

**SOUTHERN NEW HAMPSHIRE UNIVERSITY
&
OPEN UNIVERSITY OF TANZANIA**

**EFFECTIVENESS OF HIV PREVENTION AND CONTROL STRATEGIES
AMONG SCHOOL ADOLESCENTS IN DODOMA URBAN DISTRICT**

**BY
VIOLET NDIBWIRE**

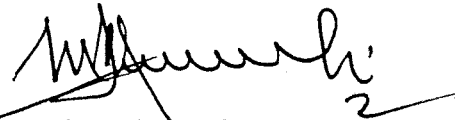
**A DISSERTATION SUBMITTED TO THE SOUTHERN NEW HAMPSHIRE
UNIVERSITY AND THE UNIVERSITY OF TANZANIA IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER
OF SCIENCE IN COMMUNITY ECONOMIC DEVELOPMENT**

SUPERVISOR: Prof. Japhet Ndaro

April, 2003

SUPERVISOR CERTIFICATION

This is to certify that I have gone through the dissertation for Violet Ndibwire titled **“EFFECTIVENESS OF HIV PREVENTION AND CONTROL STRATEGIES AMONG SCHOOL ADOLESCENTS IN DODOMA URBAN DISTRICT”** and found it in a form acceptable for the partial fulfillment of the requirements for the MASTER OF SCIENCE IN COMMUNITY ECONOMIC DEVELOPMENT of the Southern New Hampshire University and Open University of Tanzania.



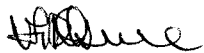
Prof. Japhet Ndaro

LECTURER: INSTITUTE OF RURAL DEVELOPMENT AND
PLANNING
DODOMA.

Date: April 24, 2003

DECLARATION:

I , VIOLET NDIBWIRE declare that, this dissertation for fulfillment of Master of Science Degree in Community Economic Development is based on my own efforts and solely done by myself unless where quoted for learning purposes it has been stated. This work has not been presented at any university or institution for similar purpose.



Violet Ndirwire

Date: April 25th, 2003

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DEDICATION

This work is dedicated to school youth whom I am really indebted to help as they are the very persons who need physical, social, moral and spiritual support from the society at large.

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I am obliged to give my sincere gratitude to all parties who in one way or another were involved in the production of this final project paper report. First of all I would like to extend my thanks to Dr Tagalala, the Regional AIDS Coordinator for Dodoma for his support especially for providing me with literature materials and encouragement he gave me during writing of this report.

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Lastly, I extend my appreciation to my family, particularly, the youngest son, Amani who missed my love and care when I was working in this research paper.

ABBREVIATIONS:

ACDP	AIDS Community Demonstration Projects (USA)
AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical and Research Foundation
CDC	Centers for Disease Control & Prevention (USA)
FAO	Food and Agriculture Organization
HBM	Health Belief Model
HIV	Human Immuno deficiency Virus
IEC	Information, Education & Communication
NACP	National AIDS Control Program
NIH	National Institute of Health (USA)
PCM	Prevention Case Management
REDESA	Relief and Development Services Association
SANOA	Say No to AIDS
STD	Sexually Transmitted Disease
TACAIDS	Tanzania Commission for AIDS
TAS	Tanzania AIDS Society
TOT	Training of Trainers
UNAIDS	United Nations Program on HIV/AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WVT	World Vision Tanzania

OPERATING DEFINITIONS

Case Management is defined as the provision for some greater continuity of care through periodic contact between case manager(s) and the client that provides greater (or longer) coordination and brokerage of services than the client could be expected to obtain without case management. (Orwin et al., 1994, p. 154).

Peer: A peer is a friend or acquaintance who is about the same age as you.

Peer Pressure: When people of your own age try to influence how you act, its called peer pressure

Adolescence: begins with the onset of physiologically normal puberty and ends when an adult identity and behavior are accepted. This period of development corresponds roughly to the period between the ages of 10 and 19 years.

Safer Sex: Is anything one does to lower the risks of getting a sexually transmitted infection.

Sex education: sometimes called sexuality education or sex and relationships education, is the process of acquiring information and forming attitudes and beliefs about sex, sexual identity, relationships and intimacy. It is also about developing young people's skills so that they make informed choices about their behavior, and feel confident and competent about acting on these choices.

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ABSTRACT

The study was conducted in Dodoma Municipal Council covering ten secondary schools. The aim of the study was to evaluate and analyze the HIV/AIDS interventions in secondary schools so as to determine effective HIV prevention strategies for behavior change among school adolescents. The specific objectives were also put forward. These were; to assess and analyze the level of HIV/AIDS knowledge among school adolescents, to find out why school adolescents are at risk of HIV infection, to analyze issues relating to sex, sexuality and HIV/AIDS among school adolescents, to assess and identify barriers to positive behavior change, to assess and analyze the roles of different individuals and social groups in influencing behavior change among the school adolescents, and to suggest effective methodology/strategies for behavior change among school adolescents.

Self administered questionnaires were used to obtain important information about HIV/AIDS and related issues among youth, particularly school adolescents. The questionnaires were completed by secondary school students of form I to VI. Interview guide was used for teachers and parents. Observations and past experiences were also part of the methodology in this study. The data collected were systematically organized in a manner that facilitated analysis. Quantitative analysis was anticipated, therefore the responses in the questionnaires were analyzed using Statistical Package for Social Sciences (SPSS). Descriptive statistics such as percentages and frequencies were also determined.

The majority of respondents were female (52.1%) while 47.9% were male.

Most of the respondents had knowledge about safer sex (70.6%) and what causes AIDS (97.5%). However, there were some misconceptions as reflected by 50.4% of the respondents who did not know whether breast milk can transmit HIV. Knowledge about modes of HIV transmission and how HIV can be prevented was found to be very high (95.8%). The high level of HIV/AIDS knowledge could explain the relatively higher rate of condom use (73.5%) during their last sexual encounter.

The study results reveal that 24.4% of the respondents had used condom consistently while 17.6% did use it inconsistently over the last one year. Despite the fact that school adolescents are now well informed about the risk of contracting HIV, they still practice unprotected sex. This was also revealed when asked whether they used condom in their last sexual encounter. Forty two percent of the total respondents had used it while 15.1% had not. It is obvious that the school adolescents are at risk though 97.5% know that one can contract HIV by having sex only once.

Results from the study reveal that school adolescents engaged in risky behaviors by having more than one sexual partners despite the fact that 82.4% of the respondents had mentioned that abstinence and fidelity (88.2%) were among the preventive methods.

The number of sexual partners was significantly associated with the number of times a respondent went out with a friend for a date or other social affairs ($p < 0.05$).

The study results also reveal that the school adolescents were aware that they are at risk of contracting HIV. When asked whether they can be infected, 36.1% indicated that they are likely while 6.7% said they are most likely to be infected

Though the study reveals that 74.8% feel close to their parents, more than half (58%) of the respondents do not talk freely about condom use.

There is no effective communication about sexual matters between teachers and students and between parents and children. This was reflected by 20.2% of the respondents who could talk freely with teachers and 7.6% with parents .

It was also revealed that the respondents confide in their peer group as it was discovered that 93.3% can talk openly with their peers about condoms. This means that even other issues related to sex or sexuality such as relationships and how to avoid pregnancy and STIs can be discussed freely.

The study shows that sexual experience is part of adolescence development as it is shown in table 6 that 60.6% of the total respondents had one to more than three sexual partners over the last one year.

Furthermore, the study reveals that 14.3% of the respondents are not confident to refuse sex if they do not want to. Also when asked whether they are confident enough to insist on condom use, only 35.3% male and 24.4 female agreed.

It was also revealed that 26.1% of the female reported to have less confidence while their counterpart is only 10.1% . This raises concern over the gender differentials where girls are not in the position to say no over sexual matter. They need to be trained on assertive skills early enough to be able to take responsibility of their own life, to take care of themselves and break the cultural barriers which insist women should be submissive before men.

There were wrong information /misconceptions that relationship between a girl and a boy should always involve sex. The study reveals that 7.6% believe that they have to try out

their manhood once they reach puberty. It is important not to delay providing information to young people but to begin when they are young. Basic information provides the foundation on which more complex knowledge is built up over time.

The responses also indicated that respondents are at risk and they are likely to contract HIV/AIDS. However, despite the fact that students know that unprotected sex is no longer safe, they continue to indulge in it, sometimes with multiple partners. These findings are consistent with a number of other reports in the literature.

Relationships among the young people are inevitable. However, we need to enhance the quality of relationships. We need to develop young people's ability to make decisions over their entire lifetime. Sex education that works, should contribute to this overall aim. The proposed behavior change model based on social learning theories was put forward in this study.

CHAPTER 1

1.0 INTRODUCTION

1.1 Introduction:

Like most of the Sub Saharan countries, Tanzania is also showing an upward trend of HIV infection. The overall prevalence of HIV infection among blood donors during 2001 was 11.01 percent as compared to 9.9 percent in 2000. As in the previous years, females had significantly higher prevalence than males. Prevalence among females was 13.7 percent while among males it was 10.4 percent. (NACP Report, 2001)

By estimation, based on prevalence among blood donors, it means that a total of 2,229,770 individuals (918,113 males and 1,311,657 females) aged 15 years and above were living with HIV in Tanzania during the year 2001. Of these, 1,867,561 (770,468 males and 1,097,093 females) were aged between 15-49 years. There is an increase of 3 percent of people living with HIV as compared to the figures in the year 2000. This shows that more people continue to be infected as a result of on going practices of unprotected sex in the community (Annex 4).

The predominant mode of HIV transmission has remained heterosexual constituting up to 78 percent of all infections during 2001. This proportion is similar to that of year 2000 which was 77 percent. Other contributing factors include mother to child transmission and blood transfusion. (NACP Report, 2001)

HIV/AIDS has been not only a health problem but also a major national crisis of great magnitude and impact. It has serious implications for both households and society at large. It leaves behind misery and poverty in the affected families. Over 70 percent of those infected fall between the age of 20 – 49 years. That means, the scourge drains away the human resource which is the basis for socio economic development of the country.

