KNOWLEDGE, ATTITUDES AND PRACTICES OF YOUTH TOWARDS HIV/AIDS

A CASE OF NORTHERN UGANDA REGION

BY

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DECLARATION

This is to declare that this thesis is my own work with the exception of references cited in this book and that it has not been submitted to any other university, college or institution for any award.

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DEDICATION

This book is dedicated to my husband, Dr. Fred Nsubuga and Baby Kisakye Nsubuga. You have broadened my horizons, lifted me up and encouraged me in believing that all things are possible.

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In life there are people who touch our lives with words and actions that they change us forever. These are people who extend our vision and inspire us to higher levels of personal achievement. First and foremost, I thank the almighty God who has enabled me to accomplish this aspiration. In a special way, I thank my parents, Mr and Mrs Ssenkungu Bateefu for all the support that they have given me throughout my education. I also thank my husband for the unending support to me. In addition, I am grateful to Population Secretariat which awarded me the scholarship for this Masters degree at Makerere University. Particularly I thank Dr. Jotham Musinguzi then Director of Population Secretariat for the career guidance and Dr. Betty Kyaddondo as well as all staff of Population Secretariat for all the support given to me. Furthermore, I am very grateful to Professor James Ntozi and Dr. G. Rutaremwa for their guidance, advice and support throughout the undertaking. Lastly, to my sisters and brothers who directly and indirectly rendered me assistance, may God bless you.

TABLE OF CONTENTS **PAGES**

LIST OF TABLES

TABLE OF FIGURES

ABBREVIATIONS

ABC	Abstinence, Be faithful, Condom use
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
IDP	Internally Displaced Persons
IEC	Information, Education and Communication
LRA	Lord's Resistance Army (LRA)
MOH	Ministry of Health
NGO	Non Governmental Organization
STI	Sexually Transmitted Infections
TB	Tuberculosis
UAC	Uganda AIDS Commission
UBOS	Uganda Bureau of Statistics
UHSBS	Uganda HIV/AIDS Sero-Behavioural Survey
UNAIDS	Joint United Nations Programme on AIDS
UPDF	Uganda People's Defence Force
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

ABSTRACT

Uganda has been hailed for combating HIV/AIDS epidemic from 18% prevalence in 1992 to 6.1% in 2000. However it has now risen to 6.4% in 2004/5. Northern Uganda which has faced political turmoil and insurgency for the past 20 years presents a mixed picture with the highest prevalence of 8.2% in the country. The main objective of the research was to investigate the relationship between socio-economic characteristics, knowledge and practices towards HIV/AIDS among youth in Northern Uganda Region.

Data on 910 youth from Northern Uganda was extracted from the national Uganda demographic and health survey of 2006. Univariate, bivariate and multivariate analyses were applied to the data.

There is evidence of some positive behavior in that most youth (88%) with knowledge of AIDS, were willing to test for HIV. A high percentage (88%) of those who knew someone with AIDS were willing to test for HIV. In addition, a large majority (85%) of the respondents who could identify persons at risk of HIV infection were willing to test. However, the above does not translate into positive behavior. For instance the study findings indicated that 67% of the youth were currently married; 17% cohabiting and 6% divorced/separated/widowed and only 10% were never married. Although the respondents with knowledge of HIV/AIDS were 98%, those who knew persons sick or dead of AIDS related diseases were 86% and knew who were at risk of HIV were 66%. Only 7% of the respondents were abstaining from sex at the time of the survey and 40% had used condoms in the last 12 months preceding the survey. Overall, 68% of the males and 64% of the female youth had sex in the past 12 months and of these 23% had sex with at least 2 partners.

At the bivarite analysis the mean number of multiple sexual partners was significantly associated with age, education, and marital status. Also condom use at last sex in the last 12 months was significantly associated with sex, age, residence, education, marital status and religion. Furthermore, significant association was found between willingness to test for HIV and sex and residence.

Results from multivariate analysis show that age, residence, education, occupation, knowledge of one dead or sick of AIDS and risk perceptions were significant predictors of condom use at last sex. Only sex was observed to be significantly related with willingness to test for HIV.

In conclusion although knowledge about HIV is important, translating it into behavior or practices to prevent or protect individuals against contracting HIV is essential.

It is important to sensitize youth on the need to adopt safe sexual behavior. A comprehensive school sex education programme that scales up the understanding of safe behavior and enables girls to negotiate for safe sex will be required. The findings have important implications for the development of primary HIV/AIDS prevention programs for youth in war torn areas.

CHAPTER ONE: BACKGROUND

1.1 Introduction

Acquired Immune Deficiency Syndrome (AIDS) is caused by a human immunodeficiency virus (HIV) that weakens the immune system, making the body susceptible to opportunistic diseases that often lead to death. The predominant mode of HIV transmission is through heterosexual contact, followed in magnitude by perinatal transmission, where the mother passes the virus to the child during pregnancy, delivery or breastfeeding. Other modes of transmission are through infected blood and unsafe injections.

HIV/AIDS is a global challenge that has threatened the very existence of the human race. In most countries the epidemic did not occur until the 1980s. At present, there is no country in the world without HIV cases (WHO 1995). The African continent is said to hold the vast majority of the world's HIV infected population. It is estimated that in 2007, of the 33.0 million people living with HIV/AIDS, 22.0 million of them lived in sub-Saharan Africa (UNAIDS, 2008).

The earliest documented case of AIDS in sub-Saharan Africa appears to have been in 1981, (Biggar and Aggius, 1987). The elusive nature of the Human Immuno-deficiency Virus (HIV) and its sequelae has created a demand for increased research in the area of human sexual behavior. Many available studies show that transmission of the disease is as a result of multiple sexual partners, in both heterosexual and homosexual relationships, (Sewankambo et al.1987; WHO 1990; Serwadda et al.1992). More than 25 million people have died of AIDS since 1981. Africa has 11.6% AIDS orphans. At the end of 2007, women accounted for 50% of all adults living with HIV worldwide and for 59% in sub-Saharan Africa. Young people (under 25 years old) account for half of all new infections worldwide (UNAIDS, 2008).

Uganda has experienced a severe and devastating epidemic of HIV infection and AIDS for more than a quarter of century. The epidemic started on the shores of Lake Victoria in Rakai District. Thereafter, HIV infection spread quickly, initially in major urban areas and along highways. By 1990s, HIV had reached all districts in the country, resulting in what is classified as a generalized epidemic. As in other countries in sub-Saharan Africa, Uganda's HIV/AIDS epidemic is predominantly spread through heterosexual contact.

The impact of the disease has been mainly felt through the escalating morbidity and mortality that disproportionately affects women during the prime of their productive life. The consequences of the epidemic span across all spheres of life (individuals and communities nationwide). It has imposed a severe and unsustainable burden on the meager health sector resources, as funds are diverted from other areas to HIV prevention and AIDS care and treatment

services. HIV infection has also given rise to an epidemic of opportunistic infections, notably tuberculosis (TB). Treatment of some of these opportunistic infections is more expensive than that of AIDS.

In Uganda, the national HIV prevalence peaked at around 15 % in 1991 and fell to 5 % in 2001 (UNAIDS 2002). According to the results of the Uganda HIV/AIDS Sero-Behavioural Survey (UHSBS) of 2004/5, the national prevalence of HIV is estimated at 6.4%. HIV/AIDS therefore, continues to represent a significant public health problem. A major concern is that the AIDS scourge is influencing the nature and quality of health care through occupational transmission, (Verbeck et al, 1991).

All persons between 15 – 24 years are defined as youth, (WHO, 1989). The youthful stage is a time when most people are beginning to experiment with sex and are being exposed to the dangers inherent in the process. The youth in Uganda as a group are highly at risk of HIV infection. Youth constitute a considerable proportion of the world's population and are one of the most dynamic human resource bases. Youth go through both physical and emotional stages of transition from childhood to adulthood.

Previous studies of sexual behavior among Ugandan youth indicate an early initiation of sexual activity. An adolescent reproductive health survey revealed that the median age at first sexual intercourse was lower for females than for males (PEARL, 2000). In addition, 14% of youth had sex before they turned age 15 and 63% of women and 47% of men had sex before 18 years old, (UBOS and Macro International, 2006). This behavioral pattern has important implications for HIV transmission among female adolescents.

1.2 HIV/AIDS in Northern Uganda

Northern Uganda is composed of West Nile (with Arua, Adjumani, Moyo, Nebbi, and Yumbe districts) Northern Central (with Lira, Apac, Gulu, Kitgum, and Pader districts) and North East (with Kaberamaido, Katakwi, Kotido, Kumi, Moroto, Nakapiripirit and Soroti districts). According to 2002 population census, Northern Uganda accounts for 22% of the Ugandan population, (2002). The main economic activity in this region is agriculture.

Special attention is paid to the Northern region of Uganda because of the political turmoil and insurgency that this region has undergone through for the past twenty years. Of all four regions of Uganda, Northern Uganda has been hit hardest by conflicts and civil strife which have been caused by the Lord's Resistance Army (LRA). Like in many conflicts, youth in the region have been most affected. The youth have been abducted by LRA rebels who forced them to fight in the war and the abducted girls have been forcefully married by the LRA

commanders. The unabducted youth have been forced to live in IDPs. HIV prevalence among the youth is high. These at times have led to HIV prevalence in the region to be higher than the national average (6.4%)

1.3 Statement of the Problem

Youth are at the centre of the global HIV/AIDS pandemic. They are the world's greatest hope in the struggle against this fatal disease. Today's youth have inherited a lethal legacy that is killing them. An estimated 11.8 million youth aged 15 – 24 years are living with HIV/AIDS. Each day, nearly 6,000 youth between the ages of 15-24 years are infected with HIV. At 25%, Uganda has one of the highest teenage pregnancies in the world, (UBOS, 2007). It also shows that condom use among youth leaves a lot to be desired.

Uganda has been hailed for combating HIV/AIDS epidemic from 18% prevalence in 1992 to 6.1% in 2000 (MOH, 2003). However the epidemic rose to 6.4% in 2004/5. According to the results of the Uganda HIV/AIDS Sero-Behavioural Survey (UHSBS) of 2004/5, HIV prevalence in Northern Central is 8.2%, North East is 3.5% and West Nile is 2.3%. Because of prolonged civil conflict and insurgency for two decades, Northern Central Uganda has the highest prevalence in the country (MOH 2005).

However it has also been reported that a number of youth are too reluctant to undergo positive behavior change in spite of extensive information through awareness campaigns. In order to realize greater success of programmes in Northern Uganda it is necessary to address the reasons for the observed reluctance.

This study will therefore find out the knowledge, attitudes and practices of youth in these three regions and how these are related to the HIV prevalence which is highest in North Central and lowest in both North East and West Nile.

1.4 Objectives of the Study

1.4.1 Main Objective

The main objective of the research is to investigate the knowledge, attitudes, behavior and practices of youth in Northern Uganda Region.

1.4.2 Specific Objectives

The research will have the following specific objectives:

1. To establish the knowledge of HIV/AIDS among youth in Northern Uganda;
2. To study the attitudes of youth in Northern Uganda towards HIV/AIDS;
3. To identify practices of youth in Northern Uganda to prevent HIV infection; and
4. To explore the relationship between socio economic characteristics and knowledge and practices towards HIV/AIDS among youth in Northern Uganda Region.

1.5 Justification of the Study

According to estimates from UNAIDS/WHO (2008) AIDS Epidemic Update, 33 million people were living with HIV in 2007. 15.5 women were living with HIV/AIDS, 2 million children were living with HIV/AIDS and 2.7 million people were newly infected with HIV. At the end of 2007, women accounted for 50% of all adults living with HIV worldwide and for 59% in sub-Saharan Africa. Youth account for half of all new infections worldwide, (UNAIDS, 2008).

Youth have been identified as being the most susceptible to the risk of infection with HIV by virtue of the nature of their sexual behavior. However it has been reported that a number of youth in Uganda are reluctant to undergo positive behavioral change inspite of extensive information, education and communication (IEC) campaigns. In order to realize greater success of these programmes in Northern Uganda it is necessary to study the knowledge, attitudes and practices of youth in Northern Uganda. This study therefore sets out to identify the knowledge, attitudes and practices of youth in Northern Uganda which will help relevant authorities to institute meaningful and applicable AIDS control measures.

1.6 Conceptual Framework

The age 15 – 24 years is a difficult period for most youth as they attempt to cope with decisions regarding marriage, education and work, which will influence and determine their future life course.

Background variables and social factors can be conceptualized to influence a sexual behavior by affecting the knowledge people have about AIDS and their risk perceptions to getting the disease. Older persons are more likely than younger people to have heard of AIDS or know someone who has suffered of the disease. However, they are less likely to be concerned about behavior change because many of them are married or at least in some form of steady

relationship. A change of sexual behavior is therefore less likely in older than in younger people.

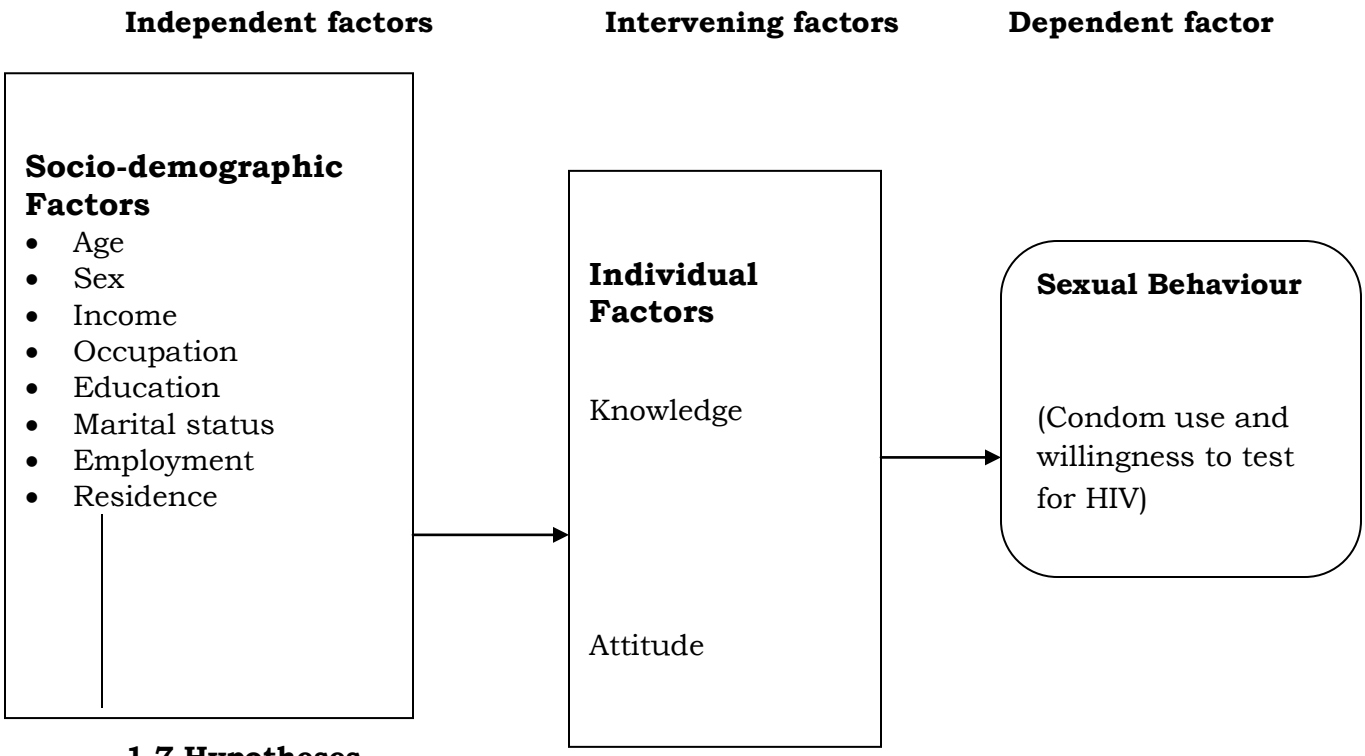
Youth's characteristics and environment shape their attitudes and knowledge that in turn determine their sexual behavior. Because their attitudes are not yet firmly established, they are likely to adapt to any message that seems appealing. Different religions differ in views on sex related issues hence religious background influences adolescent attitudes, beliefs and knowledge.

