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ADOLESCENT SEXUALITY AND HIV/AIDS IN MALAWI: KNOWLEDGE, ATTITUDES AND BEHAVIOUR OF SECONDARY SCHOOL STUDENTS

BY

DIXIE W. MALUWA-BANDA 

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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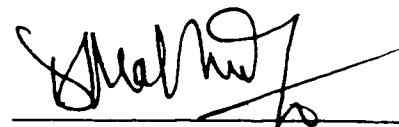

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DEDICATION

"Just as a mountain needs a valley to be a mountain,

I need a world of other people

and things to be an I."

(Troutner, 1969, p.124).

This thesis is dedicated to that very special world of other people. First, to my beloved and understanding wife, Mary, who not only supported me but also made many personal sacrifices during the whole time we were apart as I was pursuing my doctoral studies at the University of Alberta. Second, to my marvellous and loving parents in rural Thyolo, Malawi. They have faithfully and relentlessly encouraged and supported my dreams. Third, to my understanding father-in-law and mother-in-law who consistently have provided encouragement throughout my programme. Finally but not the least, this thesis is dedicated to the young men and women of the Republic of Malawi. Together we have an enormous challenge ahead of us to reverse the present HIV/AIDS trend in Malawi.

ABSTRACT

The general aim of this study was three-fold: (1) to assess the depth and accuracy of secondary school students' HIV/AIDS-related knowledge, beliefs and attitudes; (2) to examine the levels of students' high-risk behaviour; and (3) to explore sexual communication among students and how gender influences negotiations for safer sex. Data were collected through self-administered questionnaire from the sample of 1,400 students drawn from ten secondary schools in Southern Malawi. In addition, focus group participants, a purposeful sample, were drawn from five of the ten schools for eight focus group discussions.

It was evident from the quantitative data that among secondary school students correct knowledge about HIV/AIDS was found to co-exist with some misconceptions. They indicated positive attitudes towards people living with HIV/AIDS. They believed that such individuals should be loved, cared for and supported by their families and communities. Slightly more than half reported having had sexual intercourse at least once in their lifetime with 67.7% of the male and 41.5% of the female students reporting sexual experience. Friends were cited as the major influence on the decision to have sex. Their main sources of information on sexuality related issues included the radio, the print media, peers and health professionals. The school was identified as the preferred source on sexuality.

In the focus group discussions, the participants acknowledged that it was difficult to openly discuss issues related to sexuality because of cultural taboos. They accepted that many young people of their age were having sex. Condoms seemed to be unpopular among adolescents. Several themes related to condom use emerged and they included

personal sense of powerlessness and male dominance, lack of knowledge or skill in application of condoms and negative attitude towards condoms. Other themes included the influence of peer, enticement of sugar daddies and lack of security and safety.

The findings of this study have important and direct implications for the introduction, development and implementation of a comprehensive programme on HIV/AIDS education in Malawian secondary schools. Practical suggestions and recommendations for implementation of the findings are addressed and areas of further research are identified.

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As no person is an island onto himself or herself, nor is any research project conducted in isolation from others. I wish to acknowledge my indebtedness to the many individuals and organisations who have provided support and assistance in order for me to complete my doctoral programme at the University of Alberta. First, I would like to sincerely thank the students who participated in the study for providing invaluable information about their personal lives, the teachers and headmasters/headmistresses for their co-operation through out the data collection exercise.

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CHAPTER 1

THE PROBLEM

> *"The future of Malawi lies with today's children and young people. Therefore, the death of these young men and women through the AIDS pandemic, if remains unchecked and unexamined, would slowly degenerate into the death of the Malawi nation"* (D. M. Banda, 1998).

Introduction

Young people are central to the discussion about sexuality and acquired immune deficiency syndrome (AIDS) in Malawi, Africa. There is great concern about the spread of human immune deficiency virus (HIV) epidemic in or within the adolescent population. Although relatively few reported HIV/AIDS cases have occurred among adolescents, many young adults who either are now infected with HIV or have developed full-blown AIDS likely contracted the virus during their teenage years (Akinde, 1994; Barnett & Blaikie, 1992; Bury, 1991; MacLaclan, Chimombo, & Mpemba, 1997). Of course, because of the lengthy incubation period, individuals who are HIV infected may develop AIDS after an undetermined period of time, sometimes 10 years or more after being infected (Kalichman, 1995).

The strategy of prevention of HIV transmission through education and the modification of behaviours is clearly the most hopeful approach to the prevention of AIDS (Albee, 1989; Damanjeet, 1995; Lamptey & Piot, 1990). Youth is an important target for such educational interventions (Levine, 1991). Puberty and adolescence are important phases during which values are formulated (Langer & Warheit, 1992). It is during the adolescent years that many young people become sexually active and begin to establish

patterns of sexual behaviour which may put their lives at high risk for contracting HIV (Akinde, 1994; Bandawe, 1992; Bandawe & Forster, 1996; Mathews, Kuhn, Metcalf, Joubert, & Cameron, 1990). Therefore, they need accurate information about AIDS, sexuality, sexually transmitted diseases and decision-making at an appropriate age to enable them to make informed decisions.

In this chapter, the context of the HIV/AIDS prevalence and problem in Malawi is established. Next, the statement of the problem is followed by the purpose of the study. The rationale and conceptual framework of this study is based on two theoretical models, the social cognitive theory (SCT) and the health belief model (HBM). These two models are summarised in this chapter too. Finally, the focus is on the significance of the study, definitions of key terms, limitations of the study, and an outline of the remainder of the thesis.

Context of the Problem

In the Sub-Saharan Africa, AIDS constitutes a humanitarian crisis of immense proportions and one of the major problems of public health in the world (Barnett & Blaikie, 1992; Caldwell, Orubuloyle, & Caldwell, 1992; Cuddington, 1993; MacLachlan et al., 1997). AIDS has become an epidemic of devastating proportions in Malawi (National AIDS Control Programme [NACP], 1997). In 1994, Malawi was reported to have one of the highest rates of HIV infection in the world, with an average of 25 people becoming HIV positive, six developing AIDS and five dying from AIDS every hour (Liomba, 1994; MacLachlan et al., 1997; Wilbrink, 1995). By 1998, it was estimated that these figures

would rise to 13 people developing AIDS and 12 dying from AIDS every hour (MacLachlan et al., 1997).

In Malawi, monitoring of HIV/AIDS epidemic has become extremely significant not only for the purpose of assessing the magnitude and spread of the problem but also for the purpose of planning and designing appropriate interventions. The existing HIV surveillance mechanism is based on 61 HIV testing laboratories designated as surveillance sites located all over the country with 14 in the northern region, 21 in the central region and 26 in the southern region. Of the 61 reporting sites, 30 are government owned, 27 are run by the Christian Health Association of Malawi (CHAM) and four are privately owned by the Army, Police, Dwangwa sugar company and the Sugar Company of Malawi (SUCOMA). Each site is required to report monthly the number of AIDS cases diagnosed in its centre to the National AIDS Control Programme secretariat's Monitoring and Evaluation Department based in Lilongwe (Chitsulo, 1996; NACP, 1997).

Since the first cases of AIDS were diagnosed and reported in Malawi in 1985 (Liomba, 1994; McAuliffe, 1994), HIV-related diseases have precipitated an epidemic of unprecedented proportions (Chitsulo, 1996; Liomba, 1994; MacLachlan et al., 1997). The major HIV/AIDS-related diseases have been Kaposi's Sarcoma, Pneumocytis Pneumonia, Esphageal Cadidiasis, Crytococcal Meningitis, HIV Dementia, and Tuberculosis (TB) Lymphadentis/Miliary (National AIDS Control Programme, 1997). Before 1985 and before the HIV/AIDS era about 4,000 to 5,000 TB cases were reported annually. This figure has grown to about 20,000 TB cases reported for 1996 in Malawi. Virtually, all of the increase in TB cases can be attributed to HIV infections. Yet the vast majority of these people with TB have not been tested for HIV, and thus officially, these infections are

simply reported as TB cases (Malawi Government & World Bank, 1998). Simple modelling of HIV-related TB in Malawi indicates that about three quarters of all current TB cases in Malawi are occurring in persons infected with HIV (Chitsulo, 1996). These modelling results are corroborated by a study of a large sample of TB patients by the Malawi TB Programme, where 66% of TB patients were HIV positive (Ministry of Health and Population, 1995).

Between 1985 and 1998, a cumulative total of 52,856 AIDS cases have been reported to the National AIDS Control Programme. The Malawi AIDS case definition is based on the World Health (WHO)/Bangui criteria for suspecting AIDS cases (NACP, 1998). In addition to the clinical diagnoses, the definition has the requirement of a single HIV positive antibody test result. "The definition, therefore, requires that someone presents with at least two major signs, at least one minor sign, and a positive HIV antibody test" (NACP, 1998, p. 4).

It is estimated that 12% of the entire population of 9.8 million in Malawi is HIV positive (NACP, 1997), with 90% of prostitutes in urban areas testing HIV positive (MacLachlan et al., 1997). Within one decade HIV prevalence among pregnant women attending antenatal facilities in Blantyre Commercial City rose from three percent in 1986 to 30% in 1990 and close to 35% in 1996 (Kaluwa et al., 1996). As a result of the long interval of five to 10 years average from HIV infection to AIDS, the annual toll of AIDS and other HIV-related conditions such as TB cases, maternal AIDS orphans, and pediatric AIDS deaths, have only become visible during the 1990s.

For the current study, this researcher has discussed the HIV/AIDS incidence rates with a number of knowledgeable professionals. There was general consensus among them

that the official statistics in HIV/AIDS cases are very conservative and do not reflect the magnitude of HIV/AIDS epidemic in Malawi. They estimated the number of AIDS cases to be more than double the reported cases. Furthermore, they speculated that 20 to 30% of the people in Malawi should be HIV infected. None wanted to be referenced because the subject remains controversial and is not yet socially acceptable for thorough discussion.

Therefore, caution should be exercised when making inferences from the official data because the true number of AIDS cases in Malawi is not known. It is known that gross underreporting of HIV and AIDS cases exists for a number of reasons, including: (1) some people never seek hospital care for AIDS; (2) doctors and other health workers may not want to record a diagnosis of AIDS because of the stigma attached to the disease; (3) people with HIV infection may die of other infections before they are even diagnosed as having AIDS; and, (4) some health care facilities, especially in rural areas, may not have the capability to test for HIV infection (Chitsulo, 1996; Forsythe & Rau, 1996; NACP, 1997). In addition, data collection is limited to those sites with the capabilities to do HIV serology testing through staffing or laboratory equipment. The data collected is even limited to those consenting to have HIV testing (NACP, 1997).

The age and gender distribution of 1997 AIDS cases is presented in Table 1.1. According to the National AIDS Control Programme (1997), the age/gender analysis shows similar distribution of cases as in the years 1992 through 1996. The combined 30-34 year-old bracket yields the highest number of all reported AIDS cases in Malawi with 22.5%. It is followed by the 25-29 and 35-39 age groups with 16.6% and 15.5%

respectively. On the overall, the majority (80%) of the reported AIDS cases fall in the 20 – 49 age group.

On one hand, the majority of female cases are below the age group of 30-34 and on the other hand, the majority of male cases are over 30 years. Retrospectively, this implies that generally there is a tendency for more females to contract HIV at younger ages than males. It is further very interesting to observe that there is a striking disparity of infection among the 15 to 19 year olds. This is most likely due to general practice of young women having older sexual partners. The number of diagnosed AIDS cases among adolescent females is about five times higher than their male counterparts.

It is important to note that the major mode of HIV transmission in Malawi is through heterosexual behaviour. According to National AIDS Control Programme (1997), it is estimated that roughly 87.8% of reported AIDS cases were infected through heterosexual contact. Taking into account the fact that AIDS cases are a mirror image of HIV infection patterns of 5-10 years ago, the data show evidence of mother to infant transmission in the early 1990s. About 11% are suspected to have contracted HIV from their mothers, especially those in the birth to 9 years age group. About 1.2% AIDS cases were reported to have had a history of blood transfusion. Homosexuality is virtually unknown in Malawi. Intravenous drug use among teens plays very minimal role if any. These two practices being illegal and culturally unacceptable pose some challenges in their ascertainment.

Table 1.1

Age and Gender Distribution of 1997 AIDS Cases

Age Group	Females	Males	Unknown	Total	Percentage
0 - 4	154	179	8	341	9.2%
5 - 9	30	37	1	68	1.8%
10 - 14	14	18	0	32	0.9%
15 - 19	55	10	2	67	1.8%
20 - 24	284	120	3	407	11.0%
25 - 29	332	277	7	616	16.6%
30 - 34	359	464	11	834	22.5%
35 - 39	234	328	10	572	15.4%
40 - 44	106	210	5	321	8.7%
45 - 49	71	150	2	223	6.0%
50 - 54	35	87	1	123	3.3%
55 - 59	11	48	2	61	1.6%
60 - 64	8	15	0	23	0.6%
65 -69	0	10	0	10	0.3%
70 +	3	4	0	7	0.2%
Total	1696	1957	52	3705	100%

Source: National AIDS Control Programme, 1997.

The 1992 Malawi Demographic and Health Survey (MDHS) collected information on fertility, early childhood mortality, family planning knowledge, and health-related matters including AIDS awareness and knowledge. In 5323 households, 4849 women between 15-49 years and 1151 men, aged 20-54, were interviewed. The results on AIDS awareness and knowledge revealed that 98% of men and 95% of women had heard of AIDS. Men were exposed to messages about AIDS through the major media, i.e., radio (87%) and newspaper (24%), whereas women received information from health workers (43%), friends and relatives (42%). Sexual intercourse was the most reported mode of HIV/AIDS transmission. Generally, men could cite more specific modes of transmission than women. Formal education of the respondent was strongly related to AIDS knowledge especially when looking at specific knowledge of modes of HIV transmission.

However, the 1992 MDHS did not collect information on the level of sexual activity, when sex was first initiated and negotiating for condom use. The school-going adolescents were not part of the study. In addition, no information was collected for female adolescents under the age of 15 and male adolescents under 20 years old. However, these 1992 MDHS results have important implications for the design of gender-specific programmes.

The National Safe Motherhood Task Force of Malawi (1995) reported of a survey in one district involving adolescent girls who were not attending school. The results revealed that two out of three girls aged 14 years had already experienced sexual intercourse. By the age of 17, the rate had increased to nine out of every 10 girls. Furthermore, the findings revealed that one out of 10 girls aged 15 had already had a baby

or was pregnant. By the age of 18 more than half of the adolescent girls had already begun childbearing, and many had put their lives at risk. Some will even have died of AIDS.

The 1996 Malawi Knowledge, Attitudes, and Practices in Health (MKAPH) survey was administered to 2,683 women and 2,658 men through out the whole country in order to get information on malaria prevention, immunisation, management of childhood illness, fertility, marriage and partner relations, and sexually transmitted diseases (STDs) including AIDS. Results on HIV/AIDS and other STDs revealed that 85% of women and 92% of men knew of AIDS. The major common source of AIDS related knowledge was the radio (93% for men and 76% for women). Other prevalent information sources were friends and relatives (43% of women and 39% of men), and health workers (38% of women and 31% of men). Women reported higher levels of perceived personal risk of getting AIDS than men. Men reported having more sexual partners than did women. Among women and men who reported having sexual intercourse with a non-regular partner during the 12 months preceding the survey, 24% of women and 43% of men reported using a condom. Again, adolescents attending school were not part of the study.

Little information is available concerning AIDS-related level of knowledge, attitudes, and sexual behaviour of adolescents attending school in Malawi. Despite cultural taboos to forbid any sexual intercourse outside the institution of marriage and inhibition, adolescents seem to be exploring sexuality on their own. A considerable rate of sexually transmitted disease cases is reported among the adolescents. Furthermore, the reality is that sexual activity among the youth appears to be common (Bandawe, 1992) with 55% of the youth reporting having sexual intercourse at the mean age 15 of whom 75% claim to have had their first sexual intercourse before the age of 14 (McAuliffe & Ntata, 1994).

Statement of the Problem

The current status of the HIV/AIDS epidemic in Malawi is characterised by a high rate of HIV infection and a growing number of illnesses and deaths among the country's citizens (Chitsulo, 1996; Delay, 1990). From Table 2, it is evident that 12.8% of AIDS cases in Malawi are young people between the ages of 15 and 24. Of the AIDS cases in the 15 to 19 years age group, the infection rate for girls is five times higher than boys (NACP, 1997). Furthermore, it is estimated that 25% of national HIV cases are young people between the ages of 15 – 24 (UNICEF-Malawi, 1996).

It has been observed that high levels of teenage sexual activity result into a lot of reproductive health problems among adolescents. These problems would include teenage pregnancies, abortions, sexually transmitted diseases including HIV/AIDS, pregnancy and delivery-related complications. In 1995, teenagers aged 14-19 years accounted for 30% of pregnancies at Lilongwe Central Hospital (Mrs Jiyani, in communication, July 1998). In 1998, Queen Elizabeth Central Hospital and Zomba Central Hospital had more than 1000 teenage pregnancies (35%) and about 40% of teenagers treated with sexually transmitted diseases (Mrs Chilipaine, in communication, February 1999).

The major mode of transmission of HIV among young people is through heterosexual relationships (MacLachlan et al., 1997). As a result, the AIDS epidemic is primarily affecting young, working age, sexually active adults between the ages of 15 and 40 (UNICEF-Malawi, 1996). Unfortunately, there is evidence that older men including some male teachers are deliberately turning to schoolgirls, believing them to be free from HIV infection (MacLachlan et al., 1997). In addition, there exists a tradition of "sugar daddies" in Malawi. Sugar daddies are older men who obtain sexual favours from young

women or girls in exchange of money for school fees, clothes or other "gifts". These older men frequently use money, power, or gifts to entice girls, who are attracted to an easy but dangerous form of income-generation (National Safe Motherhood Task Force, 1995).

At present, there is no formal programme on sexuality and AIDS education in the secondary schools in Malawi. Some initiatives to provide family life education in secondary schools are being conducted by individuals or non-governmental organisations with permission from the Ministry of Education, Sports and Culture. One such initiative is the "WHY WAIT?" programme coordinated by the Sub-Saharan African Family Enrichment (SAFE) project. The programme is designed to educate students in God's principles of character, moral development and sexual purity. The emphasis is sexual abstinence until marriage.

AIDS Control and Prevention Project (AIDSCAP), a United States Agency for International Development (USAID) technical support project, undertook a major effort to provide some AIDS education in primary and secondary schools by developing a series of booklets intended to be appropriate to different levels of education (Jimerson & Stone, 1993). Although a quarter of a million booklets were printed and distributed, Nyirenda and Jere's (1991) preliminary evaluation reported discouraging results. They found no increase in pupil's scores on a test of AIDS knowledge, given before and after several weeks of the booklets in schools. Teachers were not using them and some teachers acknowledged that they did not feel comfortable talking to school pupils about sex and HIV transmission.

In addition, UNICEF has introduced AIDS-TOTO clubs in secondary schools (UNICEF-Malawi, 1996). The purpose of the club is to provide the members with basic information on HIV/AIDS, disseminate AIDS prevention messages to other young people

through songs, poems, talks, drama, and dancing, give them opportunities to speak openly about AIDS and sexuality, offer them the mechanisms for positive action in the prevention of AIDS and help them make informed choices on their sexual behaviours. It also provides members with the opportunity to reach their fellow students and communities through peer education and counselling. The students who join the club do it voluntarily. The club is just like any other clubs and is run by a student executive composed of the chairperson, vice chairperson, secretary, treasurer, publicity secretary, and committee members representing all Forms in school.

Whatever the exact incidence and prevalence rates of HIV infection and the AIDS pandemic, it is clear that HIV/AIDS presents Malawi with an enormous challenge to the health of its citizens, especially adolescents. Malawi, like many African countries, has a young population. Almost half of the Malawians are under age 15 (United Nations, 1992) and about 64% of the population is under the age of 24. Officials from the Ministry of Women, Youth, and Community Services estimate that more than 38% of young people of both sexes experience their first penetrative sexual encounter between the ages of 10 and 12 years (Mrs Jiyani, in communication, July 1998). Therefore, the HIV/AIDS situation in Malawi makes it vital to develop a comprehensive set of interventions that target these young people about HIV/AIDS education and prevention. In order to make an impact on young people, the AIDS information package needs to be relevant to the kind of concerns, problems, and decisions that fit into their lives now. Hence, this research study seeks to examine students' knowledge, attitudes, and behaviour in relation to sexuality and HIV/AIDS in Malawi.

Purpose of the Study

The General Aim

In this study, I sought to gain an understanding of the Malawian secondary school students' AIDS-related knowledge, attitudes, and sexual behaviour. I also assessed the depth and accuracy of their knowledge on various aspects of HIV/AIDS. Furthermore, I have explored how gender influences high-risk behaviours and sexual communication among students. In analysing the effects of gender on sexual behaviour, the socio-cultural and economic contexts that influence the sexual behaviour of girls were taken in account. As well, contextual variables of family background (education of parents, family size, age, socio-economic status) combined with school related variables (class level, gender composition of the school, other students' attitudes) influence students' sexual behaviour were studied.

Specific Research Questions

The specific research questions of this study are as follows:

1. What are the students' current HIV/AIDS-related knowledge, beliefs attitudes and their HIV/AIDS preventive behaviours by gender and grade level?
2. What is the relationship between students' prevailing attitudes and beliefs about HIV/AIDS and their sexual behaviour?
3. What is the relationship among variables of age, religion, socio-economic background, gender, and the grade level on sexual practices of students?
4. What are the levels of students' high-risk behaviours?

5. What are the sources of information and requirements for HIV/AIDS prevention among adolescent youth?
6. How does gender influence negotiations for safer sex among students and their partners?

Rationale and Theoretical Framework

In the absence of the cure for HIV infection, the strategy of prevention of HIV transmission through AIDS education and efforts to change high risk behaviours remains the only hopeful and available approach at present to prevent HIV infection (Albee, 1989; Kalichman, 1995; Piot & Merson, 1995). Because HIV is largely transmitted through sexual behaviour and the sharing of drug injection equipment, it can be prevented or severely curtailed through appropriate behavioural changes. While sexual abstinence is the best method of preventing sexual transmission of HIV, research findings consistently report that a substantial proportion of adolescents fail to adopt this strategy (Bandawe & Forster, 1996; Bury, 1991, Delay, 1990; King et al., 1989). In fact, it would be totally unrealistic to expect that all adolescents will adopt sexual abstinence as an HIV prevention strategy. Consequently, for a sexually active group of adolescents, appropriate and consistent use of condoms represents the most effective strategy to reduce their risk of exposure to HIV.

Changing high-risk sexual behaviour is a particularly difficult problem because the risk behaviours responsible for HIV infection occur in the context of people's personal, private, and often secret interpersonal relationships and pose many social, psychological, and cultural obstacles to curtailing the epidemic (DiClemente & Peterson, 1994).

Consequently, complex theoretically based intervention studies are necessary to identify precisely which factors or components of interventions produce behavioural change. Hence, the conceptual framework for this study is based on two theoretical models: Social Cognitive Theory (SCT) and Health Belief Model (HBM).

(i) Social Cognitive Theory

In Social Foundations of Thought and Action, Bandura (1986) wrote that individuals possess a self system that enables them to exercise a measure of control over their thoughts, feelings and actions. This self system houses one's cognitive and affective structures and includes the ability to symbolise, learn from others, plan alternative strategies, regulate one's own behaviour, and engage in self-reflection. It also plays a prominent role in providing reference mechanisms and a set of sub-functions for perceiving, regulating, and evaluating behaviour, which results from the interplay between the self system and external environmental sources of influence. As such, the self system serves a self-regulatory function by providing individuals with the capability to alter their environments and influence their own actions. In all, Bandura painted a portrait of human behaviour and motivation in which the beliefs that people have about themselves are key elements in the exercise of control and personal agency.

According to social cognitive theory, human motivation and action are extensively regulated by forethought. This anticipatory control mechanism involves three types of expectancies: (1) situation-outcome expectancies, in which consequences are cued by environmental events without personal action, (2) action-outcome expectancies, in which outcomes flow from personal action, and (3) perceived self-efficacy, which is concerned

with people's beliefs in their capabilities to perform a specific action required to attain a desired outcome (Bandura, 1977; Maddux, 1991).

In social cognitive theory, human behaviour is seen to result from a constant interaction between the person and the environment outside the individual. According to Bandura (1994), interventions developed in AIDS risk reduction using social cognitive theory normally contain four components: (1) information designed to increase awareness of health risks, (2) development of social and self-regulative skills needed to translate informed concerns into effective preventive action, (3) guided practice and corrective feedback in applying skills in high risk situations in order to build skills and self-efficacy, and (4) enlisting and creating social supports including large environment.

A seminal construct in social cognitive theory is that individuals must have confidence in their ability to perform behaviour, including "exerting control over their own motivation, thought processes, emotional states, and patterns of behaviour" (Bandura, 1994, p. 26). This behaviour-specific confidence is what Bandura calls "self-efficacy". Self-efficacy can simply be defined as a person's confidence or lack of confidence in his or her capability to organise and execute courses of action required to attain a designated type of performance (Bandura, 1986; Muuss, 1996). It is constructed from knowledge and skills (behavioural capability), expectations of what the outcome of performing the behaviour will be, the value placed on getting these results or expectancies, and the reinforcement given to the individual to perform the behaviour (Bandura, 1977; 1986; 1994; Maddux, 1991). Individuals lacking self-efficacy do not manage situations effectively even though they may know what to do and possess the requisite skills.

(ii) Health Belief Model

The Health Belief Model (HBM) has for the past decade or more been used in Northern America as the basis for designing prevention interventions for a wide variety of health risks. It is based on the assumption that health behaviour is more likely to occur when the following are present: a person perceives that failure to act will make him or her susceptible to illness or disease, the consequences of failing to act will be serious, there are perceived benefits to taking actions, the perceived benefits outweigh the perceived costs, there is a belief that the action will be successful in achieving the desired outcome (self-efficacy), and one or more cues to action initiate and reinforce the contemplated behaviour (Becker, 1974). In HBM, human behaviour is seen to depend on two variables: the value placed by an individual on particular outcome, and the person's estimate of the likelihood that a given behaviour will result in that outcome.

With its emphasis on perceived severity of an illness, personal susceptibility and that preventive actions will be effective in reducing susceptibility and/or severity of disease, HBM has been used extensively in planning AIDS prevention interventions. Many programmes in the United States and Canada in the late 1980s relied on HBM (Petosa & Wessinger, 1990; Prewitt, 1989). Interventions developed using HBM normally include five components: information designed to increase awareness and knowledge of health risks, perception of personal risk, perceived effectiveness of change and response efficacy, socio-demographic variables, and social network affiliation and peer norms.

Much of AIDS education in African countries has been based on the idea implicit to HBM that individuals' knowledge, attitudes and beliefs are important determinants of health-related behaviours. However, the extent to which individuals' perceptions of factors

such as vulnerability and seriousness usefully predict subsequent changes in behaviour is now open to question (Montegomery et al., 1989). Many existing AIDS education programmes appear to underplay the complexities in turning adolescents' knowledge, attitudes, and beliefs into behaviour change. AIDS education programmes have been successful in increasing students' knowledge about HIV/AIDS threat but have been unable to convince them to change their behaviour. Often, attitudes and behaviours are so deeply held that information alone will not change them (Levine, 1991).

Much of this resistance to change involves a person's perceived vulnerability for HIV infection, perceived benefits of changing behaviour, and self-efficacy (Hayes, 1991; Sorensen, 1992). Many adolescents do not see themselves as vulnerable, do not recognise the value of changing their behaviour, and do not believe that they are capable of making changes. Today, AIDS educators must realize that knowledge alone does not ensure long-term sexual behaviour change. Education that aims solely to increase knowledge would appear to be limited in its ability to induce and maintain alterations in sexual behaviour. Educators must convince students, especially those engaged in high-risk behaviours, that they are vulnerable, identify the benefits of change, and help them become more comfortable in trying new behaviours. Teaching such students about the use of condom provides them with an opportunity to address the perceived vulnerability, benefits, and self-efficacy of change.

Education efforts to control HIV must start with an understanding of sexual, educational, cultural, and religious values of the society. Without an understanding of and respect for these values held by individuals in the community, education efforts will be ineffective.

Significance of the Study

The project presented here, "Adolescent Sexuality and HIV/AIDS in Malawi", is only the beginning of an on-going research to be carried out in phases. In Phase I, the focus is on secondary school students because they are more readily available and the results can be put into immediate use. In Phase II, adolescents who are not attending school, those from rural and urban settings will be the focus. At the moment, the Malawi Ministry of Education in collaboration with the Ministry of Health is in dire need of solid data and information on which to base their AIDS Education programme in schools. An accurate understanding of adolescents' knowledge, attitudes, and behaviour concerning sexuality and HIV/AIDS is necessary for the design of efficacious education and prevention efforts. The results of this first study will have significant and practical implications for the intervention strategies for schools.

It is important to note the exploration of HIV/AIDS-related knowledge, attitudes, and behaviour. Assessment of relationships to demographic characteristics is significant for several reasons. Perhaps first among them is that the risks for spreading of the AIDS epidemic and the potential of controlling it, cannot be fully assessed without much further information and solid data about the sexual behaviour and the vulnerability to HIV of the targeted group. Second, in view of the uniquely fatal, infectious, and current stigmatised character of AIDS, new knowledge is needed about the behaviour changes and prevention strategies that could minimise transmission of AIDS among our adolescents.

Furthermore, the results provide insight to the potential risk of HIV infection faced by Malawian secondary school students and provides us with data on current sexual behaviour and factors that influence students to indulge in risk behaviours. Such

information could be incorporated into the teacher education programme and secondary school curriculum.

