FACTORS INFLUENCING YOUNG PEOPLE'S PREVENTIVE ACTIONS AGAINST HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS IN TANZANIA

by

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Dedication

I dedicate this dissertation to my beloved brother Prosper Msafiri Assenga who has been my support to this day.

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Student number: 364-365-85

DECLARATION

I declare that *FACTORS INFLUENCING YOUTHS' PREVENTIVE ACTIONS AGAINST HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS IN TANZANIA* **is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.**

.....Neema..... ...6th January 2010

EVELYNE NEEMA ASSENGA **DATE**

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FACTORS INFLUENCING YOUTHS' PREVENTIVE ACTIONS AGAINST HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS IN TANZANIA

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ABSTRACT

This study identified factors influencing the practice of HIV prevention behaviours amongst Tanzania youths. Structured interviews with in-school youths (n=222) and out-of school youths (n=150); and focus groups discussions with 25 youths were conducted to collect data.

Although the level of HIV/AIDS awareness was 97.6% and 58.5% of the youths had positive attitudes towards HIV prevention, only 50.8% practised at least one mode of HIV prevention. Factors which promoted HIV prevention practices included positive attitudes towards specific preventive behaviours and the individual's self-efficacy to enact such behaviours. The barriers against the practice of HIV prevention behaviours included the lack of comprehensive knowledge about HIV/AIDS and HIV prevention, socio-economic issues such as unemployment, influx of mobile populations, loss of cultural values, negative social norms, peer pressure, alcohol abuse and the lack of adequate HIV preventive services.

Key words

Barriers to HIV prevention practices, HIV/AIDS knowledge, HIV prevention behaviours, self-efficacy to enact HIV prevention behaviours, Tanzania.

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LIST OF ACRONYMS AND ABBREVIATIONS

ABC	Abstinence, be faithful, condom use
ABCD	Abstinence, be faithful, condom use and diagnosis (VCT)
AIDS	Acquired Immunodeficiency Syndrome
AOR	Adjusted odds ratio
ARRM	AIDS Risk Reduction Model
ART	Antiretroviral therapy
ARVs	Antiretrovirals
CDC	Centers of Disease Control and Prevention
CPAR	Canadian Physicians for Aid Relief
CSW(s)	Commercial sex worker(s)
DED	District Executive Director
DFID	Department for International Development
DHS	Demographic and Health Survey
DNA	Di-ribonucleic Acid
DSW	German Foundation for World Population
ESRF	Economic and Social Research Foundation
FGC	Female genital cutting
FHI	Family Health International
GDP	Gross Domestic Product
GHC	Global Health Council
GHPWG	Global HIV Prevention Working Group
GNI	Gross National Income
GOT	Government of Tanzania
GSC	Global Service Corps
HAART	Highly active anti-retroviral therapy
HBM	Health Belief Model

HDI	Human Development Index
HIV	Human Immunodeficiency Virus
IEC	Information, education and communication
ILO	International Labour Organization
IPPF	International Planned Parenthood Federation
MoH	Ministry of Health
MoHSW	Ministry of Health and Social Welfare
NACP	National AIDS Control Programme
NBS	National Bureau of Statistics
NGO(s)	Non-governmental organisation(s)
NIMR	National Institute of Medical Research
NMSF	National Multi-sectoral Strategic Framework
OCGS	Office of the Chief Government Statistician
ORC Macro	Opinion Research Corporation, Macro International
PAI	Population Action International
PEPFAR	Presidential Emergency Plan for AIDS Relief
PLWHA	People living with AIDS
PLWHIV	People living with HIV
PMTCT	Prevention of mother-to-child transmission
PSABH	Primary School Action for Better Health
RNA	Ribonucleic Acid
SSA	Sub-Saharan Africa
STI(s)	Sexually transmitted infection(s)
TACAIDS	Tanzania Commission for AIDS
TB	Tuberculosis
THMIS	Tanzania HIV/AIDS and Malaria Indicator Survey
Tshs	Tanzania shillings
UK	United Kingdom
UNAIDS	Joint United Nations Programme on AIDS
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization

UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
UNISA	University of South Africa
USA	United States of America
VCT	Voluntary counselling and testing
VEO(s)	Village Executive Officer(s)
WEO(s)	Ward Executive Officer(s)
WHO	World Health Organization
ZAC	Zanzibar AIDS Commission

CHAPTER 1

INTRODUCTION AND BACKGROUND INFORMATION

1.1 INTRODUCTION

Since the Human Immunodeficiency Virus (HIV) was identified in 1981 (CDC 2006), the infection has spread to become a pandemic of gross magnitude worldwide. HIV causes the destruction of the body's natural immunity leading to Acquired Immunodeficiency Syndrome (AIDS). According to the United Nations Educational, Scientific and Cultural Organization (UNESCO 2006:12-13), AIDS is defined as a life-threatening illness characterised by attacks from various opportunistic infections and in many cases results in pre-mature death particularly in young people of reproductive age. The Global Health Council's (GHC Sa(a)) assessment of the impact of AIDS shows that over the last 25 years, there have been a cumulative 25 million reported deaths due to AIDS-related illnesses. In 2007 alone, 2.1 million people died of AIDS, 1.7 million of whom were adults aged 15 years and older (UNAIDS 2007:1). Similarly, of the 2.5 million people who were newly infected with HIV that same year, 40% were estimated to be aged 15-24 years (UNAIDS 2008a:17).

By the end of 2007, there were an estimated 33.2 million people living with HIV (PLWHIV) and over 90% of them were in the developing world (UNAIDS 2007:1). There has been a significant reduction in HIV prevalence from 39.5 million in 2006. There has also been a reported decline in new HIV infections from 4.3 million in 2006 to 2.5 million newly infected cases in 2007 (UNAIDS 2006:1 & UNAIDS 2007:1). Despite this downward trend in the epidemic, there are still a large number of people infected with HIV who will be in need of long-term medical and social support when they progress to AIDS.

According to the GHC's report (GHC [Sa]b), the developing countries, particularly in sub-Saharan Africa (SSA) of which Tanzania is part, have been hardest hit and account for 62% of the global HIV infection burden with an estimated 22.5 million PLWHIV. It was also estimated that of the 5.4 million youths living with HIV, 3.3 million were in SSA alone (UNAIDS 2008a:17). At the end of 2007, Tanzania had an estimated population of 39.7million (Thomas 2007). The country has seen a relatively stable national HIV prevalence ranging from 7.7 to 8.2% in 2004 and 2006 respectively, with a reported decline to 5.7% in 2007/08. However, the prevalence varies across the 26 regions of Tanzania from as low as 1.5% in Manyara to as high as 15.7% in Iringa regions respectively (NACP 2005:21; NACP 2006:7; TACAIDS, ZAC, NBS, OCGS & Marco International 2008b:116). The main mode of transmission of HIV in Tanzania is through heterosexual intercourse accounting for up to 78.1% of the infections (NACP 2005:4); while women are the most affected with a gender-specific prevalence of 10.7% compared to 7.2% in men (NACP 2005:21). The cumulative deaths from AIDS in Tanzania since 1983 to 2006 are estimated to be 2.37 million (Lwehabura & Ndyetabura 2006:130), whilst the life expectancy at birth has been projected to drop from 61 years (1995) to 46 years in 2010 due to AIDS mortality (Van den Hombergh & Weezenbeek 2008:98).

Tanzania is reportedly one of the poorest and least developed countries in the world with a gross national income (GNI) of $ 370 per capita in 2006 (World Bank 2006) and a human development index (HDI) of 0.467, ranking 159th out of 177 countries in 2005 (UNDP 2008). The country is already facing dire circumstances including: poverty, communicable diseases such as malaria and tuberculosis (TB), malnutrition, lack of access to clean water, poor infrastructure and lack of access to social amenities to name a few. The HIV epidemic is thus a reality in Tanzania, and is not only adding to the existing health crisis, but has become an integral contributor towards a rapidly growing socio-economic crisis.

1.2 BACKGROUND INFORMATION

In this section the source and background of the research problem are discussed. The background of the research problem includes details of the national overview of HIV/AIDS in Tanzania and the scaling up of antiretroviral therapy (ART) in the wake of new HIV infections, with a focus on the youths.

1.2.1 Source of the research problem

In Tanzania, there remains a high HIV infection rate; particularly amongst the youths. The HIV prevalence among the youths aged 15-24 years is an average of 2.7% ranging from 1.0% to 4.3% in the age-groups of 15-19 and 20-24 respectively. These figures represent the more recent infections and serve as an indicator for the incidence trends of HIV infection (TACAIDS et al 2008b:122). The prevention and management of HIV/AIDS is therefore at the core of saving the youths of Tanzania.

The HIV/AIDS crisis has seen the partnering of stakeholders, including the World Health Organization (WHO) and related authorities, governments, scientists, non-governmental organisations (NGOs), communities right down to the individual attempts to implement social and biological interventions at primary, secondary and tertiary levels of prevention. Such interventions include: developing and undertaking health education programmes so as to bring about sexual behaviour change to prevent HIV infection, scientific research to develop both therapeutic and preventive HIV vaccines. It also entails the development of microbiocides to prevent HIV infections and antiretrovirals (ARVs), which are life-prolonging drugs used in combinations to suppress the HI retro-virus in a person affected with an AIDS defining syndrome. ARVs are also used in preventing mother-to-child transmission (PMTCT) of HIV. However, there is still no definitive cure for HIV/AIDS infection.

The Government of Tanzania (GOT) and partners have responded to the HIV epidemic. Although the GOT increased its annual expenditure on HIV/AIDS in 2007-8 to 10.9% (595.7 billion Tanzania shillings) of its annual budget (Foster, Do, Lupa & Mdai 2008:7) which is double the 2004-5 expenditure; 90% of the HIV/AIDS programme funding is from donors (TACAIDS 2008a:14). This means that the focus and budgetary allocation for the HIV/AIDS programmes will be largely dictated by the donors. This poses a great challenge for countries like Tanzania for defining their HIV/AIDS programme priorities, due to their heavy dependence on donor money (IRIN PlusNews 2007). A study done on the systemwide effects of the Global AIDS Fund grants in three countries, Malawi, Benin and Ethiopia showed that the focus of the donor programmes had not always been in line with

the national programmes and priorities. For example, the global fund programmes had largely focused on treatment and care, and not on prevention services (Stillman & Bennett 2005:19-25).

When AIDS was first reported in Tanzania in 1983 (NACP 2006:1), the HIV intervention programmes focussed on providing information, education and communication. These programmes were largely funded by NGOs, donors and religious organisations but coordinated by the National AIDS Control Program (NACP). The main objective was to create awareness that AIDS was a deadly disease with no cure and steps needed to be taken to prevent HIV infection. In the 1980s and early 1990s, the main promotional messages by the NACP were fear-based such as “AIDS kills” (Nguma in PAI 2007); with which the public soon became complacent. The focus of the intervention programmes and funding has since shifted to the up-scaling of ART, PMTCT and caring for orphans and vulnerable children. The Tanzania fiscal year 2008 country Presidential Emergency Plan for AIDS Relief (PEPFAR), operational plan report attests to this. It shows that, in the distribution of HIV/AIDS donor funds in 2008, $60 million went into prevention programmes, whereas a combined $70 million went into care and another $126 million went into treatment (PEPFAR [COP] 2008).

Indeed, AIDS has become an immediate concern. Without adequate management of AIDS, Tanzania will continue to contribute to the re-emergence of diseases like TB and multi-drug-resistant TB (MDR TB) associated with AIDS. During 2008, 52% of the TB patients in Tanzania were co-infected with HIV (TACAIDS 2008a:12). This means that prevention efforts might be compromised by this shift in focus towards treatment of HIV/AIDS, and other diseases such as TB.

1.2.2 Background of the research problem

The first three AIDS cases in Tanzania were reported in the north-western region of the country, in 1983 (NACP 2006:1). Two decades later, the epidemic has spread countrywide. By the end of 2007 there were an estimated 1.4 million PLWHIV, an annual 96 000 reported deaths due to AIDS and over 970 000 AIDS orphans (UNAIDS 2008b:214-217).

The provision of care and treatment for people living with HIV/AIDS (PLWHA), their upkeep including AIDS orphanages poses a huge medical and social burden in resource-constrained countries including Tanzania. Although the national HIV prevalence has remained steady, the prevalence in some high-risk groups notably bar workers and commercial sex workers (CSW) along with major truck stops has been as high as 50% to 60% (Tanzania National Website 2009). These population groups serve as foci that have the potential to further spread the HI virus to Tanzania's entire population.

The HI virus is thus spreading amongst the economically active groups of young adults and destroying the fibre of the labour force in Tanzania. According to the International Labour Organization's (ILO 2004:5), Tanzania is projected to experience a loss of 8% of its active labour force by 2015 as a result of HIV/AIDS with an age-specific loss in labour force of 3.6% among the youths aged 15-24 years. This will lead to a significant decline in the net economy of the country. According to the Economic and Social Research Foundation of Tanzania (ESRF in Research & Analysis Working Group 2005:30), the Tanzanian economy is projected to be 8.3% lower in 2015 whilst the gross domestic product (GDP) will be 4% lower due to HIV/AIDS, affecting the economically productive sectors of the Tanzanian community.

1.2.2.1 The national overview of HIV/AIDS in Tanzania

The national response to HIV/AIDS has been shaped by the varying demands of the HIV epidemic over the last two decades. The response was divided into three phases (MoHSW [Tanzania]-NACP [Sa]). The first phase was launched in 1985 when a National AIDS Task Force was formed under the Ministry of Health (MoH); which was responsible for overseeing a short-term plan (1985-1986) to mobilise and train the health sector personnel and to reinforce blood safety measures.

The second phase saw the establishment of the NACP in 1987. This was predominantly under the health sector and was responsible for the development of three, 5-year medium-term plans in 1987-1991, 1992-1996 and 1998-2002 respectively. The main objective was

to reduce the incidence of HIV and its associated morbidity and mortality. This phase also saw the formulation of the National HIV/AIDS Policy in 2001 (Prime Minister's Office 2001) which was aimed at providing government leadership and coordination of the national multi-sectoral response to HIV/AIDS.

The third phase was from 2003-2006 which saw the establishment of the Tanzania Commission for AIDS (TACAIDS). The mainstay for this phase was to undertake a multi-sectoral approach towards fighting HIV which had proved to be more than just a health concern. A National Multi-sectoral Strategic Framework (NMSF) was developed and led by TACAIDS to intensify the HIV prevention, care and support and impact mitigation programmes with the participation of all stakeholders. The Tanzania HIV and AIDS Prevention and Control Act (No. 28 of 2008) was later passed, making it the government's mandate to provide services for the prevention, care and treatment and control of HIV/AIDS using all available resources (Tanzania 2008).

Overall, the GOT has followed a systematic approach towards tackling the HIV/AIDS problem and has responded to the arising needs. However, with the rise in new HIV infections especially amongst the youths, it is questionable whether this response has been adequate. For example, the Tanzania National HIV/AIDS Policy of 2001 stipulates some fairly theoretical approaches to HIV prevention emphasising providing information to various youth groups in section 5.2 through to section 5.6 (Prime Minister's Office 2001:18-19)**.** Many studies have shown that creating awareness alone does not translate to HIV prevention behaviours (TACAIDS, NBS & ORC Marco 2005; NBS & ORC Marco 2005; Mbjijmonywa 2008). More elaborate and practical interventions should be engineered in order to have a real impact on HIV prevention amongst the youths.

1.2.2.2 Scaling up ART in the wake of new HIV infections

Tanzania, like other developing countries rolled out ART programmes in phases throughout the country, in collaboration with various stakeholders. ARVs were first issued on a limited scope as part of a pilot PMTCT programme during 2000 which was later expanded countrywide during 2003 (MoH [Tanzania] 2003:1). It entailed the provision of selected single-drug treatment to pregnant women prior to delivery and to the new-born babies

concerned immediately after birth to prevent MTCT of the HI virus. According to Sweat, O'Reilly, Schmid, Denison and De Zoysa (2004:1661-1671) the provision of Nevirapine to prevent MTCT of the HI virus in eight African countries proved to be a cost-effective and efficient way of reducing the burden of HIV in the population, by reducing the number of HIV positive babies born to HIV positive mothers.

The Tanzania nationwide enrolment of free ART to all in need, was launched in 2004 (Bwijo 2007:5), following the discovery of new ARVs which the WHO recommended should be used in specific combinations to treat adults and children already affected with AIDS. Such combination treatments which are commonly referred to as highly active anti-retroviral therapy (HAART), "…have turned AIDS from a death sentence to a chronic [and manageable] illness…" (Clinton 42nd President of the USA December 1, 2002). The WHO had set a target of treating at least three million PWLHA by 2005 (WHO 2003), which was only achieved in 2007, two years after the set target.

The delivery of PMTCT and ART services entails policy making, developing of national guidelines, recruitment and training of manpower, upgrading and equipping of health care centres and supplying of ARVs. According to the UNAIDS report (UNAIDS 2008b:214-217), the estimated ART coverage in Tanzania by the end of December 2007 was 31%. However, the actual coverage could be as low as 7% since Tanzania reported a total of 1 867 918 people in need of treatment and not the UNAIDS estimated 440 000 PLWHA. The number of HIV positive women receiving ARVs for PMTCT was much higher at 27%, with 31 863 out of a reported 114 800 pregnant women receiving single-drug treatment at the end of 2007. These interventions have been lifesaving to many Tanzanians; but the figures show that the targets are still far from being achieved.

The increase in incidence of new HIV infections, will pose a challenge to the GOT in the management and control of AIDS. Whilst efforts are being made to scale up treatment and care, new strategies need to be put in place to re-enhance the preventive programmes to break the epidemic cycle; and special prevention programmes focussing on the youths need to be implemented and sustained.

1.2.2.3 HIV and the youths in Tanzania

The youths aged 15-24 account for 20% percent of the Tanzanian population and have been shown to contribute up to 60% of the new HIV infections annually (Jenaya 2008). HIV prevention programmes must urgently target this group. Surveys done among the youths show that high levels of HIV/AIDS awareness exist, but this knowledge does not translate into behaviour changes to prevent HIV infections. According to the 2007-08 Tanzania HIV/AIDS and malaria indicator survey (THMIS), HIV/AIDS awareness among the youths aged 15-24 was found to be as high as 97.8%; while 49.1% of those aged 15-19 and 21.9% of those aged 20-24 reportedly continued to engage in high-risk sex (TACAIDS et al 2008b:52, 101).

HIV/AIDS intervention programmes are turning their attention to the youths. The GOT and partners have set aside a youths' week held on the 8th-14th October each year. This was commemorated in Iringa region in 2004 and in Singida region in 2005 (YouthNetBriefs 2006 & FHI 2006). These events, which have been largely organised by NGOs like Family Health International (FHI), have brought together top government officials, donors, community organisations, parents and the youths. The aim of such programmes is to reinforce the HIV prevention messages amongst the youths through a participatory approach. The youths were encouraged to participate in songs, sports, drama, role-plays and beauty pageants which reiterate the HIV prevention messages. The youths were also encouraged to engage in dialogue with invited parents and programme coordinators to discuss issues which were previously difficult to address due to socio-cultural barriers.

The Global Service Corps (GSC), an international volunteer community service, has also initiated youth-oriented programmes amongst secondary school learners in Tanzania, focussing on providing life-skills training to enable the youths to develop HIV prevention capacity. Post-event surveys from these youths' camps held annually in the Arusha region by the GSC, have shown a notable increase in knowledge on HIV prevention, transmission and testing among the youths (Jenaya 2008). However, it is important to know that these positive impacts are sustained once they are away from a controlled environment.

1.3 RESEARCH PROBLEM

The GOT under the NACP and partners have played an active role in providing free ART to PLWHA. The ART coverage of 31% at the end of 2007 will most likely decrease due to the increasing denominator of people reported to be in need of treatment. It could be expected that there would be a decline in new HIV infections. On the contrary, a study done to estimate and project the HIV prevalence and AIDS deaths in Tanzania, using antenatal surveillance data, showed that the new HIV infections are projected to rise steadily resulting in 225 000 new cases in 2010. It also showed that the deaths due to AIDS will equally rise reaching 120 000 in the same year (Somi, Matee, Swai, Lyamuya, Killewo, Kwesigabo, Tulli, Kabalimu, Ng'ang'a, Isingo & Ndayongeje 2006:120).

Information, education and communication campaigns on HIV prevention have been done to provide the knowledge, skills and support needed to prevent HIV transmission. However, it has become apparent that successful HIV prevention needs to go beyond information and raising awareness to directly address sexual behaviour change. Rosensvard and Campbell (1996), in a review of sexual behaviour change studies in SSA, showed that while knowledge on HIV/AIDS was high, this had not resulted in consistent reduction in the incidence of HIV. The identified barriers to sexual behaviour changes included the negative attitudes towards condom use, desires to have children, low socio-economic status, lack of negotiation skills, attribution of HIV to witchcraft and low educational status of women.

Despite ongoing intervention programmes on HIV/AIDS prevention and management in Tanzania, there are still new cases of HIV infection every year. This study addressed the reasons why there have been minimal changes in sexual behaviours towards HIV prevention, particularly amongst the youths who are most at risk, thus perpetuating the epidemic.

1.4 AIM OF THE STUDY

In this section, the research purpose, research objectives and research questions are outlined.

1.4.1 Research purpose

The purpose of this study was to determine the factors that influence HIV prevention behaviours amongst the youths aged 15-24 years, in Tanzania.

1.4.2 Research objectives

The specific objectives of this research were to:

- assess the level of knowledge, attitudes and practices of HIV/AIDS prevention amongst the youths
- determine the perceived susceptibility of the youths to HIV infections
- determine the youths' perceived severity of HIV/AIDS
- examine the association between the determinants of HIV prevention and the HIV prevention practices amongst the youths
- determine the youths' perceived barriers that impede behaviour changes towards the prevention of HIV infections
- identify gaps in the youths' perceived self-efficacy to enact HIV prevention behaviours
- determine the youth-appropriate measures for HIV prevention in Tanzania

1.4.3 Research questions

The study attempted to answer the following questions:

- What is the level of knowledge, attitudes and practices of HIV prevention amongst the youths?
- How do the youths perceive their susceptibility to HIV infections?
- How do the youths perceive the severity of HIV/AIDS?
- What is the association between the determinants of HIV prevention and HIV prevention practices amongst the youths?

- What were the barriers which influence the youths' behaviour changes towards HIV prevention?
- How did the youths perceive their self-efficacy to enact HIV prevention behaviours?
- What do the youths suggest to be the best HIV preventive measures?

1.5 SIGNIFICANCE OF THE STUDY

Several studies have been done in Tanzania to establish the level of knowledge on HIV/AIDS and the resultant HIV prevention practices. These have shown a significant gap between having HIV/AIDS knowledge and the youths' actual practice of HIV prevention (TACAIDS et al 2005; NBS & ORC Marco 2005; Mbjijmonywa 2008). Few follow-up studies have been done in Tanzania to define why the gap exists and what can be done to close the gap particularly amongst the youths, who are most vulnerable.

This study aimed at determining the factors which positively influence HIV prevention behaviours amongst the youths in Tanzania, and can therefore be strengthened. It also aimed at determining the barriers that prevent the practices of HIV prevention behaviours, despite having the HIV/AIDS knowledge, and how these can be overcome amongst the youths.

The findings from this study will not only contribute to the existing knowledge but will also assist the Ministry of Health and Social Welfare, TACAIDS, the Ministry of Community Development, Women and Children, the Ministry of Labour, Youth and Sports Development, donors, NGOs and other intervention groups to develop informed strategies for youth-appropriate HIV/AIDS information, practical motivational solutions and behavioural skills training that could enhance HIV prevention behaviours amongst the youths in Tanzania. The findings will also create a platform from which the identified socio-cultural barriers impeding HIV prevention can be addressed at community level.

1.6 DEFINITIONS OF KEY CONCEPTS

The following is a list of key concepts used in this study that were defined so that the exact meaning, as interpreted by the researcher, could be communicated to the reader.

1.6.1 AIDS Risk Reduction Model (ARRM)

This is a three-stage model which provides a framework for explaining and predicting the behaviour change efforts of individuals specifically in relation to sexual transmission of HIV/AIDS. The stages include the recognition and labelling of one's behaviour as high risk, making a commitment to reduce high-risk sexual contacts and to increase low-risk activities and taking action by seeking information, obtaining remedies and enacting solutions.

1.6.2 Bias

This is an unknown trend in the selection of participants in a research, in the collection, analysis, interpretation, publication or review of data which can lead to conclusions that are systematically different from the true value (Fletcher & Fletcher 2005:7).

1.6.3 Determinants

In this study, these were defined as the factors such as knowledge, attitudes, socio-cultural and economic issues that influence HIV prevention behaviours amongst the youths.

1.6.4 Health Belief Model (HBM)

This is a psychological model that attempts to explain and predict health behaviours by focussing on the attitudes and beliefs of the individual. The main constructs under this model that determine the adoption of health behaviours are: the perceived susceptibility to a certain condition, the perceived severity of that condition, the perceived barriers and perceived benefits of the adoption of particular health behaviours (Rosenstock, Streicher & Becker 1988:175-183).

1.6.5 Higher-risk sex

This means having unprotected sex (without using condoms) with non-marital or non-cohabiting partners.

1.6.6 High-risk groups

These are people who engage in high-risk behaviours such as having unprotected sex, having multiple sexual partners, injection drug users and men having sex with men.

1.6.7 Knowledge about HIV/AIDS

This was defined as what the youths know about HIV/AIDS, about the modes of transmission and the different methods of preventing HIV infection. The assessment of knowledge enabled the researcher to determine if there were any gaps in information that may contribute negatively to HIV prevention.

1.6.8 Theory of Reasoned Action (TRA)

This is a model in the social psychological field used to predict human behaviour based on the assumption that humans are rational and that their behaviours are under the volitional control of the individual. The theory suggests that an individual's behaviour is influenced by his/her intention to perform that behaviour; and that intention is in-turn influenced by his/her attitudes towards specific behaviours and his/her subjective norms (Moore, Rosenthal & Boldero 1993:65-80).

1.7 FOUNDATIONS OF THE STUDY

Human behaviour is a result of the complex interactions of psychological, socio-cultural and biological factors (Greene 1994:23). However, behaviour has also been known to be

influenced by contextual factors (conditions) like poverty, level of education, ethical climate, leadership and reward systems (Frederick 2002:219). In order to understand what influences behaviour change towards HIV prevention; the conceptual framework for this study is derived from three behaviour change theories including: the Health Belief Model (Becker in Ayers, Baum, McManus, Newman, Wallston, Weinman & West & 2007:97), the Theory of Reasoned Action (Fishbein & Azjen in Terry, Gallois & McCamish 1993:39) and the AIDS Risk Reduction Model (Catania, Kegeles & Coates 1990:53-72).

1.7.1 Theoretical frameworks

A theoretical/conceptual framework is a school of thought consisting of various observational, experiential and analytical elements which seek to explain a possible course of action. In research, conceptual/theoretical frameworks are used to provide a structure for examining a research problem and for examining the relationship between research variables.

1.7.1.1 Health Belief Model (HBM)

According to the HBM, behaviour change is said to be largely determined by the individual's perceptions, attitudes and beliefs. Therefore for an individual to practice HIV preventive sexual behaviours, the individual must know which practices can put one at risk (knowledge), must believe that "people like him or her" can be at risk (attitude), and must perceive that the risk of getting an illness like HIV/AIDS which has no definitive cure is so severe as to be life threatening (attitude); before that person can adopt a certain HIV prevention behaviours (practices). The HBM later incorporated the concept of perceived self-efficacy to successfully execute a specific behaviour change (Bandura in Ayers et al 2007:192). This means the individual's perceived ability to enact and sustain a changed behaviour greatly influences his/her decision to perform that behaviour. This concept was incorporated when it became apparent that the HBM had failed to explain how life-style behaviours requiring long-term changes can be modified. Thus the concept that the individual must regard themselves to be competent to implement certain HIV prevention behaviours comes into play. The limitation with this model is that it focuses on the

individual as being the sole determinant of behaviour which is not the case as will be explained by other models.

1.7.1.2 AIDS Risk Reduction Model (ARRM)

The ARRM incorporates social and psychological factors from other behaviour change theories and it hypothesises that behaviour change will take place in three stages namely: by the recognition and labelling of one's behaviour as high risk by the individual, then making of a commitment to reduce high-risk sexual contacts and to increase low-risk activities and then seeking and enacting of solutions directed at reducing high-risk activities. This model extends the predictors of behaviour change to spheres of influence outside the individual. One of its hypothesised factors, that influence the implementation of a solution, include information seeking through social networks. These are largely external motivators such a public education campaigns which may cause the individual to examine and change his/her behaviours. However, the limitation in this model is that it still focuses on the individual as the main determinant of behaviour change whereas an individual's ability to enact low-risk behaviours largely depends on having willing partners and a supportive environment. This was confirmed by a study to review the cultural context of sexual risk behaviours amongst urban Baganda women in Uganda (McGrath, Rwabukwali, Schumann, Pearson-Marks, Nakayiwa, Namande, Nakyobe & Mukasa 1993429-439).

1.7.1.3 Theory of Reasoned Action (TRA)

The TRA on the other hand assumes that all human beings are reasonable and that their behaviours are under their volitional control based on the individual's attitudes towards that behaviour, his/her subjective norm (this means how he/she thinks other people would view them if they perform that behaviour) and their strength of intention to perform a certain behaviour. In the practice of HIV prevention behaviour for example, an individual may have the view that condom use can prevent HIV infection, but his colleagues may have the opinion that using a condom is not a display of masculinity, hence such an individual will have less intent to use a condom. This is a key consideration when dealing with the youth,

who in seeking their identity, will tend to enact behaviours they perceive to be acceptable by their peers (Moore et al 1993:65-80).

The conceptual framework for this study is based on the interplay between the various elements of the three mentioned theoretical frameworks as represented in Figure 1.1. The dependent variables are the expected HIV prevention behaviours which are predicted to be influenced by independent variables which are in turn determined by the background variables. For example the younger adolescent, may have a low level of comprehensive knowledge on HIV/AIDS prevention and thus may fail to practise abstinence when faced by peer pressure. Or, the religious backgrounds of the youths may contribute to negative attitudes towards condom use and thus lead to a lack of condom use to prevent HIV infections. The specific elements drawn from the behaviour change theories and their contribution towards HIV prevention outcomes are further discussed in the following section.

1.7.2 Research variables

In this section the research variables and their interrelationships are discussed including the background, independent and dependent variables.

1.7.2.1 Background variables

These are the socio-demographic characteristics of the study population. In this study the youths in Arusha region, which may or may not have a significant bearing on the independent variables which will in-turn influence the practice of HIV prevention behaviours. For example, out-of-school female youths who are unemployed may engage in higher-risk sexual behaviours for money to support themselves and this may result in having multiple sexual partners which puts them at risk of HIV infection.

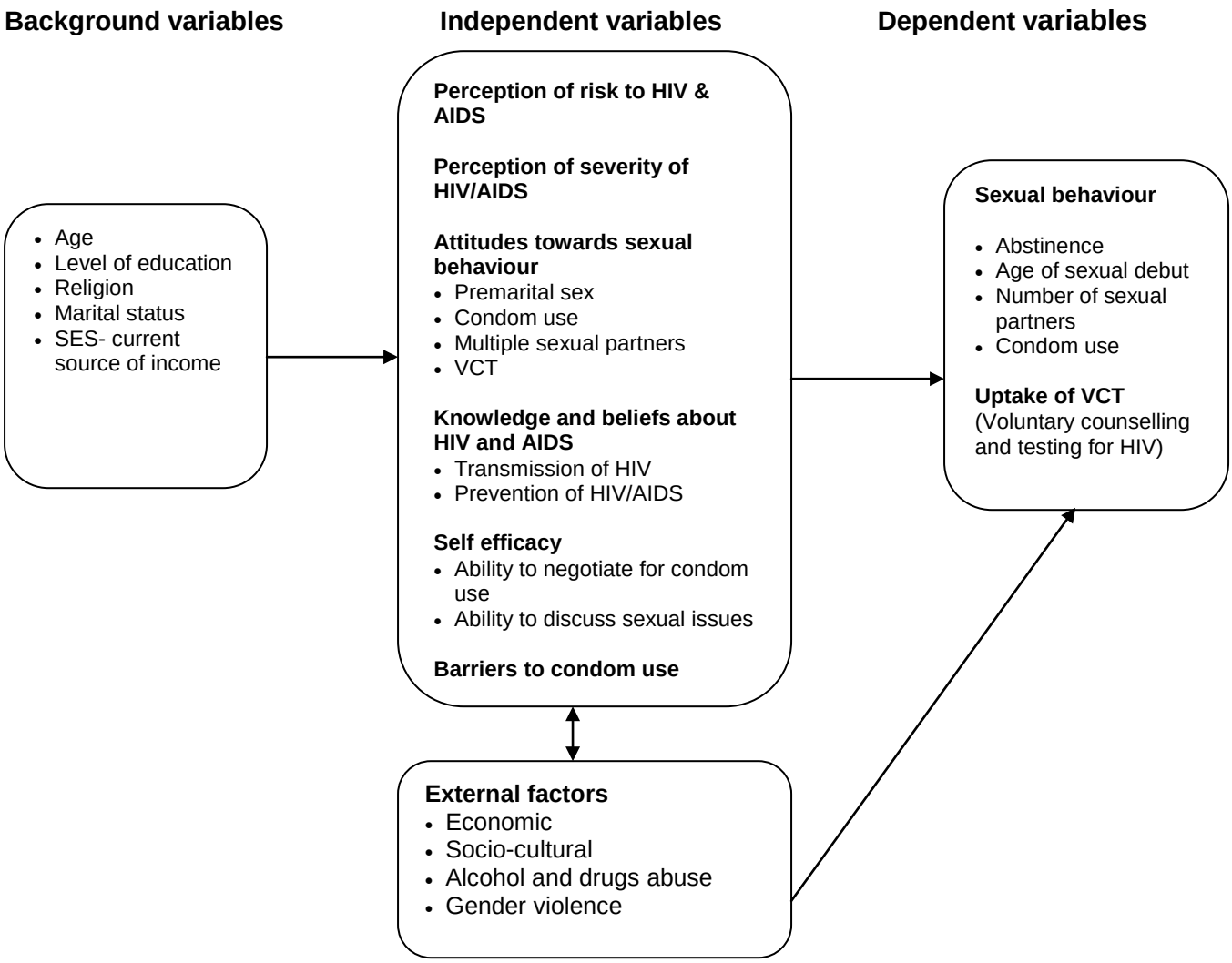

Figure 1.1 Conceptual framework: variables influencing HIV prevention behaviours (Wekete & Madzingira 2004).

1.7.2.2 Independent variables

These are derived from the various behaviour change models, influencing the HIV prevention behaviour outcomes (dependent variables).

- *Knowledge and beliefs on HIV/AIDS (ARRM)*

  Having the correct knowledge on HIV/AIDS transmission and prevention, and correction of any misconceptions is predicted to enable the individual to label his/her behaviour as risky and will influence the individual to commit to and enact HIV prevention behaviours.

- *Perceived susceptibility to HIV infection* (HBM)

This is one's subjective perception of the risk of acquiring HIV infection and will determine whether or not one changes one's behaviour to prevent HIV infections. The labelling of high-risk groups is detrimental not only because it results in stigma and discrimination; but it may also imply that membership of a particular group, rather than engaging in certain sexually risky behaviours, can cause HIV infection. It may give a false sense of security to the youths who do not identify with high-risk groups even when they engage in behaviours that put them at risk of HIV infections (UNESCO 2006:21). It is therefore important to narrow down the perception of risk to the individual rather than to certain groups.

- *Perceived severity (HBM and ARRM)*

The youths have to acknowledge AIDS as being a serious condition with dire consequences and without any cure, before they will implement positive behaviour changes to prevent HIV infections. Otherwise a negative perception of the severity of HIV/AIDS would mean a low level of adoption of HIV prevention practices.

- *Attitudes towards HIV prevention behaviours (TRA)*

These include the positive and negative feelings amongst the youths towards certain HIV prevention behaviours such as abstaining from pre-marital sex, fidelity and condom use. It is predicted that positive attitudes towards certain HIV prevention behaviours would lead to the practice of those behaviours and vice versa.

- *Perceived barriers (HBM and ARRM)*

  The perceived barriers are dictated by the interplay between the individuals' views and social factors or group norms. For example, the perceived barriers to condom use may include the potential negative consequences of using condoms such as the perception that condoms create feelings of mistrust or infidelity; condoms result in reduced sexual pleasure; or that the peer group does not favour condom use. These barriers might impede the practise of HIV preventive behaviours.

- *Self- efficacy (HBM)*

This means the belief in being able to execute the required behaviours and is especially so for the female youths who may find themselves unable to negotiate for condom use, unable to discuss their sexual concerns with partners who might be exposing them to risks. Individuals who feel they are capable of enacting certain behaviours will be more likely to practise those behaviours.

- *External factors (TRA and ARRM)*

These include economic, religious and socio-cultural (norms) factors which influence the intentions to conform to certain behaviours.

1.7.2.3 Dependent variables

These constitute the measurable HIV prevention behaviour outcomes amongst the youths such as abstinence, age of sexual debut, condom use, number of sexual partners and the uptake of voluntary counselling and testing (VCT) for HIV which are influenced by both the background and independent variables.

1.8 RESEARCH DESIGN AND METHODOLOGY

In this section, the research design and methods are discussed briefly. A detailed description of the research methodology will be presented in chapter 3 of this dissertation.

1.8.1 Research design

A research design is the plan according to which data will be collected and utilised so that the desired information can be obtained. This study was conducted in two phases; in phase one a quantitative design was used while in phase two a qualitative research design was adopted to collect and interpret the data.

1.8.2 Research setting

The research took place in the Arusha region located to the north of Tanzania. It involved the youths living in the Karatu and Mto wa Mbu wards; in Karatu and Monduli districts respectively.

1.8.3 Study population

This is the group from which a study gathers information and about which conclusions are drawn (Katzenellenbogen, Joubert & Abdool Karim 1997:74). The study population for this research comprised youths aged 15-24 years who were resident in Karatu and Mto wa Mbu wards for a period of not less than six months prior to August 2009.

1.8.4 Data collection instruments and processes

Two data collection instruments were used, one for each phase of the research.

Phase one adopted a structured interview schedule to collect data which was completed by the researcher and research assistants as they conducted structured interviews with the selected respondents, producing structured quantitative data. Data from phase 2 of the research were collected through open-ended questions posed during Focus Group Discussions (FGDs), based on the data analysis of phase 1 of this study, producing qualitative data. These two approaches would enable the comparison (triangulation) of quantitative and qualitative data.

1.8.5 Data analysis

In phase one, the structured interview schedule was customised such that data could be extracted and entered into the SPSS software version 15.0 (Statistical Package for the Social Sciences), from which statistical analyses were done.

In phase 2, the data from the audio tapes recorded during the FGDs were transcribed and reviewed along with the field notes documented by the observer/recorder. These were read thoroughly so that the researcher became familiar with the data. Content analysis was done whereby common themes were categorised into codes based on the research objectives. The various codes were summarised for the final data interpretation. The process of data analysis and interpretation for phase 2 will be discussed in more detail in chapters 3 and 5 of this dissertation. Thematic or content analyses were done whereby themes were systematically organised into codes (Guest & MacQueen 208:216).

1.8.6 Ethical considerations

Ethical considerations are a combination of legal and professional principles that are applied within healthcare and studies that support the development and improvement of healthcare, in order to protect the rights of the people while enabling appropriate research to be done (Drummond 1996:18). In this section the ethical principles applicable to this study are discussed.

1.8.6.1 Permission

The researcher sought ethical clearance to conduct the study from the Research and Ethics Committee of the Department of Health Studies, University of South Africa (Unisa - see Annexure G for the attached ethical approval), the National Medical Research Institute of Tanzania (NIMR - see Annexure H for the letter of application to NIMR and Annexure I for the attached ethical clearance certificate) and the respective Regional and District Health Offices in Arusha. The local government authorities, Ward Executive Officers (WEOs) and Village Executive Officers (VEOs), were also approached to give consent to carry out the study in their respective wards and villages; and permission was also sought from the selected school authorities. The researcher discussed the research project with the above mentioned stakeholders, to ensure that they were well versed with the objectives of the study and the expected outcomes from the findings of the study. The researcher, with the assistance of the local village authorities, school authorities and members of local NGOs, motivated the targeted youths to participate in the study.

Before enlisting participants, the researcher explained in detail; the aim of the study, mode in which it was to be conducted, expected benefits from the findings and answered questions from the prospective participants. The researcher also explained that their participation in the research was voluntary and that the structured interview schedule would be completed anonymously during the interview. The researcher and research assistants then sought the individual's permission to be interviewed by the signing of a consent form by the parents or teachers and by the youths themselves (NACP 2007:18) (see Annexures E & F for the attached consent forms).

1.8.6.2 Human rights

All persons approached were treated with dignity and respect. None of the youths approached opted out of the study. The research team respected the information given by the participants and did not judge or form any biased opinions based on the information received. Every interviewee was supplied with the researcher's telephone number in case

they wished to discuss any aspect or obtain more information about HIV/AIDS or related issues.

This research did not pose any risks to the participants. However, for phase 2 of the study, the researcher ensured that the FGDs did not cause any discomfort or embarrassment to the participants.

1.8.6.3 Confidentiality

HIV and STIs remain sensitive topics in many parts of the world. The researcher was aware of the need to treat personal information with the utmost confidentiality. The researcher ensured that participants did not use any form of personal identification on their interview schedules so that no personal information could be traced back to any specific respondent.

For the FGDs, a numbering system was used to identify the participants. During the opening of the discussions, the researcher asked the participants to agree to keep the contents of their discussions confidential. This means that the individual opinions and experiences were not to be discussed outside the FGDs and were used for the purpose of the FGDs only. The researcher also used questions that required more generalised opinions rather than personalised opinions on the topics asked, so as to reduce the potential threats encountered during answering the questions.

1.9 SCOPE AND LIMITATIONS OF THE STUDY

This study recruited a total of 372 youths for inclusion in the quantitative phase and a total of 25 youths participated in the FGDs for the qualitative phase.

Selection bias

Due to financial and time constraints the study area was limited to two districts in Arusha region, Monduli and Karatu. These districts were purposefully selected because, they have

ongoing HIV/AIDS intervention activities and previous baseline surveys done in these areas showed significant discrepancies between having HIV/AIDS knowledge and the youths' actual practices to prevent HIV infections.

Sampling bias

This is said to occur when the sample is not representative of the study population (Katzenellenbogen et al 1997:79). In phase one of the study, cluster sampling was used to select the villages and schools to be included in the study from which the out-of-school and in-school youths were recruited, respectively. The villages and schools sampled for the study were located close to the center of the towns as opposed to the more remote villages and schools. This means that if the clusters of the villages or schools selected have different characteristics from the other villages and schools sampled out of the study; then the results could be biased.

In phase 2 of the study, the researcher used purposive sampling to select homogeneous groups of male and female youths who were sampled for the quantitative phase. This is a non-random sampling method in which inclusion of the subjects was based on the researcher's criteria of interest, acceptable in qualitative research.

Information bias

This means a systematic inaccuracy in measurement, recording, management and analysis of data (Katzenellenbogen et al 1997:128). In this study, differential misclassification of the exposure variable might have occurred. The sensitivity of the research topic led to the over reporting of positive practices to prevent HIV infections particularly amongst the in-school youths. These youths were sceptical about giving information on their sexual history for fear that this may be reported to their respective school authorities. The researcher addressed this limitation by giving details on the research project, expected outcomes and re-assuring the participants about maintaining the confidentiality of the data collected.

1.10 STRUCTURE OF THE DISSERTATION

This dissertation will be divided into six chapters as follows:

Chapter 1 of this study introduced the study, defined the research problem and provided background information on HIV/AIDS globally, regionally in SSA and nationally in Tanzania with emphasis on the youths.

Chapter 2 will discuss the situational analysis of HIV prevention. It will include a review of the literature on the factors that influence the practice of HIV prevention behaviours amongst the youths.

Chapter 3 will describe the research methodology used in collecting the data for the study.

Chapter 4 will present the analysis and discussion of the quantitative results obtained by conducting structured interviews with the young people.

Chapter 5 will present the data analysis and discussion and literature control of the qualitative data obtained by conducting four focus group discussions (FGDs) with young people.

Chapter 6 will be the final chapter. This chapter will present the limitations of the study, the conclusions reached about promoting behaviour change towards HIV prevention amongst the youths in Tanzania, and findings from the quantitative and qualitative phases will be compared and contrasted. Recommendations for future research, and for future youth health education programmes in Tanzania, and possibly in other SSA countries, will finally be addressed.

1.11 SUMMARY

Chapter 1 of this research discussed the overview of the HIV/AIDS epidemic internationally, regionally in SSA and nationally in Tanzania. It also provided background information on the impact of HIV/AIDS on the youths and emphasised their role in

enhancing HIV prevention behaviours. It also discussed the research problem, the purpose of the research, the significance of the study, the research methodology, the scope and limitations of the study and it defined the key concepts found within the study in the context of pre-defined conceptual and theoretical frameworks

Chapter 2 will present a discussion on the relevant literature reviewed in terms of HIV prevention amongst the youths while focussing on the research questions.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The literature review covers published and unpublished reports on the knowledge about HIV/AIDS and key prevention strategies against the back-drop of socio-cultural factors that promote or impede the practice of HIV prevention behaviours. The main focus is on the adoption of HIV preventive behaviours by the youths who contribute to nearly half of the new HIV infections worldwide (Marston & King 2006:1581-1586).

2.2 SITUATIONAL ANALYSIS

HIV infection is sexually transmitted. It is also transmitted through blood contact either through the transfusion of contaminated blood and blood products or through the use of contaminated instruments such as injections and blades. There is also a 23% risk of transmitting HIV infection from an HIV-positive mother to her unborn child during pregnancy, during labour and child birth or thereafter through breast feeding (Fan, Conner & Villarreal 2007:122). Blood transfusion is the most certain way of transmitting HIV with a 90% probability of seroconversion in recipients of HIV antibody-positive blood at follow-up (Donegan 2003). However, the regulations on donor selection and screening of blood transfusion products have significantly reduced the risk of HIV transmission through this mode. A study to determine the residual risk of transfusion-transmitted HIV infections by antibody-screened blood, in Italy, showed that the risk of HIV transmission was reduced to

as low as 1 in 435 000 (Velati, Romanò, Baruffi, Pappalettera, Carreri & Zanetti 2002:989-993).

Therefore, the main modes contributing to the spread of the HI virus are from mother-to-child and sexual transmission, whereby over 70% of all HIV infections worldwide are spread through sexual intercourse between men and women (Jackson 2002:81). In order to develop more effective HIV prevention programmes, in addition to understanding the transmission of the HI virus, more information is required on the determinants of people's behaviours, sexual standards and practices.

When the HI virus enters the body, it attaches itself onto the receptors on the CD4 T-cell lymphocytes which are responsible for the body's cellular immunity. These cells are attacked and destroyed by the HI virus which in the process, penetrate into the cells and utilise the genetic information of the cells (DNA) to create new viral genetic information (RNA). The destruction of the $CD4^+$ T-cells and the generation of new HI viruses leads to the subsequent depletion of the body's cellular immunity below a critical level causing AIDS (Levy 2007:125). It is this characteristic of the HI virus to transform and regenerate that has made the discovery of a definitive cure and a HIV vaccine a great challenge to scientists (Levy 2007:398).

While the search for a definitive cure for HIV infection is underway, ARVs have been developed which disrupt the proliferation of the HI virus leading to a significant decrease in viral load thus boosting the body's immunity. This principle has made ARVs revolutionary in prolonging the lives of PWLHA. In preventing MTCT, HIV-positive pregnant women who receive ARVs, safer delivery approaches and engage in the correct infant feeding options using breast milk substitutes, will also reduce the risk of transmitting HIV to their new born babies to less than 2% (MoH [Malaysia] 2008:2). ARVs are widely and freely distributed to ensure they are accessed by people in need of treatment. However, the global coverage of ART remains low and is estimated at only 30% (Ford, Mills & Calmy 2009:1808-1810). Efforts should therefore be re-directed towards the prevention of new HIV infections.

2.2.1 Sexual transmission of HIV

Social, personal and biological factors have been found to promote the sexual transmission of HIV. A detailed understanding of these factors is required in order to determine the role of HIV prevention programmes in overcoming them. Some of the social factors influencing the spread of HIV include cultural practices such as polygamy, poverty, migration, gender inequity, the economic gap between males and females and low levels of education. Personal behavioural factors which promote sexual transmission of HIV include: having multiple sexual partners, the age difference in sexual partnerships with older men engaging in sex with younger females and low condom use. Whereas the biological factors that contribute to the spread of HIV are the presence of untreated STIs and the lack of male circumcision (Jackson 2002:85-86).

2.2.2 HIV prevention

The sexual transmission of HIV is preventable; therefore it is paramount that all stakeholders in the fight against the spread of HIV/AIDS re-focus their efforts on practical prevention strategies. HIV prevention interventions have relied on imparting knowledge to create awareness about HIV/AIDS based on the cognitive behavioural models which presumed that having knowledge would empower the individual to change behaviour towards HIV prevention (Global HIV Prevention Working Group [GHPWG] 2008:6). This has been proven to be ineffective. Behavioural HIV prevention programmes should thus promote accurate knowledge and perception of risk and increase the youths' motivation to avoid risky behaviours by building the youths' skills needed to use the prevention modalities effectively (GHPWG 2008:9).

Although the Tanzanian National HIV/AIDS Policy of 2001 stipulated that the government would accelerate AIDS information in schools, it was not until 2006 that this policy objective was upheld; following a 2005 Ministry of Education study which showed that 30% of the primary school pupils had already experienced sex (UN-IRIN 2006). Non-examinable HIV/AIDS topics are taught in primary school subjects namely biology and social studies and in secondary school subjects namely biology, civics and general studies. This process

entailed the training of teachers at both primary and secondary school levels. However, due to lack of resources, the actual number of teachers trained was inadequate. As a result, some teachers find themselves tasked to train the youths on aspects of sex with which they are uncomfortable. It has been reported that, in some areas the HIV/AIDS education has been reduced to the simple discussion on abstinence, being faithful and the demonstration of condom use. It is also unclear whether the students get comprehensive knowledge on HIV prevention or whether HIV/AIDS is taught using a life-skills approach which might impart more sustainable prevention skills to the youths.

HIV prevention interventions that require behaviour change need to be sustainable over the long-term to cope with changing social and physical environments that make HIV/AIDS seem less threatening. Several intervention programmes for example in Uganda, Thailand, the USA and high income countries have shown early prevention successes, followed later by marked increase in risk behaviour due to ‘prevention fatigue’. This has resulted in a reversal of the key success indicators leading to an increase in multiple sexual partnerships with low condom use in Uganda, an increased prevalence of HIV amongst the heterosexual community as opposed to among the commercial sex workers’ group in Thailand; and a notable increase in unprotected anal sex among American men having sex with men (GHPWG 2008:18-19).

Hence, for HIV prevention programmes to be effective, they must be versatile. It means that intervention programmes should simultaneously address all aspects of HIV prevention including abstinence, fidelity, condom use and VCT, at the community level. This is because sexuality has been found not to be dictated by one’s cognitive approaches but rather by factors outside the individual. For intervention programmes targeting the youths, social norms, economic and physical environments for HIV risk behaviours and group values must therefore be addressed to create any long-term change.