Youth's religious, cultural and family background and demographic characteristics shape their beliefs, attitudes and knowledge towards HIV/AIDS which later would influence sexual behavior. Attitudes and knowledge always precede behavior.

Physiologically, youth go through a period of rapid growth emotional turbulence during which they strive to achieve independence from their parents. While these stages are universal, they can occur at widely varying ages in different cultures.

The above concepts are diagrammatically shown in Figure 1.1:

Figure 1.1: Conceptual framework showing the relationship between socio-cultural and demographic factors and behavior towards HIV/AIDS



1.7 Hypotheses

The following hypotheses will be tested in the study in order to address the above stated objectives:

1. Youth residing in the rural area are more likely to be sexually active than those residing in urban centres.
2. Youth residing in urban areas are likely to be more knowledgeable, have more favorable attitudes and practice contraception more than their rural counterparts.
3. The higher the education of an individual, the more knowledgeable about HIV/AIDS.
4. Knowledge, attitudes and practices towards HIV/AIDS do not vary much between religious denominations.
5. Youth who are single are likely to be more knowledgeable, have more favorable attitudes, behaviors and practices towards HIV/AIDS more than the married.

1.8 Outline of the dissertation

The study is organized in seven chapters. Chapter one gives the background to the epidemic, the problem statement, conceptual framework and the justification of the study. Literature review is in chapter two while chapter three presents the methodology of the study. Background social and demographic characteristics of the study group are described in chapter four. Chapter five gives results of bivariate analysis of the knowledge of one dead or sick of AIDS and the risk perceptions to getting AIDS in relation to the selected social characteristics such as marital status, residence and religion. Multivariate analysis results of the effect of the selected variables on behavior are discussed in chapter six. Lastly, chapter seven presents the summary of findings, conclusions and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

AIDS results in progressive impairment of the human immune system and the consequent emergence of various opportunistic infections. HIV infection is the first stage of a morbid process that leads to AIDS. After entering the human host, HIV attacks certain cells of the immune system and destroys them.

There are several modes of HIV transmission and the most common is through heterosexual and homosexual intercourse. Perinatal transmission from mother to child and transfusion of blood and blood products are also other modes of transmission. Intravenous drug use is a common source of HIV transmission in the developed world while injections and accidental needle stick injuries account for a small proportion of AIDS cases. In sub Saharan Africa the most common is through heterosexual intercourse. The risk of infection increases with the number of sexual partners. High rates of partner exchange, the practice of certain types of sexual intercourse and the presence of anal or genital lesions combine to increase the risk of HIV infection, (Akol et al, 2000).

Populations at risk of HIV infection and AIDS vary by geographical region. In North America, Western Europe and parts of South America homosexual males and IV drug users have the highest prevalence of AIDS. In Africa and most parts of the Caribbean the highest prevalence levels are found among heterosexual persons, especially those with numerous sexual partners (Palloni and Glicklich, 1989). Most of those infected are aged 20-49, the most sexually active group. Sexual behavior therefore plays an important role in the risk of infection.

Gradually, more and more countries around the world are starting to realize that they must take decisive action if they are to avert a major AIDS crisis. More and more money is being channeled into Africa, especially by the US which pledged $15 billion to fight AIDS in resource-poor countries and Uganda is one of the countries on the list of recipients. Given the decline that has taken place in its HIV prevalence, Uganda is being given as an example of good planning and action that others should emulate. But the results seen in Uganda do not have a simple recipe, and with so many lives and such large sums of money at stake, it is important to look carefully at what has been done there.

2.2 Background

Uganda was estimated to have a population of about 28.4 million in 2007. The extreme mortality of AIDS has had an effect on this figure, which would otherwise be higher. As another consequence of AIDS, life expectancy in Uganda is around 50 years only. Uganda has over 40 distinct ethnic groups, a similar number of languages, and several religions. Over 80% of the working population is employed in agriculture.

Uganda is one of the few African countries where rates of HIV infection have declined, and it is seen as a rare example of success in a continent facing a severe AIDS crisis. Uganda's policies are credited with helping to bring adult HIV prevalence (the proportion of adults living with HIV) down from around 15% in the early 1990s to 6.4% in 2004/5. At the end of 2005, UNAIDS estimates that 6.7% of adults were living with the virus. The country is seen as having implemented a well-timed and successful public education campaign.

Young people are particularly vulnerable to the HIV pandemic. Over half of all new infections worldwide are found in young people between the ages of 15 and 24. Every day, 6,000 young people become infected with HIV – more than five every minute. Half of all new infections are estimated to be among people under age 25 years and the majority of young people are infected sexually. In the most recent years young people have developed more casual attitudes towards premarital sex, due to the rapid development of the economy, the influence of mass media on the perception of sex, and the degradation of traditional value, in addition to being sexually mature much earlier than before. If these individuals lack adequate information regarding HIV knowledge and behavior, they might be hit hard by the HIV pandemic.

Until recently, parts of Northern Uganda were involved in a conflict between the Lord's Resistance Army (LRA) and government-backed militia. The conflict has claimed many civilian lives, with both sides targeting civilian populations. Atrocities such as the mass amputation of limbs are not uncommon.

Even though HIV prevalence in Uganda is much lower than it once was, it still remains very high, and AIDS is still claiming tens of thousands of lives each year. Such a severe epidemic has a considerable social and economic impact. As AIDS usually kills young adults, it depletes a country's labor force, and weakens educational and health services. Deaths among young adults also leave behind thousands of orphaned children and grandparents, placing an additional burden on the community or the state.

Much of Northern Uganda was involved in civil war between the LRA and the army, and efforts there predominantly focus on caring for refugees and providing food. Many people in this part of the country have been killed or injured by the fighting, and at least 1.6 million have been displaced. The HIV prevalence is high for Northern Uganda region compared to the national average.

2.3 Youth in Northern Uganda Region

During the conflict in Northern Uganda, LRA rebels abducted thousands of youth - estimates place the number of youth abducted at a minimum of 20,000, (MOH, 2005). About 20% of those abducted are girls most of whom were forced into 'marriages' or given to senior commanders of LRA as rewards and incentives. Some youth managed to escape, and among those who have done so, about 50% have some type of STD. Among youth who have been in captivity for long, this rate rises to 85% (MOH, 2005).

The rates of HIV infection among the abductees or the LRA rebels are unknown, but are thought to be very high. Rehabilitation centers for abductees have been offering HIV testing to youth in their centers, and have found 13 out of 83 youth tested to be HIV positive (TASO, 2006).

Due to the conflict only about a third of youth are enrolled in school, meaning that many do not receive adequate sexual health education. There is also an urgent lack of condoms and sexual health education, and many people in rural areas are unable to access healthcare facilities. Many of the organizations doing relief work in the north tend to focus on dealing with the immediate effects of the conflict - providing medical help and food (TASO, 2006).

2.4 Knowledge of HIV/AIDS

The 1995 and 2000 – 2001 Uganda Demographic and Health surveys as well as the 2004 – 2005 Uganda HIV/AIDS Sero Behavioral Survey showed that general awareness of HIV/AIDS among men and women is almost universal in the country (UBOS, 1995&2000/01 and MOH, 2005).

HIV is mainly transmitted through heterosexual contacts between an infected and a non- infected person. Consequently, the HIV prevention programme has mainly sought to reduce further sexual transmission through three important programmatic ways, namely promotion of abstinence, mutually faithful monogamy among uninfected couples and condom use by those that cannot abstain. These are important ways to avoid the spread of HIV/AIDS.

2.4.1 HIV/AIDS-RELATED KNOWLEDGE AMONG YOUTH

Knowledge of how HIV is transmitted is one of several factors that enable youth to protect themselves from the virus. Correct knowledge can also reduce stigma and discrimination against people living with HIV/AIDS.

Youth with comprehensive knowledge are those who agree with prompted questions that individuals can reduce their chances of contracting HIV by having sex with only one faithful, uninfected partner and by using condoms, those who know that a healthy-looking person can have the AIDS virus, and those who know that HIV cannot be transmitted by mosquito bites or sharing food with a person who has HIV.

HIV/AIDS knowledge among young people globally constitutes a major challenge to the control of this scourge. Most people become sexually active in adolescence. The need to admit that young people are having sex but lack the proper knowledge to protect themselves is important in the fight against HIV/AIDS. Young people are now the epicenter and bear a disproportionate burden of this pandemic (WHO/UNICEF/UNAIDS, 2002).

In 2007, national surveys found that 40% of young men and 36% of women had accurate HIV knowledge. Both in sub-Saharan Africa and globally, women had lower levels of HIV knowledge. Most youth were aware that being in monogamous relationship with a person of the same sero status is an effective prevention strategy (UNAIDS, 2007).

Research has shown that women and men who have never married, but who have been sexually active, are most likely to know about the major means of avoiding HIV. Further research shows that urban residents and those living in Central, East Central, and Kampala regions are more knowledgeable than other respondents. Young people in West Nile, North Central and Northeast regions are the least informed about ways to avoid getting HIV/AIDS. Education is strongly correlated with knowledge about AIDS prevention (MOH, 2005).

2.4.2 Myths and misconceptions

In addition to knowing about effective ways to avoid contracting HIV/AIDS, it is also useful to be able to identify incorrect beliefs about AIDS to eliminate misconceptions. Common misconceptions about AIDS include the idea that all HIV-infected people appear ill and the belief that the virus can be transmitted through mosquito or other insect bites, by sharing food with someone who is infected, or by witchcraft or other supernatural means.

In sub-Saharan Africa, surveys continue to indicate that young people between 15-24 years harbor serious misconceptions about HIV and how it is transmitted (Cohall, et.al. 2001). Even though it is now common knowledge that the HIV agent cannot be transmitted through mosquito bites, many people still believe that mosquitoes are a good vehicle for HIV transmission. In sub-Saharan Africa where mosquitoes are endemic, this misconception is significant because it implies a defeatist attitude that regardless of what one does, one is subject to HIV infection as a resident of a mosquito infested region. It also poses a compliance challenge for any educational intervention effort targeted at this group (Wodi, 2005)

2.4.3 KNOWLEDGE OF CONDOM SOURCES AMONG YOUTH

Condom use among young people plays an important role in the prevention of transmission of HIV and other sexually transmitted infections, as well as unwanted pregnancies. Knowing a place to get condoms helps youth to obtain and use condoms. Furthermore knowing where condoms can be got puts youth in a better position to make informed decisions on issues pertaining their sexuality.

Although the use of condoms can reduce the risk of sexually transmitted diseases, most sexually active youth in sub-Saharan Africa do not consistently use condoms because they are too expensive for the youth and they do not know where to get them among many other reasons (Jemmot, 2000).

2.4.4 VOLUNTARY HIV COUNSELLING AND TESTING AMONG YOUTH

Awareness of HIV status can motivate individuals to further protect themselves against infection or to protect their partners from acquiring the disease. It is particularly important to measure testing behavior among youth. Not only are they especially vulnerable to infection, but they also may experience barriers to accessing testing services because of their young age.

Most youth in sub-Saharan Africa do not have access to sexual health advice, condoms, and forms of contraception, voluntary counseling and testing services for HIV. Reproductive health services are seldom geared towards the needs of the people, who therefore tend to avoid them-putting themselves and their sex partners at risk of infection (UNAIDS, 2008).

Youth in Northern Uganda have challenges especially in accessing voluntary counseling and testing centers. The facilities where HIV testing is done are always crowded and at times there are no testing kits. In addition many youth are left out due to the long distances they have to travel from their homes in the villages to go to these VCT centers (Akol, 2000).

2.5 ATTITUDES RELATING TO HIV/AIDS

2.5.1 HIV/AIDS-RELATED STIGMA

Stigma refers to a situation when people living with HIV/AIDS are viewed as shameful and the disease is perceived to be a result of personal irresponsibility. If not counteracted, such attitudes fuel prejudice against those living with HIV/AIDS, marginalizing and excluding individuals. Ultimately such attitudes allow societies to excuse themselves from the responsibility of caring for and looking after those who are infected. More importantly, stigma leads to secrecy and denial that hinders people from seeking counseling and testing for HIV, as well as care and support services.

In Sub-Saharan Africa, communities have appeared insensitive to the plight of HIV positive youth as a result victims chose not to disclose their HIV status for fear of being ostracized by society. Overt discrimination against HIV positive youth could cause dropping out of school for the victims (Wodi, 2005). In Uganda, efforts have been made to reduce fear and discrimination towards those living with HIV/AIDS but the stigma has not completely disappeared.

2.5.2 ATTITUDES TOWARDS NEGOTIATING SAFER SEX

While condoms are the best weapons against HIV infection, studies continue to show limited use of condoms in sub-Saharan Africa (Eaton.et.al, 2008; Volk and Koopman, 2001; Adih and Alexander, 1999). These studies implicate socio-cultural and religious factors in negotiating for safer sex.

Knowledge about HIV transmission and ways to prevent it are less useful if people feel powerless to negotiate safer sex with their partners. To gauge attitudes towards safer sex, there is need to know if people think a wife is justified in refusing to have sex with her husband when she knows he has a disease that can be transmitted through sexual contact. There is also need to know whether a woman in the same circumstances is justified in asking her husband to use a condom.

2.6 PRACTICES

2.6.1 HIV/AIDS-RELATED BEHAVIOUR

Youth in general indulge in sexual relations for various reasons. The basic reason is self-gratification and enjoyment (Lema and Hassan, 1994). A survey done in Lira district showed that the reasons for sexual activity among youth were; forced by partner; peer pressure; carried away by passion; to prove normality; to prove love for boyfriend; tantalizing movies and films; seeking physical pleasure and desire to be a mother (Lira District Local Government, 2002).

Studies have showed that the age at first coitus is remarkably low. Lema and Hassan (1994) in a study on sexually active adolescents in Nairobi, Kenya found that the mean age of males starting sexual activity was 15 years while that of their female counterparts was 16 years.

Males generally start coitus earlier. About 50% of this study group had their first coital experience with someone older than they were. Typically, female youth tend to be more involved with older persons than the males. However males were found to be more likely involved with groups of people considered to be high risk such as strangers, bar attendants and prostitutes. Similar findings were reported by the PEARL project in Uganda in a survey of eight districts of the country which revealed low age of initiation of sexual activity among Ugandan youth with median age at first sex ranging from 14.6 to 16.8 years. This age was lower for females though males were reported to be having sexual intercourse more frequently than females. In addition, most of the current sexual partners of the male youth were non-regular, including ordinary friends, casual partners, friends and relatives (PEARL, 2000).