The education sector is among the sectors that have been seriously affected by the HIV/AIDS epidemic. The epidemic has led to decline in the quality of education as the epidemic takes its toll among teachers and students. (National Policy on HIV/AIDS Document, 2001). School children, adolescents and young adults are particularly vulnerable to HIV infection.

A wide range of preventive intervention activities including political advocacy and active involvement at the highest level has taken place. Tanzania AIDS Society (TAS) and Tanzania Commission for AIDS (TACAIDS) in collaboration with the National AIDS Control Programs in the Ministry of Health and Universities and other Higher Learning Institutions in the country, International Development Partners on AIDS, Community Based Organizations, Non Governmental Organizations, Civil Societies and government sectors have been engaging in one way or another in fighting against the epidemic.

Other actors have been involved in HIV/AIDS response through using different strategies in combating the epidemic. These strategies are being implemented at various levels and to different focus groups in some of the regions here in Tanzania. These include, supporting income generating activities, promotion of voluntary testing and counseling, ToT peer education training, establishment of youth centers, supporting orphans, screening of blood for HIV, strengthening of STD management, home based care for infected people and families and promotion of condom use. These actors include; TANESA, UNICEF, DATEX, GTZ, AMREF, WAMATA, UNAIDS, FPAT, WVT and USAID to mention a few.

Behavior change towards minimizing risk behavior has been one of the greatest challenges in this struggle against the HIV/AIDS epidemic. Some of the actors have even slowed down the pace to release funds for HIV/AIDS interventions fearing that their efforts will go down the drain. However, in some of the interventions, signs of behavior change have been noticed.

UNICEF reported that much emphasis should be put on the problems facing children. More than 60 percent of all new infections are in young people below the age of 25 years; over 70 percent of sexually active girls reported granting sexual favors in order to be able to meet basic daily needs; and 30 percent of all primary school pupils, 60 percent of secondary school students and 70 percent of out-of-school youth are sexually active. (The State of the World's Children 2003 Report)

REDESA is among the NGOs working on HIV/AIDS interventions in schools and other settings in urban and rural areas. Other NGOs in Dodoma, conducting various education activities include; Society for Women and AIDS in Africa, Tanzania Branch, Tanzania Home Economics Association (TAHEA), Religious Network on AIDS Control, CMCR and CARE. Others are Seventh Day Adventist Church, Diocese of Central Tanganyika and Village of Hope. The main interventions include; Information, Education, and Communication (IEC), counseling, orphan care, home care and income generation.

1.2 Background Information on HIV/AIDS in Tanzania/ Dodoma

By every definition, AIDS is the great plague of the 21st century. HIV has infected more than 50 million people around the world. AIDS already has killed more than 21 million people, surpassing tuberculosis and malaria as the leading infectious cause of death worldwide. (UNAIDS, AIDS Epidemic Update, December 2001). HIV/AIDS was first diagnosed in 1983 in Kagera Region. Since then, the HIV infection has been spreading very fast covering all regions in Tanzania. It is estimated that over 2 million people are infected with HIV, 70.5 percent of whom are aged between 25-49 years, and 15 percent between 15-24 years. More than 72,000 new born babies were HIV infected. Women are more vulnerable to HIV infection than men. Among the new infections in women, 69 percent were in the age of 15 to 24 years.

Although much effort has been put by national and international research institutions, availability of vaccine against the virus and potent cure for AIDS is still uncertain. So

far, what have been identified are the life prolonging drugs. Dodoma is among the regions where HIV infection is increasing at alarming rate . Prevalence of HIV infection among male and female blood donors increased from 2.8 and 4.8 percent in 1992 to 7.8 and 8.7 percent respectively in 2001. (Ministry of Health Tanzania Mainland: HIV/AIDS/STI Surveillance Report, 2001). Among the five districts that make up Dodoma Region, Dodoma Municipality is leading with a high infection rate of 13.2 percent of the blood donors screened.

This research project paper gives a critical analysis of the work done by an NGO known as Relief and Development Services Association (REDESA). It was registered as a local NGO under Tanzania Society Ordinance in the year 2001. The NGO focuses on fighting against poverty through promotion of self help projects, community development activities and through maximization of human resources, land and other natural resources. Another area of intervention is the provision of HIV/AIDS education in primary and secondary school and to the other target groups in the community at large.

It started its interventions in 2001 while mainly conducting HIV/AIDS prevention and control activities under the following components:

- Training of Trainers (TOT) where teachers have been trained on HIV/AIDS education and counseling who in turn train other teachers in their respective areas. The trained teachers also facilitate HIV/AIDS education to school children and school committees.

-Information, Education and Communication (IEC) materials were also distributed in different schools. These materials carry different messages that focus on raising awareness about HIV transmission.

-SAY NO to AIDS (SANO) health clubs is another approach used by REDESA emphasizing change of behavior among school youth. Teachers have organized and established these health clubs which meet and discuss their roles and HIV/AIDS related issues. Video shows, drama and HIV/AIDS awareness meetings were also conducted in some of the schools.

Though the organization has long term plans on implementing other interventions on environmental protection, micro enterprise development and relief and emergency, to date the organization has focused on provision of HIV/AIDS education. A total of 20 primary and 10 secondary schools have been reached in urban and rural settings. HIV/AIDS sensitization meetings and workshops have been conducted to pupils, school teachers and school committees apart from distributing some IEC materials to schools.

It is assumed that inadequate and inappropriate HIV/AIDS education for school children lead to increased rate of HIV transmission. Thus, without appropriate methods and techniques in fighting against spread of HIV/AIDS, meaningful and sustainable development cannot be attained as the epidemic will continue to drain human resources.

1.3 Statement of the Problem

HIV/AIDS is not only a health problem to mankind but it is also a threat to social economic status of the people. Since the AIDS cases were identified in Tanzania in 1983, there has been a rapid increase of HIV infection leading to the devastation of some of the areas in this country. The impact of the HIV/AIDS epidemic on our society is really catastrophic. Over 70 per cent of those infected are aged between 25-49 years, and the infection rate is higher among the younger in the group. This is the most productive age group upon which families and the nation depend for sustenance, production, and development. (National Policy on HIV/AIDS Document, 2001)

Of recent, it has been observed that AIDS really drains the human and institutional capacities that fuel sustainable development. Many teachers, doctors, nurses, and other technical people in whom the government has invested a lot, are dying of AIDS. Soon or later most of the institutions and different sectors of economy will face shortage of skilled and technical persons who could have contributed to the development of their respective countries. According to UNICEF, in 1999, it was estimated that 860,000 children lost their teachers due to AIDS, most of them in Kenya, Nigeria and South Africa. Zambia recorded 1300 teachers' deaths in the first 10 months of 1998, two thirds the number of new teachers trained annually. In the Central African Republic, almost as many teachers died between 1996 and 1998.

When FAO commissioned its first paper on the impact of HIV/AIDS on food security in 1988, the estimated number of infected people worldwide was set at 5 million. This figure was a challenge to the health and agriculture sectors (FAO Report, 2001). In areas hard hit by the epidemic, the need for health care is expanding massively at a time when the epidemic is claiming its heaviest toll among health workers. Consequently, the capacity of health systems to provide care is being eroded. Rural development and particularly food security has also been adversely affected because of the increasing demand on the income earning labor, household maintenance and child care while the productive age group is diminishing. FAO has estimated that in the 25 most-affected African countries, AIDS has killed seven million agricultural workers since 1985.

Knowledge/awareness on HIV/AIDS among different age groups is reasonably high in both urban and rural settings. About 98 percent of the adult population are now aware of HIV/AIDS and its mode of transmission. (MoH, HIV/AIDS Surveillance Report, 2001). But yet, HIV transmission is increasing at an alarming rate, in which case, young people are the most affected. The major question to ask, is whether adequate and appropriate HIV/AIDS/STIs education is delivered to respective groups. Furthermore, an important thing is whether the knowledge gained has any effect on people's behavior change, since it is how people behave, and not what they know, that drives the HIV epidemic. How then, can the attitudes and thinking processes that

drive people's behaviors be changed? This is the major question that will be investigated by focusing on selected schools in Dodoma Urban.

A number of visits have been made to REDESA NGO since March, 2002 discussing overall implementation of the project activities. It has been observed that strategies which are now used or will be used in future HIV/AIDS projects should be carried out in a more effective and integrated approach. As such, effective methodology for behavior change, should be developed particularly for school adolescents. One of the approaches used by REDESA is the formation of "SAY NO to AIDS" clubs, but the issue is how these clubs could be made effective as change agents. For the purpose of this study, therefore, evaluation research of the HIV/AIDS interventions have been conducted to provide the basis for our discussion.

1.4 Research Objectives

General Objective:

- The purpose of this study is to evaluate and analyze the HIV/AIDS interventions in secondary schools so as to determine effective HIV prevention strategies for behavior change among school adolescents.

Specific Objectives:

- To assess and analyze the level of HIV/AIDS knowledge among school adolescents.
- To find out why school adolescents are at risk of HIV infection
- To analyze issues relating to sex, sexuality and HIV/AIDS among school adolescents.
- To assess and identify barriers to positive behavior change
- To assess and analyze the roles of different individuals and social groups in influencing behavior change among the school adolescents.
- To suggest effective methodology/strategies for behavior change among school adolescents.

1.5 Research Questions/Hypotheses

- Proper and correct HIV/AIDS information contributes to adoption of safe and protective behaviors among school adolescents.

Indicators:

-Level of HIV/AIDS knowledge among school adolescents

-% of school adolescents practicing safer sex

% of school adolescents with risk behavior

- Psychological, Social and Cultural elements contribute to HIV risk and protective behaviors.

Indicators:

% of school adolescents with positive minds towards desired behavior

% of school adolescents close to parents

% of school adolescents with open discussion with parents/teachers

Level of confidence among school adolescents

% of school adolescents engage in social evening activities

% of school adolescents who are likely to contract HIV

% of adolescents, parents and teachers with positive attitudes about sexuality.