In addition, the intent of this study was to enhance the understanding of adolescent sexual habits and behaviours within the context of family and school related influences in Malawi. It will provide useful information to be considered in developing relevant mass media campaigns, sex, and AIDS education in schools and strengthen the present HIV/AIDS prevention initiatives. Malawi needs to develop appropriate and culturally sensitive AIDS prevention programmes, AIDS counselling strategies and mobilization campaigns aimed at promoting behaviour change and helping students perceive HIV/AIDS as a serious problem thereby motivating them to act safely and implement safer acts.

On these accounts and many others, detailed study of the adolescents' AIDS-related knowledge, attitudes, and behaviour is required in order to deal effectively with AIDS among the adolescent population. Even more importantly, dealing with the AIDS epidemic immediately is paramount. Successful interventions are critical to making an impact on the young people. If problems resulting from premature sexual activity are to be realistically resolved, then the results of such programmes need to mould regional and national policies. Before effective interventions can be designed, decision makers and curriculum planners and those implementing programmes need to know more about the current knowledge, attitudes and behaviour in relation to sexuality and HIV/AIDS among Malawian adolescents.

Delimitation of the Study

The study was conducted in 10 randomly selected government and government-assisted secondary schools from 30 schools in the Southern region of Malawi. While there is no evidence to suggest that the adolescents from the northern and central region are significantly different, this assumption has not been tested. It was delimited to secondary school students in forms 1 to 4 (equivalent to Canadian grades 9 to 12) of the 10 participating schools. A questionnaire was administered to 1,400 students who were selected through cluster sampling procedure. In an attempt to gain group specific knowledge, a series of two single-sex focus group discussion meetings were arranged and conducted at five randomly selected schools from the 10 participating schools.

Limitations of the Study

In the present study, I attempted to investigate secondary school students' understandings about HIV/AIDS and sexually related behaviour within the context of their own community. The sample is limited to students enrolled in government and government-assisted secondary schools in the Southern Malawi. Therefore, the results of this study cannot be generalised to other regions of the country that may have a homogeneous population. Students enrolled in private secondary schools and adolescents who are not attending school were excluded. Accordingly, the results from the data can only be generalised to students enrolled in government and government-assisted secondary schools in the Southern Malawi.

Assessment of what students know about HIV/AIDS and sexually related behaviour was intentionally circumscribed. The questionnaire and the focus groups did not

include questions on oral or anal sex and homosexuality. Questions on these topics were excluded due to their controversial nature. Furthermore, because intravenous drug abuse is not a significant problem in Malawi, questions about this or its associated dangers for HIV transmission were not included in the study.

It should be noted that approaching individuals with sexually related questions require appreciation of the difference between sex and sexuality. Sex is behavioural. Sexuality is the totality of our human ideas about sexual relations, sexual values, attitudes, intimacy, love, meaning of sex, how we practice it, how we control it, or limit it. Obtaining reliable and valid data on adolescent sexual behaviour can be difficult and complex in Malawi because any open talk about sex and sexuality is regarded as intimate, personal, private, taboo, often embarrassing, and perhaps socially unacceptable. Consequently, many social and cultural methodological problems surround the collection and analysis of information on sexual behaviour. As a result, generalisations from one study to a large population concerning prevalence or frequency of sexual activity may potentially be inaccurate.

There are inherent weaknesses in survey research and the use of a self-report tool such as the questionnaire that was used in this study. In such research studies, especially those of sensitive nature, the participants can manipulate the scores through their responses. Participants may inflate or underestimate their knowledge, or give socially acceptable answers. However, surveys have been found to be excellent tools for measuring knowledge, attitudes, and behaviour in that they provide a means of determining prevailing trends. A self-administered questionnaire is preferred when questions are highly personal and sensitive, as was the case in this investigation. Student participants may be more

willing to answer questions honestly and may have greater trust in the confidentiality of a paper-and-pencil questionnaire than oral interviews. The validity of the results of survey research depends on frank and honest responses on the part of the respondents. Even though the students in this study were assured anonymity, there is no way to know with certainty that they provided candid, not socially acceptable, responses.

Definition of Terms

For the purpose of this study, the following definitions are used:

AIDS (Acquired Immune Deficiency Syndrome) - is a blood borne infectious disease caused by a virus, which impairs the function of the body's immune system, leading to its collapse. This leaves the infected person vulnerable to a number of other infections or cancers.

HIV (Human Immunodeficiency Virus) - is a blood borne virus transmitted from one infected person to another during anal and vaginal intercourse and with some added risk during oral intercourse, sharing intravenous needles and syringes when using drugs, and during birth processes or when nursing from infected mother to the newborn baby. HIV is synonymous with the AIDS virus.

AIDS-related knowledge refers to information concerning the way HIV is and is not spread and an understanding of how HIV transmission can be prevented and controlled.

AIDS-related beliefs are individual's perception of something held to be true; or actual regard for the risk of HIV/AIDS infection, people with AIDS and school-based instruction about AIDS.

Attitude: The definition of attitude used in this study is the one which was developed in the early 1930s by social psychologist, Louis Thurstone. His popular and widely accepted definition of attitude includes (a) feelings for or against, (b) evaluation of, (c) like or dislike of, or (d) positiveness or negativeness toward a psychological object (as described in Mueller, 1986).

Risk-behaviour: any behaviour by an individual that may place that person or other people at risk of contracting HIV infection, or a sexually transmitted disease (STD), for example, unprotected sexual intercourse.

Focus Group Discussions: Interviews with representatives (usually 6-12) of a target audience who are asked prepared questions on a selected topic and encouraged to speak freely, so that the moderator or interviewer can gain an insight into what the target audience thinks about the topic.

Government Secondary Schools: these are public schools which are directly and wholly maintained by the Ministry of Education, Sports and Culture out of public funds.

Government Assisted Secondary School: these are schools maintained in part by grant from the Ministry of Education, Sports and Culture. They have religious affiliations with either the Catholic Church (RC), the Anglican Church or the Church of Central African Presbyterian (CCAP). These schools follow the same curriculum as the government secondary schools.

Form: class level signifying the number of years at secondary school level. Students enter Form 1 and pass through Forms 2 and 3 to Form 4 thereby completing the four years of secondary education.

An Outline of the Thesis

This thesis is organised into five chapters. In this chapter, the context of HIV/AIDS prevalence and problem in Malawi is established. Next, the statement of the problem is followed by the purpose of the study. The rationale and conceptual framework of the study is based on two theoretical models, the social cognitive theory and the health belief model. These two models have been summarised in this chapter too. Finally, the significance of the study, its delimitations, limitations and the definitions of terms have all been presented in this chapter. Chapter 2 consists of a review of related literature. First, a brief background on Malawi's geography and political history is summarised. Then, relevant information on the etiology and epidemiology of the HIV/AIDS is provided. Thereafter, a selected AIDS-related knowledge, attitudes and behaviour studies that have been done in Sub-Saharan Africa are reviewed.

In chapter 3, a detail on the methodology that was used in carrying out the study is provided. The five important aspects of the methodology are described. These aspects are research approach, population and sample, a description of the data collection instruments, the procedure for data collection, and techniques for data analysis. Chapter 4 gives the analysis of the findings of the study and the interpretations made on the basis of the quantitative and qualitative data collected from the students through the questionnaire and focus group discussions. The results are in relation to the research questions. The final chapter has been divided into three sections. In the first section, an overview of the study is provided. Then, some conclusions based on the study are provided in the review of the findings. All in all, practical suggestions and recommendations for the implementation of the findings are addressed and areas of further research are identified.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

Because of the urgent need to deepen our understanding of adolescents' knowledge, attitudes, behaviour, and experiences as they relate to both HIV/AIDS and sexuality, the key aspects of the relevant literature are reviewed in this chapter, which is divided into six sections. First is some background information on Malawi: (a) brief geographical, historical, political, and economic context; (b) the education system and (c) health priorities and programmes. Then is a brief introductory overview of the current state of knowledge on the Human Immunodeficiency Virus (HIV), the identified cause of AIDS. Thereafter, some of the selected studies that have been done on adolescents' AIDS-related knowledge, attitudes, and behaviour in Sub-Saharan Africa are examined. Finally, adolescent decision-making, the status of AIDS education in Eastern and Southern Africa, and education and prevention issues are reviewed.

1. Brief Background Information on Malawi

1.1 Geographical, Historical, Political and Economic Context

Malawi is a small, landlocked and sovereign independent state bordered to the north and northwest by the United Republic of Tanzania, to the east, south, and southwest by the People's Republic of Mozambique and to the west by the Republic of Zambia. It is 901 kilometres long and ranges in width from 80 to 161 kilometres. The country has a total area of 118,484 square kilometres, of which one-fifth are covered by water. Fifty-six percent of the land is arable (Demographic and Health Survey, 1997).

Based on the examination of earliest human remains and stone-aged tools, people who are known as *Abatwa, Akafula* or *Mwandionerapati* lived in Malawi since around 8000 BC. During the 9th Century AD, a group of people known by the name of *Pule, Lenda* or *Katanga* from the shores of Lake Tanganyika settled in Malawi. Between the 13th and 16th Century AD, Bantu speakers known as *Maravi* settled in central and southern Malawi. Those who eventually got established in central Malawi are known as *Chewa* while those who settled in southern Malawi are known as *Mang'anja* or *Nyanja*. The *Tumbuka, Tonga, Ngonde, Ngoni* and *Lambya* eventually came to settle in northern Malawi. Later, during the 19th Century AD, the *Yao, Lomwe* and *Sena* settled in southern Malawi. It was also during this period that Europeans arrived in Malawi and began colonization (Pachai, 1973).

On 14th May 1891, the British declared the country a British Protectorate under the name of Nyasaland District Protectorate which was then changed to British Central African Protectorate in 1893. Opposition to colonial administration culminated in the uprising led by Rev. John Chilembwe in 1915. In 1953, the Federation of Rhodesia and Nyasaland was instituted comprising three countries, namely: Zimbabwe (then Southern Rhodesia), Zambia (then Northern Rhodesia) and Malawi (then Nyasaland) despite protests from Africans in Malawi by the Nyasaland African Congress (NAC), which was a nationalist movement founded in 1944. On 3rd March 1959 the colonial government declared a state of emergency and NAC, whose leaders were arrested and detained, was banned as a political party. In September 1959, the Malawi Congress Party was formed (Mhone, 1992; Pachai, 1973).

The Federation was abolished in 1963 paving way for Malawi's self-government. On 6th July 1964, Nyasaland became the independent state of Malawi under the monarchical constitution. That was replaced by a republican constitution as of 6th July 1966 when Malawi became a Republic and a one party state (Pachai, 1973). On 14th June 1993, a national referendum was conducted which resulted in Malawi becoming a multiparty state (Lwanda, 1993).

Administratively, Malawi is divided into three regions, namely: Northern, Central and Southern regions. There are 26 districts, five in the Northern region, nine in the Central region and 12 in the Southern region. Each district is under the jurisdiction of a district commissioner. Malawi has taken population census 11 times since 1891. The rapidly growing population was estimated at 7.9 million in 1987 and was growing at 3.2 percent per annum (Malawi Government, 1993). Presently, the country's population is estimated to be 9.8 million. The pattern of the population distribution is uneven. It is concentrated in the Southern Region where almost half of the country's population lives. The population is still predominantly rural with about 89% of people falling into this category. Urban population is centred in four cities: Blantyre, Lilongwe, Mzuzu, and Zomba. Currently almost half of Malawi's population is under the age of 15.

To curb this rapid population growth, the Government of Malawi adopted a National Population Policy in 1994. This policy was designed in order to reduce population growth to a level compatible with the country's social and economic goals (Office of the President and Cabinet, 1994). Strategies to achieve this objective include improved family planning and health care programmes, increased school enrolments with

emphasis on raising the proportion of female students to 50% of total enrolments, and wider employment opportunities, particularly in the private sector.

With respect to economy, Malawi is predominantly an agricultural country. Its main resource is the soil. Agricultural produce accounts for 90% of the country's exports. Tobacco, tea, and cotton are rated to be the major export commodities. From 1964 to 1989, agriculture contributed between 36 and 40 percent of the country's GDP. Its main export is tobacco which accounts for almost half of foreign exchange earnings. Other exports include sugar and tea. Tourism is rated fourth as a foreign exchange earner. From 1964 to 1978, Malawi experienced favourable economic developments, the GDP grew at an annual average of 5.5 percent.

During the past 15 years, Malawi has had to contend with a series of external shocks: falling world prices for exports which has led to the drastic decline in tobacco prices in the world market; rapid escalation in import prices, particularly fuel and intermediate and capital goods; an escalation in regional political tensions which has disrupted external transport routes and led to large rises in transport costs and caused a large and continuing flow of Mozambican refugees to Malawi; drastic decline in the domestic production of tobacco and maize due to periodically adverse weather conditions caused serious economic hardships. The decline in the national economy accompanied by high population growth and the escalating HIV/AIDS cases are affecting to a very great extent the development of Malawi including the provision of basic social services such as education and health.

1.2 Malawi's System of Education

The Ministry of Education, Sports, and Culture is responsible for all formal education and training in Malawi. All public schools and post-secondary institutions fall under its jurisdiction. The traditional structure of the education system was inherited from the colonial government. It is divided into four major levels: primary, junior secondary, senior secondary, and tertiary.

The primary level of education covers 8 years, that is, from standard 1 to standard 8 and enrols children from the age of 6 or 7. Access to primary school is open to all school-age children. With the introduction of free primary education in 1994/95 academic year, over 80% of the children are enrolled in primary schools (Kadzamira, 1997). In their eighth standard, students are required to sit for a government national examination, Primary School Leaving Certificate of Education (PSLCE). The examination is administered by the Malawi National Examinations Board (MANEB). Only the very best students from among those candidates who have passed the PSLCE examination in a particular year are eligible for selection for secondary education. There are also expensive private schools which cater to a very small percentage of the population who can afford them.

The secondary education programme is a 4 year one with two levels, junior and senior. Access to secondary education remains highly competitive. For example, the transition rate to government funded and government-aided secondary schools has averaged around 10% only over the past decade (Kadzamira, 1997). Students join the system in Form 1 and in their second year, i.e., Form 2, write another national examination known as Junior Certificate of Education (JCE) examination. The candidates who successfully fulfil the requirements and pass this JCE proceed to senior secondary level of

forms 3 and 4. In their fourth form, the students sit for yet another national examination called Malawi School Certificate of Education (MSCE), an equivalent of the British General Certificate of Education (GCE) ordinary level.

The tertiary education is designed to be the final step in preparing students for their various careers. After successful completion of secondary education, students may select a university or college to apply for their desired programme of study. In Malawi, there are three types of post-secondary institutions which require JCE or MSCE as a prerequisite. These institutions are vocational colleges, teacher training colleges, and the university. The vocational colleges provide certificate and diploma programmes in apprentice, community nursing, health, agriculture, forestry, and hotel management. The programmes are run from 2 to 3 years. The teacher training colleges (TTCs) offer a certificate programme which covers a 2 year duration. The programme is aimed at training primary school teachers only, students who want to be secondary school teachers study at the university. Upon completion, T3 and T2 qualifications are obtained by candidates who TTCs got admitted into the programme with JCE or MSCE, respectively.

University education programme is offered at the newly established Mzuzu University and the University of Malawi. The University of Malawi has five constituent colleges, namely: Chancellor College situated in Zomba, the Malawi Polytechnic and College of Medicine in Blantyre, and Kamuzu College of Nursing and Bunda College of Agriculture in Lilongwe. Approximately 3,000 students attend university each academic year. The university education offers certificate, diploma, and degree programmes in education, public administration, social science, science, arts, theology, medicine, engineering, business studies, commerce, computer studies, nursing, and agriculture. It is

only about 0.04% of the candidates who sit the MSCE examinations that go on for university education (Chimwenje, 1996).

1.3 Malawi's Health Priorities and Programmes

The main objective of health policy in Malawi is to develop a sound health care delivery system capable of preventing and curing disease. Because of high childhood and maternal morbidity and mortality, the health needs of mothers and children under 5 years of age are high priorities. Service delivery is being improved by extending coverage, so that basic curative services for common illnesses such as malaria, diarrhoea, and acute respiratory infection are widely available along with immunisations and family planning. Information, education, and communication programmes are used to increase the prevalence of effective preventive behaviour. Training of providers is being upgraded. Management systems are being reorganised to improve collaboration between units of the Ministry of Health and Population and to improve cost effectiveness (Ministry of Health and Population, 1995).

There is a system of government sponsored free health care in the central hospitals of Queen Elizabeth (Blantyre), Zomba, and Lilongwe, district hospitals, dispensaries, and clinics all over the country. It is estimated that 81% of the urban population has access to health services compared to 29% of rural population with access to health services. Condoms are provided free in these places as part of family planning programme and HIV prevention initiative. People can also buy condoms in all major shops and groceries through out the country.

The Ministry of Health and Population has also launched a major initiative to reduce the prevalence of HIV/AIDS and other sexually transmitted diseases in the country. The first AIDS case was confirmed in Malawi in 1985. Screening of blood supplies began somewhat haphazardly at that time. The National AIDS Control Programme (NACP) provides coordination of AIDS control activities. The first medium-term AIDS control plan (MTP I) was implemented in 1987. MTP I was followed in 1994 by MTP II, which ran until 1998. Under the second MTP, the emphasis was on preventive information, education, and communication; counselling, social support and case management; blood supply monitoring; and epidemiology and surveillance. (AIDSEC, 1994).

2. Etiology and Pathogenesis of AIDS Virus

AIDS, an acronym standing for "Acquired Immune Deficiency Syndrome," is caused by a virus of the retrovirus family, called Human Immunodeficiency Virus (HIV), which attacks, and over time, destroys the body's immune system (Kalichman, 1995). This viral hypothesis fails to convey that current knowledge/evidence indicating HIV as the etiological agent of the same nature and quality as that linking TB or measles and their organisms. Most debate about this is ideological not scientific. However, this viral hypothesis, which is currently in popular acceptance, initially gave this virus three separate names due to the political nature of its discovery. Between 1983 and 1984, the retrovirus that causes the underlying immune deficiency in AIDS was independently identified by researchers in three laboratories in France and the United States. As a result, the retrovirus was given three different names: *lymphadenopathy associated virus* (LAV), discovered by Luc Montagnier of the Pasteur Institute of France; *human T-cell lymphotropic virus type-*

III (HTLV-III), identified by Robert Gallo at the National Institute of Health; and *AIDS-associated retrovirus* (ARV), discovered by Jay Levy of the Cancer Research Institute of the University of California at San Fransisco (Kalichman, 1995). Later, this virus was renamed human immunodeficiency virus, more commonly known as HIV.

AIDS was first described as a new and distinct clinical entity during the late spring and early summer of 1981 (McCoy & Inciardi, 1995). According to Landau-Stanton & Clements (1993) and Kalichman (1995), clinical invesatigators in Los Angeles reported five cases of *Pneumocystis carii pneumonia* (PCP), a rare type of upper respiratory infection, among young, previously healthy, homosexual active men to the Centers of Disease Control (CDC). None of these patients had an underlying disease that might have been associated with PCP. And within one month, CDC reported another 10 cases of this PCP and 26 cases of Kaposi's sarcoma, a rare cancer which often causes red skin lesions. All of these unusual cases occured in New York city, San Franscisco, and Los Angeles among previously healthy young homosexual men (Kalichman, 1995; McCoy & Inciardi, 1995).

First seen in homosexual men, AIDS was soon found in other groups "at risk" for the disease, including intravenous (IV) drug users, recent Haitian immigrants to US, hemophiliacs, recipients of blood transfusions, sexual partners of persons who had the disease or were at risk, and infants of mothers with or at risk for the disease (Kalichman, 1995; McCoy & Inciardi, 1995). By the end of 1981, the number of reported AIDS cases in United States grew to 257, and over 2,000 cases by the end of 1983, setting into motion the rapid accumulation of over 100,000 AIDS cases in the first decade and reaching 360,000 cases by the end of 1993 (Kalichman, 1995).

What is known, is that HIV invades cells which bear the necessary viral receptor site on their surfaces. The site is called the CD-4 antigen. Chief amongst these cells are white blood cells, the T4 or T-helper cells. The T-helper cells act to switch on the immune system when the body is under attack by infectious agents (Kalichman, 1995). Once the virus has been introduced into the body and has established itself within its host cells, the infected person will enter the first of the four stages and possibly progress through the remaining three. In stage 1, the individual is either asymptomatic or may present with persistent generalised lymphadenopathy, while stages 2, 3, and 4 may be referred to, respectively, as "early", "intermediate" and "late" disease (Kalichman, 1995; Landau-Stanton & Clements, 1993).

In stage 1, the individual who is HIV-positive asymptomatic has been exposed to the virus and has developed antibodies to it. However, there may be no overt symptoms of disease and, unless the individual has been tested, he/she may not be aware of his/her condition. The duration of this stage can range from a few months to many years. In a way, this can be the most dangerous stages of the disease in terms of unknowing passing the virus to others through unprotected sex or by sharing of needles (Kalichman, 1995; Landau-Stanton & Clements, 1993).

The second stage is characterised by the occurrence of typical mucocutaneous lesions, such as oral hairy leukoplakia, or infections such as zoster. "Constituional manifestations such as moderate weight loss, fatigue, anorexia, and night sweats, are also common in this stage. These signs and symptoms are frequently intermittent. Recurrent upper respiratory tract infections may also occur during this phase of the disease (Kalichman, 1995; Landau-Stanton & Clements, 1993).

Clinical manifestations characterising stage 3 may occur more frequently some time after early symptoms but before the full development of late-stage indicator disease. In this stage, clinical conditions typically include oral candidiasis, oral hairy leukoplakia, pulmonary tuberculosis, labial or genital herpesviral vesicular dermatitis, isosporiasis, some bacterial infections such as alveolar pneumonia, a tumour (Kaposi's sarcoma) that is very characteristic of HIV infection, and a number of constitutional symptoms such as persistent fever, diarrhoea, and weight loss exceeding 10% of body weight (Kalichman, 1995; Landau-Stanton & Clements, 1993).

The final stage is full blown AIDS. The hallmarks of AIDS are a T-cell count of less than 400 cells/mm^3 (a normal T-cell count is approximately 1,600 cells/mm^3), the presence of certain opportunistic infections, specifically PCP and KS, HIV encephalopathy, and HIV wasting syndrome. Death in these individuals occur not from HIV itself but rather the opportunistic diseases (Kalichman, 1995; Landau-Stanton & Clements, 1993).

Most people infected with HIV do not know that they have been infected. It takes at least 8-12 weeks for a detectable antibody to appear in the blood. During the period between infection with the virus and the appearance of antibodies against it, routine antibody tests would be negative, however viral antigens are present in the blood and the virus may be cultured from body fluid. The individual at this stage is potentially highly infectious even through the antibody blood test is negative (Kalichman, 1995; Landau-Stanton & Clements, 1993; McCoy & Inciardi, 1995).

HIV is transmitted when virus particles or infected cells gain direct access to the bloodstream (Kalichman, 1995; McCoy & Inciardi, 1995). This can occur through all

forms of sexual intercourse, through using contaminated hypodermic needles and injection equipment, through blood and blood products, and through the passing of the virus from infected mothers to their unborn or new-born children (Kalichman, 1995; Landau-Stanton & Clements, 1993; McCoy & Inciardi, 1995). Although HIV has been isolated in body fluids of infected persons, including saliva, tears, sweat and urine, it is extremely low concentration and therefore is thought to be of much lesser risk of infection. The accumulated data of detailed epidemiological studies throughout the world strongly support the conclusion that transmission of HIV occurs primarily through three modes: sexual activity, parenteral, and perinatal events (Friedland & Klein, 1987).

On a global basis, sexual intercourse is the most frequent means of transmitting HIV (Bernett & Blaikie, 1992; Lamptey & Piot, 1990; UNESCO, 1995). The virus can be transmitted from an infected person to his or her sex partner (man to woman, woman to man, and man to man). People who abstain from sex and people who are not infected and have sexual intercourse only with a monogamous uninfected partner are not at any risk of becoming infected sexually with HIV (WHO, 1990).

Parenteral transmission occurs through the transfusion of infected blood or blood products, or the use of blood-contaminated needles, syringes, or other skin-piercing instruments. The risk of acquiring HIV infection is related to the size of the inoculum: recipients of a single unit of HIV infection infected blood have a 100% probability of acquiring infection (Kalichman, 1995; Landau-Stanton & Clements, 1993). In some cultures, burial practices can easily transmit HIV. For example, Kornfield and Namate (1997) reported that most of the time the corpse is washed and prepared for burial with bare hands in Phalombe district, Malawi. According to their participants, this was the case

even for people who had died of AIDS with bodily sores because "it would be considered an insult to their family to do otherwise" (p. 18).

Transmission of HIV infection from a woman to her fetus or infant may occur before, during, or shortly after birth. The overall risk of HIV transmission *in utero* or during delivery is 20-40%. Postnatal transmission, probably through breast milk, has been described in a small number of infants of mothers who acquire HIV infection after delivery (Kalichman, 1995; Landau-Stanton & Clements, 1993).

A person has AIDS when the virus, HIV, has done enough damage to the immune system to allow the infections and cancers to develop (Landau-Stanton & Clements, 1993). These infections and cancers make the person ill and lead to his or her death. At present, there is no cure or vaccine for AIDS. Drug treatment appears to control the disease, at least for a period of time, in most patients, but it is enomously costly (about US$ 10,000 per year per person).

3. Adolescents' AIDS-related Knowledge, Attitudes and Behaviour (KAB)

The strategy of prevention of HIV transmission through education and the modification of behaviours remains clearly the most hopeful approach to the prevention of AIDS (Albee, 1989; DiClemente & Peterson, 1994; Lamptey & Piot, 1990). In Africa, the past decade has witnessed a mammoth effort to promote people's knowledge about AIDS and its routes of transmission, in the hope that this will influence attitudes and encourage people to avoid or reduce behaviours which put them at risk of contracting HIV. Many governments and non-governmental organisations (NGOs) have responded to the AIDS pandemic by initiating national HIV preventive mass educational programmes focussing upon minimising sexual partners and promoting the use of condoms. This has been done through the electronic and print media. In addition, some governments through the Ministries of Education and Health have introduced AIDS education in schools (UNESCO, 1995).

If educational efforts to convey information about transmission and prevention of HIV infection and AIDS are to be effective, it is essential to develop an understanding of the knowledge, beliefs, and attitudes a target group holds. Adolescents are a particularly important group to target as they may be developing new beliefs, forming new relationships, and may be engaging in high-risk behaviours. This section of the chapter provides a review of recent and major research on young people's knowledge, attitudes and behaviour (KAB) in relation to HIV infection and AIDS (see Table 2.1). The sample populations in these studies have ranged from senior primary school and secondary school students to college students and young people in the general population.

Table 2.1

Summary of the Main KAB Research on Adolescents in Sub-Saharan Africa

Author(s)	Age/Group	Size of Sample	Methodology	Issues Addressed	Main Findings
Pitts et al. (1989)	Undergraduates at Univ. of Zimbabwe	238	Questionnaire	Knowledge, attitudes and beliefs about AIDS	High level of knowledge, AIDS was perceived as a serious threat and many expressed concern about HIV.
Wilson et al. (1989)	Secondary school students (Zimbabwe)	1532	Questionnaire	Knowledge and sexual behaviour	Knowledge was superficial, 46% of males and 3% of females were sexually active.
Mathews et al. (1990)	Secondary school students (South Africa)	377	Questionnaire	Knowledge, attitudes and behaviour	Lack of knowledge about modes of transmission. 75% of students had had sexual intercourse.
Kapiga, Natchtigal & Hunter (1991)	Secondary school students (Tanzania)	490	Interviews using a structured questionnaire	Knowledge and behaviour	Knowledge of sexual transmission was high. Knowledge inreased with age. Less than 5% reported ever using a condom.
Wilson & Lavelle (1992)	Forms 3-6 Secondary school students (Zimbabwe)	563	Questionnaire	Sexual behaviour and condom use	57% of males and 17% of females reported being sexually active amongst whom 34% of males and 41% of females reported condom use.

Flisher et al. (1993)	Secondary school students (South Africa)	7,340	Questionnaire	Sexual behaviour	17.4% indicated a previous episode of heterosexual intercourse.
Tauna & Hildebrand (1993)	Secondary school students (Nigeria)	416	Questionnaire	Reproductive health knowledge	Differences related to age and grade level, with older students being better informed.
Akande (1994)	University students (Zimbabwe and Nigeria)	1400	Questionnaire	AIDS-related beliefs and sexual behaviour	There were no significant differences in the knowledge of AIDS across two countries (Zimbabwe and Nigeria). Majority of students engaged in a number of sexual practices.
Konings et al. (1994)	Men and women aged 15-49 (Tanzania)	904	Interview using a structured questionnaire	Sexual behaviour	Levels of sexual activity were highest in men and among younger age group.
Kuhn, Steinberg & Mathews (1994)	High school students (South Africa)	1,039	Questionnaire	Evaluation of a high school AIDS programme	Students' knowledge of HIV transmission and prevention was high and had greatly improved.
Ndeki, Klepp, Seha & Leshabari (1994)	6th and 7th grade students (Tanzania)	2,026	Questionnaire	Knowledge, attitudes, and perceived risk	Knowledge level was low. Students with high scores were likely to report AIDS as a very severe disease, perceived themselves less susceptible and had positive attitudes towards people with AIDS.