Intervention programmes, for behavioural HIV prevention, must have a monitoring and evaluation system whereby a review of the encountered successes and limitations could be done so that future programmes could use the experiences of existing programmes. This study also sought to establish the existing limitations in HIV prevention programmes

targeting the youths in Tanzania, in order to make recommendations that might improve these outcomes.

2.3 KNOWLEDGE ABOUT HIV/AIDS

Research has been done to establish the level of knowledge on HIV/AIDS in relation to the prevalence of HIV and/or the levels of HIV prevention behaviours. This has been based on the assumption that having information on HIV would automatically lead to a positive behaviour change towards HIV prevention. The findings have been equivocal and in some instances contradictory. A baseline study done by the German Foundation for World Population (DSW) in Arusha, Kilimanjaro and Tanga regions, in Tanzania, found that the level of awareness of HIV/AIDS among the female youths was a high as 81.5% whilst their HIV prevention practices were as low as 42.9% (Mbjijmonywa 2008:9-11) This shows a lack of correlation between having HIV/AIDS knowledge and the actual practice to prevent HIV infections.

The reasons for this discrepancy can be two-fold; either due to a methodological error whereby, the assessment of both knowledge and behaviour are not made at the same level of specificity (Fisher & Fisher 1992:465). For example, having a general knowledge of what AIDS stands for, or the difference between HIV and AIDS will not translate to specific HIV preventive behaviours. The assessment of knowledge on HIV prevention must therefore be very specific to understand if the target group (the youths) knows about HIV transmission methods, and specific preventive methods, for each mode of transmission before they can be expected to change their behaviours. In the same light, some studies on HIV knowledge have relied solely on closed-ended questions which means that, the lack of understanding of exactly what the youths know or do not know (including their misconceptions) about HIV/AIDS becomes a limiting factor towards HIV prevention practices.

The other school of thought is from a conceptual perspective, which suggests that having HIV/AIDS knowledge can only impact on the initial AIDS-risk behaviour change at the start of the epidemic but cannot maintain such behaviour change over time, especially when the

behaviour change concerned is complex such as avoiding sexual contact, or discussing and consistently using condoms (Fisher & Fisher 1992:465). There has to be a motivation to continue with HIV prevention behaviours and a sustainable support mechanism that would prevent the youths from becoming vulnerable to higher-risk sexual behaviours.

In order to understand the level of knowledge, this study defined comprehensive knowledge as knowing that consistent use of condoms and having just one uninfected, faithful partner can reduce the chance of getting HIV infection. Furthermore, knowledge also involves knowing that a healthy-looking person can be HIV positive and rejecting common local misconceptions that HIV transmission can occur by mosquito bites, by witchcraft or by sharing a plate food with a person suffering from AIDS (NBS & ORC Marco 2005:231). According to the Tanzania HIV/AIDS indicator survey (THIS) of 2004, although HIV awareness was as high as 99%, the level of comprehensive knowledge was much lower particularly among the youths aged 15-24 years which ranged from 44.3% in females to 48.5% in males (TACAIDS et al 2005:56). These findings remained similarly low during THMIS of 2007/08, with 39.2% of females and 41.5% of males aged 15-24 years having comprehensive knowledge on HIV/AIDS despite a 97.8% level of awareness of HIV/AIDS (TACAIDS et al 2008b:94). This clearly shows that there is a gap in correct knowledge on HIV prevention which can be expected to impact negatively on HIV prevention behaviours among the youths.

2.3.1 Conflicting knowledge about HIV/AIDS prevention

Whilst the indicators of measuring comprehensive knowledge on HIV/AIDS transmission and prevention have been established, the youths face conflicting information which might be detrimental to the HIV prevention campaign. A study on the knowledge and attitudes towards HIV/AIDS in Guyana involving 2 000 youths found that a person's religious background played a significant negative role in condom use, where only two in five sexually active youths used condoms consistently (O'Toole, McConkey, Casson, Goetz-Goldberg & Yazdani 2007:193-201). Major religions around the world have advocated the "abstinence" and "being faithful" aspects of the 'ABC' campaign and have labelled the

“condom use” aspect as being contrary to religious teachings. According to Abidin (2008), Islam’s stance against condom use outside marriage is non-negotiable even for the reasons of the prevention of HIV infection. A similar view is shared by the Roman Catholic Church leaders in Africa, who steadfastly refused to endorse the use of condoms to fight HIV/AIDS, at the Triennial Symposium of Episcopal Conferences of Africa and Madagascar, in Dakar (Sylla 2003).

From the perspective of the youths, such conflicting information limits their options. At the individual level of decision making about sex; when the “A” and “B” options fail, the young people are left with the “condom use” option. However, due to guilt based on their religious backgrounds, they might refrain from using condoms and engage in higher-risk sex without using condoms.

Large donor programmes like the PEPFAR have also dictated the simplistic view that the ‘ABC’ approach with more emphasis on ‘A’ and ‘B’ is ideal in any set up. However, there has been no concrete scientific evidence to show that the ‘abstinence’ approach works in SSA (IRIN 2007). This prescriptive approach by donors without understanding the social context and applicability is contradictory to past HIV prevention messages which have fervently promoted condom use; and so the youths become uncertain of what preventive options they have.

2.3.2 Myths and misconceptions about HIV and AIDS

A myth is something that people wrongly believe to be true (Macmillan English Dictionary 2002:937). In fighting the spread of HIV infection, many countries in SSA have had to overcome socio-cultural beliefs and misconceptions which have impeded the practice of HIV prevention behaviours. Some examples include the myth that sex with a virgin can cure HIV/AIDS. This led to a devastating rise in rape cases particularly in southern African countries in the late 1990s (UNFPA & IPPF 2007:31-37). There were also myths surrounding the use of condoms; that they are ineffective, laden with holes or laced with pathogens (Feldblum, Welsh & Steiner 2003:268-269). These negative beliefs have been a setback to the advocacy for condom use.

In some communities in western Tanzania, HIV/AIDS is still said to be a result of witchcraft (Kielburger & Kielburger 2008) and hence the onus of prevention is taken away from the individual as it was perceived to be beyond one's control. According to the THMIS of 2007-2008 (TACAIDS et al 2008b:55), only 55.7% of the youths aged 15-24 say that a healthy-looking person can have HIV infection and rejected two of the common local myths. This means that there are still a number of youths in Tanzania who wrongly believe that one can tell a person's HIV status by looking at his/her physical appearance.

It is therefore important in any public health intervention programme (in this case HIV prevention programmes), to understand what the target population know to be true and what their social norms are with regard to the issue at hand, in order to dispel any misconceptions that may impede the practice of HIV prevention behaviours.

2.4 SEXUAL BEHAVIOURS AND ATTITUDES TOWARDS HIV/AIDS PREVENTION

The youths worldwide have become familiar with the renowned "ABC" campaign against HIV/AIDS. That is the 'abstinence', 'be faithful' and 'condom use' campaign. A new component has now been added to the campaign slogan changing it to the "ABCD" campaign where the 'D' stands for diagnosis; which means undergoing voluntary counselling and testing (VCT) for HIV (De Cock 2006). The response to the principles of this campaign has been varied. This section reviews the 'ABCD' campaign and its dynamics amongst the youths.

2.4.1 Abstinence and the youths

Although abstinence would be the ideal measure for preventing HIV infection amongst the youths who are not ready for marriage, this approach has not been successful. The THMIS of 2007-08 (TACAIDS et al 2008b:96), showed that the age of sexual debut is gradually getting lower with up to 10.2% of the youths in Tanzania getting exposed to sex at an age of younger than 15 years (the same levels as in the 2004-05 Tanzania demographic and health survey [TDHS]). Sex at this age occurs not only between the youths themselves but

is commonly associated with older experienced partners (up to 10 years older) having sex with inexperienced youths. This was found to be the case in 7.7% of the female youths aged 15-19 in Tanzania (TACAIDS et al 2008b:104). This is high-risk sex. It is mainly a result of several factors including: the youths wanting to experiment with sexual encounters, coercion especially of young girls, poverty and in some instances gender violence (Jackson 2002:123). The youths at this age develop natural desires due to puberty and become curious to learn about sex. Due to peer pressure, they are keen to have sex and studies have shown that only 28.6% of the youths aged 15-24 admitted to have been ready for sex and the majority wanted to revert to abstinence (Harrison, Cleland, Gouws & Frohlich 2005:259-261).

Early sexual debut is high-risk because it is also commonly associated with the lack of condom use. Only 26.5% of the youths reported using condoms during their sexual debuts (TACAIDS et al 2008b:97), especially among the Tanzanian youths who are least educated and those who are poor. The reasons are debatable, but can be seen to be due to a lack of information about condoms, a lack of access either due to finances or not knowing where to access condoms. Youths who are exposed to alcohol and/or drugs at a very early age are also more likely to have early sexual debuts which involve higher-risk sex that is, without using condoms and with casual partners (Harrison et al 2005:259-261). Many youths engage in sex because they do not know about other non-penetrative sexual options (Jackson 2002:123). Intervention programmes should perhaps not advocate for abstinence only, but they should also provide alternatives for the youths including non-penetrative sex.

2.4.2 Fidelity and the youths

Fidelity is commonly associated with married or cohabiting couples. Thus the youths might view fidelity as a distant option, when it comes to HIV prevention; because they are still searching for the right partners. However, there are also other external factors which might prevent the youths from practising fidelity. According to studies done in Zambia, although the youths were willing to adopt fidelity as a means of HIV prevention, many were

influenced by their existing socio-economic status and cultural norms. It was reported that the female youths in Zambia had multiple sexual partners to escape poverty, whilst male youths engaged in multiple sexual relationships to prove their masculinity. The female youths felt unable to change their own behaviours to practice fidelity due to the economic ties around multiple sexual partnerships (Masimba 2008). Some youths might also be influenced into having multiple partners by promiscuous role models who portray casual sex as being glamorous (Jackson 2002:123), such as those appearing on television programmes.

2.4.3 Condom use

Intervention programmes to promote condom use are widespread. Although these programmes have reported a successful increase in the use of condoms amongst youths, many have failed to show youths' consistent use of condoms in long-term follow up studies. For example, in a study done in Indiana among high-risk female adolescents, 54% of the clients who returned after six months reported an increased use of condoms but all clients remained inconsistent users (Orr, Langefield, Katz & Caine 1996:288-295). Similar findings were reported by Ao, Sam, Manongi, Seage and Kapiga (2003:688-696) who showed consistent condom use in bar and hotel workers in northern Tanzania to be as low as 14.1%. It was also noted that condom use for the prevention of HIV was found to be influenced by individual, socio-cultural and external factors.

The major predictor for consistent condom use amongst the youths has been shown to be the belief that condoms are safe and effective in preventing HIV infections. This has been affected negatively by myths surrounding the use of condoms, including that condoms would break anyway and that the condoms would get stuck inside a woman's vagina (UNFPA &IPPF 2007:31-37). Equally, the use of condoms has been hampered by various social norms. For example condoms have been associated with lack of trust or suspicions of infidelity between partners or the general perception that sex with condoms is not pleasurable (Prata, Vahidnia & Fraser 2005:192-199). There are also external factors which contribute to the lack of condom use such as the lack of access to condoms either

due to finances or that the sources of condoms might not be discrete enough for the youths to access them freely (Jackson 2002:110).

2.4.4 Uptake of voluntary counselling and testing for HIV amongst the youths

VCT for HIV amongst the sexually active youths is one of the most effective preventive measures (UNFPA 2002:1). VCT, when delivered correctly, provides an opportunity for the youths to have a one-on-one counselling and educational session which should empower the youths with behavioural skills to prevent HIV infection. For the youths who test negative for HIV, post-test counselling should empower them with behavioural skills to remain HIV-negative. For youths who test HIV positive, the post-test counselling should enable them to join a care and treatment programme, to protect themselves from acquiring new HIV infections and to prevent them from spreading the infection to others. Despite these potential benefits, Tanzania's national uptake of VCT remained low at 33.3% in female and 19.1% in male youths aged 15-24 years during 2007-08 (TACAIDS et al 2008b:83-84). Similarly, in a study to determine the willingness to test for HIV amongst secondary school learners in northern Tanzania, Munuo (2005) found the uptake of VCT to be low. Only 16.5% of the youths reported having been tested for HIV, despite the fact that 95% of the youths knew about VCT.

The main reasons for the low rates of VCT utilisation included the fear of stigma and discrimination, and the fear of knowing one's status. Some Tanzanian youths still believe that a positive HIV test result serves as a death sentence (Tendai 2006). However, through intervention programmes, the fear of undergoing VCT can be alleviated. According to Doyle, Maganja, Baisley, Changalucha, Hayes, Watson-Jones, McCormack and Ross (2008), through the MEMA kwa Vijana Trial Further Survey (MkV1FS), 72% of the targeted youths underwent the HIV test during their mobile VCT clinic campaigns in Mwanza region, in Tanzania during 2007-2008. If VCT campaigns were to be promoted nationally, there might be an increased number of youths who use these services.

2.5 SOCIO-CULTURAL FACTORS AFFECTING HIV PREVENTION

The HIV/AIDS epidemic has cut across all boundaries of gender, creed, race, socio-economic status and levels of education. There are varying views on how socio-economic and cultural factors surrounding the youths can contribute to the practice of HIV prevention behaviours. An understanding of how these factors impact on the spread of HIV is therefore necessary, to offer insight into what the targets for HIV prevention programmes should be.

2.5.1 Level of education

The level of education, or the lack of education, has been related to the prevalence of HIV. The assumption is that a low level of education would contribute to a higher risk of contracting HIV infections due to a lack of knowhow on HIVAIDS, transmission and prevention modes. Some studies have confirmed this association between a low education level and a higher risk of contracting HIV infections (Mmbaga, Hussain, Leyna, Mnyika, Sam & Klepp 2007:58). However, other studies have shown there is no consistent pattern in the association between the prevalence of HIV and level of education. During the THMIS of 2007-08, while the HIV prevalence was found to be higher in women (7.3%) and in men (6.2%) who had completed primary education compared to 6.0% in women and 5.5% in men with no education, respectively; the prevalence was found to decrease to 4.9% in women and 3.4% in men with secondary education and above (TACAIDS et al 2008b:116).

2.5.2 Poverty

There is a vicious cycle between HIV/AIDS, wealth and poverty. Often a low socio-economics status has been blamed for the rampant spread of HIV/AIDS particularly amongst women and girls engaging in high-risk sexual activities and/or prostitution, for monetary gains. However, the men who source these sexual favours are often wealthy and have money to pay for sexual services. Therefore, the three variables HIV, wealth and poverty are interrelated and interdependent. The HIV prevalence in Tanzania, was higher

amongst women (9.5%) and men (6.3%) in the wealthier quintile compared to 5.0% among the poor women and 4.1% among the poor men respectively (TACAIDS et al 2008b:116). The interaction between the poor women and the wealthier men will result in these men exposing their partners to HIV infections. At the same time the women of low socio-economic status will most likely have other male partners, whether casual or permanent within their social bracket, who will be exposed to the risk of HIV infections. This forms a circle of HIV infection at all social levels.

Poor living conditions prompt a large proportion of young men to migrate in search of work. These men leave behind a stable family unit and once in the new environment, develop a tendency to solicit casual sex from commercial sex workers or from cohabiting partners far from home. This niche of multiple sexual partners leads to the risk of HIV infections both at the place of work and back home when the workers return. Likewise, the female partners left at home are sometimes inclined to also engage in sex with other male partners for money whilst their husbands or partners are away. Women's economic dependency on men has been the root cause of these interactions and the resultant spread of HIV infections. This is true for business sectors within the transport corridors, mining and long distance truck routes which have been significantly affected (Kalipa & Nkuna 2009). This means that HIV intervention programmes must also be tailored to address vulnerable groups such as migrant and mobile workers and the communities where they live and where they work.

2.5.3 Gender inequalities

Women in many developing countries are seen as having no place in society. The girl-child is often deprived of schooling opportunities because her role is to perform house chores and prepare for marriage. As a result, when they grow up, these young girls lack the skills to find meaningful employment, putting them at risk of engaging in high-risk sexual behaviours for money. They are thus prone to unwanted pregnancies and the risk of contracting HIV infections. Equally, in women-led homes the mothers are charged with the responsibility of fending for the family. Some of these women might engage in small-scale informal businesses from an early age. Whilst this may provide some form of income, the

earnings cannot cater for all their basic needs. Such situations prompt women to seek supplemental earnings, by engaging in casual sex with either temporary or permanent partners (Jackson 2002:93-94), exposing them to the risk of becoming HIV positive.

Women's rights in parts of SSA might be limited or non-existent. Even in stable relationships, the man has the final say when it comes to sex. Women cannot negotiate for safer sex, for family planning and are often put at risk of HIV infection by their male partners (UNIFEM 2006). Incidences of gender violence including rape, even within the marital context are common. This means a woman has no autonomy over her body. Often such cases go unpunished and are thus perpetuated. A woman who has been raped is at risk of contracting STIs and HIV (Jackson 2002:95-96).

2.5.4. Polygamy

In many SSA countries, polygamy whether official (with a known co-wife) or un-official (with an unknown, non-resident partner) is a widely accepted culture. There are still some religions and cultures which allow polygamy. According to Kulzer (2002:96), in a study on the socio-cultural norms and HIV prevention among pastoralist communities in northern Tanzania, polygamy, marriages between old men and young women, premarital and extramarital affairs were found to be enduring practices in the Maasai culture. This being a deeply-rooted cultural practice, it becomes very difficult to erase. Men in many other African communities tend to have a single wife but will also have other permanent female partners in different locations, who will in turn have other male partners. Polygamy is therefore at the heart of promoting the heterosexual spread of HIV in SSA, as shown in the case-study of Swaziland whereby nearly 40% of the adults were HIV positive (UN 2008). The youths thus grow up in a society in which polygamy is accepted as a socio-cultural norm and will therefore practise similar multiple-partner relations which will place them at risk of HIV infections from a young age.

2.6 SEXUAL BEHAVIOUR CHANGE INTERVENTIONS

Sexual behaviour changes towards the prevention of HIV infections have to be the mainstay of action in order to save the youths from HIV/AIDS; which would result in a global decline in new HIV cases and will see a turn-around in the epidemic. However, based on the factors surrounding HIV prevention behaviours, intervention programmes must become custom-made. Often behaviour change intervention programmes have been very prescriptive that is, designed by the adults for the youths. For any intervention to be successful, a review of the targeted youths must be done to establish the factors that influence their HIV prevention sexual behaviours such as their perceptions of risk of HIV infections, their understanding of the severity of HIV/AIDS, the demographic and socio-economic factors that will influence the practice of HIV prevention.

The HIV/AIDS intervention programmes targeting the youths must therefore develop theme campaigns that are applicable to a specific age-group, race and a person's sexual experiences with theme messages derived from the back-drop of the socio-cultural aspects of their respective communities. The HIV prevention campaigns must also be relevant to the settings of the in-school and out-of-school youths so that, the knowledge and skills imparted to them will ensure that HIV prevention practices amongst them are sustainable.
The adoption of HIV prevention sexual behaviours involves long-term changes in lifestyles. Public health interventions requiring people to change their behaviours face significant challenges. For the youths to change towards HIV prevention sexual behaviours, it is paramount that the intervention programmes provide some forms of capacity building to enable them to enact HIV prevention behaviours. This entails behaviour skills training or family life education to promote their self-efficacy to change behaviours. In a study by Mbaga (2000) on women's sexual empowerment amongst bar maids in Dar es Salaam, Tanzania, only 7% of the women reportedly had the abilities to negotiate for safer sex. The reasons for the low levels of self-efficacy included their low socio-economic status, the fact that they had dependants to take care of, their low level of education and male dominance in sexual relationships. This means that the HIV/AIDS campaign needs to go beyond the 'ABCD' slogan and has to review the aspects which impede the self-efficacy of the youths to enact HIV preventive practices.

For the youths in schools, the motivation to adopt HIV prevention behaviours has to be sustainable even when the youths are out of their controlled settings upon completion of their studies. For the out-of-school youths, who are relatively more vulnerable, capacity building would have to include the empowerment to survive in the society, particularly for the female youths. Gender empowerment of the female youths should address the cultural gender-related beliefs, adult literacy issues, economic empowerment and building of their self-esteem (Motzoi 2006). For the male youths, life skills training should in addition include the empowerment to avoid alcohol and drugs in order to avoid potential detractors from HIV prevention practices. The youths should also be encouraged to form their own gender-balanced support groups within which they can have dialogues which can promote HIV prevention practices.

From the perspective of the youths, ways to enhance HIV prevention behaviour changes could help to save their lives. Based on the view that behaviour change is largely a decision of the individual, a participatory approach from the youths would go a long way towards enhancing HIV prevention. The fact remains that, HIV infection is preventable; hence while scientists are still looking for a cure, there is an urgent need for sexual behaviour changes towards HIV prevention to ensure a definite decline in new infections is achieved.

2.7 SUMMARY

This chapter discussed HIV/AIDS prevention amongst the youths. It identified the existing gap between having HIV/AIDS knowledge and the actual practice of HIV prevention, with a focus on Tanzania. It also addressed factors influencing HIV prevention practices and outlined the need for HIV prevention intervention programmes to be re-enhanced, multifaceted and able to impart sustainable HIV prevention skills to the youths.

Chapter 3 will present the research design and methodology used to collect and analyse data.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents details on the research methods and the data collection processes. The research was carried out in two phases using quantitative and qualitative designs respectively. The researcher recruited research assistants and used a structured interview schedule developed for this study, based on the variables derived from the conceptual framework of the study, to collect data for phase 1. The researcher also used focus group discussions (FGDs) to obtain in-depth information from selected participants for phase 2 of the study.

3.2 AIM OF THE STUDY

The purpose of this study was to determine the factors that influence HIV prevention behaviours amongst the youths aged 15-24 years, in Tanzania.

3.3 RESEARCH DESIGN

In this section, the research design and methods are discussed.

3.3.1 Research paradigm

The research paradigm is defined as the dominant framework of perceptions, values, procedures, understanding and beliefs within which normal science is conducted (Kuhn in

Smith 1998:198). In this study two research paradigms were used, the positivist and constructivist respectively.

3.3.1.1 Positivist paradigm

The positivist paradigm is based on the principle that science quantitatively measures independent facts about a single apprehensible reality (Healy & Perry in Krauss 2005: 760). This approach was first used in natural science and later adopted in social science. It states that only the observable and measurable data should be taken into account. This paradigm was adopted in phase one of this research where the object of study was independent of the researcher. The researcher wanted to discover facts about the participants and measured these from the data collected through structured interviews.

3.3.1.2 Constructivist paradigm

In phase 2 of this study, the researcher sought insight into human behaviours and adopted a constructivist paradigm. This is defined as the view that all knowledge, and therefore all meaningful reality, is dependent on human practices, being constructed in and out of interactions between human beings and their world, developed and transmitted within a social context (Crotty in Golafshani 2003:603). This is grounded on the fact that every individual sees the world based on his/her own experiences and perceptions. Hence the data collected in this phase through FGDs was largely the subjective accounts of the participants.

3.3.2 Research design

Research design is the plan in which data is collected and utilised so that the desired information can be obtained. This study adopted both a quantitative design for phase 1 and a qualitative for phase 2.

3.3.2.1 Phase 1: Quantitative research design

In phase one of this research, a descriptive, cross-sectional, quantitative study design was used to collect and interpret data. The aim of this phase was to determine the current level of knowledge of HIV/AIDS, the attitudes of the youths towards HIV prevention behaviours and the levels of practice of HIV prevention behaviours. It also identified factors that influence HIV prevention behaviours. Structured interviews using a pre-defined structured interview schedule were used to collect data. It entailed the recruitment of research assistants. These assistants were trained in using the research instrument prior to entering the field.

A pre-test of the structured interview schedule was done on 10 randomly selected youths in Dar es Salaam, who were outside the study area, prior to the actual data collection date. However, the data from the pre-test was not included in the final results.

Descriptive design - also referred to as a survey, sets out to quantify the extent of a problem (Katzenellenbogen et al 1997:66). Phase one of this study is descriptive because the data obtained during the structured interviews was statistically analysed to determine the frequencies of various variables.

Cross-sectional design - this phase of the study is cross-sectional because the information gathered is representative of what is going on at a certain point in time (Oslen & George 2004:7). The data collected in this study reflects the youths' perceptions during the period of the study in August 2009.

Quantitative research - is concerned with collecting and analysing data focusing on numbers or frequencies, seeking to establish cause and effect rather than meaning and experience (Hsu & Gallinagh in Lanöe 2002:42). Phase 1 of this study is quantitative because it quantifies the levels of knowledge, attitudes and practices, and the influencing factors for HIV preventive behaviours amongst the youths.

3.3.2.2 Phase 2: Qualitative research design

The second phase of the research employed a qualitative design which allowed the researcher to understand what the youths' perceptions of HIV prevention behaviours, their risks of being infected and their roles in enacting such HIV prevention behaviours. The importance of the qualitative data collected was to complement the quantitative data which could otherwise not elicit in-depth information from the respondents. A total of four focus group discussions (FGDs) were done (one for male youths only and one for female youths only in each of the two wards). An observer/recorder and a facilitator were recruited for this phase. The facilitator and recorder received prior training on their roles in the FGDs. The youths who participated in the FGDs were selected from those sampled for the quantitative phase.

Qualitative research - is mainly descriptive and involves the collection and analysis of data concerned with meaning, attitudes and beliefs rather that data that results in numerical counts from which statistical inferences can be drawn (Lanöe 2002:42). Phase 2 of this research is qualitative because it describes the youths' perceptions of HIV prevention behaviours.

3.4 RESEARCH METHODS

In this section, the research methods are discussed in detail.

3.4.1 Study population

This is the group from which the study gathered information and about which conclusions were drawn (Katzenellenbogen et al 1997:74). The study population for this research comprised youths aged 15-24 years who had been resident in Karatu and Monduli districts, in Arusha region, for a period of not less than six months from the date of conducting the study. The researcher focussed on the youths because they contribute significantly to the rise in new HIV infections in Tanzania. The youths can therefore be classified as a key

population vulnerable to HIV infections and in urgent need of interventions to avert HIV/AIDS.

3.4.2 Study area

The research took place in the Arusha region located to the north of Tanzania. Arusha is a fast growing commercial province with agriculture as its main economic activity. It is also home to several natural game reserves and is the tourist hub of Tanzania. Two out of the seven districts in Arusha were included in the study namely Karatu and Monduli. One ward from each district was selected namely Karatu and Mto wa Mbu wards respectively. These were purposively selected because of their peri-urban location, ongoing HIV/AIDS intervention programmes by NGOs such as DSW, Marie Stopes and CPAR (Canadian Physicians for Aid Relief), and the existence of baseline surveys showing low levels of HIV preventive behaviours amongst the youths in these areas.

Karatu district is the gateway between Arusha and the Ngorongoro national parks whilst Monduli is the gateway to the Tarangire national parks. Hence both districts see a significant flow of tourists throughout the year. Many tourist guides and drivers stop over in Karatu and Monduli, which have several hotels and guest houses. The mobile populations in both districts pose risks for exposure to STIs and HIV/AIDS. During the national HIV surveillance among antenatal clinic attendees in 2005, Arusha region had an overall HIV prevalence of 6.1% as shown in Figure 3.1; while Karatu and Monduli districts had a prevalence of 3.1% and 3.6% respectively (NACP 2006:9-10). However, the district statistics of those who underwent VCT in 2007 showed that the HIV prevalence in Karatu had increased to 6%, with 5% of the men and 7% of the women testing HIV positive (DED [Karatu] 2008:10). This study therefore, aimed at establishing the factors that impede the practice of HIV prevention behaviours thus contributing to the rise in new HIV infections, particularly among the youths in Tanzania.

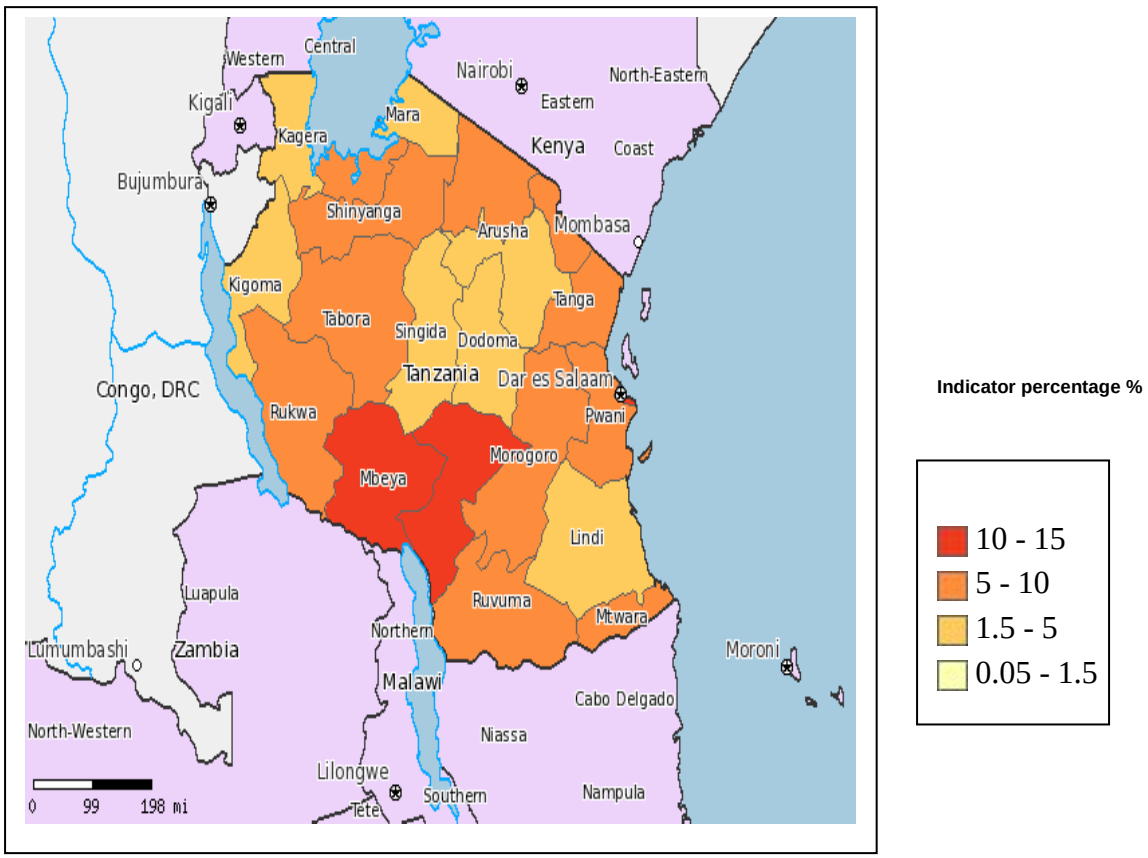

Figure 3.1: The HIV prevalence by region, Tanzania 2004

(HIV Mapper [sa]

3.4.2.1 Social demographic characteristics of the study area

The Karatu and Monduli districts are mostly populated by the Nilotic and Cushitic tribes including the Maasai, the Iraqw, the Barbaigs and the Hadzabe. The former three engage mainly in farming and pastoralism; whilst the latter are hunters and gatherers. The main economic driver is agriculture contributing up to 85% towards the economy (DED [Karatu] 2008:2), while there are also petty businesses in the major trading centres. There are no industries. The Karatu and Mto wa Mbu wards receive a small flow of cultural tourists, though the majority of the tourists are en-route to the major national parks. These town

centres in both wards thus serve as stop-overs for tour guides and drivers. According to the Tanzania census (Tanzania Sensa 2002), Karatu district was found to have a population of 177 951 inhabitants with 17 922 in Karatu ward, while Monduli had a population of 184 516 inhabitants with 16 068 in Mto wa Mbu ward during 2002.

The educational institutions in the study area consist of pre-primary, primary and secondary schools. There are no institutions of higher learning such as teacher training colleges, technical vocational training colleges (polytechnics) or universities (DED [Karatu] 2008:9). However, there are post-secondary training schools which offer short courses in languages, handicrafts, hotel management and tourism hereby termed as vocational training for the purpose of this study. The level of education amongst the youths has been low due to the fact that culturally, education was not seen as important and formal education was viewed with suspicion (AMANI ECCD 2005:1). Thus from a very early age children were brought up to focus on pastoralism and farming. Those girl-children who went to school, were limited to primary school education only. After primary school they got married, often to older males who are more sexually experienced. This practice might expose female youths to STIs and HIV (Swedi 2009).

The tribes resident in the study area have deeply-rooted cultural backgrounds which perpetuate male dominance. Married women have literally no place in these societies. The practice of polygamy is common which exposes the women to high risks of HIV infections because they cannot negotiate for safer sex (Kulzer 2002:92).

Originally, the resident communities in the two districts lived in seclusion, with very little interaction with other communities and hence they were at a fairly low risk of exposure to HIV and STIs (Valdez in Kulzer 2002:85). However, due to their inbuilt polygamous culture; with the migration of people, introduction of new economic activities, tourism, seeking of job opportunities in major towns, there has been an increased exposure of these communities to higher-risk sexual activities, particularly amongst the young men. This has resulted in an increased risk of exposure of the young women to HIV/AIDS when the men return to their homes. Some studies have opposed this speculation stating that, due to their cultural background, many migrant pastoralist men do not engage in sex with women

outside their communities (Coast 2006). However, other studies have shown that urban migrant pastoralist men pose a significant risk of introducing HIV/AIDS on their return to their communities (May 2003:2; Bennett, Magoma, Johnson & Leslie 2004).

3.4.3 Sampling procedure

For phase 1 of the research, random sampling using both cluster sampling and simple random sampling were adopted to select the respondents, whilst in phase 2, non-random, purposive sampling was used. Random sampling also known a probability sampling is a selection tool where each individual in the study population has a known chance of being included in the sample (Katzenellenbogen et al 1997:75).

3.4.3.1 Selection of wards

Purposive selection was used to define the study area which includes the Karatu and Mto wa Mbu wards respectively. Purposive sampling allows the researcher to choose a group, setting or individuals because they illustrate a feature or process in which the researcher is interested (Silverman 2000:104). Arusha was amongst the three regions in Tanzania covered in the 2008 youths' survey on HIV/AIDS which showed a significant discrepancy between having HIV/AIDS awareness and actual HIV prevention practices (Mbjijmonywa 2008); whilst Karatu and Monduli districts already had ongoing HIV/AIDS intervention activities. This study was therefore a follow-up to understand why the gap existed. Two out of the seven districts in Arusha, namely Karatu and Monduli, were included in the study. Karatu district is further divided into 13 wards of which Karatu ward is part and was selected for the study. Monduli district consists of 20 wards of which Mto wa Mbu is part and was also selected for the study. The respective wards were selected due to their peri-urban location and the fact that they were mobile populations which might pose an increased risk of exposure to HIV infections.

3.4.3.2 Selection of out-of-school youths

The out-of-school youths sampled for the quantitative phase were recruited at the community level. With the assistance of the WEOs and NGO representatives, a list of all the villages in the respective wards was drawn up. A cluster sample of villages within each ward was selected at random and then all the youths aged 15-24 years in the sampled villages were eligible for inclusion in the study. All the three villages in Karatu ward and three out of nine villages in Mto wa Mbu ward were represented in the study. At the village level, with the assistance of the VEOs and NGO representatives, the researcher and research assistants randomly select a starting point from which the research assistants randomly recruited youths aged 15-24 years who upon giving consent, were asked to meet at a central location where they were interviewed. The researcher opted to recruit the youths to a central venue after receiving advice from the local authorities about the potential unresponsiveness of the communities when visited at their homes. The communities in Karatu ward in particular, have developed 'research fatigue'. In matters concerning HIV/AIDS, members of the community tend to be very apprehensive as to why their particular home was sampled. It was also reported that, community members had on occasion, made demands to know what financial or material benefits they would get out of the research being conducted in their homes/communities.

3.4.3.3 Selection of in-school youths

The in-school youths were sampled from the secondary and post-secondary schools using a multi-stage sampling method. The schools were selected using cluster sampling. In Karatu ward, three secondary schools and one language/hotel management school were selected out of a total of six secondary schools, whilst in Mto wa Mbu ward both secondary schools were included in the study. The researcher sought permission from the respective head teachers for a suitable time for conducting the interviews without interrupting the school timetable. At the school level, the youths were randomly selected. A head count was done in each class from which the youths were divided into two groups of alternate

odd and even numbers. One group was selected for each class; the youths in the selected group were asked to pick random numbers for inclusion into the sample until the maximum sample for each class was recruited. On average each class consisted of 40 to 50 students from which 10 to 15 youths were selected depending on the school's size.

3.4.3.4 Selection of focus group discussion participants

For phase 2, a total of four FGDs were done (one for male youths only and one for female youths only in Karatu and Mto wa Mbu wards respectively). This entailed purposive sampling of homogeneous groups of six to seven members each, based on their qualification criteria including: that they be aged 15-24 years and they had available time to participate in the discussions. The researcher ensured that the diverse characteristics of the participants such as religion, schooling background and occupation were included in the groups so that they could be representative of the wider youth population.

3.4.3.5 Ethical issues related to sampling

Group stigmatisation - the sampling procedure for the study was explained to each group of youths such that they were aware that throughout the selection process, they had an equal chance of being included into or excluded from the research. This prevented discrimination against the participants based on the assumption that they might have peculiar characteristics compared to the youths who were not requested to participate in the study.

3.4.3.6 Sample

This is the number of participants selected from the study population who were included in the study. The researcher chose to calculate the sample size based on the estimated prevalence of the variable of interest (Magnani 1997:6), in this case the practice of HIV prevention behaviours among the youths in selected sites in Tanzania.

The following formula (Katzenellenbogen et al 1997:275) was used to obtain the minimum sample size

$$n = \frac{t^2 x\ p\ (1-p)}{m^2}$$

n = minimum required sample size
t = confidence level at 95% (standard value of 1.96)
p = estimated level of HIV prevention practice among the youth (42.9%)
m = margin of error at 5% (standard value of 0.05)

$$n = \frac{1.96^2 \times 0.429(1-0.429)}{0.0025}$$

$$n = \frac{3.8416 \times 0.244}{0.0025}$$

n =374.9

This was based on the DSW baseline survey which showed that the level HIV prevention practices amongst female youths in selected regions of Tanzania (Arusha) was 42.9% (Mbjijmonywa 2008:9-11). The estimated sample size was 374.9 which was rounded off to 375.

3.4.4 Data collection

In this section, the data collection methods, instruments and processes for the two phases of the study are discussed.

3.4.4.1 Data collection approach and method

Two forms of data collection were used for the respective phases of the research. A structured interview schedule with pre-conceived open and closed-ended questions was the instrument used for data collection in phase one of the research. The structured interview schedule was completed by trained research assistants as they conduct structured interviews with the respective respondents. The interview schedule was developed in English and later translated into Swahili. The English version is for the purpose of the study reference only. The national language of Tanzania is Swahili; hence the structured interview schedule was translated into Swahili to ensure that the respondents were able to fully participate in the interview in a language in which they are competent (both the English and Swahili structured interview schedules were checked by an English-Swahili translator - see Annexures A and B for the attached interview schedules). The researcher collected the completed structured interview schedules from the research assistants and placed these into a safe collection box until the data collection phase was completed. (A letter from the English-Swahili translator is also included in Annexure K).

The qualitative data were collected from FGDs in the form of open-ended discussions led by a facilitator who used a focus group guide to set the pace for discussions (see Annexures C and D for the attached FGD English and Swahili guides). The discussions were recorded by audio tapes. At the same time, the narrative material was also collected by an observer/recorder, who made notes to include specifics of the verbatim dialogue between the researcher, the facilitator and the participants. The observer also took notes of the various expressions and gestures of the participants that presented themselves during the discussions. All notes were filed for the final data analysis and interpretation.

3.4.4.2 Data collection instruments

3.4.4.2.1 Structured interview schedule

This is a tool for quantitative research often used in social surveys. It consists of a standardised schedule where each respondent gets the same questions, in the same way and in the same order (Pettersen & Durivage 2008:54). A structured interview schedule was developed for this study consisting of closed-ended, pre-coded or fixed choice questions and open-ended questions, whose answers were later coded and analysed.

Advantages of using a structured interview schedule

- it reduced error due to interviewer variability
- the closed ended, pre-coded or fixed choice questions increased accuracy of the data and eased the data processing

Disadvantages of using a structured interview schedule

- the interviewers had limited time and developed limited rapport with the respondents
- there was limited interactive discussion and it was a less satisfying experience for respondents
- for sensitive topics like HIV/AIDS, some respondents, particularly amongst the in-school youths, gave socially desirable answers which might have led to information bias

3.4.4.2.2 Focus group discussions (FGDs)

A FGD is a form of qualitative research method in which a group of 6-12 people are recruited and engaged in a discussion which seeks to establish their perceptions and attitudes towards a concept, a product, a service or an idea (Dawson, Manderson & Tallo 1993). In this study, four interactive FGDs were conducted allowing participants to freely express their views on HIV/AIDS.

Advantages of FGDs

- they complemented the quantitative survey by providing in-depth information from participants on the various topics
- implementation of FGDs was more flexible as each focus group discussion was built on previous discussions and hence the researcher modified the discussions to the appropriate language and content to improve subsequent discussions

Disadvantages of FGDs

- for sensitive topics such as sexual behaviours, some group members hesitated to air their feelings or experiences freely
- the information obtained cannot stand on its own and has to be complemented by survey data to show the distribution of the opinions and beliefs expressed by the youths
- the data management and analysis were more complicated than for quantitative surveys

3.4.4.3 Data collection process

The data collection process for this study followed various stages.

A literature review was done on HIV/AIDS to obtain background information on HIV/AIDS, transmission and prevention modes; and the youths' HIV preventive behaviours which enabled the researcher to develop the research questions. From the literature reviewed, an assessment of three conceptual behaviour change models was done which defined the key variables for the study.

The conceptual framework adopted for this study was formed from a combination of the variables found in the HBM, ARRM and theory of reasoned action models. The variables

guided the researcher into the development of the research instruments. A structured interview schedule was developed for phase 1 from which quantitative data was collected and analysed to determine the frequency of occurrence of the various variables based on the research questions. FGDs were selected as the appropriate method for obtaining in-depth opinions on beliefs and attitudes of the youths towards HIV prevention for the qualitative phase of the study. The variables derived from the conceptual framework of the study were also used to develop the FGD manual which was used by the facilitator to guide the discussions.

Training of the research assistants: phase1

The researcher recruited 11 research assistants to assist with conducting of the structured interviews. A two-day training and preparation programme was conducted with the research assistants. The training included a briefing on knowledge about HIV/AIDS, the dynamics of HIV/AIDS prevention amongst the youths, the basic concepts of this study, the research objectives, the interviewing techniques and the standard way of recording responses from the structured interviews.

Pre-testing of the research instrument: phase 1

The structured interview schedule was pre-tested amongst 10 youths living outside the study area with the aim of detecting any weaknesses with the research instrument. The structured interview schedule was edited to address potential misinterpretation of the language used, in an effort to obtain more appropriate answers in response to specific questions.

Venue selection: phase 2

The resident research assistants aided the researcher in selecting suitable venues within their respective wards, where the participants were comfortable in holding the FGDs. The researcher also ensured that the venues were located in quiet areas with minimal distractions from the outside environment.

Recruiting a facilitator and a recorder: phase 2

The researcher recruited a facilitator whose role was to guide the discussions and an observer/recorder whose role was to document all the narrative conversations between the researcher, facilitator and participants. The researcher briefed both the facilitator and the recorder on the situational analysis of the study area, the background information of HIV/AIDS prevention, the research objectives and their respective roles during the FGDs.

The researcher defined the role of the facilitator to include:

- the introduction of the session
- to control the rhythm of the meeting
- to encourage the involvement of participants in the discussion
- to summarise the discussions and check for agreement on the key arising concepts

The recorder was required to record the following:

- the date, time and place of the FGDs
- the socio-demographic characteristics of participants
- the group dynamics
- the emotional aspects
- the vocabulary used

3.4.5 Data analysis

In phase one of the research, each structured interview schedule was assigned a unique number and the questions were customised such that data could be extracted, entered into and analysed using the SPSS software, version 15.0. The answers to the closed-ended questions were coded and entered into the database. Answers from open-ended questions were collated manually, categorised into groups, coded and entered into the database for analysis. Socio-demographic characteristics and the perceived barriers to HIV prevention were analysed using univariate analysis to generate descriptive statistics including

frequencies and measures of central tendencies such as the mean and measures of variability or dispersion, such as the range.

The HIV prevention determinants including HIV/AIDS knowledge, HIV/AIDS misconceptions, attitudes towards HIV prevention, self-efficacy and perceived severity of HIV/AIDS were individually scored. Each score was obtained by collating answers to questions relevant to the specific score. The values were added to get a total score and cut-off points were set for low, moderate and high levels respectively, where applicable. The scores were used in the cross tabulation analyses.

The Pearson's chi-square (X^2) statistical test was used to test the strength of association between the background variables, independent variables and dependent variables in this study. Multivariate linear regression analyses were used to determine the predictors of HIV preventive behaviour outcomes whilst controlling for confounding variables. This was followed by bivariate logistic regression analysis on factors that were shown to influence HIV prevention practices to determine the strength and direction of the correlation between two variables.

In phase 2, the audio data from FGDs were transcribed and was reviewed along with the field notes documented by the observer. These were read thoroughly so that the researcher became familiar with the data. Thematic or content analysis was done whereby the data were explored for themes which were systematically categorised into codes (Guest & MacQueen 2008:216). The codes were manually created using a deductive category application whereby the categories will be based on prior formulated, theoretically derived aspects of analysis; and these were then connected to the text (Mayring 2000). The researcher used data reduction and data display of the coded data for drawing conclusions during the data interpretation phases.

3.5 RELIABILITY: PHASE 1

Reliability is the consistency of the measurement, or the degree to which an instrument produces the same results each time it is used under the same conditions with the same

subjects (Katzenellenbogen et al 1997:90). The researcher could not definitively test and retest for the reliability of the research instrument due to the content of the study.

According to Joppe (in Golafshani 2003:599) attempts to re-test the questions with the same respondent may sensitise the respondent to the subject matter and hence influence subsequent responses. The researcher thus made comparisons between the data collected during the pre-test and the data collected during the actual research which showed consistency in the data obtained.

Inter-rater reliability represents the degree to which two or more individuals (raters or coders) agree (Marques & McCall 2005:442) or give consistent estimates of the same phenomenon. The researcher assessed this aspect of reliability upon reviewing the results from the pre-test structured interviews. Where the results were varying particularly with the open-ended questions, the researcher re-trained the research assistants to enhance consistency in the way they framed the questions.

3.6 VALIDITY: PHASE 1

Research validity is the degree to which the research process undertaken is accurate or the best available approximation to the truth (Bonita, Beaglehole & Kjellström 1993:57).

Internal validity represents how well a variable measures what it is supposed to (Joppe in Golafshani 2003:599). The researcher conducted a pre-test on the structured interview schedule using 10 randomly selected youths. The data collected was analysed and showed that the findings obtained were as expected. Where there were some misinterpretations, the questions were re-phrased to make it easier for the respondents to understand.

External validity refers to the ability to generalise the results of the study to other social settings (Bryman & Bell 2007:410). The researcher used probability sampling namely

random sampling, and ensured that the sample size for the study was adequate in order to provide findings that will be similar to those of the general population.

3.7 TRUSTWORTHINESS: PHASE 2

Trustworthiness refers to the honesty of data collected from or about the participants such that it will be credible, dependable, confirmable and transferable (Ulin, Robinson & Tolley 2005:25). The researcher undertook the following measures to ensure trustworthiness.

- The researcher, and research assistants, built rapport with the participants to ensure they felt free to share their feelings, insights and experiences
- The researcher kept an audit trail of all ongoing documentation of the data collection and analysis processes to demonstrate consistency
- Member checks – the researcher discussed the data interpretations and conclusions with the participants of the FGDs for verification of arising concepts to minimise researcher bias
- Peer review - the researcher discussed the data interpretations and conclusions with a non-participating colleague, experienced in qualitative research, to challenge the research findings. Verbal consent was obtained from the FGDs participants with this regard to ensure that they did not feel there had been a breach of confidentiality of the discussions
- Reflexivity – the researcher critically reviewed her own potential biases and predispositions to ensure that they did not have a bearing on the data collection process during the FGDs and on the data interpretation and analysis

3.8 SUMMARY

This chapter described the research methodology used in collecting the data for the study. Included were the description of the study population, research setting, sampling procedure, the research designs, data collection instruments and processes; and details on how the data had been managed and analysed.

Chapter 4 will present the results as obtained from the data collected during phase 1 of this study, by means of conducting structured interviews with youths.

CHAPTER 4

ANALYSIS AND DISCUSSION OF RESEARCH RESULTS: PHASE 1

4.1 INTRODUCTION

Chapter 1 of this dissertation presented the background information on HIV/AIDS and discussed the ongoing challenges of providing treatment and care to PLWHA in the wake of increasing HIV infections. It focussed on the rising incidence of HIV amongst the youths in Tanzania, despite the existence of HIV/AIDS prevention programmes and the need to address this discrepancy. Chapter 2 reviewed the literature on the prevention of HIV infections particularly amongst the youths and identified factors influencing the practice of HIV prevention behaviours; which provided insight into the conceptual framework used in this study. The research methodology, as discussed in chapter 3, was divided into two phases, namely the quantitative phase (phase 1) and the qualitative phase (phase 2). This chapter presents the data analysis and discussions of the results from the quantitative phase of study. The values have been rounded-off to the nearest decimal place.

This information will be used to recommend more effective measures to improve the practice of HIV preventive behaviours amongst the youths; where the provision of health education alone, has not resulted in sustainable behaviour changes towards the prevention of HIV infections.

4.1.1 Statement of the problem

Despite ongoing intervention programmes on HIV/AIDS prevention and management in Tanzania, there are still new cases of HIV infections every year, contributing towards a rapidly growing socio-economic crisis. This study addressed the reasons why there have been minimal changes in sexual behaviours towards HIV prevention, particularly amongst the youths who are most at risk, thus perpetuating the epidemic.

4.1.2 Purpose of the study

The aim of this research was to determine the factors that influcence HIV prevention behaviours amongst the youths aged 15-24 years in Tanzania.

Specific objectives of this study were to:

- assess the level of knowledge, attitudes and practices of HIV/AIDS prevention amongst the youths
- determine the perceived susceptibility of the youths to HIV infections
- determine the youths' perceived severity of HIV/AIDS
- examine the association between the determinants of HIV prevention and the HIV prevention practices amongst the youths
- determine the youths' perceived barriers that impede behaviour changes towards the prevention of HIV infections
- identify gaps in the youths' perceived self-efficacy to enact HIV prevention behaviours
- determine the youth-appropriate measures for HIV prevention in Tanzania

4.2 DATA ANALYSIS

In this study, various data analysis formats relevant to the research questions were used, as detailed in chapter 3. The data from the structured interview schedule were collated, coded, categorised and entered into the SPSS software version 15.0. Descriptive statistics were generated from univariate analysis using SPSS from which frequencies, measures of

central tendencies such as the mean and measures of variability such as the range, were derived (Sternstein 1996:4, 11). These were presented in the form of frequency tables, bar graphs and pie charts by created using the Microsoft Excel computer program.

To assess the association and strength of relationships between background variables versus HIV prevention determinants, HIV prevention determinants versus HIV prevention practices and background variables versus HIV prevention practices, cross tabulation analyses and the Pearson's chi-squared tests (X^2) were done (Archdeacon 1994:67-71). The chi-squared tests were done to test the assumption that there was no difference between the number of observations in each category of dependent variables. The probability of obtaining a difference in the test statistic or p-value was set at 0.05, therefore a p-value of <0.05 means that the assumption (null hypothesis) of no difference was rejected and that the differences in the dependent variables observed were statistically significant or predicted by the respective independent variables (Wimmer & Dominick 2006: 282-285) .