1.6 Rationale and Significance of the Study

It is 20 years now since the HIV/AIDS epidemic was once heard in Tanzania. Since then, the HIV transmission has been increasing at a fast rate affecting all age groups

despite the fact that about 98 percent of the population is aware of HIV/AIDS. HIV/AIDS is of great concern to the education sector. It will affect the quality of education. The number of school entrants will be lower than would be the case in the absence of AIDS. This change in numbers will, overtime, work its way up the educational system. At the most basic level it will increase morbidity and mortality, particularly among young adult populations; decrease life expectancy; and increase infant and child mortality rates.

School adolescents and youth are subject to a number of factors contributing to HIV infection. They are the most sexually active and affected group in the community. Whilst many adults have some information about HIV, they are unlikely to discuss HIV with children because of cultural and religious barriers. The unwillingness among parents to talk with their growing children about physical changes in the body, acceptable norms of behavior, love affairs and safe sex education, contributes to the spread of HIV in adolescents.

Children often think that they have no right to refuse sex, especially if it is requested or demanded by men who are having relations with their mothers and are providing the family with basic needs. Incidents of teachers asking to have sex with their own pupils are believed to be common.

Studies have shown that school children are not well informed on HIV/AIDS. During a short interview on how much they know about HIV/AIDS, the great majority of children said that no adult had ever discussed it with them. Studies conducted among Dar es Salaam primary schools suggested that 45% of children have sex with another person before completing the primary school level. (CCBRT-HIV/AIDS School Education Action Days Report, 2002)

As such influencing behavior change among the youth will definitely rescue most of their lives and hence reduce the negative impact of HIV/AIDS to a greater extent. The study also presents various views and experiences around HIV prevention strategies.

1.7 Scope and Limitations of the study.

The study was done in a relative short period of time (March, 2002 to January, 2003). It was based on visiting a local NGO known as REDESA and assessing what is being implemented so as to provide technical assistance, leading to local capacity building. This NGO is taking part in provision of HIV/AIDS education in 20 primary and 10 secondary schools in Dodoma urban and rural areas. Out of the 30 schools, 10 secondary schools were selected for the purpose of this study. Out of 120 questionnaires distributed 119 (99%) were completed by students. Teachers and parents also took part in the focus group discussion so as to get their views with regard to school adolescents behavior.

Due to limited financial resources this study was confined to Dodoma Urban District only. The primary schools in the rural area were not investigated.

CHAPTER II

2.0 LITERATURE REVIEW

2.1 Introduction

The review is based on empirical sources and theoretical papers where a number of books, publications and journal articles have been cited. Also articles (electronic) from the web site are cited.

2.2 Theoretical Review:

2.2.1 HIV/AIDS knowledge and awareness

Since 1994, the standard indicator recommended by the World Health Organization (UNAIDS; Measure Evaluation Bulletin, 2001, No. 2) to track public awareness of AIDS and knowledge about AIDS has been the number of people citing at least two acceptable ways of protection from HIV infection, divided by the total number of people aged 15-49 surveyed.

Some of the questions used and thought appropriate in different surveys were whether “People can protect themselves from HIV/AIDS” in certain ways. They were then read a list of statements and were prompted to say whether each statement was true or false. The prevention strategies considered “acceptable” were “staying with one faithful partner” and “using condoms during sexual intercourse.” Responses to false statements included in the list (such as avoiding public toilets) were not included in any indicator. (UNAIDS/Measure Evaluation Bulletin, No. 2)

Some other surveys took a similar approach, but included abstinence among the correct methods for avoiding HIV. In addition, some surveys simply asked how HIV could be avoided and recorded spontaneous responses, rather than prompting for responses. However, two decades into the epidemic, several things are clear. First, virtually everyone in countries badly affected by HIV knows about AIDS and the virus that causes it. There are still various pockets of ignorance, principally among young and old women in rural areas, but knowledge of HIV is probably better than knowledge of any other health condition. Secondly, knowing that abstinence or condom use prevents HIV does not automatically translate into safe sexual behavior. Similarly, knowing that smoking causes lung cancer, may not necessarily stop teenagers from taking up smoking. Third, correct knowledge absorbed from public information campaigns is mixed up with incorrect knowledge based on rumor, superstition, traditional belief systems and occasionally even deliberate, misinformation campaigns by those opposed to condom use or other HIV prevention strategies. These problems call into question the value of knowledge indicators. In the first place, it hardly seems worth measuring something that goes from 96.1% to 97.2%. (UNAIDS; Measure Evaluation Bulletin Report, 2001). That is especially true if that knowledge doesn't seem to have any effect on people's behavior anyway, since it is how people behave, and not what they know, that drives the HIV epidemic. How then, can the attitudes and thinking processes that drive people's behaviors be measured?

2.2.2 Education programs/Strategies

It has been determined that education programs have impact on the people's behavior although they face a daunting challenge. A large number of forces encourage youth to engage in sexual activity, including unprotected sexual activity (e.g. changing hormones, emotional and physical needs and desires, desires to be an adult and to take risks, ambivalence about becoming pregnant or producing a pregnancy, peer pressures, norms promoting sexual risk-taking, and the omnipresent inaccurate portrayal of sex in the media). In addition, it is known that significant underlying factors, such as the many manifestations of poverty and family and community disorganization, are related to sexual risk-taking behavior, as is detachment from parents or school and lack of a belief in the future (Kirby, 2001). Thus, it may not be reasonable to expect that relatively short educational programs can overcome all these other factors and have a very dramatic impact upon sexual risk-taking behavior.

It was also cited by (Kirby, 2001) that most kinds of educational instruction are evaluated by assessing the impact of instruction upon knowledge, not upon behavior outside of school. For example, history or civics classes are not evaluated by measuring their impact on voting, law breaking, or better citizenry. In contrast, when researchers evaluate the impact of sex or HIV instruction upon sexual or contraceptive behavior, they use dramatically more challenging criteria: changing sexual or contraceptive behavior. So there is a need to use these more demanding criteria to track any impact in these programs.

There are more than 60 studies that have used experimental or quasi-experimental designs with sample sizes of at least 100 to examine the behavioral impact of school and community education programs that specifically focus on the reduction of sexual risk-taking behavior among adolescents 18 years old or younger (Kirby, 2001). For statistical reasons, it was difficult, if not impossible, for most of these studies to measure the impact of programs upon actual rates of HIV or other STD infections. However, it was possible to measure the impact upon behaviors that are logically related to HIV and STD infection rates: age of initiation of intercourse, frequency of sexual activity, number of sexual partners, condom use, and contraceptive use.

The Effective Program and Research Task Force of the National Campaign to Prevent Teen Pregnancy in U.S has reviewed the evidence for the effectiveness of programs in reducing sexual risk-taking behavior, and has identified five programs with particularly strong evidence for success in delaying sex or increasing condom use (St. Lawrence, 1994; Barth, 1996; Coyle & Fetro, 1998; Jemmott, 1998). These five include:

- Becoming a Responsible Teen: An HIV Risk Reduction Intervention for Adolescents
- Making a Difference: An Abstinence Approach to STD, Teen Pregnancy and HIV/AIDS Prevention
- Making Proud Choices: A Safer Sex Approach to STDs, Teen Pregnancy, and HIV/AIDS Prevention

-Reducing the Risk: Building Skills to Prevent Pregnancy, STDs, and HIV

-Safer Choices: Preventing HIV, Other STDs, and Pregnancy.

When these five curricula and other curricula having significant positive behavioral outcomes are compared with curricula without such positive behavioral results, the effective curricula share ten characteristics, which may be linked to their success, whereas ineffective curricula lack one or more of these characteristics. Effective programs focused on reducing one or more sexual behavior that lead to unintended pregnancy or HIV/AIDS infection. Specific behavioral goals such as delaying the initiation of sexual intercourse or using condoms or other forms of contraception were focused. Relatively little time was spent addressing other sexuality issues, such as gender roles, dating, or parenthood.

Effective programs were based on theoretical approaches that have been demonstrated to be effective in influencing other health-related risky behaviors. Such approaches include social cognitive theory (Bandura, 1986), social influence theory (McGuire, 1972), social inoculation theory (Homans, 1965), cognitive behavioral theory (Bandura, 1986), theory of reasoned action (Fishbein & Ajzen, 1975) and theory of planned behavior (Landry, Kaeser & Richards, 1999). These theories recognize the fact that the beliefs and values of youth are influenced directly through observing the behavior of others and the consequences that befall them. In addition, social influence theories address societal pressures on youth and the importance of

helping young people understand those pressures and resist the negative ones. Thus, these programs strive to go far beyond the cognitive level; they focus on recognizing social influences, changing individual values, changing group norms and perceptions of those norms, and building social skills.

The effective programs did not simply lay out the pros and cons of different sexual choices and implicitly let the students decide which was right for them; rather, most of the curriculum activities were directed toward convincing the students that abstaining from sex, using condoms consistently, or using other forms of contraception consistently was the right choice, and that unprotected sex was clearly an undesirable choice. To the extent possible, they tried to use group activities to change group norms about what was the expected behavior.

Effective programs provided basic, accurate information about the risks of teen sexual activity and about methods of avoiding intercourse or using protection against pregnancy and STDs. They emphasized the basic facts needed to persuade young people to avoid unprotected sex, and they provided information that would lead to changes in beliefs, attitudes, and perceptions of peer norms.

Effective programs included activities that address social pressures that influence sexual behavior. These activities took a variety of forms. For example, several curricula discussed situations that might lead to sex.

Effective programs provided modeling of, and practice with, communication, negotiation, and refusal skills. Typically, the programs provided information about skills, demonstrated the effective use of those skills, and then provided some type of skill rehearsal and practice (e.g. verbal role-playing and written practice). Some curricula taught different ways to say “No” to sex or unprotected sex, how to insist on the use of condoms or other methods of contraception, how to use body language that reinforced the verbal messages, how to repeatedly refuse sex or insist on condom use, how to suggest alternative activities, and how to help build the relationship while refusing unprotected sex or refusing to have sex at all. Although all effective curricula gave some attention to skills, there were significant variations in the quality of activities designed to teach skills and also in the time devoted to practicing the skills.

