HIV/AIDS KNOWLEDGE, ATTITUDES AND RISKY SEXUAL BEHAVIOURS OF COLLEGE STUDENTS AT NAZARENE TEACHER TRAINING COLLEGE IN SWAZILAND: A DESCRIPTIVE STUDY.

By

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A mini-thesis submitted to the Faculty of Community and Health Sciences of the University of the Western Cape in partial fulfillment of the requirements for the degree of Masters in Human Ecology.

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KEYWORDS

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Knowledge

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College students

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Self-esteem

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Self-efficacy

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ABSTRACT

The sub-Saharan region accounts for 62% of the world's young people living with AIDS. While the spread of HIV/AIDS is stabilizing in other countries, in Swaziland, it is still rampant. As a developing country, we need to overcome some of the problems that counteract development, such as illness. The spread of HIV is one of the setbacks in life that hinders the progress of the youth. College students, who are prospective teachers, tend to be a vulnerable group because of being in the stage of development, which is marked by increased sexual activity and thinking that they are immune to misfortunes. It is necessary to determine the amount of knowledge, the attitudes toward the disease, and the extent of risky sexual practices of the college students as they are considered to be the key players in teaching the younger population in schools.

The aim of the study was to describe the knowledge and attitudes of college students of the Manzini Nazarene Teacher Training College with regard to HIV/AIDS. The aim is to identify risky sexual practices of the college students as well, which may require redress in order to enhance their effectiveness in combating the spread of HIV. According to the literature, knowledge is important to facilitate cognitive processing of information. For college students, to have optimum knowledge is essential in order to clarify myths and misconceptions that pupils might have and to develop confidence in communicating HIV information. The attitude social model is based on the conception that what people think, feel and believe affects their intention to behave in a certain way. What they think, in turn, is a function of the knowledge and attitude that they hold.

Method: A descriptive study utilizing a quantitative research method was employed. Quantitative data was collected from a convenient sample comprised of college students in their third year of study. A self-administered questionnaire was used to collect data on the knowledge, attitudes, and risky sexual behaviours of the college students. The responses were coded and analyzed using SPSS® and Excel® computer statistical packages. The findings were tabulated and graphically presented.

The results recognized gaps, doubts or lack of confidence in the knowledge of HIV/AIDS of the college students. Their attitudes were fatalistic and in denial of the risk of infection, with negative attitudes displayed towards people living with AIDS. Most of the students displayed fear in communicating HIV issues. Attitudes towards condom use were negative, possibly due to religious orientation, and those who used condoms were inconsistent. Their self-esteem rated very low, leading to uncertainty on their perceived risk of contracting the virus. Though most had adopted abstinence and monogamous relationships, there were pockets of high-risk sexual behaviours displayed by a minority.

Recommendations: There is a need for intervention to address the gaps and misconceptions that the college students have with regard to knowledge about HIV/AIDS. Intervention planners need to address knowledge on the life-cycle of the virus so that students know that the virus cannot be identified immediately after infection, the fears that cause students to lack confidence, negative attitudes towards condoms, VCT and people living with AIDS. The self-esteem of the students needs to be enhanced in order to initiate protective behaviours against HIV. The college needs to produce teachers who are knowledgeable, confident and have positive attitudes towards the disease.

DECLARATION

I declare that HIV/AIDS knowledge, attitudes, and risky sexual behaviours of college students at Nazarene Teacher Training College in Swaziland is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Signed……

NOMCEBO BARBARA SIMELANE DATE: November 2005

DEDICATION

This mini-thesis is dedicated to my late parents Mr. and Mrs. F.W. Ndlangamandla, without their efforts I would not be where I am.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Anti retroviral
ASE	Attitude Social influence Model
FLAS	Family Life Association of Swaziland
HBM	Health Belief Model
HIV	Human Immuno Deficiency Virus
HRW	Human Rights Watch
KAP	Knowledge Attitude and Practice
MOE	Ministry of Education
MOHSW	Ministry of Health and Social Welfare
PLWA	People Living With AIDS
NERCHA	National Emergency Response Committee on HIV/AIDS
RCAP	Rural Centre for AIDS/STIs Programme
SCT	Social Cognitive Theory
SHAPE	Schools Health And Population Education
SNAP	Swaziland National AIDS Programme
STI	Sexually Transmitted Infections
TRA	Theory of Reasoned Action
UNAIDS	United Nations Programme on HIV/AIDS
UWC	University of the Western Cape
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

CHAPTER 1: INTRODUCTION

1.1 Background

The HIV/AIDS pandemic is a problem that has extended beyond the Ministry of Health to have a profound impact on other ministries such as that of the Ministry of Education in affected countries. It is part of the problems that counteract development and need to be addressed. HIV/AIDS is one of the prevalent setbacks in life that hinders progress for the youth (Norton & Dawson, 2000). Among the most vulnerable groups to infection are the youth who are in schools and tertiary institutions. This study is concerned with college students who are part of the youth. Their developmental stage and the role they are expected to play require that they are knowledgeable about HIV/AIDS. Most of the interventions have targeted school pupils; there is scant information about how this problem is understood by college students in Swaziland.

The number of people infected with HIV/AIDS continues to rise globally. The year 2003 recorded the number of newly infected HIV cases to be 4.8 million people, and 2.9 million had died of the disease (UNAIDS, 2004: 23). Across the globe, 38 million people are living with HIV (Nunn, Baggaley, Melby & Thomas, 2004). Currently, six million people are living with HIV/AIDS in developing countries (Nunn, et al., 2004). The same report states that 14,000 people are infected each day, nearly 2,000 under the age of 15 years; 8, 500 die each day of HIV, with about 1,600 being children; and more than 6,000 children are orphaned by AIDS each day. According to UNAIDS (2004), youths less than 25 years old constitute more than 50% of the world's HIV population, and the ages 15-25 years have been cited as accounting for more than half of all new cases of HIV.

AIDS is the most infectious disease to hit Africa in recorded history. The continent of Africa holds approximately 70% of the global total of people living with HIV (Saloner, 2002). In many African countries, HIV is spreading throughout the general population rather than being confined to populations at high risk, such as sex workers, men who have sex with other men and injection drug users (UNAIDS, 2004). The frightening feature of the pandemic is that, currently, treatment is not affordable or even accessible in developing countries, most of which, are in Africa. While the spread of infection seems to be stabilizing in some African countries, such as Uganda, it is still on the increase in countries like Swaziland (Kelly, 2000). The sub-Saharan African region accounts for 62% of the world's young people living with AIDS (UNAIDS, 2003). About 90-95% of people living with AIDS in sub-Saharan Africa do not know that they are infected, and access to counselling and testing is often limited (Nunn, et al., 2004).

The 15th International AIDS Conference (2004) was held in Bangkok, Thailand. The conference focused international attention on the latest developments in the fight against the AIDS pandemic. Nunn, et al. (2004) reported that the World Health Organization (WHO) hopes to treat 3 million people with antiretroviral drugs by 2005, known as '3 by 5'. This would help to prolong the lives of the most productive generations, and it would allow parents to survive long enough to put their children through school. The hope given at this conference is that most people living with HIV will have access to the drugs. However, Nunn, et al. (2004) argues that drugs alone are not enough; community organizations and networks must provide drug recipients with backup and prevention programmes must not be neglected in favour of drugs because even the most aggressive

treatment will not be able to keep pace with the number of people who need treatment. The WHO also aimed at changing the attitudes toward HIV testing by arguing for the 'right to know'; promoting the notion that access to treatment is a human right that can be obtained through HIV testing. This it will do by fighting the stigma through increasing options after a positive test. That will be done through increasing access to ART and healthcare, which will then make more people learn about their status and seek appropriate cures and support, at the same time protecting themselves and their families. Prevention remains the best way to save lives and the most cost-effective way of dealing with HIV. Comprehensive HIV education and prevention programmes must continue to be key elements of all countries' efforts to fight the epidemic.

1.1.1 HIV/AIDS prevalence in Swaziland.

The first HIV infection was reported in 1986 in Swaziland; since then, the epidemic has continued to increase. The country has been reported to have an oversize AIDS problem (African crisis, 2003). The situation has been described as having assumed devastating proportions. The prevalence of HIV infection, as observed by antenatal attendants, has risen from 3.9% in 1992 to 38.6% in 2004 (Ministry of Health & Social Welfare (MOHSW), 2002: 23; National Emergency Response Committee on HIV/AIDS (NERCHA), 2003: 6) and 42.6% in 2005 (UNICEF, 2005). The estimated number of people living with HIV is 220,000; approximately 65,000 children have lost one or both parents as a direct result of AIDS; and 60% of hospital admissions are due to HIV-related illnesses. The age group 20-29 years has recorded the highest HIV prevalence rate in Swaziland at 46.6% (Whiteside, Hickey, Ngcobo & Tomlinson, 2003: 15), which is

above the country's rate. The slogan adopted nationwide goes, *`I AIDS yindzaba yetfu sonkhe'*, loosely translated to mean, "AIDS is our collective concern". The campaign to raise awareness of the disease has spread its tentacles beyond the Ministry of Health, echoing the fact that it is everybody's concern.