2.6.2 Sexual behavior indicators among youth; abstinence, being faithful, and condom use among youth

The acronym 'ABC' represents a prominent message to youth on behaviors to follow to prevent HIV infection: abstinence, be faithful, use condoms. The approach used in Uganda has been named the ABC approach - firstly, encouraging sexual abstinence until marriage; secondly, advising those who are sexually active to be faithful to a single partner or to reduce their number of partners; and finally, especially if you have more than one sexual partner, always use a condom. A number of factors helped to encourage people to take up these strategies (Uganda AIDS Commission, 2005).

It seems that the message about HIV and AIDS has been effectively communicated to a diverse population by the government and by word of mouth. Ugandan people have themselves to thank, in large part, for the reduction in HIV prevalence. Much of the prevention work that has been done in Uganda has occurred at grass-roots level, with a multitude of tiny organisations educating their peers, mainly made up of people who are themselves HIV positive. There was considerable effort made towards breaking down the stigma associated with AIDS, and frank and honest discussion of sexual subjects that had previously been taboo was encouraged. There is a high level of AIDS awareness amongst people generally.

An important pioneer in communication about AIDS was Philly Lutaaya, a popular Ugandan musician who announced in 1989 that he was HIV positive. Through his music and educational tours Lutaaya spread understanding,

compassion and respect for people living with HIV, and encouraged others to come forward to confront the disease. Although he died just months after publicizing his HIV status, Lutaaya continues to inspire positive responses to AIDS in Uganda.

2.6.3 Contraceptive use

It is worth noting that adolescents have a relatively high frequency of sexual intercourse. In spite of this, the use of a reliable method of contraception or preventive measure against STDs and HIV/AIDS is quite low, although their contraceptive awareness is generally quite good (Lema et al.1988; Lema 1990). This may be due to most of the sexual encounters being impromptu in nature. It may also be fear of the unknown side effects of the various methods of contraception or fear of appearing to be loose by preparing for sex, though some reported not knowing where to obtain a method, prohibition by prevailing policy guidelines and one's partner as reasons for not using protection (Lema and Njau, 1988; Paxman, 1984).

In Uganda a gap exists between knowledge and use of family planning methods by Ugandan youth. Despite almost universal knowledge of modern methods, less than 50 percent ever used the methods in most districts studied by the Programme for Enhancing Adolescent Reproductive Health Life project in 1999. The leading reasons given for not using the methods were that adolescents were not married, were not having sex or were having sex only occasionally, objection from their partners, desire to get pregnant or impregnate a partner, breastfeeding and fear of side effects. Other youth did not know where to get the methods from and others just did not want to use contraceptives (PEARL, 2000).

Condoms have been promoted as a means of preventing HIV infections. However in sub-Saharan Africa the majority of people do not like using condoms. They are used mostly with commercial sex workers, and not in long term relationships, or those that are perceived as being steady. Adolescents, in particular may not know where to get them or fear to approach health workers for them. Unprotected sex is a sign of love in this age group (Varga, 2000). As a result of all the above, sexually active youth are at high risk of many health hazards. Of major concern is the risk of HIV/AIDS. Though there are no reliable figures, most researches estimate that adolescents by nature of their sexual behavior are at relatively higher risk of contacting HIV infection (Lemma and Hassan, 2000).

2.6.4 Sexual Behavioral Change

It would therefore seem logical that a change from risky to less risky behavior is necessary to stop the spread of AIDS in this age group. However before risky behavior can be changed, it is necessary to explore the reasons for taking risks. Socio-cultural beliefs and norms as well as the deteriorating economy may be blamed for the trend in sub-Saharan Africa (Kabwe-Kaunde, 1997). Other factors are lower school qualifications, school drop outs and upbringing.

It was initially thought that, knowledge about HIV and its mode of transmission was the single factor necessary for initiating positive behavior change. This has been found not to be true. There is evidence that in spite of more adequate knowledge of AIDS, there is continued high risk behavior among the youth of sub-Saharan Africa (Varga, 1999; Hoger, 1999). It should be noted that research in this area is rendered difficult by the need, often suspect, for self reporting of sexual behavior. It has been observed that males tend to exaggerate the number of their sexual partners (Anarfi, 1999).

The reluctance to institute positive behavioral change among the youth of sub-Saharan Africa can be partly explained by the perception among the males in the region that they have an inborn need for sexual activity that cannot be denied (Orubuloye and Caldwell, 1999). Drinking and drunkenness increase this need and the situation is aggravated by the availability of most commercial sex in bars and hotels. This is particularly true for Eastern and Southern Africa (Mupemba, 1999). Furthermore, female sex workers are motivated by the hope of later setting themselves up in business and marrying (Orubuloye and Caldwell, 1994).

Among the youth, sex is seen as a way of cementing relationships (Varga, 1999). Peer pressure helps to undermine any youth deviating from this view (Preston-Whyte, 1999). In addition, relationships among these age groups are characterized by poor communication between the two parties, often leading to sexual violence, which unfortunately is often regarded as a sign of affection (Varga, 1999).

Having sex under the influence of alcohol is dangerous. In Uganda there are more male youth than their female counterparts who have sex when drunk. There is need to ensure that youth are sensitized on the dangers of getting drunk (UBOS and Macro International, 2006).

According to the UDHS of 2006, youth were asked about use of force the first time they had sex. Youth are exposed to forced rape and in particular girls are more prone to forced sex because of a number of reasons which include low

bargaining power, being taken advantage of by the older men and socio cultural impediments.

2.6.5 Prevalence of HIV among Youth

Generally, cases of HIV infection among youth aged 15-24 represent more recent infections and serve as an important indicator for detecting trends in both prevalence and incidence. An attempt was made to estimate incidence by subjecting all HIV-positive samples to the BED-assay. However, recent evidence suggests that this test overestimates incidence (UNAIDS, 2005).

2.7 Conclusion

From this review, it is clear that HIV is a major challenge of youth globally. Youth are susceptible to the risk of infection with HIV by virtue of the nature of their sexual behavior. However it has been reported that a number of youth in Uganda are reluctant to undergo positive behavioral change in spite of extensive information, education and communication (IEC) campaigns.

In order to realize greater success of HIV/AIDS programmes in Northern Uganda it is necessary to study the knowledge, attitudes and practices of youth in Northern Uganda. This study therefore sets out to identify the knowledge, attitudes and practices of youth in Northern Uganda.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design used in the study. In particular it focuses on the study area, data source, and the proposed data analysis techniques. It further shows how the analysis was carried out to meet the various objectives and testing the set hypotheses.

3.2 Study Area

The research was conducted in Northern Uganda and targeted youth between the age 15 -24 years. Northern Uganda is composed of West Nile (with Arua, Adjumani, Moyo, Nebbi, and Yumbe districts) Northern Central (with Lira, Apac, Gulu, Kitgum, and Pader districts) and North East (with Kaberamaido, Katakwi, Kotido, Kumi, Moroto, Nakapiripirit and Soroti districts).

According to the 2002 Population Census, Northern Uganda accounted for 22% of the Ugandan population (UBOS, 2002). The main economic activity in this region is agriculture. This region experienced war caused by the Lord's Resistance Army which took over 20 years to end. The war has not completely ended, but there is commendable peace in the region, following the Peace Talks that took place in Juba, Southern Sudan and the recent Uganda army attack on Lord's Resistance Army (LRA) in Garamba Forest, Democratic Republic of Congo (DRC).

3.3 Data Source

Secondary data was used from the Uganda Demographic and Health survey (UDHS), conducted by Uganda Bureau of Statistics (UBOS) and Macro International 2006. This survey was conducted with a general objective of providing information on demographic, health and family planning status and trends in the country. Respondents from Northern Uganda Region in the age group 15 – 49 were asked questions on their knowledge, attitudes and practices towards HIV/AIDS. The analysis will however be limited to the sample of 910 youth in the age group 15 – 24 years.

3.4 Data Analysis

Analysis of the data was done at three stages namely univariate, bivariate and multivariate.

3.4.1 Univariate analysis

At univariate stage, frequencies of the different categories of background characteristics were presented to show the percent distribution of respondents.

3.4.2 Bivariate analysis

Cross tabulations were run to establish the association between knowledge and attitudes about AIDS and sexual behaviour. Other variables expected to influence individual behaviour in form of socio-economic characteristics were age, sex, marital status, income, education level, occupation, cultural beliefs, residence and employment status. The association of these variables with the intermediate variables of knowledge and attitudes towards AIDS were presented. The dependent variable, behavioural change was measured in terms of condom use and willingness to go for an HIV test.

The association between the dependent and independent variables were analysed at this level. This was done using cross tabulation and contingency tables to establish whether the independent variables such as age, sex, marital status, income, education level, occupation, cultural beliefs, and employment status have any significant statistical association with the dependent variable (sexual behaviour). The significance of the relationship between the variables was established by computing the chi-square as shown below;

The Chi square test formula takes the form:

$$\chi^2 = \sum_{i=1}^{r}\sum_{j=1}^{c}\frac{\left(O_{ij} - E_{ij}\right)^2}{E_{ij}} \quad \text{.....} \quad 3.1$$

Where

O_{ij} is the observed frequency

i =1, 2, … r and j = 1, 2,..., c

χ^2 is the Chi Square

E_{ij} is the expected frequency

r is the number of categories of the independent variables

c is the number of categories of dependent variable.

A significance level of 5% will be used. This gives the probability of wrongfully rejecting the null hypothesis (H_0) when it's true. A p-value less than 0.05 indicate a statistically significant association between two variables. A p-value lying outside the limits of confidence indicates no association between the two variables.

3.4.3 Multivariate Analysis

At this level, the binary logistic regression model was fitted to examine the relationship between the sexual behavior (dependent variable) and the independent variables (knowledge and attitudes). The method was deemed appropriate for analysis because the dependent variable is dichotomous or binary in nature (change or no change in behavior). The model was used to calculate the odds ratio for the exposure categories of the main study variables carried out. The odds ratio of an event is the ratio of the probability that it will occur to the probability that it will not occur.

The binary logistic model (Hair et al, 1998) that was fitted in this form:

$$Loge\frac{p}{(1-p)} = (B_0 + B_1X_1 + ... + B_kX_k + \varepsilon) \quad \text{——} \quad 3.2$$

Where:

B_s = the estimated coefficients

ε = error term

X_s = the independent variables

k = number of variables

p = probability of youth changing behavior

The model shows the likelihood of a youth changing his or her sexual behavior relative to a reference category for each of the independent variables. Independent variables were categorized and for each category dummy variables were created. This was done in reference to the category hypothesized with the lowest likelihood for behavior change called the reference category. The likelihood of a youth changing his sexual behavior varies across socio-economic and demographic characteristics. However, the odds ratios were assumed to remain constant across the exposure duration.

A factor less than one means reduced odds while that greater than 1 means increased odds. Variable categories with p-value ≤ were deemed significant. The R-static which is used to analyze the partial correlation between the dependent variable and each of the independent variable ranges between the dependent variable and each of the independent variables, ranges between -1 and +1. A positive value indicates that as a dependent variable increases in value so does the likelihood of the event occurring and the reverse is true for the negative value. The R-statistic measures the partial contribution of the variable to the model.

3.5 Limitations or challenges of the data

Two limitations were incurred. First, extracting data for Northern Uganda from the whole data set was challenging considering that it was a large dataset. Secondly, quantitative data needed to be supplemented by qualitative data collected through focus group discussions and key informant interviews, which did not exist.

CHAPTER FOUR
BACKGROUND CHARACTERISTICS OF RESPONDENTS

4.1 Introduction

This chapter deals with selected socio- economic and demographic variables of respondents that have a bearing on their sexual behavior and willingness to make positive behavior change in the face of AIDS. These variables include age, sex, marital status, income, education level, occupation, cultural beliefs, and employment status.

4.2 Age and sex composition

The results which are presented in Table 4.1 show that overall, the majority of respondents were females (59.3%) and 40.7% were males. The ages of the respondents were put into two groups 15-19 and 20-24. The first group represents adolescents while the second group represents young adults. Table 4.1 and figure 4.1 show that 56.1% of the respondents of both sexes were young adults and 43.9% were adolescents. The Table also indicates that 60% of the female respondents were aged 20-24 and the rest (40%) were aged 15-19 years. The age distribution of male respondents was similar with 52.2% being 20-24 years and 47.8% in the age group 15-19 years.

Figure 4.1 Sex of respondents

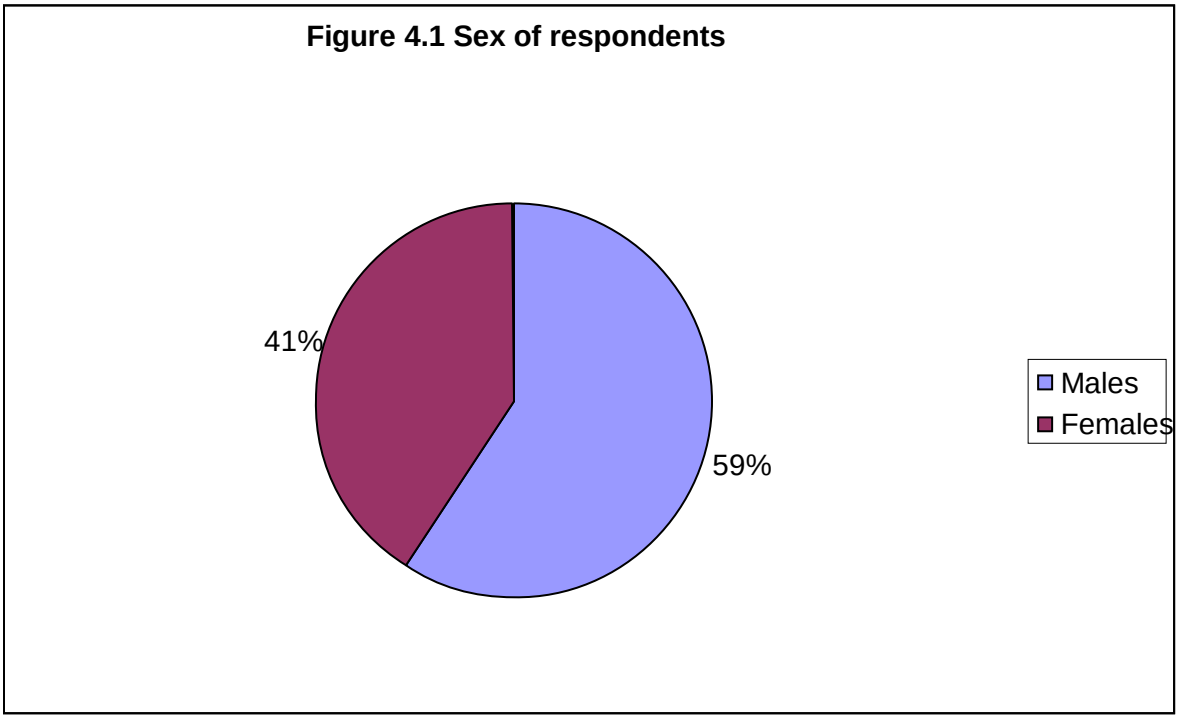


Table 4.1 Percentage distribution of respondents according to background characteristics by sex

Background Characteristics	Males (n=370)	Females (n=540)	Both sexes (n=910)
Age group			
15-19	47.8	40.0	43.9
20-24	52.2	60.0	56.1
Residence			
Urban	75.8	41.4	58.6
Rural	24.2	58.6	41.4
Sub-Region			
North East	13.6	8.7	11.2
North Central	38.4	45.2	41.8
West Nile	48.0	46.1	47.0
Education			
None	5.6	18.9	13.2
Primary	39.1	47.0	43.7
Secondary	37.3	23.5	29.4
Tertiary	18.0	10.6	13.7
Religion			
Catholics	49.1	47.4	48.3
Protestants	36.0	33.2	34.4
Moslems	14.9	19.4	17.5
Occupation			
Peasants	21.1	52.7	48.1
Business	30.5	19.9	20.2
Clerical work	18.2	16.6	17.4
Casual work	30.2	10.8	20.5
Marital status			
Never married	16.0	3.3	9.8
Currently married	62.5	70.8	66.7
Cohabiting	14.6	18.8	16.7
Separated/Divorced/widowed	6.90	7.1	6.8
ALL	**100.0**	**100.0**	**100.0**

4.3 Residence

Table 4.1 shows that most male respondents lived in urban centers (75.8%) than in rural areas (24.2%). In contrast, the majority of the females lived in rural areas (58.6%) compared to 41.4% living in urban centers. Overall majority of the youth (58.6%) lived in urban centers than rural areas (41.4%). This is perhaps because of the civil war which scared the youth from rural areas where they could be abducted by LRA and misunderstood by Uganda army.