Multivariate model linear logistic regression analyses were done to examine which HIV prevention determinants influenced HIV prevention practices while controlling for confounding factors influencing HIV prevention behaviours. Further analyses, using bivariate model logistic regression and correlation analyses were done on factors that were shown to influence HIV prevention practices in order to determine the strength and direction of the relationship between the two respective variables (Archdeacon 1994: 98-106).

4.3 DEMOGRAPHIC DATA

A total of 372 respondents who met the inclusion criteria for the study were interviewed in phase 1 of this study as explained in chapter 3. The minimum sample size was estimated at 375 respondents. However, three respondents were disqualified due to their age falling outside the required range of 15-24 years. The respondents' background characteristics were obtained from the personal information collected in section A of the structured interview schedule, as summarised in table 4.1. These included age, gender, religion, marital status, highest level of education attained and current socio-economic activity.

The respondents were grouped into two age categories, with 63.2% (n=235) in the age group 15-19 and 36.8% (n=137) in the age group 20-24 years, respectively. The mean age of the respondents was 18.8 years with a standard deviation (SD) of 2.75. Amongst the respondents, 60.5% (n=225) were male while 39.5% (n=147) were female with a male: female ratio of 1.5:1. The distribution of the respondents by sex is representative of the study population which has an estimated male: female ratio of 1.1:1 derived from the Karatu district projected population estimates, showing a distribution of 114 964 males to 107 128 females, in 2007 (DED [Karatu] 2008:1).

Most of the respondents were Christians, with Catholic youths accounting for 40.6% (n=151), Protestant youths 32.8% (n=122) while 26.1% (n=97) were Muslims. The majority of the youths were single (n=316; 84.9%), whilst 9.1% (n=34) had multiple partners, 3.0% (n=11) were cohabiting with a partner, 0.8% (n=3) were divorced and only 2.2% (n=8) were married. More than half of the respondents 222 (59.7%), were students including secondary, post-secondary and vocational training students while 40.3% (n=150) comprised the out-of-school youths. Of the out-of-school youths, who largely comprised youths with primary education only (n=135; 36.3%) and uneducated youths (n=15; 4.0%); 82 (22.0%) were self-employed engaging in small businesses, farming and artisan jobs; while 56 (15.1%) were unemployed and only 3.2 % (n=12) were formally employed.

4.4 HIV/AIDS KNOWLEDGE, ATTITUDES AND PREVENTION PRACTICES

In section B of the structured interview schedule, the respondents' information about HIV/AIDS knowledge, attitudes towards HIV preventive behaviours and practices of HIV prevention behaviours was obtained.

4.4.1 HIV/AIDS awareness

The youths were asked if they had ever heard about HIV/AIDS. A high level of awareness of HIV/AIDS was observed amongst the respondents with 97.8% (n=364) of them having heard about HIV/AIDS whilst only 2.2% (n=8) reportedly had not done so. This

corresponded with the national findings during the THMIS of 2007-08 which reported a 97.8% level of awareness of HIV/AIDS amongst youths in the age-group 15-24 years (TACAIDS et al 2008b:54).

Table 4.1: Socio-demographic characteristics of the respondents (n= 372)

Background characteristics	Frequency	%
Age (years)		
15-19	235	63.2
20-24	137	36.8
Sex		
Male	225	60.5
Female	147	39.5
Level of education		
No education	15	4.0
Primary	135	36.3
Secondary	179	48.1
Post Secondary	3	0.8
Vocational training	40	10.8
Religion		
Catholic	151	40.6
Protestant	122	32.8
Muslim	97	26.1
Others	2	0.6
Marital status		
Single	316	84.9
Have multiple partners	34	9.1
Cohabiting with partner	11	3.0
Married	8	2.2
Divorced/ separated	3	0.8
Occupation		
Student	222	59.7
Unemployed	56	15.1
Self employed	82	22.0
Formal employment	12	3.2
Total	372	100.0

4.4.2 Youths' HIV/AIDS knowledge

In this study, knowledge about HIV/AIDS was measured by identifying the youths who could correctly define HIV and AIDS, and could mention correctly all four modes of HIV transmission and four modes of prevention, including VCT, as shown in table 4.2.

Table 4.2 Respondents' knowledge about HIV/AIDS (n=372)

Youths who could correctly define	Frequency	%
What is HIV	173	46.5
What is AIDS	223	59.9
Modes of HIV transmission		
By sex	344	92.5
By sharp objects	299	80.4
By blood transfusion	138	37.1
By MTCT	61	16.4
Modes of HIV prevention		
By abstinence	140	37.6
By being faithful to one partner	102	27.4
By condom use	192	51.6
By VCT uptake	50	13.4

Knowledge of HIV/AIDS was collated and scored on a scale from zero to 10 points, where 10 meant the respondents had the highest level of HIV/AIDS knowledge. The results indicated that the HIV/AIDS knowledge amongst the respondents was moderate with a mean knowledge score of 4.6 out of 10 points. The distribution of the respondents by level of HIV/AIDS knowledge was also assessed by setting cut-off values for high, medium and low knowledge levels respectively. More than half of the youths had medium HIV/AIDS knowledge levels (n=240; 64.5%), while only 8.1% (n=30) had high knowledge levels and a further 27.4% (n=102) had low knowledge levels. The respondents were more conversant with the routes of HIV transmission than the HIV prevention modalities.

These findings were similar to a nationwide study done by Wong, Chin, Low and Jafaar (2008:148) on HIV/AIDS knowledge amongst Malaysian young adults, which reported a moderate knowledge level amongst the respondents with a mean score of 20.1 out of 32 points. However, this study reported much lower knowledge levels than were found in a study on HIV/AIDS knowledge, perceptions and behaviours amongst Nigerian youths (Durojaiye 2009), which showed a mean knowledge score 8.3 out of 10 points amongst students in tertiary institutions, in Lagos.

4.4.2.1 HIV transmission misconceptions

The youths' misconceptions about the transmission of HIV are shown in figure 4.1, where 82.3% (n=306) of the respondents correctly refuted the common myth that HIV can be

transmitted by mosquitoes, 78.8% (n=293) said sharing food with an AIDS patient cannot transmit HIV and 79.6% (n=296) said transmission by witchcraft could not occur. On the contrary, only 50.0% (n=186) of the respondents acknowledged that a healthy-looking person could transmit HIV.

These findings were similar to those reported in the general population during the THMIS of 2007-08 where of the youths' aged 15-24 years, 75.6% declined HIV transmission by mosquitoes, 83.4% declined transmission by supernatural means, 80.4% declined transmission by sharing food with an infected person and only 55.7% acknowledged that HIV could be transmitted by a healthy-looking person (TACAIDS et al 2008b:54).

4.4.2.2 Comprehensive knowledge about HIV/AIDS

HIV/AIDS awareness alone has not been found to improve youths' HIV preventive practices. Accordingly to the ARRM, the recognition that one's behaviours are high risk influences one's decisions to adopt low risk activities. This means that youths also need to have the correct knowledge on HIV transmission and prevention modes in order to change their behaviours towards HIV prevention.

The respondents' comprehensive knowledge about HIV/AIDS was analysed. Only 57.5% (n=214) of the respondents in this study had comprehensive knowledge about HIV/AIDS. These included 51.6% (n=192) of the respondents who knew that consistent condom use and having one uninfected partner (n=102; 27.4%) can reduce the risk of HIV infections as shown in table 4.2. It also included that 50.0% (n=186) of those who knew that a healthy person could transmit HIV and the respondents who rejected at least two of the common myths of HIV transmission, such as HIV transmission by sharing food with a patient (n=293; 78.8%) and HIV transmission by witchcraft (n=296; 79.6%), as shown in figure 4.1. The level of comprehensive HIV/AIDS knowledge amongst the respondents was higher than 40.4% amongst youths aged 15-24 years in the general population, reported during the THMIS of 2007-08 (TACAIDS et al 2008b:55-56). Comprehensive HIV/AIDS knowledge was also higher than amongst their regional counterparts where a comprehensive HIV/AIDS knowledge level of 36.5% was reported amongst the men and women during the

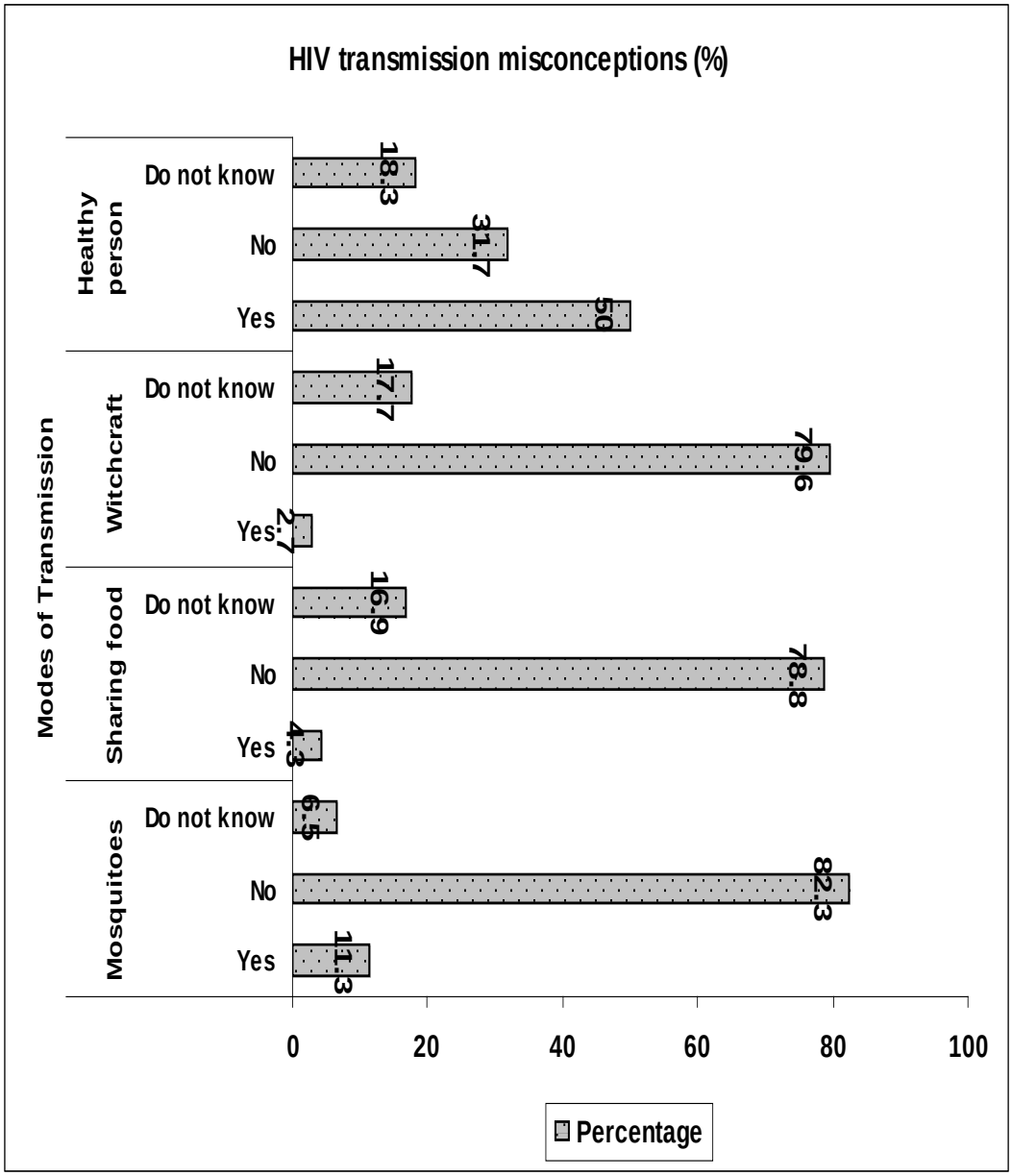

Figure 4.1 HIV transmission misconceptions (n=372)

Ugandan demographic and health survey of 2006; despite an ongoing HIV/AIDS intervention programmes (Uganda Ministry of Planning and Economic Development, Uganda Statistics Dept, Macro International, Institute of Resource Development Demographic and Health Surveys & Uganda Ministry of Health 2006).

4.4.3 Attitudes towards HIV prevention

In order to assess the youths' attitudes towards HIV prevention behaviours, youths' responses that were in agreement with the effectiveness of various HIV prevention approaches including condom use, abstinence and fidelity were analysed, as shown in table 4.3. More that half of the respondents 62.4% (n=232) agreed that children aged 10-14 should be taught about condom use. This was similar to the findings amongst the youths aged 18-24 years in the general population where 62.9% supported condom use education in children aged 12-14 years during the THMIS of 2007-08 (TACAIDS et al 2008b:71). Many respondents (62.1%; =231) agreed that condoms were effective against HIV prevention. This was much higher than the findings during a study in Benin that sought to understand the barriers to condom use amongst individuals aged 15-55 years, where only 37.0% of the participants perceived condoms as an effective means of HIV prevention (Hounton, Carabin & Henderson 2005:8). Some respondents 28.7% (n=106), stated that condom use reduced sexual pleasure. This myth appeared to be more common than findings in a study done in Madagascar amongst university students where only 6.4% cited reduced sexual pleasure as a reason for lack of consistent condom use (Rahamefy, Rivard, Ravaoarinoro, Ranaivoharisoa, Rasamindrakotroka & Morisset 2008:28-35).

On the other hand, 66.9% (n=245) of the respondents agreed that abstinence could reduce the risk of HIV infections. This was concurrent with a study on factors associated with sexual abstinence among adolescents in four SSA countries, where 70.0% of the Malawian

and Ugandan male youths said they abstained from sex to prevent STIs and HIV (Kabiru & Ezeh 2007:111-132). Overall, the majority of the respondents (80.6%; n=300) were in favour of fidelity as a more effective HIV preventive measure. This corresponded with results in a study done on knowledge of HIV/AIDS amongst adolescents in Chile, where 88.6% identified having a single sexual partner to be a form of HIV prevention (Pérez, Barrales, Jara, Palma & Ceballos 2008: 503- 508).

Similarly, the youths' overall attitudes towards HIV prevention were measured by scoring their responses and cut-off values were set for positive, neutral and negative attitudes respectively. More than half (61.3%; n=223), of the respondents had positive attitudes towards HIV prevention behaviours, while 37.1% (n=135) agreed with some approaches to HIV prevention and not others or were said to be neutral and only 1.9% (n=7) disagreed with several HIV prevention approaches or had negative attitudes towards HIV prevention behaviours (Taylor & Morrison 2005:3).

Responses that indicated that condom use was effective in preventing HIV were coded as "agree". A "disagree" coding was given for responses which included negative opinions on condom use. These included responses such as condoms were against one's culture or against one's religion, condoms were costly, condoms were ineffective and unsafe. Responses which showed indecision on the part of the respondents were coded as "do not know".

Table 4.3 Youths' attitudes towards HIV prevention behaviours

Question	Agree f	%	Disa-gree f	%	Don't know f	%	Total
Do you agree that children age 10-14 should be taught about condom use?	232	62.4	130	34.9	10	2.7	372
Does condom use prevent HIV infection?	237	62.1	124	33.3	17	4.6	372
Do condoms reduce sexual pleasure?	106	28.7	174	47.2	89	24.1	369
Can a person reduce their risk of HIV infection by having not sex at all?	245	66.9	100	27.3	21	5.6	366
Can one reduce one's risk of HIV infection by being faithful to one tested partner?	300	80.6	53	14.2	19	5.1	372

4.4.4 Youths' HIV prevention practices

The levels of practice of HIV prevention behaviours amongst the respondents in this study remained low as shown in figure 4.2; despite high levels of awareness about HIV/AIDS (97.8%; n=364) with 61.3% (n=223) of the respondents having positive attitudes towards HIV prevention behaviours. On average, 50.8% (n=189) of the youths had practised a form of HIV prevention behaviour including those who had abstained from sex (n=199; 53.5%), had remained single or had one sexual partner (n=90; 52.9%), had used condoms during their most recent sexual encounter (n=88; 51.2%) and had done VCT for HIV (n=167; 44.9%). These findings were similar to those in the study by Mbjijmonywa (2008) which reported HIV/AIDS awareness to be as high as 81.5%, positive attitudes at 57.7% but HIV prevention practices as low as 42.9%; amongst female youths in selected regions in Tanzania.

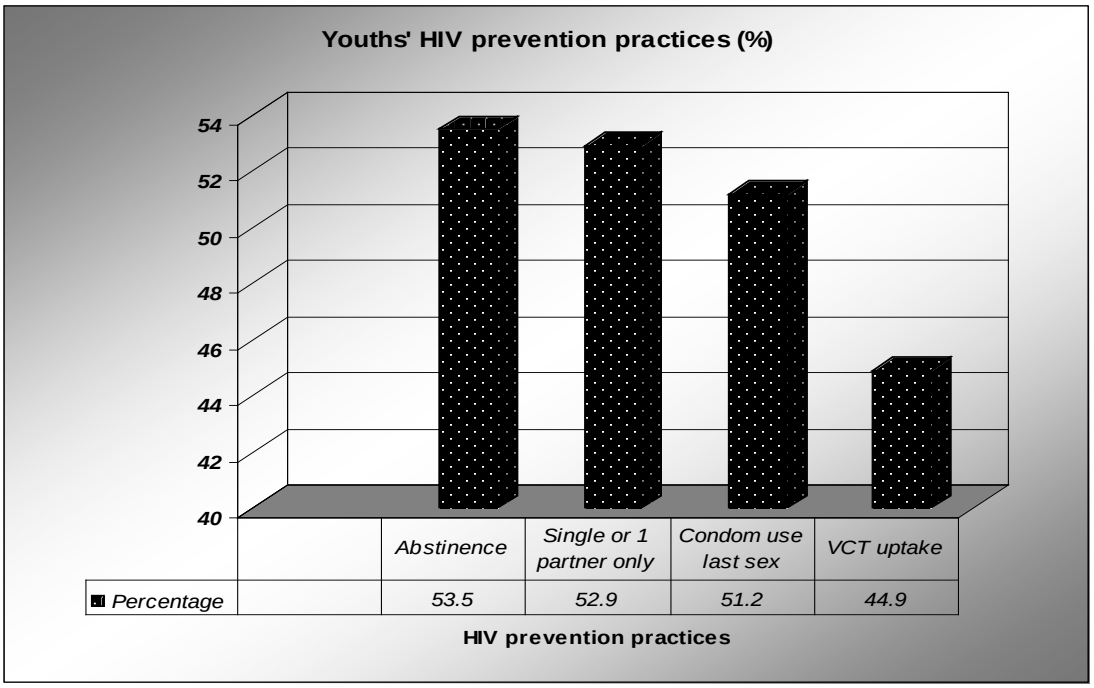

Figure 4.2 Youths' HIV prevention practices (n=372)

4.5 PERCEPTIONS OF SUSCEPTIBILITY TO HIV

According to the HBM and ARRM, an individual's perception of susceptibility to HIV/AIDS is a key determinant of behaviour change towards HIV prevention. A person will change his/her behaviour once he/she identifies such behaviour as being high risk. In section C of the structured interview schedule, the respondents' perceptions of risk of HIV infection were assessed as shown in table 4.4.

Table 4.4 Youths' perceptions of susceptibility to HIV infection

Question	Frequency	%
Do you know someone who is sick or has died of HIV/AIDS		
Yes	269	72.3
No	103	27.7
Do you perceive yourself to be a risk of HIV infection		
Yes	188	50.7
No	144	38.8
Do not know	39	10.5
How great is your risk of getting HIV infection		
High	37	19.7
Medium	48	25.5
Low	103	54.8

Most respondents (72.3%; n=269) had met a person who suffered from AIDS. The respondents had varying reactions to such occurrences including shock, fear and empathy, whilst few stated that knowing an AIDS patient made them aware of the need to protect themselves from HIV infections. Knowing an AIDS patient was found to significantly influence the youths' perceptions of risk as shown in table 4.5. More that half of the respondents (54.9%; n=147) who knew an AIDS patient, perceived themselves to be at risk of HIV infections, whilst only 39.8% (n=41) of those who had never met an AIDS patient perceived themselves to be at risk of infection, with p-value <0.05. This was contrary to a study done amongst South African youths about the association between knowing someone who died of AIDS and behaviour change. The South African study showed that although such knowledge significantly made youths change their behaviour and increased their perceptions about the severity of HIV/AIDS, there was no consistent increased perception of risk of contracting HIV amongst the youths in question (Palekar, Pettifor, Behets & MacPhail 2008:903-912). However, another South African study indicated that knowing someone who had died of AIDS was associated with a significant elevation in perceived HIV risk amongst female youths in Cape Town (Anderson, Beutel & Maughan-Brown 2007:98-105).

Despite the high awareness of AIDS patients, overall only 50.7% (n=188) of the respondents considered themselves to be at risk of HIV infections, of whom 19.7% (n=37) considered themselves to be at high risk, 25.5% (n=48) at moderate risk, while 54.8% (n=103) said they were at low risk of contracting HIV infections as shown in table 4.4. Risk perceptions amongst the respondents were lower than those reported by the MXit mobile phone survey of 2009, which showed that only 6 000 (30.0%) of the 20 000 South African youths who participated in this survey, believed they were not at risk of HIV/AIDS (Keeton 2009).

Table 4.5 Knowing an AIDS patient versus perception of risk of HIV infection

	Do you perceive yourself to be at risk of HIV infection								
	Yes		No		Do not know		Total		
Variable	f	%	f	%	f	%	f	%	Significance
Knows AIDS patient									
Yes	147	54.9	104	38.8	17	6.3	268	100.0	X^2=19.283
No	41	39.8	40	38.8	22	21.4	103	100.0	df=2
Total	188	50.7	144	38.8	39	10.5	371	100.0	P=0.000

Perception of risk versus attitudes towards HIV prevention

Perception of risk significantly influenced the youths' attitudes towards HIV prevention behaviours with p-value <0.05, as shown in table 4.12. More youths who perceived themselves to be at risk (n=122; 66.7%) had positive attitudes towards HIV prevention behaviours compared to 59.2% (n=84) youths who thought they were not at risk. The level of perceived risk had no influence on the respondents' HIV prevention behaviours including uptake of VCT, number of sexual partners and condom use.

This was contrary to a study on the risk perception attitudes towards HIV/AIDS prevention in Malawi, where risk perception did not influence HIV prevention behavioural intentions (Rimal, Bose, Brown, Mkandawire, Joshi & Folda 2009). Similarly, in a study on self-perception of risk and reduction of risky behaviours amongst undergraduate youths in Nigeria, neither a high nor low self-perception of risk influenced the inclination to reduce risky behaviours (Oshi, Ezugwu, Oshi, Dimkpa, Korie & Okperi 2007:195-203). However, according to Durojaiye (2009), a perception of risk was found to positively influence one's commitment to behaviour change and subsequent condom use.

High- risk youth groups

The youths were asked to name groups which they perceived to be at high risk of contracting HIV infections. Youth groups that were reported to be at higher risk of HIV infections included alcohol and drug abusers 25.5% (n=94), idle youths 15.4% (n=57) and teenagers/students especially young girls 15.2% (n=56) as shown in figure 4.3. Although these groups were more likely to be exposed to unprotected sex due to various relationship

dynamics, the other youths might tend to develop a false sense of security against the risk of contracting HIV infections (UNESCO 2006:21). Only 2 (0.01%) of the respondents acknowledged that the risk of HIV infection is applicable to all youths globally.

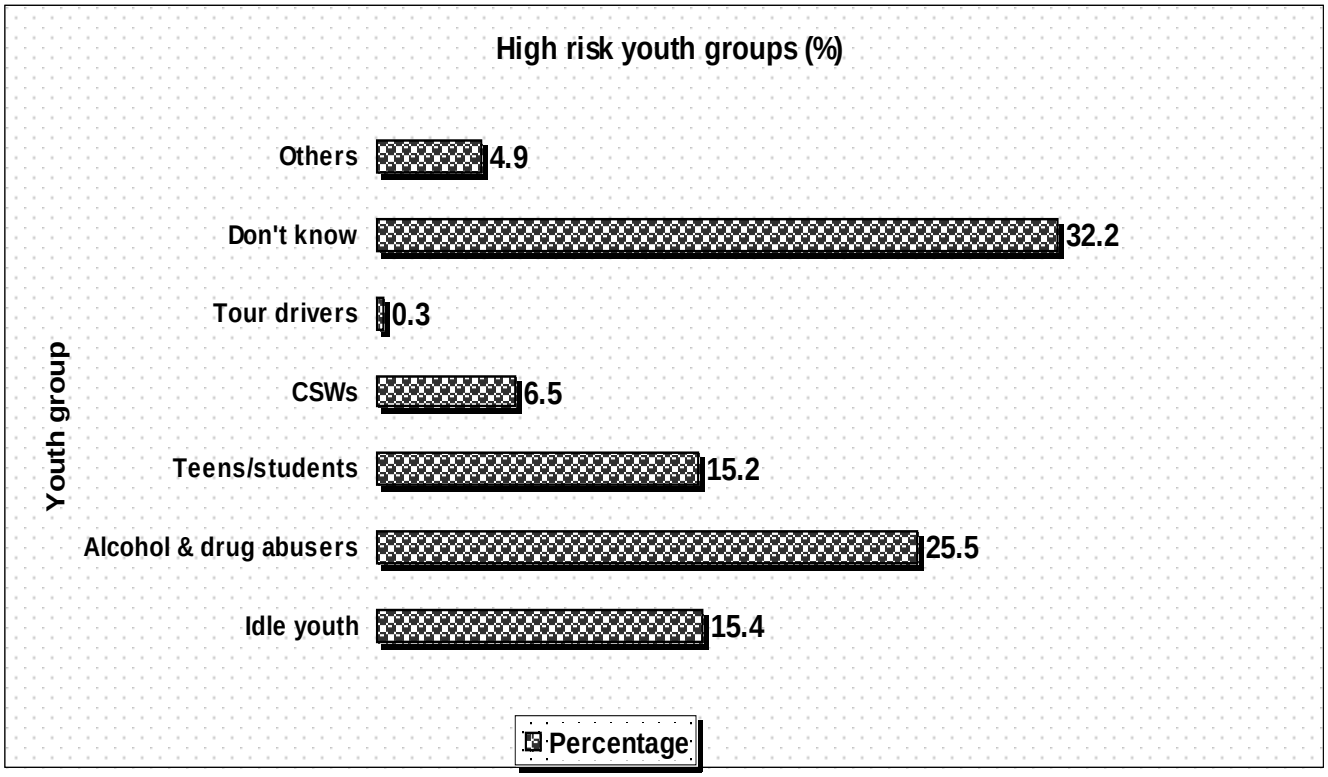

Fig 4.3 High-risk youth groups (n=369)

4.6 PERCEPTIONS OF THE SEVERITY OF HIV/AIDS

The perception of the severity of HIV/AIDS is also a key determinant of the adoption of HIV preventive behaviours. In section D of the structured interview schedule, the perception of severity was determined by scoring youths who thought HIV/AIDS was a serious health problem, with no cure. Overall, the majority of the youths (n=326; 87.6%) acknowledged that HIV/AIDS was a severe disease with no cure, while 12.4% (n=46) had a lower perception of severity as shown in table 4.6.

Table 4.6 Youths' perception of severity of HIV/AIDS

	Perception of severity of HIV/AIDS							
	Yes		No		Do not know		Total	
Question	f	%	f	%	f	%	f	%
Do you think HIV/AIDS is a major health problem	334	89.8	32	8.6	6	1.6	372	100.0
Do you think there is a cure for HIV/AIDS	14	3.8	346	93.0	12	3.2	372	100.0

Perception of HIV/AIDS severity versus attitudes towards HIV prevention

The perception of HIV/AIDS severity was found to significantly influence the youths' attitudes towards HIV prevention behaviours as shown in table 4.12, with a p-value <0.05. More respondents (n=200; 62.9%) with a higher perception of severity had positive attitudes towards HIV prevention behaviours compared to those with a lower perception of severity (n=23; 50.0%). This concurred with a study on AIDS health beliefs and intentions for sexual abstinence amongst male adolescent students in Nepal which showed that students with higher perceptions of severity strongly agreed with the intention to abstain from sex, with a crude odds ratio of 1.86 (Iriyama, Nakahara, Jimba, Ichikawa & Wakai 2007: 64-72). A similar view was shared by Fang, Li and Zhao (2006), in a study on factors influencing condom use amongst female sex workers in China, which showed that perceived HIV/AIDS severity was an additional predictor of condom use intention, with an odds ratio of 1.44.

4.7 ASSOCIATIONS BETWEEN THE FACTORS INFLUENCING HIV PREVENTION

In this section, the associations between the variables within the conceptual framework for this study as presented in chapter 1, including background variables, determinants of HIV prevention and HIV prevention behaviour outcomes are analysed and discussed.

4.7.1 Demographic characteristics versus the determinants of HIV prevention

The following sections discuss the relationships between the background characteristics of the respondents such as age, gender, education levels and socio-economic activity and the determinants of HIV prevention behaviours.

4.7.1.1 Age

In table 4.7, the respondents' ages were analysed against various determinants of HIV prevention behaviours. Youths were separated into two conventional age groups 15-19 and 20-24 respectively, for ease of comparison with other studies.

More respondents in the age-group 15-19 years had significantly higher HIV/AIDS knowledge levels (n=25; 83.3%) compared to respondents in the age-group 20-24 years (n=5; 16.7%), with p-value = 0.053. The implementation of the Tanzania National HIV/AIDS Policy of 2001 in schools was officially launched in 2006 (UN-IRIN 2006). This means that HIV/AIDS education is provided to students in both primary and secondary schools. Thus the younger respondents, who were the majority of the in-school youths, had more information on HIV/AIDS. This was supported by the fact that up to 36.6% (n=136) of the respondents' primary source of HIV/AIDS information was their respective schools (see figure 4.4).

Age also significantly influenced the youths' attitudes towards HIV prevention, their perceptions of risk of HIV infection and their self-efficacy to enact HIV prevention behaviours, with p-value <0.05. More youths in the younger age-group 15-19 years, had positive attitudes towards HIV prevention behaviours (n=122; 54.7%) and perceived themselves to be at risk of HIV infections (n=107; 56.9%) compared to their older counterparts aged 20-24 with only 45.3% (n=101) having positive attitudes and 43.1% (n=81) perceiving themselves to be at risk of infection, respectively. This means that the younger respondents (n=121; 57.1%) felt they were more capable of implementing HIV prevention behaviours compared to 42.9% (n=91) of the older respondents.

Similar results were observed in a study on sustainability of gains made in primary school HIV prevention programmes in Kenya which showed that students who had attended primary schools with the Primary School Action for Better Health (PSABH), had significantly higher levels of HIV/AIDS knowledge and attitudes that were supportive of sexual restraint, condom use and VCT. They were also more likely to have used safe sex practices and to have been tested for HIV (Maticka-Tyndale 2009).

Table 4.7 Age versus determinants of HIV prevention

	Age group						
	15-19		20-24		Total		
Variables	f	%	f.	%	f	%	Significance
Level of HIV knowledge							
High	25	83.3	5	16.7	30	100.0	X^2= 5.861
Medium	149	62.1	91	37.9	240	100.0	df = 2
Low	61	59.8	41	40.2	102	100.0	p = 0.053
HIV/AIDS misconceptions							
Low	193	65.4	102	34.6	295	100.0	X^2 = 3.435
Medium	8	61.5	5	38.5	13	100.0	df = 2
High	34	53.1	30	46.9	64	100.0	p = 0.180
Self-efficacy							
High	121	57.1	91	42.9	212	100.0	X^2 = 8.128
Medium	82	70.1	35	29.9	117	100.0	df = 2
Low	32	74.4	11	25.6	43	100.0	p = 0.017
Perception of severity of AIDS							
High	205	62.9	121	37.1	326	100.0	X^2= 0.094
Low	30	65.2	16	43.8	46	100.0	df = 1
Total	235	63.2	137	30.8	372	100.0	p = 0.759
HIV prevention attitudes							
Positive	122	54.7	101	45.3	223	100.0	X^2 = 16.833
Intermediate	103	76.3	32	23.7	135	100.0	df = 2
Negative	4	66.7	2	33.3	6	100.0	p = 0.000
Total	229	62.9	135	37.1	364	100.0	
Perception of risk of HIV							
Yes	107	56.9	81	43.1	188	100.0	X^2 = 7.520
No	103	71.5	41	28.5	144	100.0	df = 2
Do not know	24	61.5	15	38.5	39	100.0	p= 0.023
Total	234	63.1	137	36.9	371	100.0	

There was no significant difference in the levels of misconceptions about HIV/AIDS and perceptions of severity of HIV/AIDS with age.

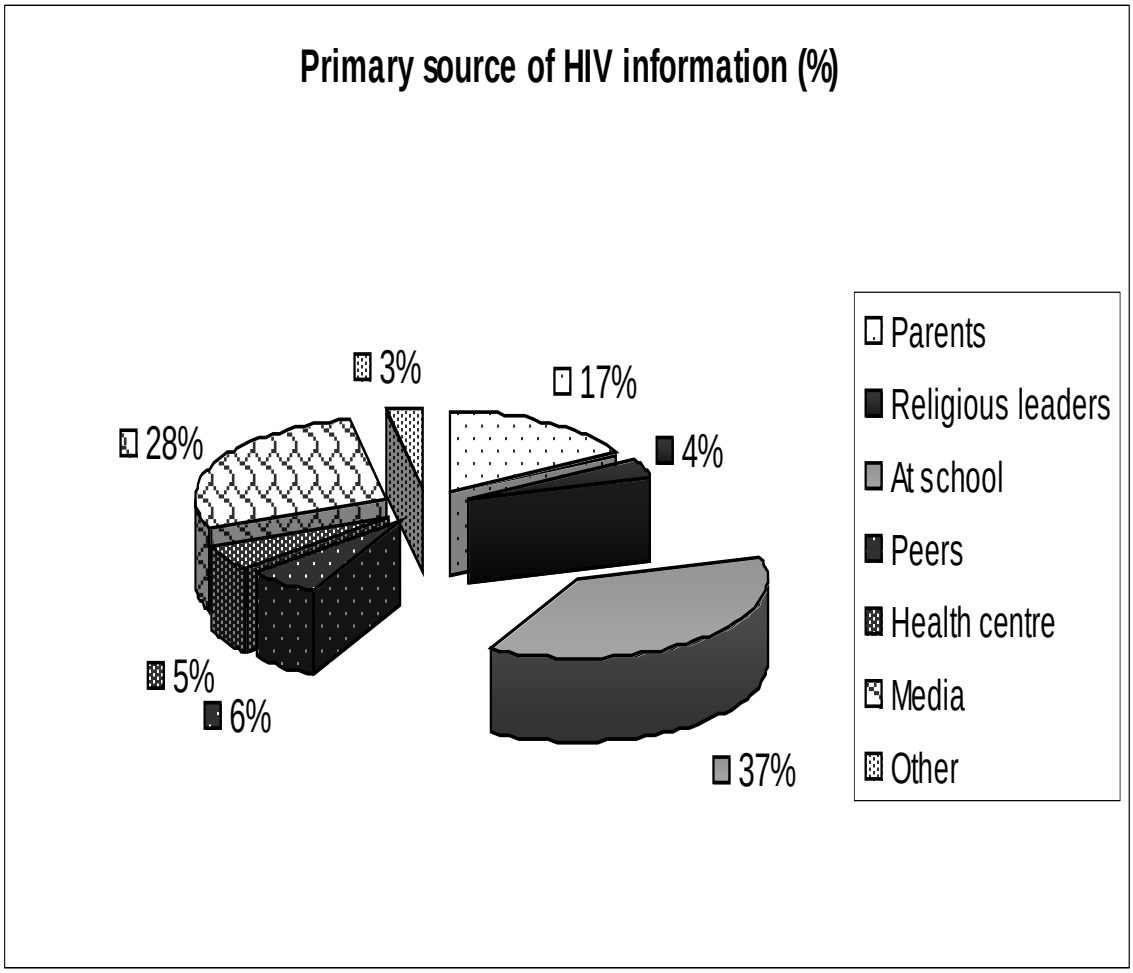

Figure 4.4 Primary source of HIV/AIDS information (n=372)

4.7.1.2 Gender

Gender was found to significantly influence youths' perceptions of risk of contracting HIV infections, their attitudes towards HIV prevention behaviours and their self-efficacy to practise HIV prevention behaviours, with p-value <0.05 (see table 4.8). More male respondents (n=127; 67.6%) had perceived themselves to be at of risk of HIV infections than female respondents (n=61; 32.4%). This was contrary to findings from a study by Kibombo, Neema and Ahmed (2007:168-181) on perceptions of risk amongst Ugandan adolescents where more female adolescents (72%) had significantly higher self-perceived risks to HIV infection than male (55%) adolescents. Likewise, more male youths (n=148; 66.4%) had positive attitudes towards HIV prevention behaviours compared to only 33.6 % (n=75) of the female respondents with positive attitudes. The perceived self-efficacy to

implement HIV prevention behaviours was therefore higher in male respondents where over two thirds of the male youths (n=143; 67.5%) felt they were capable of negotiating for safer sex to prevent HIV infections compared to only 32.5% (n=69) of the female youths.

These findings were consistent with the Tanzanian patriarchal society where a woman's rights might be limited when it comes to sex. A study on gender power imbalance on women's capacity to negotiate self-protection against HIV/AIDS in Botswana and South Africa showed that women's self-efficacy was significantly lower in demanding safer sex, particularly when they had partners 10 years older than themselves (Langen 2005:188-197).

There was no significant difference in youths' levels of HIV/AIDS knowledge, levels of HIV transmission misconceptions and perceptions of severity of HIV/AIDS with gender.

4.7.1.3 Level of education

This study compared determinants of HIV prevention amongst the in-school and out-of-school youths, as shown in table 4.9. Post-secondary education in the study area consisted of short courses in tourism, computer studies and secretarial fields. There were no institutions of higher learning such as university colleges or polytechnics. However, the vocational-trained youths included in this study included those youths who were learning very basic skills in tailoring, arts and crafts, languages and hotel management upon dropping-out of school or on completion of primary education. These courses were offered by privately run institutions and NGOs.

More respondents with secondary education (n=28; 93.3%), who largely constituted the in-school youths, were found to have significantly higher levels of HIV/AIDS knowledge compared to out-of-school youths, including those who had attained primary education only (n=1; 3.3%) and uneducated youths (n=1; 3.3%) with p-value < 0.05. On the contrary respondents who had attained primary level education only (out-of-school youths), showed significantly more positive attitudes towards HIV prevention behaviours (n=98; 43.9%) than their counterparts with p-value <0.05. This is contrary to the findings of the THMIS of 2007-

08 which showed that 95.6% of the men and women with at least secondary education had positive attitudes towards negotiating for safer sex (including refusing sexual intercourse and suggesting condom use) compared to 85.8% amongst those with no education and 92.9% with primary education only (TACAIDS et al 2008b:69).

The respondents' education background had no significant influence on their levels of misconceptions, their perceptions of severity of HIV/AIDS, perceptions of risk of HIV infection or their self-efficacy to adopt HIV prevention practices.

Table 4.8 Gender versus determinants of HIV prevention

	Gender						
	Male		Female		Total		
Variables	f	%	f	%	f	%	Significance
Level HIV knowledge							
High	18	60.0	12	40.0	30	100.0	$X^2 = 5.019$
Medium	136	56,7	104	43.3	240	100.0	df = 2
Low	71	69.6	31	30.4	102	100.0	P = 0.081
HIV Misconceptions							
Low	180	61.0	115	39.0	295	100.0	$X^2 = 2.405$
Medium	10	76.9	3	23.1	13	100.0	df = 2
High	35	54.7	29	45.3	64	100.0	P = 0.300
Perception of severity of AIDS							$X^2 = 1.517$
High	201	61.7	125	38.3	326	100.0	df = 1
Low	24	52.2	22	47.8	46	100.0	P = 0.218
Self-efficacy							
High	143	67.5	69	32.5	212	100.0	$X^2 = 10.568$
Moderate	62	53.0	55	47.0	117	100.0	df = 2
Low	20	46.5	23	53.5	43	100.0	P = 0.005
Total	225	60.5	147	**39.5**	372	100.0	
HIV prevention attitudes							
Positive	148	66.4	75	33.6	223	100.0	$X^2 = 7.530$
Neutral	70	51.9	65	48.1	135	100.0	df = 2
Negative	4	66.7	2	33.3	6	100.0	P = 0.023
Total	222	61.0	142	39.0	364	100.0	
Perception of risk of HIV							
Yes	127	67.6	61	32.4	188	100.0	$X^2 = 7.724$
No	78	54.2	66	45.8	144	100.0	df = 2
Do not know	20	51.3	19	48.7	39	100.0	P = 0.021
Total	225	60.6	146	39.4	371	100.0	

Table 4.9 Level of education versus determinants of HIV prevention

	Level of education												
	No education		Primary		Secondary		Post Secondary		Vocational		Total		
Variables	f	%	f	%	f	%	f	%	f	%	f	%	Significance
Misconception levels													
Low	12	4.1	96	32.5	151	51.2	3	1.0	33	11.2	295	100.0	X^2 = 12.418
Medium	1	7.7	8	61.5	2	15.4	0	0.0	2	15.4	13	100.0	df = 8
High	2	3.1	31	48.4	26	40.6	0	0.0	5	7.8	64	100.0	p = 0.133
Knowledge level													
High	1	3.3	1	3.3	28	93.3	0	0.0	0	0.0	30	100.0	X^2= 86.641
Medium	1	0.4	76	31.7	131	54.6	3	1.3	29	12.1	240	100.0	df = 8
Low	13	12.7	58	56.9	20	19.6	0	0.0	11	10.8	102	100.0	p = 0.000
Perception of severity													X^2 = 6.095
High	13	4.0	114	35.0	164	50.3	2	0.6	33	10.1	326	100.0	df = 4
Low	2	4.3	21	45.7	15	32.6	1	2.2	7	15.2	46	100.0	p = 0.192
Self-efficacy													
High	7	3.3	87	41.0	100	47.2	1	0.5	17	8.0	212	100.0	X^2 = 12.517
Moderate	5	4.3	38	32.5	59	50.4	1	0.9	14	12.0	117	100.0	df = 8
Low	3	7.0	10	23.3	20	46.5	1	2.3	9	20.9	43	100.0	p = 0.130
Total	15	4.0	135	36.3	179	48.1	3	0.8	40	10.8	372	100.0	
Perception of risk													
Yes	6	3.2	72	38.3	95	50.5	1	0.5	14	7.4	188	100.0	X^2 = 11.094
No	6	4.2	48	33.3	70	48.6	2	1.4	18	12.5	144	100.0	df = 8
Do not know	3	7.7	15	38.5	13	33.3	0	0.0	8	20.5	39	100.0	p = 0.196
Total	15	4.0	135	36.4	178	48.0	3	0.8	40	10.8	371	100.0	
Prevention attitudes													
Positive	9	4.0	98	43.9	95	42.6	1	0.4	20	9.0	223	100.0	X^2 = 19.176
Neutral	6	4.4	33	24.4	76	56.3	2	1.5	18	13.3	135	100.0	df = 8
Negative	0	0.0	3	50.0	1	16.7	0	0.0	2	33.3	6	100.0	p = 0.014
Total	15	4.1	134	36.8	172	47.3	3	0.8	40	11.0	364	100.0	

This was contrary to a study amongst Nigerian military personnel which showed an inverse correlation between HIV risk perceptions and higher educational attainment levels; meaning there might be an increase in higher risk behaviours amongst personnel with higher education levels (Essien, Ogungbade, Ward, Ekong, Ross, Meshack & Holmes 2007:1177-1181).

4.7.1.4 Employment

The youths' occupations were used as an approximate indicator of their socio-economic status. This means that students and the unemployed youths were considered as having no source of income whilst the formally employed and self-employed youths had a source of income, which could vary from being regular to occasional income. The influence of the youths' socio-economic status on the determinants of HIV prevention behaviours was analysed (see table 4.10). More students (n=25; 83.3%), who largely constituted the younger age-group 15-19 years, had significantly higher levels of HIV/AIDS knowledge and lower levels of misconceptions (n=190; 64.4%) about HIV transmission than their counterparts with p-value <0.05. Similarly, more students (n=110; 58.5%) perceived themselves to be at risk of HIV infections with p-value =0.055; had more positive attitudes towards HIV prevention behaviours (n=114; 51.1%) and felt more capable (n=112; 52.8%) of adopting HIV prevention practices than their counterparts, with p-value <0.05.

Although the in-school youths tended to score significantly higher on all counts versus their out-of-school counterparts; the apparent positive influence of education on HIV/AIDS determinants is arguably exaggerated. The in-school youths were interviewed in their respective school settings; therefore they might have given answers which they thought would be socially acceptable. This might have contributed to information bias.

A study on the association between school attendance, HIV infections and sexual behaviours amongst youths in rural South Africa showed no difference in HIV knowledge, communication about sex and HIV testing between students and non-students; but showed a significantly lower number of sexual partners and lower incidence of unprotected sex amongst students than non-students (Hargreaves, Morison, Kim, Bonell, Porter, Watts, Busza, Phetla & Pronyk 2006:113-119).

Table 4.10 Socio-economic activity versus determinants of HIV prevention

	Socio-economic activity										
	Student		Unemployed		Self employed		Employed		Total		
Variables	f	%	f.	%	f.	%	f.	%	f	%	Significance
HIV prevention attitudes											
Positive	114	51.1	35	15.7	64	28.7	10	4.5	223	100.0	$X^2 = 24.789$
Neutral	98	72.6	17	12.6	18	13.3	2	1.5	135	100.0	df = 6
Negative	3	50.0	3	50.0	0	0.0	0	0.0	6	100.0	p = 0.000
Total	215	59.1	55	15.1	82	22.5	12	3.3	364	100.0	
Perception of risk											
Yes	110	58.5	24	12.8	49	26.1	5	2.7	188	100.0	$X^2 = 12.331$
No	90	62.5	20	13.9	29	20.1	5	3.5	144	100.0	df = 6
Do not know	21	53.8	12	30.8	4	10.3	2	5.1	39	100.0	p = 0.055
Total	221	59.6	56	15.1	82	22.1	12	3.2	371	100.0	
Level of HIV knowledge											
High	25	83.3	3	10.0	2	6.7	0	0.0	30	100.0	$X^2 = 50.750$
Medium	165	68.8	29	12.1	41	17.1	5	2.1	240	100.0	df = 6
Low	32	31,4	24	23.5	39	38.2	7	6.9	102	100.0	p = 0.000
Misconceptions											
Low	190	64.4	31	10.5	63	21.4	11	3.7	295	100.0	$X^2 = 26.509$
Medium	6	46.2	4	30.8	3	23.1	0	0.0	13	100.0	df = 6
High	26	26	21	32.8	16	25.0	1	1.6	64	100.0	p = 0.000
Self-efficacy											
High	112	52.8	30	14.2	63	29.7	7	3.3	212	100.0	$X^2 = 18.687$
Medium	79	67.5	21	17.9	14	12.0	3	2.6	117	100.0	df = 6
Low	31	72.1	5	11.6	5	11.6	2	4.7	43	100.0	p = 0.005
Perception of severity											
High	199	61.0	44	13.5	74	22.7	9	2.8	326	100.0	$X^2 = 7.351$
Low	23	50.0	12	26.1	8	6.5	3	6.5	46	100.0	df = 3
Total	222	50.0	56	15.1	82	22.0	12	3.2	372	100.0	p = 0.062

4.7.2 Interrelationships between HIV prevention determinants

The association between having HIV/AIDS knowledge was assessed against other HIV prevention determinants such as attitudes towards HIV prevention behaviours, perceptions of risk of HIV infection, perceptions of the severity of HIV/AIDS and perceived self-efficacy to practise HIV prevention behaviours (see table 4.11). The results showed no significant correlation between HIV/AIDS knowledge, perceptions of HIV risk, perceptions of HIV/AIDS severity and perceived self-efficacy to practise HIV prevention behaviours with p value > 0.05; which was consistent with the essence of the research problem.

Table 4.11 HIV/AIDS knowledge versus HIV prevention determinants

	Knowledge score								
	High		Medium		Low		Total		
Characteristic	f.	%	f.	%	f.	%	f	%	Significance
Self – efficacy									
High	16	7.5	136	64.2	60	28.3	212	100.0	X^2= 2.525
Moderate	8	6.8	77	65.8	32	27.4	117	100.0	df= 4
Low	6	14.0	27	62.8	10	23.3	43	100.0	p= 0.640
Perception severity									
Yes	28	8.6	212	65.0	86	26.4	326	100.0	X^2= 2.045
No	2	4.3	28	60.9	16	34.8	46	100.0	df= 2
Total	30	8.1	240	65.4	102	27.4	372	100.0	p= 0.360
Perception of risk									
High	17	9.0	124	66.0	47	25.0	188	100.0	X^2= 7,786
Low	7	4.9	96	66.7	41	28.5	144	100.0	df= 4
Do not know	6	15.4	19	48.7	14	35.9	39	100.0	p= 0.100
Total	30	8.1	239	64.4	102	27.5	371	100.0	
Prevention attitudes									
Positive	11	4.9	147	65.9	65	29.1	223	100.0	X^2=9.792
Neutral	17	12.6	86	63.7	32	23.7	135	100.0	df= 4
Negative	1	16.7	2	33.3	3	50.0	6	100.0	p= 0.044
Total	29	8.0	235	64.6	100	27.5	364	100.0	

This was based on the premise that having HIV/AIDS knowledge might not be translated into HIV preventive behaviours amongst the youths. There was a statistically significant association between having HIV/AIDS knowledge and the respondents' attitudes towards HIV prevention behaviours with p value <0.05. However, it was not discernible whether a higher knowledge level actually contributed to more positive attitudes since more respondents with medium HIV/AIDS knowledge levels (n=147; 65.9%) had more positive attitudes than their counterparts. A similar view was shared by Tehrani and Malek-Afzali

(2008). These authors showed that the level of knowledge of HIV/STIs was higher amongst truck drivers and female sex workers than amongst the youths. However, the former two groups had more positive attitudes towards higher-risk sexual behaviours including pre- and extramarital sex. This might have been due to the fact that their sources of knowledge might not be primarily from public awareness campaigns, and could therefore be misguided.

On the contrary, having positive attitudes towards HIV prevention was significantly improved by a greater perception of risk of HIV infection (as discussed in section 4.5) and greater perceptions of HIV/AIDS severity (as discussed in section 4.6). Having positive attitudes towards HIV prevention also significantly influenced one's perceived self-efficacy to enact HIV prevention practices, with p-value <0.05. More youths (n=155; 69.5%) having positive attitudes towards HIV prevention behaviours, were more likely to have a higher perceived self-efficacy to enact HIV prevention behaviours compared to those with neutral attitudes (n=54; 40.0%) and those with negative attitudes (n=1; 16.7%) towards HIV prevention behaviours (see table 4.12).

Similar findings were reported in a study on attitudes towards condom use and HIV/AIDS knowledge as determinants of condom use self-efficacy amongst Hispanic youths. This study indicated that attitudes towards condom use, rather than HIV/AIDS knowledge, significantly influenced condom use self-efficacy, with an adjusted prevalence odds ratio (APOR) of 3.2 (Essien, Parvaneh, Monjok, Ogungbade, Balogun, Meshack, Ward & Holmes 2006:28).

