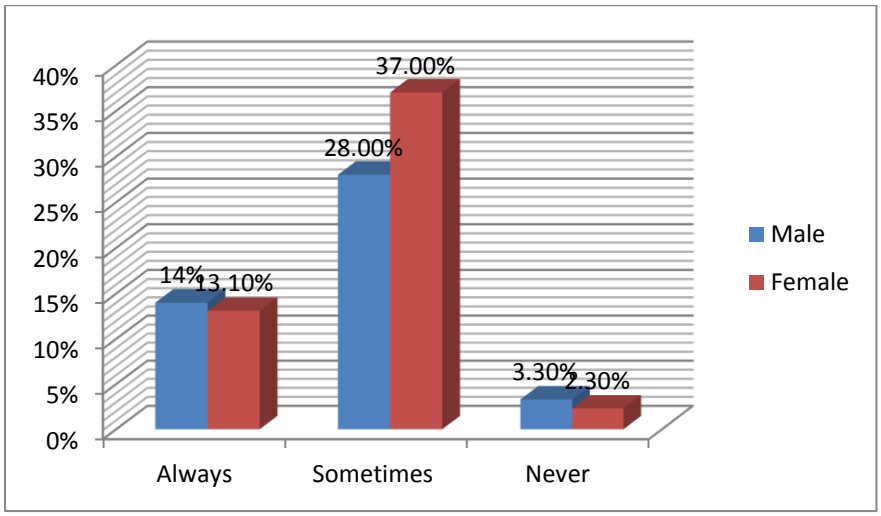


Figure 6: Frequency of Condom use at last Sex

4.2.5 Condom use at first Sex

Figure 7 shows that, respondents who had, experienced sex were asked whether they used protection (a condom), at first sexual experience, only 32 of the 213 experienced respondents said they had used a condom, representing 15% (9.4% males and 5.6% females) while 177 representing 83% (52.4% females and 47.6% males) did not.

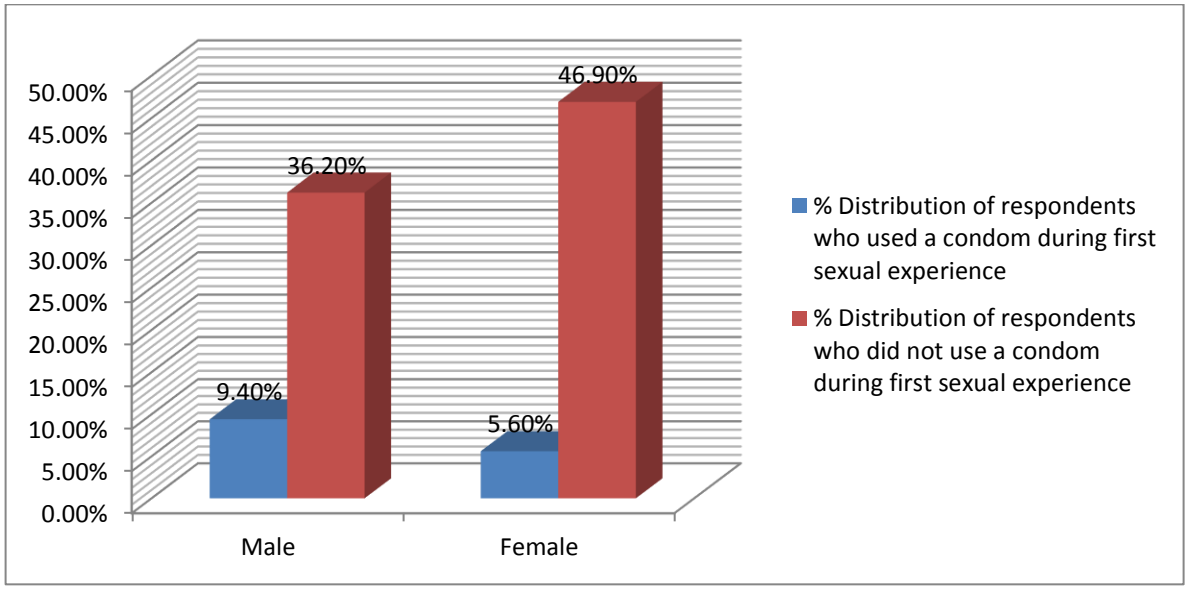


Figure 7: Condom use at first Sex

4.2.5 Concerning the preferred method of birth control.

When asked, what could be the reason for not using a method of contraception to avoid pregnancy, the responses were as follows

Table 9 shows, 2.3% of respondents were combining a condom and other methods (0.9% male and 1.4% female), 20.1% were using condoms only (7.7% male and 12.2% female), 2.8% were on the pill (1.4% males had partners on the pill and 1.4% females) were on the pill, none of the respondents were sterilised, 5.6% were not on any birth control (3.3% male and 2.3% female), 59.6% said they were using withdrawal (27.2% male and 32.4% female), and 8% were using the traditional method (5.2% male and 2.8% female). A chi square test of independence was performed to examine the relationship between contraceptive use by sex of the respondents. The relationship between these two variables was found to be highly significant ($p < .05$)

Table 9: Contraceptive use by sex

Which method(s) of Family planning are you using	Sex		Total	P-value
	Male	Female		
Combination of condom with other	2 (0.9%)	3 (1.4%)	5 (2.3%)	P < 0.05
Condoms	17 (7.9%)	26 (12.2%)	43 (20.1%)	
Pill	0 (1.4%)	3 (1.4%)	6 (2.8%)	
Male/Female Sterilization	0 (0.0%)	0 (0%)	0 (0%)	
None	7 (3.3%)	5 (2.3%)	12 (5.6%)	
Withdrawal	58 (27.2%)	69 (32.4%)	127(59.6%)	
Traditional	11 (5.2%)	6 (2.8%)	17 (8%)	

4.2.6 Reasons for not using contraceptives

Table 10 shows, 3 (1.3%) males and 1 (0.4%) female did not respond, while 13 males representing 5.7% and 14 females representing 6.2% said it was because partners were not for the idea. 4 males (1.8%) and 4 females (3.1% believed avoidance was due to side effects while 87 males (38.7%) and 96 females (42.7%) believed contraception reduced enjoyment of sex. The analysis of chi-

square analysis found that there was no significant relationship between the reasons for not using contraceptives and sex of the respondents.

Table 10: Reasons for not using contraceptives

Reasons for not using contraceptives	Sex		Total	P- Value
	Male	Female		
No reason	3 (1.3%)	1 (0.4%)	4 (1.8%)	P < 0.860
Partner does not want	13 (5.7%)	14 (6.2%)	27 (12.0%)	
Has side effects	4 (1.8%)	7 (3.1%)	11 (4.9%)	
Cannot enjoy sex	87 (38.7%)	96 (42.7%)	183 (81.3%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.7 Attitude towards pregnancy

When respondents were asked if they thought it was not possible to conceive at first sexual experience.

Table shows, 11 representing 4.9% (1.8% male and 3.1% female) believed that, one could fall pregnant during first sexual experience while 214 representing 95.1% (45.8% male and 49.3% female) were not. Ironically, statistics were the same for beliefs on getting HIV at first sexual experience. The analysis of chi-square analysis found that there was no significant relationship between the respondents who believe that it is important to use birth control to prevent pregnancy and sex of the respondents.

Table 11: Percentage who thinks that it is possible to fall pregnancy during first sex

	Sex		Total	P- Value
	Male	Female		
No	4 (1.8%)	7 (3.1%)	11 (4.9%)	P < 0.715
Yes	103 (45.8%)	111 (49.3%)	214 (95.1%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.8 Attitude towards pregnancy

When asked whether the respondents thought it is important to use birth control.

Table 12, 94 (41.8%) males and 96 (42.6%) females did not think birth control was important while 13 males (5.8%) and 22 females (9.8%) thought it was. A chi square test of independence was performed to examine the relationship between the respondents who believe that it is important to use birth control to prevent pregnancy and sex. The relation between these two variables was not significant.