Ndeki, Klepp, & Mliga (1994)	5th, 6th and 7th grade students (11-18 yrs) (Tanzania)	1,119	Questionnaire	Knowledge, perceived risk and behaviour.	Knowledge increased with age and grade. 86% perceived AIDS as a serious threat and 96% were afraid of getting it. 38.4% of males and 14.5% of females had had sexual intercourse.
Pattullo et al. (1994)	Secondary school students (Kenya)	3,018	Questionnaire	Knowledge, attitudes and behaviour	Students were well informed about HIV/AIDS but not evident in their sexual behaviour.
Vos (1994)	Hospital patients, secondary school students and teachers (Zimbabwe)	40 third form students	Focus group discussion	Attitudes to sex and their behaviour	Traditional sex education no longer takes place and communication between sexual partners is limited. Teenagers rely on peers for information on sexual matters.
Abraham, Rubaale & Kipp (1995)	Secondary school students (Uganda)	387	Questionnaire	Effects of AIDS education efforts	AIDS education efforts have been effective in establishing basic knowledge.
Araoye & Adegoke (1996)	Secondary school students (Nigeria)	1000	Questionnaire	Knowledge, attitudes and behaviour	Knowledge of transmission was high but misconceptions were common. 24% had had sexual intercourse.
Bandawe & Foster (1996)	Secondary school students (Malawi)	191	Questionnaire	Beliefs, attitudes and intentions	Supported the Theory of Reasoned Action that intention can be predicted from attitudes and subjective norm.

Buga, Amoko & Ncayiyana (1996)	Standard 5-7 pupils (South Africa)	2,108	Questionnaire	Sexual behaviour, contraceptive practice and reproductive health	Early sexual initiation, high level of sexual activity, low contraceptive use and high rate of adolescent pregnancies.
Lugoe, Klepp & Skutle (1996)	Secondary school students (Tanzania)	852	Interviews (Semi-structured)	Sexual behaviour and condom use	Of the sexually active students, 26.8% reported ever using a condom and 21.5 reported use of a condom during their most recent sexual encounter. 528 students were sexually active.
Pillai, Barton & Benefo (1997)	Junior secondary school girls (Zambia)	305	Questionnaire	Sexual attitudes and courtship	Liberal sexual attitudes. Pro modern patterns of courtship behaviour.
Peltzer, Cherian & Cherian (1998)	Secondary school students (South Afr.)	622	Questionnaire	AIDS awareness	Over 72% of knowledge questions were answered correctly, 18% thought AIDS doesn't exist and 19% thought there is a cure.
Venier, Ross & Akande (1998)	Form 2 high school students	974	Questionnaire	Social anxiety associated with HIV prevention	Data indicated similar structure for the students of Kenya, Nigeria and Zimbabwe.

With few exceptions, data have been collected through various self-report techniques, the most popular being the use of structured questionnaires. It is important to point out at onset that there are a number of limitations of data obtained in this way. For example, on some items, the researcher(s) may assume a basic understanding of the differences between the virus (HIV) and the syndrome (AIDS). Responses may also be influenced by knowledge acquired from the questionnaire items. At the same time, a response indicating knowledge on a questionnaire may not necessarily reflect what action will be taken in a given situation. The major question is, "To what extent can we rely on questionnaire data to predict the practice of safe behaviour?"

Wilson, Greenspan and Wilson (1989) conducted one of the first studies of the knowledge about AIDS and self-reported sexual behaviour of 1532 (893 male and 633 female) students drawn from 12 secondary schools in Zimbabwe. Their results revealed that over 75% of students knew that AIDS is fatal and incurable, with less than 15% believing that traditional healers can cure AIDS. However, 40% of the students believed that most people with AIDS in Africa are homosexual and 45% did not know that many seropositive individuals look healthy. Furthermore, the researchers found that 46.4% of male students and 3% of the female students reported having had sexual intercourse. Of these students, 38% of the males and 2% of the females reported having had sexual intercourse with two or more partners. One hundred and fifteen (15.8%) male students reported having had sexual intercourse with a prostitute. Students from homes in urban areas reported significantly more sexual partners than did students from homes in rural areas.

In another study of Zimbabwean students' knowledge, attitudes and risk estimates concerning HIV/AIDS, Pitts, Wilson, Phillips, White, and Shorrocks (1989) found that there were high levels of knowledge concerning AIDS but they were not consistent across sub-scales. Generally, knowledge of transmission was high, but knowledge of causes and prevention was more variable. Pitts et al. also found that AIDS was perceived as a serious threat and most students expressed concern about contracting HIV. A significant correlation was found between knowledge and personal risk, thereby indicating that knowledge itself has limited impact on risk estimates. There was evidence of greater retention of specific messages (e.g., the use of condom as a means of reducing risk) among those receiving more education about HIV/AIDS.

In South Africa, Mathews, Kuhn, Metcalf, Joubert, and Cameron (1990) administered a questionnaire to a sample of 377 students from four Cape Town township high schools to obtain information on their knowledge of and attitudes towards AIDS, and their sexual behaviour. The results showed that most students had heard of AIDS and a majority of them knew it was infectious. More than 50% lacked knowledge about the modes of transmission. Two-thirds of the students believed AIDS could be prevented, but knowledge of prevention strategies was found to be superficial. More than 75% of the students reported that they had had sexual intercourse. Of the sexually active students, only 11.4% had ever used a condom. Two-thirds of the students were not aware that there is no cure for AIDS. Concerning students' attitudes towards people affected with AIDS, Mathews et al. found that students expressed intolerance, fear and rejection of people with AIDS, and only 6.4% would accept an affected person into their classroom. Of those not

willing to accept someone with AIDS in their class, 76.4% gave reasons related to fear of AIDS, of death or of the person affected.

In Tanzania, Kapiga, Nachtigal and Hunter (1991) assessed knowledge of AIDS among 481 students from four randomly selected secondary schools, two from Dar-Es-Salaam (a city) and two from Bagamoyo (a semi-rural town). The results revealed that 99% of students had heard of AIDS and 92.9% were able to mention spontaneously at least one sexually transmitted disease, of whom 83.7% mentioned AIDS. They also found that knowledge increased with age and grade level. AIDS knowledge among female students was higher in the city of Dar-Es-Salaam than in the town of Bagamoyo. It is likely that the urban students would have greater access to a wider variety of communication channels like the radio, posters, newspapers and magazines than their counterparts in the small town. Two hundred and ninety three respondents (i.e. 60.9%) reported that they were sexually active. However, only 21 students (i.e. 4.4%) reported to have ever used condoms.

In a test of the predictive capacity of Health Belief Model on intended condom use, Wilson and Lavella (1992) conducted a study with 343 male and 220 female Zimbabwean adolescents. Of these, 57% of males and 17% of females were sexually active, amongst whom 34% of the males and 41% of females reported consistent condom use. Of the 57% of males, who reported being sexually experienced, 13% reported having had sexual intercourse with a prostitute. There was widespread perception of personal susceptibility to AIDS and of the severity of AIDS: about 60% believed there was a big risk they would get AIDS, over 80% believed that people with AIDS were likely to die of the disease, and fewer than 10% believed a cure is likely to be discovered for people who

now have AIDS. Over 80% of the respondents believed that condoms are effective against HIV infection and 25% said they would not use condoms because they break or leak too often. Regarding potential barriers, nearly 20% of males and 30% of females would be embarrassed to discuss condom use with their partners and nearly 40% of males and 50% of females would be embarrassed to carry condoms lest people discovered that they had them.

Ndeki, Klepp, Seha and Leshabart (1994) conducted a major study of 2,026 students aged 10 to 17 years in Arusha and Kilimanjaro regions of Northern Tanzania. The researchers found that, while students reported having been exposed to several sources of AIDS information, their overall knowledge level remained low, particularly with respect to risk associated with casual contact and the fact that a person can be infected and show no signs of the disease. They also found that students with high scores on AIDS knowledge were more likely to report AIDS as a very severe disease, perceived themselves as less susceptible to AIDS, and were more positive towards being with and taking care of people with AIDS.

Abraham, Rubaale, and Kipp (1995) conducted a survey on HIV-preventive cognitions among 387 secondary school students in Uganda. They observed an encouraging and a positive pattern of HIV-preventive beliefs. They found fairly high levels of knowledge. For example, 87% of the students knew that HIV can be transmitted through unprotected vaginal intercourse, 83% knew that people can look healthy even when infected with HIV, and 73% knew that no vaccine was available. The major implication of the study was that AIDS education efforts in schools had been effective in

establishing basic transmission knowledge, accurate risk perception, and an understanding of effective precautions.

The results from other KAB studies of school student's knowledge about HIV/AIDS reveal that students, in general, demonstrate a level of AIDS-related knowledge that range from low to moderately high depending on age, grade level in school, geographical placement, and the availability of information and the frequent source of information is the media (Araoye & Adegoke, 1996; Bandawe, 1992; Chirwa & Phiri, 1990; MacLaclan et al., 1997; Ouedraogo, Lorenz, Zina, Rehle & Soudre, 1996; Tauna & Hilderbrand, 1993; Wilson et al., 1989). In one study of 738 secondary school students in Calabar in Nigeria, about 30% of the students did not know that AIDS existed in Nigeria and only 31% were aware that the use of condoms can protect them from HIV (Asindi, Ibia & Young, 1992). Tauna and Hildebrand (1993) surveyed 416 Nigerian students aged 10 to 16 years to examine their reproductive health knowledge. Results indicated differences related to age and grade level, with older and senior students being better informed. However, their knowledge about AIDS was found to be very limited. Pattullo et al. (1994) conducted a study of 3,018 students in 11 Kenyan secondary schools and found that the questions dealing with knowledge were answered correctly by an average of 77.1% of the students. Kapiga et al. (1991) assessed the knowledge of AIDS among 315 male and 166 female students from Bagamoyo and Dar-Es-Salaam in Tanzania and the results revealed that students demonstrated a high level of AIDS knowledge.

However, these studies have also revealed numerous misconceptions about the cause, spread, and prevention of HIV infection. For example, areas where students' knowledge was less complete included the inability of mosquitoes to transmit the virus

(Chirwa & Phiri, 1990; Kapiga et al., 1991; Puttullo et al., 1994; MacLaclan et al., 1997; Wilson et al., 1989), the protective effect of condoms (MacLaclan et al., 1997; Ouedraogo et al., 1996; Pattullo, 1994), the lack of protection from medications (Ouedraogo et al., 1996), the fatal and incurable nature of AIDS (Buga, Amoko & Ncayiyana, 1996), and the fact that those infected with HIV may appear healthy (MacLachlan et al., 1997). Furthermore, some students believed AIDS to be 'a curse from God and impossible to avoid' (Kipp et al., 1992,).

Nevertheless, there is a special category of disinformation which has not been given sufficient attention. This information is not simply inaccurate with regard to routes or mechanisms of contracting HIV, it often challenges the basic premise that students ought to avoid or reduce certain high risk behaviours. An example is the idea, common in many parts of Africa, that the notion of AIDS is really an 'American intervention to discourage sex' (MacLachlan, 1996; Southern African Economist, 1992). What influence may such an idea have on how a student weighs up to the information given them about HIV/AIDS? However direct or indirect the relationship between knowledge and behaviour, contradictory information is likely to reduce the chances of low risk behaviours being adopted.

Most young people in Africa begin having sexual intercourse during their teenage years. Current data suggest that there seems to be clear trend whereby increasing number of young people are having their first sexual intercourse at a younger age than they did in the past (UNESCO, 1995). For example, in Burkina Faso, one KAB study revealed that 48.7% of secondary school students declared to have had at least one sexual intercourse and the mean age of first intercourse was 15 years old (Ouedraogo et al., 1996). In South

Africa, Buga, Amoko and Ncayiyana (1996) conducted a KAB study in 26 schools among standards 5, 6, and 7 in rural Transkei. Their results revealed that 76% of the girls and 90% of the boys were already sexually experienced. In Zimbabwe, research has shown that the first coitus was reported to have taken place at the mean age of 12 years for boys and 13.6 years for girls (Mbizvo, Kasule, Gupta, Rusakaniko, Gumbo, Kinoti, Mpanju-Shumbusho, Sebina-Zziwa, Mwateba & Pedayachy, 1995).

In Malawi, AIDSCOM and UNICEF undertook a major effort to provide AIDS education in primary and secondary schools by developing a series of booklets intended to be appropriate to different levels of education. They trained over 200 education officers from the country's 24 administrative districts who in turn were to train teachers in each of their zones (Jimerson & Stone, 1993). Although a quarter of a million booklets were printed and distributed, a preliminary evaluation reported discouraging results. Nyirenda and Jere (1991) found no increase in pupils' scores on a test of AIDS knowledge, given before and after several weeks of using the AIDS education materials. A number of factors could account for this. Teachers may have used the material in different ways, and it was reported that some teachers did not feel comfortable talking to their pupils about sex and HIV transmission. It is unclear whether the reported failure of the booklets is due to their content, the application of the materials in a classroom setting, or the methods of evaluation (Nyirenda & Jere, 1991).

The selected research studies reviewed above have relied on the use of structured questionnaires in assessing AIDS-related knowledge, beliefs, attitudes and sexual behaviour of the adolescents in Africa. This has been valuable in providing baseline data and enabling comparisons to be made between Malawi and the rest of Africa. For

example, Akande (1994) assessed AIDS-related beliefs and sexual behaviours of over 1400 university students in Zimbabwe and Nigeria. A comparison between the Zimbabwean and Nigerian samples' knowledge of AIDS revealed no significant differences. Data analysis revealed no significant associations between age and sexual practices, age and the percentage of time condoms were used, or between reasons for low condom use and age, frequency of anal sex or whether the respondent preferred insertive, receptive or both anal sex. At the same time the information obtained through the questionnaires is limited to some extent by the categories imposed by the researcher(s) so that it is not possible to get insights into why students are responding in the way they are.

These selected studies demonstrate that some secondary school students in Africa are at high risk to acquire HIV through sexual risk-taking. This underscores the need to have early intervention efforts that cater for students' specific needs. With no cure for HIV/AIDS, education and prevention efforts remain the most effective intervention strategy to combat further spread of HIV infection. Prevention relies on behavioural changes for success, which hinge on reduction in an individual's sexual risk-taking. This risk-reduction does not only depend on the individual's knowledge but also the individual's perception or construction of what constitutes risk.

4. Adolescent decision-making

Decision-making is a critical component of AIDS education for adolescents. Every decision that an individual makes depends on others made previously, and each decision directs and diminishes the range of choices one has left. Therefore, understanding exactly how adolescents make decisions should be carefully considered. Some aspects of decision-making can be learned.

Meeks and Heit (1988) apply what they refer to as a responsible decision-making approach in their curriculum AIDS: What you should know. Their decision-making process calls for students to do the following: identify the situation, identify different decisions one might make to resolve the situation, ask questions about each possible decision, make a responsible decision and act on it, and evaluate actions. Students may ask themselves five questions to assess whether a proposed decision will lead to responsible actions. "*Would the results of my decision be healthful?*" "*Would the results of my decision be safe?*" "*Would the results of my decision be legal?*" "*Would the results of my decision show respect for myself and others?*" "*Would the results of my decision follow my parent's or guardian's guidelines?*" (p. 14)

One problem with this model is that it does not capture the complex nature of decisions related to sexuality and HIV/AIDS. The steps have to take into account differential information processing from peers, parents, other adults, media, and through critical or reflexive self-analysis. In an attempt to address this shortcoming, Langer and Warheit (1992) advanced a new model of adolescent health decision-making called the Pre-Adult Health Decision-Making Model (PAHDM).

The central premise of the PAHDM is that adolescents are in a process of self-development, and in order to understand their decision-making, the concept of emerging self as it interacts with their 'lifeworld' must be taken into account prior and subsequent to a cue to action (Langer & Warheit, 1992). A major assumption by the authors of this model is that directedness/orientation is an important component of decision-making. More specifically, the focus is on how reference groups associated with decision-making direct and reinforce the knowledge, attitudes, beliefs, and behaviours related to risk.

In the PAHDM, Langer and Warheit (1992) primarily focus on two major aspects of adolescent decision-making: inputs, considered to be knowledge and beliefs, and outputs, defined as the adolescent's attitudes and behaviours. "Both inputs and outputs are mediated at different points by biopsychosocial/environmental factors which exist along a time sequence" (p. 935). That is, past, present, and a self-perceived future factors are considered by PAHDM to intervene or mediate adolescent decision-making at the input stage (prior to any cue to action) and/or the decision-making stage.

Good decision-making includes two major components: adequate knowledge based on information and a system for organising and studying that information in order to arrive at a choice. In regard to the former, it is extremely important that students get accurate facts. Without accurate and relevant information that is closely related to the decisions at hand, there is very little chance that a 'good' healthy choice can be made except by accident. In getting enough information on which to base their decisions, one should remember that the more related information one has, the greater will be one's chances of reducing errors. Once the individual is satisfied that he/she has adequate information, the person must organise it into a usable system.

To develop an effective system, students must learn what action is most likely to bring about desired results. In some situations, a given action will lead to a particular outcome. It becomes important, therefore, to learn to estimate realistically the chances of specific actions producing specific outcomes for the individual. It is doubly important that the individual estimates and predictions made be based on enough related, factual, and correct information to ensure realistic choices.

AIDS risk reduction interventions have shown that, in general, educating adolescents about AIDS has not always translated into appropriate behavioural change (Bury, 1991; Kalichman, 1995; Piot & Merson, 1995). Hence there is the need to reexamine the current health behaviour models used to plan interventions in terms of how relevant these interventions are when applied to adolescents. Sexual decision-making among adolescents is multifaceted. Further, if successful interventions for this age group are to be made, they must attend carefully to contextual meanings. The interactional patterns of adolescents include a great deal of peer processing, discussions, interaction with parents and other adults. In accordance with PAHDM, an intervention is more likely to be successful if is designed to gain maximum processing and reinforcement from a student's support group, no matter how this social network is constituted.

5. The Status of AIDS Education in Eastern and Southern Africa

The UNESCO regional seminar on HIV/AIDS and education within the school-system for twelve English speaking countries in Eastern and Southern Africa was held from February 20 to 25, 1995 in Harare, Zimbabwe. The seminar was initiated by the UNESCO Programme of Education for the Prevention of AIDS and organised jointly with the Education Programme of the UNESCO sub-regional office of Southern Africa. It drew participants from high-level decision and policy makers in Ministries of Education and Health, as well as representatives of NGOs, from the following countries: Botswana, Ethiopia, Kenya, Lesotho, Malawi, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe.

Each participating country submitted a report on the status of HIV/AIDS education programme. A synthesis of country presentations highlighted the similarities and differences among the countries. The reports revealed that young people in the region were increasingly at risk of HIV infection. They agreed that there was urgent need to enable adolescents in schools to protect themselves against HIV, other sexually transmitted diseases (STDs) and unwanted pregnancy, and to experience safe and healthy sexual development. Furthermore, there was a general consensus that the primary risk behaviour that leads to HIV infection in adolescents in the region is heterosexual intercourse. It seems very few young people from the region acquire HIV infection from contact with bloodstream by HIV contaminated unsterilized skin-piercing equipment and by blood transfusion (UNESCO, 1995).

Some African countries, through their Ministries of Health, have taken decisive policy decisions. National AIDS Control Programmes (AIDSCPs) have been formed to

coordinate and spearhead HIV/AIDS prevention and education efforts. A major component of government policies on AIDS has been school-based initiatives. However, these policies vary widely from country to country depending on the political and beauracratic commitment to action, the range of sectors or organisations within the national AIDSCPs, the degree of collaboration between and among the various sectors/organisations, the status and scope of national AIDSCPs. Quite a number of countries in the Sub-Saharan Africa do not have HIV/AIDS education policies within their Ministry of Education (UNESCO, 1995).

The first country in Africa to respond actively to a massive national HIV/AIDS burden was Uganda. The government engaged religious and traditional leaders and other sectors of society in a vigorous debate that helped forge consensus around the need to attack the problem of HIV. Active prevention programmes, focused on delaying sexual relations and negotiating safe behaviours, were brought into schools. Community groups were set up to counsel people and families living with the virus. The efforts of the government and people of Uganda seem to be paying off. At both rural and urban surveillance sites infection rates are falling. The improvement has been particularly marked in the young age groups. This is in line with behaviour studies showing that young people nowadays are adopting safer sex behaviour – later sexual initiation, fewer partners, more condom use – than was common a decade ago. First signs of falling infection rates in young people are also being seen in neighbouring Tanzania, in areas with active prevention programmes (UNAIDS & WHO, 1998).

Some Sub-Saharan African countries have developed HIV/AIDS programmes for schools, some covering either primary schools only or secondary school only, but others

covering both primary and secondary schools. Uganda, Zambia and Zimbabwe are ahead of other countries. They are at various stages in the development of curricula and learning/teaching materials and in the implementation of both in-service and pre-service training programmes for the teachers. The AIDS education programmes have been aimed at enabling students to delay initiation of sexual intercourse and practice behaviours that can protect them from HIV infection. Countries, in varying degrees, have faced some resistance from pressure groups to the introduction of sex education into the AIDS programme. Cultural, religious, and community concerns in relation to condom use and the concept of safe sex have had to be taken into account in the development of curricula (UNESCO, 1995).

The participants also reported other obstacles encountered in trying to implement HIV/AIDS education. The main ones included stereotyping of women and girls as the ones responsible for spreading HIV/AIDS, the abundance of misconceptions and myths about HIV/AIDS, the belief that AIDS education is sex education and therefore will encourage promiscuity among adolescents as well as sexual experimentation, the lack of political commitment, bureaucratic, financial and cultural constraints, shortage of properly trained teachers, and the lack of resources/reference materials for teachers (UNESCO, 1995).

6. Education and Prevention Issues

The most popularly advocated approach for behavioural change in AIDS-related high risk behaviours has been in the direction of creating awareness and changing people's attitudes through education. In the absence of a cure or vaccine, the only means of preventing the spread of HIV/AIDS is through public education. The many mass educational campaigns typically have sought to raise the national awareness of the problem of HIV/AIDS. In doing so, they are set out to dispel ignorance and unfounded myths about AIDS. Educational approaches have tended to provide accurate information about all aspects of HIV/AIDS with emphasis on its modes of transmission. They have also tended to promote the adoption of safer sex practices and warn individuals to avoid contact with infected instruments such as shared needles and razor blades. Furthermore, they have been set out to identify the most effective means of communicating the information on HIV/AIDS be it through the radio, television, print media, and drama.

Of late in the educational approach, there has been a shift in emphasis from total reliance on impersonal mass communication towards an emphasis on direct and more personal contact with target groups. Education efforts to date have demonstrated that presenting information about HIV to people simply increases their knowledge but it is not sufficient (Levine, 1991; MacLachlan et al., 1997). Knowledge alone does not change behaviour. At the 1991 "AIDS in Africa" conference in Dakar, Senegal, AIDS workers in the field lamented at the continuous existence of unprotected sex behaviour in the hardest hit AIDS areas despite numerous and extensive educational programmes (Bandawe, 1992). Therefore whilst there is much evidence that AIDS awareness and education campaigns do inform most people about AIDS, there appears a baffling refusal and

stubbornness amongst people to be able to use this newly acquired knowledge to change their attitudes and sexual behaviours.

In the battle against the spread of HIV and other sexually transmitted diseases (STDs), youth in the age range of 15 to 24 years old represent an important target group (Coyle, Kirby, Parcel, Basen-Engquist, Banspach, Rugg & Weil, 1996; MacLachlan et al., 1997) for a school-based HIV intervention programme. Adolescents and young adults have been singled out as being vulnerable to the transmission of HIV because of their penchant for risk-taking behaviour and feelings of immortality (Katz, Mills, Singh, & Best, 1995; Youngstrom, 1991). The research posits that prominent features of adolescence such as cognitive immaturity, the struggle for psychological autonomy, susceptibility to peer influences, and the traumas of physical development, heighten the tendency to engage in risk taking behaviour (Bury, 1991; Montgomery, Joseph, Becker, Ostrow, Kessler, & Kirscht, 1989). Although relatively few reported AIDS cases have occurred among adolescents, many young adults who either are now infected with HIV or have developed full-blown AIDS probably contracted the virus during their teenage years as adolescents (Coyle et al., 1996; Katz et al., 1995). People who are HIV infected may develop AIDS after an undetermined period of time, sometimes 10 years or more after being infected by the virus (Kalichman, 1995; UNESCO, 1994; Landau-Stanton & Clements, 1993).

The timing of the adolescents' first sexual intercourse is a key variable likely to affect some negative outcomes. For example, adolescents who become sexually active at younger ages could put themselves at an increased risk for an unintended pregnancy because studies have shown that they are less likely to practice effective contraceptive methods (Buga, et al., 1996; Mbizvo et al, 1995; McAuliffe & Ntata, 1994). Sexually

active young adolescents could also be at risk for contracting sexually transmitted diseases and HIV infection (Bandawe, 1992; Coyle et al., 1996; UNESCO, 1995; Ford and Norris, 1991; Gray and Saracino, 1989; King et al., 1989; MacLachlan et al., 1997; Wilson et al., 1989). However, it is probably important to note from the cited studies above that not all adolescents engage in risk-taking behaviours. These adolescents who postpone early first sexual intercourse merit special attention. They have chosen to remain virgins after the majority of their peers have initiated intercourse. Hence, a study of these adolescents may help elucidate strategies for delaying first intercourse in the prevention of HIV infection.

It should be noted that there is a widespread agreement that while knowledge is necessary it is not in itself sufficient criterion for behavioural change (Levine, 1991). As a result, education needs to go beyond lectures and simple information giving such that people need to "come to accept those facts as relevant to their lives; they must have prevention products easily available, and they must receive continued support and counselling to protect themselves from HIV infection" (Jackson, 1988, p. 118). In schools, students need to be involved in a decision-making process that includes discussing alternative behaviours and practicing negotiations of condom use with partners. As adolescents become comfortable discussing sexual behaviours, they gain confidence, have positive self-efficacy and are more likely to take responsibility for their lives by engaging in appropriate safer sexual behaviours. Student teaching student through peer education programme may be one of the best ways to convince teenagers to change their risky behaviours.

This study has been based on constructs of the Social Cognitive Theory, Health Belief Model, and the Pre-Adult Health Decision-Making Model (PAHDM). Models of

behaviour change to stand any chance of succeeding need to recognise that behavioural issues are crucial factors that need to be considered for an effective intervention. There has been a growing realisation of the need for a different and deeper direction of emphasis. AIDS education needs to be structured in such a way that can fit within the context of the culture and the individual differences within the culture. Accordingly, it was expected that the assessed level of awareness, knowledge, attitudes, and sexual behaviour in relation to HIV/AIDS of the secondary school students in Malawi would be useful for developing an appropriate and relevant sex education programme and also helpful for advising policy planners on the needs of adolescents in relation to preventative methods to HIV/AIDS. To develop successful AIDS prevention programme, a greater understanding of factors which determine risk-taking as well as preventive behaviours is needed. Interventions should also address the socio-environmental influences on preventive behaviours and the beliefs and self-efficacy of the students.

CHAPTER 3

METHOD AND PROCEDURE

Introduction

A vaccine to prevent HIV infection and a cure for AIDS are not expected for several years. As a result, it has often been stated that the primary strategy available to control and eventually reduce the spread of HIV infection is education of the general population and, particularly, of individuals most likely to engage in behaviour that places them at risk of either contracting or transmitting the virus. In the absence of the cure for AIDS, it is then essential that studies on AIDS-related knowledge, attitudes, and sexual behaviours be conducted with a variety of social and educational groups to provide the necessary data for the development of appropriate intervention programmes. In this manner, these programmes should be geared specifically towards the needs of various target groups. In the present study, the researcher sought to gain an understanding of the Malawian secondary school students' AIDS-related knowledge, attitudes, and behaviours in order to specifically assess and examine their current knowledge, prevailing attitudes, and high risk sexual practices and develop appropriate interventions. Furthermore, factors that influence adolescent decision-making in relation to sex and what needs to be considered in any future strategies of prevention for HIV infection were examined.

In this chapter, the researcher has outlined the method and procedure that was used in the collection of data for the study. The research population and sample, a description of the data collection instruments, the procedure for data collection, and techniques for data analysis are summarised. The study, largely exploratory in nature, was intended to gather data from Government and Government-assisted secondary school

students in order to provide descriptive information that may generate future research hypotheses in the area of adolescent sexuality and HIV/AIDS in Malawi. This information will also be useful for the creation of AIDS education programme targeted specifically towards this age-group. As well, it will be useful in determining the effectiveness of existing AIDS information programmes through the mass media. Accordingly, the study used an ex post facto research design.

The Research Approach

Sweeney and Olivieri (1981) describe the research approach as "...a very generalized plan that is used as a guideline for finding answers to the problem or to the question that was initially posed" (p. 102). This study followed a descriptive exploratory approach simply because the focus was on understanding secondary school students' AIDS-related knowledge, attitudes, and sexual behaviours.

The nature of this study and the research questions required several methods to be used in a creative and sensitive approach. Correspondingly, a combined emphasis on both quantitative and qualitative data collection was found to be desirable. According to Aboud (1998), "quantitative and qualitative methods are used sequentially, to build on each other, or simultaneously, to support and cross-validate the other's findings"(p.33). Both quantitative and qualitative methods have their strengths and weaknesses, and the use of multiple methods can be complementary and reinforcing (Montell, DiVittis, & Auerbach, 1997).

The basic research plan included the collection of quantitative data through the use of a self-administered student questionnaire. The use of the questionnaire has many

advantages which make it very appealing. A wide scope of information can be gathered on a large sample of respondents (Bogdan & Biklen, 1992; Montell et. al., 1997). It is also relatively easy to administer to one group at one time and the use of keys or scales in the response categories make the scoring simple and objective. Depending on the length, a questionnaire usually takes less time to administer than a personal interview. Respondents may be more likely to answer honestly as the results are anonymous and cannot be traced back to them.

Along with the advantages, there are some disadvantages to the questionnaire. As the questionnaire is administered to a large group at one time, the individual personal characteristics of the respondents are overlooked. Some subjects may choose not to answer the questionnaire leaving a subgroup of non-representative respondents.