4.4 Sub-Region

The majority of study respondents were from West Nile region (47.0%), followed by those from North Central region (41.8%) and only 11.2% were from North East region. This was perhaps because of more political stability and security in West Nile than the other two sub-regions where the population is more mobile due to insecurity in North central and cattle rustling in North East.

4.5 Education

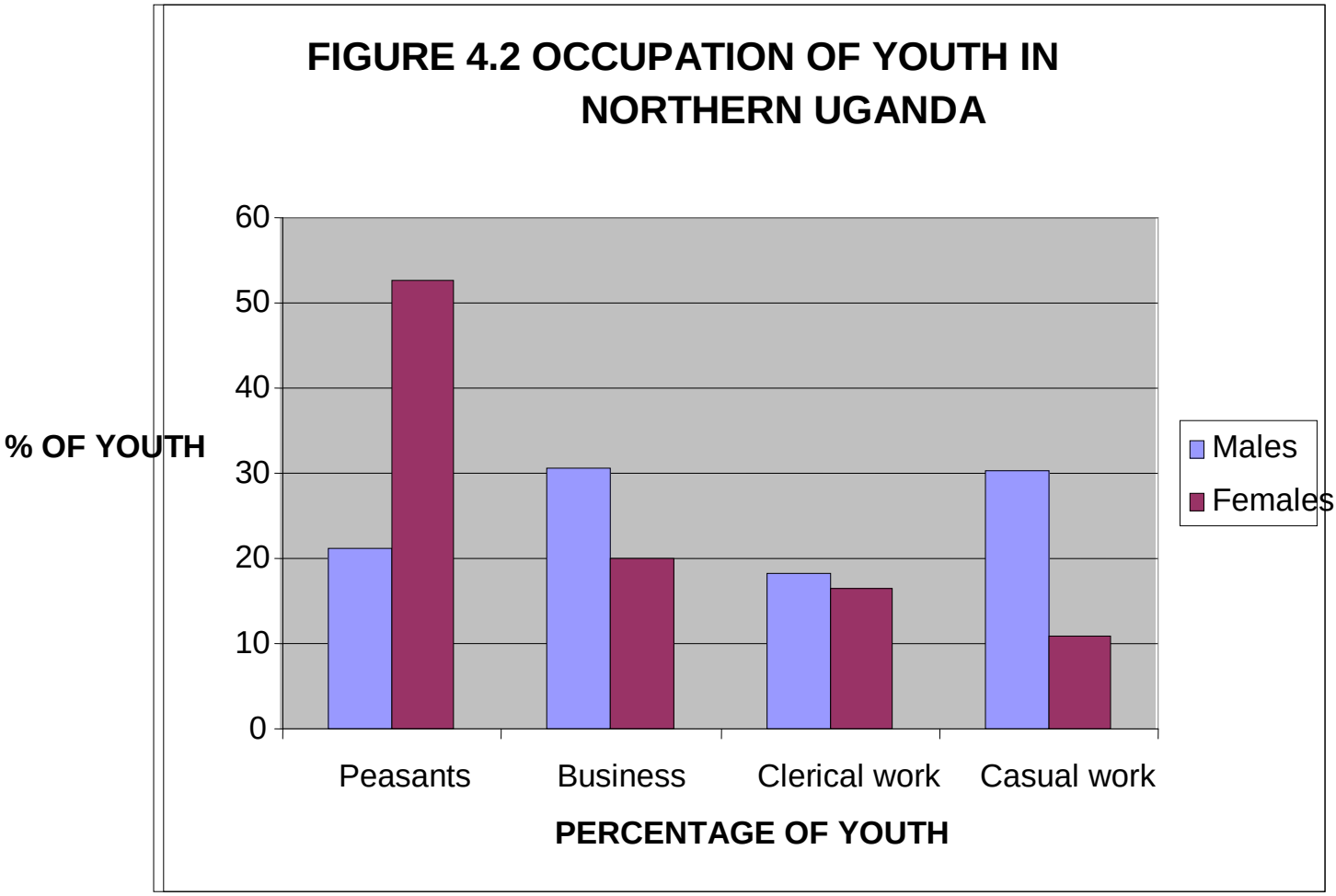
In Table 4.1 it is showed that higher proportion of female respondents (18.9%) than male respondents (5.6%) had no education at all. In contrast, lower percentage of female respondents attained secondary education (23.5) compared to their male counterparts (37.3). This may be a reflection of a higher dropout rate of female respondents at secondary level compared to their male counterparts.

4.6 Religion

Religion is of paramount importance to the lives of many Ugandans. Three main religions were identified for this study namely Catholics, Protestants and Moslems. As showed in Table 4.1, the majority of the respondents were Catholics (48.3%) while the Protestants were 34.4% and Moslems were the least at 17.5%.

4.7 Occupation

Occupation plays a vital role in the spread of AIDS in Sub Saharan Africa. An example is the long distance drivers and commercial sex workers who have been identified as drivers of the spread of HIV/AIDS. Four categories of occupation were described for the respondents which included businessmen, peasants, clerical workers and casual workers. Table 4.1 and figure 4.2 show that overall the majority of respondents were peasants (48.1%) dominated by the majority of peasants being females (52.7%) while only 21.1% belonged to this group. Most men were casual laborers (30.5%) and businessmen (30.2%). Lower proportion of women were involved in clerical work (16.6%) and casual work was done by only 10.8% women. These findings show how the different literacy levels between male and females affected their occupation category.



4.8 Marital Status

Respondents were divided into the never married, currently married, the cohabiting and the divorced and widowed. Most of the respondents were currently married (66.7%). The percentage of men currently married (62.5%) is lower than that of women in the same category (70.8%). In contrast, higher proportion of men (16.0%) than of women (3.3%) had never been married before. Also a higher percent of females (7.1%) than males (6.9%) respondents were separated, divorced or widowed which may be due to men being able to remarry than women.

4.9 Summary

This chapter has looked at the socio-demographic attributes of the respondents that may affect their sexual behavior. Most of the respondents were young adults aged 20-24 years. While higher proportion of females than male youth had never been to school, higher proportion of male than female youth were living in urban areas and more female youth were living in rural areas than in urban areas. Sex was a big determinant of level of education attained by respondents. While higher proportion of men than women had post primary education, higher proportion of female than male youth had no education. Catholics formed the majority of the study group and Moslems were the least. While the majority of the respondents were from the West Nile and North Central region, the North East region had the least respondents in the study. The majority of the female respondents were peasants while most males were clerical and casual workers. Higher proportion of males than females had never been married before and higher proportion of female youth were divorced, separated, or widowed.

CHAPTER FIVE

KNOWLEDGE, ATTITUDES AND BEHAVIORS OF RESPONDENTS ABOUT HIV/AIDS

5.1 Introduction

Abstaining from sex, being faithful to one uninfected partner and using condoms are important ways to avoid the spread of HIV/AIDS. Recent studies on HIV/AIDS in Uganda have shown that knowledge of HIV/AIDS among the population is almost universal. The transmission is known to be spread mainly through heterosexual contact when one of the partners is infected with the virus, followed by the mother to child transmission (UBOS, 2006).

The knowledge that youth have about HIV/AIDS is expected to determine their attitude towards the disease. The attitude in turn is expected to determine their sexual behavior. To ascertain the depth of knowledge about modes of HIV/AIDS transmission, respondents were asked specific questions on whether they had heard about HIV/AIDS; they knew someone who has HIV/AIDS and perceptions towards contracting HIV/AIDS.

5.2 Knowledge of HIV/AIDS by Sex of respondents

Table 5.1 shows the percentage of respondents with knowledge according to sex. Results presented in Table 5.1 show that most respondents had heard about AIDS (97.7%) and knew who was sick or dead with AIDS (86%) and knew who were at risk of HIV infection (65.5%). All male youth had heard about AIDS and a high percent of them knew someone dead or sick with AIDS (92.2%) and were at risk of infection (71.7%). The table shows that male youth have significantly higher knowledge of deaths due to HIV/AIDS or patients with HIV/AIDS than their female counterparts (p=0.002). This could be because of the majority of the male youth living in urban areas where HIV/AIDS information is more available compared to the rural areas where their female youth mostly live. Greater mobility among male than female youth may be another reason.

Table 5.1 Percentage of respondents with knowledge on HIV/AIDS by sex.

Variables	Males	Females	All	p-value
Heard of AIDS				
Yes	100.0	96.7	97.7	1.000
No	0.0	3.3	2.3	
Know someone with AIDS				
Yes	92.2	81.5	86.0	0.002
No	7.8	18.5	13.0	
At Risk to HIV infection				
Yes	71.7	62.6	65.5	0.63
No	28.3	37.4	34.5	

5.3 Knowledge of HIV/AIDS by other factors

The percentage of male and female youth with knowledge of someone dead or sick of AIDS are represented according to age group, residence, religion, region, occupation and marital status in Table 5.2.

Table 5.2 Percentages of respondents who knew someone with HIV/AIDS and are at risk.

Variables	Know someone with AIDS			At risk of HIV Infection		
	Yes	No	p-value	Yes	No	p-value
Age group						
15-19	71.4	28.6	0.85	63.7	36.3	0.365
20-24	84.3	15.7		65.7	34.3	
Residence						
Urban	87.9	12.1	0.55	70.9	29.1	0.001
Rural	82.2	17.8		54.9	45.1	
Sub-Region						
North East	83.7	16.3	0.000	54.3	45.7	0.000
North Central	95.5	4.5		70.5	29.5	
West Nile	79.1	20.9		66.9	33.1	
Education						
None	76.0	24.0	0.000	75.0	25.0	0.49
Primary	83.4	16.6		69.1	30.9	
Secondary	95.6	4.4		73.6	26.4	
Tertiary	98.8	1.2		81.0	19.0	
Religion						
Catholics	82.5	17.5	0.071	61.4	38.6	0.013
Protestants	87.5	12.5		73.3	26.7	
Moslems	92.9	7.1		76.3	23.7	
Occupation						
Peasants	73.6	26.4	0.000	57.5	42.5	0.012
Business	90.2	9.8		65.7	34.3	
Clerical work	97.0	3.0		82.3	17.7	
Casual work	91.5	8.5		67.7	32.3	
Marital status						
Never married	86.7	4.0	0.301	77.8	22.2	0.250
Currently married	96.0	13.3		63.7	36.3	
Cohabiting	86.9	13.1		72.2	27.8	
Separated/Divorced/ widowed	91.9	7.1		62.6	37.4	

5.3.1 Age

The age percentage of respondents with knowledge of someone with AIDS shown in Table 5.2 displays that knowledge increased with age. Older youth had more knowledge (84.3%) than the adolescents (71.4%) possibly because older youth had been exposed to the disease longer than the young ones.

5.3.2 Residence

Knowledge of someone dead or sick of AIDS increased from rural (82.2%) to urban residence (87.9). This could be because the urban residents have a higher HIV prevalence than the rural areas.

5.3.3 Sub-Region

Knowledge of someone dead or sick with AIDS was lowest in West Nile region (79.1%) and highest in North Central region (95.5%). Sub-region was significantly associated with knowledge of someone sick or dead of HIV/AIDS (p=0.000). This may be because West Nile and North East sub-regions have the lowest HIV/AIDS prevalence in the country implying that people there do not see people sick or dead of AIDS as often as in the North Central region with one of the highest prevalence rates in the country.

5.3.4 Education

As expected knowledge of someone with AIDS was higher for respondents with tertiary (98.8%) and secondary education (95.6%) than those with primary (83.4%) and no education (76.0%). A significant association is observed between the level of education of the respondents and the knowledge of someone sick or dead of AIDS (p=0.000) possibly because of increased exposure to HIV/AIDS information with higher level of education.

5.3.5 Religion

It is showed in Table 5.2 that the Catholics had the least knowledge of a person sick or dead of AIDS (82.5%) followed by the Protestants (87.5%) while the Moslems had the highest level of knowledge (92.9%). These results do not indicate a significant association between religion and the knowledge of someone dead or sick of AIDS (p=0.071).

5.3.6 Occupation

Past research has showed that there is a linkage between the occupation and the spread of AIDS. Research has proved that HIV/AIDS is most common in traders along major highways and among the long distance truck drivers.

In this study, knowledge of someone sick or dead of AIDS was lowest among peasants (73.6%), followed by business people (90.2%) and casual workers (91.5%). Clerical workers had the highest knowledge (96.0%). These results

might be linked to education since peasants are usually uneducated as compared to clerical workers who are highly educated hence more knowledgeable on HIV/AIDS. A significant association is found between the occupation of the respondents and the knowledge of someone sick or dead of AIDS (p=0.000)

5.3.7 Marital status

The results in Table 5.2 showed that there is no significant association between the respondents' marital status and their knowledge of HIV/AIDS (p=0.301). Knowledge was highest among respondents who were currently married (96.0%) and lowest among those who had never been married (86.7%). In between the two categories are those separated, divorced or widowed, 91.9% of whom knew someone with AIDS.

5.4 Risk perceptions to HIV/AIDS

Table 5.2 also shows percentage of respondents according to their perception to HIV.

5.4.1 Age

The Table shows that risk perception increased with age. While 63.7% of adolescents considered themselves at risk of contracting HIV/AIDS, the figure for youth 20-24 was 65.7%. However, the association between age and risk perception was not significant (p=0.365).

5.4.2 Residence

Respondents in urban areas perceived to be at higher risk of infection (70.9%) than those in rural areas (54.9%). Results also show a significant association between risk perception and place of residence (p=0.001). This could be due to the more HIV/AIDS awareness campaigns in the urban centres than in the rural areas.