As in the rest of Southern Africa, the chief HIV/AIDS transmission vehicle among adolescents in Swaziland has been identified as being heterosexual activity (Nunn, et al., 2004; UNAIDS, 2004: 93; Schools Health and Population Education (SHAPE), 2003: 3; Akande, 2001: 237). In a study conducted by the Family Life Association of Swaziland (FLAS) and UNICEF, 45% of youth self-reported being sexually active and 70% felt that their friends were sexually active (Whiteside, et al, 2003). Halting the epidemic is stymied by conservative religious and traditional beliefs against condom use, alongside social acceptance of multiple partners in both monogamous and traditional polygamous relationships (USAID, 2004). In the absence of a cure, the campaign is to curb the transmission of HIV by promoting the prevention of infection by those not yet infected. One way of curbing the transmission is by education and communication of accurate information about the modes of transmission (Kirby, 2002; Geballe, Guendel & Andimen, 1995; Norton & Dawson, 2000). The college students are viewed as a potential vehicle for communicating such information, nurturing and empowering learners to resist the scourge, as they will be deployed throughout the country.

1.1.2 National Response to HIV/AIDS

Swaziland implemented a national AIDS program in 1987, which included a variety of activities aimed at controlling AIDS that were undertaken by the government, non-governmental organizations and the business sector (USAID, 2004). A national HIV/AIDS policy was developed and approved by parliament in 1998. In 1999, His Majesty King Mswati III declared HIV/AIDS a national disaster and established an HIV/AIDS cabinet committee and a multisectoral HIV/AIDS crisis management and technical committee under the Deputy Prime Minister's office (NERCHA, 2003). As part of the national response, the Swaziland government established the National Emergency Response Committee on HIV/AIDS (NERCHA) in 2001, which was mandated to ensure that the strategic plan is implemented and coordinated in an effective manner (NERCHA, 2003). Swaziland's efforts to assuage the effects of the HIV/AIDS epidemic are contained in a national HIV/AIDS strategic plan for the period 2000-2005. It contains a framework for a multisectoral national response that addresses three areas of concern: risk reduction, risk management and impact mitigation.

1. 1. 3 Contextualising the study

The role of teacher training colleges.

Teacher training in any subject is important but even more important where concern is related to reproductive health and HIV/AIDS. (James-Traore, Finger, Ruland & Savariaud, 2004) argues that school based programs, especially primary education, are a logical place to reach young people. Teachers are a valuable link in providing valuable information about HIV/AIDS to youth.

Teacher training colleges have the duty to train teachers who are going to be mentors to the young generations. According to Ngidi and Sibaya (2003), teachers should be facilitators in all their relationships, urging their personal growth and taking charge of others with an extraordinary enthusiasm and confidence. "Student teachers should be molded to be role-directive, but commanding without seeming to do so, that is, not by explicit orders but by kindling in their students their own passion for self-exploration and development" (Walker, 2000). Teachers should be masters of the art of positive expectation and communicate their belief in such a glowing manner that they will induce action in others. Teacher training institutions have the duty to provide current theoretical and pedagogical knowledge necessary for students' preparation in the field; however, they often overlook the human element integral to teaching, such as interpersonal skills, friendliness, positive attitude, listening, compassion, caring and empathy (Hagreaves, 2001). Hagreaves called for teachers to teach beyond the subject matter, in accord with Grant and Murray (2002). Effective teachers do not only have a certificate proving they have mastered content knowledge in their field but also possess something more intangible, social insight about their students. College students should be trained to posses these qualities if they are to be effective in HIV/AIDS prevention. However, Coombe (2003) noted that most colleges have not started thinking about training teachers of the kind needed for HIV education and sexuality education and are not doing research in support of the government or even their own institutions.

The main focal point in HIV/AIDS prevention, globally, is the youth; they are the windows of hope for turning the tide (UNAIDS, 2004: 93; McDevitte & Omrod, 2002:

17). In Swaziland, 86% of the youth are in schools, and, being an easily accessible population, they should be reached with accurate HIV information (SHAPE, 2000: 3). Schools can play a vital role in the prevention of HIV/AIDS and can act as immediate sources of information to children from HIV-affected families. In an era of HIV, teachers play a more critical role of being a source of accurate information and as a person with whom young people can raise sensitive and complicated issues about sexuality. The role of teachers as critical players in the provision of HIV/AIDS information targeting positive behaviour change to young people within the education system can never be over-emphasized. Secondary school students felt that sex education started too late and felt that they needed to hear about it, including HIV/AIDS, at a much younger age (MOHSW, 2002: 34; Ministry of Education (MOE), 1999: ES6). Primary school teachers can be of great importance in this kind of service as they are exposed to the children at a tender age when learning can take place.

The education system in Swaziland is divided into schools and tertiary institutions. Primary education spans a seven-year period. Secondary education runs for a period of three years and senior secondary is two years. Most schools are government-owned, with a few owned by missionaries. Private schools who have obtained permission are run parallel to government-owned schools. The enrolment of pupils in schools is on the decline and one of the major reasons is the loss of parents due to AIDS. Pupils are not able to meet the demands of their education and therefore drop out. One of the institutions responsible for training teachers in Swaziland is the Manzini Nazarene Teacher Training College.

There are few colleges in the country and these, therefore, do not cope with the demand; hence, most students have to wait for a number of years before they can attain admittance. This is reflected in the ages of the students who are enrolled in the college. The curriculum in this college includes Education, Languages (Siswati & English), Science (Mathematics, Physics, Chemistry and Biology), Social Sciences (Geography, History & Religious Education), Applied Sciences (Home Economics & Agriculture), Music, Physical Education and Practical Arts. The HIV/AIDS component is integrated into the Science and Home Economics components of the curriculum. The Science Department covers characteristics, biological causes and mode of transmission, treatment of HIV/AIDS and voluntary testing and counseling in the biology component. Home Economics covers the same topics under the family life education component of the syllabus, including the effects of the disease on the social life of the family members. Because it may be seen as duplication, students who do natural sciences do not take applied science at their third level of study. This means that there is a possibility of students going through the college without being oriented to the subject of HIV/AIDS, depending on when these topics have been covered and their choice of specialization.

Manzini Nazarene Teacher College is a mission-owned college with a strong Christian background. Students attend compulsory daily religious sessions and various non-compulsory religious sessions.

1.2 Rationale of the study

While efforts are being made to workshop pupils and teachers in the field with regard to HIV/AIDS, student teachers are lagging behind. The student teachers are prospective teachers for primary school education, where the education on HIV/AIDS should be concentrated. Children in primary schools are at a stage where they have receptive minds and easily gain a sense of what is expected of them (McDevitte & Omrod, 2002:17). These college students are vulnerable to HIV infection because they live away from their homes of origin, which may expose them to conditions that favour HIV transmission (Nowkoji & Ajuwon, 2004). The population of student teachers as targeted in this study is predominantly women, who are the most vulnerable group to HIV infection (Booth, 2004). The developmental stage of college students, with its liberal sexual activity, also contributes to their vulnerability. These students must be equipped with accurate information and must have positive attitudes in order to handle children who come from families stressed by HIV/AIDS. Equipping them with skills while at college will conserve time and money for training them through workshops when they are deployed to different schools. The knowledge, attitudes and risky behaviour of the college students are not known. There appear to be no studies done among college students with regard to HIV/AIDS knowledge, attitudes and sexual practices in Swaziland and hence the need to conduct this study.

1.3 Significance of the study

The study will help to reveal the knowledge of HIV/AIDS of the college students and their attitudes toward HIV/AIDS. The risky sexual practices of the student teachers will

be identified and, consequently, the educational needs of the college students will be better understood. The survey will assist programme planners for HIV/AIDS intervention campaigns in directing their training towards gaps identified by the study. It will also help curriculum designers for the college to understand which aspects of HIV/AIDS need to be emphasized in the syllabus and will create awareness to SHAPE as to what factors may be driving the pandemic in this group. This will ensure that when student teachers graduate from the college they are equipped with accurate information and have a comfort zone to discuss HIV/AIDS-related issues with their pupils.