4.7.3 Determinants of HIV prevention practices

In this section, the relationships between the respondents' background characteristics and their determinants of HIV prevention were analysed against their HIV prevention practices.

Table 4.12 Attitudes towards HIV prevention versus HIV prevention determinants

	Attitude score								
	Positive		Neutral		Negative		Total		
Characteristic	f.	%	No.	%	f.	%	f.	%	Significance
Self – efficacy									
High	155	69.5	54	40.0	1	16.7	210	57.7	X^2= 44.821
Moderate	57	25.6	55	40.7	2	33.3	114	31.3	df= 4
Low	11	4.9	26	19.3	3	50.0	40	11.0	p= 0.000
Total	223	100.0	135	100.0	7	100.0	364	100.0	
HIV risk perception									
Yes	122	66.7	59	32.2	2	1.1	183	100.0	X^2= 15.346
No	84	59.2	57	40.1	1	0.7	142	100.0	df= 4
Do not know	17	44.7	18	47.4	3	7.9	38	100.0	p= 0.004
Total	223	61.4	134	36.9	6	1.7	363	100.0	
Perception of severity									X^2= 9.257
High	200	62.9	115	36.2	3	0.9	318	100.0	df= 2
Low	23	50.0	20	43.5	3	6.5	46	100.0	p= 0.010
Total	223	61.3	135	37.1	6	1.6	364	100.0	

4.7.3.1 Abstinence

Only half of the respondents 53.5% (n=199) had reportedly abstained from sex while 46.5% (n=173) did engage in sexual encounters. Significantly more female respondents (n=102; 69.4%) had abstained from sex compared to 43.1% (n=97) male respondents, as shown in table 4.13. The respondents' ages at their sexual debuts ranged from 8 to 23 years with a median age of 17.0 years. Significantly more male respondents reported younger ages at their sexual debuts than female respondents, with 7.0% (n=9) of male respondents reporting sexual debuts at ages of 10 or younger, 33.6% (n=43) at age 11 to 15 years compared to zero female respondents with sexual debuts at age 10 or younger and 17.8% (n=8) at age 11 to 15 years respectively, with p-value <0.05 (see table 4.16).

This was contrary to the findings during the Swaziland demographic and health survey of 2006-07 which showed that female youths (7.0%) were more likely to have their sexual debuts at a earlier age of 15 years and younger compared to 5.0% of the male youths, with a median age at sexual debut of 16 years (Central Statistical Office [Swaziland] 2007).

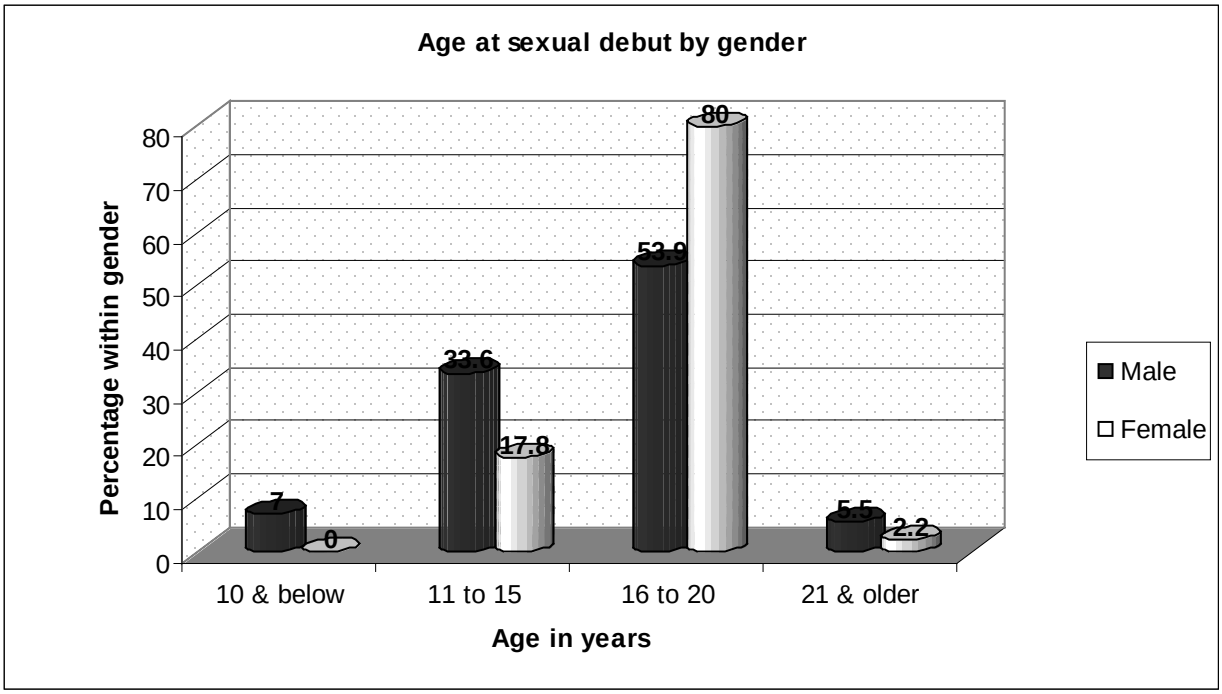

Figure 4.5 Age at sexual debut by gender (n=173)

In-school youths (n=158; 71.2%) were more likely to abstain from sex compared to unemployed youths (n=23; 41.1%), formally employed youths (n=3; 25.0%) and self-employed youths (n=15; 18.3%) (see table 4.13). Similarly abstinence was found to be significantly higher amongst respondents with secondary school education (n=129; 72.1%) who largely consisted of the in-school youths compared to their counterparts. Figure 4.3 indicates that youths who were idle (n=57; 15.4%), had been ranked second to drug and alcohol abusers, amongst the higher-risk youth groups, as they were said to be pre-occupied with sexual activities. Although this difference was significant at the 5% level of significance, it is likely that levels of abstinence amongst the in-school youths were exaggerated for fear that the interview findings might be reported to their respective school authorities. Thus, the youths might have tended to under report their sexual activities, because they perceived abstinence to be the acceptable social norm.

Abstinence was also significantly higher amongst single youths. More than half (n=192; 60.8%) of the single youths reportedly abstained from sex compared to their counterparts with p-value < 0.05. Despite higher levels of abstinence in this group, pre-marital sex was also commonplace in 39.2% (n=124) of the single youths. This was slightly higher than the

national findings during the THMIS of 2007-08 which showed that 31.6% of youths aged 15-24 had engaged in pre-marital sex (TACAIDS et al 2008b:99). Comparatively, the prevalence of pre-marital sex was even much lower (18.3%) amongst male and female adolescents in Nepal (Singh, Krishna, Manandhar & Singh 2006:35-38).

There was an inverse correlation between perceived self-efficacy and abstinence, where significantly fewer respondents with a high self-efficacy (n=90; 42.5%) compared to 81.4% (n=35) with a low self-efficacy had abstained from sex, with p-value <0.05. This was similar to the findings in a study by Kaljee, Green, Riel, Lerdboon, Tho, Thoa and Minh (2007:48-59), which showed that although more female youths scored higher on a scale of perceived self-efficacy for abstinence, significantly more male youths reported low engagement in sex. In this case, the reported self-efficacy was attributed to a higher perceived sexual stigma amongst the female youths than male youths, rather than the perceived risk of HIV infections.

Similarly, abstinence had a significant inverse correlation with youths' attitudes towards HIV prevention behaviours with p-value <0.05. Fewer youths with positive attitudes towards HIV prevention behaviours (n=96; 43.3%) compared to 66.7% (n=4) with negative attitudes had abstained from sex (see table 4.13). Likewise, according to Dlamini, Taylor, Mkhize, Huver, Sathiparsad, Vries, Naidoo and Jinabhai (2009:450-460), youths' social influences such as perceived norms and alcohol intake, rather than their attitudes influenced their self-efficacy and intentions towards sexual abstinence amongst rural high school learners in South Africa.

More youths (n=102; 54.3%) who had engaged in sex were significantly likely to have a higher perception of HIV risk compared to 45.7% (n=86) who had abstained from sex as shown in table 4.13 with p-value <0.05. Anderson et al (2007:98-105) reported similar findings amongst female youths in Cape Town, where youths who had experienced sex were significantly more likely to report a higher perceived risk of HIV infection.

Table 4.13 Abstinence versus background characteristics and HIV prevention determinants

	Have you ever had sex						
	Yes		No		Total		
Variables	f	%	f	%	f	%	Significance
Prevention attitudes							
Positive	127	57.0	96	43.3	223	100.0	X^2= 21.728
Neutral	43	31.9	92	68.1	135	100.0	df=2
Negative	2	33.3	4	66.7	6	100.0	P=0.000
Total	172	47.3	192	52.7	364	100.0	
HIV risk perception							
Yes	102	54.3	86	45.7	188	100.0	X^2= 9.071
No	57	39.6	87	60.4	144	100.0	df=2
Do not know	14	35.9	25	64.1	39	100.0	P=0.011
Total	173	46.6	198	53.4	371	100.0	
Self-efficacy							
High	122	57.5	90	42.5	212	100.0	X^2=28.318
Medium	43	36.8	74	63.2	117	100.0	df=2
Low	8	18.6	35	81.4	43	100.0	P=0.000
Gender							
Male	128	56.9	97	43.1	225	100.0	X^2=24.676
Female	45	30.6	102	69.4	147	100.0	df=1
							p=0.000
Level of Education							
No education	8	53.3	7	46.7	15	100.0	
Primary	92	68.1	43	31.9	135	100.0	X^2= 54.165
Secondary	50	27.9	129	72.1	179	100.0	df=4
Post secondary	3	100.0	0	0.0	3	100.0	p=0.000
Vocational training	20	50.0	20	50.0	40	100.0	
Marital status							
Single	*124	39.2	192	60.8	316	100.0	X^2=45.677
Multiple partners	29	85.3	5	14.7	34	100.0	df=4
Cohabiting	10	90.9	1	9.1	11	100.0	p=0.000
Married	8	100.0	0	0.0	8	100.0	
Divorced/ separated	2	66.7	1	33.3	3	100.0	
Occupation							
Student	64	28.8	158	71.2	222	100.0	X^2=76.118
Unemployed	33	58.9	23	41.1	56	100.0	df=3
Self employed	67	81.7	15	18.3	82	100.0	p=0.000
Formal employment	9	75.0	3	25.0	12	100.0	
Total	173	46.5	199	53.5	372	100.0	

In this study abstinence was neither influenced by the respondents' level of HIV/AIDS knowledge nor a higher perception of severity of HIV/AIDS. This was concurrent with the DSW 2008 baseline survey addressing sexual and reproductive health amongst female youths in Tanzania. The latter showed that despite high levels of knowledge 81.5% and positive attitudes 57.7% towards HIV prevention, the levels of abstinence remained low at 26.2% (Mbjijmonywa 2008:9).

4.7.3.2 Condom use

This section analyses the determinants of condom use at first sex and at most recent sexual encounters as shown in table 4.14.

Condom use at sexual debuts

Condom use at sexual debuts was very low. Of the 173 respondents who had had sex, only 27.2% (n=47) reported to have used condoms the first time. Similar findings were reported in the general population during the THMIS of 2007-08, where only 26.5% of the youths used condoms at their first sexual encounters (TACAIDS et al 2008b:97). Condom use at sexual debuts was reported to be equally low (29.0%) amongst out-of-school youths in a study done in Nigeria (Adebiyi & Asuzu 2009:92-97). Notably, none of the youths who had sex for the first time at age 10 years or younger, used condoms whilst as few as 11.9% (n=6) who had their sexual debuts at age 11 to 15 years used condoms. Neither HIV/AIDS knowledge, attitudes towards HIV prevention behaviours, perception of HIV risk, perception of severity of HIV/AIDS nor self-efficacy influenced condom use at youths' sexual debuts.

Condom use at most recent sexual encounters

Condom use at last sexual encounter is used as a more accurate measure of a person's HIV prevention behaviour. This is because sexual debuts are commonly said to 'just happen' and the expectation is that most youths will not use condoms at these occasions because they are unplanned. Table 4.14 also shows the assessment of condom use at most recent sexual encounters against various HIV prevention determinants. Overall condom use at their most recent sexual encounters was higher at 51.2% (n=88).

Condom use at most recent sexual encounters was significantly influenced by respondents' attitudes towards HIV prevention behaviours, self-efficacy, age, religion and occupation with p-value <0.05. More youths with positive attitudes (n=74; 58.7%) used condoms compared to zero youths with negative attitudes. Similar findings were reported in a study by Manlove, Ikramullah and Terry-Humen (2008:325-333) which showed that African-American youths with more positive attitudes towards condom use were more likely to use condoms.

More youths with a higher perceived self-efficacy (n=73; 59.8%) used condoms during their most recent sexual encounters compared to 12.5% (n=1) of those with low self-efficacy. This was concurrent with a study by Sunmola, Olley and Oso (2007:459-472) amongst individuals in the national service in Nigeria which showed that men who had self-efficacy (67%) were significantly more likely to use condoms than men who did not have self-efficacy (38%) and those who did not know whether they had self-efficacy.

Condom use was also higher (n=64; 58.2%) amongst older youths aged 20-24; many of whom were out-of-school and were self-employed (n=41; 61.2%) compared to 38.7% (n=24) in the younger age-group 15-19 years, many of whom were students 39.7% (n=25). This was contrary to findings by Manlove et al (2008:325-333) who reported reduced odds of condom use amongst older male youths.

According to Prata et al (2005:192-199) in a study on gender and condom use amongst youths in Angola, condom use was positively associated with higher levels of education with an odds ratio of 1.7-2.6. This study also showed a significantly higher reported condom use amongst youths with post-secondary education 66.7% (n=2), with p-value <0.05. However, there was an inconsistent increase in condom use with education levels where 62.2% (n=57) youths with primary education only reported using condoms, while 40.0% (n=8) of youths with vocational training, 37.5 % (n=3) of youths with no education and 36.0% (n=18) of youths with secondary education used condoms.

Most respondents (n=126; 72.8%) from all religions did not use condoms at their sexual debuts with a higher proportion amongst Catholic youths (n=52; 77.6%); while 74.5% (n=38) Protestant and 65.5% (n=36) Muslim youths also reported a lack of condom use. However, condom use at their most recent sexual encounters increased across respondents of all religions; but remained significantly lower (40.3%; n=27) amongst Catholic youths compared to 64.8% (n=35) amongst Muslims and 51.0% (n=26) amongst Protestant youths, with p-value <0.05.

Table 4.14 Condom use versus background characteristics and HIV prevention determinants

	Did you use a condom first time you had sex						
	Yes		No		Total		
Characteristic	f	%	f	%	f	%	Significance
Age at sexual debut							
10 and below	0	0.0	9	100.0	9	100.0	X^2=14.771
11-15	6	11.9	45	88.2	51	100.0	df=3
16-20	39	37.1	66	62.9	105	100.0	p=0.002
Above 20	2	25.0	6	75.0	8	100.0	
Religion							
Muslim	19	34.5	36	65.5	55	100.0	X^2=2.359
Catholic	15	22.4	52	77.6	67	100.0	df=2
Protestant	13	25.5	38	74.5	51	100.0	p=0.307
Total	47	27.2	126	72.8	173	100.0	
	Did you use a condom last time you had sex						
	Yes		No		Total		
Characteristic	f	%	f	%	f	%	Significance
Prevention attitudes							
Positive	74	58.7	52	41.3	126	100.0	X^2=10.937
Neutral	14	32.6	29	67.4	43	100.0	df=2
Negative	0	0.0	2	100.0	2	100.0	P=0.004
Total	88	51.5	83	48.5	171	100.0	
Self efficacy							
High	73	59.8	49	40.2	122	100.0.	X^2=13.802
Moderate	14	33.3	28	66.7	42	100.0	df=2
Low	1	12.5	7	87.5	8	100.0	p=0.001
Age group							X^2=6.017
15-19	24	38.7	38	61.3	62	100.0	df=1
20-24	64	58.2	46	41.8	110	100.0	P= 0.014
Religion							
Muslim	35	64.8	19	35.2	54	100.0	X^2=7.194
Catholic	27	40.3	40	59.7	67	100.0	df=2
Protestant	26	51.0	25	49.0	51	100.0	P=0.027
Level of education							
No education	3	37.5	5	62.5	8	100.0	
Primary education	57	62.6	34	37.4	91	100.0	X^2=11.280
Secondary education	18	36.0	32	64.0	50	100.0	Df=4
Post secondary	2	66.7	1	33.3	3	100.0	P=0.024
Vocational training	8	40.0	12	60.0	20	100.0	
Occupation							
Student	25	39.7	38	60.3	63	100.0	X^2=7.709
Unemployed	19	57.6	14	42.4	33	100.0	df=3
Self employed	41	61.2	26	38.8	67	100.0	P=0.052
Formally employed	3	33.3	6	66.7	9	100.0	
Total	88	51.2	84	48.8	172	100.0	

This might prompt the youths to engage in unprotected sex due to influences from their religious backgrounds; a finding that was also reported by O'Toole et al (2007:193-201) where only two in five youths used condoms due to negative religious influences.

4.7.3.3 High–risk sex

In table 4.15, the youths' background characteristics are assessed against their number of sexual partners.

Table 4.15 Number of sexual partners versus background variables and HIV prevention determinants

	Number of sexual partners in the last 12 months								
	0-1		2-5		>5		Total		
Variables	f	%	f	%	f	%	f	%	Significance
Age group									X^2=6.814
15-19	41	66.1	17	27.4	4	6.5	62	100.0	df=2
20-24	49	45.4	48	44.4	11	10.2	108	100.0	p=0.033
Religion									
Muslim	29	53.7	22	40.7	3	5.6	54	100.0	X^2=3.489
Catholic	32	48.5	25	37.9	9	13.6	66	100.0	df=4
Protestant	29	58.0	18	36.0	3	6.0	50	100.0	p=0.479
Sex									
Male	62	49.6	49	39.2	14	11.2	125	100.0	X^2=4.133
Female	28	62.2	16	35.6	1	2.2	45	100.0	df=2
									p=0.127
Marital status									
Single	*62	50.8	48	39.3	12	9.8	122	100.0	
Multiple partners	14	48.3	13	44.8	2	6.9	29	100.0	X^2= 6.048
Cohabiting	6	66.7	3	33.3	0	0.0	9	100.0	df=8
Married	6	75.0	1	12.5	1	12.5	8	100.0	p=0.642
Divorced	2	100.0	0	0.0	0	0.0	2	100.0	
Employment									
Student	35	55.6	22	34.9	6	9.5	63	100.0	X^2= 5.990
Unemployed	13	39.4	18	54.5	2	6.1	33	100.0	df=6
Self employed	37	56.9	21	32.3	7	10.8	65	100.0	p=0.424
Formal employed	5	55.6	4	44.4	0	0.0	9	100.0	
Perception of risk									
Yes	46	46.0	44	44.0	10	10.0	100	100.0	X^2=5.251
No	37	64.9	16	28.1	4	7.0	57	100.0	df=4
Do not know	7	53.8	5	7.0	1	7.7	13	100.0	p=0.256
Total	90	52.9	65	38.2	15	8.8	170	100.0	

Multiple sexual partner relationships

Multiple sexual partner relationships were significantly more common amongst the older respondents aged 20-24 years (n= 59; 54.6%) compared to the respondents aged 15-19 years (n=21; 33.9%), with p-value <0.05. Although more male respondents (n=63; 50.4%) had multiple partner relationships compared to female respondents 37.7% (n=17), there

was no significant difference in the number of sexual partners with gender, religion, occupation, marital status, HIV/AIDS knowledge or perception of risk of HIV infection.

Studies have shown the predictors of multiple sexual partner relationships to be largely outside the individual's sphere of influence. According to Yan, Chen, Wu, Bi, Zhang, Li and Braun (2009:305), in a study amongst female undergraduate students in China, risk factors for multiple sexual partners included working in a place of entertainment, having close friends living with boyfriends, poor academic performance and positive attitudes towards multiple sexual partners. According to Mohammad, Farahani, Mohammadi, Alikhani, Zare, Tehrani, Ramezankhani, Hasanzaed and Ghanbari (2007:407-414), in a study amongst boys aged 15-18 years in Teheran, predictors of multiple sexual partners amongst the adolescent boys included older age, drinking alcohol, early sexual debuts and poor knowledge of reproductive physiology. Likewise in a study on predictors of sexual risk behaviours amongst homeless youths in Los Angeles, using drugs influenced multiple sexual partner relationships in both female and male youths, whilst living in non-family settings increased the risk of multiple sexual partner relationships amongst the male youths (Solorio, Rosenthal, Milburn, Weiss, Batterham, Gandara & Rotheram-Borus 2008:401-409).

Female youths are often said to be more prone to higher-risk sex including, having multiple sexual partners, inter-generational sexual relationships and being forced into sexual intercourse. Contrary to such views, this study revealed that both female and male youths were equally exposed to higher-risk sex as presented in table 4.16.

Youths' sexual relationships with older partners

Some respondents (n=31; 17.9%) had sex with partners at least 10 years older than themselves. This was more common amongst female youths 22.2% (n=10) compared to 16.4% (n=21) of the male youths who reportedly had sex with older partners as shown in table 4.16. This was higher than the national findings during the THMIS of 2007-08 where 7.7% of the female youths aged 15-19 years had sex with men at least 10 years older than themselves (TACAIDS et al 2008b:104). Although at the 5% level of significance this

difference was not significant across gender, it is noteworthy that male youths also engaged in sex with older female partners.

Table 4.16 Frequency of high-risk sexual practices by gender

	Gender						
	Male		Female		Total		
Characteristics	f	%	f	%	f	%	Significance
Age at sexual debut							
10 and below	9	7.0	0	0.0	9	5.2	X^2=10.483
11-15	43	33.6	8	17.8	51	29.5	df=3
15-20	69	53.9	36	80.0	105	60.7	P=0.015
21 and older	7	5.5	1	2.2	8	4.6	
Total	128	100.0	45	100.0	173	100.0	
Sex with older partners							
							X^2= 0.766
Yes	21	16.4	10	22.2	31	17.9	df=1
No	107	83.6	35	77.8	142	82.1	p= 0.382
Total	128	100.0	45	100.0	173	100.0	
Forced sex							
							X^2=0.063
Yes	10	7.8	3	6.7	13	7.5	df=1
No	118	92.2	42	93.3	160	92.5	P=0.802
Total	128	100.0	45	100.0	173	100.0	
Sex under the influence of alcohol							X^2= 0.015
Yes	18	14.1	6	13.3	24	13.9	df=1
No	110	85.9	39	86.7	149	86.1	P=0.903
Total	128	100.0	45	100.0	173	100.0	

Forced/ coerced sex

Few respondents 7.5% (n=13) reported being coerced into sex. More male respondents 7.8% (n=10) compared to female respondents 6.7% (n=3) reported to have been coerced into sexual intercourse. Similarly, although at the 5% level of significance, gender was not found to significantly influence forced sex, this reported occurrence amongst male youths remains noteworthy. The same view is shared by Moore and Madise (2008) in a review of unwanted sexual experiences amongst adolescent males in SSA countries including Burkina Faso, Ghana, Uganda and Malawi. This study showed that 4.0-12.0% of boys aged 12-19 years were not willing partners at their sexual debuts whilst 3.0-7.0% stated that they had at some stage been forced into sex.

Alcohol intake during sexual encounters

In comparison, more male respondents (n=18; 14.1%) than female respondents (n=6; 13.3%) reportedly had sex under the influence of alcohol, as shown in table 4.16. Sex under the influence of alcohol was higher for both male and female respondents than was

reported during the THMIS of 2007-08 where 1.5% male and 4.2% female youths reported to being drunk during sex (TACAIDS et al 2008b:105). Alcohol abusers were named as the group at highest risk of HIV infections (see figure 4.3). According to Kalichman, Simbayi, Kaufman, Cain and Jooste (2007:141-151), in a review of alcohol and sexual risks for HIV/AIDS in SSA, alcohol use was associated with a sexual risk for HIV infections in southern Africa.

4.7.3.4 Voluntary counselling and testing for HIV

The uptake of VCT as a measure of preventing HIV infections was analysed against HIV prevention determinants and youths' background characteristics as shown in table 4.17. VCT uptake was measured by the number of youths reporting to have been tested for HIV. Due to the scope of the study, this could not be further substantiated by actual routine clinical statistics. The overall uptake of VCT was reportedly higher (n=167; 44.9%) than the national VCT uptake of 22.0% in the age-group 15-24 years, reported during the THMIS of 2007-08 (TACAIDS et al 2008b:107).

Positive attitudes towards HIV prevention and high levels of perceived self-efficacy were found to significantly influence VCT uptake amongst the respondents with p-value <0.05. More youths (n=113; 50.7%) with positive attitudes had tested for HIV compared to 33.3% (n=2) youths with negative attitudes towards HIV prevention behaviours. This was concurrent with a study by Charles, Kweka, Mahande, Barongo, Shekalaghe, Nkya, Lowassa and Mahande (2009:128), on the uptake of and attitudes to VCT amongst healthcare professional students in the Kilimanjaro region in Tanzania, where the majority of the students (93.9%) had positive attitudes towards VCT, and 85.4% of the students stated that they were willing to undergo VCT.

Similarly, respondents with high perceived self-efficacy to adopt HIV prevention practices (n=112; 52.8%) were more likely to have been tested for HIV than respondents with low self-efficacy 32.6% (n=14) levels. In a study to determine social and cognitive variables predicting VCT amongst Tanzanian medical students, the uptake of VCT was also significantly influenced by self-efficacy, fear of being HIV-positive, fear of being stigmatised and the perceived susceptibility to HIV infection (Vermeer, Bos, Mbwambo, Kaaya & Schaalma 2009:135-140).

Although the younger youths had portrayed higher scores on several determinants of HIV prevention, VCT uptake was significantly lower among respondents aged 15-19 years (n=75; 31.9%) compared to 67.2% (n=92) amongst their older counterparts aged 20-24 years with p-value <0.05. VCT uptake was also significantly lower 34.6% (n=64) in secondary school students compared to post-secondary school youths (n=3; 100.0%), vocational-trained youths (n=23; 57.5%), youths with primary education only (n=73; 54.1%) and 40.0% (n=6) of youths with no education. This is in line with the study by Munuo (2005) which reported the uptake of VCT to be low, at 16.5% amongst secondary school youths in the Kilimanjaro region of Tanzania.

Respondents who were married (n=7; 87.5%) or in any form of permanent relationship including 55.9% (n=19) of respondents with multiple partners, 72.7% (n=8) of respondents who were cohabiting with a partner, were more likely to have been tested for HIV than respondents who were single (n=130; 41.1%). VCT uptake was neither influenced by HIV/AIDS knowledge, perceived susceptibility to HIV infections nor perceived severity of HIV/AIDS.

4.8 SELF-EFFICACY

In section F of the structured interview schedule, youths' perceived self-efficacy to enact HIV preventive behaviours was determined by scoring their responses as to whether they could practise safe sex, negotiate condom use, use condoms effectively and discuss VCT and fidelity with their partners, as shown in table 4.18. Youths' responses were collated and cut-off values were set for high, medium and low self-efficacy scores. More than half of

respondents (n=212; 57.0%) expressed high self-efficacy levels to enact HIV preventive behaviours, while 31.5% (n=117) reported moderate self-efficacy and 11.6% (n=43) expressed low self-efficacy levels. Although in-school youths reported higher self-efficacy scores (n=112; 52.8%), as shown in table 4.10, overall only 50.9% (n=189) of the respondents said they were confident in using condoms correctly. It is therefore debatable whether the attained self-efficacy scores, were a true reflection of the youths' actual ability to negotiate for safe sexual practices in the field. Furthermore, condom use and uptake of VCT remained lower in this group.

Table 4.17 VCT uptake versus background characteristics and HIV prevention determinants

	Have you ever been tested for HIV						
	Yes		No		Total		
Characteristics	f	%	f	%	f	%	Significance
HIV prevention attitudes							
Positive	113	50.7	110	49.3	223	100.0	X^2= 8.095
Neutral	48	35.6	87	64.4	135	100.0	df=2
Negative	2	33.3	4	66.7	6	100.0	p=0.017
Total	163	44.8	201	55.2	364	100.0	
Perception HIV risk of							
Yes	79	42.0	109	58.0	188	100.0	X^2= 1.583
No	68	47.2	76	52.8	144	100.0	df=2
Do not know	20	51.3	19	48.7	39	100.0	p=0.453
Total	167	45.0	204	55.0	370	100.0	
Self-efficacy							
High	112	52.8	100	47.2	212	100.0	X^2=12.632
Medium	41	35.0	76	65.0	117	100.0	df=2
Low	14	32.6	29	67.4	43	100.0	p=0.002
Age group							
15-19	75	31.9	160	68.1	235	100.0	X^2=43.440
20-24	92	67.2	45	32.8	137	100.0	df=1
							p=0.000
Level of Education							
No education	6	40.0	9	60.0	15	100.0	
Primary	73	54.1	62	45.9	135	100.0	X^2= 18.608
Secondary	64	34.6	117	65.4	179	100.0	df=4
Post secondary	3	100.0	0	0.0	3	100.0	p=0.001
Vocational training	23	57.5	17	42.5	40	100.0	
Marital status							
Single	130	41.1	186	58.9	316	100.0	X^2=16.457
Multiple partners	19	55.9	15	44.1	34	100.0	df=4
Cohabiting	8	72.7	3	27.3	11	100.0	p=0.002
Married	7	87.5	1	12.5	8	100.0	
Divorced/ separated	3	100.0	0	0.0	3	100.0	
Total	167	44.9	205	55.1	372	100.0	

While the respondents' perceived self-efficacy has been shown to be significantly influenced by age, gender, occupation and positive attitudes towards HIV prevention behaviours, a higher perceived self-efficacy was found to influence the uptake of VCT and condom use at most recent sexual encounters.

Table 4.18 Youths' perceived self-efficacy

Question	Frequency	%
Do you think you can practice safe sexual behaviour		
Yes	281	75.5
No	91	25.5
Are you able to negotiate condom use with permanent partner		
Yes	278	74.9
No	93	25.1
Are you able to negotiate condom use with casual partner		
Yes	273	74.4
No	94	25.6
Do you think you are able to use condoms correctly		
I am fully capable	189	50.9
I am partially capable	96	25.9
I am not capable	86	23.2
Are you able to discuss VCT and fidelity with your partner		
Yes	343	93.0
No	26	7.0

In order to further analyse the influence of self-efficacy on HIV prevention practices, multivariate model linear regression analyses were done on all HIV prevention determinants which showed statistically significant influences of self-efficacy on condom use at most recent sexual encounters and on the uptake of VCT, with p-value <0.05 (see tables 4.19 and 4.21 respectively). This was followed by bivariate model logistic regression analyses to determine the strength and direction of correlation of perceived self-efficacy on condom use at last sex and VCT uptake, respectively. Self-efficacy to enact desired health behaviours is a key determinant within the HBM.

Self-efficacy and condom use at most recent sexual encounter

In table 4.20, respondents' perceived self-efficacy was shown to positively influence condom use at their most recent sexual encounters. Although the relationship was weak, it was found to be statistically significant, with p-value = 0.000 in both cases.

Table 4.19 Condom use at last sex versus HIV prevention determinants

Model	Un-standardised coefficients		T	Sig
	B	Std Error		
(Constant)	1.175	0.231	5.095	0.000
Knowledge score	- 0.119	0.069	-1.729	0.086
Attitude score	0.061	0.084	0.726	0.469
Severity score	0.139	0.118	1.174	0.242
Perception of risk	0.039	0.059	0.653	0.514
Self-efficacy score	0.216	0.072	3.025	0.003

Table 4.20 Self-efficacy score versus condom use at last sexual encounter

Model	Un-standardised coefficients		T	Sig	Correlation (Zero order)
	B	Std Error			
(Constant)	1.152	0.095	12.154	0.000	
Self-efficacy score	0.251	0.095	3.3843	0.000	0.283

Self-efficacy and the uptake of VCT

In table 4.22, the uptake of VCT was also shown to be positively influenced by respondents' perceived self-efficacy. The relationship was also weak, but was statistically significant, with p-value =0.001. The coefficient of determination, r2, was 0.03 meaning 3% of those who had higher perceived self- efficacy were more likely to undergo VCT for HIV.

Table 4.21 Uptake of VCT versus HIV prevention determinants

Model	Un-standardised coefficients		T	Sig
	B	Std Error		
(Constant)	0.456	0.155	2.940	0.003
Knowledge score	0.029	0.046	0.626	0.532
Attitude score	-0.101	0.052	-1.949	0.052
Severity score	0.118	0.079	1.494	0.136
Perception of risk	0.070	0.040	1.755	0.080
Self efficacy score	-0.107	0.040	-2.656	0.008

Table 4.22 Self efficacy score versus uptake of VCT

Model	Un-standardised coefficients		t	Sig	Correlation (Zero order)
	B	Std Error			
(Constant)	1.359	.062	21.810	.000	
Self-efficacy score	0.124	.037	3.375	.001	0.173

4.9 PERCEIVED BARRIERS TO HIV PREVENTION

In this section the youths' perceived barriers to HIV prevention behaviours are analysed and discussed.

4.9.1 Perceived barriers to HIV prevention behaviours

In section E of the structured interview schedule, the youths were asked to mention what they perceived to be barriers against the adoption of HIV prevention behaviours as presented in figure 4.6. Alcohol and drug abuse (n=100; 26.9%) were reported to be the main barriers to HIV prevention. Other reasons included: greed for material things due to a low economic status coupled with laissez-faire attitudes amongst the youths (n=77; 20.8%) the lack of condom use (n=39; 10.5%) either due to affordability, lack of availability or the belief that condoms reduced sexual pleasure, lack of HIV/AIDS education (n=19; 5.1%), multiple partner relationships (n=12; 3.2%) and youths being unprepared for sex (n=10; 2.7%).

A study was done by Pérez-Jiménez, Seal and Serrano-García (2009:11-17) on barriers and facilitators of HIV prevention amongst Latino couples in Puerto Rico. Their findings indicated that cultural taboos, and sexual conservatism associated with Catholicism, leading to gender-imbalanced relationships were cited as limiting factors for HIV prevention. On the other hand, according Mantell, Harrison, Hoffman, Smit, Stein and

Exner (2006:113-122) gender social norms, sexual coercion and violence were found to contribute to unintended pregnancies, HIV and other STIs amongst school-going youths in rural South Africa.

According to the CDC (2005), the identified barriers to HIV prevention amongst the youths include sexual risk factors such as the presence of STIs, substance abuse including the use of alcohol and other drugs, lack of awareness, poverty and youths dropping out of school.

Youths were also asked to mention factors which promoted HIV prevention within their study area. The main factors identified included, condom use (n=131; 35.2%), fear of AIDS (n=60; 16.1%), fidelity (n=39; 10.5%) and health education (n=20; 5.4%). Some respondents (n=92; 24.7%) were unaware of HIV preventive factors.

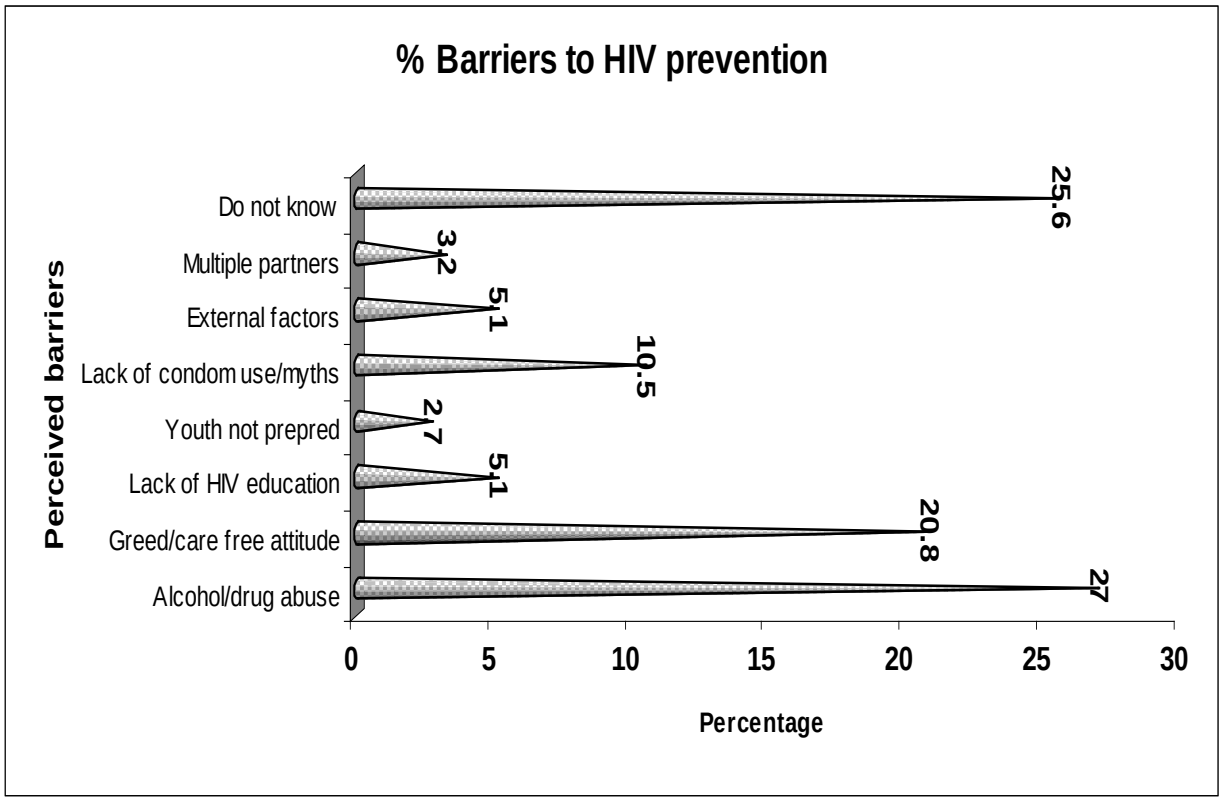

Figure 4.6 Youths' perceived barriers to HIV prevention (n=371)

4.9.2 Barriers to condom use

The main reasons cited for lack of condom use during the respondents' sexual debuts was the lack of 'condom knowhow' at the time (n=64; 50.8%), whilst a further 19.0% (n=24) mentioned they had not been prepared for the act (see figure 4.7). Other reasons included the inability to afford condoms (n=6; 4.8%), unwilling partners (n=6; 4.8%) and fear of suspicions of infidelity (n=5; 4.0%). This is concurrent with the study by Harrison et al (2005:259-261) amongst young men in rural South Africa which showed that 19.5% of youths who had sexual debuts before the age of 15 years were unprepared and practised unprotected sex without condom use and with casual partners. On the other hand, the respondents who used condoms during their sexual debuts, stated it was mainly to prevent HIV/AIDS (n=21; 34.8%), STIs (n=13; 27.1%) and pregnancies (n=9; 18.8%).

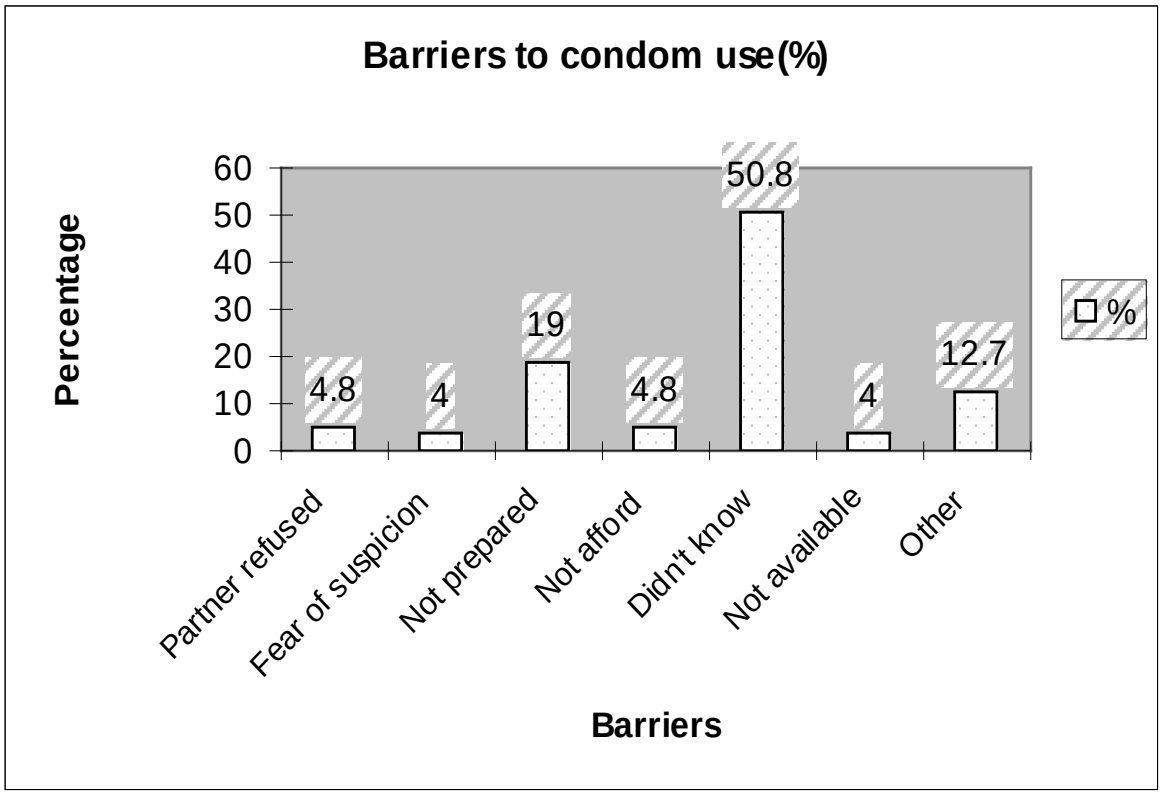

Figure 4.7 Barriers to condom use (n=126)

Consistency of condom use was also addressed. The trend showed a rise in condom use from 27.2% (n=47) at youths' sexual debuts to 51.2% (n=88) at their most recent sexual encounters. However, only 48.0% (n=82) reported consistent condom use over the last 12 months. This was higher than the findings in a study done by Ao et al (2003:688-696) amongst female bar and hotel workers in the Kilimanjaro region, in northern Tanzania; which showed consistent condom use was as low as 14.5 %.

4.9.3 Barriers to VCT uptake

The main reasons mentioned for the lack of VCT uptake amongst the respondents included, the lack of decision to undergo the HIV test (n=80; 39%), certainty that one was HIV negative (n=58; 28.3%) and fear of knowing one's status (n=35; 17.1%) as shown in figure 4.8. Stigma and lack of confidentiality at the VCT centres also contributed to low VCT uptake rates. This was concurrent with findings amongst university students in Limpopo, South Africa which cited fear of stigmatisation and fear of knowing one's positive

status as the main barriers to HIV testing, which had negative consequence for HIV/AIDS prevention and treatment (Meiberg, Bos, Onya & Schaalma 2008: 49-54).

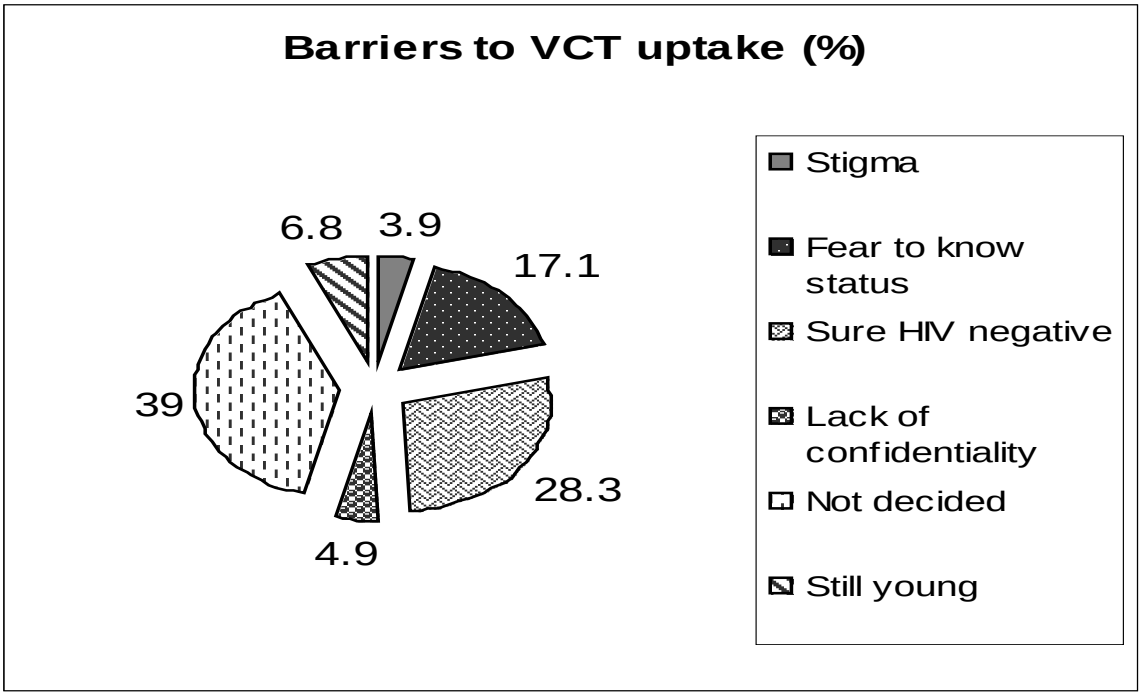

Figure 4.8: **Barriers to VCT uptake (n= 205)**

4.10 YOUTHS' RECOMMENDATIONS FOR HIV PREVENTION

In section G of the structured interview schedule, respondents were asked to propose youth-appropriate measures for HIV prevention. The youths' access to HIV prevention services and information was analysed by determining how many youths knew HIV/AIDS information centres and/or had received HIV/AIDS information from their schools. Youths were also asked to rate the HIV/AIDS services offered by such centres and to recommend measures which they thought were appropriate for promoting HIV prevention amongst fellow youths.

Access to HIV prevention services

More that half of the respondents (n=228; 61.5%) were unaware of centres providing HIV prevention information and services in their areas, implying that the established services had not reached these youths. Only 48.9% (n=182) of the respondents thought that the existing prevention services were youth-friendly. They therefore recommended that youths, in cooperation with government leaders, should be involved in the coordination of HIV prevention services; for they would be better versed about the needs of fellow youths.

Nearly half of the respondents (n=158; 42.5%) had received HIV/AIDS awareness education whilst in primary schools, 19.1% whilst (n=71) in secondary schools and 16.4% (n=61) in both primary and secondary schools. This improved their HIV/AIDS knowledge levels. The school education component of the Tanzanian HIV/AIDS Policy had reportedly been implemented.

Youth-appropriate measures to improve HIV prevention

Some respondents (n=162; 43.5%), recommended that HIV/AIDS and condom use education should be re-enhanced particularly in the community settings where such educational sessions were offered once annually, during World AIDS day celebrations. Since the youths had varying access to different types of media as shown in figure 4.9, it was proposed that all available communication media should be used to disseminate this information, including trained peer educators who had a better chance to reach 16.2% (n=60) of youths who had no access to print, audio or visual media.

The youths also advocated the need for monthly youth seminars, with interactions between youths of both genders and parents, so as to bridge the existing information gaps and to collectively address key barriers impeding HIV prevention in their respective communities.

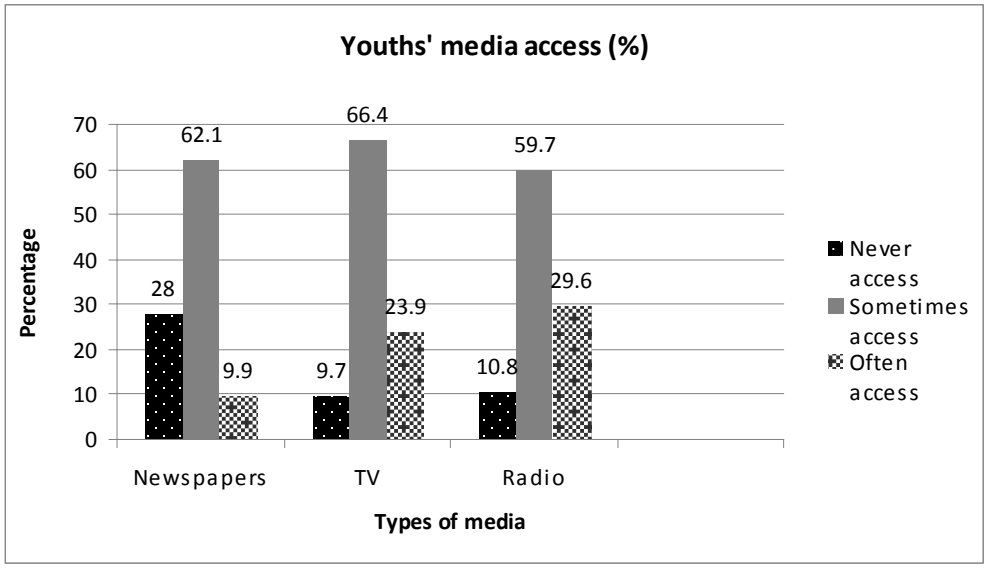

Figure 4.9 Youths' access to media (n=372)

4.11 DISCUSSION

Youths' HIV/AIDS knowledge

Overall, the level of awareness of HIV/AIDS was high, but the knowledge level amongst the youths was found to be average. Those with higher knowledge levels had more positive attitudes towards HIV prevention which improved their use of condoms and their uptake of VCT, particularly amongst the older youths aged 20-24 years.

Having HIV/AIDS knowledge did not influence youths' perceptions of risk, perceptions of HIV/AIDS severity or their perceived self-efficacy. The younger youths aged 15-19 years, who largely constituted the in-school youths, had higher knowledge levels and more accurate knowhow on HIV transmission and prevention as opposed to the older out-of-school youths. This could be considered to be missed-opportunities to learn about HIV/AIDS when they were still at school, on the part of the out-of-school youths. The

youths also had varying sources of information on HIV/AIDS, with parents playing a minor role in talking about HIV/AIDS with their children.

Assessment of the youths' HIV/AIDS knowledge revealed some misconceptions about HIV transmission. This might have contributed to an equally moderate level of comprehensive HIV/AIDS knowledge; which according to the ARRM is required in defining an individual's high-risk behaviours.

Only half of the youths acknowledged that a healthy-looking person could transmit HIV. This could be a deterrent to safe sexual practices. Consequently the youths who thought that a healthy person could not transmit HIV could continue to engage in unprotected sex with healthy-looking persons.

HIV preventive practices amongst the youths

Although the levels of risk of HIV infections might appear to be equally distributed amongst in-school and out-of-school youths, the in-school youths might be at higher risk. The proportion of youths who had their sexual debuts at the age of 15 or younger and who have or had multiple partners was found to be equal in both groups. However, the use of condoms and the uptake of VCT was found to be higher amongst older out-of-school youths compared to their younger in-school counterparts. The practice of abstinence was reportedly higher amongst the in-school youths compared to the out-of-school youths. However, these reported levels might be questionable. The in-school youths might have feared discussing their sexual activities openly and thus might have tended to over-report good sexual practices, which they perceived to conform to socially acceptable norms.

Attitudes towards HIV prevention and perception of HIV risk

According to the HBM, a person will change certain behaviours once they know that their current behaviours are high-risk and they believe that getting a particular health problem will have serious health implications for them. They will then look for cues for action and

will change to the desired behaviours once they feel capable of doing so.