5.4.3 Sub-Region

Table 5.2 shows a significant association between the sub-region of respondents and their risk perception to contracting HIV/AIDS (p=0.000). Respondents in North central sub-region were more at risk (70.5%), followed by those in West Nile (66.9%) and North East (54.3%). The highest risk perception in the North Central region was expected given that this sub-region has been most affected by the war and the majority of the people had been living in camps with limited access to health services including condoms and living risky lifestyles.

5.4.4 Education

According to the results of the study, risk perception was highest for respondents with tertiary education (81%) and lowest for respondents with primary education (69.1%). Risk perception among respondents with secondary education was 73.6% while that for none educated was 75.0%. The level of education is not significantly associated with respondents risk perception (p=0.49). The lack of consistent pattern could be due to the sexual reproductive health issues including HIV/AIDS being part of the primary and secondary school curriculum. Schools have also formed HIV/AIDS awareness clubs and straight talk clubs where HIV/AIDS is discussed widely. As a result, HIV/AIDS awareness and knowledge of associated risk factors among the school going youth begins quite early.

5.4.5 Religion

Table 5.2 shows that the Catholics had the lowest risk perception of getting HIV/AIDS (61.4%) followed by Protestants (73.3%). Moslems had the highest risk perception of 76.3% perhaps because they are polygamous and are more exposed to getting HIV/AIDS compared to Christians whose religion emphasizes the need for them to be monogamous. There was a significant association between risk perception and religion (p = 0.013).

5.4.6 Occupation

The risk of getting HIV was lowest among the peasants (42.5%) and highest among clerical workers (97.0%). Risk perception of business people was 90.2% while that of casual workers was 91.5%. The association between risk perception and occupation is significant (p=0.012). This is because peasants have less HIV/AIDS information than the clerical workers.

5.4.7 Marital Status

Risk perceptions were found to be higher among the never married (77.8%) compared to the currently married (63.7%), cohabiting (72.2) and the separated/divorced/widowed (62.6%). This pattern is probably due to the currently married assuming they are in faithful and stable unions while the never married know they can easily be tempted into sexual activity due to pressure to get stable partners who may not be safe. No significant association was found between the marital status of the respondents and their risk perceptions to getting HIV/AIDS (p=0.250).

5.5 Exposure to Media on HIV/AIDS

The most prominent source of HIV and AIDS information in all the three sub-regions was the radio, which includes information disseminated by formal campaigns. The range for other media including magazines, booklets and

pamphlets was varied from sub-region to sub-region as shown in Table 5.3. Whereas posters and brochures play a vital role in IEC they are non existent in parts of the North East and North Central region. Among interpersonal sources, health care workers were the leaders (32 percent) followed by friends (9 percent). Religious groups and community meetings were cited as the most prominent sources in North East. Educational institutions and teachers were also important sources of HIV information. It is interesting to note that very few respondents mentioned traditional healers (0.2%).

Table 5.3: Percentage of respondents who are exposed to Media on HIV/AIDS

Source	West Nile	North East	North Central	All
Radio	41.3	32.6	51.6	41.8
Health workers	31.7	41.5	30.3	34.5
Friends	3.6	18.5	1.3	7.8
Teachers	11.4	3.7	5.8	6.9
Film	1.2	0.7	1.3	1.1
Newspapers/magazines	6.0	0.0	0.0	2
Peers	1.2	0.0	0.0	0.4
Religious leaders	0.6	2.2	0.0	0.9
Other	0.0	0.0	3.9	1.3
Family	1.2	0.0	1.3	0.8
Television	0.0	0.7	1.3	0.7
Community notices	0.0	0.0	2.6	0.9
Brochures	1.2	0.0	0.0	0.5
Posters	0.6	0.0	0.0	0.2
Traditional leaders	0.0	0.0	0.7	0.2
Total	100.0	100.0	100.0	100.0

5.6 Knowledge of Misconceptions about HIV/AIDS

It is important to examine misconceptions and beliefs in order to understand the quality of knowledge of the respondents. Table 5.4 gives the responses on misconceptions, beliefs and attitudes of respondents towards them.

5.6.1 Sex of Respondent

Table 5.4 shows that generally misconceptions among the respondents about HIV/AIDS were low. 70.5 percent of the male and 94.7 percent of the female respondents agreed that a healthy person can have the AIDS virus. Eight in every ten males and females reported that people cannot get AIDS by sharing food with people who have AIDS. However the misconception about HIV being transmitted by a mosquito bite is high with 35% females and 29% males agreeing with the misconception. There is no significant association between the sex of respondents and misconceptions about HIV/AIDS (p=0.782).

Table 5.4: Knowledge of Misconception about HIV/AIDS by Background Characteristics of Respondents

Background Characteristics	A healthy looking person can have AIDS virus	The AIDS virus cannot be transmitted by mosquito bites	The AIDS virus cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person with HIV	p-value
Sex					
Male	70.5	70.5	70.5	81.8	0.782
Female	94.7	64.9	94.7	84.2	
Sub-Region					
West Nile	88.1	77.5	92.5	93.3	0.001
North Central	70.4	58.9	70.9	83.8	
North East	94.29	64.1	92.8	91.4	
Age					
15-19	73.3	69.9	79.6	88.8	0.505
20-24	87.0	63.6	83.1	85.6	
Education					
No Education	76.9	56.2	78.0	83.1	0.012
Primary	90.8	76.0	92.4	90.5	
Above Primary	96.7	91.2	92.1	95.8	
Marital Status					
Married	84.3	66.4	86.0	88.2	0.575
Divorced/Separated	96.7	46.9	84.5	79.9	
Widowed	79.8	69.9	79.4	86.1	
Never married	69.6	44.7	804	64.3	
Religion					
Catholics	69.2	70.1	58.9	77.8	0.810
Protestants	73.9	67.8	59.8	73.4	
Moslems	59.8	58.5	53.2	66.6	
Occupation					
Peasants	59.4	64.5	59.5	58.3	0.006
Business	80.4	72.9	77.8	74.0	
Clerical work	91.5	96.1	89.5	86.9	
Casual work	70.9	73.1	71.9	60.6	

5.6.2 Age

Table 5.4 shows that there was no significant association between age and misconceptions about HIV/AIDS (p=0.505). Generally misconceptions among the respondents in both age groups about HIV/AIDS were low.

5.6.3 Sub-Region

Table 5.4 shows a significant association between the region of respondents and misconceptions about HIV/AIDS (p=0.001). Respondents in North Central region had more myths and misconceptions followed by those of North East and West Nile sub-regions. The more myths and misconceptions in the North Central region could be due to the sub-region being most affected by the war and majority of the people living in camps with limited access to health information and services.

5.6.4 Education

It is interesting to observe that in Table 5.4 level of education is significantly associated with the level of myths and misconceptions about HIV/AIDS (p=0.012). Not surprisingly the more the education of the respondent, the less the myths and misconceptions towards HIV/AIDS. This result is due to the introduction of health, HIV/AIDS in the school curriculum, which reduces myths and misconceptions.

5.6.5 Marital status

Myths and misconceptions were found to be higher among the never married compared to the currently married, cohabiting, and the separated/divorced/widowed. The study confirmed that there was no significant association between the marital status of the respondents and the myths and misconceptions on HIV/AIDS (p=0.575).

5.6.6 Religion

On average the Muslims had the most misconceptions about HIV/AIDS compared to the Protestants and Catholics. However, there was no significant association between religion of respondents and misconceptions (p=0.810).

5.6.7 Occupation

Table 5.4 shows that peasants had the most myths and misconceptions (39.9%), followed by casual laborers (30.9%), then business men (23.7%) while the clerical workers had the least myths and misconceptions about HIV/AIDS, (9.0%). This can be explained by the higher education of the clerical workers which exposes them to adequate information about HIV/AIDS. There was a significant association between occupation and misconceptions (p=0.006).

5.7 Knowledge of Drugs for AIDS Treatment

General knowledge about anti-retroviral therapy and AIDS care are critical for utilization of HIV/AIDS services. However, the results of the study in Table 5.5 show that there was a low level of overall awareness of anti-retroviral therapy among all youth. Four in every ten youth both males and females reported to have heard of any AIDS drug. The variations in characteristics are analyzed below.

Table 5.5: Knowledge of drugs for AIDS Treatment by Background Characteristics

Background characteristics		p-value
Age		
15-19	40.0	0.490
20-24	42.5	
Sex		
Male	35.7	0.670
Female	48.6	
Sub-Region		
North East	38.3	0.005
West Nile	18.8	
North Central	60.6	
Education		
No Formal Education	17.7	0.018
Primary	27.8	
Secondary	45.0	
Marital tatus		
Married	37.8	0.072
Divorced/Separated/Widowed	28.3	
Never married	19.8	
Religion		
Catholics	36.1	0.098
Protestants	38.4	
Moslems	35.2	
Occupation		
Peasants	12.7	0.008
Business	39.0	
Clerical work	50.2	
Casual work	22.2	
Residence		
Urban	40.7	0.008
Rural	14.8	

5.7.1 Age

The study shows that there is no significant association between age and level of information about the AIDS drugs (p=0.490). Level of knowledge about AIDS drugs is low among younger youth (40.0%) than older ones (42.5%).

5.7.2 Sex

Table 5.5 shows that that there was no significant association between sex and misconceptions about HIV/AIDS (p=0.670).

5.7.3 Sub-Region

Table 5.5 shows that all sub-regions had low knowledge about AIDS treatment. Respondents from the West Nile had the lowest knowledge on AIDS treatment (18.8%), followed by those in the North East region (38.3%). The respondents in North Central region had the highest knowledge on AIDS drugs (60.6%). There was a significant association between sub regions and knowledge of AIDS treatment (p=0.005). The highest prevalence in North Central may explain the highest knowledge of AIDS drugs which they have to use more than respondents in the sub-regions.

5.7.4 Education

As expected, Table 5.5 shows that there was a significant association between knowledge of AIDS drugs and level of education (p=0.018). The more education a respondent had, the more the level of knowledge about AIDS drugs. Youth with secondary education had more knowledge about drugs for AIDS treatment (45%) compared to those with primary (27.8%) and no education (17.7%).

5.7.5 Marital Status

Table 5.5 shows that married youth had the most knowledge about AIDS drugs (37.8%) compared to 28.3% among divorced/Separated/Widowed and only 19.8% among the never married. There was no significant association between marital status and knowledge about drugs for AIDS treatment (p=0.072).

5.7.6 Religion

There was no significant difference in the knowledge about AIDS drugs and religion. 36.1% of Catholics, 38.4% of Protestants and 35.2% of Muslims had knowledge on the knowledge about AIDS drugs. There was no significant association between religion and knowledge about drugs for AIDS treatment (p=0.098).

5.7.7 Occupation

Peasants had the least knowledge about AIDS drugs (12.7%) followed by casual workers (22.2%), business (39.0%) and clerical workers (50.2%). The high knowledge in clerical workers can be explained by the exposure on HIV/AIDS information at work and the higher education level among the clerical workers. There was a highly significant association between knowledge of AIDS drugs and occupation (p=0.008).

5.7.8 Residence

Table 5.5 shows that 40.7% of youth in urban areas had knowledge about AIDS drugs compared to only 14.8% in the rural areas. This can be explained by the more access and exposure to HIV/AIDS information in the urban areas than in the rural areas. There was a highly significant association between knowledge of AIDS drugs and residence (p=0.008).

5.8 Attitudes towards HIV/AIDS

This section is about issues related to attitudes towards HIV/AIDS which include stigma towards people living with HIV/AIDS, ability to negotiate for safer sex and attitudes towards teaching youth about condom use. Table 5.6 summarizes responses on attitudes of respondents.

5.8.1 Sex of respondents

In the Table, the responses show that some families would not support family members who were HIV positive. About 71.6 percent of males and 74.6 percent females accepted to take care of the relatives affected by HIV/AIDS. In addition, 65.1 percent of males and 67.6 percent of the females believed that infected female teachers should be allowed to continue teaching their children. Furthermore only five in every ten male and female respondents wanted to keep the HIV positive status of a family member secret. A sizeable proportion of the respondents also hold positive perceptions buying sugar, fresh vegetables/food from vendors who are infected with HIV/AIDS (64.9 percent of the females and 71.7 percent of the males). There is no significant association between the sex of respondents and positive attitudes towards people living with HIV (p=0.950).

Table 5.6 Percentage of respondents with positive attitudes towards people living with HIV by background characteristics

All Background Characteristics	Willing to care for a family with the AIDS virus	Would buy fresh food/vegetables from vendors with AIDS virus	A female teacher with AIDS virus be allowed to teach	Would want to keep secret that a family member is infected with AIDS virus	All	p-value
Sub-Region						
North Central	79.6	83.6	79.5	39.3	70.5	0.001
West Nile	53.6	35.9	41.5	25.1	39.0	
North East	91.4	87.5	73.4	16.1	67.1	
Age						
15-19	72.2	68.3	64.6	39.0	61.0	0.771
20-24	77.3	68.6	67.8	32.8	61.6	
Sex						
Male	71.6	64.9	65.1	48.7	62.6	0.950
Female	74.7	71.7	67.6	45.6	64.9	
Education						
No Formal Education	70.6	55.2	55.5	26.5	51.9	0.003
Primary	86.4	83.6	79.0	43.4	73.1	
Above Primary	91.3	90.9	90.0	40.2	78.1	
Marital Status						
Married	73.9	60.8	57.7	42.5	58.7	0.000
Divorced/Separated/Widowed	70.1	56.7	51.6	37.7	54.0	
Never married	49.4	40.0	32.3	30.1	37.9	
Religion						
Catholics	65.7	58.5	62.3	62.4	62.2	0.540
Protestants	64.3	61.4	66.1	63.8	63.9	
Moslems	65.0	63.1	61.0	64.6	63.4	
Occupation						
Peasants	58.2	63.2	57.8	47.3	56.6	0.013
Business	82.0	75.6	80.1	76.7	78.6	
Clerical work	93.2	95.4	91.4	91.6	92.9	
Casual work	75.7	77.3	76.1	64.6	73.4	
Residence						
Urban	88.6	84.7	81.0	63.8	79.5	0.015
Rural	54.9	55.6	58.8	35.8	51.3	

5.8.2 Sub-Region

Table 5.6 shows that the West Nile sub-region had the lowest accepting attitudes towards people with HIV/AIDS (39%), followed by North East (67.1%). The North Central region had the highest accepting attitudes towards people with HIV/AIDS (70.5%). The highest attitudes towards people with HIV/AIDS in North Central may be due to greater exposure to the disease compared to the other sub-region. There is a significant association between the region of respondents and positive attitudes towards people living with HIV (p=0.001).

5.8.3 Age

Youth aged 20-24 had more positive attitudes towards people living with HIV/AIDS (61.6%) compared to those aged 15-19 (61.0%). The study confirmed that there is no significant association between the age of respondents and positive attitudes towards people living with HIV (p=0.771).

5.8.4 Education

The more education a respondent had, the more accepting attitudes towards people living with HIV/AIDS. A significant association was found between the education of respondents and positive attitudes towards people living with HIV (p=0.003).