The qualitative data were collected through Focus Group Discussion (FGD). The qualitative data were designed in order to add explanation and context to the quantitative findings of this study. Focus groups provide a rich array of data, an opportunity to hear from the participants, and the chance to ask about the "why" behind the "what" (Aboud, 1998; Mertens, 1998). The researcher strongly felt that FGD would provide valuable information to the study. Focus groups have been proven to be of value in education and HIV/AIDS research (Aboud, 1998; Bryant & Gulitz, 1993; Krueger, 1988; Patton, 1990). Whether formal or informal, focus groups can offer insight into the perceptions, attitudes and beliefs of discussants. "While generalizations can be made from focus groups, it is important to recognize that they do not measure intensity of opinion or feelings" (Hendrich, 1999, p. 90). Indeed, Basch (1997) reminds us that focus groups were never

intended to do so; rather, that their value comes from providing a greater depth of understanding of participants' views.

Population and Sample

The population from which the sample was obtained for this study was comprised of students enrolled in Government and Government-Assisted secondary schools in Malawi. These students were considered the ideal group for the study for many following reasons. Adolescents are considered to be at greater risk of HIV infection than the general population; this is the age group with the highest reported sexually transmitted diseases (Bandawe, 1992; Malawi: Ministry of Health, 1996); and there is a high pregnancy rate (Malawi: Ministry of Women and Children Affairs and Community Services, 1992). Furthermore, secondary school students are in a position to provide influential role models of behaviour and to shape knowledge about, and attitudes towards AIDS to the pre-adolescents in primary schools and their peers in secondary schools. They also provide an accessible and amenable research group and accessible to school-delivered interventions.

Secondary education in Malawi falls under three categories; government, government-assisted, and private secondary schools. Government secondary schools are those schools which are directly and wholly maintained by the Ministry of Education, Sports, and Culture out of public funds. Government-assisted secondary schools are maintained in part by grant from the Ministry of Education, Sports and Culture. They have religious affiliations with either the Roman Catholic Church, the Anglican Church, or the Church of Central African Presbyterian. Both government and government-assisted secondary schools follow the same prescribed curriculum. Unlike their counterparts in

government schools, heads of government-assisted schools control school finances. Private schools are the sole responsibility of the proprietors. However, the Education Act mandates the Ministry of Education, Sports, and Culture to exercise supervision and control over major decisions such as instruction and establishment for all types of schools in the country.

The sample of respondents was obtained through a two-stage cluster sampling procedure. In other words, the secondary school was first selected and then the class. A sampling frame consisted of a list of all the twenty-nine government and government-assisted secondary schools in Southern Malawi. Putting all the names of the schools in a hat, the researcher had to pick out 10 schools for the sample. At each school, there were three streams of each form and the researcher had to randomly pick one class in each form. In the end, the sample consisted of 1,400 students: 370 in Form One (26.4%), 391 in Form Two (27.9%), 362 in Form Three (25.9%) and 277 in Form Four (19.8%). Forms one through four would be equivalent to Canadian grade 9 through 12. There were 677 female and 723 male students. The female students accounted for 48.4% and the male students 51.6%. The students were between 13 and 22 years old. The main reason why there is a 9-year age range in 4 forms is due to class repetition, especially in their final year (standard 8) of primary school. Most pupils have to repeat several times in standard 8 before being selected for secondary education. Thus within one form in secondary school a far wider range is found than would be the case in Canadian schools.

The students participating in the quantitative part of the study were drawn from 10 Government and Government-assisted secondary schools, which were randomly selected by the researcher, from the 29 secondary schools in the Southern region of the country.

The schools accounted for one third of the secondary schools that are under the jurisdiction of the Ministry of Education, Sports, and Culture in the region. Geographically, the sample represents seven out of 12 administrative districts in the region and these are Balaka, Blantyre, Chiradzulu, Mangochi, Mulanje, Thyolo, and Zomba. According to Malawi Government (1993) statistics, almost half of the country's total population lives in the South.

The participating secondary schools included the following; the city in Malawi where they are located is included in parentheses:

1. Balaka Co-educational Secondary School (Balaka)
2. Chiradzulu Co-educational Secondary School (Chiradzulu)
3. Likangala Co-educational Secondary School (Zomba)
4. Luchenza Co-educational Secondary School (Thyolo)
5. Lunzu Co-educational Secondary School (Blantyre)
6. Mangochi Co-educational Secondary School (Mangochi)
7. Providence Girls Secondary School (Mulanje)
8. Stella Maris Girls Secondary School (Blantyre)
9. St. Mary's Girls Secondary School (Zomba)
10. Zomba Catholic Boys Secondary School (Zomba)

In an attempt to gain group-specific information for the qualitative part of the study, a series of eight focus group meetings were arranged and conducted at selected five from the 10 participating secondary schools. Two focus group discussions were conducted at co-educational institutions and one at single sex schools. Boys and girls were never mixed during the discussions. This was viewed as appropriate due to cultural limitations

and not to restrict one group not to participate fully in the discussions. Each focus group consisted of a single-sexed homogenous group of 8-12 students. Eighty-three students participated in the qualitative study. The ages of participants ranged from 13 to 21, with the mean age of 14.49 (SD = 1.65). There were two focus groups conducted at Chiradzulu Secondary School (1 male and 1 female), two at Likangala Secondary School (1 male and 1 female), two at Lunzu Secondary School (1 male and 1 female), one focus group at Stella Maris Secondary School (1 female only) and one at Zomba Catholic Secondary School (1 male only).

Instruments

The Student Questionnaire

The instrument created to collect the quantitative data was a survey-questionnaire. It was developed by the researcher based on personal classroom and counselling students' experience to address the specific objectives and goals of this study. In order to identify the community's concerns about HIV/AIDS and to create a questionnaire sensitive to existing issues within Malawi, a number of separate but complementary sources of information were used to identify items for the questionnaire. These sources, which were comprised of gatekeepers, included secondary school student representatives, trainee teachers, qualified teachers, medical doctors, and representatives of the Ministries of Education and Health.

From the gatekeepers, the researcher was able to identify key items that were later incorporated into the questionnaire. Furthermore, some items were adapted questions that had been used in other studies of the same nature in the Sub-Saharan Africa and Northern

America. Some of the questions on knowledge and attitudes related to HIV/AIDS were adapted from MacLachlan et al. (1997), Damanjeet (1995), Katz et al. (1995), WHO/UNESCO (1994), UNESCO/WHO/UNICEF (1992), Wilson, 1990; Wilson et al. (1989). Selection or revision of an item was based on relevance, clarity, and conciseness. Only items considered as most relevant to this study were included in the questionnaire.

The content of the questionnaire covered a wide range of areas (see Appendix A). An attempt was made to keep the questionnaire relatively short and concise in order to hold the attention of students. The questionnaire was comprised of 82 items on general demographic information, factual HIV/AIDS-related knowledge, attitudes, sexual behaviour and sources of information. Accordingly, the questionnaire was divided into five parts.

In Part One, students were asked to provide general demographic information. The 10 items on demographics were useful in obtaining the basic characteristics of the sample being studied. The demographics collected included age, sex, Form in school, religion, parents' occupation and level of formal education, living arrangements, and the number of siblings in their families. The items in the demographics section were straightforward, for example: "What is your sex? (Male or Female)". Obvious differences between the responses of the two sexes were expected to be tested in order to point out whether there are any statistically significant differences. The demographic characteristics made it possible to view any relations between the variables being studied; for example, is there any relationship between sex of students and their sexual behaviour?

Questions designed to reveal students' factual HIV/AIDS-related knowledge were in part two of the questionnaire. The level of HIV/AIDS-related knowledge was assessed

by requesting students to respond to questions using checklists. The response categories for the knowledge questions were *true*, *false* and *don't know*. In total, students were tested on 22 items that assessed their knowledge about HIV/AIDS. It was decided to include items that were considered as important in literature, such as the causes of AIDS and associated symptoms, transmission of HIV, and prevention of HIV infection. In this way, the results could describe what secondary school students know and in which areas they are deficient. It was hoped that the statements included in this part were common facts with which all students should be familiar.

In part three, the items from the questionnaire focussed on students' attitudes and beliefs. It is probably important to note that attitudes cannot be easily measured directly or observed. They can, however, be reflected in behaviour and influenced by knowledge. When inquiring about their attitudes, people will respond with opinions, beliefs, values, feelings, stated facts and information, or describe their own behaviour. While these factors (and many others) are constructs of attitude, their interaction and effect are very complex and not well understood. Accordingly, students were given 25 statements to indicate how much they agreed with each statement on a 5 point scale where 1 was strongly agreed and 5 was strongly disagree. The statements were intended to find out the attitudes of students to various aspects of sex and HIV/AIDS. What are their attitudes towards people living with AIDS or HIV infection? Would they accept a classmate who is HIV positive? Do they see AIDS as a serious problem in Malawi? Is it okay for teenagers to have premarital sex? How do they feel about themselves and sexuality? Would they be embarrassed to buy, carry and use condoms?

Part four had questions on sexual behaviour. These were adapted from Hess (1996), Schnirer (1996), Damanjeet (1995), and Gray & Saracino (1989). Thirteen items were devoted to the students' behaviours. Students were asked whether they had experienced heterosexual vaginal intercourse. If they had, the students were asked: (1) the age at first sexual intercourse, (2) the age of their sexual partner, (3) who initiated the first sexual intercourse, (4) whether they had discussed condom use with their sexual partner, (5), the number of times they have had sexual intercourse, and (6) the number of different partners with whom they had experienced intercourse. In addition, other questions touched on whether they have had a sexually transmitted disease, or have ever been pregnant or made someone pregnant or whether there was time when they were forced to have sexual intercourse against their will.

In the final part of the questionnaire, students were asked to provide their sources of information on AIDS related issues. They had to indicate their actual sources of information on sexuality, HIV/AIDS, and condom use. They also had to indicate their preferred sources on sexuality and AIDS.

Focus Group Discussions

A focus group discussion (FGD) is a structured in-depth discussion with "a group of people with similar backgrounds brought together to talk about a specific topic of interest under the guidance of a moderator/facilitator" (Aboud, 1998, p. 35). The moderator facilitates discussion among the participants while keeping them on the topic. The moderator encourages participants to express their perceptions and opinions by posing open-ended questions and letting them respond to ideas expressed by other group members (Krueger, 1994).

FGD was used to have an in-depth discussion with students who are representative of the target audience of the sample. Furthermore, in the FGDs the researcher attempted to gain group-specific information. Each focus group consisted of a single-sexed group of students (8-12 students per group). The FGDs were organised and conducted during third term of the secondary school academic year in the month of September, 1998. There were eight focus groups that were conducted in five secondary schools. Each group comprised of students in Forms one, two, and three. Form four students could not participate in this exercise because they were writing their national Malawi School Certificate of Education (MSCE) examinations.

As is common with the use of focus group methodology, the sample selected was a purposeful and convenient sample. The researcher screened from those students presented by the teaching staff, who had been briefed on a description of the desired participants for the group. The participants therefore were purposefully selected by the teachers and the researcher, often because they were opinionated and articulate, and also because they are were willing to share their observations, experiences, concerns, and perceptions on the research topic.

It should be emphasised that the focus group sessions were designed to complement the questionnaire. Accordingly, areas explored in the discussion included: attitudes of students towards sexual behaviour, relationships and cultural norms, knowledge and attitudes in relation to HIV/AIDS prevention, and barriers to behaviour change amongst adolescents in the face of AIDS risk (See Appendix B for a question guide of the FGD).

Pilot Study

The draft questionnaire for this study was first pilot tested for readability and understandability. One hundred and twenty three students drawn from Forms one, two, three and four at one co-education secondary school in Blantyre, Malawi, completed the questionnaire. This was done in June, 1998. Instructions on how to complete the instrument were read, and students completed the questionnaire in class. Further arrangements were made to test the question guide of the FGD at the same school with two single-sexed focus groups in July, 1998. The school where this pilot study was conducted was deleted from the overall list of schools to be randomly selected for the actual research study.

Thereafter, the draft questionnaire and the question guide of the FGD were revised with the professional assistance from the Faculty of Education academic staff at Chancellor College, the University of Malawi. Content experts from the Ministry of Health and Population reviewed the instruments for content validity and determined that they were reasonable assessment of the constructs in the study. There was also feedback from the University of Malawi's Centre for Educational Research and Training (CERT) and Centre for Social Research (CSR) research staff for the final determination of appropriateness of content, format and psychometric characteristics. Then, feedback from these academics and research staff were incorporated in the final version of the instruments.

As a result of the pilot study and feedback from local researchers, some changes were made to the questionnaire. The number of items on the questionnaire was reduced from 100 to 82. Some modifications were made to accommodate the administration of the

questionnaire in Malawi. The sensitive questions on masturbation, homosexuality and abortion were deleted. Some issues such as masturbation and homosexuality are a taboo subject in Malawi. Abortion has been a serious problem among young women including female students (Dr. Frank Taulo, in communication, June 1998). However, there has never been a lawsuit against a physician for performing an abortion, or against a woman for receiving one, even though abortion is illegal.

Further changes included the inclusion of statements deemed relevant to the Malawian situation. For example, "Everyone who loses a lot of weight in a short time has AIDS" and "Some traditional healers can cure AIDS". Some statements were deleted from the questionnaire. For example, "AIDS is punishment from God", "AIDS is a sexually transmitted disease", "Ministers of religion cannot get AIDS" and "Everyone who gets TB has AIDS". These items were omitted because of the concerns raised by some reviewers from the Ministry of Health and Population of the questions. First, the questionnaire was very long. Second, some items would be construed as being against the church.

Threatening questions, technical words and confusing items were avoided. Any statement, which contained non-technical polysyllabic words without changing the meaning, were rephrased (e.g. "can transmit the virus" was changed to "can pass the virus", "by donating blood" was changed to "by giving blood", "develop" was changed to "get".) In addition, the statement "It is not possible to get AIDS from an asymptomatic person" was changed to "It is not possible to get AIDS virus from a healthy looking person".

From the pilot instrument and feedback from reviewers, appropriate changes were made to the questionnaire. Finally, a six-page questionnaire was developed. The questionnaire was divided into five sections: (1) student demographic information, (2) students' HIV/AIDS-related knowledge, (3) students' attitudes, (4) students' sexual behaviour and (5) sources of information.

Procedure and Data Collection

Approval to conduct the study was first obtained from the Department of Educational Psychology's Ethics Review Committee at the University of Alberta (See Appendix C) and then the Research and Publications Committee of the University of Malawi (See Appendix D). Thereafter, a letter of clearance to conduct the study in Malawi's secondary schools was obtained from the Ministry of Education, Sports and Culture headquarters in Lilongwe through the Head of Educational Foundations Department, Chancellor College, University of Malawi (See Appendix E). Finally, permission was sought from the headmasters/headmistresses of the participating schools to use designated classroom time to conduct the study. Permission was granted and the process of data collection started.

The Administration of Student Questionnaire

At each school, the researcher found that each Form had three streams and had to randomly pick one class in each Form, thereby dealing with one-third of the student population in Forms one, two, three and four for the administration of the survey-questionnaire. In each classroom, the researcher was privileged to be introduced to students by either the headmaster or the headmistress who afterwards left the classroom.

Then, the researcher briefed the students on the purpose of and the importance of the information being collected. The instructions were given in English. All students could understand English because it is the language of instruction for the secondary school curriculum. All the subjects at both junior and senior levels are taught in English except for Chichewa and French subjects.

Before instructing them on how the questionnaire should be completed, the researcher went to great lengths to assure the participating students of the confidentiality of their responses. It was also emphasized that there was need for them to answer all the questions as honestly as possible given the sensitive personal information being solicited on some of the questions. Furthermore, students were instructed not to write their names anywhere on the questionnaire so that there was complete anonymity.

Participation in the completion of the questionnaire was completely and strictly voluntary. Consent was obtained from students by simply checking the box on the front cover of the questionnaire. Students were free to opt out of the study at any stage by simply withdrawing their consent either in writing or verbally. In responding to the questionnaire, students were encouraged to answer all questions though they were free to disregard any questions they wish to exclude.

At the beginning and through out the time set aside for the administration of the questionnaire, students were told that they could use either a pen or pencil by simply checking the right box. They were given an example of an item from Part one which asked the sex of the respondent. They were advised to simply check "1" for female and "2" for male in the small box provided close to their response. They were also encouraged to ask the researcher any questions with respect to either clarification or how an item should be

filled while completing the questionnaire. They were given unlimited time but many students managed to finish within 30 to 40 minutes. The students completed the questionnaire independently and in the absence of their administrative and academic staff.

In general, the atmosphere during the whole administration of the questionnaire remained relaxed and students appeared comfortable. They all seemed to be happy that they were participating in the study. There was no student who opted out. Finally, students were thanked for their participation in this study.

Focus Group Discussion Sessions

At the beginning of the FGD session, no teacher or any other adult, except the researcher, was present in the room. Furthermore, it was of critical importance that the participants were made to feel comfortable, relaxed, and free to talk. In doing this, the moderator thanked the students for agreeing to participate in the focus group discussion. Then, the moderator explained the general purpose of the study, ground rules for the discussion, specific purpose and importance of the information from focus groups to the study.

Thereafter, students were briefed on issues of confidentiality, introductions, interview questions as well as the general moderator's responsibilities. Participants were further informed that they were not being forced to participate in the study, they could opt out at any time or refuse to answer any question by letting it pass. They were also assured that the discussion would have no bearing to the school administration. Their teachers and anyone else would not have access to the tape except for the moderator and the research assistant who will transcribe the tapes.

The FGDs were held in either the school library or career resource centre as neutral sites so that the context did not constrain the students. Students sat in a circle so that everyone felt equally a part. The moderator guided the discussion. Each session was audio taped with the full knowledge and permission of participants. The discussions were conducted in ether the library or career resource centre of the school so that the participants were assured of privacy without interruption. Confidentiality was guarded by avoiding mentioning the name of the school and also their names through out the discussions. Using a prepared list of questions (see Appendix B), the moderator guided and encouraged the participants to speak openly and freely in one of the two national languages, either English or Chichewa, as well as kept field notes of discussion themes and other impressions or observations.

FGD Questions were initially posed to the group and not to individuals. Although interview guide was used, the group facilitated spontaneous interaction among its members and allowed the moderator to probe responses and explore topics, as well as obtain a spectrum of opinions from group members. On the overall, the participants were relaxed and spoke freely. Each group had a good discussion on various questions and they provided a lot of insights to the study.

Data Analysis

Upon completing the quantitative data collected through the survey-questionnaire in all the participating secondary schools, the data were checked, coded, and entered into the computer using the Statistical Package for the Social Science (SPSS) 8.0 software. Various data analysis methods were used. Initially, frequencies on demographic data as

well as on AIDS-related knowledge, attitudes and behaviour were produced, and these provided the basis for cross-tabulation of the independent and dependent variables. Demographic data and AIDS-related knowledge, attitudes, and behaviour were compared by gender and grade level. For this purpose, the following tests were performed: Independent t-tests, Chi-square tests (χ^2) and analysis of variance (ANOVA) to measure the levels of significance. For statistical analysis $p < 0.05$ was defined as statistically significant for inferential statistical procedure.

The audio taped recordings of the focus group sessions were transcribed by a research assistant. Then, the transcripts were reviewed and typed. These typed reports of the focus group meetings provided the raw data for analysis. For qualitative data from these in-depth interviews in Focus Group Discussions, analyses of the verbatim transcripts of FGDs were further reviewed and categorized by the researcher according to direct responses to questions and to themes that consistently emerged from the data using qualitative research methods described by Bogdan and Biklen (1992), Krueger (1994) and Patton (1990). Accordingly, the analysis consisted of holistic reading of all transcripts and notification of major themes, patterns, and trends. The range of responses, central themes and shared perceptions as well as dissenting viewpoints were analysed. The meaning behind the spoken words were interpreted and the context of responses were documented. Significant quotes expressing these themes were noted and highlighted.

Summary

In this chapter, the methodological description of the study has been provided. The population and sample, the initial development of the study instruments and the pilot study are described. Furthermore, the actual procedure followed in data collection has been presented. Finally, data analysis both for the questionnaire and the FGD transcripts is outlined. Chapter 4 will describe in detail the analysis and results of the collected data.

CHAPTER 4

RESULTS AND DISCUSSION OF THE STUDY

Introduction

The occurrence of HIV/AIDS cases in Malawi represents an epidemic with serious economic, social and demographic consequences. Not only does it pose a great challenge to public health but also the future of the nation. Behavioural changes are important for AIDS control and well-targeted programmes are essential. Adolescents constitute a high-risk group for HIV infection. Accordingly, this study was conducted in order to assess and examine knowledge, attitudes and sexual behaviour of secondary school students with regard to HIV/AIDS.

At the end of the data entry of the individual student knowledge, attitudes and behaviour (KAB) questionnaires into the computer using the Statistical Package for the Social Science (SPSS) PC version 8.0 software and the transcriptions of the focus group discussions, the raw data and transcriptions were available for analysis. In this chapter, the results of both quantitative and qualitative data analysis are presented. First, the description of the sample is provided. Thereafter, the results from KAB questionnaire are presented under five subheadings, namely: students' general demographic characteristics, students' HIV/AIDS-related knowledge, students' AIDS-related beliefs and attitudes, students' sexual behaviour and students' sources of information. Finally, an analysis of students' responses to focus group discussions are presented under the following subheadings; students' HIV/AIDS and sexuality awareness, attitudes towards cultural norms and sexuality; problems associated with condom use and some general barriers to the adoption AIDS risk –reduction behaviours.

Description of the Sample

As indicated in the previous chapter, the sample for the quantitative data consisted of 1400 students drawn from 10 randomly selected government and government-aided secondary schools in southern Malawi. Of these 10 secondary schools, six were co-educational, three were girls' schools and one was a boys' school. The students were divided almost equally by gender, with 48.4% female (N=677) and 51.6% male (N=723) students responding to the knowledge, attitudes and Behaviour (KAB) questionnaire because of the three female single sex schools included in this study. However, it should be noted that the sample is not a reflection of the gender ratios of student enrolment in public co-educational secondary schools in Malawi. In essence, there are more male than female students in public secondary schools.

For the qualitative data, the participants for the focus group discussions were drawn from five randomly selected secondary schools. Students from these schools had participated in answering the KAB questionnaire. Eighty-three students participated in the focus groups, with 10 to 12 participants in each group. In all eight focus groups were conducted. There were four groups for male and female participants, respectively. The ages of all participants in focus group discussions ranged from 13 to 21, with the mean age of 16.49 (SD=1.65). The mean age for female participants was 15.89 (SD=1.43) and for male participants was 17.0 (SD=1.67). Male participants were more significantly different from the female participants in age, ($t=-3.212$, $df=80$, $p=.002$). Male students were, on average, older than female students.

Results from KAB Questionnaire

Students' General Demographic Characteristics

Age and Sex Distribution: Responses to questions 1 and 2 of the questionnaire which can be found in Appendix A were combined to get cross-tabulation frequency distributions of students' age and sex. The results are presented in Table 4.1. The percentages are based on all respondents (N = 1400 students). The age range for the whole sample was from 13 to 22 years with the Mean age of 17.19 (the Standard Deviation [SD] of 1.87).

Across all four Forms, the mean age for female students was 16.51 (SD=1.57) while that of male students was 17.82 (SD=1.90). The majority of the females' ages (80%) were in the 15 to 18 range and that of males (71%) was from 16 to 19. With the alpha level of .05, the effect of age between males and females was statistically significant [t(-14.089), $p < .001$, two-tailored] by the Independent Samples Test. Male students were significantly older than female students.

The mean age of students increased across Form one to Form four as follows: 16.00 (SD=1.57), 16.80 (SD=1.68), 18.00 (SD=1.53), and 18.73 (SD=1.50). The ages ranged from 13 to 22 in Form one, two and three, and from 14 to 22 in Form four. The mean age of students also increased across all forms by gender. For female students, the mean ages were as follows: 15 (SD=1.23), 16 (SD=1.43), 17 (SD=1.24), and 18 (SD=1.13). For male students, the mean ages were 16 (SD=1.65), 18 (SD=1.71), 18 (SD=1.57) and 19 (SD=1.51).

Table 4.1

Age and Sex Distribution

	Female		Male		TOTAL	
Age	N	%	N	%	N	%
13	11	1.6%	3	0.4%	14	1.0%
14	57	8.4%	28	3.9%	57	6.1%
15	121	17.9%	58	8.0%	179	12.8%
16	157	23.2%	90	12.4%	247	17.6%
17	136	20.1%	118	16.3%	254	18.1%
18	127	18.8%	160	22.1%	287	20.5%
19	53	7.8%	114	19.9%	197	14.1%
20	12	1.8%	64	8.9%	76	5.4%
21	3	0.4%	32	4.4%	35	2.5%
22	0	0.0%	26	3.6%	26	1.9%
TOTAL	677	100%	723	100%	1400	100%

Form in School: From the 1400 students that participated in this study, 26.4% were in Form One, 27.9% in Form Two, 25.9% in Form Three and 19.8% in Form Four. The cross-tabulation distribution of students by their sex and Form in school is presented in Table 4.2. Is should be noted Form two is a national examination class, students sit for the Junior Certificate of Education (JCE) examinations. Those who pass the JCE proceed to Form three while those fail may apply to repeat the year at the same school or go to a different one. This may explain why there were more students in Form two.

Table 4.2

School Form and Sex

	Female		Male		TOTAL	
FORM	N	% within sex	N	% within sex	N	%
Form 1	179	26.4%	191	26.4%	370	26.4%
Form 2	202	29.8%	189	26.1%	391	27.9%
Form 3	195	28.8%	167	23.1%	362	25.9%
Form 4	101	14.9%	176	24.3%	277	19.8%
TOTAL	677	100%	723	100%	1400	100%

Family Group: The responses of students to the question on the number of brothers and sisters from the same parents are summarised in Table 4.3. It is evidently clear that a majority of students in schools come from "big" families. The Mean number of siblings is 5.71 with a Standard Deviation of 2.22.

Table 4.3

Number of Siblings from Same Parents

Number of Siblings	Frequency	Percentage
None	28	2.0%
One	82	5.9%
Two	142	10.1%
Three	179	12.8%
Four	225	16.1%
Five	233	16.6%
Six	180	12.9%
Seven	172	12.3%
Eight	109	7.8%
Nine	37	2.6%
Ten or more	13	0.9%
Total	1400	100%

Living Arrangements: Forty-seven percent of the students surveyed in secondary schools lived with their father and mother (see Table 4.4). Twenty four percent lived either with only their mother (i.e. 20.1%) or with their mother and stepfather (i.e. 3.7%) compared with about eight percent who lived either with only their father (i.e. 2.9%) or their father and stepmother (i.e. 4.6%). Extended family members, grandparents and other guardians provided home for about 21% of these young people.

Table 4.4

With Whom the Students Lived

With whom do you live?	Frequency	Percentage
Both parents	659	47.1%
Mother only	281	20.1%
Extended family members	211	15.1%
Grandparents	86	6.1%
Father and step mother	64	4.6%
Mother and step father	52	3.7%
Father only	41	2.9%
Other	6	0.4%
Total	1400	100%

It is evidently clear from the data that a new trend in family living arrangement is emerging in Malawi. Slightly more than half of the students are not living with both their

parents. This might be because of divorce or death through AIDS pandemic. Of course, this would need further investigation through research.

Religion: All participating students reported to be religious and had some religious affiliations. The frequency distribution of students according to their religious affiliations is presented in Table 4.5. A majority of students indicated their affiliation to the established churches of Church of Central African Presbyterian (CCAP) (i.e. 31.9%) and the Roman Catholic Church (i.e. 31.2%). It generally seems all the students were affiliated to either Christianity or Islam. However, it would be premature to speculate how important religion is to their lives. There is a need to further investigate how often students attend church or mosque, the role of religion and its impact on their lives.

Table 4.5

Students' Religious Affiliation

Affiliation	Female		Male		Total	
	N	%	N	%		
CCAP (Presbyterian)	218	32.2%	228	31.5%	446	31.9%
Roman Catholic	243	35.9%	194	26.8%	437	31.2%
Islam	52	7.7%	96	13.3%	148	10.6%
Seventh Day Adv.	77	11.4%	69	9.5%	146	10.4%
Anglican	10	1.5%	25	3.5%	35	2.5%
Baptist	3	0.4%	14	1.9%	17	1.2%
Others*	74	10.9%	97	13.4%	171	12.2%
TOTAL	677	100%	723	100%	1400	100%

(* includes Abraham, Church of Christ, Jehovah's Witness, Assemblies of God, Living Waters Church and other small independent Pentecostal churches)

Parent's Highest Level of Formal Education: A summary of students' responses to the question on the highest level of formal education of their parents is presented in Table 4.6. Twenty four percent of the fathers, as compared to 9.6% of the mothers, had at least a university certificate, diploma or degree. Slightly over 60% of the fathers had at least gone through some or completed secondary education and higher education. The single largest group had graduated from the secondary school with the Malawi School Certificate of Education (MSCE). The table also reveals that a majority of mothers had only primary education. The largest single group, approximately 23% had some primary education. About 14.5% of the mothers, as compared to 4.7% of the fathers, had never been to school for formal education.

Table 4.6

A Summary of Father's and Mother's Highest Level of Education

Educational Level	Father		Mother		Total	
	N	%	N	%	N	%
No Formal Education	52	4.7%	159	14.5%	211	9.6%
Some Primary Education.	188	17.2%	255	23.3%	443	20.2%
Completed Primary Educ.	122	11.1%	171	15.6%	293	13.4%
Some Secondary Educ.	160	14.6%	195	17.8%	355	16.2%
Completed Secondary Ed.	294	26.8%	197	18.0%	491	22.4%
University Education	263	24.0%	105	9.6%	368	16.8%
Other	16	1.5%	13	1.2%	29	1.3%
TOTAL	1095	100%	1095	100%	2190	100%

Socio-economic status: A cross-tabulation distribution of the occupations of students' parents is shown in Table 4.7. The occupations were divided into seven categories. The categories included: (1) Professional [e.g. accountants, doctors, nurses, lawyers, teachers, lecturers, engineers, pilots, air-hostess]; (2) Business; (3) Farm-related occupations; (4) Skilled workers [i.e. carpenters, plumbers, electricians, brick layers, mechanics, etc.]; (5) Clerical and secretarial work (6) Labour [e.g. factory/estate workers, cooks, grounds-men, cleaners, etc]; (7) Homemaking; (8) other. The "other" category included church ministers/pastors, watchmen, and drivers. The largest groups of the fathers and mothers were in the professional category (38.7%) and homemaking category (35.9%), respectively.