Possessing HIV/AIDS knowledge is expected to influence persons' determinants of behaviour change. However, in this study having HIV/AIDS knowledge alone did not result in the adoption of desired HIV prevention behaviours.

The individual's attitudes towards certain behaviours and his/her perceived self-efficacy influenced the adoption of the HIV prevention behaviours. In this case, the youths' attitudes towards HIV prevention were in turn influenced by the youths' perception of risk of HIV infections and their perception of severity of the disease. Perceptions of HIV risks were also influenced by knowledge of a person who was sick or who had died of AIDS.

Perception of severity of HIV/AIDS

According to the HBM a higher perception of severity is a key determinant of the adoption of HIV preventive practices. In this study the majority of the youths reported a high perception of severity, which did not influence the youths' HIV behaviour outcomes including abstinence, condom use, VCT uptake and the number of sexual partners.

Self-efficacy

Despite being knowledgeable about HIV/AIDS, many youths failed to use the avenues available to them such as, the HIV/AIDS education sessions in school, to discuss the challenges they faced pertaining to sex and HIV prevention. The high levels of perceived self-efficacy reported amongst the in-school youths might have given them a false sense of being able to do the right thing, whilst they might not have adhered to HIV prevention practices.

Positive attitudes influenced youths' condom use at their last sexual encounters and their VCT uptake. However, the youths' perceived self-efficacy had positive correlations with condom use at their most recent sexual encounters and their VCT uptake, respectively.

Perceived barriers to HIV prevention

The youths' carefree attitudes towards HIV prevention were influenced by socio-economic, cultural, personal and environmental factors. Poor socio-economic status and greed for material things resulted in commercial sex and multiple partner sex for monetary gain. Youths wanted quick money for their general upkeep. In such situations, the youths' negotiating powers for safe sex, particularly amongst in-school youths and the unemployed youths were compromised.

The lack of HIV/AIDS education and youths' exposure to sex whilst they were still immature, were also seen to impede HIV prevention efforts. Similar to other studies, alcohol and drug abuse were the main deterrents to behaviour changes towards HIV prevention amongst youths in this study.

Abstinence and multiple sexual partner relationships

Abstinence was higher amongst female youths, in-school youths with secondary education and youths who were single. However, neither positive attitudes nor perceptions of the severity of HIV/AIDS influenced youths' abstinence. Youths who had sex, were most likely to report a higher perception of risk of HIV infection. The majority of the youths favoured fidelity as an effective mode of HIV prevention.

This was largely expected of female youths whereas more male youths in the older age group 20-24 years, had more than one partner. Notably, inter-generational sexual relationships and coerced sex, were prevalent across both genders.

Barriers to condom use

Consistent condom use remained elusive. There was an increase in condom use at most recent sexual encounters compared to condom use at youths' sexual debuts, particularly amongst the older youths aged 20-24 years.

However, the lack of condom use by most youths at their sexual debuts posed high risks of first time exposure to HIV infections, particularly if the youths engaged in sex with older partners. Although the reported use of condoms at most recent sexual encounters in this study group was higher than in the general population, consistent condom use remained a challenge amongst these youths in Tanzania.

Some beliefs about condom use, associated with peer influences, justified the lack of consistent condom use including, the reduced sexual pleasure whilst using condoms. Religious teachings, particularly within the Catholic faith, also negatively affected the use of condoms, whereas youths did not abstain from having sex, posing a risk of exposure to unwanted pregnancies, STIs and HIV infections.

Barriers to VCT

VCT for HIV is an effective tool for HIV prevention aimed at empowering the individual to practise safe sex. However, common barriers to the uptake of VCT included the fear of knowing one's HIV status, fear of stigma/discrimination, the over-confidence in one's HIV-negative status and the lack of confidentiality at the VCT centres. These along with other service-related factors might have resulted in youths' negative views of HIV/AIDS information centres.

Youth-appropriate HIV prevention measures

The out-of-school youths advocated for more seminars and training of peer health educators who would help to improve the levels of knowledge and decrease the levels of misconceptions amongst the youths. Interactions between youths and older persons and, between male and female youths, were also suggested in order to bridge the information gaps.

It was also proposed that political leaders should be more transparent in the running of HIV/AIDS prevention programmes and should call for the involvement of the youths. Idle youths, who were unable to secure business capital for developmental activities were prone to engage in unsafe practices including alcohol/drug abuse and higher-risk sex.

Therefore, youths' empowerment through a multi-sectoral approach would be helpful to enhance their sustained HIV prevention behaviours.

4.12 SUMMARY

Chapter 4 presented the results from the phase 1 of this study and analysed the associations between the youths' demographic characteristics, their determinants of HIV prevention and their resultant HIV prevention behaviour outcomes.

The quantitative data, collected from these structured interviews, were analysed using SPSS from which deductions were made.

The youths' levels of knowledge about HIV/AIDS, transmission and prevention were average despite their high levels of awareness of HIV/AIDS. Most youths had positive attitudes towards HIV prevention practices. However, the youths' practices of HIV prevention behaviours also remained low, despite their HIV/AIDS awareness levels. This might have been influenced by a moderate level of comprehensive knowledge and misconceptions about HIV transmission.

The study showed that age affected knowledge, attitudes, perceptions of risk and self-efficacy. The younger age-group, comprising the majority of the in-school youths, was more knowledgeable about HIV/AIDS due to the HIV/AIDS education sessions being done in schools.

However, the younger youths, aged 15-19 years, were less likely to adopt HIV prevention practices. Male youths had more positive attitudes, higher risk perceptions and higher levels of self-efficacy but were more likely to have had sex than female youths.

There was no difference in number of sexual partners, condom use and uptake of VCT across gender. According to the HBM's major tenets, scoring high on these determinants would have translated into behaviour changes towards HIV prevention. However, in this

study a high knowledge level and more positive attitudes did not impact positively on HIV prevention behaviours.

The majority of the youths had high levels of perception of the severity of HIV/AIDS, while only half of the youths perceived themselves to be at risk of HIV infection. The perceptions of the severity of HIV/AIDS and the perceptions of risk of HIV infection positively influenced the youths' attitudes towards HIV prevention behaviours. Subsequently, youths' attitudes towards HIV prevention behaviours and their perceived self-efficacy influenced condom use and the uptake of VCT.

The individual's perceived self-efficacy was the main determinant of the practice of safe sex. Youths' perceived self-efficacy had a weak but positive correlation with condom use at their most recent sexual encounters and their uptake of VCT.

The services which promoted HIV prevention, including VCT centres in the area, reportedly did not reach many youths, especially those in the rural areas. Unfriendly service providers and lack of confidentiality at these centres limited the youths' access to HIV preventive information. A participatory approach, using trained peer health educators, was suggested as the way forward in reaching more youths, particularly those with no media access.

The next chapter, chapter 5, will present the data from the qualitative phase (phase 2) of this research, the analysis and discussion of the data obtained from the four FGDs.

CHAPTER 5

ANALYSIS AND DISCUSSION OF RESEARCH RESULTS: PHASE 2

5.1 INTRODUCTION

Chapter 4 presented the data analysis and findings from the quantitative phase (phase 1) of the study which focussed on frequencies of occurrences of variables which were used to determine levels of HIV/AIDS-related knowledge, attitudes and practices. It also presented the associations between various HIV prevention determinants and the HIV prevention behaviour outcomes amongst the respondents. This chapter presents and discusses the results from the qualitative phase (phase 2) of the study. The data were obtained from focus groups discussions (FGDs) conducted amongst homogeneous groups of male and female youths, in each of the respective wards. The findings consist of the display and analyses of data collected from open-ended questions, which depict youths' perceptions and experiences with regards to HIV/AIDS. This information will be used to complement the findings from phase 1 of the study by contributing in-depth perspectives to the quantitative findings, to better understand the youths' standpoints.

Similar to phase 1, the purpose of the qualitative phase of this research was to establish the determinants of HIV prevention behaviours amongst the youths aged 15-24 years in Tanzania. However, in phase 2, the researcher sought to further explore each specific objective through in-depth discussions with the participants in order to understand their varying opinions and experiences.

Specific objectives of this study were to:

- assess the level of knowledge, attitudes and practices of HIV/AIDS prevention amongst the youths
- determine the perceived susceptibility of the youths to HIV infections
- determine the youths' perceived severity of HIV/AIDS
- examine the association between the determinants of HIV prevention and the HIV prevention practices amongst the youths
- determine the youths' perceived barriers that impede behaviour changes towards the prevention of HIV infections
- identify gaps in the youths' perceived self-efficacy to enact HIV prevention behaviours
- determine the youth-appropriate measures for HIV prevention in Tanzania

5.2 DATA ANALYSIS

In this chapter, two formats of data analysis were adopted for the quantitative data and the qualitative data respectively.

The quantitative data largely comprised the demographic characteristics of the participants obtained during the introduction sessions of respective FGDs. The data was collated manually, coded, categorised and analysed. Descriptive statistics were generated from univariate analysis using SPSS from which frequencies, measures of central tendencies such as the mean and measures of variability such as the range, were derived (Sternstein 1996:4, 11).

In phase 2, the audio data from the FGDs were transcribed and the transcripts were reviewed alongside the field notes documented by the observer. These were read thoroughly so that the researcher became familiar with the data. Thematic or content analyses were done whereby the data had been explored for both themes which were systematically categorised together into codes (Guest & MacQueen 2008:216).

The codes were manually created using a deductive category application whereby the categories were based on prior formulated, theoretically derived aspects of analysis based on the specific objectives; and these were then be connected to the text (Mayring 2000). The researcher used data reduction and data display of the coded data for drawing conclusions during the data interpretation. The data were then tabulated and presented in the form of data displays.

5.3 DEMOGRAPHIC DATA

In phase 2 of this study, a total of 25 participants including 12 male youths and 13 female youths, participated in the FGDs. A total of four FGDs were conducted consisting of homogenous groups of six to seven male and female youths recruited from each ward. The demographic characteristics of the participants in phase 2 are presented in table 5.1.

More female (n=13; 52.0%) than male (n=12; 48.0%) youths participated in the FGDs. Their ages ranged from 16 to 24 years with a mean age of 20.6 years. The FGD participants largely comprised older out-of-school youths aged 20-24 years (n=17; 68.0%) compared to younger in-school youths aged 15-19 years (n=8; 32.0%). Half of the participants (n=13; 52.0%) had attained various levels of primary education only, while the remainder 48.0% (n=12) had either dropped-out or were in various levels of secondary schooling.

The majority of the participants (n=24; 96.0%) were single with only one participant (n=1; 4.0%) was reportedly married. Nearly half of the participants (n=12; 48.0%) were self-employed engaging in small businesses, tailoring and artisan jobs, while 36.0% (n=9) were students, 8.0% (n=2) were formally employed and a further 8.0% (n=2) were unemployed.

Table 5.1: Socio-demographic characteristics of the participants (n= 25)

Background characteristics	Frequency	%
Age (years)		
15-19	8	32.0
20-24	17	68.0
Sex		
Male	12	48.0
Female	13	52.0
Level of education		
Primary	13	52.0
Secondary	12	48.0
Marital status		
Single	24	96.0
Married	1	4.0
Occupation		
Student	9	36.0
Unemployed	2	8.0
Self-employed	12	48.0
Formal employment	2	8.0
Total	25	100.0

5.4 QUALITATIVE DATA PRESENTATION

In table 5.2, the structure of the qualitative data is presented. The data has been coded into seven main themes based on the specific objectives, which were then grouped into categories and sub-categories along key points of discussion. The findings under the respective themes are discussed in the following sections.

5.4.1 Theme 1: Perception of severity of HIV/AIDS

In this section, participants were first asked to identify the major health problems affecting the youths, particularly within their areas of residence. Participants cited various health problems including HIV/AIDS and STIs, alcohol and drug abuse, female genital cutting (FGC), unwanted teenage pregnancies, rape and abortions as shown in data display 5.1.1. HIV/AIDS appeared commonly amongst health problems listed during all four FGDs. This is concurrent with a review on the youths in SSA (Blum 2007:230-238) which showed out-of-wedlock births, clandestine abortions, pre-marital sex, HIV/AIDS and maternal mortality as major challenges facing the youths. Similarly, according to Nugent (2006), in a review of youths in the global world, apart from HIV/AIDS, youths also had other potential health

risks including alcohol abuse, smoking of tobacco and road accidents. At the same time, early sexual activity and early childbearing were also found to have long-term effects on the quality of life of the youths.

Table 5.2: Presentation of themes, categories and sub-categories

DATA DISPLAY	THEMES AND CATEGORIES	
5.1	**Theme 1**	**Perception of severity of HIV/AIDS**
5.1.1	Category 1.1	Major health problems affecting the youths
5.1.2	Category 1.2	Perceived severity of HIV/AIDS
5.2	**Theme 2**	**Knowledge of HIV/AIDS**
5.2.1	Category 2.1	Definition of HIV/AIDS
5.2.2	Category 2.2	HIV Transmission
5.2.3	Category 2.3	HIV prevention
5.2.4	Category 2.4	Misconceptions about HIV transmission
5.3	**Theme 3**	**HIV/AIDS-related attitudes and practices**
5.3.1	Category 3.1	Is HIV preventable?
5.3.2	Category 3.2	Abstinence
5.3.3	Category 3.3	Fidelity
5.3.4	Category 3.4	Condom use
5.3.4.1	Sub-category 3.4.1	*Condom availability*
5.3.4.2	Sub-category 3.4.2	*Condom use with permanent partners*
5.3.4.3	Sub-category 3.4.3	*Condom use with casual partners*
5.3.4.4	Sub-category 3.4.4	*Misconceptions about condom use*
5.3.5	Category 3.5	VCT uptake
5.4	**Theme 4**	**Perception of risk**
5.4.1	Category 4.1	Perceived risk of HIV infection
5.4.2.	Category 4.2	Levels of HIV risk
5.4.3	Category 4.3	High-risk youth groups
5.5	**Theme 5**	**Barriers to HIV prevention**
5.5.1	Category 5.1	External/ environmental factors
5.5.2	Category 5.2	Individual factors
5.5.3	Category 5.3	Socio-cultural factors
5.5.4	Category 5.4	Socio-economic factors
5.5.5	Category 5.5	Lack of education
5.5.6	Category 5.6	Gender inequalities
5.6	**Theme 6**	**Perceived self-efficacy**
5.6.1	Category 6.1	Self-efficacy to practice safer sex
5.6.2	Category 6.2	Self-efficacy to negotiate condom use with permanent partners
5.6.3	Category 6.3	Self-efficacy to negotiate condom use with casual partners
5.6.4	Category 6.4	Self-efficacy to discuss VCT / fidelity
5.7	**Theme 7**	**Youth-appropriate HIV prevention measures**
5.7.1	Category 7.1	Evaluation of VCT & HIV prevention programmes
5.7.2	Category 7.2	Recommendations to improve VCT services
5.7.3	Category 7.3	Coordination of youths' HIV prevention programmes
5.7.4	Category 7.4	Recommendations for HIV/AIDS education

The participants in this study were well aware of HIV/AIDS as a leading health problem affecting the youths today. This corresponded with the national findings during the THMIS

of 2007-08 which reported a 97.8% level of HIV/AIDS awareness amongst youths in the aged-group 15-24 years (TACAIDS et al 2008b:54).

DATA DISPLAY 5.1.1
MAJOR HEALTH PROBLEMS AFFECTING THE YOUTHS

- If someone gets pregnant then they want to remove the pregnancy or if someone gets raped or is forced to have anal sex.
- Teenage pregnancy is also a problem; youths are still very young but have joined peer groups with bad influences.
- Health problems result from people using drugs which lead to unprotected sex.
- Youths today drink a lot, use drugs of addiction, they smoke cannabis and end up practising unprotected sex and get infected with HIV
- Once they get HIV, it means they will continue to infect others
- Drugs of abuse affect one's brain, so youths are having mental problems and they end up in bad groups where they are at risk of unprotected sex.
- There are many health problems but the greatest one is HIV/AIDS, which is giving everyone a headache.
- Also STIs are a health problem; also FGC is a health problem.
- A large percentage of girls from the village are circumcised, so when they come to town, the question of having one male partner is difficult. They have several male partners so that they can be satisfied, therefore HIV infection rate will continue to remain high.
- Yes, drugs of abuse have negative effects on our youths because they lose direction and end up being contrary to everyone and breaking the law.

Perception of severity of a health problem, according to the HBM, is a key determinant of behaviour change towards the desired healthy behaviours, in this case HIV prevention. Overall, participants acknowledged that HIV/AIDS was a very severe disease, with negative personal and social consequences as shown in data display 5.1.2. It would have been expected that this would influence the adoption of HIV preventive practices amongst the youths, leading to a decline in the incidence of new HIV infections.

DATA DISPLAY 5.1.2
PERCEIVED SEVERITY OF HIV/AIDS

- First if you are infected with HIV you are like half-dead, because it is a disease with no cure and no medicine, one must die.
- AIDS contribute to loss of national income because when one is infected, his income goes towards health care and not towards the national income.
- Firstly an individual loses his strength, cannot work and is eventually waiting to die.
- Not all AIDS patients die. There are some who live, if you follow the requirements of healthy living such as eating well. It is not automatic that you must die.
- I think the one with the worst effects is HIV/AIDS meaning we youths fail to achieve our targets.
- Yes I think HIV is severe because once a person is sick, his/her health becomes at risk.
- Yes, AIDS has negative effects as it increases the number of street children.

Some participants acknowledged the fact that an HIV-positive diagnosis did not mean a death sentence, This view was also documented by Nyanzi-Wakholi, Lara, Watera, Munderi, Gilks and Grosskurth (2009:903-908), in a report on the role of HIV testing in

Uganda where HIV/AIDS was related to a swift death. However, participants noted that some youths, within their study area had become complacent and had developed laissez-faire attitudes towards the severity of HIV/AIDS. This was commonly reported amongst male youths. A participant commented that: "*youths are saying AIDS is like Malaria or flu, so people are taking it easy*". The same comment was shared by another participant who said: "*youths are saying AIDS is like Malaria, you get a headache and you die …"*. Such perceptions of the severity of HIV/AIDS might have encouraged negative attitudes towards HIV prevention behaviours and justified high-risk behaviours amongst the youths.

Marcelin, McCoy and DiClemente (2006:121-138) in a study to determine HIV/AIDS knowledge and beliefs amongst Haitian adolescents in Florida, also questioned whether familiarity with AIDS had led to complacency, when they quoted a youth stating … *"they make it seem like you will get HIV today and die tomorrow"*… This apparent perception of HIV/AIDS severity had the potential to impede HIV prevention behaviours amongst such youths.

Complacency with HIV/AIDS was also reported to occur amongst some female youths within the study area. A participant mentioned: "*female youths are afraid of pregnancy not AIDS. If a girl is taking contraceptives, she is likely to tell her male partner to have sex without condoms because the problem of unwanted pregnancy has been taken care of*". Similar findings were reported amongst Caribbean youths in a study to determine youths' responses to HIV/AIDS prevention messages where all participants reported the greatest fear that prompted them to use of condoms was pregnancy and not HIV/AIDS (Media 2008:42).

According to Landey in a proposal by the Commonwealth Secretariat (2008), the reduction in focus on HIV/AIDS had led to complacency, ignorance and a resurge in HIV/AIDS amongst youths in the UK, compared to youths in some regions in Kenya, Malawi, Tanzania and Zambia. In the latter case targeted HIV/AIDS education and information programmes were being carried out amongst the youths and had led to young people waiting longer to have sex, using condoms more often and having a lower rate of HIV infections.

5.4.2 Theme 2: HIV/AIDS knowledge

DATA DISPLAY 5.2.1 DEFINITION OF HIV/AIDS
• AIDS means a lack of immunity in one's body. So AIDS is a normal disease but with no treatment. • AIDS is the decrease in the body's immunity and HIV are the viruses which cause AIDS. • AIDS is the decrease in the body's immunity causing someone to be attacked by various illnesses which can enter the body easily. • HIV is the lack of immunity in the body, meaning you are infected whilst AIDS is when someone has already become sick. So we have two groups, someone with HIV and someone with AIDS. • HIV is a small micro-organism which grows in your body till you get AIDS which is the decrease in the body's immunity.

Most participants could correctly define HIV and AIDS implying they were aware of the disease as shown in data display 5.2.1. However, studies have shown that having HIV/AIDS awareness alone did not equate to having comprehensive HIV/AIDS knowledge, therefore did not influence HIV prevention behaviour outcomes (Oyo-Ita, Ikpeme, Etokidem, Offor, Okokon & Etuk 2005:2-6; TACAIDS et al 2008b:51-56 & Oyenuga & Akinwale 2008).

DATA DISPLAY 5.2.2 HIV TRANSMISSION
• HIV is caused by having sex without using a condom and when you do not use condoms, if you have friction you will get open sores; then you will get infected if you have not tested your status. • If you have sex without a condom, if you share needles and blades. • I also think you can get HIV from a road accident; you get cut and a colleague who is infected gets cut and there is contact with each other's blood, you can get infected. • There are various tribes that are still practising traditions like circumcision e.g. the Maasai. You find that they use the same instrument for more than three youths. • By having sex, when you have sores and friction occurs, you can get infected. • Also difference in body sizes between a man and a woman can cause friction and hence you can get infected. • If you have sex, share needles, perhaps toothbrushes and anything with sharp edges. • If I have an open wound and I come into contact with someone with an open wound, then I will get HIV. • I see that in majority of the cases, sharing sharp instruments does not contribute largely to HIV infection, but the main contributor is sex. Maybe sharing sharp instruments contributes at a rate of 0.0001% something like that, so this is not significant.

Participants were knowledgeable about the various routes of HIV transmission including sexual intercourse and through sharing of contaminated sharp instruments. No participant cited blood transfusion and MTCT of HIV as routes of HIV transmission (see data display 5.2.2).

DATA DISPLAY 5.2.3
HIV PREVENTION

- We should be given education on HIV prevention because the government is now focussed on treatment of AIDS patients. They do not talk about prevention.
- We should participate in sports and work to avoid being preoccupied with sex.
- If we abstain from sex or if we use condoms and are faithful to one tested partner.
- To abstain from sex and to use “salama” condoms.
- If we get education and condom supply, and if our youths go for VCT and remain faithful to one partner, we can prevent HIV infections.
- I think to prevent HIV, you need to have one partner only because you cannot stay alone, but if you do not have a partner, then you need to abstain.
- I think one should place two condoms on your partner if possible and make sure the condoms are fitted well otherwise you will get HIV.
- To undergo VCT to know our status, to avoid using blades from the streets and injections.
- I think we need to be faithful to have one partner after both of you have tested. Secondly it helps if we use protection that is, condoms.
- I think it is most effective to be faithful to one partner after you have both tested because you can say that you will use condoms, then the condom bursts and you find you have not tested. So it is risking your life.

Similarly participants were well versed on HIV preventive modalities including abstinence, fidelity, condom use and uptake of VCT as shown in data display 5.2.3. Fidelity and condom use appeared to be the more preferred modes of HIV prevention after reportedly testing for HIV. Many participants thought abstinence was not practical. According to the Global Youth Coalition on HIV/AIDS and UNFPA (2007), despite governments’ targets for 90.0% HIV knowledge levels amongst young people by 2005; only 40.)% of young males and 36.0% of young females had accurate HIV knowledge, at the end of 2007.

DATA DISPLAY 5.2.4
HIV TRANMISSION MISCONCEPTIONS

- When someone has been ill for a long time, they start to believe they have been bewitched and even go for prayers in churches to take out evil spirits. After the prayers a person can go and test and find they are HIV negative.
- I do not have misconceptions but there was a time my neighbour was sick and he believed he had been bewitched. Many people in rural areas believe they have been bewitched and they run to traditional healers.
- You will find someone who has been sick for a long time and has tested and been told he is HIV positive, they do not believe. Some still believe in being bewitched. Such beliefs are still there.
- I think people are afraid of AIDS because they do not know how HIV is transmitted. They think if you go near a person with AIDS when they are sick, then you will get AIDS. So you find AIDS patients suffer a lot with no one to care for them.
- Yes, some are scared of touching an AIDS patient without knowing that AIDS cannot be transmitted by touching, hugging or kissing on the cheeks.
- This is a small town, even is you try to warn a colleague that a particular woman may be suspect, they will not listen to you. If they see a woman with big buttocks and hips, they say they cannot leave that fat “wezere”. This is contributed by mind altering substances. When one is already drunk and you see a “wezere”, you will not believe that there is HIV there.
- I don’t believe HIV is due to witchcraft, because if it is a spell then it would happen to other diseases as well. I think it is one’s own doing by having many partners.

The participants' beliefs about HIV transmission were also assessed. Data display 5.2.3 shows that, although participants did not agree with the common myths, most were aware that such misconceptions existed in their respective societies. The belief that HIV could be transmitted by witchcraft was reported to be prevalent, resulting in AIDS patients seeking traditional healers' treatment rather than going to clinics or hospitals. Some people were said to believe that contact with an AIDS patient could lead to HIV infection. This belief contribute to stigma and discrimination. Participants also pointed out that some of their peers still believed that a healthy-looking person could not be HIV positive, and thus could not transmit HIV. People adhering to this belief might have unprotected sex with healthy-looking persons, if they are presumed to be HIV negative, based on their healthy appearances. Marcelin et al (2006:121-138), noted similar findings.

5.4.3 Theme 3: HIV/AIDS-related attitudes and practices

DATA DISPLAY 5.3.1 **IS HIV PREVENTABLE**
• No, I do not think so because people are still having sex. • Yes I think you can prevent HIV if you have one partner and you sit and discuss what both of you should do. • Yes you can prevent AIDS if you educate youths both male and female especially when in their peer groups. • Yes by undergoing VCT or using condoms with the partner you are with. • Yes we can prevent HIV by testing to ensure you are both HIV negative, or use a condom and remain faithful to your partner. • I think AIDS can be prevented if we are faithful to one partner, we can definitely win against AIDS. • I agree, we can prevent AIDS but how will we win? By getting HIV/AIDS education of being faithful and using protection and avoiding other means of getting HIV infections. • In truth I think AIDS medication is more to decrease HIV/AIDS but does not help to do away with HIV/AIDS at all.

Participants' attitudes towards the prevention of HIV was analysed to determine whether youths saw a way forward in curbing the HIV/AIDS pandemic (see data display 5.3.1). The majority of the participants agreed that HIV could be prevented, although few believed it was unlikely because youths were still having sex. In a study on HIV knowledge amongst the youths in the urban slums of Vadodara, India (Kotecha & Patel 2008:68-72), only 64% of the youths acknowledged that HIV could be prevented. Oyo-Ita et al (2005:2-6) reported similar findings where 32.9% (n=191) of the secondary school adolescents in Calabar, Nigeria, believed HIV/AIDS could not be prevented. The fact that some youths believed

that HIV cannot be prevented might impact negatively on their perceived self-efficacy to practise HIV preventive behaviours.

DATA DISPLAY 5.3.2
ABSTINENCE

- To abstain is difficult, but there should be other ways such as using condoms. When it comes to sex, these are feelings inside one's body and it is difficult to abstain completely.
- I think to abstain completely is not possible. But youths should be motivated to know that there is HIV/AIDS and so be more careful. One should have one partner with whom you are both faithful.
- I can say to abstain completely is very difficult, because I was born and live here. Most youths work in clubs and bars and this is a place for visitors. There many CSWs here. Truly if you are a male and you do not have a female partner, your peers will laugh at you and query what is wrong with you…*"How is it Charlie, anything wrong with you?"*
- Amongst 100% youths, 50% can abstain and 50% cannot abstain. The latter will continue to have sex because they claim 'AIDS is like malaria'. So only those who understand are afraid of AIDS.
- It is not possible because AIDS is something that is global; to love a woman and to love a man is a natural phenomenon. But what we can do is to have one partner only.
- It is not possible because sex is a natural impulse, one doesn't have to think or be taught about this, and thus sex cannot be avoided.

Most participants believed that abstinence, as a measure of HIV prevention was not a plausible option for the youths. The natural sex drive was blamed for youths wanting to have sex, which was projected as an involuntary act. This is contrary to the TRA model, which states that human behaviour is under one's volitional control. Jackson (2002:123), in a review of AIDS in SSA, noted similar findings where youths developed natural desires during adolescence due to puberty and were driven to have sex. However, it concurs with the TRA model element, that one's subjective norms were key determinants of abstinence. Participants claimed that some male youths were driven to have sex because they did not want to appear sexually incapable. Dlamini et al (2009:450-460), in a study of rural South African high school youths in the Kwa Zulu-Natal province, showed that abstinence amongst female youths was influenced by what their friends and parents thought about abstaining from sex and whether their friends were abstinent or not. Therefore external influences played a significant role in determining youths' abstinence.

According to the IRIN In-depth report on Africa-Asia (IRIN 2007), youths' resistance to behaviour changes towards HIV prevention was noted. Youths in Kenya reported to be saturated with sex education which appeared to negatively impact on the practice of abstinence. An 18-year old student was quoted as saying: "*It [sex education] has become like a song to us now … but it makes us want to know what it [sex] is, we want to*

experience it*".* Another student also stated: *"Youths enjoy sex, they enjoy sex more than anything, and being told to abstain only reduces the number of times we have sex"*.

DATA DISPLAY 5.3.3
FIDELITY

- Youths say they cannot eat "ugali" [maize meal] every day; they need to change their diet [sexual partners].
- It is a big deal to have more than one partner; some youths perceive that if you do not have multiple partners, then you are lost in the dark.
- Youths have more than one partner because of greed. One is not satisfied with the one they have and when you travel outside this area, you end up with other partners elsewhere.
- I do not think people have only one partner, peer male youths sit and discuss how many female partners they have been through, and when such thoughts are shared, their peers pick up the same behaviours meaning they will have three or more partners.
- To have one partner is possible; one must have good choice of friends. Your group should be good, but if it is a bad group that thinks of drug abuse and alcoholism, HIV will continue to spread.
- Girls in this area are also too easy going, they do not say no even once. Whey they are told they are loved they give in to sexual advances. So it will be difficult to decrease number of sexual partners.
- I do not think it is possible to have one partner because we girls dress indecently with our backs exposed and no skirts, and so your male partner will definitely want to go out with such girls.
- I do not think they can have one partner because; we have both high and low economic statuses in our society. So you find a girl with in a high economic status can use her money to get a boy she likes with a low economic status and once this is over she returns to her former partner with AIDS.
- First you have to discuss with your partner and undergo VCT and then you remain faithful to one another.
- I don't agree, youths cannot have only one partner.
- In reference to Tanzania, this region is the centre of tourism. It appears the girls are getting a lot of money from the sex trade and even girls from other regions come to this area for business.
- I don't think it is possible because if you have a partner who stops providing for you once he has kept you in his home, and another man appears and says he loves you and offers you Tshs 5 000, and because you are in a rush you will not use a condom.

As presented in data display 5.2.3, fidelity appeared to be the most favoured HIV prevention modality. However, in practice, participants seemed to be doubtful of the practicality of having one partner relationships as shown in data display 5.3.3. Most believed that fidelity was not possible in their area, due to both personal factors such as greed or derailed cultural ideals but largely because of external influences such as peer pressure, social norms, economic factors and the presence of mobile populations. Having multiple sexual partners was viewed as a show of masculinity amongst male youths and was fuelled by greed, easy going girls, substance abuse and alcoholism. Mobile populations, especially those working in the tourist industry, led to the rise of a lucrative sex trade in the town centres which served as stopovers for tour guides, drivers and tourists with bars, brothels, discos and guest houses.

This is concurrent with a report on Zambian youths by Masimba (2008), which showed that female youths had multiple partners to escape poverty whilst male youths engaged in

multiple sexual relationships to prove their masculinity. Similarly, in a study on transactional sex amongst youths in Dar es Salaam, Tanzania, young men described their pursuits of multiple partners as sexually motivated, while women sought multiple partners for economic reasons. Young men were also aware of the expectations of material support from their female partners, and acknowledged that their ability to provide for a partner affected both the longevity and exclusivity of their relationships (Maganja, Maman, Groves & Mbwambo 2007:974-981).

However, some participants believed that practising mutual fidelity was possible if youths had a good choice of peers, who focussed on developmental issues rather than sexual activities. This might not be adequate in resolving women's economic dependence on men which was an important driver for multiple sex partner relationships..

DATA DISPLAY 5.3.4 **CONDOM USE**
• I would say out of 100%, only 30% percent of youths use condoms and even then after they have done VCT, they do not use condoms as they believe their partners will be faithful. • I think youths' opinions of condom use are very low. We can say this is due to lack of education. I may have a condom, but when I am with a woman, I might use it wrongly leading to HIV infection. • Condom use is difficult for the youths due to alcoholism, so when the youth leaves the bar with a woman, he will not be able to use a condom because he is drunk. • Female condoms are not widely accepted and most females will carry male condoms. • I have never seen a female condom, even when I meet a woman, none has ever told me to use one, they ask for male condoms. • I think there are drugs which have come these days that make a woman look fat and healthy. They call them "wezere". So a person will not use a condom when having sex with such persons ["wezeres"] causing them to get HIV infections. • I think 98-99% condoms prevent HIV, but if youths are seen carrying condoms, some tribes perceive these as taboo and such youths are regarded as having lost cultural norms. • Youths do not use condoms. Many say condoms reduce sexual pleasure. • Honestly, youths do not use condoms to prevent HIV. A greater percentage who use, say it is to prevent pregnancy not AIDS. Youths are more scared of pregnancy than AIDS. • I think girls fear to suggest condom use as they will be perceived as CSWs.

Data display 5.3.4 presents participants' varying views on male and female condom use. It was unlikely that youths were using condoms consistently despite a high level of awareness about condoms. This was attributed to a lack of condom use education, alcoholism, misconceptions about HIV transmission, socio-cultural taboos, myths about reduced sexual pleasure and complacency with HIV/AIDS. According to Prata et al (2005:192-199), some of the factors which promoted condom use included multiple partner relationships, higher levels of education and being in school; whilst the fear of suspicions of

infidelity, being married or in a cohabiting relationship and the belief that condoms diminished sexual pleasure negatively impacted on condom use. The perceived lack of self-efficacy to use condoms correctly was reported by some participants in this study; which, according to Guiella and Madise (2007:182-196), was a key determinant of condom use amongst adolescents in Burkina Faso.

Most participants had never seen female condoms and those who had did not know how to use them. These findings were similar to studies done in Malawi which showed that the acceptability of the female condom remained low due to the prohibitive product costs, lack of political will and stigma surrounding its use (IRIN PlusNews 2008).

DATA DISPLAY 5.3.4.1
Condom availability

- Most shops close between 10-11p.m, therefore if one meets a partner later in the night either at the disco or bar and suddenly you have agreed to have sex, condoms are not available at that time. Even when you go to a guest house, the guest owners are selling condoms at up to thrice the price at Tshs 3 000 and you find you only have enough money to pay for the guest house (Tshs 2 000).
- Female condoms are available but not used. Many of us have never seen female condoms and do not know how to use them.
- Condoms are preventive against AIDS but are not sold like tomatoes; they are sold in secret which is wrong. So when you find your “bird”, you cannot buy condoms because you will be seen to have ill-morals.
- I have never seen a female condom; I have seen them on TV but not in the shops. If they are there then maybe they are scarcely available.
- Male condoms are sold for Tshs 100, 1 500 up to 2 000.
- I think they do not have a fixed price; it can range from Tshs 200 to 300. So you have to decide to use or not.
- In some places condoms are issued for free for example in hospitals. They are also sold in shops and guest houses for Tshs 500, 700 up to 2 500, depends on which ones you want.
- In this life of today, you find you do not even have Tshs 200 to buy condoms.
- I think they can afford. If they can buy a woman at any cost, they should be able to buy condoms.
- In town centres they are readily available, but I would recommend that they are issued for free. In the villages there is nothing, so the government should supply more to the villages because some of the AIDS patients come from the villages.
- Male condoms are readily available in shop, pharmacies at any time and if you want you can freely purchase.

Most youths agreed that male condoms were readily available and cheap, but in some situations, the availability was said to be relative (see data display 5.3.4.1). Condoms were readily available in most shops, pharmacies and hospitals during business hours. However, late at night, when most sexual activities occurred, condoms were reportedly unavailable, even in guest houses where prices were reportedly escalated. Condoms were more accessible in the town centres than in the rural areas.

Some of the barriers to condom availability included lack of affordability and the lack of conducive environments to purchase condoms. In a report by Drezin (2007:4-23), some of the barriers to condom use included lack of women's empowerment, negative religious and morality perspectives, personal beliefs about pleasure, cost restrictions and lack of integration into reproductive health services.

The lack of affordability of condoms was challenged by other participants who stated that, condoms should be affordable because male youths could afford transactional sex at any cost. A study on condom use becoming the norm in the sexual culture of college students in Durban, South Africa (Maharaj & Cleland 2006:104-112), showed the possibility of condom use being highly acceptable when made easily accessible to the youths. However, the majority of the students in question used condoms to prevent pregnancies and many did not like going to health facilities for supplies.

DATA DISPLAY 5.3.4.2
Condom use with permanent partners

- They will use the first and second day even up to the third day; then after that because you already know each other they will not use, and for female youths because you have already loved the person, you don't want to lose him, you will accept to go without condom.
- They do not use with their permanent partners. Very few use condoms to prevent HIV, but many when they go out to discos, have unprotected sex. In general many do not use.
- For the first time they will use condoms, but after a few months they will not use because they are used to each other, and you find they had not tested, this will contribute to spread of HIV.
- Youths rarely use condoms; you find that even the stocks in the shops do not move.
- If a boy likes you, the first day he can use condoms, the second day even the third day, after that he will tell you since you are permanent partners, what is the need in using a condom?
- If you have a permanent partner there is no need to use condoms because, you are sure your partner is already tested, so you are free to have unprotected sex.
- Even me I do not see why I should use condoms with my permanent partner because we test every three months, so I cannot purchase condoms and continue to use.
- In my opinion, I do not think so at all, because we sit on the streets and we talk. They never talk about condom use but they are always talking about sex which they have had with so and so and so.
- Condom use depends on the individual youth and their behaviour. For example, I know I do not have greed, so I have one partner only. So I have never used a condom.
- Many youths use them for the first round and second round only, after that they go without and decide to continue the third round without a condom.
- It is very difficult. I can say that many will use them at the start for few days, but even less than a month. If you insist on using a condom one may ask you, if it means you do not trust them and because you want to be close to them you will give in.

Participants noted that being in a permanent relationship was a deterrent to condom use as shown in data display 5.3.4.2. Youths who had permanent partners were less likely to use condoms than youths who had casual partners. Similarly in a study on condom use amongst African-American male youths, many participants explained the decisions to discontinue condom use in serious relationships were based on the type and length of the relationship and HIV serostatus. Condom use was discontinued at the point when couples had been together for more than a few months (Kennedy, Nolen, Applewhite, Waiters & Van der Hoff 2007:1032-1038). Similar findings were noted in the United Nations Economic and Social Commission for Asia and the Pacific's report (UNESCAP 2007:53), indicating that 97.6% of truck drivers who had sex with their permanent partners over a period of 12 months, did not use condoms, compared to 40.0% of those who had sex with casual partners. Therefore, the heterosexual HIV transmission in many parts of SSA, Tanzania inclusive, amongst married couples has been evidently fuelled by the fact that couples in permanent relationships cannot negotiate condom use. Thus youths in similar relationships with permanent partners were at higher risk of HIV infections due to lack of condom use.

DATA DISPLAY 5.3.4.3
Condom use with casual partners

- Yes they regularly use with their casual partners.
- Yes they use condoms with the casual partners because you find they have not been together for a couple of months and each does not know where the other has been.
- Yes because it is for a short time, and they do not want to put their families at risk. But those who have no family to take care of may not use a condom with casual partners.
- They do not use because they say condoms do not have pleasure and it gives other problems.
- They do not use because of the cost of buying Tshs 200 to 500. So the cost also contributes because you find he doesn't even have a job, so it is difficult to buy and use condoms.

In comparison, participants stated that youths were more likely to use condoms with casual partners than with permanent partners, with whom they had undergone VCT or whom they assumed would be HIV negative (see 5.3.4.3). This was contrary to a study by Lescano, Vazquez, Brown, Litvin and Pugatch (2006:443.e1-443.e7), amongst adolescents in three major cities in the USA, which showed that, there was no difference in the number of unprotected sexual acts between teens in the casual partner groups and teens in the permanent partner groups. Although participants in this study believed that condom use increased with casual partners over permanent partners, some participants still felt that barriers such as cost of condoms and the belief that condoms were not pleasurable

prompted youths to avoid using condoms even with casual partners, placing them at a higher risk of HIV infections.

In data display 5.4.4.4, several misconceptions that contributed to the lack of condom use were reported during the FGDs. Some of the beliefs surrounding condom use included that condoms reduced sexual pleasure, condoms were not effective in preventing HIV transmission, condoms had holes and that condoms were laced with the HI virus. Some participants stated that youths feared using condoms because they had the potential to burst inside a woman's reproductive organs. Kennedy et al (2007:1032-1038) reported similar findings where the lack of immediate access to condoms, inconvenience, mood-killing, time taken to put on condoms, and youths' dislike of condoms contributed to a lack of condom use. Such negative beliefs about condoms impeded the condom use campaign and contributed to the practice of unprotected sex amongst many youths in Tanzania.

DATA DISPLAY 5.3.4.4
Misconceptions about condoms

- Some say if you wear female condoms you will not enjoy sex as you have already "pissed".
- We are divided into two groups, they are those who believe condoms are effective and those who believe condoms reduce sexual pleasure.
- People are not using condoms at all because they say they cannot "eat a sweet" with its wrapper on'.
- Some are afraid that condoms will burst inside the woman, so they will not use.
- I think misconceptions include that condoms reduce sexual pleasure. Secondly, some women say if they use condoms it causes friction, so they do not want to wear a condom. Some women say they get fungus; there are a lot of things which make men not to use condoms.
- Some say condoms are only 50% effective; also that they have holes through which the virus can go through. I think it is only one's belief.
- I think condoms will burst if the woman and man are physically different in size and it will remain in the woman's body and the man will not say anything because he is enjoying.
- I see some people say that condoms cause fungus; that they have holes, and some say if you use condoms there is nothing that you are doing.
- Some say condoms have insects, when you put them in the sun, when it dries you find insects in the wrapper, so many do not use them.

The uptake of VCT for HIV remains low. The fear of knowing one's status, fear of discrimination, lack of confidentiality at the VCT centres and alleged unreliability of the test results were reported to be limiting factors for the uptake of VCT amongst the youths in the study area (see data display 5.3.5). The fear of knowing one's status was prompted by youths' histories of high-risk behaviours including unprotected sexual encounters and multiple sexual partner relationships. Most youths preferred not to know their status and this might pose a high risk of HIV transmission amongst youths within the study population.

Similar findings were reported by Meiberg et al (2008:49-54), in a study on barriers for VCT in South Africa, which showed that fear of stigmatisation and fear of knowing one's HIV status were the main barriers to HIV testing. Participants also pointed out that youths feared VCT because they were not equipped to live with an HIV-positive diagnosis. According to Pathfinder International [Mozambique] (2009:7), in order to increase HIV/AIDS therapy adherence, amongst youths in Mozambique, the need to have well trained peer educators, especially those who were HIV-positive was found to offer life-saving support to individuals diagnosed with HIV. This form of supportive environment does not exist in the study area.

Sexual contacts were said to be unwilling to go to VCT centres which deterred willing partners from undergoing the HIV test. On the other hand some participants had positive attitudes towards VCT and believed if youths and their partners discussed and agreed on terms of their relationships, they could undergo VCT to know their status.

DATA DISPLAY 5.3.5 **VCT UPTAKE**
• No, youths do not go there because they know if they are found to be HIV positive they will be living with worry because they know other people will know that they are infected. Some may take the decision to commit suicide when they know that they are HIV positive, because they know they will only stay a short while or begin to lose weight. • If you go to one centre in our area, there are rules; you must go with your partner. They will ask you where you got the disease if you are positive or if you are negative, they want you to bring your partner. Sometimes your partner does not want to go, so what do you do, you stop to test. • I think youths are scared to test due to the unprotected sex which they have heard. So if you tell him to go test, he will first think of how many he has had sex with and how many he has at the moment. Many are afraid. • Very few go to test because they are afraid and they know recently they had sex with a woman without using condoms. They argue it is better not to know and will only test when he is very sick. • Some believe if they test and find themselves to be positive, they might hang themselves or take poison so they can die quickly. • Yes some youths go to the VCT centres when they get a partner and they have sat down and agreed to undergo testing to know their status. • Many youths do not go for testing, because they are scared after having multiple partners. They fear that they may already be infected and do not know how they will live with HIV. They prefer to stay without knowing so they do not die quickly; that way they continue to spread HIV. • Some fear that the person who tested them and the one who gave them their results might make their results public. • Yes, before we got other services; one went to the hospital to test. There the doctor told someone close to you, who told someone else. Many youths fear to test because of the lack of confidentiality.

5.4.4 Theme 4: Perception of risk of HIV infection

DATA DISPLAY 5.4.1 PERCEIVED RISK OF HIV INFECTION
• Yes I agree, I am at risk of getting HIV because I can have a partner and believe 100% that I am the only one he has, but later find out that my partner is not faithful. • Yes we are at risk, when you have someone who is unfaithful and you are faithful; to get HIV infection is very fast. • Yes, it is true with this current situation, but what is good is that now people are getting educated on how to prevent HIV infections and there is medication for AIDS patients which reduces the risk. • No, I am not at risk, by avoiding temptations and greed, being faithful to only one partner or abstaining from sex completely. • I think I am at risk because if I attend to an injured person who is infected whilst I have an open wound, I can get infected. • Yes we are at risk because we are surrounded by people with no HIV prevention education. • Yes I can be infected because if I pass in the streets with worn out shoes and you come across sharp objects used by an infected person, so you find yourself infected. • The environment around us has casinos and brothels where girls sell themselves, so as a man if you find you have taken any girl from there then you will get infected.

The majority of the participants considered themselves to be at risk of HIV infection as shown in data display 5.4.1, with several citing higher-risk levels (see data display 5.4.2). This was largely attributed to external factors including unfaithful partners, substance abuse and alcoholism, women's economic dependence on men leading to multiple partner relationships and an environment which favoured high-risk behaviours including the sex trade.

DATA DISPLAY 5.4.2 LEVELS OF PERCEIVED HIV RISK
• I think in our current life we are at high risk. • Very high risk. • I think youths are at high risk because they now think they can decide on their sexuality. Others smoke cannabis, take drugs of addiction and drink alcohol; and in drinking alcohol they are most likely to have more than one partner. • High risk because a lot of people are infected already. • Because we already have the disease, so those who will be safe are few and those who will die are many. • As youths we are at high risk of infection because we are too full of greed. So it is very easy to be infected. • I think we are 100% at risk of getting infected; because the girls these days cannot be trusted and so you can think you are faithful to each other, but some other person can convince her to have sex with him and they end up not using condoms. So for AIDS to decrease it will be very difficult. • I think we are at high risk because girls are very greedy for material things. She may ask you for something and when you tell her to wait for a few days, if someone comes and is ready to provide for her immediately, she will give into sex with other partners. • I can say I am at medium risk. • Youths are at high risk of being infected and infecting others with HIV. This is because there are many families which are poor and you find girls selling themselves.

Participants' perceptions of risk were also related to the existence of a pool of already infected persons, who lacked HIV prevention education. Some youths laid more emphasis on risk factors such as exposure to sharp objects in the waste dumps and contacts with open wounds, whose contribution to HIV transmission was relatively insignificant. A participant reported the misconception that, with the advent of ART, the risk of HIV transmission was reduced. There were also some participants who believed they were not at risk because they followed the HIV prevention modalities and they avoided greed and temptations.

DATA DISPLAY 5.4.3
HIGH-RISK YOUTH GROUPS

- Yes, the groups using drug of addiction, smoking cannabis, abusing alcohol, these are the high risk groups. If you are drunk the chance of HIV infection is great or if you inject yourself with a needle shared by five people you will get infected.
- Yes, what I can say is that, for us the youths who are at home and those who are in schools, the difference is only one. For the ones who are in schools, during holidays they will be at home, when they can engage in sex. So if I have sex with her, I can give her HIV and if she has sex when she goes back to school she can give HIV to her colleague. So all of us youths who have not received HIV/AIDS education and do not know how to protect ourselves will be exposed to HIV.
- I would say girls are more at risk. They tell you, "are you looking for a man for his face, we are looking for money".
- I agree girls are at higher risk because they are full of greed. If you have a girlfriend and do not have enough money, just know that if someone else comes, she is likely to have sex outside the relationship.
- I would say girls are more at risk. I have never met a woman who demanded that I use condoms, until I wear one to protect myself then I protect her.
- Yes, those who smoke cannabis, CSWs and especially barmaids because working in the bars you can also sell yourself to get clothes and money.
- I think there is no difference between in-school youths and out-of-school youths; they are all driven by greed, because if someone is dressed well, then you also want that dress, so you engage in high-risk behaviours.
- I do not think there is a difference because even school girls go to guest houses after school hours.
- Girls are at higher risk because they are too easy-going, when they are told they are loved they just give into sex and they do not stay with one partner.
- I think in-school youths are at higher risk because their teachers are strict so when they get an opportunity to go to the disco, and you know they cannot go with condoms to school, they are likely to engage in unprotected sex.

The participants were asked to name groups which they perceived to be at high risk of contracting HIV infections. Youth groups that were reported to be at higher risk of HIV infections included alcohol and drug abusers, young girls, both in-school and out-of-school youths, CSWs and all youths who lacked HIV/AIDS education as shown in data display 5.4.3. Some participants felt in-school youths were at slightly higher risk, whereas most believed the risk was equal to that of out-of-school youths. Although these groups were

more likely to be exposed to unprotected sex due to various relationship dynamics, the remainder youths might tend to develop a false sense of security against the risk of contracting HIV infections (UNESCO 2006:21). This is because they determined the risk of HIV infections by group membership rather than by individual high-risk behaviours.

5.4.5 Theme 5: Barriers to HIV/AIDS prevention

Participants were asked to mention barriers to behaviour change towards HIV prevention amongst the youths in the study area as presented in data displays 5.5.1 to 5.5.6. These included external/environmental factors such as negative peer influences, alcohol and drug abuse, access to pornographic movies and the Internet (see data display 5.5.1). Alcohol abusers were named as the group at highest risk of HIV infections. The participants emphasised that alcohol was the greatest contributor to unsafe sex. Similar findings were reported by Molla, Berhane and Lindtjørn (2008:9) who noted that young adults who used alcohol and chewed Khat were more likely to engage in pre-marital sex.

DATA DISPLAY 5.5.1
EXTERNAL/ENVIRONMENTAL FACTORS

- You find youths are in bad peer groups such as drug abusers who influence each other into bad behaviours.
- For some male youths alcohol was equal to women, once a person had too much to drink, he will take any woman for the night without thinking she may be a CSW. It is better for such a person to marry so that he can have one fixed partner at his home.
- I think many youths are browsing on the internet and watching pornographic movies, so the media is impeding behaviour change.
- I think drug and alcohol abuse contribute to HIV. If you are both drunk and you go to the guest house, your partner may do something bad to you different from what you agreed on.
- The environment has too many recreation facilities which serve alcohol and which encourage having sex.
- In our area there are up to 52 guest houses with cheap accommodation, hence promotes high-risk behaviours.
- In my opinion these facilities are not a factor, it is business. Youths must determine for themselves their direction in life and have to educate themselves on HIV prevention.
- I think alcohol abuse contributes a lot because a boy will coerce you into drinking and you end up drinking more than one and there he can take you and use you as he wants, because you can't do anything about it.
- I think alcohol, ignorance and lack of education are the main contributors. Very young youths are drinking alcohol; will they remember to use condoms? They do not remember; they will just have unprotected sex.
- Many youths say women are twins of alcohol, so when you take alcohol you start looking for women.
- I think those who smoke cannabis are not so much engaged in sex but those who drink alcohol are.