Table 12: Percentage who believe that it is important to use birth control to prevent pregnancy

	Sex		Total	P- Value
	Male	Female		
No	94 (41.8%)	96 (42.6%)	190 (84.4%)	P < 0.569
Yes	13 (5.8%)	22 (9.8%)	35 (15.6%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.9 Attitude towards abstinence

All respondents were asked whether they think abstinence is a problem.

Table 13 show, about 24 males representing 10.7% said they did not think abstinence is a problem while 20 females had the same response, representing 8.9% of the total 44 (19.6%). 83 males said they thought abstinence is a problem while 98 females had the same response, representing 43.6% of the total 181 (80.4%). A chi square test of independence was performed to examine the relationship between the respondents' responses on whether they think abstinence is a problem and sex of the respondent. The relation between these two variables was found to be significant (P <. 029).

Table 13: Distribution of respondents' responses on whether they think abstinence is a problem.

	Sex		Total	P- value
	Male	Female		
No	24 (10.7%)	20 (8.9%)	44 (19.6%)	P < 0.029
Yes	83 (36.9%)	98 (43.6%)	181 (80.4%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.9.1 Perception towards abstinence

When asked whether the respondents thought that long-term abstinence leads to physical problems or infertility.

Table 14 shows that: 3 males representing 1.3% said no while 7 females representing 3.1% had the same response of the total 10 (4.4%). 104 males said yes while 111 females representing 49.3% of the total 215(95.6%) had the same response. The analysis of chi-square analysis found no significant association between the adolescents who believe that abstinence leaders to physical problems and infertility.

Table 14: Percentage of adolescent's Perception towards abstinence's association with physical problems or infertility

	Sex		Total	P- Value
	Male	Female		
No	3 (1.3%)	7 (3.1%)	10 (4.4%)	P < 0.573
Yes	104 (46.2%)	111 (49.3%)	215 (95.6%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.6 Sexually Transmitted Disease

Adolescents were further asked if any of them had contracted STIs in the last three months.

Table 15 shows that the majority 97.3% had not contracted any STIs in the last 3 months. However, the calculations showed a distribution of 2.5% females compared to 0.4% males this demonstrates that that females are at high risk of contracting affections than males. A chi square test of independence was performed to examine the relationship between the respondents who had STD by sex of the respondent, the relationship between these two variables was found to be significant (P <. 036).

Table 15: Percentage of respondents who had STDs

Ever had STDs	Sex		Total	P- Value
	Male	Female		
No	106 (47.1%)	113 (50.2%)	219 (97.3%)	P < 0.036
Yes	1 (0.4%)	5 (2.2%)	6 (2.7%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.10 Attitude towards sexual Behaviour

Table 16 shows, no males and only 1.3% females (1.3% of respondents) were not confident that they can avoid having sex if they did not want to have sexual intercourse while 47.6% males and 51.1% females (98.7% of respondents) were confident that they could avoid having sex if they did not want to have sexual intercourse. The chi-square analysis found that no significant relationship between the two variables. About 47.6% males and 54.2% females said they would not refuse to have sex with a person whom they had known for a few days and surprisingly, the same percentage of males and females equally said they would refuse. 19.1% males and 15.1% females said they would not refuse to have sex with a person whom they had known for three months while 28.4% males and 37.3% females said they would refuse. A chi square test of independence was performed to examine the relation between the variable with sex of the respondent and the relationship between these two variables was found to be ($p < .017$). The data further indicate that about 16.9% males and 15.1% females said they would not refuse to have sex with a person who offered them gifts, while 30.7% males and 32% females said they would refuse. The chi-square test showed no significant relationship between these two variables. About 4.9% males and 9.8% females said they would refuse to have sex with a person who had power over them, while 42.7% males and 42.7% females said they would not refuse. The analysis of chi-square of independence showed significant association between these two variables (P<.032).

Table 16: Reasons of sex preference in relation to sex characteristics of adolescents.

Reasons for sex preference	responses	Sex		Total	P- value
		Male	Female		
Confident of sexual avoidance	No	0 (0.0%)	3 (1.3%)	3 (1.3%)	P < 0.545
	Yes	107 (47.6%)	115 (51.1%)	222 (98.7%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Denial of sex with familiar person	No	43 (19.1%)	34 (15.1%)	77 (34.2%)	P < 0.017
	Yes	64 (28.4%)	84 (37.3%)	148 (65.8%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Exchange of sex with gifts	No	38 (16.9%)	46 (20.4%)	84 (37.3%)	P < 0.326
	Yes	69 (30.7%)	72 (32.0%)	141 (62.7%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Sex with care giver	No	99 (44.0%)	110 (48.9%)	209 (92.9%)	P < 0.236
	Yes	8 (3.6%)	8 (3.6%)	16 (7.1)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Sex with school sponsor/ provider	No	84 (37.3%)	96 (42.7%)	180 (80.0%)	P < 0.607
	Yes	23 (10.2%)	22 (9.8%)	45 (20.0%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Sex with school teacher/employer	No	11 (4.9%)	22 (9.8%)	33 (14.7%)	P < 0.032
	Yes	96 (42.7%)	96 (42.7%)	192 (85.3%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.10 Communication of sexual issues with others

When respondents were asked whether they had discussed sex, avoiding and delaying sex, avoiding pregnancy and avoiding HIV/AIDS/STIs by using condoms with their partner

Table 17 shows, 4.4% males and 9.3% females (13.5% of respondents) said they hadn't discussed sex with their partners while 43.1% males and 43.1% females (86.2% of respondents) said they

had. The analysis of chi-square of independence showed significant association between these two variables (P<.019). About 4% males and 8.9% females (12.9% of respondents) said they had not discussed avoiding and delaying sex, while 43.6% males and 43.6% (87.1% of respondents) females said they had. A chi-square test of independence was performed to examine the relationship between these two variables and these variables was found to be significant (P <. 028). The data further showed that that majority of the couples talked about avoiding sex. 4.4% males and 8.4% females (12.9% of respondents) said they hadn't discussed avoiding pregnancy with their partners while 43.1% males and 44% females (87.1% of respondents) said they had. The analysis of chi-square showed there was no significant relationship between these two variables. Furthermore, about 6.7% males and 8% females (14.7% of respondents) said they had not discussed avoiding HI/AIDS/STIs using a condom, while 40.9% males and 44.4% females (85.3% of respondents) said they had. A chi-square test of independence was performed to examine the relationship between these two variables and the result was found to be highly significant (P < .002).

Table 17: Percentage of respondents who have ever talked or discussed any of these issues with their partner, by sex

Discussed the following issues with others	Responses	Sex		Total	P- value
		Male	Female		
About sex	No	10 (4.4%)	21 (9.3%)	31 (13.8%)	P < 0.019
	Yes	97 (43.1%)	97 (43.1%)	194 (86.2%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Avoiding and delaying sex	No	9 (4.0%)	20 (8.9%)	29 (12.9%)	P < 0.028
	Yes	98 (43.6%)	98 (43.6%)	196 (87.1%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Avoiding pregnancy	No	10 (4.4%)	19 (8.4%)	29 (12.9%)	P < 0.545
	Yes	97 (43.1%)	99 (44.0%)	196 (87.1%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Avoid HIV/AIDS/STIs using condoms	No	15 (6.7%)	18 (8.0%)	33 (14.7%)	P < 0.002
	Yes	92 (40.9%)	100 (44.4%)	192 (85.3%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.11 Self-Efficacy on condom use.

When asked what, they would do in different circumstances.

Table 18 shows, 47.6% males and 56.4% females thought that they could talk to every partner about the importance of using condoms even those that they had sex with before while 47.6%males and 52.6% females thought otherwise. 12.4% males and 16.4% females did not think that they could insist on using a condom with every partner that you are interested in while 35.6% males and 36% females thought that they could.