Table 4.7

Occupations of Students' Parents

Occupation	Father		Mother		Total	
	N	%	N	%	N	%
Professional	497	38.7%	269	20.3%	766	29.4%
Business	206	16.0%	208	14.9%	414	15.9%
Farming	211	15.1%	273	19.5%	484	18.6%
Skilled Work	99	7.1%	14	1.0%	113	4.3%
Clerical	31	2.2%	22	1.6%	53	2.0%
Labour	124	8.9%	27	1.9%	151	5.8%
Homemaking	46	3.3%	475	35.9%	521	20.0%
Other	70	5.0%	36	2.7%	106	4.1%
TOTAL	1284	100%	1324	100%	2608	100%

Students' HIV/AIDS-Related Knowledge

A number of questions in the survey explored the extent of students' HIV/AIDS related knowledge beginning with a general question asking whether these students had heard about HIV/AIDS. Most students (95.8%) indicated that they had heard of AIDS, with 94.4% of female and 97.1% of male students responding "Yes" to the question. Male students reported higher knowledge than female students did [χ^2 (df = 2, N=1400) =6.371, p = .041]. By Form level, data revealed that 98.7% of Forms two, three and four respectively had heard about AIDS in comparison to the 90.3% of Form one students. Form one students were less knowledgeable than students in other Forms [χ^2 (6, N=1341) = 39.857, p < .001).

Students were then asked, "*Do you know a person who has or has died of AIDS-related illness?*" Seventy-one percent knew of a person who had or had died of AIDS-related illnesses. Almost 16% said they did not know of a person living either with AIDS or had died of AIDS and 13% said they were unsure. There were no major statistically significant differences in the proportion of students who knew a person who had or had died of AIDS across forms or between sexes.

In the question that followed, students were asked to estimate the number of persons expected to be HIV infected in Malawi as of 31st December 1997. There were only 17.9% that estimated correctly the number to be over 800,000 infected individuals. Six percent estimated the number to be between 500,001 and 800,000 and 8.5% under-estimated the number to be less than 10,000. Though the students' estimation of the number of persons presently expected to be infected with AIDS virus was very low, more than 50% indicated that they did not know the possible number of HIV cases in Malawi.

Asked whether students were afraid that they or someone close to them might get AIDS, they responded on a five-point scale: 38.4% said they were "extremely afraid" and 39.6% were "very afraid". Almost 6% indicated that were "not sure", 8.4% were "not very afraid" and 7.4% were "not at all afraid". There were no significant differences between male and female students. However, the statistically significant differences were observed by form level [χ^2 (df = 12, N=1400) = 42.943, p. < .001]. From form one through four, the percentages of the students who were "extremely afraid" were 31.4%, 35.3%, 41.7% and 47.7% respectively. Form four students were more "extremely afraid" than the other students.

In response to a related question on how concerned they were about the HIV/AIDS situation in the country, a majority of them were concerned and they indicated that they worry quite a lot about it. On a five-point scale, 37% were "extremely concerned", 38.8% were "very concerned", 6.6% were "not sure", 11.5% were "not very concerned" and 6.1% were "not at all concerned". Though there were no significant differences by form, differences were observed by sex. Male students were more "extremely concerned" than the female students [χ^2 (4, N=1400) = 22.106, p<.001]. Despite their fear and concern, 76.6% of the students indicated they did not see themselves as very much at risk of contracting AIDS for they could protect themselves from becoming infected with the AIDS virus. This is consistent with the belief that adolescents' thinking is characterised, in part, by the 'personal fable'. The personal fable reflects a kind of cognitive egocentrism, or belief that one is special, unique, and invulnerable to the risks and hazards that befall other people (Elkind, 1985). Adolescents think that what happens to others cannot happen to them.

In order to tap their current knowledge of facts about AIDS, modes of transmission of HIV and modes of prevention of AIDS infection, the students were presented with 22 statements which they were to state whether the given statement is "True", "False" or "Not Sure". The twenty-two items in the questionnaire in order of decreasing percentage of students who gave the correct responses to each item for each of the three sub-groups of knowledge category are presented in Table 4.8. There were no statement items to which all students knew the correct answer.

Table 4.8

Questionnaire Items Listed in Order of Decreasing Percentage of Correct Responses

Statement		Answer	Percentage Correct
Characteristics			
18.	AIDS is a disease for whites only not Africans	False	96.1%
19.	AIDS is a sexually transmitted disease (STD)	True	90.1%
23.	At present, there is no cure for AIDS.	True	80.8%
24.	Everyone who loses a lot of weight in a short time has AIDS	False	75.7%
38.	A person can live more than ten years after getting HIV.	True	73.2%
20.	AIDS does not exist. It is a mere myth.	False	62.8%
39.	You can tell if a person is HIV infected by simply looking at the person.	False	58.6%

Modes of Transmissions

33.	You can catch the HIV infection by shaking or holding hands with an infected person.	False	92.9%
21.	A pregnant woman who has the AIDS virus may infect her unborn baby with the virus.	True	92.6%
37.	You can get HIV through sexual contact.	True	91.4%
35.	You can get AIDS from an injection given by an unsterilised needle.	True	88.9%
26.	One can easily get AIDS virus from sharing a cup with a person living with AIDS.	False	87.7%
36.	You can get HIV from hugging.	False	79.5%
25.	It is not possible to get AIDS virus from a healthy looking person.	False	75.0%
34.	You can get AIDS virus from a mosquito if it bites you just after biting an HIV infected person.	False	72.6%
28.	You are more likely to get HIV/AIDS if you already have STD.	True	59.6%
22.	An HIV infected mother may pass the virus to her child through breastfeeding.	True	45.6%
27.	One can get AIDS by giving or donating blood.	False	24.4%

Modes of Prevention

29.	One way to greatly reduce the risk of getting HIV is to abstain totally from sex.	True	80.6%
31.	Some traditional healers can cure AIDS.	False	79.1%
30.	You can greatly reduce the risk of getting HIV by having sex with only a mutually uninfected faithful partner.	True	55.1%
32.	The use of condom reduces the likelihood of one partner getting HIV from the other.	True	53.6%

The range of statement items was wide from statement 18 at 96.1% to statement 27 at 24.4%, with the mean percentage of 69.5%. Statement 18 (*AIDS is a disease for Whites only, not Africans*) was refuted by the highest rating of 96.1%. Statements 33 (*You can catch the HIV infection by shaking or holding hands with an infected person*) and 21 (*A pregnant woman who has the AIDS virus may infect her unborn with the virus*) shared the highest ratings of 92.9% and 92.6% respectively. Students knew that AIDS is not a disease for whites only, but also of Africans, that an individual cannot catch the HIV infection by shaking hands or holding hands with an infected person and that an infected mother might pass the virus to her child through breastfeeding. In all, half of the twenty-two statements were answered correctly by 75% or more of the students.

Knowledge scores were computed by summing across correct responses, such that a score of 22 (100%) would indicate that the student had answered all items correctly. The overall mean score of the whole student sample was 15.30 (SD=2.80) or 69.5% with students' correct answers on the 22 knowledge question items ranging from 3 to 21. The female students' mean score was 15.06 (SD=2.84) or 68.5% while the mean score for the male students was 15.52 (SD=2.74) or 70.5%. Male students had higher knowledge scores than female students ($p = .002$).

Further analysis of the total scores for each student on knowledge items by Form was done. Mean scores for Forms one through four were 14.60 (SD=3.10, with a correct response range of 3 to 21), 14.78 (SD=2.65, with a range of 6 to 20), 15.90 (SD=2.57, with a range of 7 to 21) and 16.17 (SD=2.44, with a range of 7 to 21). Analysis of variance was used to determine the relationship of HIV/AIDS knowledge to the number of years of formal education. There was a highly significant relationship between the

number of years of education and HIV/AIDS knowledge, $F(3,1396) = 28.240$, $p < .001$. Form four students were more knowledgeable than the lower Forms. Form one students were least knowledgeable. AIDS knowledge seems to increase with the grade level in school. It should be noted that there was no relationship between age and HIV/AIDS knowledge.

Analysis of variance was performed on some variables in order to see if there were any relationships between students' knowledge about AIDS and various variables from the demographic information, namely: religion, living arrangements, parents' level of formal education and parents' occupation. There was no relationship between students' knowledge about AIDS and either religion, living arrangements or father's occupation. However, statistically significant relationships were observed between students' knowledge about AIDS and their parents. The more formal education either the father [$F(6, 1156) = 3.675$, $p = .001$] or the mother [$F(6, 1259) = 4.354$, $p = < .001$] had, the higher the knowledge score of the student. Furthermore, there was statistically significant relationship between the mothers' occupation and the students' knowledge about AIDS [$F(7, 1316) = 3.506$, $p = .001$].

Of interest were those questions where students' knowledge was less complete. Almost 47% said, "*AIDS does not exist. It is a mere myth*" and about 40% did not know that many HIV seropositive individuals look healthy. Correspondingly, almost one quarter of the students thought that it is not possible to get AIDS virus from a healthy looking person. Malawi's AIDS awareness campaign has, to date, not emphasised the major role of asymptomatic HIV seropositive person in HIV transmission and this should be stressed in future educational efforts.

The majority of students correctly identified the most important routes of HIV transmission, but almost three quarters were not aware that one cannot get AIDS by giving or donating blood and more than half (54.6%) did not know that an HIV infected mother can pass the virus to her child through breastfeeding. Almost 27% thought that HIV could be transmitted by mosquito bites. There is no evidence that this is the case, but there is still a popular myth that mosquito bites can transmit HIV. Furthermore, about 20% thought that casual contact, such as hugging, carried a risk of HIV transmission.

On their knowledge of modes of HIV/AIDS prevention, almost 81% knew that one way to greatly reduce the risk of getting HIV was to abstain totally. Slightly more than half identified having sex with only a mutually uninfected faithful partner as a way to reduce the risk of getting HIV. The use of condoms to reduce the likelihood of one partner getting HIV from the other was accepted by 53.6%. Furthermore, about one fifth of the sample believed, erroneously, that traditional healers could cure AIDS. This does not come as surprise because some traditional healers have actually made claims that they have found the cure for AIDS. These claims were reported in the media. However, they have generally been reluctant to provide information to enable their "cure" to be subjected to scientific analysis (Dr. J. Seyani, personal communication, May 96).

It is evident that among secondary school students in Malawi correct knowledge about the principal modes of transmission and prevention are found to co-exist with misconceptions about the risks of casual transmissions and beliefs that AIDS is curable. These results suggest a critical need for the Ministry of Education in cooperation with the Ministry of Health and the National AIDS Control Programme to introduce a comprehensive AIDS education programme for secondary school students. The AIDS

education programme would then address the gaps in students' AIDS related knowledge on basic information required in order to protect themselves against AIDS and HIV transmission. Students will need to be provided with accurate information about transmission and strategies for HIV/AIDS prevention. Furthermore, they need to understand that there is no cure for AIDS.

As no AIDS education is presently being provided as part of the formal secondary school curriculum in these schools, the observed awareness and knowledge could have been acquired through other, possibly, formal and informal channels. For example, this could have largely been due to the ongoing national education campaign in both print and electronic media. These other channels deserve research in themselves because they represent a potentially useful medium for health promotion information. Extant community communication networks should be identified so that they can be enhanced and augmented by more formal school based initiatives.

It appears that formal education enhances one's ability to assimilate accurate information about HIV/AIDS. There was variation in knowledge levels among the students in secondary schools. The most striking finding was that there was a significant relationship between the number of years of education and AIDS knowledge. This suggests that AIDS knowledge increased with education, even without a specific AIDS education programme being implemented in secondary schools. One can only surmise that this AIDS knowledge is being acquired through other channels.

The absence of a relationship between age and HIV/AIDS knowledge can be explained by the fact that, unlike in Western schools, Malawian children may be delayed to enter school for financial reasons, since education was not free until 1992 and is not

compulsory. It is now free only at primary school level. The second reason might have to do with parent's attitudes toward formal education and the value they attach to education. The other reason may have to do with class repetition; the pupils may have repeated a grade level several times in the course of their education. Thus within one Form a far wider age range is found than would be the case in Western schools. In the case of Form one in this study, for example, the mean age was 16, with a standard deviation of 1.57, and an actual age range of 13 to 22 years.

Students' AIDS-Related Beliefs and Attitudes

In order to measure students' attitudes toward a variety of AIDS-related issues including sexual issues and behaviour, AIDS-related beliefs, people with AIDS and condoms, students were presented with 25 statements which they were required to indicate how much they agreed with each individual statement on a 5 point likert-type scale. The scale was coded as follows: 1= Strongly Agree, 2=Moderately Agree, 3=Not Sure, 4=Moderately Disagree and 5=Strongly Disagree. The students' responses in percentages (N=1400) are presented in Table 4.9.

Table 4.9

Students' AIDS-Related Beliefs and Attitudes

Statement	How much students agreed with each statement Strongly Agree ◄——► Strongly Disagree 1	2	3	4	5
Sexual Issues and Behaviour					
Unmarried people should not have sex.	40%	10%	17%	9%	21%
It is okay for teenagers to have sex if they are in love.	14%	10%	13%	13%	51%
Premarital sex when two people intend to marry is okay.	19%	15%	21%	15%	26%
I think it is okay to say "NO" when someone wants sex.	53%	7%	24%	5%	9%
If your boy/girlfriend wants you to have sex, it is better to agree rather than to lose him/her.	11%	7%	11%	12%	57%
It is against my parents' values for me to have sex while I am an unmarried teenager.	34%	9%	19%	10%	26%
It is against my values to engage in premarital sex.	36%	9%	19%	10%	21%

AIDS-Related Beliefs					
AIDS is a serious problem for the people of Malawi.	49%	6%	24%	5%	13%
Only people who live in the cities/towns can get AIDS.	5%	3%	5%	8%	75%
Young people don't get HIV/AIDS.	6%	4%	6%	10%	70%
I would get tested if I thought I might have HIV.	34%	8%	24%	10%	22%
It is impossible for teenagers to change their sexual behaviours to avoid getting HIV.	21%	7%	18%	11%	40%
Attitudes Toward People Living with HIV/AIDS					
Students with HIV should not be allowed to go to school.	7%	4%	6%	9%	70%
If a student has HIV, everyone in the school has the right to know.	14%	11%	13%	17%	42%
People with AIDS should be loved, cared for and supported by their communities.	61%	5%	23%	2%	5%
I would visit a friend even if he/she has AIDS.	46%	6%	28%	4%	10%
People with AIDS should be put in a special hospital to avoid infecting others.	12%	8%	11%	15%	50%
I would feel comfortable hugging a friend who has AIDS	24%	10%	20%	14%	27%
Availability and Use of Condoms					
It is the man's responsibility to carry condoms.	20%	13%	24%	15%	24%
It is too risky to have sex without a condom.	32%	11%	19%	11%	22%
Condoms should be made readily available to students.	16%	11%	15%	14%	38%
I would feel comfortable carrying condoms "just in case" I might need them.	20%	13%	21%	12%	29%
I would be embarrassed to buy condoms at the till/counter.	19%	10%	20%	17%	31%
I would be embarrassed to talk to my sexual partner about condom use.	20%	10%	21%	12%	31%
It is alright for young people to have sex without condom if they know each other.	10%	7%	11%	14%	54%

For each of the sexual attitude questions students were given five choices from strongly agree (1) to strongly disagree (5). In order to simplify descriptive analysis of the five point likert scale, the strongly agree or strongly disagree and moderately agree or moderately disagree are combined to obtain the percentages which agreed or disagreed with the attitude statements. With regards to sexual issues 60% thought it was okay to say no to sex. Almost 50% agreed that unmarried people should not have sex. Sixty four percent disagreed that teenagers should have sex if they are in love and about 70% disagreed with the statement, "*If your boy/girl friend wants you to have sex, it is better to agree rather than to lose him/her.*"

On some selected AIDS related beliefs, a majority of students disagreed with the statements, "*Only people who live in the cities/towns can get AIDS*" (83%) and "*Young people don't get HIV/AIDS*" (80%). Almost half of the sample indicated that it was possible for teenagers to change their sexual behaviours to avoid getting HIV. Fifty-five per cent thought AIDS is a serious problem for the people of Malawi.

With regards to attitudes towards people affected with HIV/AIDS, about 80% were willing to accept someone with HIV into their class. Sixty-five percent disagreed with the notion that people with AIDS should be put in a special hospital to avoid infecting others. Instead, 66% believed that people with AIDS should be loved, cared for and supported by their communities. Fifty-two percent admitted that they would visit a friend even if he/she has AIDS. Only a quarter of students agreed with the statement, "*If a student has HIV, everyone in the school has the right to know.*"

On condom use, less than half (43%) thought it was too risky to have sex without a condom and 52% disagreed that condoms should be made readily available to students.

Though 68% thought it was not right for young people to have sex without condom even if they know each other, only 33% indicated that they would feel comfortable carrying condoms 'just in case' they might need them and that it was the man's responsibility to carry condoms.

It is encouraging to note that a majority of students were aware that AIDS is a serious problem in Malawi and that it is not only for urban dwellers but also for people in the rural areas. They knew that anyone could get AIDS though they doubted whether young people would change their sexual behaviour to avoid getting AIDS virus. A majority of students had positive attitudes towards people living with HIV/AIDS. They did not support the notion that people living with AIDS be put in special hospitals. Instead, they supported the attitude that people living with AIDS should be loved, cared for and supported by their community. It is thus critical that any AIDS education should attempt to consolidate these positive attitudes. Furthermore, AIDS education should also consist of attempts to change negative attitudes and beliefs and to motivate individual students positively to change.

Students' Sexual Behaviour

Students were asked whether they had experienced heterosexual vaginal intercourse. If they had, students were further asked: (i) their age at first intercourse, (ii) the age of the sexual partner when they had first sexual intercourse, (iii) who initiated the first sexual intercourse, (iv) whether they had discussed condom use, (v) the number of different partners with whom they had experienced intercourse and (vi) other sexual behaviour related questions.

Of the 1400 students in the sample, slightly more than half (55.1%) reported having had heterosexual vaginal intercourse at least once in their lifetime. Closer examination across gender lines revealed that male students were more sexually active than female students with 67.7% of the male students reporting sexual experience whilst 41.5% of the female students had had sexual intercourse ($\chi^2 = 97.489$, df = 1, $p < 001$). The reported age of first sexual intercourse for the sexually active group averaged 14.76 (N=771, SD=2.43) though the ages varied in range from 9 to 19 years (See Table 4.12). The mean age of first sexual intercourse for the female students was 14.88 (SD=2.25) while that of male students was 14.70 (SD=2.52).

The most striking difference was observed between AIDS knowledge and whether a student had had sex. Though there was no significant difference between male and female students, a statistically significant relationship was observed between AIDS knowledge of the sexually active and non-sexually active students [F (1, 1398) = 16.619, $p < .001$]. The mean score on AIDS knowledge questions for the sexually active students was 15.02 (SD=2.84), while the non-sexually active students had the mean score of 15.63

(SD=2.71). The non-sexually active students had more AIDS knowledge than the sexually active students.

A Chi-Square test on the sexually active students versus the person(s) with whom they live was found to be statistically significant between the sexually active students and living with mother only ($\chi^2 = 18.305$, df = 10, p =.05) and father only ($\chi^2 = 16.224$, df = 8, $p < .05$). No significant differences were observed between the sexually active students and living with both parents (p=.175), grandparents (p=.637), mother and step father (p=.360), father and step mother (p=.157), or extended family members (p=.334).

An analysis of the ages of students' first sexual partners revealed that they ranged from age 12 to 35, with a mean age of 17.05 (SD=3.81). A closer examination by gender revealed that the mean age of the male students' sexual partners was 16.72 (SD=3.80) while the mean age of the female students' partners was 17.64 (SD=3.75). The independent samples test on the age of their sexual partners by gender was significant, t(769)=3.253, p=.001. The sexual partners of the female students were older than those partners of the male students. The sexually active female students had sexual partners who were older than them.

A cross-tabulation of those students who indicated that they had had sexual intercourse by sex and school form is presented in Table 4.10. No gender differences were observed in Forms two and four. However, significant differences were observed in Forms one, $\chi^2(9, N = 192) = 19.662$, p = .02, and three, $\chi^2(10, N = 169) = 22.111$, p= .01. From the table, it is evident that form two students of both sexes had the highest number of the sexually active individuals. Female students accounted for 31.7% of all female sexually active group (n=281) whilst male students accounted for 29% of all sexually

active male students (n=490). Form one female students with 28.1% seconded the form two female students.

It is probably important to note that the highest percentages of sexually inexperienced students were observed in Forms three and one for females and males respectively. Inexperienced female students in Form three accounted for 35.1% (n=396) and Form one males accounted for 33.5% (n=233).

Table 4.10

Percentage of Sexually Active Students by Form and Sex

	Female		Male		Total	
Form	N	% within sex	N	% within sex	N	%
Form 1	79	28.1%	113	23.1%	192	24.9%
Form 2	89	31.7%	142	29.0%	231	30.0%
Form 3	56	19.9%	113	23.1%	169	21.9%
Form 4	57	20.3%	122	24.9%	179	23.2%
Total	281	100%	490	100%	771	100%

In response to the question about the major influence on their sexuality, almost 43% of the student sample reported to have been influenced to make the decision to have sexual intercourse by friends (See Table 4.11). Out of these 597 students who were

influenced by their friends, male students accounted for 56.3% while female students accounted for 43.7%. The second and third major influences included movies/video (20.1%) and magazines/books (12.1%). Sexual partners (8.7%) were at the fourth position. The radio was the fifth with 7.9%.

Table 4.11

Influences on the Decision to Have Sexual Intercourse

Influence	Female		Male		Total	
	N	%	N	%	N	%
Friends	262	38.7%	337	46.7%	599	42.8%
Movies/Videos	139	20.5%	141	19.5%	280	20.0%
Magazines/Books	94	13.9%	75	10.4%	169	12.1%
Sex partner	64	9.5%	59	8.2%	123	8.8%
Radio	55	8.1%	55	7.6%	110	7.9%
Relatives	12	1.8%	17	2.4%	29	2.1%
Mothers	16	2.4%	3	0.4%	19	1.4%
Teachers	9	1.3%	6	0.8%	15	1.1%
Church	5	0.7%	3	0.4%	8	0.6%
Fathers	2	0.3%	2	0.3%	4	0.3%
Don't Know	19	2.8%	25	3.5%	44	3.1%
TOTAL	677	100%	723%	100%	1400	100%

Several questions addressed the issues of personal sexual risk behaviours. Risk behaviours focussed on age at first sexual intercourse, frequency of sexual intercourse, number of different sexual partners and condom use. A summary of the findings on students' sexual risk behaviours is presented in Table 4.12.

Table 4.12

Sexual Risk Behaviours

Behaviour	Female		Male		Total	
	N	%	N	%	N	%
Age at First Sexual Intercourse						
9 Years	0	0.0%	4	0.8%	4	0.5%
10	8	2.9%	13	2.7%	21	2.7%
11	6	2.1%	10	2.0%	16	2.1%
12	33	11.7%	112	22.9%	145	18.8%
13	47	17.7%	52	10.6%	99	12.8%
14	32	11.4%	43	8.8%	75	9.7%
15	26	9.3%	52	10.6%	78	10.1%
16	51	18.2%	62	12.7%	113	14.7%
17	38	13.5%	50	10.2%	88	11.4%
18	33	11.7%	67	13.7%	100	13.0%
19	7	2.5%	25	5.1%	32	4.2%
Total	**281**	**100%**	**490**	**100%**	**771**	**100%**

Behaviour	Female		Male		Total	
	N	%	N	%	N	%
Number of sexual Partners						
One	165	58.7%	241	49.2%	406	52.7%
Two	84	29.9%	102	20.8%	186	24.1%
Three	14	5.0%	42	8.6%	56	7.3%
Four	8	2.8%	28	5.7%	36	4.7%
Five or More	10	3.6%	77	15.7%	87	11.3%
Total	**281**	**100%**	**490**	**100%**	**771**	**100%**
Did You Discuss Condom Use						
Yes, before sex	124	44.1%	209	42.7%	333	43.2%
No, it was after sex	31	11.0%	34	6.9%	65	8.4%
Never	126	44.8%	247	50.4%	373	48.4%
Total	**281**	**100%**	**490**	**100%**	**771**	**100%**
Have you been pregnant or impregnated someone?						
Yes	47	16.7%	66	13.5%	113	14.7%
No	234	83.3%	424	86.5%	658	85.3%
Total	**281**	**100%**	**490**	**100%**	**771**	**100%**
Have you ever had a Sexually Transmitted Disease?						
Yes	52	18.5%	73	14.9%	125	16.2%
No	229	81.5%	417	85.1%	646	83.8%
Total	**281**	**100%**	**490**	**100%**	**771**	**100%**

From the table, it is evident that male students are beginning to have their sexual intercourse at the age of nine, while female students are having their first sexual experience at the age of ten. This is very important information because it gives us an indication of when AIDS education programme ought to be introduced to the students. In essence, it ought to be introduced before students are sexually active in order to help them delay sexual activity.

A majority of the sexually active students had only one sexual partner. There were some gender differences. Almost 59% of the female sexually active students had only one partner as compared to about 49% of the male sexually active students. A chi-square test revealed that there were statistically significant differences between males and females [χ^2 (df = 5, N=771) = 114.826, $p. < .001$]. More female students than male students were for monogamous relationships. However, there were some sexually active students that had multiple sexual partners. Male students were more inclined to have more sexual partners than female students thereby putting themselves at risk for HIV infection.

When asked to indicate how many times they have had sex, 31.3% reported to have had sex only once in their lifetime. Twenty seven percent had five or more times of sex. In this category, males accounted for 75% while females were 25%. Almost 24% indicated to have had sex twice. Those who had had three or four times of sex accounted for 10.2% and 7.9% respectively.

About 52.7% of all sexually active students reported to have had sex with only one sexual partner and 24.1% reported to have had sex with two sexual partners. Those who had three, four and five or more sexual partners accounted for 7.3%, 4.7%, and 11.3% respectively.

It is probably important to note that 45% of the sexually active students had had their last sexual encounter one year ago or more. However, there were 26.2% of the students who had had their last sexual encounter within the last three months. Of these, 36.6% were female sexually active students and 63.4% were male sexually active students. Twenty percent and 10% had their last sex within the last six months and within the last 9 months, respectively. For those sexually active students who had had sex one year ago or more accounted for 41% and 47.3% for female and male students, respectively. In all, there were statistically significant gender differences [χ^2 (df = 4, N=771) = 98.043, $p < .001$].

Alarmingly, only 43.19% discussed condom use with their sexual partners, with almost 48.38% indicating never and 8.43% discussed after they had sex, despite the fact that 96% of the students indicated that they had heard of AIDS and 71.4% knew of a person who has or has died of AIDS-related illnesses. One-way analysis of variance was performed in order to determine whether there was any relationship between AIDS knowledge and condom use. There was a statistically significant relationship between AIDS knowledge scores and condom use [F (4, 1395) = 7.817, $p < .001$]. The students who did not use a condom had lower scores on AIDS knowledge than those who did. The non-sexually active students scored higher than the sexually active students. Their mean score was 15.63 (SD = 2.71).

As shown in Table 4.12, students' responses to whether they have had a sexually transmitted disease revealed that 125 students did, with 41.6% and 58.4% being female and male students respectively. This accounted for 16.21% of the sexually active students. This represented 18.5% of the sexually active female students and 14.9% of the

sexually active male students. In essence, more female students than male students had a sexually transmitted disease at one point in their life [χ^2 (df = 1) = 56.665, p. < .001].

Correspondingly, 14.6% of the sexually active students admitted to have been pregnant or made someone pregnant. Fourteen percent of the sexually male students reported to have made someone pregnant while 16.7% of the sexually active female students admitted to have had a pregnancy. This is a clear indication that a condom was not used, thereby putting themselves at high risk of HIV infection.

Furthermore, almost 33% (n=252) of the sexually active students reported that there was a time when they were forced to have sex against their will. This actually represented 34.5% of the sexually active female students and 31.4% of the sexually active male students. There was a statistically significant difference between male and female students. Female students were more likely to be forced to have sex against their will than male students [χ^2 (df = 2) = 89.350, p. < .001].

It is probably important to note that questions dealing with sexual behaviour must be interpreted with care since the accuracy of answers is necessarily subject to students' willingness or lack thereof to report behaviour which is very private and often not condoned by family, church or society. From this study, it is evident that there is sexual activity taking place among the students in secondary schools. The self reported sexual behaviour indicated considerable sexual activity among male students and limited sexual activity among female. The difference might partly be due to more pressure on females to report virginity for social or family reasons, such as marriageability, or a degree of exaggeration by males if sexual experience is viewed as an achievement among peers.

The fact that female students reported rates of forced sex higher than those among male students was expected. However, students were not asked the specific nature of forced sex experience and it is not possible to know the kinds of experiences which students classified as forced sex. The female students may have considered forced sex to be where an aggressive male aroused them to the point that they engaged in intercourse. This would be in line with many rape cases that are being reported in both the print and electronic media in Malawi. This is another area that would need further research in order to determine the accurate magnitude of rape cases among students in secondary schools and also to identify the perpetrators.

For the sexually active adolescents, they were asked to indicate the age at which they had their first sexual encounter. This information was important because of its immediate implications for the study. The age of first sexual intercourse gives a clear indication of when AIDS education programme should be introduced. From this study, it is evidently clear that the AIDS education programme should start in primary school. In doing so, it will help many young people to seriously think of delaying their first sexual intercourse for their own good.