1.4 Problem statement

The purpose of this study is to examine and describe the knowledge, attitudes and risky sexual behaviours of college students with regard to HIV/AIDS in Swaziland.

Sub-problems

1. What knowledge do college students have in relation to HIV/AIDS?
2. What are the attitudes of college students toward HIV/AIDS and towards people living with AIDS?
3. What risky sexual behaviours do student teachers engage in with regard to HIV/AIDS?

1.5 Operational definitions

College student: Denotes a student who has enrolled for a Primary Teacher's Diploma programme in the Nazarene Teacher Training College.

Attitude: An emotive orientation involving feelings when in close proximity to someone with AIDS; morals and judgments about AIDS infection, empathy and acceptance.

Knowledge: Means the understanding of the causes, transmission, treatment and prevention of HIV/AIDS and the information that an individual holds.

Practicing teacher: Denotes a teacher who is qualified and is teaching.

Student: Denotes a primary or secondary school pupil of the age range 6-20 years.

High-risk behaviour: Engagement in one or more of the following: alcohol abuse, unprotected sex, multiple sex partners, drug abuse, early sex debut, casual sex, sex with an unknown person and sex with someone in the high-risk group.

High-risk partner: Defined as a partner who engages in one or more of the following: men who have sex with other men, injection drug users and/or HIV-infected person, and alcohol abusers.

Casual sex: Any sex that is not part of a long-term or committed relationship.

Sex pool: The proportion of sexually active people in that age group.

1.6 Assumption

This study is based on the assumption that all the participants have acquired some HIV/AIDS information, formally or informally. The assumption is based on the fact that participants are college students and being at tertiary level of education must have had some education on HIV/AIDS, either in school or from media.

1.7 Inclusion criteria

The study was limited to students enrolled in the academic year August 2004-June 2005. It involved only third-year students (final year) who have gained most of the information that they will need when they go out to teach. Thus, results cannot be generalized with other population groups.

1.8 Chapter summary

The chapter depicts HIV as an issue of global concern, with regional, cohort and gender biases. Special emphasis is on the African region, with women and the youth being the most infected groups. College students falling into these categories are vulnerable and yet they are to be the instruments in the prevention of HIV transmission among primary pupils. The knowledge, attitudes and sexual practices of the college students were captured so that planning of HIV/AIDS intervention can be tailored toward gaps identified by the study.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter will provide an exploration of the theories that have been used to study knowledge, attitudes and sexual behaviours by different scholars in the study of HIV/AIDS. The main concepts in the study will be discussed which will include HIV/AIDS, college students, knowledge, attitudes and factors that influence risky sexual behaviours. Possible intervention programmes that have been recommended will be considered, forming a departure point in this study.

2.1 Theory and lifestyle review

AIDS has developed into the most deadly disease of the time, one without a cure presently. The infection was first associated with homosexual people but is now common among heterosexuals. It can be passed on from one infected person to another through unprotected sex, pregnancy and breastfeeding and from being in contact with infected blood through an open wound. In the plight of having no cure and the rate at which it is spreading, emphasis is currently on prevention of the spread of infection (Norton & Dawson, 2000). Prevention thus involves an education component and for this reason research has been concentrated on curbing HIV infection through education of potential high-risk groups. The assumption is that knowledge should lead to a significant change in the sexual behaviour and practices of the sexually active population. Previous studies have therefore followed a process of assessing knowledge regarding HIV/AIDS, attitudes of people towards HIV/AIDS and AIDS victims as well as sexual behaviour of various groups. Information required for the development of educational programmes has thus

been established in this manner. Such research is referred to as the knowledge, attitudes and practices (KAP). The next section shall explore some of the theories that have been used in HIV/AIDS research by various scholars within the KAP model.

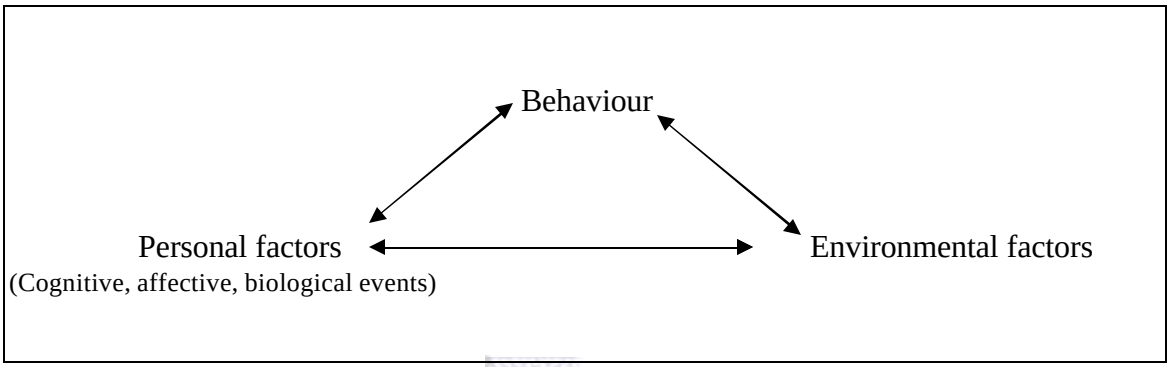
This study adopted a conceptual framework of the Knowledge, Attitude, and Practice approach (KAP) by Joffe (1996). This approach assumes that changes in knowledge levels and attitudes, leads to behaviour changes. It states that an individual's HIV/AIDS knowledge, attitudes, subjective norms and present practices determine and predicts one's AIDS-related behavioural decision and outcomes. The underlying assumption in this approach is that health-related behaviours are the results of individual, rational, conscious and consistent decision-making process. KAP has informed several theoretical models about health-related behaviours, especially those in the social and psychological dynamics of AIDS transmission (Gabusa, 2001). These include the health belief model (Fisher & Fisher, 1992), social cognitive theory, theory of reasoned action (Gabusa, 2001), theory of planned behaviour and information-motivation behavioural skills model (RCAP, 2003), theory of personal investment, AIDS risk reduction model and multi-component stage model (RCAP, 2003). The most commonly used theories include the social cognitive theory (Bandura, 1986), the health belief model, (Rosenstock, Strecher & Becker, 1994) and the theory of reasoned action (Ajzen & Fishbein, 1980).

2.1.1 The Social Cognitive Theory. (SCT)

This theory views people as self-organizing, proactive, self-reflecting and self regulating organisms, shaped by environmental forces or driven by concealed inner impulses

(Bandura, 2001). This theoretical perspective considers human functioning as being the product of a dynamic interplay of personal, behavioural, and environmental influences. How people interpret the results of their own behaviour informs and alters their environments and the personal factors they possess which, in turn, inform and alter subsequent behaviour.

The social cognitive theory model



In general the SCT describes the person's rational evaluation of alternatives and focuses on people's cognitive processes. People pose self-beliefs that enable them to exercise a measure of control over their thoughts, feelings and actions. "What people think, believe and feel affects how they behave" (Bandura, 1986; 25). Bandura provided a human behaviour in which the belief that people hold about themselves is a critical element in the exercise of control.

According to this theory people learn not only from their experiences but also by observing the behaviour of others. This observational learning permits individuals to learn a novel behaviour without undergoing the trial and error process of performing it.

The SCT model for decreasing risk-reduction behaviour includes two central components, perceived self-efficacy and outcome expectancies (Semple, et al., 1999).

According to HIV Quest (2005) self-efficacy denotes the confidence an individual holds about performing a specific behaviour, including confidence to overcome barriers to performing the behaviour. Self-efficacy beliefs can enhance human accomplishment and well-being in many ways. It influences choices people make and the courses of action they pursue. This implies that people select activities in which they feel competent and confident and avoid those they do not feel so competent about. Individuals who may have tried in the past and failed are likely to perceive themselves as having a low self-efficacy (Bandura, 1997). Self-efficacy determines how much effort a person will expend on an activity and how long they will persevere when confronting obstacles (Pajares, 2002). Bandura (2001) argue that perception of self-efficacy may be specific to a task or generalized to many aspects of a person's life, but it is based on experience and is believed to be modifiable. Perceptions of self-efficacy may be relatively low because the situations involved are not familiar to the people (Bandura, 1986). Information about the dangers of HIV/AIDS infection may create fear or alarm, and such emotional arousal can contribute to doubts about self-efficacy under some conditions.

Outcome expectancies have also been reported to affect HIV risk-associated behaviour (Jemmott & Jemmott, 1992). Negative outcome expectancies about condoms, such as beliefs that they reduce pleasure have been identified to be impacting on condom use as inhibiting factors, in a variety of populations (O'leary, Goodhardt & Boccher, 1992).