12.9% males and 15.1% females were not confident that they could suggest using a condom without making their partner feel uncomfortable while 34.7% males and 37.3% females were confident that they could suggest using a condom without making their partner feel uncomfortable. 16% males and 18.7% females thought that they could not suggest using a condom with their partner even if she/he would reject them while 34.7% males and 37.3% females felt that they could. 0.9% males and 32.9% females were not confident that they could protect themselves from any kind of sex while 46.7% males and 19.6% females were confident that they could protect themselves. 6.7% males and 32.9% females were not confident that they could completely protect themselves from getting HIV/AIDS while 40.9% males and 19.6% females were confident that they could completely protect themselves from getting HIV/AIDS.

Table 18: Self efficacy on condom use by sex characteristics and sex.

Characteristics	Responses	Sex		Total	P- value
		Male	Female		
Can insist on using a condom with every partner that you are interested in having sex with	No	28 (12.4%)	37 (16.4%)	65 (28.9%)	P < 0.490
	Yes	79 (35.1%)	81 (36.0%)	160 (71.1%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Confident that you could suggest using a condom without making your partner feel uncomfortable	No	29 (12.9%)	34 (15.1%))	63 (28.0%)	P < 0.402
	Yes	78 (34.7%)	84 (37.3%)	162 (72.0%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Suggest using a condom to a partner even if she/he would reject you	No	36 (16.0%)	42 (18.7%)	78 (34.7%)	P < 0.315
	Yes	71 (31.6%)	76 (33.8%)	147 (65.3%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Confident that to protect myself from any kind of sex	No	2 (0.9%)	74 (32.9%)	76 (33.8%)	P < 0.142
	Yes	105 (46.7%)	44 (19.6%)	149 (62.2%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Confident that you can completely protect yourself from unwanted pregnancy	No	2 (0.9%)	100 (44.4%)	102 (45.3%)	P < 0.274
	Yes	105 (46.7%)	18 (8.0%)	123 (54.7%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	
Confident that you can completely protect yourself from getting HIV/AIDS	No	15 (6.7%)	74 (32.9%)	89 (39.6%)	P < 0.039
	Yes	92 (40.9%)	44 (19.6%)	136 (60.4%)	
	Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.2.11 Reasons for having sex

When respondents who had indulged in sexual activity were asked for the main reasons for their first indulgence,

Table 19 shows, 71 respondents of the 97 that admitted to having had sex before (33.3%) were encouraged by friends (peer pressure). Of these, 18.7% were male while 14.6% were female. 16 (7.0%) males and 16 (7.5%) females totalling 14.5% of respondents said it was influenced by viewing of pornographic material while 4 males (1.9%) and 12 females (5.6%) adding to 5.5% said they first had sex as an exchange for goods and or services. Additionally, no males (0%) and 10 females (4.7%) totalling to 4.7% said they had sex for the first time after experimenting with touching while 2 males (0.9%) and 9 females (4.2%) adding up to 7.1%, said their first sexual experience was because of coercion while 7 males (3.3%) and 8 females (3.8%) adding to a total of 7.1% said they were intoxicated. The results presented indicate that, most respondents (33.33%)

indulged in sexual activity due to peer pressure, with more males experiencing this. More females than males however indulged in sexual activity for the first time due to other reasons such viewing of pornographic material, for goods or services, curiosity, accidental indulgence after experimenting with touching, coercion, and intoxication. When respondents were asked why adolescents would continue to indulgence in sexual activity after first sexual experience, 70 representing 32.9% (8.5% male and 24.4%female) said one of the reasons was to prevent their spouse from cheating, 110 respondents representing 51.7% (14.1% male and 37.6% female) said the reason was for pleasure, 62 respondents representing 29% (7% male and 22% female) said they indulged as an exchange for goods and or services, 80 respondents representing 37.6% (28.2% male and 9.4% female) continued to have sex due because of failure to control their emotions after being exposed to compromising environment, 95 respondents, representing 44.6% (30% male and 14.6% female) attributed their continued indulgence in sexual activity to peer pressure, while 55 respondents representing 26.1% (23.8% males and 2.3% females said they had continued having sex as a result of intoxication.

Table 19: Percentage of youths you reported reasons for engaging sex by sex

Reasons	Sex		Total	P- value
	Male	Female		
Peer pressure	40 (18.7%)	31 (14.6%)	71(33.33%)	P < 0.005
Media (Pornography)	15 (7.0%)	16 (7.5%)	31 (14.5%)	
Sex worker	4 (1.9%)	12 (5.6%)	16 (7.5%)	
Curiosity	2 (13.6%)	30 (14.1%)	32 (27.7%)	
Accident after experimenting with touching	0	10 (4.7%)	10 (4.7%)	
Coercion	2 (0.9%)	9 (4.2%)	11(5.1%)	
Intoxication such alcohol or drugs	7 (3.3%)	8 (3.8%)	15 (7.1%)	
Total	97 (45.5%)	116 (54.5%)	213 (100%)	

4.3. Alcohol and Drug Abuse

When asked whether they had ever taken alcohol,

Table 20 shows that, 55 representing 24.4% (13.3 male and 11.1% female) had not taken alcohol while 170 representing 75.6% (47.6% male and 52.4% female). Thus, there were more females who drank alcohol, with the number being 93%.

Table 20: Distribution of respondents' responses on whether they have ever taken alcohol in relation to sex.

Ever drunk alcohol	Sex		Total	P- value
	Male	Female		
No	30 (13.3%)	25 (11.1%)	55 (24.4%)	P < 0.039
Yes	77 (34.2%)	93 (41.3%)	170 (75.6%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.3.1 Negative influence of alcohol and drug abuse

When asked whether they had they thought that alcohol had a negative effect on an individual's ability to protect themselves from HIV and pregnancy during intercourse

Table 21 shows that, 76.4% of respondents (37.3% male and 39.6% female) said alcohol influences sex indulgence and 22.2% (10.2% male and 12% female) believed said alcohol did not influences sex indulgence. Therefore, many respondents felt alcohol was a determinant of attitudes toward protection from HIV and pregnancy.

Table 21: Percentage of adolescents who thought alcohol influence had a negative effect on adolescent practices of protection from HIV and pregnancy

	Sex		Total	P- value
	Male	Female		
No	23 (10.2%)	27 (12%)	50 (22.2%)	P < 0.214
Yes	84 (37.3%)	89 (39.6%)	173 (76.9%)	
Total	107 (47.6%)	118 (52.4%)	225 (100%)	

4.3.1 Frequency of using alcohol

Figure 8 shows that, 4.4% (1.8 male and 2.7% female) took alcohol every day, 21 representing 9.3% (5.3% male and 4.0% female), 21 representing 9.3% (5.3% male and 4.0%), 38 representing 16.9% (8.9 male and 8.0% female), 101 representing 44.9% (18.2% male and 6.7% female), 55 representing 24.4% (13.3% male and 11.1% female) didn't respond.

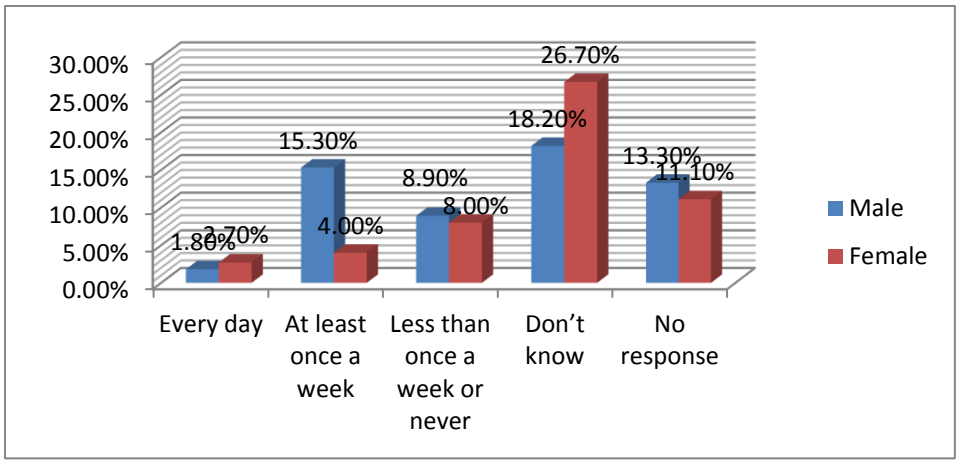


Figure 8. Frequency of consuming alcohol

4.4.1 Parental involvement

Figure 9 shows that, 197 respondents representing 87.5% (41% male and 46.2% female) had not discussed pregnancy with their parents while 12.4% (6.4% male and 6.2% female) had. Therefore, there were more respondents who had not discussed pregnancy with their parents than those who had an equal number of females and males who had discussed pregnancy with their parents.