In addition, educational interventions would need to emphasise the importance of avoiding situations where forced sex, including date rape and stranger rape, may occur. Counselling services might need to be made available in every school and counsellors and teachers should be made aware that various forms of forced sex might be part of the profile of the student suffering from emotional and behavioural problems. How to access counselling services should also be emphasised.

Sources of Information

The students were asked to indicate their actual first, second and third sources of information about human sexuality, HIV/AIDS and condom use, as well as their preferred first, second and third sources of information about human sexuality and HIV/AIDS. There were twelve sources of information identified in the questionnaire for the students (the category "other" was included as a thirteenth source but these responses were too limited to be analysed). The students' responses are presented in Table 4.13.

Table 4.13

Students' Actual and Preferred Sources of Information

Actual Source	***First***	***Second***	***Third***
Human sexuality	Radio (43%)	Print media (21.4%)	Sexual partner (19.6%)
HIV/AIDS	Radio (55%)	Print media (26.4%)	Health workers (16.2%)
Condom use	Radio(63.6%)	Print media (32.6%)	Health workers (22.3%)
Preferred Source	***First***	***Second***	***Third***
Human sexuality	Radio(33.3%)	School (23.3%)	Health workers (13.8%)
HIV/AIDS	Radio (46%)	Print media (21%)	School (14.8%)

It is evident from the above table that the radio has been the students' main actual and preferred source of information on human sexuality, HIV/AIDS and condom use. However, it should be pointed out that friends were also mentioned as a major source of information with about 16% of the students. The print media (newspapers / magazines / pamphlets / posters / books) was the actual second main source of information on human sexuality, HIV/AIDS and condom use. Mothers, fathers, family relatives, and Church/mosque were identified more infrequently as actual sources of information.

The data clearly indicate that the radio has been a very important source of information about AIDS for students in Malawi. We cannot tell from the data why radio is as popular a source of information as others. Compared to other sources, however, radio and printed media are far less personal and they do not put students on a spotlight. This stresses the importance of continued efforts to utilise the radio in providing the public, including students, with relevant and updated AIDS education information necessary for the formation of the right attitude and healthy lifestyles to protect them from HIV/AIDS.

At present, the Malawi Broadcasting Corporation (MBC) has several programmes that focus on the young people and AIDS. These programmes include "Straight Talk," "Teen line" and "Tinkanena," *Straight Talk* is presented by young people and deals with issues that affect young people in Malawi. The youth are provided with accurate information on HIV/AIDS, abortion, peer pressure, pregnancy, and sexuality. *Teen Line* is a programme which addresses concerns and questions that young people have. Teenagers write to the producer of the programme with their concerns or questions which are answered by professional people. *Tinkanena* is a radio drama programme.

Although the first AIDS cases were reported in Malawi in 1985, it was not until early 1990 that the public began to be aware of AIDS through the publication of short stories and plays (MacLachlan et at., 1997). The first short story had a theme, "AIDS is punishment from God" (Mwale, 1990). Other short stories and play concerned the connection between AIDS and tuberculosis (Sagonja, 1990), marital fidelity and infidelity (Gondwe, 1990; Lane, 1993), and AIDS and prostitution (Kamanga, 1993).

It should be noted that the media in Malawi discussed HIV/AIDS related issues cautiously, describing the types of sexual behaviour through which infection is primarily contracted in socially acceptable and, therefore, vague terms. This initial and cautious approach was soon abandoned after the switch from one party to multi-party politics in 1994. Now journalists speak and write explicitly about AIDS and describe in easily understood terms the sexual activities through which HIV is transmitted. This less discreet approach is especially apparent in media advertising. Advertisements for condoms have become commonplace. The media have acted positively by keeping the issue of AIDS before the public and giving it prominent coverage through the Media AIDS Society (MASO).

In addition, students were requested to rate how well informed they felt about actions that they could take to avoid becoming infected with the AIDS virus. The response categories of *not at all informed, not too well informed, fairly well informed* and *very well informed* were used. Slightly more than half of the students indicated that they were very well informed. Seventeen percent of the students felt not at all informed. Eleven percent equally felt not very well informed and fairly well informed.

Findings from Focus Group Discussion

In an attempt to gain group specific information on various aspects of sexuality in relation to HIV/AIDS among secondary school students, focus group discussions were arranged and conducted in Southern Malawi. The results of the focus group discussions are based on eight focus groups comprised of students drawn from five secondary schools. The major topics explored in the discussions included: awareness of HIV/AIDS issues, attitudes towards cultural norms and sexuality, knowledge and attitudes in relation to condom use and the problems associated with their use and some general barriers to the adoption of risk-reduction behaviours.

Students' HIV/AIDS and Sexuality Awareness

In the focus group discussions, all students indicated that they had heard of AIDS and their initial orientation to AIDS awareness mainly came from the radio and print media. Several participants also cited health officials who were invited from time to time to their schools to give a talk on HIV/AIDS to the whole student body. Most of the participants in the groups were aware of the major transmission routes for HIV infection. However, they expressed some reservations in eating with AIDS person, kissing and hugging. They could not understand why a mosquito bite could not transmit the AIDS virus. Many participants thought that it was always possible to determine if someone had AIDS by their appearance. Furthermore, they were able to correctly identify the usual AIDS prevention methods (i.e. avoiding sex with multiple partners; avoiding sharing needles, razor blades and toothbrush; using condom consistently, and abstinence).

Some participants indicated that they had learnt about AIDS and sexuality in their schools through the WHY WAIT? Programme. Other participants cited the AIDS TOTO Club. The senior students in Form three reported that AIDS was one of the topics they covered in their Biology and Home Economics subjects under human reproduction and sexually transmitted disease. Furthermore, most participants strongly felt that many teachers were not comfortable to teach on sexuality and AIDS. They observed that their teachers simply presented the facts with no in-depth discussion to prepare them for examinations.

> "*Some of us in senior classes and are taking Biology, we learn about AIDS when doing a chapter of sexually transmitted diseases... There is a special topic in Biology which deals with AIDS. In fact, there are some booklets which discusses how one can avoid catching AIDS. Our school library has such literature. In connection with that Malawi National Examination Board is now asking questions on AIDS in the national MSCE examinations*" (Male student # 5, age 20).

Participants in the focus groups had heard and learnt about AIDS largely through the radio, print media and health professionals. The Ministry of Health through the National AIDS Control Programme in conjunction with many non-governmental organisations like UNICEF have sponsored a number of HIV/AIDS related projects in both electronic and print mass media. The main media has been the Malawi Broadcasting Corporation (MBC) radio. This was initiated in order to reach lots of Malawians with the message on HIV/AIDS in vernacular languages through radio programmes and jingles. The programmes are presented in various forms such as radio drama/play, music, guest

speakers, panel discussions, and phone-in programmes. One of the youth's popular programme on MBC is *Straight Talk*. The programme is presented in English and Chichewa in order to address some of the challenges of adolescents in Malawi with regards to HIV/AIDS and sexuality. From time to time, health professionals are invited to schools to talk about AIDS and other sexually transmitted diseases, especially at the beginning of the school year.

In the absence of formal AIDS and sexuality education programme in the secondary schools, there have been some initiatives by individuals and non-governmental organisations with the permission from the Ministry of Education, Sports and Culture. Such initiatives are the "WHY WAIT" Programme, coordinated by Sub-Saharan African Family Enrichment (SAFE) project and the AIDS TOTO club, sponsored by UNICEF. It does not come as a surprise that these two were mentioned by participants as being their source of information on AIDS and sexuality in the school.

Some participants indicated that they had learnt about AIDS and sexuality through the WHY WAIT? Programme. The programme, which currently targets secondary school students and its membership is voluntary, is designed to educate the school children and youth of Malawi in God's principles of character and moral development and sexual purity; introduce them to Christ and his principles in order to develop a godly self-concept; and show how he can empower them to withstand social and sexual pressures. "This in turn will enable them to live in sexual abstinence until marriage, at which time they may implement God's principles of family life in order to pass the blessings to the next generation" (Dick Day, in communication, July, 1998).

According to Chimombo (1990), the purpose of the WHY WAIT Educational Programme is to address the problems that currently face the young people attending school. The programme is intended to give youth sensible reasons to abstain from pre-marital sex so that they can make informed decisions regarding their future. "It is more than simply admonishing them against harmful behaviour. It also extends to providing hope for a joyful and fulfilling future family life which comes from making healthy moral choices" (p. 3). In the programme, events include guest speakers, panel discussions, question time, music, drama, and teaching sessions on various aspects of HIV/AIDS from Christian perspective.

Other participants indicated that they learnt about AIDS and sexuality related issues through the AIDS TOTO Club. Unlike the WHY WAIT? Programme which only focuses on abstinence because of its Christian content, the AIDS TOTO club focuses on various options available to students for AIDS prevention with a special emphasis on safer sex. The philosophy behind AIDS TOTO club is that sexually transmitted diseases, including HIV infection, are preventable. Students are presented with several responsible prevention strategies including the use of condoms.

The main goal of AIDS TOTO is to help students make "responsible and realistic choices" (Sandra Ali, in communication, 21 July 1999). This is done through the provision of decision-making skills that would encourage students to practice safer sex. Furthermore, the members are challenged to explore and reflect on their sexual attitudes, values and behaviour in the light of AIDS pandemic. The impact of the club largely depends on student leadership. The club is run by students under the patronage of an academic staff member. In the programme, just like WHY WAIT, events include guest

speakers, panel discussions, question time, music, drama, and teaching sessions on various aspects of HIV/AIDS.

Attitudes Towards Sexual Behaviour/Relationship

In discussing whether people in Malawi openly discuss issues related to sexuality, the majority of participants strongly felt that it was very difficult to openly discuss issues related to sexuality in Malawi because of cultural restrictions. Most participants agreed that people, especially parents and adults, choose to remain silent on this subject. One participant commented that the main reason for silence on sexual matters is because; "*sex is considered a secret issue and that it would be disrespectful of customs to discuss sex openly*" (Male student, aged 14 years). Similar sentiments were also expressed by other participants. Typical comments by these participants included:

> "*One contributing factor why young people don't see themselves at risk for HIV is that parents don't talk to their children about sex and AIDS*" (Female student # 8 aged 16 years).
>
> "*We don't feel free to talk about sex because of our culture. The subject of sex is quite a taboo. It is guarded with a lot of secrecy...*" (Male student # 4 aged 16 years).
>
> "*According to our culture, it is a taboo to openly discuss issues surrounding sexuality. As a result, the subject is left to the mature people and guarded by secrecy*" (Male student # 15 aged 18 years).

A majority of the participants indicated that the subject of sexuality was openly discussed amongst close friends and people of similar ages. Most participants agreed that they could not discuss various aspects of sexuality with members of the opposite sex. However, they were quick to recognise the importance of discussing sex and its related issues with knowledgeable adults if young people were to be effectively educated about sex and the risks associated with certain sexual behaviours.

In the discussion, the participants were asked the following questions: "Is it possible to talk about sexuality? In what situations is it generally possible to talk about sexuality-related matters? Who can talk about sex and to whom?" Though it was observed that it was difficult to openly talk about sexuality, most of the participants were able to identify some situations where issues could be discussed openly. First, they identified initiation rites. The participants reported that during the initiation rites, conducted by village elders who are professional instructors (*anankungwi*), the candidates were offered instructions on conduct, values, traditions and sexuality-related issues.

A probe into how many had actually gone through the initiation rites revealed that about one-fifth of the participants had graduated from this traditional school. Several participants strongly felt that the church's messages on youth and sexuality were always negative with "*lots of don'ts*". As for parents, the prevalent feeling among the participants was that they were very uncomfortable to talk to their children about sexuality. Most participants agreed that the guidance the parents provide to children was very vague. For example, some female participants agreed that their parents advised them "*not to play with boys because they (boys) are dangerous*".

Second, the participants identified marriage ceremony as another situation where people openly talk about sexuality. The third scenario identified was when an individual had contracted a sexually transmitted disease. He or she would share with friends and the health professionals. Finally, the participants identified their close peers as those whom they openly talk about sexuality-related issues.

In general, all the participants were aware that the expectations of people in their culture would not approve any sex act outside the bond of marriage. Most participants agreed that pre-marital sex was not accepted by their parents, church and culture. However, a few of the participants acknowledged that some parents were now taking a liberal view on pre-marital sex and they were more accommodating. It was also observed that some adults had not been good models.

One participant summarised the cultural expectations this way:

> "*It is not an acceptable thing for the boys and girls to stay together, thus to have sex, no matter how much they love each other. It is only when they are married that they can share the bed. Sex is allowed in the context of marriage. But now with the breakdown in moral fabric of our cultural values in society, people are having sex outside marriage. Interestingly, adults who are married initiate much premarital sex. As for young people, those who are sexually active engage in sex in secrecy without the knowledge of parents and relatives*" (Male student #17, aged 16).

In each group session, the participants had a good knowledge of the costs and benefits of pre-marital sex. The majority of female participants considered pre-marital sex a bad practice because of unwanted teenage pregnancies and the high risk of

contracting sexually transmitted diseases including HIV/AIDS. By contrast, most of the male participants believed that pre-marital sex was good because that was the best way to prove one's manhood. Several male participants strongly felt that sex was normal and it was necessary to practice because "*practice makes perfect*".

All the participants accepted that many young people of their age were having sex. Although some students were engaged in sex, the participants in focus groups were quick to point out that it was not everyone who was doing it. They cited a variety of reasons why some students are not having sex. Most participants agreed that both male and female students who did not engage in sex did so out of religious obligation, moral concerns, and fear of contracting sexually transmitted diseases including HIV/AIDS. In more specific ways, several female participants stated that they were afraid of their parental disapproval and out of concerns for their reputation. The prevalent feeling among the male participants was "*fear of rebuff*" and unwilling partners.

In general, most participants agreed that pre-marital sex was common among many young people though it took place without the parents' knowledge. When asked to give reasons as to why this is the case, the major reasons included influence of peer pressure, sugar daddies, curiosity, enjoyment, a test of true love, a proof of manhood, and to be accepted by friends.

Almost all participants indicated that there was pressure on them and other young people to have sexual intercourse. Most female participants strongly felt they were getting more pressure than male students to have sexual intercourse. Interestingly, a few of male students thought they were the ones getting a lot of pressure. A majority of male participants believed that their strong pressure was coming from their friends who had

girlfriends and some disgruntled girls who desperately wanted money to measure up to their friends. One female participant believed:

> "*Some girls have sex for money, if friends show you money and gifts they get from boyfriends, they choose to become involved too and they will try hard to find boys or men*" (Female student # 9 aged 15 years).

Many female participants revealed that they are always having a lot of pressure in school and out-of-school from boys and sugar daddies. Some participants revealed that they had had pressure from male teachers. Several participants felt that some young people had pressure from their family. This was reported to be having rare cases. One female participant summarised the pressure from males as follows:

> "*If the girl borrows money or takes something on loan from them (boys), they say that the girls should repay with sex and they will refuse to have anything except sex. As a result, some girls are trapped and simply give in to the boys*" (Male student # 35, aged 16).

Several participants strongly felt that the pressure for some females from their family was to either get married or obtain extra finance for the family from either their boyfriends or sugar daddies. Interestingly enough, there was the same prevalent feeling among many male students. One male participant summarised it this way:

> "*Some of these girls come from poor families and if the things they want are not provided for by their parents, they indulge in sex with sugar daddies in order to get money. The problem is that they compare themselves with those girls from well-to-do families and they want to measure up to them. They want to have what these others have. As a*

result, they become too loose to sugar daddies to give them easy money. In so doing they think they can raise their standards to have high life" (Male Student # 8, 17 years old).

Most participants were aware of the negative impact from peers if one resists the pressure to have sexual intercourse though they might have good reasons for resisting peer pressure. Several participants agreed that those students who resisted the pressure were labelled "*uncivilised*" and were always laughed at by the sexually active group. One respondent commented:

"*They think that you are stupid, sleepy, backward and there is no one who loves you... When you are in a relationship, the boy will try to get you to bed and when you refuse he gets to tell his friends that you are really uncivilised and backward because you can't accept sex and then you will hear rumours... the boyfriend will come to threaten that if you can't accept sex then he will terminate the affair because he does not want to continue to be a laughing stoke with his friends... being afraid of losing him, you simply give in to respect his sexual favour*" (Female Student # 37 aged 16 years).

Another participant remarked:

"*Peer pressure plays a major role in a teenager's decision to have sex. People get placed in groups as to whether they are virgins or not. I have had classmates and friends desert me, talk ill about me, laugh at me and pick on me... I have decided to remain a virgin and wait for the right person*" (Female Student # 7, age 16).

Age at first sexual experience varied considerably. When participants were asked to estimate the age at which young people were having their first sexual experience, many of the female participants believed that first sexual activity among adolescents was in the range of 10 to 18. The male participants estimated first sexual intercourse among the young people in the range of 12 to 21. On the overall, most participants emphasised that early sexual experience was done without the knowledge of parents and it was largely in response to curiosity aroused by the peer pressure.

In general, all the participants were aware of the expectations of people in their culture which on the overall did not approve any sexual act outside the bond of marriage. Traditionally, premarital sex is not accepted among the adolescents. Participants were able to cite situations where it is generally possible to talk about sexuality related matters. They cited marriage ceremonies and among peers. On the wedding day, special professional instructors are summoned to give instructions and advice to the newly wed. Some instructions are given to the couples separately and other instructions together. Thereafter, the newly weds are officially permitted to engage in sexual relations.

Peers play a very prominent role in the discussion of sexuality related matters. It is with the peers that adolescents try out various roles, pick and choose those that seem to 'fit' with few long-term consequences of failure in role acquisition. Peer interaction allows contact with age mates who share similar problems, concerns, conflict, likes and dislikes (Vos, 1994; WHO/UNESCO, 1994). One of the popular topics in the peer groups is about boy/girl friendships and sex. In this way, peers help each other to uncover the various aspects of sexuality. Discussions on sexual matters are restricted to only very close peers of the same sex.

They also cited initiation rites where sexual instructions are taught both in direct ways with explicit demonstration on exactly how sexual intercourse is done and indirect ways through stories, songs, dances, riddles, or by setting simulated situations to which the initiates have to respond. Unfortunately, the initiation rites are no longer popular as they used to be, especially with the urban people. A majority of the participants may have not attend the initiation rites because of either time conflict with the school calendar, prevailing changing attitudes to the practice, church restrictions, and also lack of parental approval to attend the initiation rites.

Almost all the participants strongly felt that there is pressure on young people to have sexual intercourse. Discussion about the nature of this pressure revealed that some young people are aware of the negative impact from peers if one resists the pressure to have sexual intercourse whilst recognising that a person might have good reasons for resisting pressure. Male students seem to have pressure from their peers. While female students seem to have pressure from male students, teachers, and sugar daddies. The pressure for some females came from their family, especially single headed one, to either get married or get extra finances for the family from either boyfriends or sugar daddies.

Barriers to Behavioural Change

When the participants were asked the question: "Do you think that AIDS has led to a change in young people's sexual behaviour, either in terms of frequency of sexual intercourse, number of sexual partners, or use of condom itself?" their immediate responses were NO and YES. The majority of participants strongly felt that many secondary school students had not changed their sexual behaviours. Several participants reported that not all students were engaged in sex because some had completely changed their behaviour. However, the prevalent feeling was that unprotected sexual intercourse was reported to be common among adolescents.

In each focus group, participants cited a number of factors affecting the adoption of risky sexual behaviour. Lack of restraint or insatiable sex urge was identified among the major reasons pushing young people to seek sexual satisfaction. As a result, the prevalent feeling was that many young people would try to have either a boyfriend or girlfriend. Others would actually "*go the easy way by going after prostitutes*" (Male student # 38, aged 19).

Several male participants identified patronising prostitutes in all the group sessions as a behaviour that exposes many young men, especially students, to the risk of contracting AIDS virus. Most participants agreed that those who could not take the courage to have girlfriends in the school were reported to have likely turned to prostitutes because they were easy to deal with as they seem to know exactly what the person wants from them and they charged a "*low service fee*" to students.

One participant commented:

"One thing we want you to know is that prostitutes are easy especially mid month. As a result they have reduced low fees for students. And they actually encourage you to go and tell your friends to come to her to learn important practical lessons of life. Some students eventually become regular customers" (Male Student 34, aged 18).

In all the sessions, expectation of monetary or material gain was identified as another crucial factor in the decision to engage in some risk sexual behaviours. Some participants strongly felt that this factor was putting young women, in particular, at risk of acquiring AIDS virus. Typical comments of the participants included:

"I know some girls who indulge in sex because they simply want easy money in order to buy modern clothes...." (Female Student # 2 aged 17).

"Some girls actually propose male teachers so that they can provide sexual favour in order for teachers to give them good marks in examinations. Some male teachers give in to this and they show the girl friend an examination before the actual exam day...." (Male Student # 45 aged 19)

"I want to say that we have seen an increase in the number of orphans in Malawi. As a result, many children are growing up with no parental care. As for girls, they sell their bodies to get money for their daily living...." (Male Student # 9 aged 17).

Most participants agreed that the high-risk behaviour that was most commonly practised by sexually active adolescents, regardless of other risk factors, was having unprotected sexual intercourse. Many participants reported that quite a good number of male adolescents were not using condoms or are using them inconsistently. The male participants provided various explanations for this behaviour. Here are some statements from male student participants:

> "*It is not every sex act that condoms are used. Condoms are only used when we are suspicious of the sexual partner, for example a prostitute. If it is your girlfriend, we just do it plain. Why using a condom*?"
> (Male Student # 4 aged 16).

> "*Medical people in our hospitals are giving out condoms freely without even explaining how one is going to use them. They assume people know how to use these condoms. It is not everyone who knows how to use the condoms properly*" (Male Student # 7 aged 16).

> "*We have had cases at this school where the boys had forgotten to carry with them the condoms and then the girls give condoms to the boys to use. The boys were very angry with the girls and even threatened to break the relationships. We were told in the end the girls gave in and they had skin to skin sex without condom*" (Male Student #6 aged 15).

> "*Many feel that using condom decreases the enjoyment that one would get in sex. It is not enjoyable to have sex with the condom... They prefer it plain... We hear that one cannot eat and enjoy the sweet while it is still in its cover paper... As a result, many friends I know don't use these condoms consistently. They prefer it plain...*" (Male Student #22 aged 17).

The female student participants also talked about condom use in various forms, providing numerous explanations for their behaviour. One participant commented:

> "*How are you going to sit there and suggest to them to use a condom. You want to but it's hard. If condom use is coming from the mouth of a girl, the boy may say you don't trust me. He will say, oh ya, how many partners, who else you having sex with? Why do we have to use a condom?*" (Female Student # 5 aged 18 years).

Another participant remarked:

> "*Teenagers use condoms to prevent pregnancy; they are not thinking of AIDS. As a result, there are times when they don't use the condom, especially if they are sure that the girl might not become pregnancy...*" (Female Student # 15 aged 18 years).

Other participants observed:

"A lot of teenage girls don't use condoms because they just have sex with one guy. Many girls tell me, 'I only have sex with one person so I don't use a condom, I can trust him'" (Female Student # 20 aged 17 years).

"Some young people would use a condom when they are not sure of their sexual partner... But after three or four sexual meetings, they build some trust in each other and continue to have sex without condoms..." (Female Student # 25 aged 18 years).

One participant eloquently challenged these stereotype views of the other female students as follows:

"If a guy doesn't pull a condom, at that moment I stop and say 'hey, you know you have to use a condom, otherwise I am not going to have sex with you'. I think if the guy is using a condom, he is taking care of both of us" (Female Student # 15 aged 18 years).

Another assertive participant summarised her experience as follows:

"Whenever I am meeting my boyfriend, I make sure that he has two or three condoms with him in his school bag just in case we may need to use one. I would not accept to have sex with anyone without a condom. It would be too risky. I want to finish school and go to the university for higher education. My parents have big dreams for me and I don't want to disappoint them" (Female Student # 24 aged 17).

However, it should be noted that despite the protection that condom is said to offer its use would appear to be still unpopular among many secondary school students. Most participants reported that they had heard of condoms but many students from rural areas had never seen one. Furthermore, the majority of the participants were aware of the benefits of condom use. It was also evident that several myths abound among adolescents concerning condom use. Many participants raised concerns about condom bursting or penetrating into the vagina and becoming lodged there. Others believed that the lubricant could cause tuberculosis and cancer.

When participants were asked to suggest the reasons why condoms were unpopular with some secondary school students, some of the reasons that were mentioned often by almost all groups included:

(1) "*sex is not pleasurable*",

(2) "*a person may be used to have sex without condom*",

(3) "*boys consider condoms dirty*",

(4) "*afraid of condom bursting*",

(5) "*ignorance on how to actually use it*",

(6) "*no money to buy condoms*",

(7) "*deceived by innocent look of a person*",

(8) "*religious restrictions*",

(9) "*laziness*", and

(10) "*love and trust the partner*".

Commenting on condom use during sex, some male participants likened it to "*eating sweets in their wrappers*". Several participants actually likened having sex with a condom to "*having a shower while in a raincoat*". Most female participants agreed that they had always heard such sentiments from the boys as one of the many excuse for not using a condom.

In response to the questions "In your opinion who should first suggest condom use when a male and a female want to have sex? Whose responsibility is to provide or carry condoms for use in a sexual activity?" male and female participants differed in their opinion on who should suggest condom use. Male participants were of the opinion that both partners had the duty to suggest condom use during any sexual activity. Some female participants were very cautious and insisted that it should be the male partners suggesting condom use.

The most frequently mentioned reasons by females for males to suggest and provide condoms were as follows:

(1) "*he wears/uses the condom*",

(2) "*it is easy for him to get condoms*",

(3) "*he is the one who initiates sex*", and

(4) "*to prevent sexually transmitted diseases and pregnancy*".

The main obstacle observed by several female participants was the stigma attached to condom use and prostitution. "*Any female who suggests condom use to a man is looked at as a bitch or whore*". Some male students believed that if females suggested condom use "*she will be looked at as unfaithful*".

However, the majority of both male and female participants agreed that it was the man's responsibility to provide condoms. Almost all female participants agreed that they could not see themselves carrying condoms in their purse. A few female participants indicated that they would have the courage to demand condom use during any sexual activity. One participant remarked (amidst nodding of heads and clapping from others):

> "*I think it is the responsibility of us, boys, to provide and carry condoms because we are the one who will use them and it is easy for us to get them. By the way, I would be very suspicious of my girlfriend if she is carrying condoms in her pulse. I would think she is sleeping around with other men*" (Male Student # 32 aged 16 years).

In all groups, the participants cited some situations that had particularly been instrumental in adoption of risky behaviour among adolescents. These situations included a gross misunderstanding of democracy, the influx of uncensored blue movies, and mushrooming of rest-houses all over the country. According to some participants, some students were having sex "*because they think it is their right and no-one should bother to question them*". Some participants observed that rest-houses were providing "short time" fee at a reduced rate to allow those who want to use the rooms for whatever one wants to do. In the name of democracy, most participants strongly felt that uncensored blue movies were on the market and anyone could have access to them regardless of age. Some of their typical remarks included:

> "*We have seen the influx of video room with blue movies which are shown to young people as young as 8 years old. All this is done in the name of democracy....*" (Female Student # 23 aged 14 years).

"I think that we have misinterpreted the real meaning of democracy. Since Malawi accepted multi-party politics in 1994 with all its freedoms... it seems many young people think they can do whatever pleases them regardless of our cultural values... Nowadays, parents are not respected and listened to... One wonders whether this is all what democracy really mean. The sad thing is that young people are now free to have sex..." (Female Student # 22 aged 18).

"Following the democracy in the country, we now have lots of XXX rated video tapes which are not meant for young people. We even have blue movies being shown in public places to young people as young as seven years old. These blue movies are almost everywhere... We wonder whether there is any censorship of these movies. In the past we used to have a Censorship Board. What is it doing these days. People are simply singing, 'Things have changed in Malawi'. Is this the change that people voted for in 1994...." (Male Student # 8 aged 17 years).

"Nowadays, these rest-houses offer special prices for 'short time' use of their facility. One can get a girl and go to the rest-house for ten minutes and they will give you a room...." (Male Student # 14 aged 21).

Discussions also focussed on what they thought would be appropriate preventive measures to stop the spread of HIV/AIDS among young people. All the participants suggested that sexuality and AIDS education should be introduced in the secondary schools to be part of the school curriculum. They also thought that students should be encouraged to join either the WHY WAIT? Programme or AIDS TOTO club. Several male students suggested masturbation. Typical comments included:

> "*Masturbation is an excellent way of releasing yourself whenever sexual feelings to have a girl are strong... I would encourage it because it is 100% safe from HIV. You can't get AIDS*" (Male Student # 39 aged 16).

> "*Efforts should be made by the strengthen the present AIDS-TOTO clubs in the schools. Student leaders can be trained by the National AIDS Control Programme so that they can pass the message to their members who would in turn pass on to other students...*" (Male Student # 3 aged 14).

> "*I would suggest that students be encouraged to join the WHY WAIT? Programme in order for them to understand the value of abstinence. In my case, I have chosen abstinence because that is what God expects of me*" (Female Student # 13 aged 16).

Furthermore, the prevalent feeling was that parents and guardians should be requested to take keen interest in the welfare of their children by providing appropriate guidance in a more open, honest and straightforward approach. One participant remarked:

> *"If they (parents) think they are shy and can't discuss sexuality with their children, they should consult family members like grandparents, uncles, and aunts or respected adults to provide counselling and guidance to the young ones in this area"* (Female Student # 5 aged 18).

Another participant commented:

> *"Parents should be spending time with their children. They should be there to provide guidance and leadership in their homes"* (Female Student # 3 aged 14).

Another participant put a similar comment this way:

> *"Parents should teach their children values and good morals to live by. In addition, there must be reinforcement on our cultural values where there is deep respect for one another. We should know that these are children and these are adults. Adults should not take advantage of the young people and start illicit relationships and begin to have sex with them"* (Male Student # 7 aged16).