Thus, in view of the effects outcome expectancies have on individual's behaviour, the positive outcome expectancy, (the belief that condoms can reduce the risk of sexually transmitted and HIV infection) may be undermined by other beliefs and normative practices in the community resulting in fewer people adopting safer sexual practices.

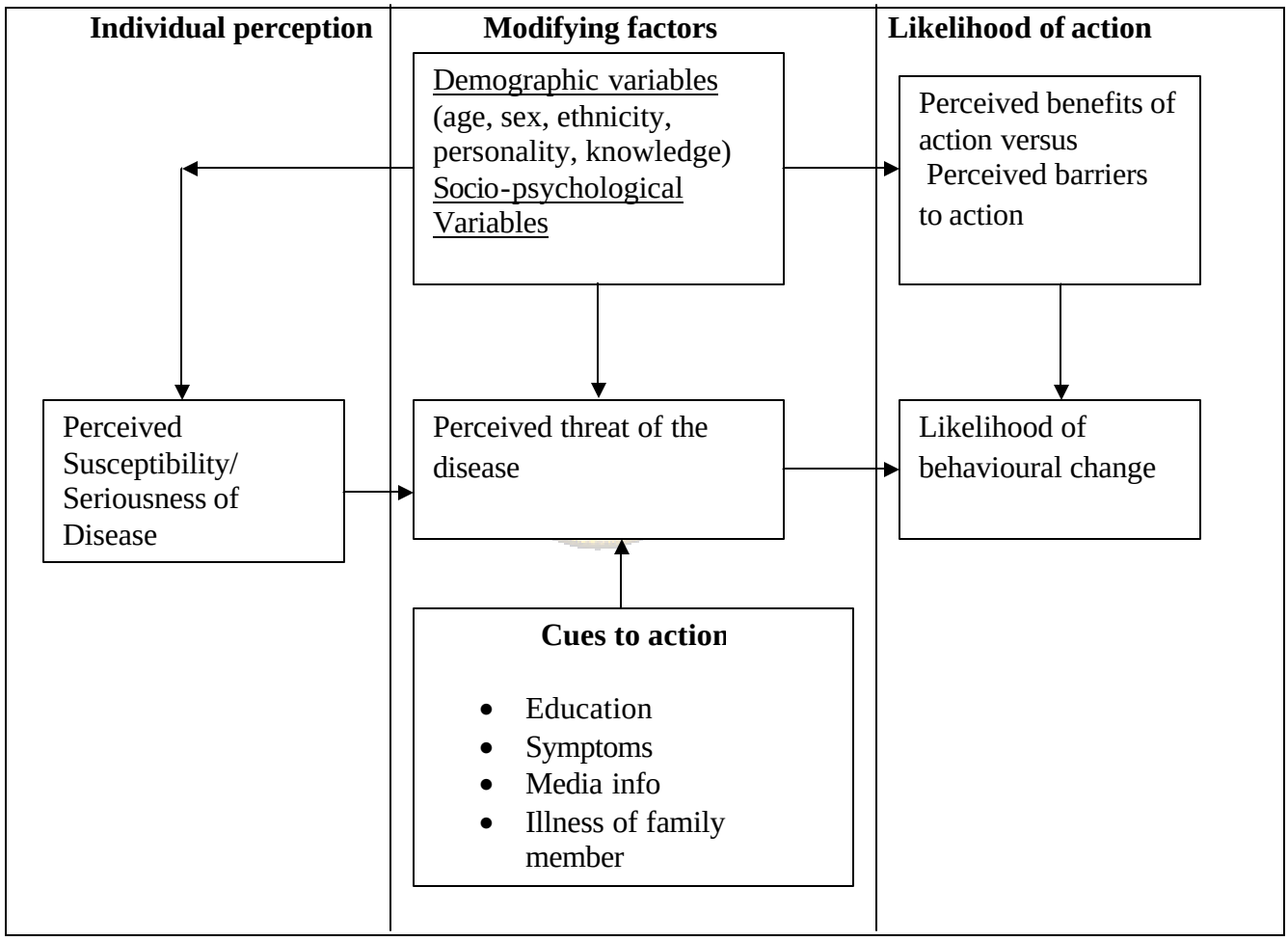
2.1.2 The Health Belief Model (HBM)

This is a psychological model that attempts to explain and predict health behaviours (Rosenstock, Strecher & Becker, 1994). It focuses on the beliefs and attitudes of individuals. It is based on the understanding that a person will take a health related action (use condoms) if that person feels that a negative health condition can be avoided (HIV infection); has a positive expectation that by taking a recommended action, s/he will avoid a negative health condition (using condoms will be effective in preventing HIV) and believes that s/he can successfully take a recommended health action (can use condoms comfortably and with confidence).

The model uses perceived threat and net benefits, which can be spelled out in four constructs: perceived susceptibility, perceived severity, perceived benefits and perceived barriers (Glanz, Rimer, & Lewis, 2002). In the case of HIV, it can be said that a person may get AIDS (perceived susceptibility), believe that the consequences of getting HIV are significant enough to try to avoid (perceived severity), believe that the recommended action of using condoms or abstaining or to be faithful to one partner would protect them from getting AIDS (perceived benefits), identify personal barriers to using the condoms and explore ways to eliminate the barriers (perceived barriers), receive reminders which

act as incentives to stimulate and encourage the individual to change behaviour and finally gains confidence in using the condoms correctly and consistently in all circumstances or abstaining till they are ready for commitment (self-efficacy).

Diagrammatic representation of the Health Belief Model



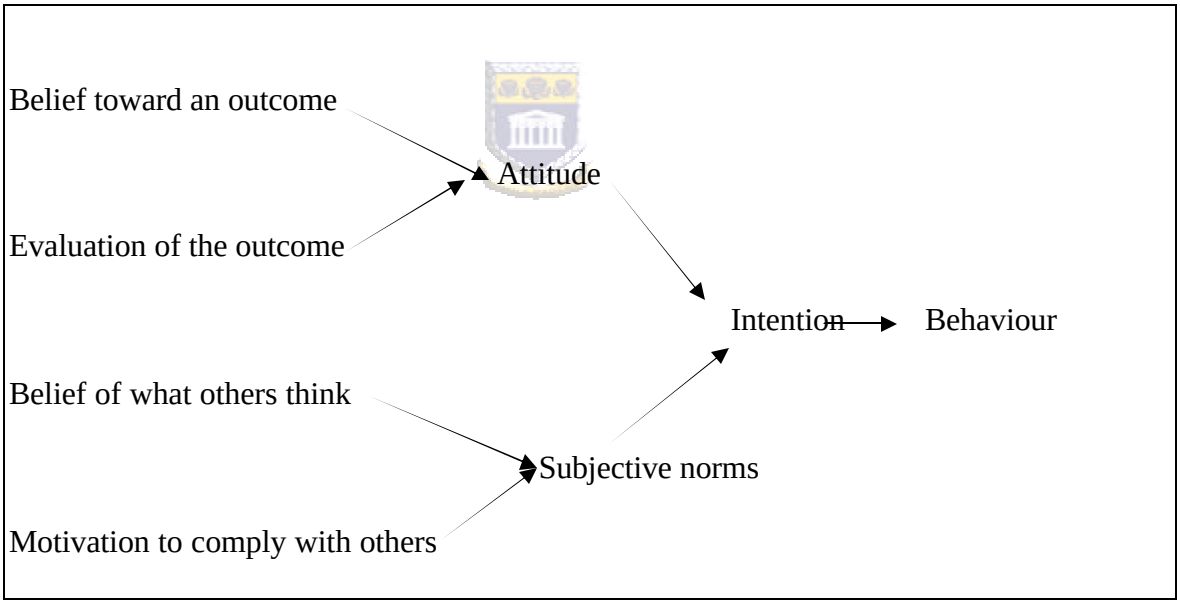
(Ndukwane, 2003)

2.13 Theory of Reasoned Action (TRA)

This theory posits that a person's behaviour is determined by his/her intention to perform the behaviour and that this intention is, in turn, a function of his/her attitude towards the

behaviour and his/her subjective norm (Ajzen & Fishbein, 1980). The TRA holds that the person's intention to act is the immediate predictor of behaviour. Intention can be defined as the individual's motivation to behave in a particular way and indicates how hard the person is willing to try to perform a specific behaviour (Rutter & Quine, 2002; 11). Intension is determined by several factors: the attitude toward the specific behaviour; their subjective norms (belief about what the significant others will think of the behaviour) and motivation to comply with the others; and their perceived behaviour control (people's perception of their ability to perform a given behaviour).