5.8.5 Marital Status

Table 5.6 shows that the never married had the lowest accepting attitudes towards people with HIV/AIDS (37.9%) compared to the married (58.7%) and the divorced/separated/widowed (54.0%). The accepting attitudes towards people with HIV/AIDS among the never married can be explained by the limited exposure to HIV information coupled with inadequate exposure to the disease compared to other categories. There is a significant association between the marital status of respondents and positive attitudes towards people living with HIV (p=0.000).

5.8.6 Religion

All religions had similar attitudes towards people living with HIV/AIDS. There is no significant association between the religion of respondents and positive attitudes towards people living with HIV (p=0.540).

5.8.7 Occupation

Peasants had the least accepting attitudes towards people with HIV/AIDS (56.6%) followed by casual workers (73.4%), business persons (78.6%) and clerical workers (92.9%).

The high accepting attitudes towards people with HIV/AIDS among clerical workers can be explained by the exposure to HIV/AIDS information at work and the higher education level among the clerical workers. There is a significant association between the occupation of respondents and positive attitudes towards people living with HIV (p=0.013).

5.8.8 Residence

Respondents in urban areas had more accepting attitudes towards people with HIV/AIDS (79.5%) compared to the rural respondents (51.3%). This could be due to the exposure to HIV information in the urban areas compared to the rural areas. There is a significant association between the residence of respondents and positive attitudes towards people living with HIV (p=0.013).

5.9 Coverage of HIV Testing

Awareness of HIV status can motivate individuals to further protect themselves against infection or to protect their partners from acquiring the virus. However, Table 5.7 shows that the majority of the respondents have never been tested for HIV.

5.9.1 Sex

A comparison of HIV testing among females and males indicates that coverage of HIV testing is higher among females (44.8%) than males (41.9%). There was a significant association (p=0.003) between sex and testing for HIV/AIDS possibly because HIV has mostly affected women.

5.9.2 Age

A higher proportion of youth aged 20-24 years had been tested (48.1%) compared to 29.7% for the youth aged 15-19 years. There was no significant association between age and testing for HIV/AIDS (p=0.150).

5.9.3 Education

As expected, Table 5.7 shows that youth with secondary level education and above had high chances of being tested as compared to those with lower education levels. There is a highly significant association between testing and level of education (p=0.002).

Table 5.7: Coverage of HIV Testing by Background Characteristics

Background characteristics	Percentage	p- Value
Sex		
Male	41.9	0.003
Female	44.8	
Sub-Region		
West Nile	29.7	0.000
North East	44.4	
North Central	57.7	
Age		
15-19	29.7	0.150
20-24	48.1	
Education		
No Formal Education	36.4	0.002
Primary	47.5	
Above Primary	49.2	
Marital Status		
Married	48.4	0.000
Divorced/Separated/Widowed	42.3	
Never married	34.2	
Religion		
Catholics	35.9	0.750
Protestants	35.6	
Moslems	33.6	
Occupation		
Peasants	32.5	0.001
Business	52.7	
Clerical workers	63.6	
Casual workers	44.8	
Residence		
Urban	68.8	0.017
Rural	52.8	

5.9.4 Sub-region

Table 5.7 shows that the North Central region had the highest number of respondents who had tested for HIV/AIDS (57.7%) compared to the North East (44.4%) and West Nile (29.7%). This can be explained by the majority of the people in North Central region living in camps and therefore people are easily mobilized for these services. There was a significant association between sub-region and testing for HIV/AIDS (p=0.000).

5.9.5 Marital status

Few never married youths had tested for HIV/AIDS (34.2%) compared to the married (48.4%) and divorced/separated/widowed (42.3%). There was a significant association between marital status and testing for HIV/AIDS (p=0.000).

5.9.6 Occupation

Table 5.7 shows that majority of clerical workers had tested for HIV (63.6%) followed by business people (52.7%), casual workers (44.8%) and only 32.5% of the peasants had tested for HIV. There was a significant association between occupation and testing for HIV/AIDS (p=0.001).

5.9.7 Residence

The coverage of HIV testing among youth is much higher in urban areas (68.8%) than in rural areas (52.8%). This could be due to the exposure to HIV information and testing services in the urban areas compared to the rural areas. There was a significant association (p=0.017) between residence and testing for HIV/AIDS.

5.10 Reasons for Not Testing for HIV

Table 5.8 shows that seven and six in every ten male and female respondents respectively, have never been tested for HIV because they need not to. Thirteen percent of the males and females respectively do not want to know if they have HIV. Other reasons for not testing include having no knowledge about HIV test, not knowing where to get tested, cost of testing being high, and inaccessibility to treatment

Table 5.8: Reasons for not testing for HIV by Background Characteristics

Reason	Male	Female	Total
No knowledge about HIV test	3.9	2.9	3.3
Don't know where to get one	10.1	17.3	14.7
Test costs too much	0.6	3.2	2.2
Don't need test/low risk	69.7	61.2	64.3
Do not want to know if I have virus	12.9	13.1	13.1
Can't get treatment if I have the virus	1.7	0.0	0.6
Other	1.1	2.2	1.8
Total	100.0	100.0	100.0

The majority of the youth felt that they were not at risk and therefore did not want to test. More male youth felt that they were not at risk (69.7%) than the females (61.2%). 15% of the youth reported that they did not go for testing because they did not know where to get the service.

5.11 Behavior change towards HIV/AIDS

This section presents data on sexual behavior related to the spread of HIV/AIDS. Indicators of sexual behavior, knowledge and attitudes include age at first sex and number of sexual partners. Behavior such as paying or receiving money for sex, sex with non-marital and non-cohabiting partners are considered risky (UBOS, 2007).

The section also highlights respondents' willingness to go for HIV testing, seeking STI treatment and knowledge of STI symptoms.

5.11.1 Protecting themselves against infection

Protection against getting HIV/AIDS was grouped into four categories abstinence, faithfulness, protected sex and nothing and is shown in Table 5.9. The table shows that overall the respondents were using the protection of sticking to one sexual partner (58.9%) followed by protected sex (29.4%), and abstinence (11.7%). These results show that less than 12% of the respondents abstain from sex which implies that youth begin sexual intercourse at a very young age.

5.11.2 Protection by Age

It is worth noting that only 5.8% of the adolescents aged 15-19 years were abstaining while 32% were using condoms. This is a worrying phenomenon for the future health of these youth. This is may be because the young adults are already in steady relationships such as marriages and cohabitation. Two thirds of those aged 20-24 years (65%) were faithful to their partners. There was no significant variation between the two age groups (p=0.951).

5.11.3 Protection by sex

Table 5.9 shows that only 11.4% of male and 18.6% of female youth were abstaining while 38.9% of males and 20.8% of female were using condoms. This can be explained by the low negotiation skills for safer sex by the female youth. More female youth were faithful (60.6%) compared to the male youth (49.7%). There was no significant association between sex and method of protection (p=0.750)

Table 5.9 Percentage of respondents who have protected themselves or their partners against HIV by background characteristics

Background variables	Abstinence	Faithfulness	Protected sex	p-value
Age group				
15-19	5.8	62.2	32.0	0.951
20-24	13.8	65.7	20.5	
Sex				
Male	11.4	49.7	38.9	0.750
Female	18.6	60.6	20.8	
Residence				
Urban	13.1	51.3	35.6	0.770
Rural	10.5	69.3	20.2	
Education				
None	25.1	54.3	20.6	0.017
Primary	12.5	63.6	23.9	
Secondary	6.8	64.1	29.1	
Tertiary	5.7	65.1	29.2	
Sub-Region				
North East	6.9	65.9	27.2	0.250
North Central	12.7	47.7	39.6	
West Nile	15.9	70.4	13.7	
Religion				
Catholics	8.5	69.1	22.4	0.890
Protestants	10.8	61.1	28.1	
Moslems	12.4	56.5	31.1	
Occupation				
Peasants	8.7	75.2	16.1	0.008
Business	7.7	54.9	37.4	
Clerical work	7.3	60.8	31.9	
Casual work	17.5	49.2	33.3	
Marital status				
Never married	5.5	34.9	59.6	0.003
Currently married	8.2	69.2	22.6	
Cohabiting	18.3	46.8	34.9	
Separated/Divorced/widowed	26.9	46.9	26.2	

5.11.4 Protection by Residence

It is not surprising that more rural residents were more faithful to their partners (69.3%) than the urban residents (51.3%). In contrast more urban residents were using condoms (35.6%) than the rural respondents (20.2%) which is also expected since urban youth are more exposed to information about condoms than their rural counterparts. There was no significant association between the place of residence and method used for protection against HIV/AIDS (p=0.770).

5.11.5 Protection by Education

It is interesting to observe that the level of faithfulness and use of condoms increases with education of the youth. This is probably due to higher education giving exposure to the youth to information, education and awareness on HIV/AIDS. Table 5.9 shows that there was a strong significant association between method of protection used and level of education (p=0.017).

5.11.6 Protection by Occupation

Faithfulness was highest for peasants (75.2%) and clerical workers (60.8%) and lowest among business persons (54.9%) and casual workers (49.2%). The reason for these results may be that the peasants had much need for being faithful due to having less money than the business persons with higher income to afford buying condoms and had no much need to be faithful. In contrast, abstinence was much lower among the business persons (7.7%), clerical workers 7.3% while casual workers had the highest proportion abstaining (17.5%). This pattern may reflect the low incomes of casual workers whose viable alternative of protection is abstaining. Table 5.9 shows a significant association between occupation and method of protection (p=0.008).

5.11.7 Protection by marital status

As expected the never married were least faithful to their partners (34.9%) and the currently married were the most faithful (69.2%). In addition, the never married youth had the highest rate of condom use (59.6%) and only 5.5% of them were abstaining. Not surprising the separated, divorced and widowed had the highest percentage abstaining from sex (26.9%) since they did not have regular sexual partners. There is a significant association between marital status of the respondents and the protective method used against HIV infection (p= 0.003).

5.11.8 Protection by sub-region

The West Nile sub-region had the highest proportion (70.4%) of respondents using faithfulness as a method of protection, followed by North East (65.9%) and the North Central had the least (47.7%). The North Central sub-region had the highest proportion of respondents using condoms as a method of protection (39.6%), followed by North East (27.2%) while West Nile had the least (13.7%). The West Nile sub-region had the highest respondents abstaining (15.9%) followed by North Central (12.7%) and the North East had the least (6.9%). There was no significant association between sub-region and method of protection (p=0.250).

5.11.9 Protection by religion

Most Catholics (69.1%) used faithfulness as a method of protection, followed by Protestants (61.1%) and the least were Moslems (56.5%). Results in Table 5.9 show that there is no significant association between religion and method of protection (p=0.890). Being allowed to have more than one wife, the Muslim youth may already be having several regular partners which is not considered faithful by our definitions. Perhaps this may be the reason higher percentages of Muslims (31.1%), than Catholics (22.4%) and Protestants (28.1%) reported using condoms.

5.12 Multiple sexual partners

The major indicators of sexual behaviour are the number of sexual partners with whom the youth had sex in the last 12 months, the type of relationship they had with these partners and the number of sexual partners in their whole life. Table 5.10 summarises responses of respondents on these indicators. Overall 69.9% of the male and 67.6% of the female youth had sex in the past 12 months. Of these 27.1% male youth had sex with 2+ partners in the past 12 months much higher than 7.8% of the female youth.

Table 5.10 Mean number of sexual partners for male and female youth

	Males			Females		
Age group	**% who had sex in the past 12 months**	**% who had 2+ partners in the past 12 months (among men who had sex in the past 12 months**	**Mean no. of life time sexual partners**	**% who had sex in the past 12 months**	**% who had 2+ partners in the past 12 months (among women who had sex in the past 12 months**	**Mean no. of life time sexual partners**
15-19	51.6	26.1	3.2	45.4	6.5	1.5
20-24	84.3	36.8	5.4	81.7	3.2	1.8
Residence						
Urban	64.3	32.1	7.1	57.4	7	2.3
Rural	73.6	26.5	5.2	72.4	3.9	2.2
Education						
None	86.9	25.1	6.8	87.6	2.9	2.1
Primary	74.9	28.3	7	74.8	4.1	2.2
Secondary+	63.3	30.6	7.1	66.2	5.7	2.2
Sub-Region						
North East	75.1	15.7	3.3	77.8	7.9	1.6
North Central	78.3	23.2	5.9	87.3	20.4	1.7
West Nile	62.1	24.1	4.7	65.7	6.7	1.6
Marital status						
Never married	63.4	31.5	6.8	41.9	20.0	1.4
Currently married	99.1	27.5	8.5	98.0	2.1	1.7
Separated/Divorced/widowed	31.8	24.4	3.2	22.5	10.7	2.5
All	**69.9**	**27.1**	**5.7**	**67.6**	**7.8**	**1.9**

5.12.1 Age

The number of sexual partners increased with age. Adolescents (15-19 years) had 2.3 life time sexual partners while the young adults (20-24 years) had 3.6 sexual partners. On average, proportion of adolescents who had sex in the past 12 months was 48.5% compared to 83% of the young adults (20-24 years) who had sex in the past 12 months.

5.12.2 Sex

Female adolescents (15-19 years) had 1.5 life time sexual partners and those aged 20-24 had 1.8 compared to the male youth (15-19 years) who had 3.2 life time sexual partners and 5.4 sexual partners for male youth aged 20-24 years. Implied in this is that, male youth had twice as many life time sexual partners as compared to their female counterparts.

Twenty six percent of female adolescents and 36.8% of male youth (20-24 years) had 2+ sexual partners in the past 12 months compared to only 6.5% female adolescents and 3.2% female youth (20-24 years).

5.12.3 Residence

Table 5.11 shows that 70.3% of rural and 60.9% of urban youth had sex in the past 12 months. Over 19% of urban youth had 2+ partners in the past 12 months compared to 15.2% of rural youth. Urban youth had more life time sexual partners (4.7) than rural youth who had 3.7.

5.12.4 Education

Youth with no education had lower number of sexual partners (4.5) compared to the primary (4.6) and post secondary (4.7). Number of sexual partners increased with increasing education. This may be due to the youth with no education having held onto the cultural values of abstinence compared to those who are educated and therefore have perhaps been exposed to media that has changed their attitudes. However, youth with no education (87.3) reported to have had sex in the past 12 months compared to 74.9% with primary education and 64.8% with secondary education. This may be due to increased information among the youth in school on issues of HIV/AIDS.

5.12.5 Marital status

The Table shows that currently married male youth had the most multiple partners (8.5) compared to the separated/ divorced (3.2) and the never married (6.8). This partly explains why HIV prevalence is highest among the married people compared to other categories.

5.13 Condom use

This section is about condom use at last sex among those who had sex in the 12 months preceding the survey.

Table 5.11 Condom use at last sex among those who had sex in the 12 months preceding the survey

Age group	Used Condoms	p-value
15-19	32.2	0.623
20-24	19	
Sex		
Male	37.6	0.000
Female	14.3	
Residence		
Urban	35.6	0.001
Rural	14.8	
Education		
None	9.4	0.000
Primary	19.4	
Secondary	26.1	
Tertiary	39.4	
Sub-Region		0.780
North East	23.7	
North Central	33.6	
West Nile	17.9	
Religion		
Catholics	13.1	0.008
Protestants	29.7	
Moslems	34.1	
Occupation		
Peasants	12.1	0.000
Business	29.9	
Clerical work	37.3	
Casual work	21.7	
Marital status		
Never married	40.2	0.000
Currently married	13.4	
Separated/Divorced/widowed	20.7	
ALL	24.9	

5.13.1 Age

Table 5.11 shows a big difference in the condom use by age groups. The adolescents (32.2%) compared to that of the young adults (19%). The difference may be due to older youth who might be in stable unions compared to the adolescents. However, there is no significant association between age and condom use (p=0.623).