Certain situations were seen as particularly instrumental in facilitating adoption of these risky sexual behaviours among adolescents in schools. First, participants identified the gross misunderstanding of democracy. It should probably be noted that Malawi has been a one party state under the autocratic leadership of Dr. Hastings Kamuzu Banda for 31 years and then switched to multiparty politics in 1994. The political transition brought with it a new constitution which guarantees freedom of speech, religion and assembly, and respect for human rights. Unfortunately, people have misinterpreted multiparty democracy to mean they are free to do whatever they wish without taking responsibility for their actions or behaviour. As a result, there has been an influx of video showrooms which has led to competition among video owners. Many video owners just accept people to watch movies regardless of age as long as they pay the entry fee. It seems the popular movies are those with sexual elements.

The main reasons adduced by participants for adoption of risky sexual behaviour fell into five major categories. The first four of these categories were associated with expected benefits immediately accruable from such behaviour including sexual satisfaction, peer approval, monetary or material gains, and experiment with sex to satisfy their curiosity. The last identified category was lack of fear for God and disregard of parental values.

In secondary schools where students are out of direct control from their parents or guardians, some girls were under intense pressure from peers, male teachers and sugar daddies to indulge in sex. Other girls were also reported to be into the habit of soliciting sexual favours from their teachers in order to get good marks in an examination. In addition, it was repeatedly said that some men were using their money, gifts, affluence,

position or power to entice and seduce students with the aim of having sexual intercourse. "There is a strong belief among the sugar daddies that school girls are free from AIDS. Many men have stopped seeing prostitutes because of AIDS but now it is sad that they are going after school girls." (Samson MacJessie-Mbewe, in communication, 13th July 1998).

Several themes related to condom use emerged from the focus groups. First, it was evident that there is lack of power in females and male dominance. Several comments from female participants suggested that a major reason for not using condoms was the personal sense of powerlessness experienced by women in general, especially young ones. This was accompanied by male dominance and female submissiveness in the sexual domain which is believed to contribute to gender inequality. As a result, males always initiated sex and they were the ones who also quite often decided to either use condom or not.

Second, some comments by participants suggested that there was lack of knowledge or skill in application of condoms. This would likely influence their beliefs about the effectiveness of condom use and resulting preventive behaviours. Third, condoms were closely associated with promiscuity. Some female participants feared that if they suggested condom use, their partners might think they are promiscuous. Others stated that they would suspect their boyfriend was unfaithful if he used a condom. Some male participants reported that condoms are usually associated with prostitutes due to poor media coverage. Others described how difficult and embarrassing it was for teenagers to buy condoms at local stores because they were often kept behind the counter

and could be requested. In the village or small town, people tend to know each other. Once a person buys a condom then other people will somehow know about it.

It was interesting to note that several participants actually likened having sex with a condom to "*having a shower while in a raincoat*" or "*eating sweets in their wrappers*". The implication here is that one cannot experience full sexual satisfaction when using a condom. It is a way of expressing their belief about reduced sexual pleasure for they would prefer "*skin to skin*".

Despite the large number of barriers to condom use among adolescents, some young people were able to develop effective strategies to promote utilisation of condoms by withholding sex. Some young women demanded that their partner should use a condom. Such young people should be commended and be given the platform to share their experiences with other students.

One of the underlying themes that also emerged from detailed analysis of the transcriptions, which may explain sexual behaviour of many secondary school students in this study, was the influence of peers. According to the participants many secondary school students resorted to having boyfriend(s) or girlfriend(s) simply because their friends had many boy/girl friends. In other instances, it was said that some students were compelled to have casual or multiple sex partners.

Another related theme was lack of security and safety. For example, many adolescents had no one to depend upon on matters related to sexuality. They did not know when something bad is going to happen to them as a result of unprotected sexual relationship. Without dependable family members to provide basic needs and emotional

support, many adolescents can easily be taken advantage of. Unfortunately, some begin to learn to use sex as a means "to be taken care of" and to secure affection.

Lack of security can easily attract young people to peer group affiliations, either directly through membership or indirectly via close connections with members of the group. Many adolescents experiencing lack of security and family ties easily viewed group members as their informal family who would protect and love them. In order to secure peer group affiliation, one would be expected to engage in extremely risky sexual behaviour.

The findings from the focus group discussions strongly suggest the need for a comprehensive preventive HIV/AIDS education programme for students in secondary schools. The students such as the participants in the focus groups are likely to receive the most benefit from AIDS education and counselling that is based on understanding of their background histories and individual circumstances. The importance of considering the social, cultural, and psychological conditions in which students live and make decisions is crucial in AIDS education programme development and implementation. Problems such as perceived lack of family support, poverty, insecurity, and peer pressure may directly influence risk-taking behaviours among adolescents. Furthermore, factors relating to perception of risk (e.g. invulnerability) and adolescent development may present barriers to the practice of safer sex and the prevention of HIV/AIDS.

The AIDS education programme would need to incorporate a combined emphasis of both abstinence-based approach and "safe-sex" education. Abstinence-based approach could include constructive teaching on the ethics of human relationships in sexuality with a profound view to presenting deferred sexual activities as a more positive option with

significant health benefits. Those students who choose abstinence should be made to feel positive about their decision to do so. This choice should be encouraged and positively reinforced through building decision-making and communication skills needed to refuse sex.

The safe sex education could be directed at the sexually active students towards helping them to assess their risks with partners in specific situations, and, more importantly, to examine how their developmental needs, expectations, and personal values might influence their risk-taking behaviours. Activities could be designed to address commonly held misconceptions about AIDS and condom use. Strategies to build self-esteem, sexual negotiating skills and problem solving techniques could also be vitally important. Group sessions could be effectively used to help adolescents acquire the social skills needed for problem solving and negotiating condom use or avoiding sexual intercourse with any partner who refuses to use condoms. Peer pressure resistance training, through the use of realistic role-playing and games, would be another promising approach for the students.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

"More than a passing tragedy, AIDS will have long-term, broad-ranging effects on personal relationships, social institutions, and cultural configurations... AIDS will reshape many aspects of society, its norms and values, its interpersonal relationships and its cultural representations" (Nelkin, Willis, & Parris, 1991).

Introduction

Since the first cases of acquired immunodeficiency syndrome (AIDS) were reported in Malawi in 1985, the human immunodeficiency virus (HIV) that causes AIDS and other HIV-related diseases has continued to represent an epidemic with serious economic, social and demographic consequences. The National AIDS Control Programme (NACP) officials estimate the number of HIV-infected individuals in the country to be more than one million as of December 1998. With little hope for a cure or an immunisation in the foreseeable future, the primary strategy available to control and eventually reduce the spread of HIV/AIDS cases is undoubtedly intervention and prevention programs through education at the national, regional, district and local levels.

In this study, I sought to gain understanding of Malawian secondary school students' AIDS-related knowledge, attitudes and sexual behaviour. Accordingly, I have divided this final chapter into three sections. In the first section, I present an overview of the study. Then, some conclusions based on the study are provided in the review of the findings. In the final section, practical suggestions and recommendations for implementation of the findings are addressed and areas of further research are identified.

Overview of the Study

In this section, I provide a review of the study in terms of its purpose, research methodology and the sample.

Purpose of the Study

As stated in the introduction, the main focus of this study was to gain an understanding of the Malawian secondary school students' HIV/AIDS-related knowledge, attitudes and sexual behaviour. In addition, factors that influence their decision-making in relation to sexuality and how gender influences negotiations for safer sex were examined. Accordingly, the specific research questions of the study were as follows:

1. What are the students' current HIV/AIDS-related knowledge, beliefs, attitudes and sexual behaviour by gender and class level?
2. How do the prevailing attitudes and beliefs about HIV/AIDS affect their sexual behaviour?
3. How do variables of age, socio-economic background, religion, gender and the school environment affect sexual practices of students?
4. What are the levels of students' high-risk behaviours?
5. What are the sources of information and requirements for HIV/AIDS prevention among adolescent youth?
6. How does gender influence negotiations for safer sex among students and their partners?

Research Methodology

A combined emphasis on both quantitative and qualitative data collection was found to be desirable in order to respond to the research questions. According to Aboud (1998), "quantitative and qualitative methods are used sequentially, to build on each other, or simultaneously, to support and cross-validate the other's findings" (p. 33). The basic research plan included the collection of quantitative data through the use of a self-administered student questionnaire. The qualitative data was collected through focus group discussions. The qualitative data was designed in order to add explanation and context to the quantitative findings of the study (Krueger, 1994; Mertens, 1998).

The Sample

The sample for the quantitative data consisted of 1400 students drawn from ten randomly selected government and government-assisted secondary schools. The students were almost divided equally by gender, with 48.4% female and 51.6% male students responding to the knowledge, attitudes and behaviour (KAB) questionnaire. They were students in Forms one to four in their respective schools. The age range for the sample was from 13 to 22 years with the mean age of 17.19 (SD = 1.87).

For the qualitative data, the participants for the focus group discussions were drawn from five randomly secondary schools. The students were a purposeful sample from these schools that had earlier on participated in the KAB questionnaire. In all, there were 83 students who participated in eight focus groups that were conducted in the five schools. The ages of the participants ranged from 13 to 21, with the mean age of 16.49 (SD = 1.65).

Review of the Findings

Results from KAB Questionnaire

Knowledge

Generally speaking, the findings suggest that students possessed some knowledge of AIDS. In some ways, however, this knowledge was uneven. Most students (95.8%) indicated that they had heard of HIV/AIDS. Seventy-one percent knew of a person either living with AIDS or had died of AIDS. There was only 17.9% of the student sample that estimated correctly the official number of HIV infected persons in Malawi. More than half indicated that they did not know the estimate of HIV cases in the country. A majority of the students indicated that were afraid that they or someone close to them might get AIDS and they were concerned.

The overall mean score for the whole student sample on the 22 knowledge question items was 69.5%. Male students had higher knowledge scores than female students. Furthermore, there was a statistically significant relationship between the number of years of education and HIV/AIDS related knowledge. Form four students were more knowledgeable about HIV/AIDS than the lower Forms. They were followed by Form three and then the Form two. Form one students were the least knowledgeable on the basic facts of HIV/AIDS. There was no significant relationship between students' AIDS-related knowledge and their religious affiliations, living arrangements or father's occupation. However, meaningful significant relationships were observed between Students' AIDS knowledge scores and highest formal education attainment of their parents. The more formal education either the father or the mother had, the more knowledgeable were students from those parents. There was also a significant

relationship between the students' knowledge about AIDS and their mothers' occupations.

In a more specific way, it was evident that among secondary school students in southern Malawi correct knowledge about HIV/AIDS was found to co-exist with misconceptions about the risks of casual transmission and beliefs that AIDS is curable. Almost one fifth believed, erroneously, that traditional healers could cure AIDS. Close to half of the student sample agreed with the statement item, "*AIDS does not exist, it is a mere myth*" and about 40% did not know that HIV seropositive individuals look healthy.

The majority of students identified the most important routes of HIV transmission, but almost three quarters were not aware that one could not get AIDS by donating blood. More than half did not know that an HIV infected mother could pass the virus to her child through breastfeeding. Almost 27% thought that HIV could be transmitted by mosquito bites. The use of condoms to reduce the likelihood of one partner getting HIV from the other was accepted by slightly more than half of the sample (53.6%).

Attitudes

In general, students indicated positive feelings on some attitudinal items. However, it was also clearly evident that they had not yet made any commitments on other attitudinal items. As a result, their opinions on such items remained scattered on the 5-point likert-type scale. For example, "*Premarital sex when two people intend to marry is okay*", "*I would get tested if I thought I might have been HIV infected*", "*I would feel comfortable hugging a friend who has AIDS*".

With regards to their attitudes towards people affected with HIV/AIDS, a majority of them (80%) were willing to accept someone living with HIV into their classroom. They also totally disagreed with the notion that people with AIDS should be put in a special hospital to avoid infecting others with the virus. Two-thirds believed that people living with AIDS should be loved, cared for and supported by their communities. More than half indicated that they would visit a friend even if he/she had AIDS. Almost three quarters of the students thought that privacy of a student living with AIDS should be respected and everyone in the school does not have the right to know.

With regard to sexual issues, 60% believed that it was okay to say NO to sex. A person should not be forced to have sex against his or her will. They did not approve that teenagers should have sex, even if they are in love. Furthermore, they expressed their disapproval to the statement, "*If your boy/girl friend wants you to have sex, it is better to agree rather than lose him/her.*"

On condom use, about 43% endorsed the idea that it was too risky to have sex without a condom and 52% indicated disapproval that condoms should be made readily available to students in their schools. Although 68% thought it was not right for young people to have sex without condom even if they know each other, only 33% indicated that they would feel comfortable carrying condoms 'just in case' they might need to use them. Both male and female students felt that it was the man's responsibility to carry condoms.

Sexual Behaviour

From the total student sample, slightly more than half (55.1%) reported having had sexual intercourse at least once in their lifetime. Closer examination across gender lines revealed that male students were more sexually active than female students with 67.7% of the male students reporting sexual experience whilst 41.5% of the female students had had sexual intercourse. The reported age of first sexual intercourse for the sexually active group averaged 14.79, though the ages ranged from 9 to 19 years.

A statistically significant relationship was observed between students' AIDS-related knowledge scores of the sexually active and non-sexually active students. The mean score on AIDS knowledge questions for the sexually active students was 15.02 (68.3%), while the non-sexually active students had the mean score of 15.63 (71.1%). The age of their first sexual partners ranged from 12 to 35. In most cases, the students' first sexual partner was older than them. The sexual partners of the female students were older than those of the male students. A majority of students reported to have been influenced to make the decision to have sexual intercourse by friends. The other cited influences included movies/video and magazines/books.

Sources of Information

From the data, it was clearly evident that the radio had been the students' actual main and also preferred source of information on human sexuality, HIV/AIDS and condom use. The print media (newspapers, magazines, pamphlets, posters, books) was the second actual main source of information on human sexuality, HIV/AIDS and condom use. The health professionals were the third actual source of information on HIV/AIDS and

condom use. However, it should be noted that friends were also mentioned as a major source of information. The school was identified as the preferred source of information on sexuality.

Results from Focus Group Discussions

In the focus groups, all students indicated that they had heard of AIDS and their initial orientation to AIDS awareness came from the radio and the print media. Occasionally, they had health professionals who would be invited to their schools to give lectures on HIV/AIDS. Many participants thought that it was always possible to determine if a person had AIDS by appearance. In all the schools, AIDS education was not being offered on the timetable as it was not yet part of the curriculum. However, some students indicated that they were learning about AIDS and sexuality through the WHY WAIT? Programme and the AIDS TOTO Club.

A majority of participants acknowledged that it was very difficult to openly discuss issues related to sexuality in Malawi because of cultural restrictions. In some ways, however, the subject of sexuality was openly discussed amongst their single sex close friends. They were all aware that the expectations of people in their cultures did not approve any sexual intercourse outside marriage. Furthermore, their religious affiliations forbade young people to engage in premarital sex.

The participants accepted that many young people of their age were having sex. Although some students were engaged in sex, the participants pointed out that it was not everyone who was doing it. They cited a variety of reasons why some chose abstinence and the major ones included religious and moral concerns, fear of contracting HIV/AIDS

and parental disapproval. For the sexually active students, the main reasons were influence of peer pressure, sugar daddies, simply curiosity and to be accepted by friends.

The main reasons adduced by participants for adoption of risky sexual behaviour fell into five categories. The first four of these categories were associated expected benefits immediately accruable from such behaviour such as sexual satisfaction, peer approval, monetary or material gains, and experiment with sex in order to satisfy their curiosity. The last identified category was lack of fear for God and disregard of parental values.

Despite all the condom promotion through the mass media, its use would appear to be unpopular among some students. Most participants reported that they had heard of condoms from either the radio, posters, newspapers, magazines or health professionals. Some students were reported to have never seen the actual condom. In addition, there were several myths about condoms such as they will burst and penetrate into the vagina and become lodged there, lubricant could cause cancer or tuberculosis and they do not provide full sexual satisfaction. The majority of both male and female participants agreed that it was the man's responsibility to carry and provide condoms. Almost all female participants acknowledged that they could not see themselves carrying condoms in their purse. Only a few female students indicated that they would have the courage to demand condom use during any sexual activity.

Certain situations were seen as particularly instrumental in facilitating adoption of the risky sexual behaviours among adolescents in schools. First, participants identified the gross misunderstanding of democracy to mean people are free to do whatever they like without taking responsibility for their actions or behaviours. Second, the participants

identified mushrooming of rest-houses throughout Malawi. These places provide "short-time" fee at a reduced rate to allow those who want to use the room for, let us say, about thirty minutes. As a result, some people book "short-time" in order to use the rooms for sex. Third, students observed the influx of blue movies on the market and young people are having access to them regardless of age. Fourth, they thought that the absence of a comprehensive AIDS and sexuality education programme in schools has led to this situation.

There were some underlying themes that emerged from detailed analysis of the transcriptions which somehow explained sexual behaviour of students in schools. Several themes related to condom use emerged from the focus groups and they included personal sense of powerlessness and male dominance experienced by women, lack of knowledge or skill in application of condoms and negative attitude towards condoms. Other themes included the influence of peers, enticement from sugar daddies and lack of security and safety.

Conclusions

The findings of this study have important and direct implications for the introduction, development and implementation of a comprehensive programme on HIV/AIDS education in Malawi. Secondary schools and teachers clearly seem to be an untapped arena for AIDS education, an arena which could potentially reach young people who could easily put themselves at risk, with accurate information regarding AIDS. Thus there is a dire need to provide educational interventions and teaching material appropriate to this adolescent group.

It is critically essential that students are given information on HIV/AIDS and services they would likely need in order to make informed choices about matters that can profoundly affect their own lives and the lives of their partners and children. With the rapid spread of HIV infection among young people, the need for sexuality and AIDS education has become more compelling than ever and the consequences of unsafe risk-taking behaviour more dangerous. If there were ever any doubt about the need for AIDS education in schools or any lingering thought that ignorance is protective, it should now be dissipated. It is now important to provide comprehensive AIDS education in both public and private secondary schools.

The scope and content of AIDS education would need to be determined by the Ministries of Education and Health in liaison with health education, counselling, and curriculum experts and the National AIDS Control Programme in order to direct this education to a proper grade level. The specific approaches to sensitive topics could be locally determined and be consistent with parental and community values. Accordingly, parents and other members of the community involved with the school should be

consulted, e.g., religious groups, health officials, non-governmental organisations, student representatives and special interest groups. This would likely help them to feel that they have an important role to play in AIDS education for their children and wards. However, the basic HIV/AIDS fundamentals would need to be presented in such a way that they provide students with the opportunity to openly discuss their fears, concerns, and personalise the facts so that they become more meaningful. It would be a good way to encourage students to adopt prevention behaviours and practice skills that they could use in real life situations to protect themselves and others from HIV infection.

Accordingly, the general aim of AIDS education should be to reduce the risk of HIV transmission, now and in the future. It is important that the education given should form part of the integrated national AIDS prevention and control strategy designed for that purpose. It should be designed in such a way that students in secondary schools are able to:

- understand the nature of HIV/AIDS and its transmission;
- get current information on the seriousness of the AIDS problem in Malawi;
- make informed decisions about the behaviour that protects them from AIDS;
- behave personally and socially in ways that eliminate the risk of spreading HIV infection;
- discuss how to make an informed choice through decision-making models;
- reject biased information and myths relating to HIV infection;
- value their own health and relationships free from AIDS;
- develop positive attitudes towards those who are infected with HIV.

In order to achieve these and other goals of AIDS education in secondary schools, commitment from various stakeholders and appropriate actions will be needed to accomplish the following:

- increase the level of knowledge about HIV transmission and AIDS among secondary school students and in the community in general;
- increase the level of understanding throughout the community in general, and in secondary school population in particular, of the personal and social problems associated with AIDS, sexual behaviour, cultural and religious norms, and the contributions individuals can make towards reducing those problems;
- increase the interpersonal skills of secondary school students, with particular attention to communication and negotiations within human relationships, self-esteem, value clarification, informed decision-making and relationships in general.

It is important, then, that all AIDS information be presented in an accurate, clear, simple and direct manner. Such an approach would not assume that all adolescents are capable of formal operational thought and would therefore need to involve concrete language and examples. The quality, style of presentation and, ultimately, the impact of an AIDS education programme are influenced by the persons who teach it. Accordingly, the training of teachers is vital for the successful implementation of the AIDS education programme. The needs of teachers would need to be assessed and then appropriate training programmes be developed. Well-equipped and trained teachers will have a significant impact on the knowledge, skills, and attitudes of the students in their care.

Accordingly, the AIDS education in secondary schools should not be limited to only presenting facts about HIV and AIDS but could also touch on topics such as prejudice and discrimination and other social issues, as well as communications and the use of the media, plus the more sensitive discussions about sexuality, feelings and emotions. Educators would need to realise that teaching is not just simply imparting knowledge, but also leading to possible changes in beliefs and attitudes, which may be more effective if acquired through relevant teaching methods, e.g., participatory teaching techniques. Participatory activities in which students can identify with situations without being drawn into personal revelations, such as role plays sessions, can explore differences of moral views and choices and relate them to young people's experiences in a changing world, while skills of negotiations and communication are practised.

Fishbein and Ajzen (1975) contended that a person's knowledge is represented by his/her beliefs. It is the individual's beliefs that are the basis for their attitudes, intentions and behaviours. It is therefore very important that beliefs, attitudes and values be openly discussed in the AIDS education programme. For example, using participatory activities, students could be guided to discuss attitudes and values in real but hypothetical situations which need not be threatening at a personal level, but which students could, hopefully, carry over into their private lives. Recent newspaper articles with "case reports", where students can easily identify themselves, could form the basis for a good discussion. Visiting organisations supporting HIV infected people or hospitals could offer students opportunities to meet with personal experiences (if possible HIV infected individuals). Local health professionals could provide a range of expertise to both students and teachers. In addition, health professionals and teachers could offer counselling to students

on HIV/AIDS related issues. People living with AIDS could provide valuable resource by making themselves available to lead classroom discussions on various aspects of AIDS.

It is also particularly important that some relevant cultural values be integrated in the AIDS education programme in order to promote positive attitudes to people living with HIV/AIDS. For example, when a person is sick, it is the collective responsibility of everyone in the extended family to take care of that sick person. If this cultural value would need to be incorporated in AIDS education, students would then be challenged to see the importance and place of cultural values. Traditional elders could be invited to address students on various cultural values.

Students also need to be taught which behaviours are considered as high risk and can increase their chances of being infected by the HIV. As a result, it is important that they should be made to understand that there is no cure for AIDS and that engaging in responsible healthy behaviour appears to be the only method of reducing the risk of HIV transmission. The responsible healthy behaviours include either delaying initiation of sexual intercourse or using the condom properly.

Individual students should also be made aware that they have several responsible prevention strategies to choose from, but the effectiveness of each one depends largely on using it consistently (every time). Those who choose to practice abstinence will find it effective only if they consistently abstain from sex. Similarly, those who choose any other recommended prevention strategies, including the use of condoms, will find them highly effective only if used correctly and practised consistently.

As the research has indicated, many students fail to make changes in their sexual behaviours unless they believe that they are personally susceptible or are concerned about

contracting AIDS. Therefore, educators must play a role in increasing the personal concern of students. This can be achieved by helping students to realise that it is their own behaviour which can put them at risk for AIDS virus transmission, and not the behaviour of others. In this manner, it is expected that students will behave in a more responsible fashion to avoid dangerous behaviours and situations.

Adolescents must come to believe that they are capable of making behaviour changes, that those changes will reduce their risk of infection, and that the benefits of doing so outweigh the costs. So AIDS educators will need to keep in mind that, in spite of their own beliefs about aspects of human sexuality, the behaviours responsible for HIV transmission are often marked by their centrality to the adolescent's sense of self-identity. This implies neither a rejection nor an acceptance of those behaviours, simply an acknowledgement of their possible significance. All students must have opportunities to learn about and discuss openly the emotional and social factors which influence types of behaviour associated with HIV transmission.

There are a variety of activities to educate all students about HIV which can be used in schools. The success of various alternatives depends upon their implementation and the unique social context of actual school populations (Coyle et al., 1996; DiClemente & Peterson, 1994; Kirby, 1985; Jimerson & Stone, 1993). Some of the activities (Ministry of Education & UNICEF, 1993; WHO/UNESCO, 1994; Yarber, 1987) could include:

1. the use of peer facilitators who discuss HIV/AIDS issues both in classrooms and individually with students;

2. role playing a scene in which a person discusses AIDS prevention with a possible sex partner;
3. dramatic theatrical presentations written and presented by students that portray the risks of HIV/AIDS, especially for adolescents;
4. writing about or participating in a group discussion on one's attitudes and beliefs concerning the social, cultural, ethical or religious issues involved in AIDS prevention;
5. school health fairs with presentations about HIV/AIDS from teachers and health officials, presentations by people living with HIV/AIDS, and mini presentations by students;
6. weekly discussion sessions on youth sexual/social issues;
7. practicing the steps of problem solving by using typical AIDS problem faced by young people;
8. answer imaginary letters from teenagers with questions and concerns about AIDS in the form of a newspaper advice column;
9. simulating a community task force that is charged with developing strategies for AIDS prevention in the school and the community;
10. health columns on HIV/AIDS in the school newspaper and bulletins.

These are only a few suggestions for learning activities. Creative teachers who have received adequate training are likely to think of many more. What is important is that the activities provide opportunities for students to be involved in the problem solving and decision making tasks and in possibly practicing health promoting skills. Through

such involvement will likely develop attitudes conducive to health behaviours that will prevent or minimise the spread of AIDS virus.

In order for classroom teachers to adopt such teaching methods and learning activities, it is important that the Ministry of Education, Sports and Culture realises the need to adequately train its teachers. The appropriate training of teachers on AIDS education programme is of paramount importance for the successful implementation of the programme. The needs of the teachers would need to be assessed broadly at the secondary school educational system level and more specifically at school level. Assessment of training needs could begin with an evaluation of the existing competence of programme presenters, including their knowledge, attitudes, beliefs and concerns about HIV/AIDS.

The appropriate training of AIDS education could be done through in-service training workshops from time to time for those teachers who are already in schools. In-service workshops can be a good vehicle of the transfer of skills and knowledge. Since the workshops at national level can generally be expensive, they can be carried out in a number of ways (WHO/UNESCO, 1992): (1) as an in-school training programme involving all the school staff; (2) in regional or district training programmes for all the teachers who are to teach AIDS education; (3) in "train the trainers" programmes where one or more key teachers per school are trained. These teachers then train their colleagues on return to their respective school; and (4) in supervisory teacher programmes, where one of the teachers, trained as above, works with a teacher who has received less training.

One realistic approach would also be to help serving teachers see how they can integrate AIDS education into their content subjects. For example, an English teacher can

have a comprehension passage dealing with AIDS and then allow general discussion at the end. Or the teacher can organise a debate on an issue dealing with AIDS. In addition, the University of Malawi's Faculty of Education would need to review their teacher training education programme and see how their courses could incorporate practical teaching methods and resources in AIDS education.

Though knowledge is necessary to achieve appropriate behavioural change among young people, it should be noted that knowledge alone is insufficient. Knowledge alone is not enough to change young people's high-risk sexual behaviours (Chimombo & MacLachlan, 1995; Coyle et al., 1996; Damanjeet, 1995; Gray & Saracino, 1989). Programmes that rely mainly on conveying information about sex or moral precepts – how the body's sexual system functions or what teenagers should and should not do – have failed (DiClemente & Peterson, 1994; Jimerson & Stone, 1993; Kirby, 1992; Kirby, 1995; Lamptey & Piot, 1990; Levine, 1991). In order for information to be turned into healthy actions, individuals need to feel a personal vulnerability (Mathews et. al., 1990). From the results of this study, it is evident that students do not perceive themselves to be at risk. It is likely that AIDS is attributed to groups outside the students' immediate ambit. The researcher's observation is that explanations of risk tend to take on moralistic overtones and AIDS seem to be a disease for 'dirty people', 'bad people', 'prostitutes', and 'people who are careless about their health'.

The social context of human sexual health has recently been receiving greater attention, particularly in the HIV/AIDS literature (Kippax, Crawford, Waldby & Benton, 1990; Kirby, 1985; Moore & Rosenthal, 1990; Thompson, 1994). Choosing to have or not to have sex, or to use condoms has social meanings, consequences, and implications

for public and private identity (Hollway, 1984). In the British Women, Risk and AIDS Project (Thomson & Scott, 1991), which studied 500 young women 16 through 21 years of age, the authors examined the perceived appropriateness of the sexual health education the women had received. One of their conclusions was summarised as follows:

> By far the most common criticism of sexual health education at school was that it had little or no relationship to the real choices and pressures around sexual health that affected the young women in question... the concentration upon the biology of human reproduction was consistently criticised for taking no account of the context in which sexual behaviour takes place nor the person and social consequences of such behaviour (Thomson & Scott, 1991, p. 6).

This fact in itself underlines once again the relevance of gender sensitivity in the delivery of education regarding HIV/AIDS and sexual health.

In Malawi, the prevalence of HIV cases in girls aged between 15 and 19 years old, and 20 and 24 years old is estimated to be five times and twice, respectively, that of boys in the same age groups (NACP, 1997). I think that the increased risk for girls arises out of not only a physical vulnerability, but also a social one. Knowing that prostitutes are a high-risk group, many "sugar daddies" are turning away from mature women for transactional sex and towards school-girls (McAuliffe, 1994; MacLachlan et al., 1997; National Safe Motherhood Task Force of Malawi, 1995). Furthermore, often responsibility for condom use seems to be dictated by males (McAuliffe & Ntata, 1994). Messages to that effect make use of the stereotype that men have dominance on women. There is an inherent contradiction in asking young women to ensure the use of condoms

or discouraging penetrative practices, when their culturally legitimised role in most cultures is one of passivity (Waldby, Kippax & Crawford, 1993). That is, the meanings and assumptions that currently define and inform young women's and young men's sexual lives are often at odds with the strategies proffered by education campaigns (Kippax et al., 1990; Lever, 1995; Thomson & Scott, 1991). Therefore, seeking to change female behaviour without taking into account its relationship to male behaviour limits the viability of such strategies. Managing the vulnerability of young women in HIV/AIDS education may also mean addressing young men and the notions of gender and sexual identity through which they understand their experiences.