Effective programs employed a variety of teaching methods designed to involve the participants and encourage them to personalize the information. Instructors reached students by engaging them in the learning process, not through didactic instruction. Students were involved in numerous experiential classroom and homework activities, such as small group discussions, games or simulations, brainstorming, role-playing, written exercises, verbal feedback and coaching, interviewing parents, locating contraception in local drugstores, and visiting or telephoning family planning clinics. All of these activities improved student involvement in the program, promoted active

awareness of the issues, and helped students integrate the information into the context of their own lives.

Effective programs incorporated behavioral goals, teaching methods, and materials that were appropriate to the age, sexual experience, and culture of the students. For example, programs for younger adolescents focused on delaying the onset of intercourse. Programs designed for high school students, some of whom had engaged in intercourse and some had not, emphasized that students should avoid unprotected intercourse; that abstinence was the best method of avoiding unprotected sex ; and that, if students did have sex, condoms should always be used.

2.3 Empirical Review:

2.3.1 Sexual debut among sexually active students

A study conducted in Mtwara and Makete Districts in southern Tanzania (Muhondwa, 1999) revealed that both school and non-school adolescents were sexually active and their sexual activity ranged from flirtation to high risk sexual practices such as unprotected anal sex. However, different literature reviews indicate different age at which students initiate sexual debut.

Another research done by Matasha et al (1996) in four communities of Mwanza region, in northern Tanzania reported that out of 892 primary and secondary school respondents, 80% of primary school boys and 68% of girls were sexually active while in secondary schools they were 89% for boys and 48% for girls. Vaginal sex was the

most common first sexual act reported by secondary school pupils and those in primary schools had practiced orogenital sex (40%) and anal sex (9%) as their first sexual act.

Similarly, findings from the study conducted among 1689 Zimbabwean teenagers in secondary schools showed that the mean age at first intercourse was 13 years for boys and 15 for girls (Njau, Mbizvo, Kasule and Gupta, 1985), while Kekovole et al (1997) reported that the mean age for the first sexual intercourse among adolescents and young people in Kenya was 14 years for males and 15 years for females.

Also findings from the study conducted among 416 men (mean age 32.2) and 498 women (mean age 30.8) in Mara region, Northwest Tanzania (Konings et al., 1991), reported that the mean age at first sexual intercourse was 15.8 years for men and 14.9 years for women. The majority of women reported to have had begun sexual activity between the age of 14 and 16. Most older men had their sexual debut at the later age than younger men. Mean age at first intercourse declined from 16.8 years in the 40-49 years old to 13.8 years in the 15-19 years olds.

The studies show that young people particularly school adolescents engage in sexual act at much younger age than it was previously done by older people. This places the young people at much higher risk of contracting HIV because they may not have been competent in negotiating for safer sex. It was pointed out by Zabin and Hayward (1993) that younger age at sexual intercourse is associated with lower rate of condom

use. Young adolescents may also be less responsive to interventions targeting sexual risks due to a tendency among young people to look at the HIV problem as a 'monster' away from them.

The most susceptible group to HIV/AIDS and other social economic problems fall under the age group 14- 25 years (Kapinga et al; 1993). Thus HIV/AIDS education and preventive measures should particularly be directed to school children.

Young people's involvement in unprotected sexual intercourse is among the reproductive problems in Tanzania (Lugoe, 1996). Students appear to be similar to those in the general youthful population, that they have premarital sex (Kapinga et al ; 1991)

2.3.2 Behaviors of Condom Use among School Adolescents

According to the Health Belief Model (HBM) sexually active students who feel susceptible to the disease are likely to adopt a preventive measure or behavior that reduces their susceptibility (Gerrard, Gibbons, Warner and Smith, 1993). For instance, the study by Hingson, Strunin, Berlin and Heeren (1990) found that, adolescents who were most likely to say that they always used condoms were those who felt susceptible to HIV infection. Similarly, different studies by Vardissieriet et al (1988) cited in Lugoe (1996) found a positive correlation between perceived susceptibility and HIV preventive behaviors. The assumption from these findings

was that, people who think that they are likely to be infected, might adopt preventive behaviors such as using a condom consistently and correctly.

Some of the African studies in relation with HIV/AIDS prevention have used the variables of HBM. Meekers et.al, (1997) employed components of the HBM to examine the extent to which the components of HBM anticipated the condom use behavior among the adolescents in Botswana. Perceived susceptibility of HIV infection was found to predict condom use behaviors. Similarly, a study conducted among Zimbabwean adolescents (Wilson and Lavelle, 1993), revealed that condom use behavior was associated with perceived susceptibility to HIV infection.

A cross-sectional survey (N = 601) among Ghanaian adolescents (Adih and Alexander, 1999), revealed that subjects who perceived high level of susceptibility of HIV infection were almost six times more likely than others to have used condoms at the most recent sexual encounter.

Again studies done in Tanzania had explained pupils' HIV risk behavior in terms of the existing gap between cognitive variables and HIV preventive behaviors (Nnko, et al., 1992; Elbadawi, 1992; Ndeki, Klepp & Mliga, 1994). The cognitive variables used in these studies are mostly constructs from the health belief model (Janz & Becker, 1984). The model postulates that individuals are likely to protect themselves against HIV infection if they have knowledge of HIV/AIDS, believe that they are

prone to HIV infection, the consequences of infection are severe, that preventive measures are effective, experience cues to action and perceive few barriers to action.

Among sexually active students in grades 9-12 in 2001, 58% reported using a condom the last time they had intercourse (Grunbaum, 2002). This percentage is two to three times higher than those reported in the 1970s before AIDS became a public issue (Michael, Gagnon, Lauman, et al. 1994). This increase over time suggests that the emergence of AIDS in public campaigns to prevent AIDS through increased condom use have actually increased condom use.

However, condom use varies with urban area, age, ethnicity, gender, and involvement in other risk-taking behaviors, and this national average obscures wide variations in different groups. In young people, for example, condom use declines with age, and is higher among African-American than European-Americans (Michael, Gagnon, Lauman, et al. 1994).

Although many adolescents have used a condom at some point in time, comparatively few use them during every act of intercourse. In 1995, only 44% of 15 to 19-year-old males used a condom during every act of intercourse during the previous 12 months (Moore, Driscoll, Lindberg, 1994).

2.3.3 Behavioral Change

At present, the most effective way to prevent or reduce the spread of HIV/AIDS is through behavior change. The majority of AIDS cases globally result from two activities: unprotected sexual intercourse with an HIV infected person and the use of HIV contaminated injection drug equipment. The primary goal of HIV/AIDS interventions or programs is to facilitate change of behavior that leads to HIV transmission, including preventing their initiation and how to maintain protective behaviors once they are adopted. An additional goal is to reduce the negative impact of AIDS infected individuals, their families, the health care system, and society.

National Institutes of Health (NIH) supported research conducted in New York City demonstrated that behavioral change can successfully prevent or reduce the spread of HIV infection in both domestic and international settings. Preventive programs resulting from such studies have altered sexual and drug using behaviors and have reduced the risk of transmission in many communities and subgroups. In the past 15 years, much has been learned and accomplished in the area of HIV/AIDS prevention through behavior change interventions. Theory driven intervention models have been developed and employed by researchers supported by NIH in USA, and have demonstrated that preventive interventions work, even among “hard to reach” and socially deprived populations.

Delaying the onset of sexual behavior and dissuading youth from engaging in drug use also have been important HIV prevention strategies developed and tested by NIH researchers. In one study, 89 percent of abstinent youth who received HIV information and a skills training intervention delayed initiation of sexual activity for one year post intervention, compared with 68 percent of those who received only the HIV information.

NIH-supported researches have also shown that in order to be successful, preventive interventions must be targeted to specific populations and must take into account the cultural and social contexts of different people's lives. There are specific elements of psychological, social and cultural life that contribute to HIV risk and protective behaviors and that must be addressed in interventions.

Studies of decision making processes have identified psychological factors, knowledge, attitudes, and behavioral intentions as important in leading to behavior change among individuals. Most of these approaches focus at one point in time or at one stage of life. However, HIV risk and behavior change may be experienced differently by people at different stages of development and different points in their lives. This suggests the importance of including a developmental and a life course perspective in HIV prevention and intervention research. (AIDS Research, NIH-U.S. Department of Health and Human Services, 1996)

Moreover, it has become apparent that the social nature of HIV risk behavior requires a broader focus than merely on the individual. Research has demonstrated the significance of partners, social networks, families, and peer groups in influencing an individual's engagement in or avoidance of risk behavior. For adolescents research has determined the important role both parents and peers play in decisions to initiate or postpone sexual activity.

The CDC AIDS Community Demonstration Projects (ACDP) was a 5-year study (1989-1994) that evaluated the impact of a community-level HIV prevention intervention. The goal of the intervention was to promote consistent condom and bleach use among injection drug users, female sex partners of injection drug users, female commercial sex workers, at-risk youth, and non-gay-identified men who have sex with men. The ACDP study was conducted in Dallas, Texas; Denver, Colorado; Long Beach, California; New York; and Seattle, Washington. Research teams in these cities collaborated with the CDC and external consultants to develop the intervention.

The ACDP intervention was based on the stages-of-change model, which recognizes that behavior change is a process and takes time. The intervention was also based on an integrated model of behavior change that provided a foundation for the intervention design and evaluation. The intervention had three key components:

Peer Volunteer Networks: Community members were mobilized to distribute and verbally reinforce prevention materials among their peers.

Role Model Stories: “Small media” materials were developed for distribution, these featured theory-based prevention messages drawn from the real-life experiences from community members.

Environmental Facilitation: Condoms and bleach kits were made readily available to community members.

Near the end of the intervention, 54% of target population members had shown behavior change towards adoption of health sexual practices. (National Center for HIV, STD and TB Prevention; Intervention Research and Support; Atlanta, Georgia, 1999)

HIV prevention case management is a hybrid intervention derived from individual HIV risk-reduction interventions and case management. Individual-level HIV interventions have been effective in changing risk behavior (Choi & Coates, 1994; Kalichman, Carey, & Johnson, 1996). Individual interventions have reduced HIV risk behavior in a variety of populations, for example, adolescent and adult heterosexuals, gay and bisexual men, and adults with serious and persistent mental illness. Furthermore, these intervention strategies have worked in a variety of settings

such as counseling and testing sites, methadone maintenance clinics, and shelters. For example, a recently completed CDC study of heterosexual STD clinic patients found significant decreases in STD rates for persons receiving either a two-session or a four-session client-focused counseling intervention (Kamb et al., 1997). Behavioral interventions also have facilitated change in areas other than HIV, such as smoking, diet, exercise, and adherence to treatment for tuberculosis and other diseases.