5.13.2 Sex

As observed in the table, much higher proportion of males (37.6%) than females (14.3%) used condoms in Northern Uganda. This might be due to the low bargaining power for safer sex of females than males and the more exposure to information by males than females. There is a strong significant association between sex and use of condoms (p=0.000).

5.13.3. Residence

Over 35% of youth in urban areas were found to be using condoms compared to rural respondents (14.8%). This is in conformity with other studies and can be partly explained by the easier access to condoms in the urban areas than in rural areas. There is a significant association between residence and condom use (p=0.001) by youth in Northern Uganda.

5.13.4 Education

Condom use was highest among respondents with post secondary (39.4%) compared to those with primary (19.4%) and none (9.4%). This is because those with no education tend to cling to their cultural beliefs and practices and therefore shun the use of condoms. The association between the education and condom use is highly significant (p=0.000).

5.13.5 Sub-Region

Condom use at last sex was highest in North Central region (33.6%), followed by North East (23.7%) and West Nile (17.9 %). There was no significant association between region and condom use (p=0.780).

5.13.6 Marital status

As might be expected the never married were most likely to have used a condom at last sex (40.2%) compared to separated/divorced/widowed (20.7%) and currently married (13.4%). Low usage of condoms among currently married might be due to the trust that they have in their partners unlike the never married.

5.14 Willingness to test for HIV

Willingness to test for HIV is an indicator of positive attitude towards the virus and its therapy. When a person tests and is found positive, he or she is counseled to live positively and given therapy. Those found negative are also counseled to protect themselves against the virus infection. Table 5.12 shows percentages of respondents who were willing to test and know their HIV status.

Table 5.12 Percentage of respondents who were willing to test for HIV

Background characteristics	Willingness to test for HIV	p-value
Age group		
15-19	75.6	0.895
20-24	86.9	
Sex		
Males	89.9	0.004
Female	78.5	
Residence		
Urban	71.3	0.028
Rural	80.9	
Sub-Region		
North Central	89.1	0.250
North East	72.3	
West Nile	84.5	
Education		
None	73.5	0.230
Primary	88.7	
Post primary	81.2	
Occupation		
Peasants	74.8	0.892
Clerical work	83.7	
Business	79.5	
Casual work	81.7	
Marital status		
Never married	68.2	0.167
Currently married	85.7	
Separated/divorced/widowed	76.9	
Religion		
Catholics	72.9	0.725
Protestants	76.3	
Moslems	79.4	
All	**77.4**	

5.14.1 Age groups

Young adults (20-24) were more willing to test for HIV (86.9%) than the adolescents (75.6%). The reason may be that older youth had more information exposure than the younger ones to enable them appreciate the benefits of testing. The association between age group and willingness to test was not significant (p=0.895).

5.14.2 Sex

The table shows that more males (89.9%) were willing to test for HIV than the females (78.5%). This could be due to the males being given more information on testing and hence appreciate the advantages of testing than females. Sex was significantly associated with the willingness to test (p=0.004).

5.14.3 Residence

Surprisingly rural youth were more willing to test (81%) than the urban youth (71%). Given that the urban youth had access to information than rural youth, one expected the reverse results where urban youth were more willing to test than rural ones. These results may reflect the fear of urban youth to know their positive status since they tend to be more promiscuous. Place of residence was significantly associated with willingness to test for HIV (p=0.028).

5.14.4 Education

Table 5.12 shows that respondents with primary education were more willing to test for HIV (88.7%) than those with no education (73.5%) and with post primary education (81.2%). Those with no education are least willing to test probably because of lack of information on testing and are more conservative culturally than the rest. However it is not clear why youth with post primary education should be less willing to test than youth with primary education. A possible explanation is that the highly educated may have been promiscuous and fear finding out their positive status. However the association between education and willingness to test was not significant (p=0.230).

5.14.5 Marital status

Willingness to test was highest among the married respondents (86%) and lowest among the never married (68%) while those cohabiting/separated/widowed/divorced are in between. The reason for the pattern of the results is that the never married fear to know their results because of their risky sexual behavior while the currently married want to find out their results and keep faithful to their partners. However, there was no significant association between marital status and willingness to test (p=0.1677)

5.14.6 Sub-region

Willingness to test was highest in North Central (89.1%) followed by West Nile (84.5%) and least in North East (72.3%). This may be due to more information on HIV among respondents in North Central than in other sub regions. There is no significant association between sub-region and willingness to test (p=0.250).

5.14.7 Occupation

Clerical workers were most willing to test for HIV (83.7%) than casual workers (81.7%), business persons (79.5%) and peasants (74.8%). It is not surprising that peasants were least willing to test since they are most conservative due to low exposure to information. The association between occupation and willingness to test was not significant (p=0.892).

5.15 Association between knowledge about HIV and practice (behavior)

Knowledge about HIV is important however translating of this knowledge into behavior or practices that prevent or protect individuals against contracting HIV is paramount. Tables 5.13 shows how the respondents who are aware of HIV/AIDS and perceive its risks use condoms and are willing to test HIV.

Table 5.13 Percentage of respondents with knowledge and risk perception about HIV/AIDS by condom use and willingness to test for HIV.

Variables	**Condom use**			**Willingness to test for HIV**		
	Yes	No	p-value	Yes	No	p-value
Heard of AIDS						
Yes	45.5	54.5	0.401	88.1	11.9	0.000
No	24.7	75.3		1.2	98.8	
Know someone with AIDS						
Yes	49.7	50.3	0.000	87.9	12.1	0.140
No	11.8	88.2		74.9	25.1	
At risk of HIV infection						
Yes	41.6	58.4	0.000	84.7	15.3	0.407
No	21.7	78.3		79.7	20.3	
Overall	**42.7**	**57.3**		**82.9**	**17.1**	

5.15.1 Heard of AIDS

The table shows that less than half of those who had heard about HIV/AIDS had used condoms in the last 12 months and a large majority of those who were not aware of the epidemic were not using condoms. The association between the variables was not significant (p=0.401).

As expected Table 5.13 indicates that willingness to test for HIV was highly significantly associated with whether the respondent had heard about HIV/AIDS (p=0.000). Almost all respondents who had not heard about HIV/AIDS (99%) were not willing to test for HIV and 88% respondents who had heard of the virus were willing to take the HIV test. The results show that knowledge of HIV/AIDS has a positive effect on willingness to know sero status but has no much effect on condom use.

5.15.2 Knowledge of one dead or living with AIDS

Of the respondents who knew someone who had AIDS, 50% had ever used condoms and the association between the two variables is significant (p=0.000). A big proportion of respondents who knew someone dead or sick of AIDS (88%) were willing to test for HIV. However the association between the variables is not significant (p=0.140).

5.15.3 Risk perception to infection with HIV

Surprisingly Table 5.13 also shows that most respondents who felt they were at risk of HIV infection, (58%) had not ever used condoms. Risk perception was highly associated with condom ever use (p=0.000). In contrast, a large proportion of youth with high risk perception (85%) were willing to take HIV test but the association between the two variables is not significant (p=0.407).

5.16 Summary

This chapter has examined the association between socio-demographic factors and the knowledge, attitudes and practices. Results have shown that generally knowledge about HIV/AIDS was high but lack of knowledge about someone with HIV was highest among respondents with no education. Furthermore, men had more information about HIV than the women. Also, most rural respondents mostly peasants thought that they were not at risk of HIV infection while a high proportion of those in urban areas knew that they were at risk.

CHAPTER SIX
DETERMINANTS OF BEHAVIOR

6.1 Introduction

This chapter presents findings of multivariate analysis of the data. At this level, the binary logistic regression model was fitted to examine the relationship between condom use and willingness to test for HIV (dependent variables of behavioral change) and the independent variables (knowledge and attitudes). The method was deemed appropriate for analysis because the dependent variables (condom use and willingness to test for HIV) are dichotomous or binary in nature (change or no change in behavior). The model was used to calculate co-efficients and the odds ratios of the study independent variables.

The likelihood of influencing the dependent variables relative to a reference category is computed by the model. Condom use and willingness to test for HIV (dependent variables) were regressed on dummy variables created from independent variables such as age, sex, residence, education, religion, marital status, occupation, education, knowledge and risk perceptions to HIV infection. Contributions of these dummy variables are given in Table 6.1 with the significance level (p), beta co-efficient and the odds ratios. (Exp B).

6.2 Results of the logistic regression.

6.2.1 Condom use

The regression results of condom use on age, sex, education, marital status, residence, knowledge of one with AIDS, risk perception to HIV infection and heard of AIDS are shown in Table 6.1. The relationship between condom use and independent variables are discussed below.

6.2.2 Age of respondent

As shown in Table 6.1, respondents in the age group 20-24 were 2.2 times more likely than those aged 15-19 (reference category) not to use condoms. Age group 20-24 also has an R-value of 0.1054, which shows that there is a relationship between the age of a respondent and their use of condoms. It can be concluded from these results that adolescents are more likely to use condoms than older youth. This may be because young adults frequently have sex with regular partners, usually their wives and therefore do not feel the need to use condoms. On the other hand, adolescents engage in sexual encounter with multiple partners for adventure. Adolescents often do not have regular partners and in cases where they do, they are not faithful to them. This necessitates them to use condoms as a mode of protection from unwanted pregnancy, STDs and HIV/AIDS.

Table 6.1 Results of Logistic Regression of condom use at last sex on selected variables

Variable	B	Exp(B)	p	R
Age				
15-19**	0.0000	1.0000	-	-
20-24	0.7700	2.1597	0.0057	0.1054
Sex				
Male**	0.0000	1.0000	-	-
Female	1.1806	3.4550	0.0001	0.1887
Residence				
Rural**	0.0000	1.0000	-	-
Urban	1.1953	3.3861	0.0007	0.1433
Education				
Secondary**	0.0000	1.0000	-	-
None	0.9132	2.4763	0.0435	0.0517
Primary	0.7653	2.1654	0.0137	0.0875
Religion				
Moslem**	0.0000	1.0000	-	-
Catholic	0.6543	1.9346	0.0621	0.0521
Protestant	0.3150	1.2901	0.3227	0.0000
Occupation				
Business**	0.0000	1.0000	-	-
Peasant	0.9168	2.5236	0.0112	0.8300
Clerical work	0.2548	1.3785	0.5349	0.0000
Casual Labor	0.7845	2.3186	0.0125	0.0849
Marital status				
Other**	0.0000	1.0000	-	-
Never married	0.3750	1.4691	0.4750	0.0000
Married	0.6741	1.9589	0.0279	0.0721
Knowledge of one dead or sick with AIDS				
No**	0.0000	1.0000	-	-
Yes	1.3575	4.7194	0.0122	0.0932
Perception of risks to HIV infection				
No**	0.0000	1.0000	-	-
Yes	0.8257	2.4066	0.0041	0.1097
Heard of HIV/AIDS				
No**	0.0000	1.0000	-	-
Yes	-1.2196	0.2417	0.2643	0.0000

Key

**= Reference category B- Logistic co efficient

R= partial correlation co efficient Exp (B) = Odds ratio

6.2.3 Sex

The results of the analysis show that female youth are 3.5 times more likely not to use condoms than men (reference group). The Table also shows that there was a strong relationship between sex and condom use (p=0.0001). The R-statistic of 0.1887 also indicates a relationship between the sex of the respondent and their condom use. These results are not surprising, considering that condoms commonly available were designed for men. The low bargaining power by women in sexual matters due to low social status and dependence on the opposite sex also explain the results. Cultural norms and beliefs which emphasize men making decisions, in particular those related to sexual matters leave women with no say.

6.2.4 Residence

Table 6.1 shows that rural residents were 3.3 times more likely not to use condoms than the people in urban areas. There is a high statistical relationship between residence and condom use (p=0.0007). These results are explainable by reasons already given in Chapter four, namely inaccessibility and unaffordability of condoms in rural areas, as well as the fact that rural residents having a higher level of faithfulness which reduces the need for condom use.

6.2.5 Education

Table 6.1 shows that condom use increases with increasing education. Respondents with no education were 2.5 times more likely not to use condoms compared to those in primary (2.2 times). Both categories are significant at $p<0.05$ but primary education is more significant (p=0.0137). Further to this, primary education has a higher R-value (0.0875) implying a higher contribution. The results suggest that higher level of education promotes condom use due to increased awareness about how to use condoms, benefits of condom use, increased bargaining power for women and dangers of not using condoms.

6.2.6 Occupation of respondent

Odds ratio for non use of condoms was highest for peasants (2.5) followed by casual laborers (2.3) and finally clerical workers (1.4). Peasants were more likely not to use condoms (p=0.0112) than casual laborers (p=0.0125). In chapter 5, the means of protection against HIV for peasants was faithfulness. Peasants are largely from rural areas and as earlier mentioned, these do not have access to condoms. Furthermore condoms cost money and the income of peasants is not enough to support regular condom use.

6.2.7 Marital status

Married youth were twice as likely as those separated, divorced or widowed not to use condoms. There is a statistical relationship between the category of youth who had been married before and condom use (p=0.0287). The marital status is related highly to non use of condoms because in marriage people assume faithfulness and the never married are expected to use condoms as they are having sexual intercourse with casual and non regular partners.

6.2.8 Religion of respondent

There is no significant relationship between being a Protestant and condom use. The R-statistic of 0.0521 shows a weak contribution of being a Catholic to condom use. Catholics were also twice as likely as Moslems were not to use condoms. This could be due to the religious beliefs against the use of condoms by Catholics and Moslems.

6.2.9 Heard of HIV/AIDS

The negative beta co-efficient of those who ever heard of HIV/AIDS means less odds not to use condoms than those who ever heard of HIV/AIDS. There is also no significant relationship between never having heard of HIV/AIDS and condom use (p=0.264).

6.2.10 Knowledge of one dead or sick of AIDS

As shown in Table 6.1, respondents with knowledge of one dead or sick of AIDS were 4.7 times more likely to use condoms than those without knowledge of one dead or sick of AIDS. There is a significant relationship between knowledge of one dead or sick of AIDS and condom use (p=0.0122).

6.2.11 Perceptions of risk to HIV infection

Respondents with perception of risk to HIV infection were 2.4 times more likely to use condoms than those in the reference category. There is a significant relationship between perception of risk to HIV infection and condom use (p=0.0000)

6.3 Willingness for HIV test

Willingness to test for HIV was regressed on the selected variables. As shown in Table 6.2. It was found out that apart from sex and marital status all other variables did not contribute to the model (R=0.0000). They are therefore not shown in the Table.

Results show that sex of respondents was significantly related with willingness to test for HIV at $p<0.05$ while marital status was not.

Table 6.2 Results of logistic regression of willingness to test for HIV on selected variables.