The participants also reported personal factors that were barriers to HIV prevention as shown in data display 5.5.2. Youths' carefree attitudes, lack of HIV/AIDS education, greed for material things, lack of direction in life, loss of cultural values and youths wanting an easy life in the peri-urban areas were seen to negatively affect HIV prevention behaviours. Participants thought that because youths were in the "foolish" age they were more likely to be influenced by fellow peers into high-risk behaviours. This is consistent with a review on adolescents' risk-perception cognition and self-assessment in relation to the HIV/AIDS pandemic by Mwale (2008:229-240), which showed that adolescence was a period of crises typified by egocentrism. This might drive the youths to behaviours presumably earning them recognition amongst their peers, and in some cases end up being high-risk behaviours for HIV transmission.

Youths reported intentionally transmitting HIV. Policy makers and WHO authorities are looking at possibilities of criminalising wilful HIV transmission, although sceptics project the potential for such cases to be a significant deterrent to being tested for HIV infection (Wainberg 2009:688). Participants also claimed that some youths had become complacent about HIV/AIDS. They down-played the severity of HIV/AIDS stating: "*HIV is like malaria, you get a headache and you die*"; whilst others thought that the introduction of ART contributed to laissez-faire attitudes amongst the youths, who believed there was hope for living longer even though one got infected with HIV.

DATA DISPLAY 5.5.2 **INDIVIDUAL FACTORS**
• I think many understand but do not take the education seriously. • Our fear of testing and knowing one's status is due to discrimination. • Youths are commonly going against their culture. • It is not that there are no jobs, but the youths do not want to work especially in the rural areas, the run to the towns and end up selling their bodies. • Youths have lost sense of direction. • Youths do not listen to parents and parents are not asking their youths where they have been. • Youths are in the foolish age, they become wild and want to experiment on things and they go out with girls without using condoms to taste sexual pleasure which contributes to HIV transmission. • Some say HIV is like malaria, so they take it easy. • We are pretending like we are used and not scared of HIV/AIDS • If you look at youths, sex is something that is in the blood it is not something that you study. It is an internal force which pushes youths. Even after you bury someone who has died of AIDS, we forget quickly because sex is powerful. • Some people who have been infected want to infect others. This notion of dying as a group is very bad. • I think the introduction of AIDS medication has contributed to an increase in unprotected sex because people believe that even if they get sick there are medications to keep them going.

The spread of HIV/AIDS in SSA has been influenced by socio-cultural aspects. Participants in this study mentioned fear of stigma and discrimination, some tribes not accepting condom use, arranged and/or teenage marriages, polygamy, traditional dances, widow inheritance and FGC as factors within their areas contributing to HIV infections (see data display 5.5.3).

FGC is common practice within the area under study. According to the DHS of 2004-05, Arusha region, ranked third in Tanzania with a FGC prevalence of 54.5%. The majority of the women's (94.9%) circumcisions involved cutting and removal of flesh (NBS & ORC Macro 2005:250). According to the US Country Report on Human Rights Practices for 2007, this type of cutting was further defined as "clitoridectomy", which is classified as type II FGC; the most common form practised in Tanzania (US Department of State 2008). Participants felt, FGC contributed to a lack of sexual satisfaction amongst women, prompting them to seek multiple partners in order to get sexual fulfilment, thus posing a risk of HIV infections. In a study to determine whether FGC contributed to an increased risk of HIV/AIDS amongst Kenyan women, researchers noted that cut women were more likely to have older partners, were at higher odds of initiating sexual intercourse before they were 20 years of age, were at higher odds of testing positive for HIV although they were at lower odds of having at least one extra-union partner (Yount & Abraham 2007:73-88). However, Okonta (2007:113-124), in a study on sexual and reproductive health amongst adolescents in the Niger Delta Region of Nigeria concurred with the fact that, the reduced sexual pleasure associated with FGC could lead female youths into having multiple sexual partners with the hope of discovering sexual satisfaction.

Teen and arranged marriages were also mentioned as possible contributors to the spread of HIV/AIDS amongst the youths; because girls were often married off to older experienced partners whom they did not know, which might expose them to the risk of HIV infections. In a report by Immigration and Refugee Board of Canada [Nigeria] (2006) on forced marriages in Nigeria, early marriages were similarly found to have negative effects on girls including widowhood, spread of HIV/AIDS, prostitution, family problems and even suicide.

Similar to reports by May (2003:2) and Bennett et al (2004), participants stated that polygamy amongst pastoralist communities in northern Tanzania was found to increase the

risk of HIV/AIDS transmission from the younger men to their wives. This was said to occur when young men travelled to major towns in search of work or business where they came into contact with CSWs and/or non-marital partners, with whom they had transactional sex. Due to negative religious and cultural norms (Coast 2007:387-401) against the use of condoms, such sexual encounters were most likely unprotected, hence increased the potential for HIV transmission to their spouses when the men returned home.

Despite the failure of parents to educate their youths on reproductive health and HIV prevention, participants also claimed that parents in their area were to blame for the spread of HIV/AIDS. This was the result of inter-generational sex, where older women had affairs with younger male youths whilst older men had affairs with younger female youths. According to Leclerc-Madlala (2008) in a report on intergenerational age-disparate sex and young women's vulnerability in southern Africa, the prevalence of HIV/AIDS infection was higher (29.5%) amongst female youths aged 15-19 years, in sexual partnerships with older men 5 years or older in South Africa. Similarly Langeni in Leclerc-Madlala (2008) reported a 28% increase in unprotected sex for every year's increase in age difference between young females and older male partners, thus posing a risk of exposure to HIV/AIDS. The reported age-disparate sexual relationships between older women and younger male youths in the communities within the study area were a noteworthy feature adding to the spread of HIV amongst the male youths.

Participant raised concern over traditional practices such as widow inheritance amongst some rural tribes which they said increased the risk of HIV transmission. This was concurrent with a report by Keown (2007), on reasons for women's vulnerability to HIV infection in Tanzania, which cited widow inheritance as a contributor towards the spread of the disease.

Rural-urban migration of the youths was also said to be a barrier to HIV prevention. Youths did not want to engage in farming activities in the rural areas. They moved to the towns in search of formal employment and when they failed to get decent jobs, they tended to engage in transactional sex and/or commercial sex work to earn easy money particularly amongst the female youths.

DATA DISPLAY 5.5.3
SOCIO-CULTURAL FACTORS

- Some tribes have traditional thanks-giving dances each month. These are held at night with a mixed crowd of youths and the older generation. During such dances participants are free to have sex with any partner they wish.
- I blame some traditional practices like FGC. Women who have had FGC do not get satisfied; sometimes it means they have to have sex with up to three partners per day, hence leading to a high risk of exposure.
- Many youths have prioritized recreation activities like discos, and many girls do not want to work, they prefer to sell their bodies.
- There are no religious barriers at all.
- In this area we do not have polygamy passé but you find someone with one wife, then they go out with other female partners.
- In our area, some of the parents are the main contributors towards the spread of HIV/AIDS because you find older women committing adultery with younger male youths and older men with younger female youths with no problems at all.
- Women do not have rights; it is only the man who has rights. If a man dies, someone will inherit his widow.
- There some tribes once a girl reaches menarche, she is married off or in some, the husband or wife is chosen for them, so you find they do not know each other.
- Certain tribes do not wear condoms at all and they do not believe that AIDS is there
- I agree some of the outgoing young men of such tribes come to town to do business, and he may have up to seven wives. If he is unable to return the same day, he will end up sleeping in town and he will end up with our sisters, [CSWs]. If they convince him he will give in to sex and when he goes back to the village he will take HIV back to his seven wives.
- There are some religions which allow people to have more than one wife and others which say condom use is not compulsory that is, do not use condoms as it is a sin. This contributes to unprotected sex and increased HIV infections.

The participants cited poor socio-economic status as the main driver for HIV transmission amongst youths in Tanzania (see data display 5.5.4). Youths were idle due to lack of employment opportunities which encouraged high-risk behaviours including substance abuse, alcoholism and unprotected sex. Lack of employment opportunities within the area under study had also led to a rampant sex trade amongst female youths. Some participants also felt that the presence of several recreational facilities including bars, discos and guest houses fuelled the sex trade. Other participants had opposing views; they thought high-risk behaviours were largely because youths had lost their sense of direction in life. However, Juma (2007:2) had similar findings in a review on promoting livelihood opportunities for rural youths in Tanzania. The lack of livelihood and employment opportunities for the youths reportedly led to increased rates of youth migration out of rural areas, increased numbers of young criminals and prostitutes, and increased drug abuse and HIV/AIDS infections.

Women's economic dependence on men promoted age-disparate relationships. Older men from wealthier social brackets had sex with younger female youths in the poorer social brackets in exchange for money or material things. Such older men were likely to be more

sexually experienced and hence might pose a risk of exposing the younger female youths to STIs and HIV infections. In this study, transactional sex was also said to occur between older women and younger male youths. Transactional sex contributed to the youths' low self-efficacy to negotiate for safe sex; often leading to unprotected sexual encounters thereby increasing the risk of HIV transmission. According to Norris, Kitali and Worby (2009:1167-1176), in a study amongst sugar plantation residents in Moshi, Tanzania, transactional sex in exchange for money, food, gifts, alcohol or work was believed to result in riskier sexual relationships, increasing the risk of STIs and HIV infections.

Commercial sex trade was said to be flourishing in the study area due to the presence of large numbers of mobile populations throughout the year. Participants noted that CSWs earned substantial amounts of money ranging from Tshs 20 000 to 150 000 per day. These earnings are higher than the minimum wage in Tanzania of Tshs 100 000 per month. Thus CSWs could earn up to 30 times more money than they would have earned working for minimum wages within the public sector. Hence uprooting this trade as a means of preventing the spread of HIV could pose a great challenge to policy makers. Few studies

DATA DISPLAY 5.5.4
SOCIO-ECONOMIC FACTORS

- Girls in school who are from poor homes may even quit school to start engaging in commercial sex for money, which will put them at risk.
- Girls in school were greedy for material things. If they get older partners who can give them Tshs 20 000 to start with, they will continue to have sex with older partners to earn up to Tshs 100 000. In-school youths, because of the limitations and rules will not carry condoms with them, so that these are not found on their person. Hence they are more likely to engage in quick and unprotected sex to avoid being caught.
- The economy is affecting the spread of HIV on both sides. Those with money, be they male or female, are looking for younger partners, both male or female, from whom they can buy sex for money.
- These days sex has become a business. This has led to the increase in CSWs and with the existence of several recreational facilities, cheap guest house accommodation and mobile populations due to tourism; the youth are easily lured into sex.
- This area is a tourist centre; you will find female youths coming from other regions of the country to sell themselves for money.
- Tourism brings CSWs and these females get from Tshs 20 000, some 50 000 up to 100 000 per day.
- I know a group of seven girls who live in this town and their main job is commercial sex. When talking to them, they told me that some days they can make from Tshs 70 000 to 150 000 per day and some days they make nothing.
- A lack of employment and business capital contributes to this.
- Many youths are idle with no work. You find them playing pool and talking about sex and girls.
- Yes, when someone is poor and you have no work and you want to dress well and feed well. When you are approached by an older woman, you will definitely give in to sex leading to an increase in HIV infections.
- If you want to marry, many families of the girls look to marry off their girls where there is money. They push their daughter to marry someone from a rich family without knowing if they are infected or not.
- Some relatives cheat parents that they will educate their children for them and when such youths come to the towns, they end up working in bars which can lead them to risky behaviours.

have been done on HIV/AIDS amongst mobile populations within the tourism industry in Tanzania including tour guides and drivers. It is well established that such mobile populations are at higher risk of HIV infection and pose a similarly high risk of HIV transmission to the sedentary communities and CSWs along their trucking routes. This was highlighted in a study on sexual behaviours amongst long distance truck drivers in India which showed that, 45.2% had more that five sexual partners, 57.2% has exposure to CSWs but only 6.8% used condoms consistently when with CSWs (Chaturvedi, Singh, Banerjee, Khera, Joshi & Dhrubajyoti 2006:153-156). This scenario is common amongst mobile populations in many parts of the world making them a highly vulnerable group to HIV infections.

In data display 5.5.5, participants mentioned lack of formal education and lack of HIV/AIDS education as barriers to HIV prevention. The implementation of the Tanzania HIV/AIDS Policy of 2001 in schools was implemented in 2006, meaning HIV/AIDS education is taught in both primary and secondary schools. Therefore out-of- school youths were more likely to miss out on such HIV/AIDS educational sessions. Equally, formal education, particularly for girls was found to be a powerful way of protecting them from HIV transmission. More educated girls could negotiate for safe sex, married later, had greater choice in marriage and were less dependent on men (ILOAIDS Brief 2004:4).

DATA DISPLAY 5.5.5 **EDUCATION**
• Many youths have not gone to seminars so they do not know what is going on. • Lack education and also lack of HIV/AIDS knowledge. • If someone falls sick they do not go to the hospital instead they go to traditional healers. • Youths do not get education. There are some who do not believe that a good looking woman who is fat can have HIV.

As shown in data display 5.5.6, participants gave varying reasons as to why gender inequalities contributed to HIV/AIDS infections amongst the youths. In a patriarchal society such as the study population, females were seen as the weaker sex having not rights. Their roles were defined as doing house chores and having babies. Male chauvinism was prevalent; male youths stated that women could not dictate the terms for sex within a relationship. On the other hand, female participants felt that they would like to be able to negotiate for safe sex but were afraid of the negative repercussions within the relationship

including, being blamed for HIV infections. One participant mentioned: *"If a woman suggests condom use for family planning or to prevent HIV infections, a man will demand; where did you get that information from. It is you who wants to bring HIV into the family".* Negotiating for safe sex was also impeded by social norms; female youths were afraid of demanding for condom use, lest they were viewed as CSWs.

Some male participants stated: "*Females have their rights; they just do not know how to use them. They need to be empowered".* Comparison was made between ordinary female youths and CSWs. The latter were said to have higher self-efficacy to negotiate for safe sex. They had different price tags for sex with or without condoms, allowing their clients, to choose. However, they too were faced with incidents of sexual violation which put them at risk of HIV infections. According to Sa and Larsen (2006), in a review of gender inequalities and HIV-1 infections amongst women in Moshi; the women had an increased risk of HIV infections if they had partners 10 years older than themselves or their partners made low financial contributions to the households. It was evident that women's subordination in sexual relationships in SSA increased the spread of HIV amongst women.

DATA DISPLAY 5.5.6
GENDER INEQUALITIES

- When male youths team up, they convince themselves through mob psychology that a woman cannot drive a man.
- If a woman suggests condom use for family planning or HIV prevention, the man will demand, "where did you get the information from, it is you who wants to bring HIV into this family!"
- Women do not request to use condoms because they are afraid to be seen as CSWs, which puts them at a higher risk of infections
- Women have their rights, they just do not know how to use them; they need to be empowered.
- If you compare with CSWs, these girls are very arrogant; they say if you wish to use condoms it is your right and if you don't it is also your right but at a different price tag. They even say they are giving you two minutes to decide and go through the price list before they move on to another customer. Sex without a condom can cost as high as Tshs 30 000 to 50 000 and with a condom as low as Tshs 10 000.
- Women are seen as having no value as our roles are seen to be performing house chores and have babies, so we cannot advice a male partner on high-risk behaviours for HIV infection.
- A woman is said to be the weaker sex, hence a man will not allow her even to talk once he has paid for her and put her in his house.
- Incidents of gender violence are common. I do not think a day goes by when you don't hear of such incidents.
- Just recently there was a girl in a guest house who was given too much to drink. Some male youths said they were tired of the sex trade. She even drank only one beer which they fixed with local herbs as they did not want to spend money and they gang-raped her in the guest house until morning and left her there.

5.4.6 Theme 6: Perceived self-efficacy

According to the HBM, the belief in being able to execute the required health behaviours is a key determinant of HIV prevention behaviours. This is especially so for the female youths who may find themselves unable to negotiate for condom use or unable to discuss their sexual concerns with partners who might expose them to risks HIV infections. Individuals who feel they are capable of enacting certain behaviours will most likely practise those behaviours. Participants had divided views on youth's perceived self-efficacy to practise safe sex. Some believed that youths were capable of practising HIV prevention, if they had willing and supportive partners. However, the majority of the participants felt that self-efficacy to enhance HIV prevention was barred by socio-economic reasons, substance abused and alcoholism, gender violence and low perception of severity of AIDS.

Socio economic reasons were cited for age-disparate relationships between older women and younger male youths and older men and younger female youths. In such cases, the younger youths are often unable to negotiate for safe sex. According to Leclerc-Madlala (2008) in a review of age-disparate and intergenerational relationships in southern Africa, young women were often powerless with regards to safer sex negotiations in relationships with older men. In this study, participants mentioned that male youths in relationships with older women were also unable to negotiate for safer sex, because they too received money in exchange for sexual services.

DATA DISPLAY 5.6.1
SELF-EFFICACY TO PRACTICE SAFE SEX

- You will find young boys are unable to negotiate against older women with money because they are being paid, and at the same time you will find the male youth has no job, so he will have to accept.
- Older women and some widows are having so-called 'marriage' relationships with younger male youths. They want youths with 'boiling blood' because their husbands are too old and they use money to get them.
- Male youths give female youths a lot of alcohol to drink so that they cannot fight back.
- Incidents of sexual violence are common, if a girl insists on condom use, the male partner will accept in principle, but when they get to the guest house, he will refuse to use one and may physically assault the girl, threaten to disclose her or leave her in the guest house to pay the accommodation bill.
- I think they can, it all depends on the individual and how they perceive the severity of AIDS.
- Yes they can, if youths have mutual respect and faithfulness in a relationship they can discuss safe sex.
- Like we say a woman has no say because she is the one who is paid, so once he has incurred any costs on you, you will have to accept whatever he wants.
- Yes, it happens you can negotiate for condom use, but when you get to the guest house, you find women have no negotiation power and once you are undressed he refuses to use a condom and the woman cannot fight him off.

The use of alcohol was also blamed for youths' inability to negotiate for safer sex particularly amongst female youths. Male youths were also said to neglect condom use when they were drunk. Grayson (2005:89), in a review of adolescents and sex also noted that the use of drugs and alcohol inhibits a young person's ability to make informed decisions about sexual intercourse.

DATA DISPLAY 5.6.2
SELF-EFFICACY TO NEGOTIATE CONDOM USE WITH PERMANENT PARTNERS

- A woman has no voice. If she suggests condom use the man will be very angry and if he is providing money, he will tell you that you cannot tell him what to do.
- I think the solution is to get married to someone who has already tested and to remain faithful.
- If possible we should marry so we can practice safe sex.
- Yes they can but when it comes to permanent partners, female youths are not faithful. You can agree on issues and later you find her with someone else.
- Even if you advice her she may not listen as that is her choice.
- I can't advice her because, who will she be using the condoms with whilst am the one entitled to use them?
- I will advice her because if I don't and she is infected I will be infected too.
- Yes I can tell him to use but some of the male youths refuse to use condoms once they are used to you. So you find you get used to not using condoms.
- I think we can agree but he may get greedy and end up having a relationship with another partner.

Participant had varying perceptions of self-efficacy to negotiate for condom use with permanent partners (see data display 5.6.2). Some felt it was possible to negotiate for condom use, whilst others lacked confidence in their partners, male or female whom they thought might be unfaithful despite having agreed. Many believed that either partner might still have an affair outside their permanent relationships.

Some male participants were hesitant about advising their female counterparts on condom use, because they believed they would use them with other partners; although some opposed this notion, because they believed they needed to discuss condom use to protect themselves and their partners. In some instances, participants felt fidelity was a more practical HIV prevention modality than condom use. Male youths believed getting married to a tested partner was a better alternative to safer sex than relying on condom use.

Female participants had low perceptions of self-efficacy to negotiate for condom use because they felt they had not rights, particularly with permanent partners. This has contributed significantly to the spread of HIV amongst married or cohabiting couples in many parts of SSA. A study on predictors of condom use amongst female bar and hotel

workers in Moshi, Tanzania, illustrated that women were more likely to use condoms with casual partners than with regular partners or partners 10 years older than themselves (Tassiopoulos, Kapiga, Sam, Ao, Hughes & Seage 2009:552-560).

DATA DISPLAY 5.6.3 **SELF-EFFICACY TO NEGOTIATE CONDOM USE WITH CASUAL PARTNERS**
• I think it is possible but it is not compulsory because one must decided for oneself to use a condoms or not and if she is not ready it is better she leaves. • Yes I can tell her, it is a very basic issue to protect her and me at the same time. • Yes it is possible to practice safe sex but it will be easier if both are educated on HIV/AIDS. But is hard to convince someone who is not educated. • Yes it is possible but she cannot convince me to have sex without a condom because you have your permanent partner who you care about. • No, they can't because they know what they want, after they get what they want they leave • They can, in maybe few instances; because causal partners are for recreation, so there is no need to test, maybe they can use condoms only. • Yes, you can use condoms, but sometimes it depends on the type of partner you have selected. There are so me females who say if you want to use condoms it is your right, but they are only after money. You find even the prices differ; it is low for those who use condoms and high for those who do not use condoms. • If I have a casual partner I cannot agree to have sex if he does not use condoms. • You can talk to him but he can agree for the first round, second round then he wants to go without a condom and if you say you test first he will ask you if you don't believe in yourself • For me, I do not have a permanent partner, so every partner that I have, I ensure that we have to use a condom.

Participants felt they were more capable in demanding for condom use with casual partners compared to permanent partners, because they believed those were once-off events, and they had permanent partners whom they did not want to jeopardise (see data display 5.6.3). This is concurrent with a study by Juarez and Martín (2006:25-35), on safe sex amongst male adolescents in Brazil, which showed that adolescent males in steady relationships were less likely to use condoms and were more concerned about pregnancy prevention than adolescents in casual relationships. Gullette, Wright, Booth, Feldman and Stewart (2009:428-441), also had similar findings in as study on rural African-American stimulant users, which showed that females had more self-efficacy to negotiate condom use with casual partners than their male counterparts.

Some participants felt it was difficult to negotiate for condom use if such casual partners lacked HIV/AIDS education or if they were more money oriented. Similarly, Juarez and Martin (2006:25-35) also noted that educational attainment, degree of knowledge of HIV transmission and prevention significantly promoted subsequent condom use amongst the adolescent males. Other participants reported instances where condoms were used in the

first and second rounds during sexual encounters but were discontinued during subsequent encounters.

DATA DISPLAY 5.6.4 SELF-EFFICACY TO DISCUSS VCT AND FIDELITY
• Yes I can, so we can continue to live healthy. • Yes they can, when they have agreed they can go test and decide to repeat every after so many months. • People do talk a lot about safe sex but VCT uptake is still low. • Yes we can but very few do so. Many do not like to discuss this because they fear their partners will disrespect them and tell them there is nothing like safe sex. So you lose heart in talking about safe sex. • Yes we can before you enter into a permanent relationship but after that there is no discussion. I do not think you understand the implication of being in a permanent relationship even if you have tested earlier, he will find another woman. So people in the marriage set up are mostly affected because if a man goes with another, when he returns you cannot use a condom.

Despite the fact that particpants claimed a high self-efficacy to discuss fidelity and VCT with their partners, this was not reflected in the uptake of VCT. This means that participants' expressed self-efficacy to discuss VCT might have been exaggerated, because not all youths are accepting of HIV testing. Similarly, a study by Olsson, Darj, Rassjo & Konde-Lule (2007:215-222) showed that the responses to VCT for HIV amongst young people in Kampala, Uganda varied from having no problem with the procedure to being very reluctant.

5.4.7 Theme 7: Youth-appropriate HIV prevention measures

Participants were asked to evaluate existing VCT services and HIV prevention programmes in their areas of residence. Although some participants were content with VCT services and HIV prevention programmes, the majority of the participants thought that existing services were not youth-friendly. Service-related factors were said to impact negatively on youths' utilisation of the VCT and HIV information centres as presented in data display 5.7.1. These included shortage of staff, alleged lack of confidentiality, alleged inaccuracy of test results and contact-tracing policies. According to Bwambale, Ssali, Byaruhanga, Kalyango & Karamagi (2008:263), in a study on HIV testing amongst men in rural western Uganda, in order to enhance HIV testing, it was recommended that VCT services should address stigma, improve access and confidentiality of VCT services; which were found to be the major barriers.

Some participants also noted that, with the advent of ART, VCT counselling services had been compromised. Counsellors had become more result-oriented, focussing on detecting patients in need of treatment and care, whilst HIV preventive counselling appeared to have been side-lined.

A lack of transparency in the running of HIV prevention programmes at the local government level, which had no youth involvement, was blamed for youths' failure to utilise VCT services. According to Tonbing (2004:1), youths around the world want meaningful involvement in government and NGOs because more than 50% of the new infections happen in those aged 15-24 years; therefore the 50% of the total resources should be targeted to their needs. Participant stated that mass campaigns and HIV/AIDS seminars led by the local government occurred once annually during World AIDS day celebration, which was less than desirable. Therefore, there was lack of continuity in promoting HIV prevention behaviours amongst the youths during the course of the year.

DATA DISPLAY 5.7.1
EVALUATION OF VCT & HIV PREVENTIVE PROGRAMMES

- I am against one centre in our area because I do not agree with the system they use. I have heard in many occasions that even if you test and they find you to be positive, they will tell you, you are negative so as to encourage others to go there. I think this is misleading to us and if you are with your partner and she is told she is negative then you will stop using condoms when you do not know for certain.
- Youths in our area do not go for VCT; there is another center where your results are made public. In fact they wait until the centre is full then they call out your name and tell you… "Come take medicine, you are already infected"… I don't think that is good.
- Even me I heard of that.
- I think it is not good and it contributes to people not going to test in our area.
- Really these services are not satisfactory, that is why youths are going to test elsewhere outside our town.
- I think it is youth-friendly to a very small percentage. When you get to the VCT centre there are rules. Then the people there do not want to waste any time, they ask you straight to give blood for testing. They also demand that you go with your partner and if you say you did not come with your partner, you are not tested! Therefore for the youth, I don't think they will be encouraged to return back to the centre.
- I think the staff dealing with HIV/AIDS programmes are still very few.
- I don't think these services help the youths, more so for them to test you and know if you are infected.
- With regard to false results I have never heard of this. Because when you go there it will only be you and the doctor who will not reveal your results.
- There are programmes but I mainly see them in the villages.
- Maybe only 50% of the youths will embrace HIV prevention programmes.
- We do not have such programmes here unless we get it from seminars like this or on world AIDS day.
- No, we don't know because our leaders do not involve the youths. They stay in the office and when the proposal funding comes they keep the money and do not help those in need.
- There is nothing here I only see one NGO which does VCT but there is no mass education except on World AIDS day which is once a year only.
- There is one NGO which does mobile education campaigns; they do so for a short time of 40-45 minutes.

Youth were asked to recommend measures to improve VCT services within the study area so as to encourage the uptake of VCT amongst fellow youths. Participants suggested improvement in patient confidentiality, seminars to educate youths on the importance of VCT and a redirection in focus to HIV prevention as shown in data display 5.7.2. Although a participant suggested compulsory HIV testing, the nature in which it was proposed to be done would be unethical. However, participants challenged policy makers to determine more user-friendly ways of increasing the uptake of VCT, as a gateway to the prevention and/or treatment of HIV/AIDS amongst the youths in Tanzania.

DATA DISPLAY 5.7.2
RECOMMENDATIONS TO IMPROVE VCT SERVICES

- The rights of the individual should be upheld and confidentiality should be ensured in these centres.
- I think youths should be educated on VCT. They should cooperate with parents and teachers in school as well as churches and mosques should advocate for people to go and test and that everyone is required to know their health.
- Because many do no want to test, I think what should be done is to tell them you are testing for malaria. Then once you get the blood, you test for all things HIV included. So that we can know who is infected who is not.
- I think regular seminars in schools and villages amongst youths where some youths volunteer to be health educators will help improve uptake.
- I think it is best to focus on prevention because many are dying of AIDS.
- I think when one is educated, it will help, but many youths do not go to VCT centres. What we need is for youths to be educated about VCT and centres to improve their services so that youths can access them.

HIV/AIDS interventions are commonly designed by adults for the youths. This has some limitations, because some contextual matters might not be relevant or applicable to the youths. Fransen (2004:1) strongly advocated for the need to engage the youths in the fight against HIV/AIDS and not to design programmes on behalf of the youths. Participants stated that for any youth HIV prevention programmes to be successful, a participatory approach was warranted (see data display 5.7.3). Most youths proposed that a collective effort between youths, parents, teachers, religious leaders, health professionals and government leaders should be the way forward in improving HIV interventions amongst the youths. However, some participants recommended that youth-led HIV intervention programmes stand a better chance of achieving the desired results because youths were well versed on matters affecting them. They therefore recommended that youths, with the cooperation from government leaders, should be involved in the coordination of HIV prevention services.

DATA DISPLAY 5.7.3 COORDINATION OF YOUTHS' HIV PREVENTION PROGRAMMES
• I think peer educators are the ones who are concerned. • I agree that youths should run their own HIV intervention programmes. • I think parents, teachers, our fellow youths, nurses and doctors should work together. • I think parents should run such programmes. There are some parents who are shy to educate their children. So these children do not get their right to be educated and end up with higher risk behaviours. • Youths should be involved in cooperation with government leaders. • I think youths should run their own projects under supervision from them [government leaders] because youths can freely communicate amongst themselves • I think the municipality should promote the project, but the NGOs should choose their own leaders to represent them at the municipality level. • Religious leaders should also give youths HIV/AIDS education.

Majority of the participants acknowledged that HIV/AIDS and condom use education was still lacking particularly amongst out-of-school youths in rural areas. They emphasised on the need to educate children as young as nine years whom they claimed already engaged in sexual activities. In order to improve HIV/AIDS education amongst the youths, they recommended that HIV/AIDS and condom use education should be re-enhanced particularly in the community settings where such education is only given out annually, during World AIDS day celebrations as shown in data display 5.7.4. Participants recommended that all available communication media should be used to disseminate HIV/AIDS information. A multi-sectoral approach to HIV prevention was recommended which would ensure the socio-cultural and economic barriers such as unemployment, or gender rights violations are addressed, under their respective ministries. This would then influence positive behaviour changes amongst the youths.

DATA DISPLAY 5.7.4 RECOMMENDATIONS FOR IMPROVING HIV/AIDS EDUCATION
• Reproductive health and HIV/AIDS education should be given to younger children because they are already exposed to sexual activities, and are likely to be more experienced than we think. Therefore they are likely to either be infected or to get infected with HIV. Nowadays, children as young as class four [aged 9-10years]; there is no style they do not know! • I think if there are regular seminars once a month. • I would like it to start from parents then to schools, because now the very young know everything .So mothers who spend most of their time with children should educate their youths. • I think we should have mass campaigns like in the main football pitch, so everyone can hear the messages. • HIV education should be given in all set-ups, schools, churches, mosques so youths of all faiths can get educated. • A multi-sectoral approach between the health ministry and other ministries will help keep the youths employed and out of risk of HIV infections due to idleness. • Teachers should educate students on HIV/AIDS because you find youths completing primary school and they do not have any life-skills education.

The youths also advocated the need for monthly youth seminars, with interaction between youths of both genders and parents, so as to bridge the existing information gaps and to collectively address key barriers impeding HIV prevention in their respective communities.

5.5 DISCUSSION

The youths in the study area are faced with several major health problems including STIs, HIV/AIDS, substance abuse, unwanted teen pregnancies, unsafe abortions and FGC. However, most participants acknowledged that HIV/AIDS was the leading cause for concern. According to the HBM, a high perception of severity of a health problem such as HIV/AIDS might increase an individual's positive attitudes towards adoption of low risk behaviours for that health problem, in this case HIV preventive behaviours. In phase 2 of this study the youth's perception of severity of HIV/AIDS was analysed. Most participants believed that HIV/AIDS was a severe health problem which had negative individual and social effects including pre-mature death, increased health costs, failure to achieve one's life goals, loss of the young labour force and increase in AIDS orphans and vulnerable children. However, there were some youths who were negatively affected by conflicting messages from the HIV/AIDS campaigns.

On one hand, the youths were told HIV/AIDS is a life-threatening illness and were urged to adopt safe sexual practices. This outlook on HIV/AIDS contributed to stigma and discrimination. With the advent of treatment with life-prolonging ARVs, the care and treatment campaign has down-played the severity of HIV/AIDS and termed it a chronic manageable condition, so that PLWHA could be more willing to adhere to treatment. The youths used these conflicting messages to justify having multiple sexual partner relationships and their failure to use condoms consistently and effectively. The perception that HIV/AIDS is like malaria, within this study group, promoted their negative attitudes towards safe sexual practices and thus prompted some youths to knowingly practise unsafe sex. Such complacency with HIV/AIDS was blamed for a resurge in the disease amongst youths in the UK (Landey in Commonwealth Secretariat 2008). It therefore poses a challenge when giving health education to a mixed crowd of youths who may or may not be infected with the HI virus.

Overall, the level of awareness of HIV/AIDS was high with most participants able to define HIV and AIDS. In comparison, the youths were more knowledgeable of all four modes of HIV prevention including abstinence, fidelity, condom use and VCT. However, they could only list two main modes of HIV transmission; by unprotected sex and by sharing sharp contaminated objects. Whilst participants mentioned other insignificant routes of HIV transmission including one's contact with the open wounds of a person infected with HIV during road accidents or when attending to PLWHA; none mentioned HIV transmission by blood transfusion or from mother-to-child. The youths' HIV/AIDS knowledge revealed that some misconceptions about HIV transmission existed amongst fellow youths. Youths were said to claim that a healthy-looking person could not transmit HIV. This contributed to negative attitudes towards safe sexual practices. Consequently some male youths who thought that a healthy person ("wezere"- a woman with big hips and buttocks) could not transmit HIV could continue to engage in unprotected sex with such healthy-looking persons. Youths, who perceived that a fat person cannot possibly have HIV, had perceptions of low risk when having unprotected sex with such individuals.

The sexual transmission of HIV, which contributes to the majority of infections amongst the youths in SSA, of which Tanzania is part, is preventable. Participants were also asked if they believed HIV/AIDS to be preventable. The belief in the preventability of HIV was found to influence one's self-efficacy to adopt HIV preventive behaviours. Most youths agreed that HIV is preventable; however, some believed that, so long as youths continued to have sex, HIV could not be prevented. Similar findings were reported amongst youths in India (Kotecha & Patel 2008:68-72) and Nigeria (Oyo-Ita et al 2005:2-6), where only about two-thirds of the youths acknowledged that HIV could be prevented. The low perception of preventability of HIV negatively influenced youths' perception of self-efficacy to practice safer-sex.

For the youths, abstaining from sex is the gold standard in the ABC campaign. However, majority of the participants reported that abstaining from sex was impossible because the youths believed sex to be a natural phenomenon. According to the TRA, humans are reasonable and able to control their behaviour based on their attitudes and subjective norms. On the contrary, youths claimed that there was a powerful drive to have sex during

adolescence which could not be controlled, particularly at a time when youths were defined to be in the “foolish age” and were keen to experiment on sex (Jackson 2002:123; IRIN 2007). Abstinence amongst the youths was largely dictated by subjective existing social norms (Dlamini et al 2009-450-460). In this study, the youths failed to abstain and engaged in sexual encounters because it was widely accepted amongst their peers that a person could not exist without sex; a view that was shared by both male and female youths.

Where abstinence seemed to have failed; majority of the participants mentioned being faithful to one partner after having undergone VCT for HIV as the preferred mode of HIV prevention amongst the youths. This was largely expected of female youths whereas it was acceptable for male youths to have more than one partner. However, when asked if youths could adopt single partner relationship, most youths believed it was not practical within their area; whilst a number of youths were said to outrightly prefer multiple partner relationships. Statements like: *“I could not eat the same diet [have sex with the same partner] everyday”,* were reportedly common amongst youths, particularly male youths. Multiple partner relationships amongst the youths were said to be influenced by greed for material things, peer pressure, loose morals amongst female youths and a show of masculinity amongst male youths. However, the major driver for multiple partner relationships was money. Transactional sex was commonly exchanged for monetary gains by male and female youths, often with older partners. The resultant gains have fuelled a commercial sex trade in the area under study particularly amongst the female youths.

Consistent condom use remains elusive. The FGDs revealed that the estimated condom use might have been even lower than reported during the structured interviews. Participants gave varying reasons for lack of condom use including: lack of availability particularly in rural areas, lack of affordability because youths had no jobs therefore no income, complacency with the severity of HIV/AIDS, lack of condom use education and lack of self-efficacy to use condoms correctly. The social marketing of the female condom was a failure. Most youths have never seen a female condom and even those who had done so, did not know how to use them. However, some youths disputed the notion of lack of affordability stating that youths (male) were willing to pay for transactional sex; therefore they should be able to afford condoms. Several misconceptions about condom use associated with peer influences also justified the lack of effective condom use. Condoms

were associated with a lack of sexual pleasure, suspicions of infidelity and were rumoured to be laden with holes and laced with the HI virus.

Similarly, some religious teachings were also said to negatively affect the use of condoms whilst youths did not abstain from having sex. Socio-cultural norms which viewed condom use as being immoral also doomed potential discussions on condom use, between the youths and the older generation. The type of relationships significantly influenced condom use; participants reported that youth were more likely to use condoms with casual partners than with permanent partners, which was also corroborated amongst African-American male youths (Kennedy et al 2007:1032) and amongst truck drivers in Thailand.

VCT is an effective tool for HIV prevention aimed at empowering the individual to practice safe sex. However, common barriers to the uptake of VCT included the fear of knowing one's status, stigma/discrimination and lack of confidentiality at the VCT centres. There were some problems with the VCT services themselves which negatively affected the youths' decision to undergo VCT. Staff shortages, service providers that were not youth-friendly, allegations that some centres breach patients' confidentiality and the alleged inaccuracy of the test results had surfaced during this study. Reportedly, the quality of service had been compromised. Group discussions revealed that with the shift in focus, from HIV prevention to care and treatment of PLWHA, VCT had become a routine process. Whereas the counselling sessions would have been beneficial to youths, who were still trying to learn about safe sex, the focus on the test results only, meant that the youths might not derive any significant long-term benefits from VCT that would empower them to practice safe sex.

According to the ARRM and HBM, a person will change certain behaviours once they know that their current behaviours are high-risk and they believe that getting a particular health problem will have serious health implications for them. They will then look for cues for action and will change to the desired behaviours once they feel capable of doing so. Most participants in this study acknowledged they were at risk of HIV infection with the majority citing high risk levels. However, this might not have influenced their HIV prevention behaviours because the youths' perception of risk of HIV infection was largely attributed to

external factors which appeared to be outside their control. Reasons cited by participants regarding why they were at risk included: the existence of a pool of PLWHIV who lacked HIV prevention education, poorly managed biological wastes, unfaithful partners, substance abuse, poverty and an environment saturated with recreational facilities and CSWs. The youths also named alcohol and drug abusers, unemployed youths, CSWs and young teenage in-school girls to be at greater risk of infection. This might have led to a false sense of security amongst youths who did not associate with such groups.

According to the participants, the youths' care-free attitudes towards HIV prevention were influenced by a lack of HIV/AIDS education, gender inequalities, socio-economic, cultural, personal and environmental factors. Poor socio-economic status resulted in the commercial sex trade and multiple partner sex for monetary gain. Youths wanted quick money for their general upkeep. In such situations, the youths' negotiating power for safer sex, particularly amongst in-school female youths and the unemployed youths was compromised. Unemployment and failure to secure business capital were major concerns for the out-of-school youths. Such youths did not wish to return to the villages to farm, in a largely agriculture-based economy. They remained in the peri-urban areas looking for job opportunities. Many found self-employment openings while others worked in bars, hotels and guests houses which were supported by the local tourism industry. Female youths in such informal sectors had tendencies to exchange sexual favours with mobile male partners for extra money, putting them at high risk of HIV infections.

Cultural aspects such as traditional dances, FGC and polygamy reportedly encouraged multiple sexual partner relationships. There were also cultural and religious norms which viewed condom use as immoral, which impeded condom use campaigns amongst the youths. Widow inheritance, teen and arranged marriages were also said to occur, which placed women and the younger female youths at risk, particularly because the HIV status of potential partners or husband was often unknown.

Environmental factors that negatively affected safe sex practices were the exposure of the youths to pornographic movies, alcohol/drug abuse and lack of HIV/AIDS and condom use education. Likewise, personal factors attributed to youths not changing their behaviours towards HIV prevention included: their loss in cultural ideals, youths not listening to their

parents, complacency with the severity of HIV/AIDS, the egocentrism associated with puberty and their misconception about HIV/AIDS and condom use. Negative socio-norms and peer influences were also prevalent. Male youths took pride in having multiple sex partners as a symbol of masculinity.

Gender inequity was also evidenced by male youths who also felt proud of dictating terms for sex to their female counterparts. In a patriarchal society such as this study population, women had not rights, were blamed for HIV infections in the family and were often prone to sexual violation even within the marital context. Women's economic dependence on men has fuelled gender inequalities when it comes to negotiating for safe sex and has led to the rampant spread of HIV amongst married couples in many parts of SSA.

According to the HBM, an individual's perceived self-efficacy to adopt changes in lifestyle towards healthy behaviours is a key determinant for ensuring sustained behaviour change. Youths' self-efficacy to adopt safer sex practices, to negotiate for condom use with permanent and casual partners and to discuss VCT and fidelity with their partners was also assessed. Overall, although participants reported high self-efficacies to negotiate for safer sex, this was not reflected in their practices and was contradictory to some of their attitudes towards HIV prevention behaviours. Youths stated they were able to demand for safer sex; but at the same time, when engaged in intergenerational sex (between older men and younger female youths or older women and younger male youths), or when under the influence of drugs and alcohol, they felt they were unable to negotiate for sex.

Participants also pointed out that, youths' self-efficacy to negotiate for condom use with permanent partners was also hampered by women's' economic dependence on men, age-disparate relationships and lack of women's rights, particularly within the marriage set-up. When it comes to VCT, participants claimed capability to discuss VCT prior to entering permanent relationships. However, this was not reflected by the low VCT uptake amongst the youths in the study area. Similarly, participants also claimed to be able to discuss the need for fidelity with their partners, but when asked if they could practice fidelity, many said it was not practical for varying reasons; particularly the female youths who felt that their male counterparts were more likely to have more than one partner.

The youths advocated for more HIV/AIDS educational seminars and training of peer health educators who would help to improve the levels of HIV/AIDS and condom use knowledge and decrease the levels of misconceptions about HIV/AIDS amongst the youths. Interaction between the youths and the older generation; and between male and female youths was also proposed in order to bridge the information gaps. Parents and religious leaders were also urged to play a pivotal role in talking about HIV/AIDS with the youths, which appeared to have been neglected.

It was also proposed that political leaders should be more transparent in the running of HIV/AIDS prevention programs and should call for the involvement of the youths. Youth empowerment through a multi-sectoral approach was found necessary. Idle youths, who were unable to secure business capital for developmental activities were prone to engage in unsafe practices including alcohol/drug abuse and higher-risk sex. Therefore, youths proposed that the Ministry of Health and Social Welfare [Tanzania] should work with other ministries dealing with youth employment, education and gender empowerment so that synergies within their operational policies could help to fight HIV/AIDS amongst the youths in Tanzania.

5.6 SUMMARY

Chapter 5 presented the results from the qualitative phase of this study and analysed the factors influencing HIV prevention amongst the youths and their resultant HIV prevention behaviour outcomes. The quantitative data was obtained during the introduction sessions of each FGD, where youths were asked closed-ended questions on their socio-demographic characteristics. The qualitative data was collected using open-ended questions posed to the selected male and female participants during the FGDs.

The youth's had high levels of awareness of HIV/AIDS as a major health problem affecting the youths today. They had partial knowledge about the routes of HIV/AIDS transmission and but were well versed on HIV prevention modalities. None of the participants mentioned blood transfusion or MTCT as routes of HIV transmission. Most youths had positive attitudes towards HIV prevention practices. However, when it came to actual practice,

youths perceived that abstinence was impossible, fidelity was also not practical and condom use, though favourable was also not practical for varying reasons.

The perception of severity of HIV/AIDS and the perception of risk of HIV infection were seen to positively influence the youths' attitudes towards HIV prevention behaviours. However, the reverse is also true. Youths who were said to be complacent with the severity of HIV/AIDS were also said to practice high-risk behaviours. Similarly, youths who had low risk perception of HIV infection, justified their high-risk behaviours such multiple partner relationships and lack of consistent condom use. Youths' low risk perception for HIV infection was influenced by peer pressure and misconceptions such as a healthy-looking person could not transmit HIV.

The youths' care-free attitudes towards HIV prevention were also influenced by a lack of HIV/AIDS education, gender inequalities, socio-economic, cultural, personal and environmental factors. These factors contributed to youths' low self-efficacy to enact HIV preventive behaviours, despite the fact that theoretically, participants claimed to be able to negotiate for safer sex.

The intervention programmes which promote HIV prevention including VCT centres in the study area did not reach out to the majority of the youths especially those in the rural areas. Unfriendly services, lack of confidentiality, alleged unreliable results and under-staffing limited the youths' access to these centres. A participatory approach using trained peer health educators was seen as the way forward in reaching out to the youths, particularly those in more rural settings with no media access.

The next chapter, chapter 6, will present the conclusions, limitations and recommendations of this study and will propose areas for future research.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

Chapter 4 and chapter 5 presented the analysis and discussion of the research results from the quantitative (phase 1) and the qualitative (phase 2) parts of the study. This final chapter presents a summary of the findings from each phase of the study from which conclusions will be drawn, based on the specific objectives. This information will be used to make recommendations in response to the research questions which were formulated in chapter 1.

6.1.1 Research purpose

The purpose of this study was to determine the factors which influence HIV prevention behaviours amongst the youths aged 15-24 years, in Tanzania.

The research questions were as follows:

- What is the level of knowledge, attitudes and practices of HIV prevention amongst the youths?
- How do the youths perceive their susceptibility to HIV infections?
- How do the youths perceive the severity of HIV/AIDS?
- What is the association between the determinants of HIV prevention and HIV prevention practices amongst the youths?
- What were the barriers which influence the youths' behaviour changes towards HIV prevention?
- How did the youths perceive their self-efficacy to enact HIV prevention behaviours?
- What do the youths suggest to be the best HIV preventive measures?

6.2 CONCLUSIONS AND RECOMMENDATIONS: PHASE 1

An assessment of the research objectives was done to determine whether they have been achieved. In this section each objective is listed and relevant conclusions and recommendations are based on the results from phase 1, are supplied.

6.2.1 Youths' level of knowledge, attitudes and practices of HIV/AIDS prevention

The objective was to assess the level of knowledge, attitudes and practice of HIV/AIDS prevention amongst the youths.

6.2.1.1 HIV/AIDS Knowledge

Findings

The results showed that the youths had high levels of awareness of HIV/AIDS similar to the findings in the general population. However, their knowledge levels remained average, with more than half (n=240; 64.5%) of the youths showing medium levels of knowledge on HIV,

AIDS, transmission and prevention. Youths' levels of misconceptions about HIV transmission were found to be generally low, although only 50.0% (n=186) of the youths acknowledged that a healthy-looking person could transmit HIV. Therefore, only about half of the youths (n=214; 57.5%) had complete knowledge about HIV/AIDS; meaning they knew that correct and consistent condom use and being faithful to one uninfected partner can prevent HIV infections. It also meant that they knew that a healthy-looking person can have HIV infection and that they were able to refute at least two of the common misconceptions about HIV transmission.

The younger youths aged 15-19 years, who largely constituted the in-school youths, had higher knowledge levels and more accurate knowhow on HIV transmission and prevention as opposed to the older out-of-school youths. Those with higher knowledge levels had more positive attitudes towards HIV prevention.

Conclusions

Myths, misconceptions and lack of access to HIV/AIDS education were seen as limiting factors towards achieving the desired HIV/AIDS knowledge levels; which would contribute to positive attitudes towards HIV prevention behaviours.

Recommendations

- It is recommended that the Ministry of Health and Social Welfare (MoHSW) in association with the district health care officers, NGOs and health care providers should design HIV/AIDS education programmes that would reach out to the out-of-school youths particularly in the remote areas.
- Print, visual and audio media should play a role in providing HIV/AIDS education.
- Community and religious leaders should receive HIV/AIDS education so that they can reach out to the youths.
- Existing HIV/AIDS school education programmes should be re-enhanced with training of more teachers on HIV/AIDS.

6.2.1.2 Attitudes towards HIV prevention

Findings

Overall, the youths had positive attitudes towards HIV prevention behaviours and these were shown to influence condom use and the uptake of VCT. However, the youths' attitudes were influenced by socio-economic, cultural, religious, environmental and personal factors. Youths' attitudes were also determined by their perceptions of risk of getting HIV infections and their perceived severity of HIV/AIDS.

Conclusions

Possessing HIV/AIDS knowledge is expected to influence persons' determinants of behaviour change. However, in this study having HIV/AIDS knowledge alone did not result in the adoption of desired HIV prevention behaviours. On the other hand, it is the individual's attitudes towards certain behaviours and his/her perceived self-efficacy that influenced the adoption of the HIV prevention behaviours.

Recommendations

- HIV/AIDS education programmes given to both in-school and out-of-school youths should be tailored to address local socio-economic, cultural, religious and environmental factors which influence youths' positive attitudes towards HIV prevention.
- Religious leaders and community elders should also be educated on HIV/AIDS so they too can educate youths along their socio-cultural lines which might influence the youths' general outlook on HIV/AIDS.

6.2.1.3 Practice of HIV preventive behaviours

Findings

The practice of HIV prevention behaviours amongst the youths remains low despite high levels of HIV/AIDS awareness with only half of the youths (n=189; 50.8%) having practised at least one HIV prevention modality. This could be explained by the lack of complete knowledge and misconceptions about HIV transmission and prevention modes.

The practice of abstinence was reportedly higher amongst the in-school youths compared to the out-of-school youths. However, these reported levels might be questionable because condom use and uptake of VCT was found to be higher amongst older out-of-school youths compared to their younger in-school counterparts. Multiple sexual partnerships were also more common amongst older youths. HIV prevention practices were influenced by age, occupation, level of education, attitudes towards HIV prevention behaviours and perceived self- efficacy as discussed in detail in section 6.2.5.

Conclusions

Having HIV/AIDS knowledge influenced positive attitudes towards HIV prevention behaviours, which influenced condom use and VCT uptake amongst the youths. It could be expected that more in-school youths who had higher knowledge and attitude scores would practice condom use and would test for HIV, but these practices were found to be higher amongst their out-of-school counterparts. It was concluded that the in-school youths feared discussing their sexual activities openly and hence tended to over-report good sexual practices, which they perceived to conform to socially acceptable norms.

It also meant that although in-school youths received HIV/AIDS education session while at school, they were not well equipped to cope with the challenges that influenced HIV prevention practices whilst in the community including: socio-economic factors, gender disparity, cultural norms and peer pressure.

Recommendations

- Life-skills training should be given in addition to HIV/AIDS education so that youths can be empowered to practice safer sex.
- For in-school youths, life-skills training could be done whilst youths were in school by forming peer-led youth clubs which are supervised by teachers trained on HIV/AIDS.
- For out-of school youths, regular monthly youth seminars which provide continuous life-skills education are required.