In addition to individual-level HIV interventions, case management is widely acknowledged to be an important intervention with the potential to address a wide range of social ills (Rothman, 1992). Since the 1970s, when case management first became widely used for persons with serious mental illness, it has been applied to an increasingly broad array of populations to address an increasing variety of problems (Falck et al., 1994). By adding a case management component to HIV risk-reduction interventions for persons having, or very likely to have, difficulty initiating and sustaining safer behavior, CDC posited that risk-reduction efforts might be more effective.

Generally, case management involves locating and pooling resources, sequencing and coordinating services and resources to respond to assessed needs, and monitoring the service delivery and service needs for a defined group of people (Baldwin & Woods, 1994; Loomis, 1988). No established procedure exists for providing the activities that may be part of case management (Graham & Birchmore Timney, 1990). Although

these activities have been grouped in many ways, the following six core case management tasks seem most relevant for Prevention Case Management (Brennan & Kaplan, 1993; Intagliata, 1982; Piette et al., 1990; Rothman, 1991, 1992):

- Client identification, outreach, and engagement
- Medical and psychosocial assessment of need
- Development of a service plan or care plan
- Implementation of the care plan by linking with service delivery systems
- Monitoring of service delivery and reassessment of needs
- Advocacy on behalf of the client (including creating, obtaining, or brokering needed client resources).

Uganda is considered to be one of the world's earliest and best success stories in overcoming HIV. Uganda has experienced substantial declines in prevalence, and evidently incidence, during at least the past decade, especially among the younger age cohorts. The decline is attributed to a number of factors including high level of political support, decentralized planning and implementation for behavior change communication (BCC). Interventions addressed women and youth, stigma and discrimination, involvement of religious leaders and faith based organizations, effective voluntary counseling and testing and effective management of sexually transmitted infection were also considered (Case Study; What Happened in Uganda by; Green, E. Nantulya, V. Stoneburner, R. and Stover, J. (2002)

2.3.4 HIV Risk taking behavior

Many adolescents engage in sexual intercourse with multiple partners and without condoms. Thus, they engage in sexual behaviors that place them at risk of sexually transmitted diseases (STDs), including HIV. Among sexually experienced people, adolescents aged 15 to 19 years have some of the highest reported rates of STDs. In addition, particular groups of adolescents (e.g. males who have sex with males, injection drug users, and teens who have sex for drugs) engage in even greater risk-taking behavior. Consequently, an estimated 25% of all people with HIV in the United States contracted HIV when they were teenagers (Office of National AIDS Policy; Youth & HIV/AIDS: An American Agenda. Washington DC, 1996). Accordingly, professionals concerned with adolescents have developed school and community programs to reduce adolescent sexual risk-taking behavior. Some of these programs have been effective at changing behavior, while others have not.

Among students in grades 9-12 across the U.S. in 2001, 46% reported ever having had sexual intercourse. About 61% reported having sex before they graduated from high school. Although most teenagers practice serial monogamy and do not have sexual intercourse with more than one sexual partner during any given period of time, their numbers of sexual partners do add up over time. Among U.S. high school seniors in 2001, about 22% had had sexual intercourse with four or more sexual partners. (Grunbaum, Kann, Kinchen, Williams, Ross, Lowry, Kolbe, 2002).

2.3.5 Sex Education

Throughout the United States, there has been and continues to be widespread support for sexuality and HIV education in schools. For example, four national Gallup polls conducted between 1981 and 1998 revealed continual increases from 70% in 1981 to 87% in 1998 of American adults who believed that public high schools should include sex education in their instructional programs (Rose & Gallup, 1998). Similarly, a 1999 Hickman-Brown national opinion poll found that 93% of adults supported sexuality education in schools (Haffner & Wagoner, 1999). Widespread support extends to education on topics such as condoms (90%) and other forms of contraception (87%). Because of this support, some sex and HIV education programs are implemented with relatively little controversy.

On the other hand, there are sex and HIV education controversies in many other communities and entire states. Often these controversies focus on whether only abstinence should be taught in schools or whether condoms and other forms of contraception should also be discussed. In some communities, proponents of abstinence-only approaches are willing to discuss condoms and other forms of contraception, but only if their failure rates are emphasized. Other groups believe that condoms and contraception should be covered in a medically accurate manner.

CHAPTER III

3.0 RESEARCH METHODOLOGY

3.1 Introduction

Self administered questionnaires were used to obtain important information about HIV/AIDS and related issues among youth, particularly school adolescents. Each item in the questionnaire was developed to address a specific objective or hypothesis of the study. The questionnaires were completed by secondary school students of form I to VI. Interview guide was used for teachers and parents. Observations and past experiences were also part of the methodology in this study.

3.2 Research Design

The study is designed in the form of case studies from among primary and secondary schools covered by REDESA. In other words, not all schools under the project in Dodoma rural and Dodoma urban districts have been included in this investigation.

3.3 Units of Inquiry

The major unit of inquiry was Dodoma Urban District. Among the two sub-units of inquiry, secondary and primary schools under the REDESA project, only secondary schools were focused. Respondents from this sub-unit came from students, teachers and parents.

3.4 Sampling Techniques

Purposive sampling has been used to select major units of inquiry and sub-units of inquiry for the study because of easy accessibility. All of the 10 secondary schools based in the urban area were selected. These are as follows; Nkuhungu , City, Nuru, Dodoma, Jamhuri, K/Ndege, Merina, Mazengo, Kikuyu and Central Secondary Schools. Actual Respondents from each school were selected randomly; 120 students, 23 teachers from all schools, and 20 parents from the town.

	Central	Jamhuri	City	Dodoma	Mazengo	Nnkuhu	Nuru	Kikuyu	Msalato	K/Ndege
School						ngu				
No.	12	12	12	12	12	12	12	12	12	12
Teach ers	2	2	3	2	3	2	2	3	2	2

3.5 Data Collection Methods

Questionnaires have been used in this study to obtain important information about HIV/AIDS and related issues on the youth. Each item in the questionnaire was developed to address specific objectives or hypothesis of the study. Structured or closed-ended questions were formulated for the purpose of this study. The questionnaires were hand delivered to the respondents and then collected after being completed. HIV/AIDS knowledge, risk and prevention behavior, attitudes, and psychological, social and cultural factors were the major themes focused.

3.6 Data Analysis Methods

Once the questionnaires have been administered, the mass of raw data collected were systematically organized in a manner that facilitated analysis. Quantitative analysis was anticipated, therefore the responses in the questionnaires were assigned numerical values. Coding, entering data and analysis was done using Statistical Package for Social Sciences (SPSS).

CHAPTER IV

4.0 ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 Introduction

One hundred and twenty (120) school adolescents in ten secondary schools in Dodoma Urban were approached to participate in the study. One hundred and nineteen (119) students (99%) completed the questionnaires. Twenty three (23) teachers and twenty (20) parents were also interviewed.

4.2 Demographic features

A majority of the respondents were female (52.1%) while 47.9% were male.

Background characteristics of the respondents included age, sex, education and religion. These parameters were used in one way or another to assess, whether any or some of these have any influence on the respondents behavior (Table 1).

Table 1: Categorized age of respondents

Age	Frequency	Percentage
< 15	5	4.2
15-18	47	39.5
19-22	61	51.3
>22-25	6	5.0
Total	119	100.0

Source: Evaluation research, 2003

4.3 Research question 1: Proper and correct HIV/AIDS information contributes to adoption of safe and protective behaviors among school adolescents

4.3.1 The level of HIV/AIDS Knowledge among school adolescents.

Knowledge and misconception questions asked the respondents whether or how much, they agreed or disagreed with specific facts or common misconceptions about transmission, prevention, treatment and symptoms of HIV/AIDS. Most of the respondents had knowledge about what cause AIDS (97.5%) and safer sex (70.6%). However, there were some misconceptions as reflected by 50.4% of the respondents who did not know whether breast milk can transmit HIV. Knowledge about modes of HIV transmission and how HIV can be prevented was found to be very high (95.8%) (Table 2). Among 119 respondents 98 (82.4%) mentioned that abstinence can prevent HIV transmission. Others included fidelity (88.2%) and condom use (71.4%). This means that 28.6% of the respondents did not believe or know whether condom use can be effective. The high level of HIV/AIDS knowledge could explain the relatively higher rate of condom use (73.5%) during their last sexual encounter (Table4)

Table 2: Level of HIV/AIDS Knowledge/Awareness

Parameter	Frequency	Percent	Valid Percent	Cumulative Percent
Mentioned correct modes of transmission and prevention	114	95.8	100.0	100.0
Did not mention correctly.	5	4.2		
Total	119	100.0		

Source: Evaluation research, 2003

In contrast with the study conducted in secondary schools in Dar es Salaam and Coast regions (Kapinga, Nachtigal & Hunter, 1991) shows that school pupils involve themselves into precocious sex with little knowledge and misconceptions about reproductive facts including contraception.

Thus, children need the right information to help protect themselves, because they may contract HIV while at tender age.

However, young people get information about sex and sexuality from a wide range of sources including each other, through the media including advertising, television and magazines as well as leaflets, books and websites which are intended to be sources of information about sex and sexuality. Some of these will be accurate and some inaccurate. Providing sexual and reproductive health education is therefore about finding out what young people already know and adding to their existing knowledge and correcting any misinformation they may have. For example, young people may have heard that condoms are not effective against HIV/AIDS or that there is a cure for AIDS. It is important to provide information, which corrects mistaken beliefs. Without correct information young people can put themselves at greater risk. Furthermore, knowledge alone is not enough to change behaviors (DiClemente RJ, Durbin M, Siegel D, et al 1992). Programs that rely on conveying information about sex or moral precepts, how the body's sexual system functions, what teens should and should not do-have failed. However, programs that focus on helping teenagers to

change their behavior-using role playing, games, and exercises that strengthen social skills-have shown signs of success (Ubell E, 1995).