Theory of Reasoned Action framework



Fishbein and Middlestadt (1989) advocated for the use of the TRA for examining how group norms might influence behaviour that put a person at risk of contracting HIV. It is, however, worth noticing that intention alone may or may not lead to a particular

behaviour. Some will initiate behaviours to implement change but some will not go beyond the intent stage (Glanz, et al., 1997). This can be seen where a person realizes that losing weight is important and desires to lose weight but never gets to the act of exercising in order to lose weight.

2.1.4 Critique of the theoretical models

A wide range of criticisms have been leveled at the theories outlined above including the following:

1. Cleary (1987) outlines the weaknesses of the TRA to include: people often act with conscious consideration of the consequences of their actions and yet still act irrationally; the estimation of risk and the efficacy of behaviour as it is perceived subjectively, and by peers, is often very difficult to ascertain; and health behaviours serve many functions and are related to a host of other factors other than health.
2. The HBM in particular fails to consider the issue of variation in individual's ability both to evaluate the potential consequences of behaviours and utilize these evaluations and that it completely ignores age-related influences and therefore underestimates the issue of peer group influence (Vanlandingham, 1995).
3. The components of the HBM and the TRA are too broad and can only capture salient effects, that is, those that are obvious to and can be consciously evaluated by the respondents.

4. The TRA model implies that beliefs about the consequences of the action (or inaction) determine behavioural outcomes, but it would be more useful to have some guidance for predicting what kinds of behaviour could be important. It does not provide much guidance as to which components would be the most important predictors of behaviour.
5. There is also limited evidence that AIDS-related knowledge and attitudes shape AIDS-related sexual practices. KAP has been criticized in the light of research findings that increasing people's knowledge about AIDS does not necessarily bring about positive change in their attitudes towards people with AIDS, and importantly does not result in changes in sexual behaviour (Gokengin, et al. 2003; Akande, 2001; Uwalaka & Matsuo, 2002; Ritieni, et al. 2000; Otaala, 2000). Qualitative research has highlighted some of the impediments to the rational assumptions of the KAP framework, which intervene between knowledge and the ability or willingness to act on such knowledge.
6. These models have been criticized for their individual orientation with emphasis on their assumptions of rational, conscious and consistent decision-making processes, resulting in researchers losing site of the factors that are beyond individuals' control, like emotional factors and survival pressures (Kelly & Kalitchman, 1995). Findings about young people indicate that a large number of them do not plan their sexual initiation and subsequent sexual behaviour (Brooks-Gunn & Furstenburg, 1990). Therefore planned and controlled conditions for safe sex cannot be easily achieved.

7. The TRA model assumes that sexual behaviour is under an individual's conscious control. Sexual behaviour is often not controlled by one individual or one factor only, since there are complex internal and external factors that influence the occurrence of high risk sexual behaviour and impact on an individual's decision-making (Joffe, 1996). It has been documented that sexual behaviours occurs in a variety of contexts and is therefore shaped by many factors other than the cognition and intensions of an individual, such as economic, social, cultural factors especially those related to women's position and access to power in patriarchal societies (Rutter & Quine, 2002; Strebel, 1995).

Despite the criticisms raised against these theories, they have been used as the basis or points of departure for numerous studies. In view of the limitations of these theories, the study will utilize a combination of the theory of reasoned action and Bandura's social cognitive theory, a model known as the Attitude Social influence Model (ASE model) (Akande, 2001). The advantage of this model is that it is about what is known about health beliefs and behaviour generally. The model proposes that intentions and behaviours in health matters can be predicted from health related attitude and values. It further predicts that the combined levels of susceptibility and seriousness provide the energy or force to act, and the perception of benefits provides a preferred path of action, however, a stimulus, in a form of cues to action, is necessary to trigger the decision-making process. In addition, a motivational factor, such as the salience of health and illness for the individual, is postulated such that an individual's positive health behaviour

depend on the value placed by him or her on maintaining a state of health (Akande, 2001). In the case of AIDS it can be hypothesized that safe sexual behaviour, for instance condom use in sex, can be associated with high levels of perceived seriousness of, and perceived susceptibility to AIDS. Thus the fewer the perceived barriers to condom use, and the more the perceived benefits, the more likely it is that individuals will use condoms. The population of interest in this study is college students who are among the most vulnerable groups to HIV infection.

2.2 College students

College life tends to correspond with the time when young people are more independent from their parents than they were as adolescents but have not yet taken on adult role responsibilities. They have the opportunity to engage in experimentation and exploratory activities in various areas that characterize adulthood. Thus young adulthood can be viewed as a period of transition from adolescence to full adulthood. Arnett (2001) defined this transition to adulthood as entering the roles that are typically considered to be part of adulthood: full-time work, marriage, and parenthood. Unfortunately the advent of HIV/AIDS has targeted this group, contradicting Arnett (2001), who viewed the stage as a period with the least susceptibility to physical illnesses and when the immune system is at its most effective and thus considering it as an exceptionally healthy time of life. It is however, a period of greatest susceptibility to a variety of health problems associated with behaviour. Hence the rates of contracting sexually transmitted infections including HIV are highest in the twenties.

2.2.1 Developmental stage

According to Jaffe (1998) understanding and making decisions about relationships and sexual behaviour involves complex cognitive and emotional processes. Noticeable is the potential ability of the emerging adult to think critically. They have the ability to analyse and make judgements from abstract concepts because of the information available in their long-term memory (Arnett, 2001). They also have the ability to consider different kinds of knowledge simultaneously and possess more cognitive strategies for applying or gaining knowledge (McDevitt & Ormrod, 2002). These strategies enable them to think more critically about what they are learning. However, critical thinking cannot develop automatically, it requires a basis of skills and knowledge and an environment that promotes and values critical thinking (Arnett, 2001). It is on the basis of their knowledge and skills that this study is conducted, to identify what knowledge the college students have with regards to HIV/AIDS so as to build an intervention based on the existing knowledge.

Young adults are faced with situations where they have to make decisions competently. These include decisions such as whether to become sexually active or to abstain, to use contraceptives or not to. While studies have shown that young adults are capable of making competent decisions, they still engage in risky behaviours. There are several explanations given for this controversy. Jaffe (1998) stated that young adults are more likely to be affected by psychosocial factors, such as the emotions of the moment, the desire to be accepted by their peers and the desire to fit in with them. Arnett (2001) stated that emerging adults make different evaluations about the desirability of the

different consequences, considering that they are more on the experimenting and exploring of things. McDevitt and Ormrod (2002) attributed it to the presence of the personal fable and the optimistic bias behaviours, which is intense at middle adolescent stage but does not diminish entirely for most people. Weinstein (1998) concurred with McDevitt and Ormrod, that people of all ages exhibit optimistic biases and that it is stronger among adolescents and young adults. Young adults tend to weigh inconveniences too heavy and effectiveness too light (Jaffe, 1998). Research has also shown that people are more likely to engage in a risky behaviour if they believe that negative consequences from risks are more likely to happen to others than to themselves (Arnett, 2001; Weinstein, 1998). These reasons give explanations to why HIV/AIDS is more rampant in this age group. However it must be noted that HIV has a long latency period and tends to be asymptomatic for a long period. This may mean that some of the people who exhibit symptoms at this stage may have contracted the virus in their teens. It can also be argued that not all the statistics on HIV/AIDS can be attributed to the behaviour of the young adults.

2.2.2 Sexuality

Normally, people tend to think that a person is not sexual until s/he starts to have sexual activity. Being sexual can mean having sexy thoughts or feelings, loving to be touched or hugged, enjoying the way other peoples' bodies look, touching your own body in places that feels particularly good, making up romantic stories in your head, feeling very attracted to another person, kissing and caressing someone you like (Bell, 1998) and biological developments (Arnett, 2001). It can refer to many interrelated factors in a

person's life that may get stronger during puberty. Though most of the time we focus on sexual intercourse, due to the problems associated with it, it is only one part of sexuality.

According to Arnett (2001) about 80% of college students in America have had sexual intercourse. The reasons given for the youth to engage in sexual intercourse include: pleasure, opportunity, curiosity, because their friends are doing it, as proof of desirability and popularity, to feel grown up and as a means of defying parental and religious authority. For boys it also serves as a way to establish masculinity (Jaffe, 1998). Most adolescents engage in sex for wrong reasons, as it can be seen, for some as a coping mechanism to express and satisfy non-sexual needs (Hedgepeth & Helmich, 1996) in which case sexual activity meets one partner's needs at the expense of the other. Sexual behaviour during adolescence is viewed as a powerful way of achieving intimacy in romantic relationships. Unfortunately careless sexual activity can alter the course of an adolescent's life. It can set the stage for unwanted pregnancy and sexually transmitted infections such as AIDS.