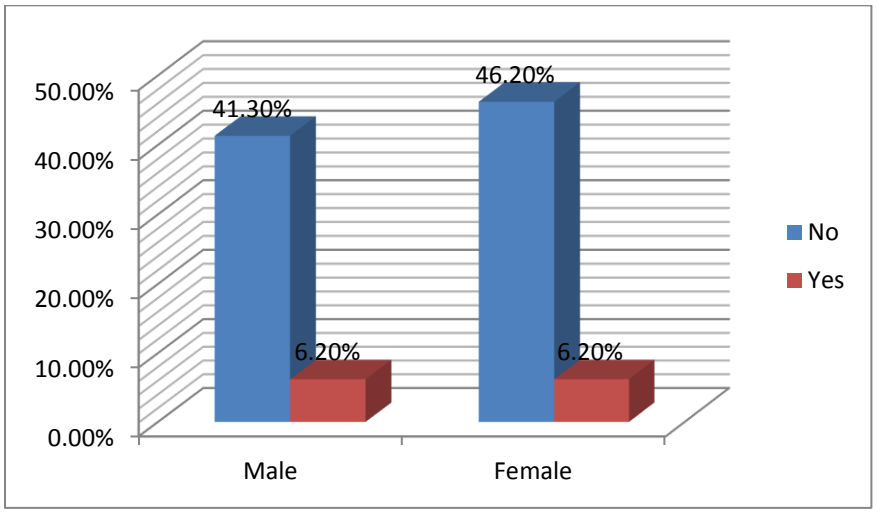


Figure 9: Parental involvement in discussing HIV pregnancy prevention

4.5.1 Opinion about parental care and support

When asked whether the respondents thought that their parents or guardians cared about them Figure 10 shows that: 101 males representing 44.9% said very much with 110 females having the same response, representing 48.9% of the total 211 (93.8%). 2 males representing 0.9% said somewhat while only 1 female had the same answer, representing 0.4% of the total 3 (1.3%). 2 males representing 0.9% said quite a bit while only female had the same response, representing 0.4% of the total 3 (1.3%). No male said very little while 2 females said very little, representing 0.9% of the total 2. 2 males representing 0.9% said not at all while 4 females had the same response, representing 1.8% of the total 6 (2.7%)

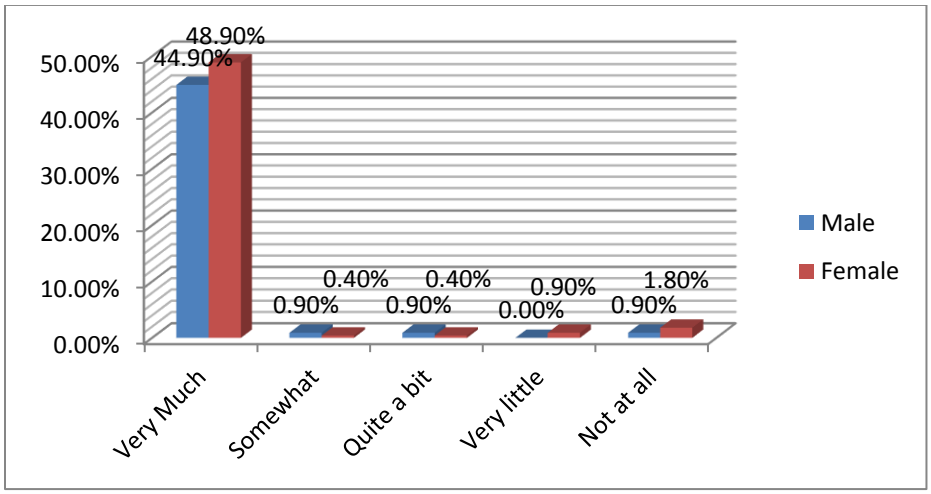


Figure 10: Parental Opinion on Adolescents health

4.6.1. Opinion about parental care and support

When asked whether their father, mother or guardian was warm and loving towards them most of the time.

Figure 11 shows that, the respondents' views were: 95 males representing 42.2% said very much while 103 females had the same response, representing 47.8% of the total 198 (88.8%). 5 males said somewhat, representing 5.2% while 4 females representing 1.8% had the same response of the total 9 (4%). The same number of males and females said quite a bit with both having 2 at 0.9% of the total 6 (2.6%). Again, the same number of males and females said very little with both having 3 at 1.3% of the total 6 (2.6%). 2 males said not at all representing 0.9% and 6 females had the same response, representing 2.7% of the total 8 (3.6%).

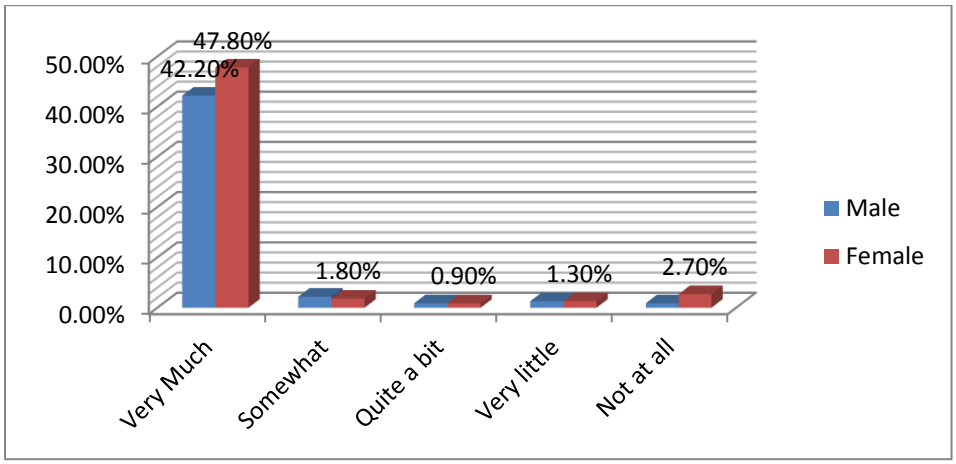


Figure 11: Parental Care

4.5. Factors Affecting Sexual Behaviour

Table 22 shows , various factors affecting sexual behaviour, cross tabulations were used to examine the relationship between the numbers of partners had sex with socio-economic, variables. For the statistical analysis, chi-square tests of independence were conducted at the bivariate level, and the differences were determined at $P < 0.05$ and $P < 0.01$ significance levels. Secondly, factors influencing number of partners having sex were analysed using logistic regression analysis. The result of the logistic regression models was converted into odds ratios, which represented the effect of a one-unit change in the explanatory variable on the indicator of having sexual behaviour.

Overall, about 18% of the respondents had one partner. The results show that males (22.4%) were more likely to have one sexual partner as compared to their female counterparts (14.4%). Regarding educational level, those with junior secondary education (27.4%) were more likely than those with senior secondary education to have one sexual partner. Moreover, respondents who did not drink alcohol were more likely to have one partner as compared to those who drank alcohol (drink; 15.3%, do not drink; 27.3%). Respondents who have discussed HIV prevention with someone were more likely 29.2% to have one partner in comparison with partners who had not discussed HIV with someone 15.3%.

About 81.8% of the respondents had two or more partners. The results show that females (85.6%) were more likely to report having two or more partners as compared to their male counterparts (77.6%). Regarding educational level, those with senior secondary education (91.1%) were more likely than those with junior secondary education (72.6%) to have two or more partners. Moreover, Respondents who drank alcohol were more likely to have two or more partners as compared to those who did not drink alcohol (drink; 84.7%, do not drink; 72.7%).

Table 22: Sexual Behaviour in relation to demographic social economic variables.