4.3.2 Respondents' sexual behavior.

4.3.2.1 Condom use

The study results reveal that 24.4% of the respondents had used condom consistently while 17.6% did use it inconsistently over the last one year (Table3)

Table 3: Frequency on condom use

Parameters			Frequency of condom use over the last 1 year?			Total
			Always	Sometimes	Never	
Sex	Male	Count	18	14	25	57
		% of Total	15.1%	11.8%	21.0%	47.9%
	Female	Count	11	7	44	62
		% of Total	9.2%	5.9%	37.0%	52.1%
Total	Count		29	21	69	119
	% of Total		24.4%	17.6%	58.0%	100.0%

Source: Evaluation research, 2003

despite the fact that they are now well informed about the risk of contracting HIV, they still practice unprotected sex. This was also revealed when asked whether they had used condom in their last sexual encounter. Forty two percent had used it while 15.1% did not (Table4). It is obvious that the school adolescents are at risk though 97.5% know that one can contract HIV by having sex only once. Furthermore, in this era of HIV/AIDS, the initiation of sexual intercourse early in life may be associated with enhanced risk of HIV (WHO, 1996; Kraft, 1989).

When asked what were the main reasons for using condom, both male and female responded to have used condom to avoid pregnancy (8%). While 18% and 14% of the male and female respondents respectively reported to have used condom for HIV/AIDS/STDs prevention. Sixty percent of the total respondents who had sex with condom reported to have protected themselves from both HIV/AIDS and pregnancy (Table 5)

Table 4: Condom use during respondents' last sexual experience

Parameter	Frequency	Percent	Valid Percent	Cumulative Percent
Used condom in the last sexual encounter	50	42.0	73.5	73.5
Did not use condom in the last sexual encounter	18	15.1	26.5	100.0
Total	68	57.1	100.0	
Did not have sex	51	42.9		
Total	119	100.0		

Source: Evaluation Research, 2003

They had in mind that it is safer to use condom if you are to engage in sex whereas 49.6% agreed that they intended to use condom for protecting them in their next sexual encounter. The emphasis of planning when to have sex and how to take precaution is important. Otherwise they might find themselves engaging in casual sex without protection.

Table 5 : Reasons for Condom Use

Parameters			If yes, what were the main reasons for using condom?			Total
			Avoid pregnancy	Avoid HIV/AIDS/STDs	Avoid both pregnancy & HIV/AIDS	
Sex	Male	Count	2	9	21	32
		% of Total	4.0%	18.0%	42.0%	64.0%
	Female	Count	2	7	9	18
		% of Total	4.0%	14.0%	18.0%	36.0%
Total		Count	4	16	30	50
		% of Total	8.0%	32.0%	60.0%	100.0%

Source : Evaluation research, 2003.

Generally, young people who become sexually active in early adolescence are at HIV risk due to limited knowledge and experiences about risks of sexual intercourse as well as inadequate skills for safer sex negotiation.

4.3.2.2 Number of sexual partners

Results from the study reveal that school adolescents engaged in risk behaviors by having more than one sexual partners (Table 6) despite the fact that 82.4% of the respondents had mentioned that abstinence and fidelity (88.2%) were among the preventive methods.

Table 6 : Number of Sexual Partners

Parameter			No. of sexual partners they had over the last one year					
Sex	Male	Count	18	26	7	4	2	57
		% of Total	15.1%	21.8%	5.9%	3.4%	1.7%	47.9%
	Female	Count	29	25	3	-	5	62
		% of Total	24.4%	21.0%	2.5%	-	4.2%	52.1%
Total		Count	47	51	10	4	7	119
		% of Total	39.5%	42.9%	8.4%	3.4%	5.9%	100%

Source: Evaluation Research, 2003

By comparison, male tend to have significantly more sexual partners (11%) than female respondents (6.7%) over a period of time.

Many of the risk behaviors engaged in by adolescents are interrelated (Jessor, 1984). Adolescents who involve themselves in any drug, for instance, have a high likelihood to use other drugs. They are also likely to be involved in other types of risk behaviors such as precocious sexual activity, aggression and delinquency (Jessor & Jessor, 1977).

According to Jessor (1984), a risk behavior syndrome suggests that the various risk behaviors may already be linked to the social ecology of youth, with socially organized opportunities to learn and to practice them together. Our main concern therefore should be to develop a sense of responsibility and skills for practicing prevention behavior.

4.4 Research question 2: Psychological, Social and Cultural elements contribute to HIV risk and protective behaviors.

4.4.1 Relationships and peer pressure

There is high level of statistical significance ($p < 0.05$) between number of sexual partners and dating or going out to social evening activities (Table 7).

Social vulnerability, the need to gain love and respect through sex, and power differentials within relationships are particularly important risk factors in the sub-groups of young people most affected by the epidemic. All teens may have personal needs and desires which can make them particularly vulnerable. The study results show that the young people do engage in social and recreational activities which in

turn drive them into sexual activity. A majority of secondary schools, especially boarding schools, include discotheque as part of their social and recreational programs particularly during weekends, national festivals and graduation ceremonies. To the extent that discotheque is consented to the pupils upon request and performed within the controls of the school teachers, the behavior would be more of a transition behavior. When performed at large, outside the school confines, discotheque behavior is associated with other health damaging behaviors including sexual activity. To that end discotheque behavior fits in the paradigm of problem oriented behaviors. In the current study, discotheque behavior had a relatively strong correlation with sexual experience among secondary school adolescents. Number of sexual partners was significantly associated with times a respondent went out with a friend for a date or other social affairs (Table7). It sounds plausible to assume that much of the risk taking behavior has a strong correlation with social relationships and peer pressure.

Table 7 : The Influence of Social evening activities on risk behavior (N=119)

Parameters			No. of times went out e.g. to a disco, or other social evening activities with friends				Total
			Once	Twice	More than twice	Not even once	
No.of sexual partners	One	Count	24	2	13	12	51
		%of Total	20.2%	1.7%	10.9%	10.1%	42.9%
	Two	Count	2	3	3	2	10
		% of Total	1.7%	2.5%	2.5%	1.7%	8.4%
	Three	Count	1	-	2	1	4
		% of Total	0.8%	-	1.7%	0.8%	3.4%
	More than three	Count	2	-	4	1	7
		% of Total	1.7%	-	3.4%	0.8%	5.9%
	None	Count	2	1	1	43	47
		% of Total	1.7%	0.8%	0.8%	36.1%	39.5%
Total	Count	31	6	23	59	119	
	% of Total	26.1%	5.0%	19.3%	49.6%	100.0%	

Source: Evaluation research, 2003

Those who admitted to have gone out between once and more than twice with friends (47.1%) had sex with one to more than three partners while those who did not go out at all and had sex were 13.5%.

Table 8 : Dating and social evening activities

Parameters			No. of times went out e.g. to a disco or any other social evening activities with a friend				Total
			Once	Twice	More than twice	Not even once	
Sex	Male	Count	17	4	13	23	57
		% of Total	14.3%	3.4%	10.9%	19.3%	47.9%
	Female	Count	14	2	10	36	62
		% of Total	11.8%	1.7%	8.4%	30.3%	52.1%
Total	Count	31	6	23	59	119	
	% of Total	26.1%	5.0%	19.3%	49.6%	100.0%	

Source : Evaluation research, 2003.

Furthermore, male respondents (28.6%) seemed to have gone out more than female respondents did (21.9%). This could mean that boys are more outgoing than girls as a result of social and cultural norms that women are to behave in a certain mannered way different from their counterparts (Table 8).

4.4.2 Likelihood to contract HIV

The study results also reveal that the school adolescents placed themselves at risk of contracting HIV. When asked whether they can be infected, 36.1% accepted that they are likely while 6.7% said they are most likely to be infected (Table 9).

Table 9 : Likelihood in contracting HIV.

Parameter	Frequency	Percent
Not likely	68	57.1
Likely	43	36.1
Most likely	8	6.7
Total	119	100.0

Source: Evaluation Research, 2003

This proportion correlate to those reported to have sexual partners over the last one year.

In order to reduce the risk, HIV/AIDS education must address some of the most intimate aspects of personal experience. For instance, questions like; Why do you say that you are likely to contract HIV? Why can't you abstain from sex? Can you contain your sexual drive? What options do you have? Prevention is fundamentally, about communication, healthy choices, responsible behaviors and self awareness. The only way to slow and ultimately stop AIDS is by educating youth about risk elimination and risk reduction.

4.4.3 Parents/guardians and teachers with open discussion with adolescents.

Though the study reveal that 74.8% feel close to their parents but more than half (58%) of the respondents do not talk freely about condom use (Table 10). This is typical of African culture; parents do not open up when it comes to sexual matters. As reported by parents, it has been difficult for them to open up during discussion about sexual matters. However, parents need to understand that there is a large number of forces that encourage the youth to engage in sexual activity including unprotected sex. These are changing hormones, emotional and physical needs and desires, desires to be an adult and to take risks, peer pressures and omnipresent inaccurate portrayal of sex in the media. Before making significant changes in life of the youth, parents have to break first the cultural barriers between them and hold open discussion with their teens on how to delay initiation of sex, how to prevent infection and what is good for them so as to build their future.

There is also no effective communication about sexual matters between teachers and children and between parents and children. This was reflected when they were asked whom they would prefer to teach sex education. Only 20.2% agreed to be taught by teachers and 7.6% accept their parents . Majority preferred to be trained by visiting facilitators from outside. However, health education is rarely conducted by health personnel from outside the schools. This raises concern on how to facilitate effective communication among school adolescents by their parents and teachers with whom they spend a lot of time. We cannot suppress teenage sexual behavior but rather,

acknowledge that many teens are sexually active, and prepare them against the negative consequences.

It was also revealed that the respondents confide in their peer as it was reflected by 93.3% who can talk freely with their peer about condoms. That means even other issues related to sex or sexuality can be discussed freely. But to what extent these peers do give correct information? A proper selection and training of potential peer educators should be conducted particularly to those who can influence others and become change agents among themselves. It is better to have people who believe in what they are saying.