Young adults today are faced with an array of mixed messages about how to express their sexuality, 'wait, and do not wait'. Confusion about how and when to express their sexual feelings makes it more that young people will seek sexual intimacy before they are emotionally ready. Sex appeal and sexual activity are so glamorized to the point that many young people are embarrassed to admit that they are still virgins. Jaffe (1998) noted that adolescent sexuality take into account family values, socio-economic status, religiosity, peer and media influences, opportunity and importantly the meaning that

adolescents attribute to their biological maturation and bodily sensations. The assumption that a majority of college students are sexually active implies that they are a vulnerable group and factors that influence their vulnerability are of particular interest in this study.

2.2.3 Vulnerability of college students

Studies have shown that the HIV/AIDS epidemic is rampant among the age group 20-29 years in Swaziland, which is the age group for the majority of college students. College student teachers are predominantly females (Belfield, 2005; Grant & Murray, 2002), as the profession tends to attract types of personalities with an ethic of care and nurturance. The anatomy of women, low social status of women (Shisana & Simbayi, 2002), economic dependence on men and power imbalances (Grieser, 2001; le Marcis & Ebrahim-Vally, 2005) renders women the most vulnerable group to HIV infection. These factors affect women's capacity to dictate their sexual lives (Booth, 2004; Ruiz, 2001). The developmental stage marked by a large sex pool in this age group further increase their vulnerability to HIV infection (Otaala, 2000: 41). A large sex pool is associated with a higher rate of HIV transmission. This can be worse if the members of the sex pool believe in poly-partenism, which is the case in most African societies including Swaziland. In affirmation Nyblade (2004) stated that multiple partners are a trend in Swazi history. Gokengin, et al. (2003) found that college students in Turkey were more likely to be sexually active. They are more accepting of casual sex; feel less guilt about sex than at high school and less likely to use condoms (Arnett, 2001; Jaffe, 1998).

Colleges are situated far from homes of origin of students and may not have sufficient accommodation for all the students. Thus college students tend to stay in hostels, rented rooms, homes with families, cohabit with partners or live with relatives. The stage coincides with the time when they are away from their homes of origin, which presents an autonomous opportunity of irresponsible behaviour (Nuwokoji & Ajuwon, 2004; Forrest et al. 1998). This opportunity influences most young people to engage in risky behaviour including unprotected sex.

There is a tendency to want to experiment with sex, drugs and alcohol, which are behaviours that can increase HIV risk factors (Forrest, et al., 1998). Findings have shown that most boys' first sexual encounter is motivated by desire to experiment and experience sex for themselves (Kalipeni, Craddock, Oppong & Gosh, 2004). They tend to be vulnerable to peer pressure. In a study conducted by Mukonda as cited in Otaala (2000), in the Caprivi it was found that 59% of youth who participated in the study were either forced or encouraged by peers to enlist in sex. At this developmental stage they gain psychological independence from their parents and attitudes about sex-related practices become more liberal (Bell, 1998).

The desire to belong to a certain social class exposes young adults to be victims of older partners who will be able to offer financial or material gain (Kalipeni, et al., 2004). This enables them to fulfill their desire to fit in a particular social class. As a result city adolescent women were getting infected faster than men, (Glyn, 2001). This renders the young adults vulnerable and unable to dictate or negotiate safer sex. In view of the

vulnerability of the college students, much effort has to be made to curb the transmission of the virus. Attention must focus on changing behaviours essential to transmission of HIV in this group. Such an endeavour must be based on a thorough understanding of prevailing knowledge, attitudes and practices related to HIV infection in various groups. Among important factors that have been identified in the prevention of infection are the knowledge and attitudes of the target groups.

2.3 Knowledge of HIV/AIDS

Several studies have examined the AIDS knowledge level of adolescents and adults and have found moderate to high levels of knowledge about AIDS across cultures (Biaye, 2004; James-Traore, et al., 2004; Kirby, Lavis & Rolleri, 2005; Uwalaka & Matsuo, 2002; Salati, 2004). Knowledge is accumulated through a learning process, which may include formal or informal instruction, personal experience and sharing of experiences with other people (Cupido, 1998). HIV/AIDS knowledge includes understanding the cause of the disease, how HIV can be transmitted and prevented, the symptoms of the disease, curability, knowing people at risk and policy issues regarding HIV/AIDS (HIV Quest, 2004). It is important for the college students to be well equipped with current facts about the disease as they will be teachers, a group that has been identified to be well positioned to inform and nurture school pupils with regards to HIV/AIDS.

2.3.1 HIV/AIDS knowledge level

Most studies conducted on the knowledge of HIV/AIDS indicate that generally respondents display high levels of HIV/AIDS knowledge (Kalichman & Simbayi, 2003;

Whiteside, et al., 2003) and as noted by Akande (2001), that the most fundamental change over the past decades is that a majority of African youth have become more knowledgeable about HIV/AIDS. Akande further noted that in some areas respondents have shown deficit through reflection in either incorrect responses or uncertainty by responding with 'do not know'. Kalichman & Simbayi (2003) conducted a study in black townships in Cape Town; found that there was evidence of misinformation in the context of high knowledge on HIV/AIDS. The educational levels of respondents also show that primary education makes a remarkable difference in knowledge of HIV/AIDS to those who have no education at all (Shisana & Simbayi, 2002). Whiteside et al. (2003) reported that there were high levels of self-perceived and actual confusion surrounding HIV/AIDS. This study targets college students who are prospective teachers for school children, in which case accurate knowledge about HIV/AIDS is important to counter myths (Nyblade, 2004), to reduce associated fear and anxiety, to change behaviour that puts them at risk and to create a more humane and compassionate response to individuals with the disease.

2.3.2 Knowledge and behaviour change

Traditionally there was an assumption that knowledge would automatically lead to behaviour change, but this assumption has proved to be a misconception as studies have indicated that in the HIV scenario, knowledge alone does not automatically translate into appropriate modifications in sexual behaviour (Akande, 2001; Biaye, 2004; Shisana and Simbayi, 2002; UNAIDS, 2004; Gokengin, et al., 2003; Uwalaka & Matsuo, 2002; Ritieni, et al., 2000; Otaala, 2000; James-Traore et al., 2004; Van Wyk & Tshivase,

2005). These findings do not suggest that knowledge of HIV is insignificant. Knowledge was found to be vital in the cognitive processing of information in the attitude-behaviour relationship by Rural Centre for AIDS/STD Prevention (RCAP) (2003). According to Shisana & Simbayi (2002, 88), better knowledge of HIV/AIDS had a positive relationship on both the prevention behaviour and the attitude toward people living with AIDS. UNAIDS (2004) noted that information is critical to helping people gain an accurate understanding of HIV transmission and prevention which are first steps towards reducing the risk. Lack of knowledge influenced condom usage in Peltzer (2003), where people indicated that it was useless to use condoms if both parties were infected. It therefore follows that information about HIV/AIDS is vital because assimilation requires knowledge about the subject of interest in any steps of the intervention to be undertaken.

Though most groups seem to have adequate information about HIV/AIDS, there is consensus on the existence of misconceptions on the origins and transmission of HIV. This leads to failure of perceiving susceptibility to HIV infection (Volk & Koopman. 2001; MOE, 1999). Swazis in general are people with a very strong cultural identity and therefore most cannot shake off their belief of disease causations such as an act of being poisoned by a neighbour. These cultural myths may interfere with perception of susceptibility and knowledge on HIV/AIDS. Knowledge is then a prerequisite in the prevention strategy of HIV to counteract myths and misconceptions (Kirby, et al., 2005) though alone it cannot guarantee behaviour change. A survey on knowledge and attitude

of HIV/AIDS of the target group is useful in understanding the group's response to HIV/AIDS and to help guide prevention programmes.

2.3.3 Factors that influence knowledge

Theories of learning have many concepts in common such as personalization, susceptibility, efficacy, social norms and skills. These concepts are important as they determine acquisition, retention and usage of knowledge, especially knowledge that pertains to HIV/AIDS. Discussed briefly below are some of the concepts that influence one's knowledge:

Personalization

In order for information to be converted to knowledge learners must see the relevance in the material and believe it holds meaning for them personally. In HIV, relevance is a requirement (Hedgepeth & Helmich, 1996) to help personalization. The information must connect with real-life issues; they must see something of themselves and relate it to their lives as Otaala (2000) argues that knowledge is only useful if it relates to the perceived problem. According to Rutter and Quine (2002) the more a person believes an event to be, the more likely s/he will believe that its probability to him/her is greater than average. Educators must try to develop activities that will help learners see relevance in topics they think students view them as not being important to their lives.