Variable	B	Exp(B)	p	R
Sex				
Male**	0.0000	1.0000	-	-
Female	0.9388	2.5670	0.0075	0.1211
Marital status				
Never married	0.8245	2.2731	0.1356	0.0401
Married	-0.2745	0.8123	0.4356	0.0000
Separated/divorced/widowed**	0.0000	1.0000	-	-

Key
**= Reference category
B- Logistic co efficient
R= partial correlation co efficient
Exp (B) = Odds ratio

6.3.1 Sex

Female youth were 2.6 times more unwilling than the males to be tested for HIV. There is a statistical association between females and unwillingness to test ($p=0.0075$). This can be explained by the African culture where males make decisions for females hence female youth cannot decide whether or not to go for an HIV test. It may also be due to cost of an HIV test since women have less money than men available to pay for an HIV test.

6.3.2 Marital status of the respondent

The Table shows a negative beta coefficient (-0.2745) and $p>0.05$ for married respondents. This implies that the married are less likely to go for an HIV test than the never married. The R-statistic for the never married youth is 0.0401 implying that there is some contribution of marital status to unwillingness to test. There is no significant association between marital status and willingness to test ($p>0.05$).

6.4 Summary

There was significant statistical relationship between background, socio-economic factors, intermediate variables of risk perception, knowledge of one dead or sick of AIDS and condom use at multivariate level. Behavior in the form of condom use is function of all variables though sex, education, residence and perception to risk of HIV infection had the greatest influence. Willingness to test is a function of only sex which showed a statistical relationship.

CHAPTER SEVEN
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter presents a summary of the findings, conclusions and recommendations. Findings are based on the analysis done in the previous chapters and in reference to the hypotheses stated in chapter one.

7.2 Summary of findings

Univariate analysis revealed a predominantly female population; the majority of whom were young adults aged 20-24 years. Most of the respondents lived in urban areas and a significant majority were males. Almost half of the majority of youth were peasants while the clerical workers were the least. The majority of youth had attained primary education and were Catholics. Two thirds of the youth were married. The majority of youth were from the West Nile Region, followed by those from the North Central and a small proportion were from North East Region.

At bivariate stage of analysis, it was found that knowledge of someone with HIV/AIDS was statistically associated to education level, occupation and sub-region of respondents. Perceptions to the risk of HIV/AIDS infection were found to be statistically associated to residence, sub-region, religion and occupation of respondents. The West Nile sub-region had the lowest accepting attitudes towards people with HIV/AIDS followed by North East while the North Central region had the highest accepting attitudes towards people with HIV/AIDS. While behavior change in the form of condom use was highly associated with sex, residence, education and marital status except age group and sub-region, change in the form of willingness to test was only significantly associated to sex and residence of respondents. Condom use was significantly associated to the knowledge of someone with AIDS and risk perception to HIV infection whereas willingness to test for HIV was significantly associated with only having heard of AIDS.

At multivariate analysis, apart from religion and age, all other factors (sex, residence, education, occupation, marital status, perception of risks to HIV infection and knowledge of one dead or sick with AIDS,) were found to affect condom use. Sex and residence of respondents were found to exert the greatest influence. On the contrary, only sex was found to be significantly related to willingness to test.

7.3 Conclusions

The study confirmed that residence was significantly related to condom use at all levels of analysis. The hypothesis that youth residing in urban areas are likely to be more knowledgeable, have more favorable attitudes and practice contraception more than their rural counterparts is true.

The study showed that education is paramount in sexual behavior even after controlling for effects of having heard of AIDS, knowledge of someone with AIDS and risk perception to HIV infection. Education improves one's knowledge about AIDS, changes individual attitude from traditional beliefs leading to misconceptions to correct knowledge and increases the bargaining power of women with men over sexual matters, which gives women an edge over controlling their sexual behavior. In view of the above, the hypothesis that the higher the education of an individual, the more knowledgeable about HIV/AIDS is true.

Religion was not found to be significantly related to knowledge, attitudes and behavior of youth hence the hypothesis that knowledge, attitudes and practices towards HIV/AIDS do not vary much between religious denominations is true.

The study verified that marital status was significantly related to the protective method used against HIV infection where the never married were least faithful and the currently married were the most faithful to their partners while the never married youth had the highest rate of condom use they hardly abstained from sex. It is not surprising that the separated, divorced and widowed had the highest percentage abstaining from sex probably because they did not have a partner.

The future of the HIV pandemic lies in the hands of young people, and the need to scale up programs targeting this group is clear. The behaviors they adopt now and those they maintain throughout their sexual lives will determine the course of the pandemic for decades to come. The new evidence base for what works in preventing HIV/AIDS in young people can help guide policymakers and practitioners to make better-informed choices in giving young people the attention they want and to accelerate action to achieving global goals.

7.4 Recommendations

There is need for sensitizing youth both in and out of school of HIV/AIDS in Northern Uganda. However, policies and strategies should be developed to decrease the disease burden and mortality in youth people in order to preserve their human capital. Moreover, preventing infection is much less costly than treatment—for every life year gained with anti-retroviral therapy, 28 life years could have been gained through prevention. Finally, since many young people are parents themselves, preserving their health benefits their children, too.

Education is a powerful protective factor against HIV infection and should therefore be promoted. Education provides youth with aspirations for their future, increases their expectations of future earnings, increases their ability to process health-related information and empowers them to make informed decisions.

Youth should be involved in the intervention design in order to ensure relevance of programs to them. The success of youth-specific interventions often depends greatly on how the youth relate to their service provider and, in turn, how those providers and institutions succeed in empowering and integrating youth. Similarly, the local governments, development partners, civil society organizations in the region should involve youth as early as possible.

There is now a wide consensus about the main settings through which young people can be reached with preventive interventions: schools, peers, health services, mass media and geographically defined communities. There is also a growing research base on the effectiveness of specific youth interventions within these settings. Of particular interest is a systematic review of evaluated evidence from developing countries on preventing HIV/AIDS in youth carried out by the UNAIDS Interagency Task Team on Young People. Some of the key messages from this review and related research are:

First, school-based programs can be effective in improving youth's knowledge of HIV/AIDS and reducing risky behavior. This implies that teachers should be sufficiently trained and encouraged to use interactive teaching methods and that they do not hesitate to address sexual matters explicitly. Also, starting well-designed reproductive health education even before the onset of sexual activity prevents risky behavior and allows programs to reach adolescents who do not remain in school later on.

Second, making health services more youth-friendly may lead to an increased use of facilities by young people in Northern Uganda. Many young people lack access to services such as condoms and voluntary counseling and testing (VCT). Often socially excluded or out-of-school youth are reluctant to go to a clinic, so services need to go to them where possible, such as in the workplace, job training programs, social venues, sports settings and in communities. Sensitizing health staff on young peoples' needs is critical to make sure they get the service package they need.

Third, targeted media and social marketing campaigns should be used in communities to improve young people's knowledge about HIV and AIDS. Programs that use a mix of media show significant outcomes on HIV knowledge and skills as well as on condom use. Higher levels of program exposure increase the likelihood of behavior change.

Fourth, training peers to be positive role models that can positively influence young peoples' behaviors, facilitating access to and creating trust among young people. Peer education and other community-based programs are especially effective in reaching out-of-school youth and other groups particularly vulnerable to infection. The most notable impact has been in increasing HIV/AIDS awareness and in improving some behavioral indicators such as increased condom use at last sex (e.g. Peru peer promotion program, Nigeria project with youth serving organizations and peer education program in Cameroon).

7.5 Research Agenda

While the knowledge base regarding successful programs has been steadily growing over the last decade, several large research gaps remain. Surveillance and monitoring data on youth are often unavailable and rigorous evaluation of youth HIV prevention programs in developing countries remains rare. The few that are available tend to focus only on small-scale programs. Further, they rarely measure biological markers such as HIV prevalence in the target population, but focus instead on behavioral outcome indicators, such as self-reported condom use or decrease in sexual activity. Approaches that deserve particular evaluation attention include youth-friendly clinical services and those linking livelihoods interventions and HIV prevention.

Finally, cost-effectiveness and cost-benefit analyses are still scarce for all types of approaches. Further operational research in this direction is crucial to inform policy makers about the merits of choosing or continuing a given intervention.

REFERENCES:

Akol, 2000, Knowledge, Attitudes and Sexual Behavior of young people towards HIV/AIDS, page 1-45.

AMREF report, The effects of the Katakwi/Soroti School health and AIDS prevention project., Kampala. August 2001.

Anarfi, 1999, HIV risk environment for Ghanaian women: challenges to prevention Letter Lancet 1999; 350: 1780.

Biggar and Aggius, 1987, A Brief History of HIV/AIDS, pages 3-8, The International Electronic Journal of Health Education, 2000; Volume 8: pages 86-94.

Caron, 1999. The politics of life and death; global responses to HIV and AIDS. World Watch, 2(3), 1999.

Centers for Disease Control and Prevention (CDC) (1995); Morbidity and mortality weekly report (MMWR): Case control study of HIV sero-conversion in health care workers after percutaneous exposures to HIV infected blood; France, UK, and US. 44: pages 929-931, CDC, Atlanta, USA.

Centers for Disease Control and Prevention (CDC) (2005); Exposure to Blood: What Health-Care Workers need to know, pages 1-2, CDC, Atlanta, USA.

Centers for Disease Control and Prevention, (1999); HIV/AIDS surveillance report, pages 1-44, CDC, Atlanta, USA.

Clever, L.H. and LeGuyader, Y. (1995) Infection risks for health care workers. Annual review of public health, 16: pages 142-159.

Cohall,A., Kassotis J., Parks R., Vaughan, R.Bannister and Northridge, 2001, HIV/AIDS Knowledge, Attitudes, and Opinions Among Adolescents in the River States of Nigeria, Joint National Medical Association pages 64-69.

Eaton, Araoye, 2008; Volk and Koopman, 2001; Adih and Alexander, 1999, HIV/AIDS Knowledge, Attitudes, and Opinions among Adolescents in the River States of Nigeria, Joint National Medical Association pages 20-29.

Hogle, J.A and Green, E. (2002) Project lessons learned case study; What happened to Uganda? Declining HIV prevalence, behavioural change, and the national response. USAID, pages 2-5.

Jemmot L.S., 2000 Saving our children; strategies to empower African American adolescents to reduce their risk for HIV infection. J Natl Black Nurses Association 11(1), pp.4-14.

Kabwe-Kaunde, 1997, HIV/AIDS, TB in correctional facilities, Joint National Medical Association pages, pages 64-69.

Lema, Adih, W.K 1988; Lema 1990, HIV/AIDS in Africa, Journal of Adolescent Health, pages 63-72.

PEARL 2000, Knowledge, Attitudes and Practices of young people towards HIV/AIDS, page 10-35, Ministry of Gender, Labour and Social Development, Uganda.

Ministry of Health, (MOH) (2003), STD/HIV/AIDS surveillance report for Uganda, Epidemiology / Surveillance unit STD/ACP, pages 19 & 30, Ministry of Health, Uganda.

Ministry of Health, (MOH) (2004/5) Uganda HIV/AIDS Sero- Behavioral Survey (UHSBS), Ministry of Health, Uganda.

Mitsui, T. and Iwano, K. (1992) Hepatitis C virus infection in medical personnel after needle stick accident. Hepatology, 16: pages 1107-1120.

Mupemba 1999, Rethinking the African AIDS Epidemic, AIDS 13, no. 3, pages 391-398.

Ndoleriire, S. (1993) Knowledge, attitudes, practices and beliefs of health personnel regarding nosocomial AIDS-HIV infection in five hospitals in Eastern Uganda. Tororo, Iganga and Mbale districts, pages 3-10. MMed (Community Practice) dissertation, Makerere University, Kampala.

Olanyinka, BA., Osho, A.A 1997. Changes in attitude sexual behavior and the risk of HIV/AIDS transmission in southwest Nigeria. East African Medical Journal 554-60.

Orubuloye and Caldwell, 1999, The social and economic impact of HIV/AIDS in poor countries: a review of studies and lessons, J. Sch Health, 73(4): 138-142.

Perreb, P., and Czernichowb, P., 2002, Teenage African Women and HIV-1 infection. The Lancet 360(9348), p1889.

Preston-Whyte, Carswell JW, Sewankambo NK, Lloyd G and Downing RG: How long has the AIDS virus been in Uganda? Lancet 1986; i: 1217.

Serwadda, Mugerwa R.D., Sewankambo N. K, Lwegaba A., Carswell J.W, Kirya G.B., Bayley.A.C., Downing R.G., Tedder R.S., Clayden S.A., Weiss R.A., Dalgleissh A.G. Slim Disease in Uganda and its associationwith HTLVIII infection: Lancet 1985; ii;849-868.

Sewankambo NK, Carswell JW, Mugerwa RD, Lloyd G, Kataaha P, Downing RG, Lucas S. HIV-1 infection through normal heterosexual contact in Uganda. AIDS 1987, 1: 113-116.

Taylor, M., Dlamim, SB., Kagore, H., Jinbhai, CC., and deVries, H 2003. Unerstanding high school students risk behavior to help reduce the HIV/AIDS epidermic in Kwazulu-Natal, South Africa, Journal of School Health. 73, pp.97-100.

The AIDS Support Organization (TASO), 2006, Experts emphasize Prevention and innovative Care strategies for Pediatric HIV Management, TASO, Uganda.

Uganda AIDS Commission, 2002, Situation Analysis 2002, Uganda AIDS Commission Kampala, Uganda.

Uganda AIDS Commission, 2005, The Uganda HIV/AIDS Status Report July 2004 – DECEMBER 2005, Uganda AIDS Commission, Kampala, Uganda.

Uganda Bureau of Statistics, (UBOS) (1995); Uganda Demographic and Health Survey Report, UBOS and Macro International, Columbia, USA.

Uganda Bureau of Statistics, (UBOS) (2000/1); Uganda Demographic and Health Survey Report, UBOS and Macro International, Columbia, USA.

Uganda Bureau of Statistics, (UBOS) (2002); 2002 Census Results, UBOS and Macro International, Columbia, USA.

Uganda Bureau of Statistics, (UBOS) (2006); Uganda Demographic and Health Survey Report, UBOS and Macro International, Columbia, USA.

UNAIDS, 2002 Report on the global AIDS epidemic, UNAIDS, Geneva.

UNAIDS 2006. Report on the Global AIDS Epidemic 2006, UNAIDS, Geneva.

UNAIDS, 2008 Report on the global AIDS epidemic, UNAIDS, Geneva.

UNICEF CEE/CIS and Baltics Regional Office. February 004. HIV/AIDS in Europe and Central Asia. Press Release, UNICEF, New York.

UNICEF, UNAIDS, WHO. 2000. Young People and HIV/AIDS Opportunity in Crisis. UNICEF, New York.

Varga 2000, HIV/AIDS and personal decision making about sex among men in Nigeria, World Wide Initiatives for Sexual Health Care Professionals, (2004). InternationalBarrier Protection Digest 4 (1), page 4.

Verbeck et al, 1991; Proceedings of the Seventh Worldwide Forum on Education and Culture, Joint National Medical Association pages 5-11, Washington, DC, USA

WHO 1989, The World Health Report, WHO, Geneva.

WHO, 1990; The world health report, WHO, Geneva.

WHO, 1995; The world health report WHO, Geneva.

Wodi B .E, 2005, International Electronic Journal of Education, pages 5-11.

Appendix; Relevant parts of the UDHS 2006 questionnaire used.