Characteristics	**One partner**	**Two or more partners**	**N**
Sex			
Male	22.4*	77.6*	107
Female	14.4	85.6	118
Age			
<16	17.9	82.1	123
16-19	20.7	79.3	58
19+	15.9	84.1	44
Educational level			
Junior Secondary	27.4**	72.6**	113
Senior Secondary	8.9	91.1	112
Religion			
Pentecostal	23.9	76.1	88
SDA	12.0	88.0	50
Catholic	16.1	83.9	88
Drinks alcohol			
No	27.3**	72.7*	55
Yes	15.3	84.7	170
Have discussed HIV prevention with someone			
No	15.3*	84.7	177
Yes	29.2	70.8	48
	18.2	81.8	225

*** Significant at P < 0.01; ** Significant at P < 0.05 * Significance at P> 0.05.

Table 23 shows ,the results of the logistic regression show that education level, religion, drinking alcohol and having an HIV discussion with someone where strong predictors of having two or more partners among the respondents. Moreover, logistic regression analysis revealed that education was another strong determinant of having one sexual partner among the respondents. Respondents in senior secondary were 4.7 times more likely to have two or more partners as compared to their junior secondary counterparts. Furthermore, respondents from catholic were negatively associated with the likelihood of having two or more partners. Drinking alcohol was

among the strong predictors of having two or more partners among the respondents. Those who drank alcohol were 2.2 times more likely to report having two or more partners as compared to those who did not drink. Having discussed HIV with someone was among the significant factors that influenced respondents' likelihood of having two or more partners. Those who had discussed HIV with someone were 3.2 times more likely to report having two or more partners as compared to those who did not have an HIV discussion with someone.

Table 23: Logistic Regression Analysis data of socio-economic and demographic variables on youths who reported having had sex with two or more sexual partners

Variables	**Beta (β)**	**Standard Error (SE)**	**Exp (β)**	**Significant level (P)**
Sex				
Male				
Female	0.3116	0.3840	1.3656	0.4171
Age				
<16				
16-19	-0.4715	0.4535		
19+	0.3900	0.5690	0.6241	0.2985
Educational level				
Junior Secondary				
Senior Secondary	1.5487	0.4307	4.7055	0.0003
Religion				
Pentecostal				
SDA	-0.7392	0.5352	0.4775	0.1673
Catholic	-0.7897	0.4421	0.4540	0.0740
Drinks alcohol				
No				
Yes	0.7198	0.4424	2.2027	0.0230
Have discussed HIV prevention with someone				
No				
Yes	0.1536	0.4954	3.1997	0.0032

CHAPTER 5: DISCUSSION OF FINDINGS AND RECOMMEDATIONS

This chapter discusses findings of the research factors associated with sexual behaviour among adolescents so as, it first sought to determine whether adolescents in Chipata District were involved in sexual activity, the factors behind this involvement, as well as the knowledge, attitudes and practices of these adolescents towards prevention of pregnancy, HIV, and STIs/ STDs.

5.1 Adolescents Indulgence and in Sexual Activity

In determining whether adolescents were involved in sexual activities, the research findings showed overwhelming involvement of adolescents in sexual activity (93%). There was also a higher percentage of females involved in sexual activity than males, with a small marginal difference. Additionally, most adolescents (40.9%) said they had sex between ages 16 and 19 showing which is in the literature. The ZDHS (2000) for example reported that 56% of women aged between 15 and 24 years had sex before the age of 18 years while 51% of men between 15-24 years had sex before age of 18 years.

Of greater concern, however, is the high proportion of respondents who had sex before the age of 16, like the findings by (WHO, 2015), which could have placed them at greater risk of infection due to their increased levels of vulnerability stemming from the fact that they still had to develop psychologically. Additionally, sexual intercourse at that age is tantamount to defilement, calling for urgent intervention. Early sexual debut (before 15 years of age) provides more opportunities over time for adolescents to be exposed to HIV, especially where higher risk partners or multiple partners are involved, and condom use is less likely. The lack of awareness and other social pressures and power imbalances can also conspire to put the health of adolescents at risk (UNAIDS 2012). In the report by WHO (2015, adolescent girls, aged 15–19 years, in sub- Saharan Africa, were more likely than boys to have sex before the age of 15 years. In West and Central Africa, 16% of girls had sex before the age of 15 years compared with 7% of boys, and in South Asia, 8% and 3% of girls and boys, respectively, had sex before the age of 15 years. This was like what was found in this research where 16% girls compared to 14.7% boys said they had sex before the age of 16.

5.2 level of knowledge and perception of adolescents towards reproductive health

The research findings on knowledge levels were coincided with what was found during the literature review. Levels of knowledge were indeed very poor among adolescents in Chipata district. While all respondents knew how HIV could be acquired as well as pregnancy, over 90% were not aware they could they could find themselves in these circumstances after the first sexual encounter, which was almost twice the percentage reported by Oyedian et al. (2002) More grievously, this same proportion of adolescents did not know that one could get HIV at first sexual experience which could explain the high statistics of HIV and early pregnancy among respondents as observed in their responses regarding whether they had either fallen pregnant or acquired an STI. Additionally, over 50 per cent of respondents, most of who were boys believed abstinence could lead to fertility problems.

Attitudes and practices towards use of protection from HIV and pregnancy were also very poor. As a matter of fact, of the 93% that said they had been sexually active, none used a condom at first sexual experience. Additionally, the research found that respondents did not only have more than one sexual partner, a good proportion had been involved in multiple sexual partnerships. This was common especially for boys. Adolescents in Chipata District were therefore highly at risk of contracting HIV or falling pregnant, considering the poor condom use practices. This was like the findings by UNAIDS, (2013).

Another worrying issue on many studies done was on HIV testing. Most adolescents did not know their HIV status or that of their partners. Although most adolescents knew of a place where they could get tested, few of adolescents who were sexually active had been for an HIV test with their sexual partners before intercourse, (Strove, 2000).

Not only this, contraception was poorly practiced, with a large percentage not on any form of birth control, while over 70% were using unreliable methods such as withdrawal, and traditional. Once again, findings were not very different from earlier researches described in the literature review such as the ZDHS (2000).

5.3 Risky sexual behaviour associated with HIV/AIDS and level of self – efficacy towards condom use among adolescents

In trying to assess risky sexual Behaviour associated with HIV/AIDS among adolescents, the research tried to understand factors that led to the first sexual experience, factors that led to continuation of sexual activity, as well as factors that could have been associated with failure to prevent HIV and pregnancy. With this regard, the research took two approaches: understanding based on the perceptions of the respondents and through statistical testing.

Regarding the factors associated with adolescent indulgence in sexual activity, the research found that initiation into sexual activity was a major factor, with 33.3% of respondents giving it as a reason. This was followed by Curiosity (27.7%), a need for goods and services (5.6%), intoxication (7.1%), coercion, and finally accidental indulgence after experimenting with touching (4.7%).

This implies that external social environment was a significant determinant of sexual behaviour: indulging in sex and attitudes towards HIV and pregnancy prevention, as was the case. Not only this, one's economic status was also a determinant of one's sexual behaviour. In exchange for goods and services, girls especially would engage in sexual activity, most often without protecting themselves. Additionally, there was poor knowledge on HIV prevention and pregnancy prevention, particularly, the fact that one can fall in either of these circumstances at first sexual experience (as indicated in the previous section). This also determined whether adolescents indulged in sexual activity. Most adolescents did not know that it was possible to get HIV or fall pregnant at first sexual encounter and therefore were likely not only to engage in sexual activity, but also not to protect themselves during the process.

When it comes to knowledge of HIV/AIDS amongst Adolescents; most new HIV infections are transmitted through sex. A basic understanding of HIV and how its spreads is a necessary component of prevention, although this is not enough to change behavior and reduce risk. Despite consistent calls for improving knowledge, in general, levels of knowledge of HIV among adolescents and young adults are appallingly low, especially in the worst affected countries. Recent surveys in countries with generalized epidemics show that, in most of these countries, less than

half of adolescent boys and girls, aged 15–19 years, have a basic understanding of HIV. This falls far short of the 95% target agreed in 2001 at the UNGASS. Consistent with the higher rates of HIV among girls in the most affected regions, girls tend to have worse knowledge levels than boys of the same age. In sub-Saharan Africa, only 26% of adolescent girls aged 15–19 years and 36% of adolescent boys of the same age have a comprehensive and correct knowledge of HIV.1 Disparities in knowledge about HIV prevention among adolescent girls and boys are linked to gender, education, household wealth, and place of residence, (UNICEF 2012).