Table 10: Discussion with adolescents

Parameter	Response	Frequency	Percent
Closeness to parents/guardians	Yes	89	74.8
	No	30	25.2
Open discussion with parent about preventive measures	Yes	87	73.1
	No	32	26.9
Open discussion with parents about condom use	-Yes	50	42.0
	-No	69	58.0
Open discussion with peers about condom use	-Yes	111	93.3
	-No	8	6.7

Source: Evaluation Research, 2003

All 23 teachers interviewed responded that school adolescents do engage in sexual activity. Among the reasons pointed out were: too much discussion about sex during their private talks; cases of fighting when they realize that they share the same girl or boy; economical survival, particularly girls receive gifts and money for sex; puberty leads to sexual stimulation and increased sexual desire; cases of pregnancy among

school girls; and disintegration of moral ethics. Furthermore they pointed out preventive measures that can reduce risk taking behavior among the school adolescents. These were: sex education, open discussion with parents about sexuality, improving economic status at family level, strict measures should be taken against those who do sex with students, involvement of churches or faith based organizations to teach on risk behaviors and how to avoid them, moral teachings, participation in games and sports, parents care and responsibility, and introduction of guidance and counseling in schools.

However, studies have shown that sex education begun before youth are sexually active helps young people stay abstinent and use protection when they do become sexually active (Kirby D, Short L, Collins J, et al. 1994). The sooner sex education begins, the better, even as early as elementary school. In the current study, 22% of the teachers interviewed admitted that schools have not put enough efforts in dealing with youth problems apart from academic. And yet, the school curriculum does not include youth problems or life skills development.

4.4.4 School adolescents with positive minds towards desired behavior

When asked if they could abstain from sex until marriage, 81.5% agreed while 16.8% found it difficult to abstain (Table 11)

Table 11 : Abstinence from sex until marriage

Parameter			Do you think you can abstain from sex until marriage?			Total
			Yes	No	I'm not sure	
Sex	Male	Count	43	14	-	57
		% of Total	36.1%	11.8%	-	47.9%
	Female	Count	54	6	2	62
		% of Total	45.4%	5.0%	1.7%	52.1%
	Total	Count	97	20	2	119
		%of Total	81.5%	16.8%	1.7%	100.0%

Source: Evaluation Research, 2003

However, this fact is contradicted by the number of sexual partners they had over the last one year which accounted for 60.6% of the total respondents (Table 6). This implies that, youth would like to avoid risk behaviors, but due to a number of factors as mentioned before do play part. It also seems that sexual experience is part of adolescence development. When mature, sexual experience becomes functional to adolescents, i.e it is perceived as a means of coping with developmental challenges and tasks.

As reflected in Table 12 it seems that a small proportion of adolescents are not well informed of their physical and sexual development. They still have misconceptions about adolescent's stages of development. Information is important as the basis for young people to develop well-informed attitudes and views about sex and sexuality.

The study reveals that 7.6% of the respondents believe that they have to try out their manhood once they reach puberty (Table 12). Such wrong information and misconception among young adolescents are not uncommon. They may be wiped out by only communicating effectively with them. They need to have information about

the physical and emotional changes associated with puberty and sexual reproduction, including fertilization and conception, and that there is no harm for not engaging in sex.

Table 12: Adolescents' perception about sexuality

Parameter		Frequency	Percent
Relationship between a girl and a boy should always involve sex	Yes	19	16.0
	No	100	84.0
A young person should initiate sexual debut once he reaches puberty	Yes	9	7.6
	No	110	92.4
Having more than one girlfriend or boyfriend you feel high	Yes	10	8.4
	No	109	91.6

Source: Evaluation Research, 2003

It is important not to delay providing information to young people but to begin when they are young. Providing basic information provides the foundation on which more complex knowledge is built up over time. This also means that sex education has to be sustained. For example, when they are very young, children can be informed about how people grow and change over time, and how babies become children and then adults, and this provides the basis on which they understand more detailed information about puberty or adolescence.

In terms of information about relationships they need to know about what kinds of relationships there are, about love and commitment, marriage and partnership, as well as the range of religious and cultural views on sex and sexuality and sexual diversity. Furthermore, if sex education is going to be effective it needs to include opportunities for young people to develop skills, as it can be hard for them to act on the basis of only having information (Bandura, A. (1992). The kinds of skills young people

develop as part of sex education are linked to more general life-skills. For example, being able to communicate, listen, negotiate, ask for and identify sources of help and advice, are useful life-skills and can be applied in terms of sexual relationships.

4.4.5 Level of confidence among school adolescents

The study reveals that 14.3% of the respondents were not confident enough to refuse sex (Table 13). Also when asked whether they are confident to insist on condom use, only 35.3% male and 24.4% female agreed. That means the young people do lack assertive skills particularly girls. They are vulnerable to potentially negative outcomes from sexual behavior like unwanted or unplanned pregnancies and infection with HIV/AIDS and other sexually transmitted diseases. Relationships among the young people is inevitable. However, we need to enhance the quality of relationships. We need to develop young people's ability to make decisions over their entire lifetime; to develop skills in negotiation, assertion and listening. Other important skills include being able to recognize pressures from other people and to resist them, deal with and challenge prejudice, seek help from adults, including parents, guardians and professionals through the family, community and health and welfare services.

Table 13 : Confidence to refuse Sex

Parameter		How confident are you to refuse if you don't want sex			Total
		I am less confident	I am very confident		
Sex	Male	Count	5	52	57
		% of Total	4.2%	43.7%	47.9%
	Female	Count	12	50	62
		% of Total	10.1%	42.0%	52.1%
Total		Count	17	102	119
		% of Total	14.3%	85.7%	100.0%

Source: Evaluation Research, 2003

It was also revealed that 26.1% of the female reported to have less confidence while their counterpart is only 10.1% (Table 14). This raises concern over the gender differentials where girls are not in the position to say no over sexual matters as traditionally they are supposed to be submissive to their partners. Therefore, they need to be trained on assertive skills early enough to be able to take responsibility of their own life, to take care of themselves and break the cultural barriers.

Table 14. Level of confidence to insist on condom use

Parameter			Level of confidence to insist on condom use			Total
			I am less confident	I am very confident	I don't have confident	
Sex	Male	Count	12	42	3	57
		% of Total	10.1%	35.3%	2.5%	47.9%
	Female	Count	31	29	2	62
		% of Total	26.1%	24.4%	1.7%	52.1%
Total		Count	43	71	5	119
		% of Total	36.1%	59.7%	4.2%	100.0%

Source: Evaluation Research, 2003

4.4.6 School adolescents, parents and teachers with positive attitudes about sexuality.

On who should teach respondents on matters relating to sex/sexuality, only 20.2% agreed to be taught by teachers, while parents were accepted by 7.6%. The majority preferred to be trained by health personnel from outside (Table15).

During interview with teachers and parents 70.0% agreed that students should be taught everything about sex education including use of condom if means to save their lives. Thirty percent disapproved to recommend students to use a condom. Their argument is that, it is like encouraging them to become promiscuous.

Table 15 : Whom will you prefer to be teaching you a subject matter relating to sex/sexuality?

Parameter	Frequency	Percent	Valid Percent	Cumulative Percent
Your class teacher	24	20.2	20.2	20.2
Health personnel	70	58.8	58.8	79.0
Peer	15	12.6	12.6	91.6
My parents	9	7.6	7.6	99.2
1,2,3 and 4	1	0.8	0.8	100.0
Total	119	100.0	100.0	

Source: Evaluation Research, 2003

Different settings may provide different contexts and opportunities for sex education. At home, young people can easily have one-to-one discussions with parents or guardians which focus on specific issues, questions or concerns. All the same, young people can be exposed to a wide range of attitudes and beliefs in relation to sex and sexuality. These sometimes appear contradictory and confusing. For example, some

health messages emphasize the risks and dangers associated with sexual activity and some media coverage promotes the idea that being sexually active makes a person more attractive and mature. Because sex and sexuality are sensitive subjects, young people and sex educators can have strong views on what attitudes people should hold, and what moral framework should govern people's behavior.

Young people are very interested in the moral and cultural frameworks that binds sex and sexuality. They often welcome opportunities to talk about issues where people have strong views especially with their peers or other people whom they have built a trust with. Furthermore, people providing sex education have attitudes and beliefs of their own about sex and sexuality and it is important not to let these influence negatively the sex education that they provide. For example, even if a person believes that young people should not have sex until they are married, this does not imply withholding important information about safer sex. We should attempt to impose a wider moralistic view about sex and sexuality rather than trying to deter or frighten young people away from having sex.

Most of the respondents anticipated bright future in their life. They also believed in engaging in various activities so as to do away with unproductive work. Thus, they need to learn more on how to plan for their future so as to attain their dreams.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

-The study revealed issues related to students' knowledge, attitudes, beliefs and psychosocial factors with regard to sexuality and HIV/AIDS. Students responses generally indicated that they know what HIV/AIDS is, how it can be transmitted and how it can be avoided. The responses also indicated that students are at risk and likely to contract HIV/AIDS. However, despite the fact that students know that unprotected sex is no longer safe, they continue to indulge in it, sometimes with multiple partners. These findings are consistent with a number of other reports in the literature.

Thus, recognizing the complexity of the problem of the adolescent unprotected sex, more multi component efforts must be implemented to change the communities in which they live in the hope that healthier environments might reduce rates of unprotected sex and encourage more safer behavior. Also as long as students are of various categories, background, varied behavior, they can be studied and helped differently. The precise age at which information should be provided depends on the physical, emotional and intellectual development of the young people as well as their level of understanding.

The following strategies are proposed to hasten behavior change among the school adolescents:

(1) Formation of health and lifeskills clubs: Different school clubs can be launched while considering physical, emotional and intellectual development of the adolescents. For instance, the younger adolescents or those haven't initiated sex may have their own clubs advocating for abstinence and ways to resist peer pressure to have sex. For those who are sexually active, the program could involve how to protect themselves. Interventions could range from assessing young people's needs, discussion of HIV/AIDS information and life skills training on appropriate communication, healthy choices, responsible behaviors and self-awareness.