With respect to policy formulation and implementation, policy makers must be conscious of the extent to which sexual behaviour takes place within a broad psychosocial framework. This framework encompasses the setting in which sexual activity takes place, the social context, as well as the role of relationships and of social or peer norms in determining sexual interactions. According to Robenstine (1995), "an effective education programme is built around the peer group and its influence, and incorporates peer educators. Peer influences can be used successfully in materials and instruction to model preventive behaviours and to provide social endorsement for behaviour change" (p. 137). Policies that protect the plight of many young people in schools and out of school youth will need to be put in place. For example, it would be very helpful to have solid policies on sexual harassment, abuse, exploitation and rape.

It has been observed that:

> One challenge to policymakers is to comprehend and respond to the distinctiveness of varying cultural experiences, including each community's fundamental assumptions and beliefs, ethical and aesthetic values, ritual and material preferences, and historical burdens (National Commission on AIDS cited by Robenstine, 1995, p.137).

Policymakers will need to be aware, then, of the ways in which factors such as gender, cultural values, religion and social economic status are important correlates of sexual intercourse initiation. With respect to Malawian students, for example, it would be a miscalculation with fatal consequences to expect an AIDS education programme solely premised on the values of the western culture to be fully effective.

Implications for Practice and Further Research

Implications for Practice

The following recommendations seem warranted on the basis of the study and the experience of the author as a Malawian educator. These recommendations cannot be considered in isolation from each other, they are mutually reinforcing.

1. It is strongly recommended that a comprehensive AIDS education programme be introduced in all public and private secondary schools. It is important that the AIDS education should even target students younger than the age group likely to have risk behaviour. In this case, the programme will have to be introduced from the primary level, with special emphasis on senior primary pupils, to secondary and tertiary levels. An effective, comprehensive programme of AIDS education directed at behaviour change is at present the only significant means to prevent the transmission of HIV. Currently almost all cases of HIV transmission in Malawi result from sexual behaviour over which society has no direct control.

2. It is also recommended that a developmentally and culturally appropriate teaching curriculum plan be put in place for all grade levels in schools possibly from kindergarten through college covering biological concepts, reproductive health, sexually transmitted diseases, self-esteem, communication, relationships and HIV/AIDS. A positive programme, providing information focussing on family life education and the students' role as future parents, needs to be introduced into the school curriculum.

3. Teachers and school administrators (e.g. headmasters/headmistresses) will need to be provided with appropriate in-service programme in AIDS education. This in-service programme could include basic knowledge on AIDS, update on curriculum materials developed to deal with HIV/AIDS and appropriate methods for teaching and dealing with AIDS-related issues and questions. Teachers and administrators would also need to be equipped with basic counselling skills to be able to work more effectively with adolescents in their schools. In order to help students receive AIDS information in a non-threatening environment, teachers have to be prepared to deal with AIDS-related content and the psychosocial issues and questions related to this area.

4. All primary school teachers should be provided with in-service training that will enable them to respond in an appropriate manner to the AIDS related issues and questions of their students. Where appropriate, consultation and advice could be provided through the National AIDS Control Programme.

5. It is also recommended that comprehensive national programmes of AIDS education and information for the general public be put in place by government in cooperation with the non-governmental organisations, workplace, churches, and the community. Clearly the best way for the government to encourage AIDS education would be to offer it to people. People should be fully involved in the planning and implementation of these programmes.

6. Institutions providing training for teachers and for all those engaged in the health occupations should ensure that their students are provided with appropriate AIDS education within their curricula. Accordingly, the University of Malawi's Faculty of Education, Mzuzu University and the Malawi Institute of Education in cooperation with the National AIDS Control Programme and the Ministries of Education and Health will need to review their curricula so that HIV/AIDS education is reflected in their teacher education programmes and school curriculum development.

7. I strongly recommend that AIDS education should be incorporated into each of the content subjects being offered in teacher education programme and also secondary school curriculum.

8. Follow-up multi-media campaigns should be developed and implemented to maintain the knowledge levels of the general population including students and reinforce the positive messages regarding how to prevent AIDS virus transmission.

9. The government should take leadership in providing clear, frank, and complete information about the AIDS epidemic in Malawi. They should acknowledge that young people are an important target group to whom information needs to be directed and that young people are and will continue to be sexually active.

10. Appropriate policies will need to be put in place with in put from the target groups. Furthermore, stern measures on how to curb the sexual harassment, abuse and exploitation of young people by sugar daddies and other adults should seriously be reviewed.

Implications for Further Research

The findings of this study have implications for future research on adolescent sexuality and HIV/AIDS in Malawi.

1. A comparative research of both the out-of-school adolescents and those attending secondary school is recommended in order to explore and examine the relationship between HIV/AIDS-related knowledge, attitudes and sexual behaviour among these two groups.

2. Research with different samples of the adolescent populations throughout Malawi is recommended and variables like gender, cultural background, religion, social economic status of parents, and urban versus rural setting will need to be examined.

3. It is further recommended that certain crucial elements of adolescent sexuality such as rape and masturbation be closely examined. It would be useful to understand adolescents' perceptions on the frequency, nature and the magnitude of rape cases in Malawi. Some male participants in the focus groups mentioned masturbation as one method of HIV prevention. Though

masturbation has been viewed for years by Malawians as being borderline deviant behaviour, it would be appropriate to investigate how it is being currently viewed by adolescents in the light of HIV infection.

4. Furthermore, research would need to be done on condom use. Adolescents are exposed to a variety of condom awareness messages, but the impact of these messages on their sexual behaviours is somehow unclear. It would be very helpful to understand adolescents' perception on condom use. How often they get to use condoms? How they get condoms? How they negotiate condom use with their partners? How has the promotion of condoms helped them? What determines condom use?

5. From this study, it is evident that not all secondary school students are sexually active. It might be very useful to investigate adolescents' perceptions of abstinence. In a more specific way, examine the reasons why some choose abstinence, the pressures they go through and how they manage to maintain their choice. In so doing, we can learn how effectively we can incorporate such findings in the AIDS education.

6. The question, "Does instructing adolescents on condom use and abstinence in the same programme cause abstinence to be perceived as 'less important'?" remains an open one and would require investigations with Malawian adolescents.

7. It would also be useful to gain further understanding of how individuals interpret AIDS-related messages from the variety of sources that adolescents encounter in their lives. The impact of these messages on the attitudes and sexual behaviours of adolescents is unclear.

8. Another area that needs research is on students' perceptions of sexual harassment, abuse, exploitation and rape.

Concluding Remarks

In this study, I have highlighted certain key areas for intervention with special emphasis on introducing AIDS education in all secondary schools in Malawi. In doing so, we will be helping the students receive more accurate information about HIV/AIDS, recognise AIDS as an immediate threat to themselves and make well informed decisions that do not put their lives at risk for HIV infection. Since a good number of students are sexually active, this places them at risk and makes HIV/AIDS prevention programme for both public and private secondary school a matter of urgency.

The AIDS education programme should be developed by the Ministries of Education and Health in conjunction with teachers, curriculum developers, parents and student representatives. Furthermore, the programme should enable students to seriously think through the issues and encourage them to adopt and maintain healthy sexual behaviour that will minimise the risk of becoming HIV infected. From this study, it is evident that all students require appropriate AIDS education and interventions.

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APPENDIX A

KNOWLEDGE, ATTITUDES AND BEHAVIOUR (KAB) QUESTIONNAIRE

CONSENT FOR PARTICIPATION (Simply tick here) ☐

KNOWLEDGE, ATTITUDES AND BEHAVIOUR (KAB) QUESTIONNAIRE

Introduction and Directions

Thank you for taking time to complete this questionnaire. The intention of this study is to find out about your knowledge, attitudes and behaviour that are related to HIV/AIDS. The information you are about to provide is very valuable. First and foremost, the results of this study will be used purely for research purposes. To keep your answers confidential and private, do not put your name anywhere on this questionnaire. Since your name is not required, you will remain anonymous. Because this study is important, please answer each question **honestly** and carefully by simply ticking or checking the number or box that represents your response.

PART ONE: Background Information

01. What is your gender? ☐(1) Female ☐ (2) male

02. What is your age? ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐19 ☐ 20 ☐ 21 ☐ 22-

03. Your Form in School. ☐ Form 1 ☐ Form 2 ☐ Form 3 ☐Form 4

04. What is your religion?

[1] ☐ Roman Catholic
[2] ☐ C. C. A. P.
[3] ☐ Islam
[4] ☐ SDA
[5] ☐ Anglican
[6] ☐ Baptist
[7] ☐ Others (specify) _____

05-06. What are your Parents' occupations? [*If retired, describe the usual job before retirement*].

05 FATHER	06 MOTHER	
☐ [1]	☐ [1]	Professional (e.g. Accountant, doctor, teacher, lawyer, nurse)
☐ [2]	☐ [2]	Business
☐ [3]	☐ [3]	Farmer or farm related occupation
☐ [4]	☐ [4]	Skilled worker (e.g. carpenter, plumber, electrician)
☐ [5]	☐ [5]	Clerical
☐ [6]	☐ [6]	Factory/Estate worker, labourer, cook, waiter, guard, driver)
☐ [7]	☐ [7]	Home maker / House wife
☐ [8]	☐ [8]	Other (please specify) _____

07-08. How much formal education have your parents completed?

07 FATHER	08 MOTHER	
☐ [1]	☐ [1]	Never been to school
☐ [2]	☐ [2]	Some primary education
☐ [3]	☐ [3]	Finished primary education
☐ [4]	☐ [4]	Some secondary education
☐ [5]	☐ [5]	Completed secondary education
☐ [6]	☐ [6]	University diploma/degree
☐ [7]	☐ [7]	Other {please specify} _____

09. With whom do you live when you are not in school?

[1] ☐ Both natural parents
[2] ☐ Mother only
[3] ☐ Father only
[4] ☐ Grandparents
[5] ☐ Mother and step father
[6] ☐ Father and step mother
[7] ☐ Extended family member (e.g. Uncle, auntie, sister, brother etc)
[8] ☐ Other (please specify) _____

10. How many brothers and sisters do you have? (number of siblings)

[1] ☐ None [2] ☐ One [3] ☐ Two [4] ☐ Three [5] ☐ Four [6] ☐ Five
[7] ☐ Six [8] ☐ Seven [9] ☐Eight [10] ☐ Nine [11] ☐ Ten or more

PART TWO: AIDS-related Knowledge

12. Have you heard of AIDS? [1] ☐ Yes [2] ☐ No [3] ☐ Not sure
13. Do you know of a person who has or has died of AIDS? [1] ☐ Yes [2] ☐ No [3] ☐ Not sure
14. How afraid are you that you or someone close to you will get AIDS?
    [1] ☐ Extremely afraid [4] ☐ Not very afraid
    [2] ☐ Very afraid [3] ☐ Not sure [5] ☐ Not at all concerned
15. About many people in Malawi do you estimate are presently infected with HIV, the virus that causes AIDS?
    [1] ☐ Less than 10,000 [3] ☐ 300,001 - 500,000 [5] ☐ Over 800,000
    [2] ☐ 10,0001- 300,000 [4] ☐ 500,001 - 800,000 [6] ☐ Don't know
16. How concerned are about HIV/AIDS in Malawi?
    [1] ☐ Extremely concerned [4] ☐ Not very concerned
    [2] ☐ Very concerned [3] ☐ Not sure [5] ☐ Not very concerned
17. Can you protect yourself from becoming infected with the AIDS virus? 1 ☐ Yes 2 ☐ No 3 ☐ Not sure

*From Questions **18** to **39**, read each statement carefully, then state whether it is **TRUE, FALSE or NOT SURE [N/S]** by circling the number that represents your response:*

	TRUE	FALSE	N/S
18. AIDS is a disease for Whites only, not Africans.	1 ☐	2 ☐	3 ☐
19. AIDS is a sexually transmitted disease (STD).	1 ☐	2 ☐	3 ☐
20. AIDS does not exist. It is a mere myth.	1 ☐	2 ☐	3 ☐
21. A pregnant woman who has HIV can infect her unborn baby with the virus.	1 ☐	2 ☐	3 ☐
22. An infected mother can pass the virus to her child through breastfeeding.	1 ☐	2 ☐	3 ☐
23. At present there is no cure for AIDS.	1 ☐	2 ☐	3 ☐
24. Everyone who loses a lot of weight in a short time has AIDS.	1 ☐	2 ☐	3 ☐
25. It is not possible to get AIDS from a healthy looking person.	1 ☐	2 ☐	3 ☐
26. One can easily get HIV from sharing a cup with a person living with AIDS.	1 ☐	2 ☐	3 ☐
27. One can get AIDS by giving blood.	1 ☐	2 ☐	3 ☐
28. One is likely to get HIV if he/she already has a sexually transmitted disease (STD).	1 ☐	2 ☐	3 ☐
29. One way to greatly reduce the risk of getting HIV is to abstain totally from sex.	1 ☐	2 ☐	3 ☐
30. One way to greatly reduce the risk of getting HIV is to have sex only with a mutually uninfected faithful partner.	1 ☐	2 ☐	3 ☐
31. Some traditional healers can cure AIDS.	1 ☐	2 ☐	3 ☐
32. The use of condoms reduces the likelihood of one partner getting HIV from the other.	1 ☐	2 ☐	3 ☐
33. You can catch the HIV infection by shaking hands with an infected person.	1 ☐	2 ☐	3 ☐
34. You can get AIDS from a mosquito if it bites you just after biting an AIDS victim.	1 ☐	2 ☐	3 ☐
35. You can get AIDS from an injection given by an unsterilised needle.	1 ☐	2 ☐	3 ☐
36. You can get HIV from hugging.	1 ☐	2 ☐	3 ☐
37. You cannot get HIV through sexual contact.	1 ☐	2 ☐	3 ☐
38. A person can even live more than ten years after getting HIV.	1 ☐	2 ☐	3 ☐
39. You can tell if a person is HIV infected by simply looking at the person.	1 ☐	2 ☐	3 ☐

PART THREE: Attitudes

In this section I would like to know your opinions on some sexual issues and behaviours in relation to HIV/AIDS. Remember that the information you give is completely confidential. There are no right or wrong answers but please be open and honest in your responses. Tick the number that represents your response on a 1 - 5 scale [1 = Strongly Agree {SA}, 2 = Moderately Agree {MA}, 3 = Agree {A}, 4 = Moderately Disagree {MD}, and 5 = Strongly Disagree {SD}] concerning the following statements:

	SA	MA	A	MD	SD
40. Unmarried people should not have sex	1☐	2☐	3☐	4☐	5☐
41. It is okay for teenagers to have sex if they are in love	1☐	2☐	3☐	4☐	5☐
42. Premarital sex when two people intend to marry is okay	1☐	2☐	3☐	4☐	5☐
43. AIDS is a serious problem for the people of Malawi	1☐	2☐	3☐	4☐	5☐
44. Only people who live in the cities/towns can get AIDS	1☐	2☐	3☐	4☐	5☐
45. If a student has HIV, everyone in the school has the right to know.	1☐	2☐	3☐	4☐	5☐
46. People with AIDS should be loved, cared for and supported by their communities	1☐	2☐	3☐	4☐	5☐
47. I think it is okay to say "NO" when someone wants sex.	1☐	2☐	3☐	4☐	5☐
48. It is against my parents' values for me to have sex while I am an unmarried teenager	1☐	2☐	3☐	4☐	5☐
49. It is against my values for me to have sex while I am an unmarried teenager	1☐	2☐	3☐	4☐	5☐
50. It is impossible for teenagers to change their sexual behaviour to avoid getting HIV	1☐	2☐	3☐	4☐	5☐
51. Students with HIV should not be allowed to go to school	1☐	2☐	3☐	4☐	5☐
52. Young people don't get HIV/AIDS.	1☐	2☐	3☐	4☐	5☐
53. It is the man's responsibility to carry condoms	1☐	2☐	3☐	4☐	5☐
54. I would visit a friend even if he/she has AIDS.	1☐	2☐	3☐	4☐	5☐
55. People with AIDS should be put in a special hospital to avoid infecting others.	1☐	2☐	3☐	4☐	5☐
56. It is too risky to have sex without a condom.	1☐	2☐	3☐	4☐	5☐
57. Condoms should be made readily available to students.	1☐	2☐	3☐	4☐	5☐
58. I would feel comfortable carrying condoms "just in case" I might need them.	1☐	2☐	3☐	4☐	5☐
59. I would be embarrassed to buy condoms.	1☐	2☐	3☐	4☐	5☐
60. I would be embarrassed to talk to my sexual partner about condom use.	1☐	2☐	3☐	4☐	5☐
61. I would feel comfortable hugging a friend who has AIDS	1☐	2☐	3☐	4☐	5☐
62. If your boy/girlfriend wants you to have sex, it is better to agree rather than to lose him/her.	1☐	2☐	3☐	4☐	5☐
63. It is all right for young people to have sex without condom if they know each other.	1☐	2☐	3☐	4☐	5☐
64. I would get tested if I thought I might have HIV.	1☐	2☐	3☐	4☐	5☐

PART FOUR: Sexual Behaviour

65. Have you ever engaged in any of the following activities with a member of the opposite sex?

[a] Holding hands?	[1] ☐ Yes	[2] ☐ No	[3] ☐ Not Sure
[b] Kissing?	[1] ☐ Yes	[2] ☐ No	[3] ☐ Not Sure
[c] Necking?	[1] ☐ Yes	[2] ☐ No	[3] ☐ Not Sure
[d] Hugging/Embracing	[1] ☐ Yes	[2] ☐ No	[3] ☐ Not Sure
[e] Breast/Genital fondling	[1] ☐ Yes	[2] ☐ No	[3] ☐ Not Sure

66. Have you ever had sex? [1] ☐ Yes [2] ☐ No

67. How old were you when you first had sexual intercourse?

[1] ☐ I've never had sexual intercourse [2] ☐ 12 or younger [3] ☐ 13 [4] ☐ 14 [5] ☐ 15
[6] ☐ 16 [7] ☐ 17 [8] ☐ 18 [9] ☐ 19 [10] ☐ 20 or older

68. How old was your partner when you had sex for the first time?

[1] ☐ I have never had sexual intercourse [2] ☐ 12 or younger [3] ☐ 13 [4] ☐ 14
[5] ☐ 15 [6] ☐ 16 [7] ☐ 17 [8] ☐ 18 [9] ☐ 19
[10] ☐ 20 or older

69. Who initiated (wanted to have) your first sexual intercourse?

[1] ☐ I have never had sexual intercourse [2] ☐ Myself [3] ☐ My partner [4] ☐ We both did
[5] ☐ Don't remember

70. Did you discuss condom use with your partner before having your first sexual intercourse?

[1] ☐ I have never had sexual intercourse.
[2] ☐ Yes, we did talk about condom use before
[3] ☐ No, we did not talk about condom use before
[4] ☐ No, we did not talk about condom use until we had had sexual intercourse
[5] ☐ We had never talked about condom use, before or after.

71. Who influences you to make the decision to have sexual intercourse? (Tick one prominent influence)

[1] ☐ Father	[4] ☐ Relatives	[7] ☐ Radio	10 ☐ Other ___
[2] ☐ Mother	[5] ☐ Teachers	[8] ☐ Magazines/Books	11 ☐ Don't know
[3] ☐ Friends	[6] ☐ Church	[9] ☐ Sexual partner	

72. How many times have you had sexual intercourse?

[1] ☐ I have never had sex
[2] ☐ Once
[3] ☐ Twice
[4] ☐ Thrice
[5] ☐ Four times
[6] ☐ Five or more times.

73. How many different partners have you had sex with?

[1] ☐ I have never had sex
[2] ☐ One
[3] ☐ Two people
[4] ☐ Three people
[5] ☐ Four people
[6] ☐ Five or more

74. How long ago was your last sexual experience?

[1] ☐ I have never had sex
[2] ☐ Within the last 3 months
[3] ☐ Within the last 6 months
[4] ☐ Within the last 9 months
[5] ☐ 1 year ago or more

75. Have you ever had a sexually transmitted disease?

[1] ☐ I have never had sex
[2] ☐ Yes
[3] ☐ No

76. Have you ever been pregnant or made someone pregnant?
[1] ☐ I have never had sex
[2] ☐ Yes
[3] ☐ No

77. Was there a time you were forced to have sex against your will?
[1] ☐ I have never had sex
[2] ☐ Yes
[3] ☐ No

PART FIVE: Sources of Information

78. How well informed do you feel you are about actions you can take to avoid becoming infected with the AIDS virus?
[1] ☐ Not at all informed
[2] ☐ Not too well informed
[3] ☐ Fairly well informed
[4] ☐ Very well informed

Please read each question carefully. Use the following code in the key below to answer questions 79 to 83:

01 = Radio	06 = School/teachers	11= Sexual partner
02. = Newspapers/magazines	07 = Friends	12 = Videos/movies
03 = Health workers	08 = Mother	13 = others (specify)
04 = Pamphlets/posters	09 = Father	
05 = Church	10 = Family members/relatives	

79. What have been your top three major sources of information about sex and sexual matters?
First ☐ Second ☐ Third ☐

80. What have been your top three major sources of information about HIV/AIDS?
First ☐ Second ☐ Third ☐

81. What have been your top three major sources of information about condom use?
First ☐ Second ☐ Third ☐

82. From which source(s) would you prefer to get your information about sexual matters?
First ☐ Second ☐ Third ☐

83. From which source(s) would you prefer to get information about HIV/AIDS?
First ☐ Second ☐ Third ☐

THANK YOU FOR PARTICIPATING IN THIS PROJECT

APPENDIX B

FOCUS GROUP DISCUSSION – Guideline Questions

FOCUS GROUP DISCUSSIONS

Guideline questions

Section One: Malawi Culture, Sexual Relationships and Adolescents

01. Do people in Malawi openly discuss issues related to sexuality?
02. What are some of the reasons why people may not discuss sex?
03. Is it possible to talk about sex and sexuality? In what situations is it generally possible to talk about sexuality-related matters? Who can talk to whom?
04. What are the expectations of people in your culture about sex out side marriage?
05. At what age do you think the majority of boys/girls have their first sexual experience?
06. Do you think there is pressure on boys/girls to have sexual relationships and at what age is this pressure strongest?
07. What would you think of a boy or girl who resists this pressure?
08. Who initiates sex? Who decides to have sex between two people? Explain.
09. When is it okay to have sex? Why? When is it not okay? Why?
10. What do you do if your boyfriend/girlfriend is pressuring you for sex?

Section Two: Adolescents and HIV/AIDS

01. Do you think that AIDS has led to a change in young people's sexual behaviour, either in terms of frequency of sexual intercourse, number of sexual partner, or use of condom itself?
02. Can AIDS be prevented? If yes, how can it be prevented? If no, why not?
03. If someone decides to change his/her behaviour, do you think it is always possible for him/her to do so? Give reasons for your answer.
04. What do you think would need to happen to stop the spread of HIV among young people?
05. What are some of the things that might prevent your solutions from happening?

Section Three: Adolescents and Condoms

01. In your opinion, where do people get condoms? Do they use them?
02. What are some of the reasons why young people don't use condoms?
03. How do you and/or your friends feel about using condoms?
04. Do young people talk about condom use with their sexual partners?
05. In your opinion who should first suggest condom use when a male and a female are having sex?
06. Whose responsibility is it to provide condom for use in a sexual activity?

APPENDIX C

CLEARANCE/PERMISSION LETTERS

(From Ethics Review Committees and Ministry of Education, Sports and Culture)

UNIVERSITY OF MALAWI

TELEPHONE: 522 422
TELEGRAMS: UNIVERSITY ZOMBA
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UNIVERSITY OFFICE
P.O. BOX 278
ZOMBA
MALAWI

Our Ref.: 1/12/3/12/1

Your Ref.: .....

3rd June, 1997

Mr Dixie W. Maluwa
CHANCELLOR COLLEGE

Dear Sir

RESEARCH CLEARANCE: ADOLESCENT SEXUALITY AND HIV/AIDS IN MALAWI: A STUDY OF SECONDARY SCHOOL STUDENTS KNOWLEDGE, ATTITUDES AND BEHAVIOUR

I am pleased to inform you that the Research and Publications Committee has granted you permission to carry out the above captioned research. Your permit number is CC/97/06/09.

If there is anything we can do to assist you further, please do not hesitate to contact us. You are required to submit three copies of your report at the end of your project.

Yours sincerely

Dr A.J. Ambali
CHAIRMAN, RESEARCH AND PUBLICATIONS COMMITTEE

cc: Vice-Chancellor
University Registrar
Head, Department of Education Foundations
Assistant Research Coordinator

AJA/mfm

Telegrams: Maseru Limkorwe
Telephone: Lilongwe 784 800
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Communications should be addressed to:
The Secretary for Education and Culture

In reply please quote No. ..... 199 .....
MINISTRY OF EDUCATION AND CULTURE
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DP6/3/5/19/VOL II

15th August, 1997

Mr Dixie Maluwa Banda
6-102 Education North
Edmonton
Alberta
CANADA TCG 2G5

Fax No : 011 403 492 1318

Dear Sir,

PERMISSION TO CONDUCT RESEARCH ON THE TITLE "ADOLESCENT SEXUALITY AND HIV/AIDS IN MALAWI"

We acknowledge receipt of your letter requesting this office to clear you on your proposal as indicated above.

I have the pleasure to inform you that your proposal has been cleared and therefore this office fully recognize that you will do this duty.

Accept my congratulation and I wish you all the best.

Yours sincerely,

M.D. Chatsika
For: SECRETARY FOR EDUCATION

University of Alberta
Edmonton
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Department of Educational Psychology
Faculty of Education
6-102 Education North, Telephone (403) 432-5245

Sept. 8, 1997

From: Department of Educational Psychology
Research and Ethics Committee

The Research and Ethics Committee of the Department of Educational Psychology has reviewed the attached proposal and finds it acceptable with respect to ethical matters.

Applicant: Dr. Hess on behalf of Dixie Maluwa-Banda (graduate student)

Title: Adolescent Sexuality and HIV/AIDS in Malawi: A Study of Secondary School Students' Knowledge, Attitudes and Behavior

Participating Agency(ies):

pM Judical
Chairman or Designate, Research
and Ethics Committee

Sept 9/97
Date

APPENDIX D

SAMPLE LETTERS TO THE SCHOOL HEADS

UNIVERSITY OF MALAWI

Dixie W. Maluwa-Banda, DipEd, B.Ed, M.Ed.
Lecturer in Educational Psychology and
Ph.D. Candidate, University of Alberta.
Email: DMBanda@unima.wn.apc.org

CHANCELLOR COLLEGE
Educational Foundations Department
P. O. Box 280, Zomba, MALAWI, SOUTHERN AFRICA
Tel: (265) 522 222
Fax: (265) 522 046

8th June 1998.

The Headmaster/mistress
_____
_____
_____

Dear Sir/Madam,

Scheduling the Data Collection Date for the School

- **Project Title: A Study of Secondary School Students' AIDS-related Knowledge, Beliefs and Attitudes.**

This is a follow-up to my earlier letter sent to you in March this year. I just want to inform you that I am now in the country to collect the research data whose information from students will be used towards the completion of my Ph.D. programme at the University of Alberta in Canada. I intend to visit your school twice. First, to administer the questionnaire to one class of each Form and then come for two focus group discussions.

Accordingly, I would like to suggest that I administer the questionnaire to students at your school on **(day), (date) at 8.00am**. I hope the date is convenient for your school.

Thank you in advance for your understanding and please if you have any questions or concerns, do not hesitate to give me a call at Chancellor College, 522 222. If I am not in the office, could you leave a message with the secretary of the Department and I will be in touch with you as soon as I can.

Yours sincerely,

Dixie Maluwa Banda

UNIVERSITY OF MALAWI

Dixie W. Maluwa-Banda, DipEd, B.Ed, M.Ed.
Lecturer in Educational Psychology and
Ph.D. Candidate, University of Alberta.

CHANCELLOR COLLEGE
Educational Foundations Department
P. O. Box 280, Zomba, Malawi.
Tel: (265) 522 222
Fax: (265) 522 046

1st September 1998

The Headmaster/Headmistress

_____
_____
_____

Dear Sir/Madam,

Request for School's Participation in Focus Group Discussion

Project Title: ***A Study of Secondary School Students' AIDS-Related Knowledge, Beliefs and Attitudes***

I would like to begin by expressing my profound gratitude and deep appreciation to you and your students for the support given to me while I was administering my doctoral research questionnaire at your school in the first phase of the project. Now the project has entered the second phase of data collection. Accordingly, I write to request for the participation of your school again. I plan to visit your school on (day), (date) 1998 at 8.00 am to conduct focus group discussion with few students.

"A focus group is a group of people with similar backgrounds brought together to talk about a specific topic of interest under the guidance of a moderator. The moderator facilitates discussion among the participants while keeping them on the topic. The moderator encourages participants to express their perceptions and opinions using two strategies: posing open-ended questions and letting people respond to ideas expressed by other group members" (Aboud, 1998, p. 35).

Your school being co-education, there will be two focus groups, one for boys and the other for girls. Each group will be comprised of eight to ten students who have the ability to articulate their ideas in either Chichewa or English. Each session is expected to last for about one hour and will be tape-recorded.

Thank you in advance for your support and when I am done with the project you will get a copy of the results of this study.

Yours Sincerely,

Dixie W. Maluwa-Banda