There were very few variations regarding the reasons why adolescents continued to indulge in sex after the first sexual experience. New ideas such as trying to keep a partner faithful, for enjoyment and failure to control sexual desires were brought out. While these were more internal, intervention would also require efforts to change mind-sets induced by society.

Further, the research sought to find out reasons why adolescents were not using condoms. The highest number of male respondents with this regard said sex was not enjoyable with protection, which was like most responses from the females. For females, though, a larger percentage attributed lack of condom uses to refusal of partners to use condoms showing a trend in low bargaining power for condom use by females.

Regarding factors associated with poor contraceptive use, side effects were a main reason in addition to factors such as lack of enjoyment attributed to condoms. Other respondents did not answer which could be assumed that they were unconcerned about contraception or uncomfortable discussing the topic.

Other determinants found based on logistic regression were sex, education level, religion and having an HIV discussion with someone were strong determinants of having one partner among the respondents. Logistic regression analysis reported that age predicted strong likelihood of having one sexual partner. Respondents who were 19 years were negatively associated with likelihood of having one partner. Religion and Education however were disqualified as determinants in the statistical analysis. For Religion, catholic was negatively associated with the likelihood of having one partner among the respondents. Moreover, senior secondary education

was negatively associated with strong likelihood of having one sexual partner among the respondents.

The psychological disposition of an individual such as whether they were intoxicated also determined sexual behaviour. 7.1% of individuals said they indulged in sex because of intoxication. This was also cited as a reason for respondents indulging in unprotected sex, with 76.6 % of respondents believing alcohol had a negative effect on an individual's attitude to protect themselves from HIV and pregnancy during intercourse. Contrary to this, drinking was found as some strong predictors of having one sexual partner among the respondents as revealed in the statistical tests among the respondents. Those who drank alcohol were 1.5 times more likely to report having one partner as compared to those who did not drink. This has been disputed in the findings by WHO (2005). Additionally, having discussed HIV with someone was among the significant factors that influenced respondents' likelihood of having one partner. Those who had discussed HIV with someone were 3.2 times more likely to report having one partner as compared to those who did not have such a discussion with someone.

5.4 Conclusion

Findings of this research highlight that, levels of sexual activity among adolescents in Chipata District were very high. It also found that external factors such as social and environmental factors were significant determinants of sexual behaviour: indulging in sex and attitudes towards HIV and pregnancy prevention, as was the case. The psychological disposition of an individual such as whether they were intoxicated also determined why an individual would either indulge in sex or not protect themselves during sexual intercourse. Not only this, one's economic status was also a determinant of one's sexual behaviour. In exchange for goods and services, girls especially would engage in sexual activity, most often without protecting themselves. Additionally, there was poor knowledge on HIV prevention and pregnancy prevention, particularly, the fact that one can fall in either of these circumstances at first sexual experience. This also determined whether adolescents indulged in sexual activity. Most adolescents did not know that it was possible to get HIV or fall pregnant at first sexual encounter and therefore were likely not only to engage in sexual activity, but also not to protect themselves during the process.

Therefore, a specific focus on adolescent sexual reproductive health is required. These efforts should concentrate not only on increasing the knowledge of adolescents but improving the attitudes and behaviours regarding sexual behaviour. However, for adolescents to undergo such a transformation, a lot of effort is required most especially those that try to bridge the gap between gender. If this pattern is not changed, the HIV prevalence will continue to rise especially among the adolescents. Therefore, for success to be scored in this fight, devising sustainable sex educational programs that seek to address the social-cultural and socio-economic barriers and misconceptions about HIV and AIDS are also needed. Such programmes may include increased information, communication and education on comprehensive correct knowledge, positive attitude and behaviour towards HIV and AIDS such as HIV testing, and condom use whenever they have sex with their partners. However, these must be targeted at specific groups already highlighted starting from primary schools onwards to instil within a young age the socially and culturally acceptable behaviours for increased HIV and AIDS prevention. Moreover, future research is also needed to assess the social-cultural factors and economic factors.

5.5 Recommendations

The study has made the following recommendations:

i. The Ministry of General Education should encourage schools to educate female adolescents about their sexuality and developmental processes since they lack understanding of their sexuality compared to their male counterparts.

ii. Ministry of Health should scale up adolescent-friendly services to meet the needs of both boys and girls, also should use mobile services to provide services to address the problem of distance boys and girls cover to the nearest health facility.

iii. The Ministry of Health should design programmes aimed at encouraging and enhancing discussions between parents/guardians and adolescents on important matters including sexuality issues with emphasis on father – daughter, and mother –son communication. These programmes should be aired on national television.

iv. The Ministry of Health to have regular training and in-servicing of health service providers to effectively serve adolescents with emphasis on adolescents' rights to confidential and comprehensive reproductive health services.

v. The Government of the Republic of Zambia to increase funding to the Ministry of Health to be specific so that problems of shortages of staff and drugs including essential items such as lifebuoy soap for boys undergoing circumcision is addressed.

vi. The Church should also play an active role in educating the young people on sexual and gender related issues.

vii. High rates of multiple partnerships among boys show that adolescent interventions to address concepts of masculinity are needed and should be part of the education curriculum provided by the Ministry of General Education.

viii. The study further recommends for a study on a similar topic to be carried out on a larger scale so that the results could be generalised to the rest of the count

REFERENCES

Abdool Karim Q, Preston-Whyte E, Abdool Karim SS. Teenagers seeking condoms at family planning services: Part I. A user's perspective. S Afr Med J 1992; 82:356-59.

ACOG Committee Opinion. Safety of oral contraceptives for teenagers. Int J Gynecol Obstet 1992; 37:309-12.

Amon J, Brown T, Hogle J, MacNeil J, Magnani R, et al. (2000) Behavioural Surveillance Surveys. Guidelines for repeated behavioural surveys in populations at risk of HIV. Durham: FHI.

Blanc AK, Gage AJ (2000) Men, polygyny, and fertility over the life-course in sub-Saharan Africa. In: Bledsoe C, Lerner S, Guyer J, editors. Fertility and the male life-cycle in the era of fertility decline. Oxford: Oxford University Press. pp. 163–187.

Booysen F. HIV/AIDS, poverty and risky sexual behaviour in South Africa. African Journal of AIDS Research 2004; 3: 57–67 11. Hallman Socioeconomic disadvantage and unsafe sexual behaviours among young women and men in South Africa. The Population Council, Working Paper No. 190. 2004.

Center for Reproductive Rights (CRR). Bringing rights to bear. New York; 2003.

Central Statistical Office, Country Population and behaviour Survey Report for Zambia 2000.

Cleland J, Boerma JT, Carael M, Weir SS (2004) Monitoring sexual behaviour in general populations: a synthesis of lessons of the past decade.

Davis M J, Niebes-Davis AJ. Ethnic differences and influence of perceived future certainty on adolescent and young adult sexual knowledge and attitudes. Health, Risk & Soc. 2010;12:149-167.

F, Sherr L, Cowan FM (2010) How to improve the validity of sexual behaviour reporting: systematic review of questionnaire delivery modes in developing countries.

Glynn JR, Kayuni N, Floyd S, Banda E, Francis-Chizororo M, et al. (2010) Age at menarche, schooling, and sexual debut in northern Malawi.

Hewett PC, Mensch BS, Ribeiro MC, Jones HE, Lippman SA, et al. (2008) Using sexually transmitted infection biomarkers to validate reporting of sexual behaviour within a randomized, experimental evaluation of interviewing methods.