(2) Promote Peer Education Strategy: As it was observed that 93.3% of the respondents can talk freely about sex, it is recommended that peer education be promoted where they can meet and discuss more about sexual related issues. It is difficult, in a cultural sense, for peer leaders to arrange educational activities when groups include both sexes. Single sex group are easier to organize. However, mixed peer group training is important and has been done successfully.

(3) Involvement of parents/guardians in education programs: It was observed that parents were not very close to their children particularly adolescents in discussing issues relating to sexuality. So there is a need to involve parents or guardians in education programs. Emphasis may be put on the ways in which parents affect the sexual behavior of their children through appropriate supervision and modeling responsible sexual behavior. Instead of providing the education only to school children, the program can include ways of reaching out parents either through meetings or distribution of IEC materials about: how to conduct open discussions

regarding needs of young people and how to encourage discussion of sexuality between adolescents and their own parents.

Sometimes it can be difficult for adults to know when to raise issues, but the important thing is to maintain an open relationship with children which provides them with opportunities to ask questions when they have them. Parents and guardians can also be proactive and engage young people in discussions about sex, sexuality and relationships.

(4) Focus on Behavior Change Theory: Much is understood about HIV/AIDS among school adolescents. However, there is a big task ahead on how to effect behavior change. It is therefore proposed to use integrated based approach or theories focusing on modifying behavior and developing positive attitudes among young people. Such theories include Health Belief Model, Theory of Reasoned Action, Social Cognitive Theory, Social Inoculation Theory and Social Influence Theory.

Table: 16 Proposed Behavior Change Model

Strategy	Focus	External Influence	Remedies
Ensure delivery of correct information/knowledge about sex/sexuality and HIV/AIDS	Facts/knowledge; misconceptions & reality.	Peer educators, Teachers, Parents, Community/health extension workers and faith based leaders.	Involve different people in conducting open discussion with youth/school adolescents;
Bring up motive behind for behavior change.	Individual's intention to change; Let them set future plans; Let them know outcome expectancy	Role models; improved performance in school; improved vocational skills; extra curricula	-The clients must feel personally susceptible to a disease with severe consequences -They must believe that the benefits of taking the

	(positive and negative)	activities;	preventive action outweigh the perceived barriers to preventive action
Change of attitude; Practicing desired behavior	Gaining skills (decision making, assertion, confidence/self esteem); Self efficacy (ability to perform action); healthy choices; responsible behavior; breaking cultural barriers.	User friendly services; accessible services; culture, education, socioeconomic status, gender relations, education policy, spirituality.	-Emphasizing behavioral rehearsal, practicing resisting future peer pressure. -Emphasizing changing of social norms as way to change the individual -Effective communication -Design programs with gender perspectives
Design and implement adequate M&E plans.	Individuals & group behavioral management	Materials, human/ financial support and moral support through self help groups.	-Client identification, outreach and engagement -Psychosocial assessment of need -Participatory development of preventive and support service plan -Implementation of the plan by linking with different support groups/workers, parents, teachers and available services. -Reassessment of needs -Advocacy for various support from different stakeholders/youth activists

Source: Evaluation Research, 2003

It was also observed that HIV/AIDS education in secondary schools is not given due weight like other subjects. Furthermore, in some schools, it is not taught at all. If we are to induce behavior change among the adolescents, and since behavior change is a process, long and continuous education programs can have an effect. It is therefore,

recommended that life skills and sex education be fully incorporated in the school curriculum. Integration of sexual health and life skills education into the school curriculum would encourage young people to consider it as vital to their learning.

6.0 Bibliography

1. Ansell, N. and Young, L. (2002) Young AIDS Migrants in Southern Africa, Final report to DFID ESCOR contract R 7896
2. Bandura A. Social Foundations of Thought and Action. Englewood Cliffs, NJ: Prentice Hall, 1986.
3. Bandura, A. (1992) Self Efficacy Mechanism in Psychobiologic Functioning, Self Efficacy: thought control of action. Washington: Hemisphere.
4. Barth R. Reducing the Risk. 3rd ed. Santa Cruz, CA: ETR Publications, 1996.
5. Behavioral and Social Sciences, HIV/AIDS Research at National Institutes of Health (NIH) U.S, 1996.
6. Centers for Disease Control and Prevention. (1995). HIV prevention case management. In *Guidelines for health education and risk-reduction activities: HIV prevention case management* (pp. 32-35). Atlanta: CDC.
7. Centers for Disease Control and Prevention. (1997). *HIV prevention case management; guidance*. Atlanta: CDC.
8. Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report, 2001; 13 (No.2) Atlanta, CDC, U.S.A
9. Coyle KK and Fetro JV. Safer Choices: Preventing HIV, Other STD and Pregnancy: Level 2. Santa Cruz Calif.: ETR Associate, 1998.
10. DiClemente R.J, Durbin M, Siegel D, et al. Determinants of condom use among junior high school students in a minority, inner city school district. Pediatrics. 1992.
11. Edward C. G (2002) "What Happened in Uganda" Bureau for Global Health USAID
12. Fishbein M, Ajzen I. Belief, Attitude, Intention, and Behavior. Reading MA: Addison-Wesley, 1975.
13. Grunbaum JA, Kann L, Kinchen SA, Williams B, Ross JG, Lowry R, Kolbe L. Youth Risk Behavior Surveillance-United States, 2001. MMWR Surveill Summ, 2002 Jun 28;51(4):1-62.

14. Haffner D, & Wagoner J. Vast majority of Americans support for sexuality education. SIECUS Report, 27, (6), 22-23, 1999.
15. HIV/AIDS; A Clinician's Guide. November 2001 Update: Cipla
16. Homans GC. Group factors in worker productivity. In: Proshansky H, Seidenbert L, eds. Basic Studies in Social Psychology. New York: Holt, Reinhart & Winston, 1965.
17. How much do people really know about HIV? UNAIDS/MEASURE Evaluation Bulletin, 2001, Number 2
18. Jemmott LS and Jemmott JB: Making Proud Choices: A Safer Sex Approach to STD, Teen Pregnancy and HIV/AIDS Prevention. Select Media, 1998/9
19. Jemmott LS and Jemmott JB: Making A Difference: An Abstinence Approach to STD, Teen Pregnancy and HIV/AIDS Prevention Select Media, 1998/9.
20. Kapinga, D. (1993). Reports on the Study of the Effects of HIV/AIDS on Agricultural Production Systems in Tanzania. FAO Project TSS-1 RAF/92/TO1/A
21. Kirby D. Emerging Answers: Research Findings on Programs to Reduce Teenage Pregnancy. Washington DC: National Campaign to Prevent Teen Pregnancy, 2001
22. Kirby D, Barth R, Leland N, et al. Reducing the Risk: a new curriculum to prevent sexual risk taking. Family Planning Perspective, 1990.
23. Konings, E. B, G. Kabauri & Massessa, E (1991). Quantifying Sexual Behavior in Northwest Tanzania, Tanzania Medical Journal, 16, (6).
24. Landry DJ, Kaeser L, Richards CL. Abstinence promotion and the provision of information about contraception in public school district sexuality education policies. Fam Plann Perspect. 1999 Nov-Dec;31 (6):280-6
25. Logoe, W. L. (1994) A Study of HIV Risk Behavior among Secondary School Pupils in Arusha, Tanzania, MSc. Thesis.
26. Lynchburg Youth Risk Behavior Survey Report, Julie A. Honnold and Mary Ellen Rives. Survey and Evaluation Research Laboratory report prepared for the Lynchburg City Schools, 2000.

27. McGuire W. (1972) Social psychology. In: Dodwell PC. New Horizons in Psychology. Middlesex, England: Penguin Books.
28. Michael RT, Gagnon JH, Lauman EO, et al. Sex in America. Boston: Brown, 1994.
29. Ministry of Health, Tanzania Mainland. HIV/AIDS/STDs Surveillance Report number 12, (1997) 13, (1998) 15, (2000) & 16, (2001)
30. Moore KA, Driscoll AK, Lindberg, LD. A statistical Portrait of Adolescent Sex, Contraception, and Childbearing. Washington DC: National Campaign to Prevent Teen Pregnancy, 1998
31. Mugenda M. O and Mugenda A. G (1999) Research Methods- Quantitative and Qualitative Approaches, Acts Press Kenya
32. Mukoyoga, N (1995) HIV/AIDS Legal and Ethical Issues in Tanzania
33. National AIDS Control Programme Strategy Mainland Tanzania 1998-2002, (NACP, 1998)
34. Office of National AIDS Policy. Youth & HIV/AIDS: An American Agenda. Washington DC: March, 1996.
35. O'Reilly K. R, (2000) The Role of Qualitative Research in the Global Program on AIDS at the World Health Organization .
36. Rose LC & Gallup AM. The 30th annual Phi Delta Kappa/Gallup Poll of the public's attitudes toward the public schools. Phi Delta Kappan, September, 1998, 41-53.
37. Rothman, J. (1991). A model of case management: Toward empirically based practice. *Social Work*, 36, 520-528.
38. Rothman, J., & Sager, J.S (1998) Case management: Integrating individual and community practice, 2nd ed., Mass: Allyn & Bacon.
39. Sarantakos S. (1998) Social Research Second Edition. Macmillan Press LTD
40. St. Lawrence JS Becoming a Responsible Teen: An HIV Risk Reduction Intervention for African-American Adolescents. Jackson State University, 1994.

41. Tanzania Commission for AIDS; Second National Multisectoral AIDS Conference in Tanzania (2002)
42. Ubell E. Sex education programs that work and some that don't. Parade Magazine. February 12, 1995.
43. UNAIDS. National AIDS programs: a guide to monitoring an evaluation. UNAIDS document 00/17E. Geneva. June 2000.
44. United Republic of Tanzania: National AIDS Control Program: Research Priorities on HIV/AIDS/STIs of The Third Medium Term Plan (MTP-III 1998-2002) (National AIDS/STIs Control Program , Ministry of Health, March, 2000)
45. United Republic of Tanzania: Prime Minister's Office; National Policy on HIV/AIDS (2001).