Susceptibility

Many people deny their susceptibility to health consequences, especially young adults who are notorious for believing themselves to be invulnerable (Rutter & Quine, 2002). There is a general understanding that misfortune will happen to others. Ordirile (2000) in Botswana found that undergraduate students recognized the severity of AIDS but believed their own risk was low. Ordirile also noted that the extent to which one holds an image of someone in the final stages of AIDS served a powerful lesson to AIDS understanding, which concurred with Rutter and Quine (2002) who noted that the more one has a personal experience of a negative event the more s/he perceives the future probability for him/her to be greater than average. People grasp knowledge if they realize that they are at risk and need the information.

Efficacy

Even if young people may believe themselves susceptible to health consequences, they still may not trust the effectiveness of certain behaviours or products recommended to lower their risk. Young adults gain knowledge by observing others performing successfully; or by self-practice in role-plays; and by experiential learning exercises (Hedgepeth & Helmich, 1996). Through these methods they will gain trust in the effectiveness of the object (condom) or behaviour and want to know more about it. Young adults are caught in the middle of political and cultural controversy that undermines their trust in condom efficacy. Opposition groups engage in disinformation campaign about condom effectiveness and safer sex practices, in an attempt to discourage sexual activity outside monogamous, lawful marriages. This tends to cloud the

acquisition, retention, and usage of knowledge on the effectiveness of condoms in the prevention of AIDS.

Social norms

These are expected modes of acting and behaving by virtue of membership in a certain social group in order to gain or maintain approval or status. By belonging to a group a person willingly learns from what members do or say. If the discourses of a group can be changed to influence others positively, the individuals can acquire positive information from the peers (Arnett, 2001). Peers can also be used to present a structured educational programme and to serve as positive role models in postponing sexual involvement.

Sources of information

The credibility of the source of information is as important as the information to be learned. This is so because the educator influences a number of factors that impinges on or supports knowledge acquisition, such as the learning atmosphere, the manner in which information is presented, the attitude of the educator towards the subject, the comfort level of the educator (James-Traore, 2004) and the knowledge possessed by the educator (Hedgepeth & Helmich, 1996). Media reinforce peer pressure norms 'to just do it', while social stigma for sexual consequences no longer exist, coupled with decline in adult supervision of youth.

2.3.4 Knowledge of HIV/AIDS Policy

An HIV/AIDS policy denotes an institutional declaration of the acknowledgement of the seriousness of the HIV/AIDS epidemic as life threatening and that the disease will have an impact on the institution. It reflects the intent of the institution to protect its students and employees' human rights and dignity; to avoid discrimination and stigmatisation; and to prevent those infected from acquiring it (Lawrence, 2002). Lawrence states that in the University of Zambia Copper belt the policy assured students of how they will be treated in the institution if they are positive. A policy reflects commitment of the institution on what measures it will take to warrant the protection. It enables the management to respond appropriately in the event of; a student reporting that s/he is HIV positive; rumours that a student or employee is HIV positive or students refusing to work with a student who is HIV positive.

Policy helps to encourage disclosure of HIV positive students without fear of victimization or prejudice (HIV quest, 2004). Students become aware of the position of the college on confidentiality and will be encouraged to disclose their status so that they are eligible to the support they need. Having a policy assists in preparing students psychologically on how to work with HIV positive people either infected or affected. In the case of Swaziland, the policy will also help support the National policy on HIV/AIDS issued 2001 (Zungu-Dirwayi, Shisana, Udjo, Mosala & Seager, 2004). According to Coombe (2003), a clear curriculum statement on empowering students on HIV/AIDS-awareness, HIV-competencies, and HIV-safety must be part of higher education institutions. Coombe states that the HIV ethos must pervade and permeate the institution

and that teachers trained in an institute that is a change agent, will be change agents themselves. Every institution has a role to play in the HIV/AIDS crisis and it can be known through its policy statement. If the HIV/AIDS pandemic is as big a crisis as it portends, then teacher-training colleges must give it top priority.

2.4 Attitudes toward HIV/AIDS

Attitudes towards AIDS and those persons with AIDS may help to predict behaviour change (Uwalaka & Matsou, 2004). However, existing literature is inconclusive. The attitudes of the general public towards people with HIV/AIDS are mostly negative (Salati, 2004), because of the stigma associated with the epidemic. The disease is associated with groups of people such as prostitutes and homosexuals who already carry a stigma.

An attitude denotes a relatively stable, mainly learned tendency in an individual towards a certain object or concept (Deetlefs, et al., 2003). It involves evaluative concepts associated with the way people think, feel, and behave and it comprises a cognitive, emotional and a behavioural component, (Baron & Byrne, 2000). Rutter and Quine (2003) stated that attitudes influence one's intention to perform behaviour. Attitudes are about what you know, how you feel and what you do. Normally an individual's attitude will be favourable towards a given behaviour if s/he believes that the performance of that behaviour will lead to mostly a positive outcome (Ajzen, 2002). In the context of HIV/AIDS it can be argued that people hold certain knowledge and beliefs, they then experience feelings towards HIV, which then influences their behaviour. Attitudes are

correlated with behaviour; for instance if a person holds a positive attitude towards condoms they are more likely to use them. According to Keller (1998) an attitude is important to establish a comfort zone about a phenomenon. A zone described as being familiar and comfortable to perform, without being nervous about the phenomenon under discussion. According to Keller, stepping out of one's comfort zone causes fear and anxiety. The attitude of college students is important, as it will determine if as teachers they will be comfortable to discuss HIV issues or even handle AIDS victims.

Research has indicated that provision of information about HIV/AIDS does not help people to alter their behaviours (Plusnews, 2003) but the TRA and the theory of planned behaviour (Ajzen, 2002) have shown the importance of attitude in performing a behaviour. College students are in the process of acquiring knowledge and forming attitudes. Theories of behaviour change such as the HBM and the TRA contends that knowledge, attitudes and beliefs are a prerequisite for any significant behaviour change to take place (Simbayi, 1999). Peltzer (2003) found that knowledge about HIV was associated with more supportive attitudes toward people with AIDS, suggesting that knowledge fosters a more positive attitude toward AIDS. Otaala (2000) stated that the attitude of people must be considered because it provides information for HIV/AIDS intervention. Grundlingh (2001: 127) alluding to HIV/AIDS prevention stated that, "Any education programme must be explicit about the dangers of the disease, address social behaviours, risky social behaviours, and attitudes and perceptions." Hendricks (2002) stated that telling the truth is the first step in combating the disease, alluding to the fact that Africans have no choice but to be honest, open and accept the fundamental

cultural adjustments. Researching about college student's attitudes and knowledge will assist us to gauge exactly the attitudes held by this cluster of our population.

2.4.1 Factors influencing attitudes

The TRA posits that there are factors that affect one's attitude in performing behaviour. Personal factors, peers, and societal beliefs affect one's attitude (Oskowitz, 1992). Oskowitz argues that these are intertwined and will have an impact on one's attitude, leading to the individual's desire to perform or not to perform certain behaviours. The attitudes of college students will impact on the care they render to victims of the disease. Following are some of the factors that have been considered.

Personal factors

Some of the functions of attitudes are to protect people against their environment, to protect their self-image and provide an opportunity for them to pose their fundamental values (Deetlefs, et al., 2003). This was shown by those exhibiting negative attitudes towards people living with AIDS in Peltzer (2003), who indicated that they could not afford to risk their lives by living next to someone with AIDS. In Ordirile's study (2000) in the University of Botswana, students were found to have negative attitudes toward the disease and towards those affected and there was general fear towards the stigmatized group. There were fears expressed regarding eating and working with infected students. This was in contrast to Singh (2004) who found that there was no evidence that women with HIV/AIDS may face greater stigmatisation.

SHAPE (2003: 35) identified a strong element of denial, which was associated with stigmatisation. According to SHAPE (1999) and MOE (1999) attitudes towards HIV/AIDS were characterized by confusion, fear and denial due to lack of openness about the disease, which was in line with UNAIDS (2000) where attitudes exhibited were indicative of fear, stigma and denial. Discourses from focus groups in Uganda indicated the severity of the stigma often associated with HIV/AIDS. For instance, a man specified that if his wife gets AIDS he would kill her, the children and himself (Human Rights Watch (HRW), 2003) and Peltzer, 2003). While most discussions on attitudes toward AIDS consistently focus on these negative feelings, and do cause harm to the affected, people do exhibit positive attitudes.