Hewett PC, Mensch BS, Erulkar AS (2004) Consistency in the reporting of sexual behaviour by adolescent girls in Kenya: a comparison of interviewing methods.

HIV and AIDS in Zambia/Avert. Accessed; 2015. Available: Http.//www.avert.org/hiv-aidszamvia.htm

Jahn A, Crampin AC, Glynn JR, Mwinuka VM, Mwaiyeghele E, et al. (2007) Evaluation of a Village-Informant Driven Demographic Surveillance System.

Joint United Nations Programme on HIV/AIDS (UNAIDS). Report on the Global AIDS Epidemic.2006. UNAIDS, Geneva.

King TM, Repke JT. Contraception and the adolescent. In: Adolescent Pregnancy in an Urban Environment: Issues, Programs and Evaluation. Hardy, J, Zabin, LS, eds. (Washington, DC: Urban Institute Press, 1991) 283-88.

Kirby D. School-based programs to reduce sexual risk-taking behaviours. J School Health 1992;62(1):280-87.

Kirby D, Short L, Collins J, et al. School-based programs to reduce sexual risk behaviours: A review of effectiveness. Public Health Rep 1994;109(3):339-60.

Klepp K-I, Ndeki SS, Seha AM, et al. AIDS education for primary school children in Tanzania: An evaluation studies. AIDS 1994;8(8):1157-62.

Koontz SL, Conly SR. Youth at Risk: Meeting the Sexual Health Needs of Adolescents. PopulationPolicy Information Kit 9. Washington, DC: Population Action International, 1994.

Martinez G, Copen CE, Abma JC. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006–2010 National Survey of Family Growth. National Centre for Health Statistics. Vital Health Stat 23(31). 2011.

Mensch BS, Hewett PC, Gregory R, Helleringer S (2008) Sexual behavior and STI/HIV status among adolescents in rural Malawi: an evaluation of the effect of interview mode on reporting.

Nnko S, Boerma JT, Urassa M, Mwaluko G, Zaba B (2004) Secretive females or swaggering males? An assessment of the quality of sexual partnership reporting in rural Tanzania.

PEPFAR, Country Operation plan report for Zambia 2017.

Plummer ML, Ross DA, Wight D, Changalucha J, Mshana G, et al. (2004) "A bit more truthful": the validity of adolescent sexual behaviour data collected in rural northern Tanzania using five methods.

Poulin M (2010) Reporting on first sexual experience: The importance of interviewer-respondent interaction. Res 22: 237–288.

Ranjani R, Kudrati M. The varieties of sexual experience of the street children of Mwanza, Tanzania. In: Learning about Sexuality: A Practical Beginning. Zeidenstein S, Moore K, eds. New York: The Population Council and the International Women's Health Coalition, 1996.

Smith KP, Watkins SC (2005) Perceptions of risk and strategies for prevention: responses to HIV/AIDS in rural Malawi.

UNAIDS/WHO. AIDS Epidemic update: Geneva: UNAIDS; 2005.

UNFPA and Engender Health. Obstetric fistula needs assessment; Findings from nine African Countries. New York: UNFPA and Engender Health; 2003

UNICEF. Innocent digest. Early Marriage. 2001;7.

UNICEF. Global Analysis on Adolescent Health 2000

World Health Organization. Contraceptive Research and Development Project (CONRAD). Safety of Nonoxynol-9 When Used for Contraception: Report from WHO/CONRAD Technical Consultation, October 2001. Geneva: World Health Organization and CONRAD, 2002.

World Health Organization/UNAIDS. AIDS Epidemic Update; 2006.

Youth in Sub-Saharan Africa: A Chartbook on Sexual Experience and Reproductive Health. Washington, DC: Population Reference Bureau, Inc., 2001.

World Health Report 1999; 82:3

Zambia Demographic Health Survey Report 2012.

APPENDICES

Appendix:1 INFORMATION SHEET

THE UNIVERSITY OF ZAMBIA,
SCHOOL OF PUBLIC HEALTH,

DEPARTMENT OF COMMUNITY AND FAMILY MEDICINE

Principal Investigator: ZIMBA CHRISTOPHER

Study Title: FACTORS ASSOCIATED WITH SEXUAL BEHAVIOUR AMONG ADOLESCENTS IN CHIPATA DISTRICT, EASTERN PROVINCE OF ZAMBIA

Performance Site: Zambia

Sponsor:SELF

Introduction

Hello. My name is _____. Am here on behalf of The University of Zambia. Am Masters Student of Public Health, Conducting a study as part of my Academic requirements. You have been randomly selected for participation in this study. With your permission, I would like to ask you a few questions in relation to my study.

Why is this study being done?

The purpose of this research study is to ascertain, the Factors associated with Sexual Behaviouramong Adolescents

What are the study procedures? What will I be asked to do?

If you agree to take part in this study, I would like to ask you a few questions, doing so will ensure that all data collected is accurate and useful for future Adolescent programs.

What are the risks or inconveniences of the study?

The main risk of the study is disclosure of confidential information. To minimize this risk, we ask that you do not give your name to the interviewer. No names will be recorded, any study-related

inconveniences should be minimal as all data is to be collected by questioning, and data collection procedures are designed to be as minimally invasive as possible.

What are the benefits of the study?

You may not directly benefit from this research; however, we hope that your participation in the study may help guide the improvement of Adolescent Programs in Zambia

Will I receive payment for participation?

You will not be paid to be in this study.

Are there costs to participate?

There are no costs to you to participate in this study.

How will my personal information be protected?

Researchers will keep all study records locked in a secure location. Research records will be labelled with a unique code. All electronic files (e.g., database, spreadsheet, etc.) containing identifiable information will be password protected. Any computer hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research staff will have access to the passwords. Neither your name, nor the name of your patients will be collected for this observation, nor provided to those analysing the collected data.

Can I stop being in the study and what are my rights?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate

Who do I contact if I have questions about the study?

Take as much time as you like before you decide to participate in this study. We will be happy to answer any question you have about this study. If you have further questions about this study, want to voice concerns or complaints about the research or if you have a research-related problem, you

may contact the principal investigator, Zimba Christopher on 0977444891. If you would like to discuss your rights as a research participant, discuss problems, concerns, and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research, ERES CONVERGE ON 0955155633/0955155634/0966765503 or Email; eresconverge@yahoo.com.uk. Or Visit ERES, 33 Joseph Mila Road, Rhodes Park Lusaka.

Appendix: 2 PARTICIPANTE CONSENT FORM

Documentation of Consent:

I have read this form and decided that I will participate in the research project described above. Its general purposes, the of involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I have received a copy of this consent form.

_____ _____

Participant Signature Date

_____ _____

Person Obtaining Consent Date

OR - *I am unable to read but this consent document has been read and explained to me by _____ (name of reader). I volunteer to participate in this research.*

Thumbprint of Participant

Please ask Participates to apply ink to thumb using inkpad and press thumb into square at left.

_____ _____

Witness Date

_____ _____

Person Obtaining Consent ***Date***

Appendix: 3 PARENT/GUARDIAN CONSENT FORM

I have read this form and decided that My Child participate in the research project described above. Its general purposes, the of involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I have received a copy of this consent form.

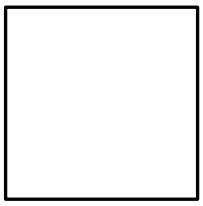
_____ _____

Parent/Legally Authorized Representative Signature Date

_____ _____

Person Obtaining Consent Date

OR - *I am unable to read but this consent document has been read and explained to me by* _____ *(name of reader). I volunteer to participate in this research.*



Thumbprint of Participant

Please ask subject to apply ink to thumb using inkpad and press thumb into square at left.

_____ _____

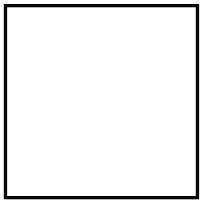
Witness Date

Appendix: 4 **CHILD PARTICIPANT ASSENT FORM**

If you understand this study and you are willing to participate, please sign below:

_____ _____
Participant Signature Date

OR - *I am unable to read but this consent document has been read and explained to me by _____ (name of reader). I volunteer to participate in this research.*



Thumbprint of Participant

Please ask subject to apply ink to thumb using inkpad and press thumb into square at left.