6.2.2 Youths' perceived susceptibility to HIV infections

The objective was to determine perceived susceptibility of the youths to HIV infections.

Findings

Knowing an AIDS patient was found to significantly influence the youths' perception of risk. However, despite the high awareness of AIDS patients, only 50.7% (n=188) of the youths considered themselves to be at risk of HIV infections, of whom less than 20.0% considered themselves to be at high risk. The labelling of high-risk youth groups including alcohol and drug abusers, idle youths, teenage in-school girls and CSWs might have led to youths developing a false sense of security against the risk of contracting HIV infections, because they did not associate with such groups.

The misconception that a healthy-looking person cannot have HIV infection also contributed to a perception of low risk amongst youths engaged in sex with such persons. A perception of risk was shown to positively influence youths' attitudes towards HIV prevention and consequently increased their chances of adopting the desired HIV prevention behaviours.

Conclusions

Overall, the youths' perception of risk was lower compared to youths in other countries in the region. It was concluded that the in-school youths might be at higher risk because the proportion of youths having their sexual debut below the age of 15 years and having multiple partners was found to be equal amongst both in-school and out of school youths; whilst the former had lower condom use and VCT uptake levels.

Recommendations

- HIV/AIDS education will need to address and correct misconceptions about HIV transmission contributing to a low risk perception.
- The use of self-proclaimed HIV/AIDS activists (PLWHA) to give motivation talks to the youths might increase the youths' risk perception which would influence positive attitudes towards HIV prevention.

6.2.3 Youths' perceived severity of HIV/AIDS

The objective was to determine youths' perceived severity of HIV/AIDS.

Findings

The majority of the youths had a high perception of the severity of HIV/AIDS which positively influenced their attitudes towards practising HIV prevention behaviours but did not influence youths' HIV prevention behaviour outcomes including abstinence, condom use, VCT uptake and the number of sexual partners. The validity of the elements of the HBM in determining behaviour change outcomes within the changing dynamics of HIV/AIDS is therefore questionable.

Conclusions

Changing environmental factors that have made HIV/AIDS appear less threatening had led to complacency with the severity of HIV/AIDS amongst the youths. This might have been contributed by HIV/AIDS campaign messages which have down-played the severity of AIDS to a chronic illness to fight stigma; in order to promote adherence to ART. Some youths might have therefore capitalised on this notion to justify their lack on consistent condom use and their prevalent multiple sexual partner relationships.

Recommendations

- The National AIDS Control Programme (NACP) should review the HIV/AIDS campaign messages. Theme messages should be tailored to suit a mixed target audience who may or may not be infected with HIV/AIDS; to avoid conflicting messages being given to the youths.
- Motivational testimonies should be given by influential HIV/AIDS activists, so that youths may appreciate the severity of the disease, such as the success reported in Uganda (Isabirye 2008:29-35)

6.2.4 Determinants of HIV prevention versus youths' HIV prevention behaviours

The specific objective was to examine the association between the determinants of HIV prevention and the HIV prevention practices amongst the youths.

6.2.4.1 Age

Findings

More respondents in the age-group 15-19 years had significantly higher HIV/AIDS knowledge levels. Age also significantly influenced the youths' attitudes towards HIV

prevention, their perception of risk of HIV infection and their self-efficacy to enact HIV prevention behaviours,

Conclusions

The younger age-group scored highly on HIV determinants due to implementation of the Tanzania National HIV/AIDS Policy of 2001 in schools, which was officially launched in 2006.

Recommendations

- HIV/AIDS education should be provided for out-of school youths to cater for this missed opportunity to learn whilst in school.
- Adult education programmes should also include HIV/AIDS education in their curricula.

6.2.4.2 Gender

Findings

Gender was found to significantly influence youths' perceptions of risk of contracting HIV infections, their attitudes towards HIV prevention behaviours and their self-efficacy to practice HIV prevention behaviours.

Conclusions

In patriarchal societies such as this study population, issues surrounding gender inequality should be addressed. The existing gender disparity was found to negatively influence female youths' perceptions of risk, their attitudes towards HIV prevention behaviours and created a feeling of low self-efficacy to enact HIV preventive behaviours.

Recommendations

- Local NGOs and community leaders should work together to develop women empowerment programmes based on the local context which could be incorporated in HIV/AIDS education for female youths.
- The Ministry for the Development of Women and Children, through its local government departments, should develop awareness programmes which would promote gender empowerment and reinforce gender rights within such communities.

6.2.4.3 Level of education

Findings

More youths with secondary level education (n=28; 93.3%), who largely constituted the in-school youths, were found to have significantly higher levels of HIV/AIDS knowledge compared to out-of-school youths. As discussed in section 6.2.4.1, this was a result of the implementation of the Tanzania HIV/AIDS Policy of 2001 in schools, which took off in 2006.

Conclusions

The implementation of the HIV/AIDS policy in schools was effective in increasing the levels of knowledge of HIV/AIDS amongst in-school youths and should therefore be enhanced.

Recommendations

- The MoHSW in cooperation with the Ministry of Education should increase resourcing towards the training of more school teachers on HIV/AIDS to ensure that more in-school youths are reached.
- The Tanzania Commission for AIDS (TACAIDS) in conjunction with district health departments should develop HIV/AIDS education programmes for out-of-school youths.

6.2.4.4 Employment

Findings

More students who largely constituted the younger age-group 15-19 years, had significantly higher levels of HIV/AIDS knowledge and lower levels of misconceptions about HIV transmission than their counterparts. Similarly, more students perceived themselves to be at risk of HIV infections, had more positive attitudes towards HIV prevention behaviours and felt more capable of adopting HIV prevention practices, than their counterparts. However, condom use and VCT uptake remained lower amongst learners than amongst out-of-school youths.

Conclusions

Although HIV/AIDS education improved students' knowledge levels, stakeholders have to make more efforts to ensure that such knowledge translates to HIV prevention behaviours amongst school going youths once they are out of a controlled schooling environment. There appeared to be an abrupt breakdown in reproductive health education once the youths leave school.

Recommendations

- The MoHSW, NGOs and district health departments should develop HIV/AIDS education programmes which can be disseminated to the youths through mass awareness campaigns, or through print, visual and audio media to ensure continuous education.
- Village AIDS Committees (VACs) which are often run by adults should involve the youths in policy development and implementation of HIV prevention strategies.
- VACs should also train peer educators who can give continuous health education to fellow youths.

6.2.4.5 Association between HIV prevention determinants

Findings

Having HIV/AIDS knowledge alone was not found to improve youths' perception of risk, perception of the severity of HIV/AIDS or their self-efficacy, and therefore had limited influence on HIV prevention behaviours. This was in harmony with the TRA model because youths' HIV prevention practices were not only dictated by their volitional control based on HIV/AIDS knowledge, but rather by their subjective norms. Peer influences therefore played a central role in dictating youths' actions or inactions towards the prevention of HIV infections.

A perception of risk of HIV infection and a high perception of severity of HIV/AIDS positively influenced a person's attitudes towards HIV prevention; which in turn influenced his/her self-efficacy, thereby improving the practice of HIV prevention behaviours including condom use and VCT uptake.

Conclusions

When developing HIV intervention programmes requiring behaviour change; stakeholders should review more that one behaviour change model that would define factors that influence youths' intentions to adopt HIV preventive behaviours. It is evident that the various constructs from different models of behaviour change relate differently.

Recommendations

- HIV/AIDS education programmes should focus on creating risk awareness and doing away with HIV/AIDS complacency amongst the youths.
- Stakeholders involved in designing HIV prevention programmes for the youths should be educated on various behaviour change models whose constructs could be incorporated into these programmes.

- Stakeholders working in HIV/AIDS interventions should develop personal risk awareness programmes according to the social context of the youths, so as to increase their HIV risk perceptions.

6.2.5 Factors influencing HIV preventive behaviours and barriers for HIV prevention

In this section, the findings and conclusions for two specific objectives were presented. The first objective was to examine the association between the determinants of HIV prevention and the HIV prevention practices amongst the youths. The second objective was to determine the youths' perceived barriers that impede behaviour changes towards the prevention of HIV infections.

6.2.5.1 Abstinence

Findings

Abstinence was higher amongst female youths, in-school youths with secondary education and youths who were single. However, neither positive attitudes, perception of severity of HIV/AIDS nor youths' perceived self-efficacy influenced youths' abstinence. Youths who had sex, were most likely to report a higher perception of risk of HIV infection.

Conclusions

Children as young as 10 years are having sex. This is often high-risk sex because it commonly involves older sexually experienced partners and is associated with a lack of condom use. Therefore the youths are at an increased risk of first time exposure to HIV, STIs and unwanted pregnancies.

Recommendations

- HIV/AIDS education should be given to children as young as 10 years of age, to encourage abstinence.
- Condom use education should be given to children from age 10, who are at risk of first time exposure to HIV infections.

6.2.5.2 High-risk sex: multiple partner relationships

Findings

Multiple sexual partner relationships were significantly more common amongst the older respondents aged 20-24 years compared to the younger youths aged 15-19 years. This was common amongst male youths. Notably, inter-generational sexual relationships and coerced sex, was prevalent across both genders. High-risk sex was fuelled by alcohol intake which was more common with male youths.

Conclusions

Despite high levels of HIV/AIDS awareness amongst the youths, they engaged in high-risk sex including multiple sexual partner relationships, age-disparate sex and coerced sex. Such occurrences were not influenced by HIV/AIDS knowledge or perceptions of HIV risk. This means that the predictors of high-risk sex were largely outside the individual's sphere of influence congruent with findings in a study by Yan et al (2009:305).

Recommendations

- The district health departments should hold meetings with the community members to understand the extent and causes of high-risk sex amongst children and design strategies to discourage youths from such behaviours.
- Intergenerational HIV/AIDS seminars should be held so that such matters can be outlined and solutions can be obtained suitable for youths and the older generation.

- The role of parents in educating the youths on HIV/AIDS needs to be re-enhanced whilst ensuring that they monitor their youths' extra-curricula activities.

6.2.5.3 Condom use

Findings

Consistent condom use remains a challenge. There was an increase in condom use at most recent sexual encounters compared to condom use at youths' sexual debuts, particularly amongst the older youths aged 20-24 years. Condom use at most recent sexual encounters was also significantly influenced by youths' attitudes towards HIV prevention, self-efficacy, religion and occupation. However, the lack of condom use by most youths at their sexual debuts, could pose high risks of first time exposure to HIV infections, particularly if the youths engaged in sex with older partners.

Religious teachings, particularly within the Catholic faith, negatively affected the use of condoms, whereas lack of knowhow on condom use, lack of preparedness for sex, unwilling partners and fear of suspicions of fidelity were also barriers for condom use.

Conclusions

Consistent condom use remained low, despite a reported increase in use during most recent sexual encounters. Younger, in-school youths and Catholic youths used condoms less frequently than their counterparts. Despite the controversies surrounding condom use, the role of religion in the advocacy for condom use needs to be reviewed; whilst condom use education needs to be re-enhanced in schools.

Recommendations

- The district education departments should provide resources for training teachers on condom use education so that they can in turn train their students/learners.

- The MoHSW and Ministry of Education should revisit condom use education policies and review possibilities for placing condom outlets in secondary schools, because youths were not abstaining from sex.

6.2.5.4. VCT uptake

Findings

The reported VCT uptake was higher than in the general population. VCT uptake was also higher amongst older youths, with positive attitudes towards HIV prevention and with high perceived self-efficacy than their younger counterparts aged 15-19 years. Youths who were married, or in any form of permanent relationship, were more likely to have been tested for HIV than single youths.

However, VCT uptake amongst the youths was also faced by challenges including the fear of knowing one's status, certainty about one's HIV-negative status, fear of discrimination and alleged lack of confidentiality at the VCT centres. Inability to confirm VCT uptake with actual statistics from routine clinical data was a limiting factor in this study.

Conclusions

VCT for HIV is an effective tool for HIV prevention aimed at empowering the individual to practise safer sex regardless of HIV status. The one-on-one counselling, if given correctly, affords the individual HIV prevention knowledge which should help him/her to adopt safer sexual behaviours. Despite, a reportedly higher uptake of VCT amongst this group, comparisons have to be made with actual statistics in order to define targets for future intervention programmes. However, positive attitudes and self-efficacy which influenced one's intentions to undergo VCT need to be enhanced.

Recommendations

- HIV/AIDS education should include components of the benefits of VCT in order to create positive attitudes towards VCT amongst the youths.
- Mass VCT campaigns should be held frequently, where government leaders and other influential role models are seen undergoing the test, so as to normalise the procedure; whilst ensuring strict confidentially of the results.

6.2.6 Youths' perceived self-efficacy to enact HIV prevention behaviours

The specific objective was to identify gaps in the youths' perceived self-efficacy to enact HIV prevention behaviours.

Findings

The youths' perceived self-efficacy was shown to be significantly influenced by age, gender, occupation and positive attitudes towards HIV prevention behaviours. The majority of the youths stated they were capable of negotiating for safer sex, for condom use with both permanent and casual partners and were able to discuss sexual issues including fidelity and VCT uptake with their partners. However, only half of the youths were confident about using condoms correctly. More students reported to have a high self-efficacy to negotiate for safe sex, but this was neither matched with consistent condom use nor uptake of VCT amongst this group.

Although positive attitudes were seen to influence youths' condom use at last sexual encounters and their VCT uptake; after controlling for confounding factors, it is the youths' perceived self-efficacy that had positive correlations with condom use at their most recent sexual encounters and their VCT uptake, respectively.

Conclusions

The high levels of perceived self-efficacy reported amongst the in-school youths might have given them a false sense of being able to do the right thing, whilst they might not have adhered to HIV prevention practices. The fact that only half of the youths felt confident in using condoms correctly might also have negatively impact on their consistent use of condoms. Interventions that would boost youths' self-efficacy to have safer sex are required because they will have a direct impact on HIV prevention practices.

Recommendations

- Life-skills training should be introduced at all levels of HIV/AIDS education for both in-school and out-of school youths which would empower them to adopt HIV preventive behaviours.
- Peer-led HIV/AIDS interventions have been shown to be useful in addressing challenges that the youths face commonly and had success in effecting positive changes in knowledge, condom use, community attitudes and norms (Maticka-Tyndale & Barnett 2009). Such interventions would help youths adopt HIV preventive behaviours within their context of socialisation.

6.2.7 Youth-appropriate HIV prevention interventions

The specific objective was to determine the youth-appropriate measures for HIV prevention in Tanzania.

Findings

The HIV prevention programmes in the study area did not reach half of the youths. HIV/AIDS and condom use education was inadequate. The youths advocated for a role in coordinating HIV prevention activities amongst fellow youths and called on parents to play a greater role in educating the youths on HIV prevention.

The youths proposed to have regular awareness campaigns and seminars, and the training of peer health educators to disseminate HIV/AIDS education. The youths also requested for government support for alternate activities including sports, creation of job opportunities and provision of soft loan schemes for small enterprises which would empower out-of-school youths to avoid high risk behaviours for HIV infections.

Conclusions

A multi-sectoral approach in tackling HIV/AIDS is necessary. Youths urged for more involvement in HIV programmes and improved HIV preventive education and services.

Recommendations

- District health departments need to implement monitoring and evaluation programmes for the HIV prevention services to ensure that targets are met and quality of service is adhered to.
- District AIDS committees need to include youth representatives to ensure that their inputs are incorporated into programme activities.
- The government and key stakeholders need to invest in youth empowerment projects including creating self-employment opportunities, providing soft loans and providing alternative recreation facilities so that youths' focus could be redirected towards positive behaviour changes.

6.3 CONCLUSIONS AND RECOMMENDATIONS: PHASE 2

In this section, the findings from the qualitative phase of this study were presented under respective themes and categories based on the research objectives. From these, conclusions were drawn and recommendations to improve HIV preventive behaviours were made.

6.3.1 Theme 1: perception of severity of HIV/AIDS

The specific objective was to determine the youths' perceived severity of HIV/AIDS.

6.3.1.1. Category 1.1: major health problems affecting youths

Findings

The youths in the study area were faced with several major health problems including STIs, HIV/AIDS, substance abuse, unwanted teen pregnancies, unsafe abortions and FGC. However, most youths acknowledged that HIV/AIDS was the leading cause for concern due to its negative effects including pre-mature death, increased health costs, failure to achieve one's life goals and increase in AIDS orphans and vulnerable children.

Conclusions

Whilst not neglecting other health concerns, HIV/AIDS as the leading health problem, needs to be urgently addressed to save youths' lives.

Recommendations

- Integrating HIV/AIDS programmes into existing health services rather than running vertical programmes would ensure an overlap in tackling youths' health problems some of which share synergies with HIV/AIDS.
- Stakeholders engaged in HIV/AIDS interventions should communicate and develop common strategies to avoid duplication and wastage of resources some of which might not reach the targeted youths.

6.3.1.2 Category 1.2: perceived severity of HIV/AIDS

Findings

Most youths believed that HIV/AIDS was a severe health problem. However, some youths were negatively affected by conflicting messages from the HIV/AIDS campaigns. With the advent of treatment with life-prolonging ARVs, the care and treatment campaign has down-played the severity of HIV/AIDS and termed it a chronic manageable condition, so that PLWHA could be more willing to adhere to treatment. The youths used these conflicting messages to justify having multiple sexual partner relationships and their failure to use condoms consistently and effectively.

Conclusions

Complacency with HIV/AIDS leads to a resurge in new HIV infections. There is a need to develop health education messages appropriate for a mixed crowd of youths who might or might not be infected with the HI virus.

Recommendations

- Youths should be given motivational talks by PLWHA so that the realities of the severity of HIV/AIDS could be instilled in them; to do away with such care-free attitudes.
- Stakeholders in HIV/AIDS interventions should revisit theme campaign messages so that these impact positively on youths' adoption of HIV prevention behaviours.

6.3.2 Theme 2: knowledge about HIV/AIDS

The specific objective was to assess the level of knowledge, attitudes and practices of HIV/AIDS prevention amongst the youths.

6.3.2.1 Category 2.1, 2.2 and 2.3: definition of HIV/AIDS, transmission and prevention

Findings

Overall, the level of awareness of HIV/AIDS was high because most youths could define HIV and AIDS. In comparison, the youths were knowledgeable about all four modes of HIV prevention including abstinence, fidelity, condom use and VCT. However, they could only list two main modes of HIV transmission; by unprotected sex and by sharing sharp contaminated objects. None of the youths mentioned HIV transmission by blood transfusion or from mother-to-child.

Conclusions

Incomplete knowledge on the transmission of HIV might impede HIV prevention amongst the youths, particularly female youths who might not be aware of PMTCT programmes.

Recommendations

- Complete HIV**/**AIDS education needs to be enhanced amongst the youths, particularly out-of-school youths who might have missed out on HIV education given in schools.
- Parents and teachers should also be educated about HIV/AIDS so that they can play a better role in educating the youths.

6.3.3.2 Category 2.4: misconceptions about HIV/AIDS

Findings

Although youths acknowledge the existence of misconceptions about HIV transmission within their communities, including by witchcraft or by contact with an AIDS patient. The misconception that a healthy-looking person cannot have HIV was more common amongst the youths. This had a negative impact on the youths' adoption of safer sex due to a low

perception of risk whilst engaging in sex with healthy-looking persons with unknown HIV status.

Conclusions

For HIV behaviour change interventions to be successful, baseline community level research must be done to identify common myths which should be addressed whilst giving HIV/AIDS education.

Recommendations

- Influential, self-proclaimed HIV activists who appear to be healthy should give motivational talks to the youths.
- Theme HIV prevention campaign messages showing that healthy-looking persons could transmit HIV should be developed and disseminated using posters, billboards or visual media where possible.

6.3.3. Theme 3: HIV/AIDS-related attitudes and practices

The specific objective was to assess the level of knowledge, attitudes and practice of HIV/AIDS prevention amongst the youths.

6.3.3.1 Category 3.1: Is HIV preventable?

Findings

Most youths agreed that HIV is preventable. However, some youths believed that, so long as youths continued to have sex, HIV could not be prevented. The belief in the preventability of HIV influenced one's self-efficacy to adopt HIV preventive behaviours.

Conclusions

The sexual transmission of HIV, which contributes to the majority of infections amongst the youths in SSA, of which Tanzania is part, is preventable. Theme campaigns should reiterate this message so that youths become aware that practising safer sex could prevent HIV infections.

Recommendation

- HIV/AIDS prevention programmes should refocus on prevention particularly amongst the youths who contribute to more than half of the new infections annually.

6.3.3.2 Category 3.2: Abstinence

Findings

Most youths believed that sex was inevitable. Early sexual debuts at age 15 years or younger and failure to abstain from sex resulted from developmental changes during puberty making youths curious to have sex, peer influences and social norms that accepted sex as a natural phenomenon. Sex at this young age was often high-risk, involving casual partners and lack of condom use.

Conclusions

Social norms promoting pre-marital sex and environmental factors such as exposure to pornographic movies need to be addressed. Donor-led abstinence only campaigns have failed because youths have sex; but they are less equipped to protect themselves against HIV, because components such as condom use education are left out (Ott & Santelli 2007:446-452).

Recommendations

- A holistic approach to HIV prevention education must be adopted giving youths, complete knowledge of all options for HIV prevention including alternatives to non-penetrative sex.

- The training and involvement of influential cultural leaders to ensure that they promote traditional practices that might instil good morals amongst the youths is recommended. For example during FGC, youths were taught to refrain from sex until marriage. Whilst the act of FGC must be eradicated under Tanzanian legislation; the lessons taught with regard to abstinence could be promoted during such initiation processes.

6.3.3.3 Category 3.3: Fidelity

Findings

Multiple sexual partner relationships were prevalent in the study area and were influenced by cultural practices such as polygamy, FGC and traditional dances. Social norms amongst peer groups, which supported the need to have a variety of women to choose from, encouraged male youths to have multiple sex partners. However, the main driver for such relationships was poor socio-economic status resulting in transactional sex. This was fuelled by the large flow of mobile populations who frequented the area under study whilst on route to tourist sites. This has resulted in a flourishing, though illegal, sex trade.

Conclusions

As long as there exists socio-economic disparities, transactional sex is bound to occur and in this case is most likely to be high-risk due to the reportedly low condom use amongst the youths. The immediate challenge is to make transactional sex safer. However, socio-cultural factors and peer norms, which encourage multiple partner sex, also need to be addressed.

Recommendations

- Regulating the sex trade and/or making it safer, by enforcing laws such as the 100% condom use by CSWs, remains food for thought for policy makers in Tanzania; a policy that was successfully implemented in Thailand (Rojanapithayakom 2006: 41-54).
- Local government authorities, community and religious leaders should hold discussions on cultural factors impeding HIV prevention and a consensus should be reached on how to gradually phase-out traditions that promote multiple sexual partner relationships.
- Peer-led interventions should be established to instil positive group norms that would discourage multiple partner relationships.
- Female youths' economic empowerment by establishing soft loans for small medium enterprises (SMEs) might reduce the number of youths engaged in the sex trade.

6.3.3.4 Category 3.4 (sub-categories 3.4.1 and 3.4.4): Condom use, availability and misconceptions

Findings

Although male condoms were widely accepted and readily available in the towns, a lack of knowhow, fear of suspicions of infidelity and male dominance in sexual relationships were seen to prevent consistent use amongst the youths. Female condoms were not used amongst the youths in the study area. A lack of education on female condom use, lack of availability and social norms discouraged their use.

Overall, myths and misconceptions surrounding condoms including that they are laced with micro-organisms, that they had holes to let the virus through, that they would burst and that they reduced sexual pleasure were the main setbacks for condom use in this study. Similarly, some religious teachings were also said to negatively affect the use of condoms whilst youths did not abstain from having sex. Socio-cultural norms which viewed condom use as being immoral also doomed potential discussions on condom use, between the youths and the older generation.

Conclusions

Evidence shows that there is a significant gap in condom use education depicted by the various myths that impede condom use. Male condoms were more readily available and affordable in the towns than in rural areas. The social-marketing of female condoms had been unsuccessful.

Recommendations

- The MoHSW, donors and NGOs need to re-launch the condom use campaign, which has been neglected due to donor-imposed abstinence only campaigns.
- Local governments should provide adequate resourcing to ensure an adequate supply of condoms in the remote areas.
- Policy makers should revisit the need to enforce free condom distribution in all recreational facilities, hotels and guest houses.
- Condom access for students in secondary schools should be reviewed.
- Negotiations with religious and cultural leaders should be continued in order to remove these barriers.

6.3.3.5 Category 3.4 (Sub-category 3.4.2. and 3.4.3): Condom use with permanent and casual partners

Findings

The type of relationships significantly influenced condom use; youths were reportedly more likely to use condoms with casual partners than with permanent partners.

Conclusions

Youths in permanent relationships, particularly female youths, were at higher risk of HIV infection because condom use was usually stopped once the partners got used to each other, regardless of their HIV status.

Recommendations

- Youths intending to enter into a permanent relationship including marriage and/or cohabitation must undergo prior VCT for HIV because the trends show that consistent condom use is not sustainable in such relationships.
- Condom use should, however, be promoted amongst casual partners who are at an even higher risk of HIV infection than regular partners.
- Condom use must be promoted among regular partners.

6.3.3.6 Category 3.5: VCT uptake

Findings

VCT for HIV was reportedly low due to barriers including the fear of knowing one's status and fear of stigma/discrimination. Service-related problems including staff shortages, service providers that were not youth-friendly, allegations that some centres breached patients' confidentiality and the alleged inaccuracy of the test results had surfaced during this study. Reportedly, the quality of service had been compromised. Group discussions revealed that with the shift in focus, from HIV prevention to care and treatment of PLWHA, VCT had become a routine process. Whereas the counselling sessions would have been beneficial to youths, who were still trying to learn about safe sex, the focus on the test results only, meant that the youths might not have derived any significant long term benefits from VCT that would empower them to practise safer sex.

Conclusions

Youths' unfounded fears of undergoing VCT for HIV need to be alleviated whereas VCT services need to be improved to ensure they provide complete HIV prevention education.

Recommendations

- VCT centres and health service providers running such centres should be increased.
- Where resources are limited, mobile VCT services should be developed for rural settings.
- The quality of service, particularly conformance to confidentiality, should be investigated and areas for improvement should be identified and implemented.
- Youths should be educated about the benefits of VCT for HIV.
- Normalising VCT uptake, by using influential leaders to promote HIV testing could avert fears that prevent the youths from testing for HIV.
- Accurate VCT results should be conveyed.
- Youths must be treated with the utmost respect at all times.

6.3.4 Theme 4: Perception of risk of HIV infections

The specific objective was to determine the perceived susceptibility of the youths to HIV infections.

Findings

Most youths acknowledged they were at risk of HIV infection, with the majority citing high risk levels. However, this might not have influenced their HIV prevention behaviours because the youths' perception of risk of HIV infection was largely attributed to external factors which appeared to be outside their control. Reasons why youths thought they were at risk included: the existence of a pool of PLWHIV who lacked HIV prevention education, poorly managed biological wastes, unfaithful partners, substances of abuse, poverty and an environment saturated with recreational facilities and CSWs.

Conclusions

Unless youths' risk perceptions are personalised by identifying an individual's high-risk behaviours, it is unlikely to influence behaviour changes toward HIV prevention.

Recommendation

- HIV prevention interventions should focus on creating personal risk awareness which would influence positive attitudes and the intentions to adopt and maintain HIV prevention behaviours.

6.3.5 Theme 5: Barriers to HIV prevention

The specific objective was to determine the youths' perceived barriers that impede behaviour changes towards the prevention of HIV infections.

6.3.5.1 Category 5.1: External/ environmental factors

Findings

Environmental factors that negatively affected safe sex practices were the exposure of the youths to pornographic movies, the Internet and alcohol/drug abuse. The presence of several recreational facilities, brothels and cheap guest house accommodation was blamed for encouraging high-risk behaviours amongst the youths.

Conclusions

Media reports influenced the youths, by exposing them foreign cultures and ideas, that might have contributed to high-risk sexual behaviours amongst the youths.

Recommendations

- Parents should monitor youths' exposure to media.
- Parents should also be knowledgeable about their children's activities and friends to avoid alcohol and drug abuse.

- More recreational facilities such as sporting fields or social halls should be invested on to encourage youths to participant in low-risk activities.
- HIV/AIDS education should be given to owners of recreational facilities and policies should be made that enforce free/subsidised condom supplies in such facilities.

6.3.5.2 Category 5.2: Individual factors

Findings

Personal factors that impeded HIV prevention amongst the youths included: their loss of some cultural ideals, youths not listening to their parents, complacency about the severity of HIV/AIDS, their misconceptions about HIV/AIDS and condom use. Negative peer influences included that males took pride in having multiple sex partners as a symbol of masculinity.

Conclusions

The role of peer health educators is necessary to address youth-related barriers to HIV prevention, as they will be better informed about youths' needs and perceptions, and thus be better able to address individual factors impacting negatively on condom use.

Recommendations

- Youth empowerment by providing life-skills training and addressing core problems such as alcohol abuse, promiscuity, and boredom especially amongst the out-of-school youths should be done.
- Peer-led educational forums should be held to create relevant informational materials including leaflets and posters to address issues affecting condom use.

6.3.5.3 Category 5.3: Socio-cultural factors

Findings

Cultural aspects such as traditional dances, FGC and polygamy reportedly encouraged multiple sexual partner relationships. There were also cultural and religious norms which viewed condom use as being immoral, which impeded condom use campaigns amongst the youths. Widow inheritance, teen and arranged marriages were also said to occur, which placed women and the younger female youths at risk, particularly because the HIV status of potential partners or husbands was often unknown.

Conclusions

Communities should be motivated to review and change cultural practices that might pose a risk of exposure to HIV infections

Recommendations

- The district health departments should organise community mobilisation and education sessions to discuss and change cultural practices which were barriers to HIV prevention.

6.3.5.4 Category 5.4: Socio-economic factors

Findings

Poor socio-economic status had resulted in the illegal sex trade and multiple partner transactional sex, which negatively influenced youths' negotiating powers for safer sex, particularly amongst in-school female youths and the unemployed youths. Unemployment and failure to secure business capital were major concerns for the out-of-school youths. Rural-urban migration necessitated some youths to engage in self-employment while others worked in bars, hotels and guests houses, which were supported by the local

tourism industry. Female youths might tend to exchange sexual favours with mobile male partners for extra money, putting them at high risk of HIV infections.

Conclusions

In this study, transactional sex amongst youths of both genders posed a higher risk of exposure to HIV infections, therefore efforts should be made to economically empower the youths, particularly females, to minimise this risk.

Recommendations

- Creation of self-employment opportunities by developing small (and possibly also medium) enterprises (SMEs) and the provision of soft loan schemes would economically empower the out-of-school youths, thereby improve their self-efficacy to enact HIV prevention behaviours, and in particular negotiate for safer sex.
- Targeted intervention programmes amongst CSWs should be done to provide alternative economic activities, to build their self-esteem and to reinforce gender rights, thus improving their self-efficacy to negotiate for safer sex.

6.3.5.5 Category 5.5: Lack of education

Findings

Youths mentioned lack of formal education and lack of HIV/AIDS and condom use education as barriers to HIV prevention. This was more prevalent amongst out-of- school youths who were more likely to have missed-out on such HIV/AIDS educational sessions.

Conclusions

Formal education, particularly for girls could be a powerful way of protecting them from HIV transmission. More educated girls could negotiate for safer sex, married later, had greater choices in marriage and were less dependent on men (ILOAIDS Brief 2004:4).

Recommendations

- The government's efforts towards achieving the UN Millennium goal two of ensuring the completion of formal primary education by all eligible children by 2025 is a positive step towards ensuring that youths remain in school.
- HIV/AIDS education should be given to even younger children aged 9-14 years who were said to become sexually active at such tender ages.
- Adult education programmes for out-of-school youths should include HIV/AIDS curricula.

6.3.5.6 Category 5.6: Gender inequalities

Findings

Gender discrimination was also evidenced by male youths who also felt proud of dictating terms for sex to their female counterparts. Women were said to have no rights, were blamed for HIV infections in the family and were often prone to sexual violation even within the marital context.

Conclusions

Women's economic dependence on men fuelled gender inequalities when negotiating for safer sex and probably contributed to the spread of HIV amongst married couples.

Recommendations

- The MoHSW, Ministry for the Development for Women and Children and NGOs dealing with women's rights should create policies and strategies towards empowering women to negotiate for safer sex.
- Local governments should ensure women are represented at district level and in village AIDS committees.
- Women should establish economic groups which engage in income generating activities making them less dependent on men.

6.3.6 Theme 6: Youths' perceived self-efficacy

The specific objective was to identify gaps in the youths' perceived self-efficacy to enact HIV prevention behaviours.

Findings

Youths' self-efficacy to adopt safer sex practices, to negotiate for condom use with permanent and casual partners and to discuss VCT and fidelity with their partners was found to be negatively influenced by a poor socio-economic status, gender inequalities and age-disparate relationships. For example, youths claimed to be able to negotiate for fidelity, but when asked if youths could practice fidelity, most agreed it was difficult; because youths might not be able to trust their partners. .

Conclusions

Self-efficacy is a key determinant of the practice of HIV preventive behaviours, therefore factors contributing to lower self-efficacy levels amongst the youths should be addressed.

Recommendations

- Community mobilisation and gender empowerment by reinforcement of gender rights should be done to enable female youths to negotiate for safer sex.
- Youth economic empowerment could lessen their economic dependence on older male or female partners.
- Youth role models should give seminars to fellow youths to build their capacity to negotiate for safer sex.

6.3.7 Theme 7: Youth-appropriate HIV prevention measures

The specific objective was to determine the youth-appropriate measures for HIV prevention in Tanzania.

Findings

The youths advocated for more HIV/AIDS educational seminars and training of peer health educators to improve their levels of HIV/AIDS and condom use knowledge and decrease the levels of misconceptions. Interaction between the youths and the older generation; and between male and female youths was proposed in order to bridge the information gaps. Parents and religious leaders were urged to play a pivotal role in talking about HIV/AIDS with the youths, which they appeared to have neglected.

It was also proposed that political leaders should be more transparent in the running of HIV/AIDS prevention programmes and should call for the involvement of the youths. Youth empowerment through a multi-sectoral approach was necessary.

Conclusions

For HIV/AIDS prevention interventions to be successful, a participatory-approach was necessary, whereby youths could be involved in policy making and implementation and where all relevant stakeholders could be engaged.

Recommendations

- The MoHSW should work with other ministries dealing with youth employment, education and gender empowerment so that synergies within their operational policies could help to fight HIV/AIDS amongst the youths in Tanzania.

6.4 COMPARISONS OF CONCLUSIONS FROM PHASE 1 AND PHASE 2

In this section a comparison was made between the findings and conclusions drawn from the quantitative phase and the qualitative phase of this study.

6.4.1 HIV/AIDS knowledge

In both phases, HIV/AIDS awareness was high; youths were found to have incomplete HIV/AIDS knowledge and had misconceptions about HIV transmission. The most common misconception was that a healthy-looking person could not have HIV and this might have contributed to low-risk perceptions whilst youths engaged in sex with such persons. In phase 1, younger, in-school youths had higher HIV/AIDS knowledge than their older counterparts, who missed the opportunity learn about HIV/AIDS in school. HIV/AIDS knowledge influenced positive attitudes towards HIV prevention behaviours, which in turn improved HIV preventive practices amongst the youths.

6.4.2 HIV prevention attitudes

In phase 1, most youths had positive attitudes towards HIV prevention which improved their condom use, VCT uptake and perceived self-efficacy to adopt HIV prevention behaviours. In this case, the youths' attitudes towards HIV prevention were in-turn influenced by the youths' perceptions of risk of HIV infection and their perception of severity of the disease. Younger, male youths had more positive attitudes compared to

older, female youths. Out-of-school youths with primary education only, had more positive attitudes towards HIV prevention than their counterparts.

Similarly, in phase 2, most youths believed HIV/AIDS was preventable; but this had not impacted on youths' HIV prevention behaviours because youths had contradictory attitudes towards each HIV preventive practice. Youths gave varying reasons why each HIV prevention mode could not be adopted as discussed in section 6.4.5. This might have been largely influenced by external factors, lack of personalised risk awareness, existing socio-cultural norms, incomplete HIV/AIDS education and complacency about the severity of HIV/AIDS. HIV prevention interventions should therefore work towards changing youths attitudes towards HIV prevention through mass awareness campaigns, which promote the benefits of adopting HIV preventive practices.

6.4.3 Perceived susceptibility to HIV infections

Youths' perceived risks of HIV infections were lower in phase 1 than in phase 2, with only 50.7% (n=188) of the youths perceiving themselves to be at risk and less than 20% citing high risk levels. In phase 1, the perception of risk of HIV infections was higher in youths with knowledge of an AIDS patient, younger age, students and male gender, whilst risk perception was found to influence positive attitudes towards HIV prevention behaviours but did not improve HIV prevention practices.

In phase 2, the misconception that a healthy-looking person could not transmit HIV contributed to a lower perception of risk whilst youths engaged in sex with such persons. However, in both phases, the perceptions of risk were largely attributed to external factors and the labelling of high-risk groups such as alcoholics, substance abusers, idle youths, CSWs. The perceived risk of HIV infection was also attributed to poor management of biological waste and the lack of recreational facilities within the study area.

6.4.4 Perceived severity of HIV/AIDS

A high perception of severity was found to influence positive attitudes towards HIV prevention in both phases. However, although the majority of the youths had a high perception of severity of HIV/AIDS in phase 1, this did not improve youths' HIV prevention practices. In phase 2, youths acknowledged the high severity of HIV/AIDS, but pointed out elements of complacency about the severity of HIV/AIDS amongst fellow youths which negatively influenced condom use and contributed to multiple partner relationships. Conflicting HIV campaign messages which down-played the severity of AIDS to a chronic and manageable condition might be blamed for this. HIV prevention interventions should create awareness of the seriousness of AIDS and where HIV/AIDS activists should give motivational talks to the youths.

6.4.5 Factors influencing HIV prevention behaviours

Abstinence

In phase 1, abstinence was higher amongst single, in-school, female youths but was neither influenced by youths' attitudes towards HIV prevention nor their perceived self-efficacy. Whilst in phase 2, the majority of the youths felt that abstaining from sex was impossible because the youths believed sex to be a natural phenomenon and it was widely accepted amongst their peers that a person could not exist without sex; a view that was shared by both male and female youths.

Fidelity

Older, male youths were more likely to have multiple partners compared to younger, female youths, in phase 1. However, there was no significant difference in the number of sexual partners with gender, religion, occupation, marital status, HIV/AIDS knowledge or perception of risk of HIV infections. This is because the number of sexual partners has been shown to be largely influenced by external factors (Yan et al 2009:3005).

In phase 2, multiple sexual partner relationships were driven by unfaithful partners, low risk perceptions of HIV infections, peer pressure, negative cultural practices, women's economic dependence on men, the sex trade and poor economic status. Multiple partner relationships contributed towards the spread of HIV/AIDS.

Condom use

In phase1, condom use was low during youth's sexual debut, but increased during their most recent sexual encounters. Condom use was higher amongst older youths with post-secondary education who had positive attitudes towards HIV prevention and had higher perceived self-efficacy levels compared to their counterparts. The main reasons cited for lack of condom use during the youths' sexual debuts was the lack of knowhow, being unprepared for sex, being unable to afford condoms, unwilling partners, fears of suspicions of infidelity and negative religious teachings.

Phase 2 revealed that the estimated condom use might have been even lower than reported during the structured interviews. Reasons for lack of condom use included: lack of availability in rural areas, lack of affordability because youths had no jobs, complacency about the severity of HIV/AIDS, lack of condom use education, misconceptions about condom use and lack self-efficacy to use condoms correctly. Some religious teachings and socio-cultural norms which viewed condom use as being immoral also hindered condom use. Youths were more likely to use condoms with casual partners than with permanent partners.

VCT uptake

In Phase 1, the uptake of VCT was higher amongst older youths, who were married or in permanent relationships than amongst younger youths who were single. Positive attitudes and a high perception of self-efficacy also improved VCT uptake. The main reasons for the lack of VCT uptake included: indecision to undergo the HIV test, certainty that one was HIV negative and fear of knowing one's status. Stigma and lack of confidentiality at the VCT centres also contributed to low VCT uptake rates.

Phase 2 revealed that VCT uptake was low. Common barriers to the uptake of VCT included the fear of knowing one's status, stigma/discrimination and lack of confidentiality at the VCT centres. Service-related problems negatively affected the youths' decisions to undergo VCT such as staff shortages, unfriendly health care providers, allegations that some centres breached patients' confidentiality and the alleged inaccuracy of the test results

6.4.6 Barriers that impede HIV prevention

In phase 1, the following barriers to the overall HIV prevention campaign were indentified including: alcohol and drug abuse, greed for material things due to a low economic status coupled with laissez-faire attitudes amongst the youths, the lack of condom use either due to affordability, lack of availability or the perpetuated myth that condoms reduced sexual pleasure, lack of HIV/AIDS education, multiple partner relationships and youths being unprepared for sex.

In phase 2, barriers to HIV prevention leading to youths' care-free attitudes towards HIV prevention were influenced by a lack of HIV/AIDS education, gender inequalities, socio-economic, cultural, personal and environmental factors. Despite the high levels of HIV/AIDS awareness, youths were not changing their behaviours towards HIV prevention.

6.4.7 Youths' perceived self- efficacy

In phase 1, youths' overall self-efficacy was found to be moderate with half of the youths scoring high levels, but only 50.0% (n=189) reported to be confident in using condoms correctly. Youths' self-efficacy was found to be influenced by positive attitudes towards HIV prevention behaviours. After controlling for confounding factors and other determinants of HIV prevention; of the HIV determinants, it was the youths' perceived self-efficacy that was found to have a positive correlation with youths' condom use and VCT uptake respectively. Although younger in-school youths were found to have higher self-efficacy scores, this was not reflected in their HIV prevention practices. In-school youths were found to have lower

condom use and VCT uptake levels. Male youths also had higher self-efficacy than female youths, a reflection of the social disparities in a patriarchal society.

On the other hand, in phase 2, youths felt that self-efficacy was lower amongst in-school youths, particularly female youths. Self-efficacy was said to be negatively influenced by poor social economic status, age-disparate relationships and gender inequalities. Some youths also expressed doubts about being able to use condoms correctly.

6.4.8 Youth-appropriate measures for HIV prevention

Access to HIV prevention services

More than half of the youths in phase 1 of the study were unaware of centres providing HIV prevention services, whilst only 48.9% (n=182) thought the existing service were youth-friendly whilst more than half of the youths (61.6%; n=229) had received HIV/AIDS education in either primary or secondary school, meaning youths' access to HIV prevention information was limited. In phase 2 of the study, the participants, most of whom were out-of-school youths, reported lower access to HIV/AIDS education, whereby most youths stated they had missed-out on HIV/AIDS education whilst at school; but had heard about HIV from various other sources including media, parents, and NGOs. They also reported several service-related problems with VCT and/or HIV/AIDS information centres which discouraged youths from going to such centres. These included: shortages of staff, unfriendly health care providers, alleged lack of confidentiality and alleged lack of accuracy of results.

Youth-appropriate measures for HIV prevention

In both phase 1 and 2, youths recommended the re-enhancement of HIV/AIDS and condom use education through holding regular informational seminars particularly for the out-of-school youths. The youths recommended the training of peer health educators and the involvement of youths in development of HIV prevention programmes. They called on parents and religious leaders to play a more active role in educating youths about

HIV/AIDS and proposed a multi-sectoral approach in tackling youths' challenges such as unemployment, lack of business capital and lack of alternative recreational activities, which might have contributed to youths' failure to practise HIV prevention behaviours.

6.5 RECOMMENDATIONS FOR FURTHER STUDY

In order to enhance sustainable HIV prevention practices amongst the youths, research needs to be done to further understand the contribution of specific factors in addressing HIV prevention practices. Future researchers should investigate the following:

- Duplicate this study at a national level for example during HIV/AIDS indicator surveys which will not only establish the levels of HIV prevention practices, but would allow for an understanding of the factors that limit the practice of HIV prevention amongst the youths countrywide.

- Duplicate this study amongst secondary school learners whilst in a neutral setting such as their home settings, to determine their HIV prevention behaviours and challenges that may be unique to them, for example student/learner-teacher relationships.
- Qualitative studies to define the barriers to HIV prevention behaviours in respective regions in Tanzania should be done by key stakeholders in order to put in place feasible strategies to overcome these.

- Factors contributing to age-disparate relationships and forced sex amongst the youths should be investigated.

- Studies to determine female condom availability, acceptability and use amongst female youths in order to define the best social marketing strategy.

- Evaluation of the quality of service and the behaviours of health service providers at the VCT centres in the study area should be done so that measures to improve these services could be undertaken.

- Studies to determine actual VCT uptake levels amongst the youths using routine clinical data from the study area.

- A needs assessment for economic empowerment of the out-of-school youths, particularly female youths, as a means of diverting them from the sex trade should also be done.

6.6 RECOMMENDATIONS FOR USE OF BEHAVIOUR CHANGE MODELS FOR HIV PREVENTION INTERVENTIONS

The conceptual framework for this study was developed using the constructs from three behaviour change models namely, HBM, ARRM and TRA. The researcher aimed at, outlining the different factors which might influence HIV preventive practices amongst the youths, identifying factors which were interrelated and defining factors which had a causal-relationship. The objective was to determine factors which positively influence of HIV prevention behaviours, which could be enhanced and those which negatively impacted on youths' HIV preventive practices, which should be addressed.

Rotheram-Borus, Swendeman, Flannery, Rice, Adamson and Ingram (2009: 399-308), in a study on common factors for effective HIV prevention programmes; advocated for a similar approach. It was argued that different behaviour change models use different paths to achieve the same outcomes, or give different outcomes which might not have been considered or might have common factors encouraging the HIV preventive practices. Combining different behaviour change models moved the focus away from a particular model, to focus on effective practices.

It was therefore recommended that the stakeholders responsible for the development and implementation of HIV prevention policies and strategies should be trained on behaviour change theories, which they can incorporate into their programmes, in order to ensure effective outcomes. TACAIDS, the governing body responsible for overseeing the multi-sectoral approach in the management of the HIV/AIDS epidemic in Tanzania, should call for regular stakeholder meetings, to monitor and review intervention programmes so as to

identify areas for synergy and avoid duplication, which could lead to misuse of the limited resources.

6.7 SCOPE AND LIMITATIONS OF THE STUDY

This study recruited a total of 372 youths for inclusion in the quantitative phase and a total of 25 youths participated in the FGDs for the qualitative phase.

Some limitations were identified in the course of this study:

- The research results might only be representative of the characteristics of youths resident in peri-urban settings as opposed to rural settings; which were purposively selected for this study under the assumption that the risk factors for HIV infections were higher in peri-urban areas.
- The use of school venues for interviewing the in-school youths might have contributed to over-reporting of positive HIV prevention practices amongst the in-school youths based on what they perceived to be socially acceptable.
- 'Research fatigue' within the communities in the study area made it impossible for door-to-door interviews due to their potential unresponsiveness. This prevented the researcher and research assistants from building rapport with the respondents during the quantitative phase of the study and also denied access at household level.
- Dominant FGDs participants posed a challenge in controlling information bias during the discussions because some respondents agreed with some opinions without providing their own views.
- The researcher used 11 research assistants, which might have led to inter-rater unreliability. The researcher attempted to control this by conducting a pre-test on the structured interview schedule and where necessary re-trained the assistant to ensure consistency in data collection.

6.8 FINAL CONCLUDING REMARKS

"*Tanzania bila UKIMWI inawezekana*" (Martin, Somi, Kibuka, Sando, Cummings & Wiktor 2008:2). This means "Tanzania without AIDS is possible". This was the theme message for the national HIV testing campaign led by the President of Tanzania, His Excellency, Jakaya Kikwete, on 14th July 2007; as a show of the political will to curb the HIV/AIDS epidemic. The objective was to normalise VCT as a strategy for HIV prevention.

With a strong political will, the adoption of HIV prevention practices by the youths remains the critical path to realising a successful decline in the incidence of HIV/AIDS in Tanzania. Whereas the provision of HIV/AIDS education to the in-school youths has been a first step, to bring about sustainable behaviour changes amongst the youths thereby improving the practice of HIV prevention behaviours, it is recommended that HIV/AIDS education be re-enhanced at community level. Youths' levels of HIV/AIDS knowledge portrayed misconceptions about HIV/AIDS.

In order to change the youths' attitudes towards HIV prevention behaviours, education campaigns must focus on creating risk awareness and dispelling myths and misconceptions surrounding HIV transmission and prevention. HIV campaign messages must also be reviewed for relevance to both HIV negative and HIV positive youths to avoid complacency with the severity of HIV/AIDS which might have led to more care-free attitudes towards preventive practices.

To improve HIV prevention practices, stakeholders must look for alternative ways to encourage abstinence or delay sexual debuts amongst the youths. To ensure consistent and correct use of condoms, condom use education needs to be urgently addressed in order to dispel myths and misconceptions. HIV prevention programmes must ensure adequate supplies of condoms. Female condom use education and social marketing should be re-enhanced, coupled with the empowerment of female youths to negotiate for condom use. In male dominant societies, where women might lack rights to negotiate for sex, the use of female condoms would provide them with alternatives to practise safer sex. Ongoing negotiations with religious leaders on their role in promoting condom use for the prevention of HIV/AIDS should be continued, whilst parents should normalise their

discussions about HIV/AIDS and condom use with the youths. Equally normalising VCT, reduction of stigma and discrimination surrounding an HIV-positive diagnosis would increase the uptake of VCT amongst the youths.

Youth empowerment by providing life-skills training and addressing core problems such as alcohol abuse, promiscuity, and boredom, especially amongst the out-of-school youths, should be done. Creation of self-employment opportunities by developing SMEs and the provision of soft loan schemes would economically empower the out-of-school youths, thereby improving their self-efficacy to enact HIV prevention behaviours, and in particular to negotiate for safer sex. In a society where prostitution is illegal but widely practised, regulating the trade and making it safer by providing reproductive health services to the female youths involved, remains food for thought for policy makers. However, in the interim, special intervention programmes amongst female youths, particularly those engaged in the sex trade, should be done to provide alternative economic activities, to build their self-esteem and to reinforce gender rights, thus improving their self-efficacy to negotiate for safer sex.

Peer involvement in the development and implementation of HIV prevention strategies, training of peer health educators, and use of multifaceted avenues including communication media, seminars, mass campaigns and billboards would ensure that HIV/AIDS education messages reach out to the majority of the youths. HIV prevention services should be expanded to communities. In such instances, community liaison members with whom the community can relate should be selected and trained on HIV/AIDS. These collaborators will play a key role in delivering HIV prevention messages within their cultural contexts making these more acceptable, especially to youths.

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ANNEXURES

ANNEXURE A: STRUCTURED INTERVIEW SCHEDULE – ENGLISH

FACTORS INFLUENCING YOUTHS' PREVENTIVE ACTIONS AGAINST HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS IN TANZANIA

- Hello, my name is …… I am a research assistant working with ……. and currently assigned to participate in this study.

- The study you are about to participate in, is a research that wants to establish what factors determine behaviour change towards HIV prevention amongst the youths in Tanzania.

- Your participation in this study is purely voluntary; however, your views are important because the information obtained will be very useful in planning for youth health intervention programmes that will enable the prevention of the spread of HIV in Tanzania.

- The study will be conducted in the form of a structured interview whereby the research assistants will ask you several standardised questions and will complete a structured interview schedule during the course of the interview.

- The interview will take around 30 minutes to complete

- You will not be required to give your name or any form of identity so that the information shall remain anonymous to protect you.

- The researcher will take responsibility for ensuring that the information you give during the study is handled with strict confidentiality and shall not be used for any other purposes.

- Thank you for your participation.

Date _____

Interviewer _____

Participant Number _____

Section A. Social demographic characteristics

First I would like to ask you some general questions about your background.

No	Question	Option (select)	Code
1	How old are you?	1 …… 2. Don't know	
2	What sex are you?	1. Male 2. Female	
3	How long have you been living in your current residence?	……years	
4	What is your religion?	1.Muslim 2.Catholic 3. Protestant 4. None 5. Other……	
5	Have you ever attended school?	1. Yes 2. No (go to no.7)	
6	What is the highest standard of schooling you completed?	1. Did not complete primary school 2. Completed primary education 3. Completed secondary education 4. Did not complete secondary school 4. Post-secondary education 5. Vocational training	
7	What is your current occupation, that is, what kind of work do you mainly do?	1. Currently in school 2. Not working 3. Other specify ……..	
8	Have you been married or lived with a partner?	1. Never married 2. Have casual partners 3. Co-habiting with a regular partner 4. Married 5. Divorced 6. Widow/widower	
9	Do you read newspapers?	1. Never 2. Sometimes 3. Often	
10	Do you watch television?	1. Never 2. Sometimes 3. Often	
11	Do you listen to the radio	1. Never 2. Sometimes 3. Often	

Section B. To assess the level of knowledge, attitudes and practice of HIV prevention amongst the youths

Now, I would like to ask you some questions on health matters particularly HIV/AIDS.

12	Have you ever heard about HIV /AIDS?	1. Yes 2. No	
13	If so, where did you first hear about HIV/AIDS?	1. Parents 2. Religious leaders 3. At school 4. From a friend 5. At the health center 6. From the media 7. From the internet 8. From peer educators 9. At work 10. Other specify…….	
14	What is HIV?	1. …….. 2. Do not know	
15	What is AIDS?	1. …… 2. Do not know	
16	Name 4 ways in which a person can get HIV infection.	1…… 2…… 3…… 4……..	
17	Can HIV be transmitted by 1. Mosquito bites? 2. Sharing food with an infected person? 3. Witchcraft? 4. A person who looks healthy?	 1. Yes 2. No 3. Do not know 1. Yes 2. No 3. Do not know 1. Yes 2. No 3. Do not know 1. Yes 2. No 3. Do not know	
18	What can a person do to prevent HIV infection? Name four ways.	1…… 2…… 3…… 4……	
19	Are there special drugs that can be given to a pregnant woman infected with HIV to prevent transmission to her child?	1. Yes 2. No 3. Do not know	

Now, I need to ask you about your opinion on HIV/AIDS related matters.

20	Do you agree that the children aged 10-14 years should be taught about condoms to prevent HIV/AIDS?	1. I agree 2. I disagree 3. I don't know	
21	What is your opinion on condom use to prevent HIV?	1. It is effective 2. It is against my culture 3. It is against my religion 4. It is costly 5. It is not effective 6. It is not safe	
22	Does condom use reduce sexual pleasure?	1. Yes 2. No 3. I don't know	
23	Are condoms readily available in your area?	1. Yes 2. No 3. I don't know	
24	A person can reduce their risk of getting HIV by not having sex at all.	1. I agree 2. I disagree 3. I do not know	
25	A person can reduce their risk of getting HIV by being faithful to one tested partner.	1. I agree 2. I disagree 3. I do not know	
26	Do you know a place in your area where you can get an HIV test if you wanted to?	1. Yes 2. No	
27	I do not want to know your results, but have you ever tested for HIV?	1. Yes 2. No (go to no.29)	
28	I do not want to know the results, but did you collect your test results?	1. Yes 2. No	
29	There are many reasons why people do not get tested for HIV. Can you tell me why you have not been tested?	1.Stigma 2. Afraid to know my status 3. Sure that you do not have HIV 4. Sure that you are HIV positive 5. Lack of confidentiality at the VCT centre 6. Undecided 7. Other specify……	

Now, I need to ask you some questions on sexual activity.

30	Have you ever had sex?	1. Yes 2. No (go to no.41)	
31	How old were you when you first had sexual intercourse?	……..years	
32	Was a condom used the first time you had sexual intercourse?	1. Yes 2. No	
33	If a condom was used, why?	1. To prevent pregnancy 2. To prevent STIs 3. To prevent HIV/AIDS 4. Other……	
34	If a condom was not used, why?	1. I did not want to 2. My partner did not want to 3. I was not prepared 4. I could not afford to buy 5. Other……	
35	In the last 12 months did you use a condom every time you had sexual intercourse?	1. Yes 2. No	
36	In the last 12 months how many people have you had sex with?	Number of partners ……..	
37	Have you ever had sex with a partner who is 10 years older than you?	1. Yes 2.No	
38	The last time that you had sexual intercourse did you or your partner a) drink alcohol? b) use any illegal drugs?	 1. Yes 2. No 1. Yes 2. No	
39	The last time you had sexual intercourse was a condom used?	1. Yes 2. No	
40	In the last 12 months has anyone forced you to have sex when you did not want to?	1. Yes 2. No	

Section C. To determine the perceived susceptibility of the youths to HIV infections

Now, I would like to ask you about the risk of HIV infection.

41	Do you know anyone who is sick or has died of HIV/AIDS?	1. Yes 2. No	

42	If yes, how did that affect you?	Explain…… ……	
43	Do you perceive yourself as being at risk of getting HIV infection?	1. Yes 2. No (go to no.45) 3. I do not know	
44	If yes, how great is your risk of getting HIV infection?	1. High 2. Medium 3. Low	
45	If you are not at risk of HIV infection, explain why do you think you cannot get infected?	List reasons …… ……	
46	Do you think there are youth groups who are more at risk than others of getting HIV infection?	If yes, name them? …… ……	

Section D. To determine the youths' perceived severity of HIV/AIDS

47	Do you think HIV/AIDS is a serious illness? Why?	1. Yes 2. No 3. I do not know	
48	Is there a cure for AIDS?	1. Yes 2. No 3. I do not know	

Section E. To determine the youth's perceived barriers that impede sexual behaviour change towards the prevention of HIV infections

49	What do you think are some of the factors that influence the youths to practice safe sex to prevent HIV/AIDS?	List them…… …… ……	
50	What do you think are some of the factors that prevent the youths from practising safe sex to protect themselves against HIV/AIDS?	List them…… …… …… ……	

Section F. To identify the gaps in the youths' self-efficacy to enact HIV prevention behaviours

51	Do you think that you are able to practice safe sexual behaviour to prevent HIV?	1. Yes 2. No	
52	Are you able to negotiate for condom use	1. Yes 2. No	

	at all times with your permanent partner?		
53	Are you able to negotiate for condom use at all times with your casual partner(s)?	1. Yes 2. No	
54	Do you believe you are capable of correctly using a condom during sexual intercourse?	1. I am fully capable 2. I am partially capable 3. I am not capable	
55	Are you able to discuss sexual matters with your partner, for example going for a HIV test?	1. Yes 2. No	

Section G. To determine the youth-appropriate measures for preventing HIV infection in Tanzania

56	Are you aware of any intervention programmes on HIV/AIDS in your area?	List them…….. ……	
57	Are these HIV/AIDS intervention programmes friendly to the youth?	1. Yes 2. No 3. Do not know	
58	Who do you think should run the HIV/AIDS intervention programmes?	1. Non-governmental organisations 2. Religious organisations. 3. Government health service providers 4. Peer health educators 5. Other……..	
59	Have you been taught about HIV/AIDS at school?	1. Yes 2. No	
60	Have you participated in any HIV/AIDS awareness clubs at school?	1. Yes 2. No	
61	What are the best measures for promoting HIV/AIDS prevention amongst the youths?	List them…… …… ……	
62	What is the best medium for communicating HIV/AIDS prevention messages?	1. Radio 2. Television 3. Newspapers Others specify…….	

Thank you for your participation in this research that aims at assisting the youth to fight the spread of HIV/AIDS in Tanzania.

ANNEXURE B: STRUCTURED INTERVIEW SCHEDULE- SWAHILI

DODOSO KWA AJILI YA TAARIFA MSINGI JUU YA SABABU ZINAZOSHAWISHI TABIA YA KUJIKINGA NA MAAMBUKIZI YA VVU KWA VIJANA WENYE UMRI WA MIAKA 15-24 NCHINI TANZANIA.

- Habari za leo, jina langu ni …… mimi ni mtafiti msaidizi, nafanya kazi na …… na hivi karibuni nimepewa jukumu la kushiriki katika utafiti huu.

- Utafiti huu ambao utashiriki, ni utafiti unaotaka kutathmini sababu zinazochangia kubadili tabia ya ngono kuelekea kujikinga na maambukizi ya VVU kwa vijana hapa Tanzania.

- Ushiriki wako katika utafiti huu ni kwa hiari kabisa, ila tunathamini sana maoni yako kwa sababu taarifa zitakazopatikana, zitasaidia sana katika kupanga muingiliano wa mipango ya afya kwa vijana itakayowezesha kuzuia maambukizi ya VVU/UKIMWI hapa Tanzania.

- Utafiti huu utafanywa kwa njia ya kutumia mahojiano ya siri ambapo watafiti wasaidizi watakuuliza maswali kadhaa yenye malengo, na watakamilisha ratiba ya hojaji iliyopangwa wakati wa kipindi cha mahojiano, na pale ambapo utakuwa hujaelewa swali, mtafiti wetu atakupa maelezo ya kutosha

- Majadiliano haya yatachukuwa takribani dakika thelathini tu kumalizika

- Kwa ajili ya kulinda usiri wa taarifa zako, hutatakiwa kutoa jina lako au aina yoyote ya utambulisho.

- Mtafiti mkuu atachuka hatua zaidi kuhakikisha taarifa ambazo utatoa wakati wa utafiti zitasimamiwa kwa usiri mkubwa na hazitatumika kwa madhumuni mengine yoyote.

- Asante kwa kushiriki.

Tarehe _____

Mtafiti _____

Namba ya mtafitiwa _____

A. Utambulisho

Kwanza ningependa kuuliza maswali ya utambulisho

No	Swali	Jibu (Chagua moja)	Code
1	Je, una umri gani?	1. Miaka ..... 2. Sijui	
2	Je, wewe ni jinsia gani?	1. Mwanamume 2. Mwanamke	
3	Je, umeishi katika makazi haya ya sasa kwa muda gani?	Miaka.....	
4	Je, wewe ni wa dini gani?	1. Muislamu 2. Mkatoliki 3. Mprotestanti 4. Sina dini 5. Nyingineyo taja.....	
5	Je, umeshawahi kuenda shule?	1. Ndiyo 2. Hapana (nenda na.7)	
6	Je, ulifikia kiwango gani cha juu cha elimu?	1. Sikumaliza shule ya msingi 2. Nilimaliza shule ya msingi 3. Sikumaliza shule ya sekondari 4. Nilimaliza shule ya sekondari 5. Nimesoma zaidi ya sekondari 6. Nimesoma chuo cha ufundi	
7	Je, kwa sasa unafanya kazi gani?	1. Bado nasoma shule 2. Sifanyi kazi 3. Nyingineyo taja.....	
8	Je, umeshawahi kuoa au kuolewa au kuishi na mpenzi?	1. Sijawahi kuoa/kuolewa 2. Nina wapenzi wa muda 3. Ninaishi na kimada 4. Nimeoa/nimeolewa 5. Nimeachika 6. Ni mjane	
9	Je, unasoma magazeti?	1. Sisomi kabisa 2. Nasoma mara moja moja 3. Nasoma mara nyingi	

10	Je, unaangalia televisheni?	1. Siangalii kabisa 2. Naangalia mara moja moja 3. Naangalia mara nyingi	
11	Je, unasilikiza redio?	1. Sisikilizi kabisa 2. Nasikiliza mara moja moja 3. Nasikiliza mara nyingi	

B.Kutathmini kiwango cha ufahamu, maoni na tabia za kuzuia maambukizi ya VVU miongoni mwa vijana

Sasa ningependa kuuliza maswali kuhusu afya hususan VVU/UKIMWI

12	Je, umeshawahi kusikia kuhusu VVU/UKIMWI?	1. Ndiyo 2. Hapana	
13	Kama umewahi kusikia kuhusu UKIMWI, je, wapi ulisikia taarifa hizi kwa mara ya kwanza?	1. Kwa wazazi 2. Kwa viongozi wa dini 3. Shuleni 4. Kwa rafiki yako 5. Katika kituo cha afya 6. Kwenye vyombo vya habari 7. Kwenye mtandao 8. Kwa waelimishaji rika 9. Kazini 10. Kwengineko taja	
14	VVU ni nini?	1 ..... 2. Sijui	
15	UKIMWI ni nini?	1 ..... 2. Sijui	
16	Taja njia nne ambazo mtu anaweza kuambukizwa na Virusi Vya Ukimwi.	1..... 2..... 3..... 4.....	
17	Je VVU vinaweza kusambazwa na ? 1. Kung'atwa na Mbu 2. Kushiriki chakula na mtu mwenye VVU 3. Uchawi 4. Mtu anayeonekana kuwa na afya nzuri	 1. Ndiyo 2. Hapana 3. Sijui 1. Ndiyo 2. Hapana 3. Sijui 1. Ndiyo 2. Hapana 3. Sijui 1. Ndiyo 2. Hapana 3. Sijui	

18	Je, ni kwa njia zipi nne mtu anaweza kuzuia maambukizi ya VVU?	Taja.....	
19	Je, kuna dawa maalum ambazo mwanamke mjamzito anaweza kupewa ili kuzuia maambukizi kwa mtoto wake?	1. Ndiyo 2. Hapana 3. Sijui	

Sasa ningependa kuuliza kuhusu maoni yako juu ya masuala yahusuyo VVU/UKIMWI

20	Unakubali kuwa watoto wenye umri wa miaka 10-14 wafundishwe kuhusu matumizi ya kondom kuzuia UKIMWI?	1. Nakubali 2. Sikubali 3. Sijui	
21	Je, nini mtazamo wako kuhusu matumizi ya kondom kuzuia UKIMWI?	1.Naona ni kinga thabiti 2. Ni kinyume na mila yangu 3. Ni kinyume na dini yangu 4. Ni gharama 5. Si thabiti 6. Si salama 7. Nyingineyo.....	
22	Je, kondom hupunguza starehe ya kujamiana?	1. Ndiyo 2. Hapana	
23	Je, kondom hupatikana kwa urahisi katika eneo unaloishi?	1. Ndiyo 2. Hapana	
24	Mtu anaweza kupunguza uhatarishi wa kupata maambukizi ya UKIMWI kwa kuacha ngono kabisa.	1. Nakubali 2. Sikubali 3. Sijui	
25	Mtu anaweza kupunguza uwezekano wa yeye kuambukizwa na UKIMWI kwa kuwa na mpenzi mmoja aliyepimwa.	1. Nakubali 2. Sikubali 3. Sijui	
26	Je, unafahamu kituo ambacho unaweza kupata kupimo cha VVU kama ukitaka?	1. Ndiyo 2. Hapana	
27	Sitaki kujua majibu yako, ila , umeshawahi kupima VVU?	1. Ndiyo 2. Hapana (nenda na.29)	

28	Sitaki kujua majibu yako, ila baada ya kupima ulichukua majibu yako?	1. Ndiyo 2. Hapana	
29	Kuna sababu nyingi zinazomfanya mtu asitake kuenda kupima VVU. Je, unaweza kuniambia sababu iliyokufanya usiende kupima VVU?	1. Unyanyapaa 2. Hofu ya kujua afya yangu 3. Uhakika kwamba sina VVU 4. Uhakika kwamba nina VVU 5. Ukosefu wa usiri katika kituo cha ushauri nasaha na kupima VVU 6. Sijaamua 7. Nyingineyo taja.....	

Sasa ningependa kuuliza kuhusu masuala ya kufanya ngono

30	Je, umeshawahi kufanya ngono?	1. Ndiyo 2. Hapana (nenda na.41)	
31	Je, ulikuwa na umri gani ulipofanya ngono kwa mara ya kwanza?	1. Miaka	
32	Mara ya kwanza ya kufanya ngono, ulitumia kondom?	1.Ndiyo 2. Hapana (nenda na.34)	
33	Kama ulitumia kondom ni kwanini?	1. Kuzuia mimba 2. Kuzuia magonjwa ya zinaa 3. Kuzuia UKIMWI 4. Nyingineyo	
34	Kama hukutumia kondom ni kwanini?	1. Sikupenda 2. Mpenzi wangu hakupenda 3. Sikuwa nimejiandaa 4. Sikuweza kugharamia 5. Nyingineyo	
35	Katika kipindi cha miezi 12 iliyopita, ulitumia kondom kila mara ulipofanya ngono?	1.Ndiyo 2. Hapana	
36	Katika kipindi cha miezi 12 iliyopita, umefanya ngono na watu wangapi?	Taja idadi.....	
37	Je, umewahi kufanya ngono na mpenzi mwenye miaka 10 zaidi yako?	1. Ndiyo 2. Hapana	

38	Je, mara ya mwisho ulipofanya ngono, wewe au mpenzi wako a) mlikunywa pombe? b) mlitumia madawa ya kulevya?	 1.Ndiyo 2. Hapana 1.Ndiyo 2. Hapana	
39	Je, mara ya mwisho ulipofanya ngono kondom ilitumika?	1. Ndiyo 2. Hapana	
40	Katika kipindi cha miezi 12 iliyopita, uliwahi kulazimishwa kufanya ngono wakati wewe mwenyewe hukuwa tayari?	1. Ndiyo 2. Hapana	

C. Kufahamu maoni ya vijana kuhusu uwezekano wao wa kupata maambukizi ya VVU

Sasa ningependa kuuliza kuhusu hatari ya maamubkizi ya VVU

41	Je unamfahamu mtu yeyote anayeugua au amefariki kwa ugonjwa wa UKIMWI?	1. Ndiyo 2. Hapana	
42	Kama ndiyo, je, taarifa hiyo ilikuathiri vipi?	Eleza.....	
43	Je, unajiona wewe binafsi kuwa unaweza kuambukizwa UKIMWI?	1. Ndiyo 2. Hapana (nenda na.45) 3. Sijui	
44	Kama ndiyo, je, uwezekano wa wewe kuambukizwa UKIMWI ni mkubwa kiasi gani?	1. Kidogo 2. Wastani 3. Mkubwa sana	
45	Kama unaona huwezi kuambukizwa UKIMWI, je, ni kwa sababu zipi?	Taja.....	
46	Je , unafikiri kuna makundi vya vijana wenye hatari kubwa zaidi ya kuambukizwa UKIMWI kuliko wengine?	Kama ndiyo , zitaje.....	

D. Kutambua maoni ya vijana kuhusu athari za UKIMWI

47	Je, unafikiri, UKIMWI ni tatizo kubwa la kiafya?	1. Ndiyo 2. Hapana 3. Sijui	
48	Je, UKIMWI una tiba?	1. Ndiyo 2. Hapana 3. Sijui	

E. Kutambua madai ya vijana kwa vizuizi vya mabadiliko ya tabia ya kufanya ngono kuelekea kupunguza maambukizi ya VVU

49	Je , unafikiri ni sababu zipi zinazoshawishi vijana kufanya ngono salama ili kuzuia UKIMWI?	Taja.....	
50	Je, unafikiri ni sababu zipi zinazozuia vijana wasifanye ngono salama ili kujizuia dhidi ya maambukizi ya UKIMWI?	Taja.....	

F. Kutambua mianya kwa vijana ya ufanisi binafsi wa kufanya tabia za uzuiaji wa UKIMWI

51	Je, unafikiri unaweza kufanya tabia ya ngono salama ili kuzuia maambukizi ya VVU?	1. Ndiyo 2. Hapana	
52	Je, unaweza kujadili matumizi ya kondom wakati wote na mpenzi wako wa kudumu?	1. Ndiyo 2. Hapana	
53	Je, unaweza kujadili matumizi ya kondom wakati wote na mpenzi wako wa muda?	1. Ndiyo 2. Hapana	
54	Je, unajiamini kiasi gani kwamba unaweza kutumia kondom kwa usahihi?	1. Najiamini sana 2. Najiamini kiasi 3. Sijiamini	
55	Je, unaweza kujadili masuala ya ngono na mpenzi wako kwa mfano kwenda kwenye kupimo cha VVU?	1. Ndiyo 2. Hapana	

G. Mapendekezo kuhusu njia za kuhamasisha vijana kujikinga na maambukizi ya VVU hapa Tanzania

56	Je, unafahamu mipango yoyote ya afya inayojihusisha na mapambano dhidi ya VVU /UKIMWI katika eneo unaloishi?	Taja.....	
57	Je, mipango hii inakubalika na vijana wa eneo hili?	1. Ndiyo 2. Hapana 3. Sijui	
58	Je, ungependekeza nani awe mratibu wa mipango hii ya afya inayopambana ya UKIMWI?	1. Mashirika yasiyo ya serikali 2. Mashirka ya dini 3. Mashirkia ya umma ya afya 4. Waelimishaji rika 5. Nyingineyo.....	
59	Je, umewahi kufundishwa kuhusu VVU/UKIMWI ukiwa shuleni?	1. Ndiyo 2. Hapana	
60	Je, umewahi kushirki katika klabu yoyote inayojihusisha na kutoa elimu ya kujikinga na UKIMWI ukiwa shuleni?	1. Ndiyo 2. Hapana	
61	Je, unafikiri ni njia zipi zitakuwa za manufaa zaidi katika kuwasaidia vijana kujikinga na VVU/UKIMWI?	Taja.....	
62	Je, ungependekeza njia gani itumike kusambaza ujumbe wa kuzuia VVU/UKIMWI kwa vijana?	1. Redio 2. Televisheni 3. Magazeti 4. Nyingineyo taja	

Asante kwa kushiriki kuchangia katika mikakati ya kusaidia kuepusha vijana na janga la UKIMWI.

ANNEXURE C: FOCUS GROUP GUIDE –ENGLISH

FACTORS INFLUENCING YOUTHS' PREVENTIVE ACTIONS AGAINST HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS IN TANZANIA

- Hello, my name is …… I am a researcher working with …… and currently participating in this study. Thank you all for coming today.

- The discussions you are about to participate in, are part of a research that wants to establish what factors determine HIV/AIDS prevention behaviours amongst the youths in Tanzania.

- You have been selected to participate in this study because you are seen as representative of the youths in Tanzania. Your participation in this study is purely voluntary; however, your views are important because the information obtained will be very useful in planning for youth health intervention programmes, which will enable the prevention of the spread of HIV in Tanzania.

- In front of you is the facilitator…… who will be conducting the discussions and the observer/recorder ……...who will be taking notes of all the discussions.

- The discussions will be conducted in the form of open-ended questions which will require the group to discuss freely, to give their opinions and even pose questions. In these discussions there are no right or wrong answers, so we urge all of you to respect each other's answers.

- If you are agreeable, the discussions will be recorded on audio tape because it is not always possible to write everything that has been said. The researcher will take responsibility to ensure that the information collected is kept confidential and will not be used for any other purposes other than for this study only.

This is how the focus group discussions will work:

  - these discussions will last for around an hour and a half
  - because of the need to tape record, it is important that only one person talks at a time
  - at certain times the observer will need to check a point with the facilitator so please be patient
  - try to keep one conversation in the group

- it is important that ALL participants give their opinion on each subject
- before we start, we will give each participant an identification number which will be used in place of names during the discussion to maintain your anonymity

A. Introduction

1. In your opinion, do you think the youths today have any health problems facing them?
    - If so name them……
    - Probe for HIV/AIDS as a health problem.

2. Do you see these health problems as being severe? If yes, which health problems are severe?

    - How severe do you think these health problems are and why?
    - Do the youths see HIV/AIDS as being a serious health problem? Why?

B. To assess the knowledge, attitudes and practices of HIV/AIDS prevention amongst the youths

We mentioned HIV/AIDS as one of the health problems affecting the youths; let us discuss this in detail.

1. What do you know about HIV/AIDS?
    - What causes AIDS……
    - What do you know about HIV/AIDS transmission……..
    - Probe for misconceptions on HIV transmission such as by witchcraft, by mosquitoes?

2. What are the main ways we can prevent HIV infections?

    - Which ways of HIV prevention, do you see as being more effective than others, and why?

    - Do you believe that HIV is really preventable? Why?

3. Let us look generally at what the youths think of various methods of preventing HIV infections.

3.1 What do the youth think of abstinence?

- Would the youth practice abstinence, if so why, if not why?

3.2 What is the opinion of the youths with regards to having one sexual partner to prevent HIV?

- Would the youths have one sexual partner, if so why?
- Would the youths rather have multiple partners, if so why?

3.3 What are the general attitudes of the youths regarding condom use to prevent HIV?

- Are the youths using condoms to protect themselves from HIV, if so why, if not why?
- Probe for any misconceptions about condom use (for example that condoms will break easily, will allow the virus to pass through, have been impregnated by the HIV virus).
- Are condoms readily accessible in this area? If so where can one find condoms and at what price?
- Do the youths always use condoms with their permanent partners?
- Do the youths always use condoms with their causal partners?

4. If someone wanted to get information on HIV/AIDS where would one go in this area?

5. Do the youths go to these centres that offer voluntary counselling and testing for HIV?

- If so, what would be your motivation to go for a HIV test?
- If not, why wouldn't the youths go for a HIV test?
- Do the youths find the services offered at the voluntary counselling and testing centres acceptable? If so why, if not why?
- Does the information given at the VCT centre help youths prevent HIV infections?

C. To determine the perceived susceptibility of the youths to HIV infection

1. Do you believe that as a member of the youth, you are at risk of HIV infection?

    - If so, are you at high, medium or low risk and why?

    - If not, why do you think you are not at risk of HIV infection?

2. Do you think there are sub-groups of youths who are more at risk of HIV infections than others? Differentiate the levels of risk between
    - in- school versus out-of-school youths
    - female youths versus male youths

D. To determine the youths' perceived barriers that impede sexual behaviour change towards prevention of HIV infections

We have talked earlier that the youths need to change behaviours towards abstinence; being faithful to one partner or using condoms at all times to prevent HIV infections. Studies have shown that the youths contribute up to 60% of the new HIV infections in Tanzania. With these new infections, it means the youth are not changing behaviour.

1. What do you think is preventing the youths from changing their behaviours to practice safe sex in order to prevent HIV?

    - Lack of knowledge about HIV/AIDS
    - Misconceptions about HIV/AIDS
    - Socio-cultural factors
    - Religious factors
    - Economic factors
    - Lack of education
    - Gender inequity
    - Alcohol and drug abuse

E. To identify the youths' perceived self-efficacy to enact HIV prevention behaviour

1. Do you as the youths think that you are capable to practice safe sex?

- Are the youths able to negotiate for safe sex with their permanent partner?
- Are the youths able to negotiate for safe sex with their casual partner(s)?
- Can youths negotiate for condom use at all times? Yes or no and why?
- Can the youths discuss sexual matters with their partners? Yes or no and why?
  (*Clarify sexual matters for example the need to be faithful, testing for HIV*)

2. For those who have undergone life skills training in schools, do you think the information you received has been relevant in helping the youths to prevent HIV once they are out of school? Yes or no, and why?

F. To determine the youth-appropriate measures for HIV prevention in Tanzania

1. Are you aware of any intervention programmes on HIV/AIDS in this area?
   List them…….

2. Can you give an evaluation of these intervention programmes? Are they youth-friendly?

- If so why, and what should be done to strengthen these programmes
- If not why, and what should be done to create youth-friendly programmes?

3. Who do you think should run the HIV/AIDS intervention programmes and why?

4. At what age should HIV/AIDS intervention programmes be introduced to the youths?

5. What settings would be appropriate for HIV/AIDS intervention programmes for both in-school and out-of-school youths?

Recap

Review the main concepts in each section.
Thank you very much.

ANNEXURE D: FOCUS GROUP GUIDE - SWAHILI

SABABU ZINAZOCHANGIA KUBADILISHA TABIA KWA VIJANA WA TANZANIA WENYE RIKA YA MIAKA 15 HADI 24 ILI KUZUIA MAAMBUKIZI YA VVU/UKIMWI
MWONGOZO WA MAJADILIANO

- Habari, jina langu ni …… mimi ni mtafiti kutoka ……. ila kwa leo nitakuwa ninashiriki nanyi kwenye majadiliano haya yanayohusu utafiti uliotajwa hapo juu. Ningependa kuwashukuru wote kwa kufika hapa leo.

- Majadiliano ya leo ni sehemu ya utafiti unaotaka kutambua ni sababu zipi zinazochangia kubadilisha tabia ya vijana wa Tanzania ili waweze kuzuia maambukizi ya VVU/UKIMWI.

- Mmechaguliwa kushiriki katika majadiliano haya, kwa sababu nyinyi kama vijana mtaweza kuwakilisha mawazo ya vijana wengine hapa Tanzania. Kushiriki kwenu ni kwa hiari; ila mchango wenu ni muhimu sana kwa sababu taarifa zitakazokusanywa zitatumika katika kutayarisha mipango mbalimbali ya afya kwa vijana zitakazosaidia kuzuia kusambaa kwa maambukizi ya VVU/UKIMWI hapa Tanzania.

- Mbele yenu kuna mwendesha mada .....ambaye atatuongoza katika majadiliano haya na vilevile tuna mwandishi ..... ambaye atanukuu maongezi yetu ili baadae tuweze kutengeneza taarifa kamili ya majadiliano yetu.

- Majadiliano yetu yatakuwa kwa mfumo wa maswali ambayo yataulizwa kwa kikundi chetu cha vijana, na kila mmoja ataombwa kutoa mtazamo wake kuhusu hoja iliyotajwa au kuuliza maswali . Katika majadiliano yetu hakutakuwa na jibu sahihi au lisilo sahili na tunaomba kila mmoja wetu aheshimu mawazo ya wenzake.

- Kama mnaafiki, majadiliano haya yatarekodiwa kwenye kanda kwa sababu siyo rahisi kwa mwandishi wetu kunukuu neno hadi neno litakalotajwa. Mtafiti wetu atachukuwa hatua ya kuhakiki kuwa taarifa zote zilizokusanywa kwenye mjadala huu zitakuwa za siri na hazitatumika kwa kazi nyingine yeyote mbali na kwenye utafiti huu.

Majadiliano haya yataongozwa ifuatavyo:

- majadiliano yatachukua muda wa takriban saa moja na nusu
- tutaomba mtu mmoja tu aongee kwa wakati mmoja ili taarifa ziwezekurekodiwa vizuri kwenye kanda
- tutaomba subira kwenu wakati mwandishi atataka kuhakii taarifa yeyote kwa mwendesha mada kabla ya kuendelea na mazungumzo
- tujaribu kuwa na mjadala mmoja tu kati yetu
- ni muhimu kila mshiriki atoe mawazo yake kuhusu hoja zote zitakazotajwa
- kabla ya kuanza, tutatoa namba kwa kila mmoja wetu hapa ambazo zitatumika kama majina katika majadiliano yetu leo, kwani majina halisi hayatatumika

A. Utangulizi

1. Kwa mtazamo wenu, je mnafikiri kuna matatizo yeyote ya afya yanayowaathiri vijana wa siku hizi?
    - Kama ndiyo, ni yapi?……
    - Kama ukimwi haukutajwa dodosa: UKIMWI je?

2. Je, matatizo hayo mliotaja, yana athari kubwa kwa vijana? Kama ndiyo ni yapi?

    - Je, athari hizo ni kubwa kiasi gani na kwanini?

    - Je, UKIMWI nao una athari kubwa?

B. Kutathmini kiwango cha ufahamu, maoni na tabia za kuzuia maambukizi ya VVU kwa vijana

Tuchukuwe ugonjwa wa UKIMWI kwa mfano na tuuzungumzie kwa undani zaidi.

1. Je, tunafahamu nini kuhusu VVU/UKIMWI?
   Dadisi:
    - Nini chanzo cha UKIMWI……
    - Je, ni jinsi gani mtu anaweza kuambukizwa na VVU/UKIMWI…….....
    - Dadisi kuhusu maoni potofu juu ya jinsi ya kuambukizwa na VVU/UKIMWI.

2. Je, ni kwa njia zipi kuu tunaweza kujikinga na maambukizi ya VVU?

- Kwa mtazamo wenu, ni njia zipi za kuzuia maambukizi ya VVU mnazoona kuwa za manufaa zaidi? Na ni kwanini?

- Kwa mtazamo wenu, UKIMWI unaweza kweli kuzuilika?

3. Tutafakari kuhusu maoni ya vijana dhidi ya njia kuu za kuzuia maambukizi ya VVU.

3.1 Vijana wana mtazamo gani juu ya kuacha ngono kabisa?

- Je, vijana wanaweza kuacha ngono ili kuzuia maambukizi ya VVU ? Kama ndiyo au hapana ni kwanini?

3.2 Vijana wana mtazamo gani juu ya kuwa na mpenzi mmoja tu aliyepimwa ili kuzuia maambukizi ya VVU?

- Je, vijana wanaweza kuwa na mpenzi mmoja tu aliyepima? Kama ndiyo ni kwanini?

- Je, vijana wanaweza kuwa na mpenzi zaidi ya mmoja? Kama ndiyo ni kwanini?

3.3 Vijana wana mtazamo gani juu ya matumizi ya kondom kama kinga dhidi ya maambukizi ya VVU?

- Je, vijana wanatumia kondom kujikinga na maambukizi ya VVU? Kama ndiyo au hapana ni kwanini?

- Dadisi kujua kama kuna mitazamo potofu kuhusu matumizi ya kondom. Vijana wanaonaje kuhusu matumizi ya kondom katika kujikinga na VVU?

- Dadisi (kwa mfano kwamba kondom zitapasukia ndani ya mwanamke, kondom zitapitisha VVU au kondom zina VVU).

- Je, kondom zinapatikana kwa urahisi kwenye maeneo mnayoishi? Ni wapi zinapatikana? Kwa bei gani?

- Je, vijana wanatumia kondom kila wakati wanapofanya ngono na wapenzi wao wa kudumu?

- Je, vijana wanatumia kondom kila wakati wanapofanya ngono na wapenzi wao wa muda?

4. Ni wapi mtu anaweza kupata taarifa za VVU/UKIMWI katika maeneo haya?

5. Je, vijana huwa wanaenda kwenye vituo vinavyotoa ushauri nasaha na kupima VVU?

    - Kama ndiyo, ni motisha gani itakayowafanya waende kupima VVU?

    - Kama hapana, kwanini vijana hawapendi kuenda kupima VVU?

    - Je, huduma inayotolewa katika vituo vya utoaji ushauri nasaha na kupima VVU vinaridhisha kwa vijana? Kama ndiyo au hapana ni kwanini?

    - Je, ushauri nasaha unaotolewa katika vituo hivyo huwasaidia vijana kujikinga na maambukizi ya VVU?

C. Kufahamu maoni ya vijana kuhusu uwezekano wao wa kupata maambukizi ya VVU/UKIMWI

1. Je, wewe kama kijana unafikiri kuwa uko kwenye hatari ya kuambukizwa na VVU?

    - Kama ndiyo, upo kwenye hatari kubwa, wastani au ndogo na kwa kwanini?

    - Kama sivyo, kwanini unafikiri kwamba haupo katika hatari ya kuambukizwa VVU?

2. Je, kuna vikundi vya vijana ambavyo mnafikiri vipo kwenye hatari kubwa zaidi ya kuambukizwa VVU? Tofautisha hatari hii kati ya

    - vijana waliopo shuleni na vijana walipo nyumbani
    - vijana wa kike na vijana wa kiume

D. Vizuizi vinavyozuia mabadiliko ya tabia ya kufanya ngono kwa vijana ambayo yangesaidia kupunguza kasi ya maambukizi ya VVU/UKIMWI

Tumeshazungumza kuhusu njia kuu za kuzuia maambukizi ya VVU. Ili kujikinga na VVU vijana ingefaa watumie njia mmojawapo. Hapa Tanzania, vijana wenye umri wa miaka 15 hadi 24

wanachangia asilimia 60 ya maambukizi mapya ya VVU kwa mwaka. Hii inamaanisha kuwa vijana bado hatujabadili tabia zetu.

1. Je, kwa mtazamo wenu, ni mambo gani yanayopelekea vijana kutobadilisha tabia ya kufanya ngono ambayo ingewasaidia sana katika kuzuia maambukizi ya VVU? Dadisi

Dadisi kuhusu:

- Kukosa ufahamu juu ya VVU/UKIMWI
- Imani potofu juu ya VVU/UKIMWI
- Sababu za kijamii au za kimila na desturi
- Sababu za kidini au za kiitikadi
- Hali duni ya maisha
- Ukosefu wa elimu
- Ukosefu wa haki sawa kwa wanawake
- Matumizi mabaya ya pombe na madawa ya kulevya

E. Kufahamu maoni ya vijana kuhusu uwezo wao wa kubadilisha tabia ya kufanya ngono ili kuzuia maambukizi ya VVU

Tumeongea kuhusu njia kuu za kuzuia maambukizi ya VVU; tungependa kujua maoni ya vijana kuhusu kama wanajiona wanao uwezo wa kutumia njia mmojawapo ya kuzuia VVU/UKIMWI

1. Je, vijana wanajiona kuwa na uwezo wa kubadili tabia zao za kufanya ngono ili kuzuia VVU?

- Je, kama vijana mnaweza kuzungumza kuhusu kufanya ngono salama na wapenzi wenu wa kudumu? Kwa vipi?

- Je, kama vijana mnaweza kuzungumza kuhusu kufanya ngono salama na wapenzi wenu wa muda? Kwa vipi?

- Je, mnaweza kuwaambia wapenzi wenu watumie kondom kila wakati? Kama ndiyo au hapana ni kwanini?

- Je vijana wanaweza kuzungumza kuhusu maswala ya kufanya ngono salama na wapenzi wao? Kama ndiyo au hapana ni kwanini?

(elezea: maswala ya kufanya ngono salama kama kupima VVU, kuwa na mpenzi mmoja mwaminifu)

2. Kwa wale ambao walipata mafundishio kuhusu afya ya kijamii wakiwa shuleni, je, mafundisho hayo yanawasaidia katika kujikinga dhidi ya maambukizi ya VVU mkiwa mmemaliza shule?

F. Mapendekezo kuhusu njia za kuhamasisha vijana kujikinga na maambukizi ya VVU/UKIMWI hapa Tanzania

1. Je, mnafahamu mipango ya afya hususan za kupambana na maambukizi ya VVU/UKIMWI katika maeneo yenu?

Itaje.....

2. Je, mnaweza kutoa tathmini ya mipango hiyo? Je inakubalika na vijana?

- Kama ndiyo, ni mambo gani yaboreshwe zaidi kwenye mipango hiyo?
- Kama hapana, kwanini, na ni mipango ipi tunayoweza kufanya ili iwe inakubalika kwa vijana?

3. Je, mngependekeza nani asimamie mipango inayopambana na maambukizi ya VVU/UKIMWI kwa vijana?

4. Je, ni umri upi mnaoona unafaa kwa vijana kuanza kupewa mafundisho ya kujikinga na maambukizi ya VVU?

5. Je, mipango hiyo ya kupambana na maambukizi ya VVU ingefaa ifanyike katika maeneo yapi ili kuwafikia vijana walioko shuleni na vijana walioko nyumbani?

1. **Marudio/ Angalizo**

Kupitia vipengele muhimu vilivyojitokeza kwenye majadiliano.

Asanteni sana.

ANNEXURE E: CONSENT FORM- ENGLISH

Structured Interview Consent Form

Date ……..

Title of the research

The factors influencing youths' preventive actions against human immunodeficiency virus infections in Tanzania.

You are invited to participate in this research project which is a survey that aims at examining the determinants of HIV prevention behaviours amongst the youths. Before you decide whether or not you want to take part in the research, it is important that you understand why the research is being done. Please read the information below carefully and sign if you consent to participate.

Background of the researcher

The principle investigator in this project is Dr Evelyne Assenga who is a student undertaking Master of Public Health, under the department of Health Studies at the University of South Africa (Unisa). The contact telephone number for the principal investigator, Dr. Assenga, is +255-784-781-001. She is under the supervision of Prof. Valerie J Ehlers, contact telephone: +27(0)12-429-6731.

Purpose of the research

The purpose of this research is to determine what factors influence the practice of HIV prevention behaviours amongst the youths in Tanzania.

Description of research

The research will require you as a respondent to answer questions of a personal nature in a private interview which should last for not more than 30 minutes.

Participation

Your participation in this research is purely voluntary and your decision to opt out of the research will be treated with respect. You have been randomly selected amongst the youths living in this area. This research will enrol a total of 375 youths in Arusha.

Potential harm

There is no known harm associated with your participation in this research.

Potential benefits

There is no direct benefit to you as a respondent; however, the information that is collected will be useful in developing policies and programmes that will help to prevent the spread of HIV amongst the youths in Tanzania.

Confidentiality

Confidentiality will be respected. The filling in of the structured interview schedules will be anonymous and there will be no place for personal identification so as to prevent the information being traced back to you. No information that discloses your identity will be released or published without your specific consent to the disclosure.

Publication

The findings from this research will be compiled and a copy of the dissertation will be sent to the respective district health officers for dissemination of the research results. The participants will also be informed when the research results will be published in both local and international journals and at no time will any repondent's identity be revealed in such publication.

Reimbursement

The researcher will reimburse you for the transport costs that you have incurred in order to come and participate in this research.

Consent

I have read and understood the relevant information above. I am aware that I may ask questions pertaining to this research in future. I have hereby consented freely to participate in this research interview by signing this research consent form.

Name of participant	Signature	Date
……..	…….	…….
Name of researcher	Signature	Date
……..	…….	…….

ANNEXURE F: CONSENT FORM -SWAHILI

Fomu ya Ridhaa ya Mahojiano

Tarehe ……..

Kichwa cha habari cha utafiti

Sababu zinazoshawishi tabia za ngono ili kuzuia maambukizi ya virusi vya UKIMWI (VVU) miongoni mwa vijana wenye rika la miaka 15 hadi 24, Tanzania .

Unaombwa kushiriki katika utafiti huu ambao ni uchunguzi wenye madhumuni ya kutathmini ni sababu zipi zinazochangia vijana wenye rika la miaka 15 hadi 24 kubadilisha tabia kuzuia maambukizi ya VVU/UKIMWI. Kabla hujaamua aidha kushiriki au kutoshiriki katika utafiti huu, ni muhimu kuelewa kwa nini utafiti huu unafanyika. Tafadhali soma vizuri na kwa makini maelezo hapo chini na kisha tia sahihi yako kama unaridhia kushiriki katika uchunguzi huu.

Taarifa za mtafiti

Mtafiti mkuu kwenye uchunguzi huu ni Dr Evelyne Assenga ambaye ni mwanafunzi katika daraja la mwisho la shahada ya pili katika Afya ya Jamii, kwenye kitengo cha masomo ya afya katika Chuo Kikuu cha Afrika Kusini (Unisa).
Namba ya simu ya mtafiti mkuu, Dr Assenga, ni +255-784-781-001
Msimamizi wake ni Prof. Valerie J. Ehlers, mwenye namba ya simu: +27(0)12-429-6731.

Madhumini ya utafiti huu

Madhumuni ya utafiti huu ni kutathmini ni sababu zipi zinazoshawishi tabia za kuzuia maambukizi VVU miongoni mwa vijana wa Tanzania.

Maelezo kuhusu uendeshwaji wa utafiti

Utafiti huu utakutaka wewe, kama mshiriki, kujibu maswali ya maisha yako binafsi katika usaili wa siri ambao utachukuwa muda usiozidi dakika thelathini.

Ushiriki

Ushiriki wako katika utafiti huu ni wa hiari kabisa na uamuzi wako wa kuchagua kuwa nje ya utafiti utaheshimiwa. Umechaguliwa katika mchakato wa nafasi sawa miongoni mwa vijana waishio katika eneo hili. Kwa ujumla, utafiti huu utaandikisha vijana 375 mkoani Arusha.

Uwezekano wa madhara

Hamna madhara yanayohusishwa na ushiriki katika utafiti huu.

Uwezekano wa manufaa

Hamna manufaa ya moja kwa moja kwako kama mshiriki ingawaje taarifa itakayokusanywa itasaidia katika kuunda sera na mipango ya afya itakayosaidia kuzuia kuenea kwa maambukizi ya VVU/UKIMWI miongoni mwa vijana wa Tanzania.

Usiri

Usiri utaheshimiwa. Dodoso zilizojazwa hazitatambulishwa na hakutakuwa na mahali pa utambulisho binafsi ili kuzuia habari zisioanishwe na wewe. Hakuna taarifa itatolewa au kuchapishwa ambayo itaweka wazi utambulisho wako bila idhini yako maalumu kupelekea uwazi.

Uchapishaji

Matokeo ya utafiti huu yataandikwa katika ripoti maalum itakayowasilishwa kwa maafisa wakuu wa afya na elimu wa wilaya husika ili waipitie na kuisambaza kwenu kwa kupita

ngazi za uongozi. Washiriki watafahamishwa endapo matokeo ya utafiti yatachapishwa katika majarida ya afya ya ndani na nje ya nchi, na kamwe hakutakuwa na utoaji wa taarifa za washirki katika uchapishaji wa ripoti.

Marejesho

Mtafiti atawarejeshea washiriki wote nauli waliotumia kufika na kushiriki katika utafiti huu.

Ridhaa

Nimesoma na kuelewa taarifa muhimu hapo juu. Ninafahamu kuwa ninaweza kuuliza maswali yoyote kuhusu utafiti huu kwa hapo baadae. Nimetoa ridhaa kwa hiari kushiriki katika utafiti huu kwa kutia sahihi yangu kwenye fomu hii.

Jina la mshirki	Sahihi	Tarehe
……..	……	……
Jina la mtafiti	Sahihi	Tarehe
……..	……	……

ANNEXURE G: ETHICAL CLEARANCE UNISA

UNIVERSITY OF SOUTH AFRICA
Health Studies Research & Ethics Committee
(HSREC)
College of Human Sciences

CLEARANCE CERTIFICATE

Date of meeting: **20 July 2009** Project No: **3643 658 5**

Project Title**:** **The determinants of HIV prevention sexual behaviours amongst the youths aged 15-24 years n Arusha region, Tanzania**

Researcher**:** **Dr EN Assenga**

Supervisor/Promoter**:** **Prof VJ Ehlers**

Joint Supervisor/Joint Promoter**:**

Department: **Health Studies**

Degree: **MPH (Master's degree in Public Health)**

DECISION OF COMMITTEE

Approved √ **Conditionally Approved** ☐

Date: **20 July 2009**

VJ Ehlers

Prof VJ EHLERS
RESEARCH COORDINATOR: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE H: LETTER OF APPLICATION FOR ETHICAL CLEARANCE

Dr. Evelyne N Assenga
P.O. Box 36312
Dar es Salaam

20-7-2009

The Director General
National Institute of Medical Research (NIMR)
P. O. Box 9653
Dar es Salaam

Dear Sir/ Madam

RE: Application for Ethical Clearance

The heading above is referenced.

I am a student undertaking a Masters in Public Health degree – Student ID 364-365-85, in the Department of Health Studies at the University of South Africa (Unisa). I am currently scheduled to undertake a research project as part of the fulfilment of the requirements of my degree course.

The research is titled; **The Determinants of HIV Prevention Sexual Behaviours Amongst the Youths Aged 15-24 years in Arusha region, Tanzania**, and is set to be conducted specifically in Karatu ward in Karatu district and Mto wa Mbu ward in Monduli district respectively.

I am hereby applying for ethical clearance with your Ethics Review Committee to enable me to proceed with the data collection phase that would help me to complete my dissertation. Please find enclosed four copies of my research proposal and the ethical clearance from the Unisa, for your review and approval.

It is my hope that my application will meet your favourable consideration

Yours faithfully

21/7/09

Dr. Evelyne Neema Assenga

ANNEXURE I: ETHICAL CLEARANCE NATIONAL INSTITUTE OF MEDICAL RESEARCH OF TANZANIA (NIMR)

THE UNITED REPUBLIC OF
TANZANIA

National Institute for Medical Research
P.O. Box 9653
Dar es Salaam
Tel: 255 22 2121400/390
Fax: 255 22 2121380/2121360
E-mail: headquarters@nimr.or.tz

Ministry of Health and Social Welfare
P.O. Box 9083
Dar es Salaam
Tel: 255 22 2120262-7
Fax: 255 22 2110986

NIMR/HQ/R.8a/Vol. IX/874

28th August 2009

Dr Evelyne N Assenga
C/O Dr Candida Mashiro
MUHAS, Department of Epidemiology and Biostatistics
P O Box 65015
DAR ES SALAAM

CLEARANCE CERTIFICATE FOR CONDUCTING MEDICAL RESEARCH IN TANZANIA

This is to certify that the research entitled: The determinants of HIV prevention Sexual Behaviors amongst the youths aged 15-24 years in Arusha Region, Tanzania (Assenga E N *et al*), has been granted ethics clearance to be conducted in Tanzania.

The Principal Investigator of the study must ensure that the following conditions are fulfilled:

1. Progress report is made available to the Ministry of Health and the National Institute for Medical Research, Regional and District Medical Officers after every six months.
2. Permission to publish the results is obtained from National Institute for Medical Research.
3. Copies of final publications are made available to the Ministry of Health and the National Institute for Medical Research.
4. Any researcher, who contravenes or fails to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine.
5. Approval is for one year: 28th August 2009 to 27th August 2010.

Name: Dr Mwelecele N Malecela

Signature

ACTING CHAIRPERSON
MEDICAL RESEARCH
COORDINATING COMMITTEE

Name: Dr Deo M Mtasiwa

Signature

CHIEF MEDICAL OFFICER
MINISTRY OF HEALTH, SOCIAL WELFARE

CC: RMO
DMO

ANNEXURE J: STATISTICIAN'S DETAILS

NAME:	**Candida Moshiro, PhD**
TITLE:	**Lecturer in Biostatistics**
CONTACT DETAILS:	**Muhimbili University of Health and Allied Sciences**
	School of Public Health and Social Sciences
	Department of Epidemiology and Biostatistics
	P. O. Box 65015
	Dar Es Salaam
Telephone:	**+255-784- 950- 071**
Email:	**cmoshiro@muhas.ac.tz,cmoshiro@yahoo.com**

ANNEXURE K: TRANSLATOR'S DETAILS

Halima Marijani,
Priorities Local AIDS Control Efforts
Muhimbili University of Health and Allies Sciences
P.O. Box 65466,
Dar-es- Salaam,
Tanzania.
Tel: +255-784-209-914

17-12-2009

Prof. Valerie J Ehlers,
Department of Health Studies,
University of South Africa,
Preller Street, Muckleneuk Ridge, City of Tshwane,
P. O. Box 392 UNISA 0003.
South Africa.

Dear Madam,

RE: Letter of Certification from the English Swahili Translator

The heading above is referenced.

This is to certify that I am a professional English-Swahili Translator. I received and translated the work from Dr. Evelyne N Assenga, Student No. 36436585; who is undertaking a Master in Public Health degree in the Department of Health Studies, at the University of South Africa.

I translated the structured interview schedule and the consent forms relevant to her study on; **"Factors Influencing Youths' Preventive Actions Against Human Immunodeficiency Virus Infections, in Tanzania**.

Yours faithfully
H Marijani
Halima Marijani