_____
Date

_____ _____
Witness Date

_____ _____
Person Obtaining Consent Date

Signature of Investigators or Responsible Individual:

"To the best of my ability, I have explained and discussed the full contents of the study, including all of the information contained in this consent form. All questions of the research subjects and those of his/her parent(s) or legal guardian have been accurately answered."

_____
Name of Investigator/Person Obtaining Consent

Appendix: 5 Questionnaire

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO
	4 SOCIO-DEMOGRAPHIC CHARACTERISTICS		
Q01	Sex of the Respondent	Male 1 Female 2	
Q02	How old are you?	Age in completed years_____	
Q03	What is your educational level?	Junior secondary 1 Senior Secondary 2	
Q04	What is your religious denomination?	Catholic 1 Anglican 2 SDA 3 Pentecostal 4 Muslim 5 Other 6	
Q05	How often do you attend religious services? **(READ OUT RESPONSES)**	Every day 1 Once a week 2 Once a month 3 Less often 4 Other (Specify)_____	
Q06	How religious are you?	Not religious, 1 Somewhat religious, 2 Quite religious 3 Very religious 4	
Q07	What is your marital status?	Currently married 1 Widowed 2 Divorced 3 Separated 4 Single 0	
WORK HISTORY AND CONTRIBUTION TO FAMILY INCOME			
Q08	Is your guardian currently working?	Yes 1 No 0	
Q09	What kind of work do they do?	Specify_____	
Q10	If in business or Employed, what is your guardians' income range?	K1,500 – K2,500 Monthly 1 K2,500 – K3,500 Monthly 2 K3,500 – K4,500 Monthly 3 Above K4,500 Monthly 4	

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO
Q11	What is your residential Area?	Low Density Populated Area 1 Middle Density Populated Area 2 High Density Populated Area 3 Other_____ 4	
	Factors Associated with risky Sexual Behaviour/ Reproductive Health Risks associated with Sexual Behaviour among Adolescents		
Q12	Do you have a sexual Partner?	Yes 1 No 0	
Q13	At what age did you first have sexual intercourse?	Specify_____ __	
Q14	What was your reason for your first sexual encounter?		
Q14	How many sexual experiences have you had?		
Q15	What was you reason for engaging in sex after the first sexual experience?		
Q16	Have you tested for HIV?		
Q16	If Sexually active, did you test you partner for HIV before intercourse?		
Q15	Do you think it is possible to get HIV or fall pregnant at fist sexual experience?		
Q16	Is it right to have a sexual partner?	Yes 1 No 0	
Q17	How many sexual Partners do you have?	Specify_____ 5	

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO
Q18	What do you think are the reasons of having Multiple Sexual Partners?	To get partner with good sexual Pleasure. 0 1 Beautiful /Handsome of Partner. Effects of long-term relationships. 0 1 To get mature Sexual Partner. Seeking for Money 0 1 Other, (Specify)_____ 0 1 0 1 0 1	
Q19	Had Sex with Older Individuals?	Yes 1 No 0	
Q20	Have you had sex after Porn Video?	Yes 1 No 0	
Q21	Have you had sex after drinking alcohol?	Yes 1 No 0	
Q22	Have you had sex with commercial sex worker?	Yes 1 No 0	
Q23	What type of sexual experienced you have last time?	Casual 0 1 Commercial Regular 0 1 0 1	
Q22	Which Sexual route do you prefer?	Oral 0 1 Anal Vaginal 0 1 0 1	
Q23	Which types of non-penetrating sexual practices do you prefer?	Placing objects in the Vagina. 0 1 Fondling of genitals/ breasts. Masturbation. 0 1 0 1	

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO
Q24	What do you know about reproductive health?	Functions of reproductive organs 0 1 Physical and emotional changes 0 1 Puberty 0 1 Menstruation 0 1 Conception 0 1 Abortion 0 1 Contraceptives 0 1 Condom use 0 1 Romantic relationships 0 1 Abstinence 0 1 Unprotected sex 0 1 Multiple partners 0 1 Other (Specify)_____ 1	
Q25	Do you have sex education at school?	Yes 1 No 0	
Q26	If Yes in the answer provided above? Do you find sex Education Useful?	Yes 1 No 0	
Q27	Do you know Contraceptive?	Yes 1 No 0	
Q28	Which Methods of Contraceptive do you know?	Condoms 0 1 Loop Pills 0 1 Others (Specify)_____ 0 1 0 1	
Q29	Do you currently use any contraceptives	Yes 1 No 0	
Adolescents Attitudes Towards Sexual Behaviour			
Q30	I have not even thought about having sexual intercourse	Agree 1 Disagree 0	

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO
Q31	I have had sexual intercourse one time	Agree 1 Disagree 0	
Q32	I have had sexual intercourse few times	Agree 1 Disagree 0	
Q33	I have had sexual intercourse many times	Agree 1 Disagree 0	
Q34	Unmarried young people should not have sex	Agree 1 Disagree 0	
Q35	Unmarried young people should not even have opposite sex friendship	Agree 1 Disagree 0	
Q36	Sexual relationships between unmarried young people are acceptable even when they love each other	Agree 1 Disagree 0	
Q37	Young women should not have sex before marriage	Agree 1 Disagree 0	
Q38	Bad for adolescents to use condoms	Agree 1 Disagree 0	
Q39	Abstinence is the only best means for an adolescent to avoid sexual risk behaviour	Agree 1 Disagree 0	
Q40	Sexual and reproductive health discussion leads to sexual activities	Agree 1 Disagree 0	
Q41	It is very important for me to use birth control to protect myself from pregnancy	Agree 1 Disagree 0	

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO

Condom Use Self - Efficacy

No.	QUESTIONS AND INSTRUCTIONS	Strongly agree	Agree somewhat	Disagree somewhat	Strongly Disagree	Code
	In the next few questions I am interested in hearing your opinion on certain issues. Please tell me if you "agree" or "disagree". Note: Interviewer to probe if they "agree strongly" or "agree somewhat", and if they "disagree strongly" or "disagree somewhat".					
Q42	I can talk to every partner about the importance of using condoms even those I have had sex with before	4	3	2	1	
Q43	I can insist on using a condom with every partner that I am interested in having sex with					
Q44	I am confident that I could suggest using a condom without making my partner feel uncomfortable	4	3	2	1	
Q45	I can suggest using a condom to a partner even if she/he would reject me	4	3	2	1	
Q46	I can persuade my partner to use a condom when we have sexual intercourse	4	3	2	1	
Q47	I am confident that I can protect myself from any kind of sex	Agree 1 Disagree 0				
Q48	I am confident that I can completely protect myself from unwanted pregnancy	Agree 1 Disagree 0				
Q49	I am confident that I can completely protect myself from getting HIV/AIDS	Agree 1 Disagree 0				
Q50	I can protect myself from alcohol and drug abuse	Agree 1 Disagree 0				
Q51	In general, how often did you use condoms with other partners during the last 12 months?	Every time 1 Most of the time 2 Some of the time 3 Rarely 0 Never				

No.	QUESTIONS, INSTRUCTIONS & FILTERS	RESPONSES	GO TO
Q52	What was the main reason that you **did not** use a condom? **(MULTIPLE RESPONSES POSSIBLE)**	Not available 1 Cost too much 2 Did not have one at the time 3 Don't like condoms 4 Was/partner drunk 5 Don't know 6 Others 7 (Specify)_____	
Q53	Have you ever had sex in return for goods or service?	Yes 1 No 0	
Q54	Have you ever had multiple sex partners at the same period?	Yes 1 No 0	
Q55	How many people have you had sex with in the last 6 months?	Specify_____	
Q56	Have you ever had sex with a person and later regretted it?	Yes 1 No 0	
Q57	Have you been forced to have sexual intercourse during the last 12 months?	Yes 1 No 0	

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Thanks very much for your participation and cooperation. Be reminded that the information given will be keep highly confidential.