Societal influence

Among the most influential societal influences are culture and education levels. Culture is the understanding that has been generated among individuals and groups about the nature of human relationships, how they should be established and how the social outcomes are predicted (Otaala, 2000). This definition of the role of culture in relationships sheds light on how Swazis perceive sexual relationships and how this could contribute to the spread of HIV/AIDS. For most African societies sexuality is a taboo subject for discussion especially not across gender lines (Hendricks, 2002). Myths identified by Odirile (2000) in Botswana included that long illness of a male were attributed to his braking a taboo, such as sleeping with a widow or a woman in her menstrual cycle or one who has miscarried, and is not associated with sexual behaviour. Sleeping with a virgin after a long illness was believed to heal the disease. According to

Jackson (2002:134), most people will publicly endorse the moral norms of culture while at the same time behaving quite differently. He enumerates some high risk beliefs that some cultures encourage to be; the use of force for the first sexual encounter to show that the woman is respectable, man can have many girlfriends, sex is something to do and not to talk about, sex is for male pleasure and not respectable for woman to enjoy. Men have greater power over women in African societies. They control decisions about sex; and logically they should be the ones to encourage safe sex (Hoosen & Collin, 2004). However the disempowered positioning of women in a patriarchal context makes it difficult for them to heed this injunction.

Societal pressures upon women to be married by a certain age causes them to engage in unprotected sex as they seek to find a mate at whatever cost, thus contributing to the spread of HIV/AIDS (Odirile, 2000). Most men do not favour the use of a condom and tend to disregard the woman's preference for protected sex.

Attitudes towards HIV/AIDS are also influenced by level of education, which counteract the effects of myths and misconceptions. Simbayi (2002) found that 59% of those with no education believed that HIV couldn't be transmitted through touching an HIV infected person, against 81% with primary education and more than 90% among those with high school education. Anderson, et al. (1998) argues that the ability of an individual to change behaviour to reduce the risk of HIV infection will be greatly influenced by the general attitudes towards HIV/AIDS of the social and cultural group to which s/he belongs (Kirby, et al., 2005), and by the extent to which that group perceives HIV

infection to be a threat. According to Jackson (2002), culture is dynamic and can therefore be influenced in positive ways. Kirby, et al., (2005) concluded that it is possible to improve values and attitudes towards PLWHA through HIV educational programs. Effort must be made to seek sensitive approaches that will promote discussion and involvement with the aim of influencing culture positively.

2.4.2 Attitudes toward condom use

The issue of condom use has dominated the attitudes of youth. Condom use in most South African societies, including Swaziland, is hindered by cultural beliefs that view them as symbols of promiscuity. To ask a partner to use a condom is tantamount to accusations or admittance of sexual promiscuity (HRW, 2003; Kalipeni et al., 2004). Condoms are commonly associated with the prevention of STIs, thus many people are reluctant to use them as they associate them with promiscuity (Gabusa, 2001; Otaala, 2000). Kalipeni, et al. (2004) and Peltzer (2003) identified negative attitudes associated with condom use to include; they are unpleasant to use and reduce sexual pleasure, imply promiscuity, they are useless they break, they get inside the woman's body, can cause cancer, HIV can pass through holes in a condom, and that they are not necessary in a long term relationship. Kirby, et al. (2005) found that most educational programs are effective in improving values and attitudes towards condom use.

Most respondents in Peltzer (2003) indicated not using condoms with their regular partners. Those who had sex with regular partners including sex workers also indicated not using a condom in the last sexual encounter (Peltzer, 2003). The common belief is

that condoms are not necessary in sexual encounter with a regular partner (HRW, 2003). Technical problems experienced by sexually active people when they use condoms were identified and the conclusion drawn was that some technical skills were needed to perform the behaviour (Otaala, 2000). Simbayi (2002) found that condom use among youth was on the increase and were also higher for young adults at risk of contracting HIV. The contrary was found, in Akande's study (2001) in South Africa, where most male youth expressed fatalistic attitudes and high risks of susceptibility to HIV infection because of their attitude towards condom usage.

Gender inequality can also influence a person's attitude through the fear that accompanies HIV. Women find it difficult to negotiate condom use, even when they know that their husbands are involved in multi-relationships (Peltzer, 2003; van de Wijgert & Coggins, 2002; HRW, 2003). Fear prevents talk about safe sex, action against HIV and leads to silencing of discussion around HIV, and the symbolic practice of silence help to maintain trust within the relationship (Hoosen & Collins, 2004). HRW (2003) found that husbands refused to use condoms in Uganda. Women often have a positive approach to condom use but lack the skills or power to negotiate its usage.

2.4.3 Attitudes towards voluntary counselling and testing (VCT)

Voluntary counselling and testing is considered a key component in the prevention struggle (Abreu, Noguer & Cogwill, 2003). It is assumed that when people are conscious of their status they will be able to act accordingly in order to prevent spreading the infection or contracting the disease. Most people who do not go for VCT feel that it is

useless because there is no cure; they have fear of stigma, doubts about confidentiality and fear that nurses will not treat them if they knew that they were positive (Van Dyk & Van Dyk, 2003; 120). Van Dyk felt that these people were ignorant of the benefits of knowing one's serostatus.

According to Simbayi (2002) most people know about VCT service availability, but the majorities do not make use of VCT services. Kalitchman and Simbayi (2003) found that one in five South Africans have been tested for HIV. Among those who would not consider going for an HIV test, 71.7% felt that their reason was that they were at low risk of being infected. Some were attributed to negative perceptions of testing services. This suggests that reasons for undergoing VCT are closely related to lower perceived risk than the problem of availability of services. A majority of those who did not want to know their serostatus indicated that knowing would bring about depression, despair and death. High quality counselling and knowledge of HIV status help individuals to assess their level of risk; develop realistic plans to reduce their risk and increase safe sex practices (Simbayi, 2002). Those found to be seropositive have a chance to assess their options for treatment and those who are seronegative can be empowered to remain disease free (Abreu, et al., 2003).

The stigma associated with HIV has resulted in people not revealing their status or getting tested for HIV (Kalitchman & Simbayi). According to le Marcis & Ibrahim-Vally (2005) to the people living with AIDS and hiding in their homes, disclosure is seen as engendering discrimination while Simbayi (2002) concluded that people were not

utilizing VCT services due to lack of understanding of the importance of using these services. However knowledge of someone who has died of AIDS or has AIDS was associated with inclination to go for testing.

Disclosure of one's status result is associated with anticipated outcome of disclosure. For instance, women who are socially and sexually disempowered fear violence, neglect, break up of the relationship, disownership by families, loss of security, shelter, or even murder (Van Dyk & Van Dyk, 2003; Gaillard, et al., 2000), while men would not disclose their negative status for fear of losing their sex appeal and care when they get sick. Fear does not only prevent communication but also works to exclude ideas from the HIV positive individual's consciousness.

2.5 Risky sexual behaviour

Risk taking is considered to be part of adolescent development, contributing to independence and maturity. Visser (2003) defined risk behaviour as being a behaviour that is either physically or emotionally dangerous or contributes to developmental problems of young people involved. Adolescents tend to engage in dangerous and health compromising behaviours such as a high average number of partners, sex with unknown persons as well as less than positive views about condom use and a low behaviour change even after learning about HIV/AIDS (Uwalaka & Matsuo, 2002). Hedgepeth and Helmich (1996) stated that human behaviour is rarely so logical or linear, for instance most individuals don't follow all prescribed steps in order, or they stop before reaching

the goal, or they relapse into former behaviour, or some may never act. In all these cases, individuals may be left with a perception of total failure, an "all or nothing" approach.

According to Kalipeni, et al. (2004) alcohol and substance use affect people's risk assessment process, coupled with sexual desire; this can reduce the ability to make responsible decisions. Risky sexual behaviours as identified by Akande (2001) include drug abuse, injecting drugs, alcohol abuse, multiple sex partners, unprotected sex, premarital sex, exchanging sex for money, cross-generational sexual relationships, early sexual debut and extra-marital relationships and sex with unfamiliar people.

In the case of HIV/AIDS, it has been recognized that the only viable means of preventing the spread of the disease is through modifying sexual behaviour. Behaviour change programs should include information on risk that is communicated often, repetitively and intensively to the target group (Hampt, Munshi & Smallwood, 2004). The study is directed towards college students, who are prospective teachers for school pupils. Their sexual behaviour is important as it affect their comfort ability in guiding the younger members in the society. Research has documented a strong relationship between one's comfort with sexuality, attitudes about sexuality and sexual knowledge.

2.5.1 Factors influencing risky sexual behaviours

In much of the discussion of health education and behaviour changes in the area of HIV, attention is focused on how individuals perceive and respond to risk (Anderson, et al., 1998). Van Wyk & Tshivase (2005) stated that sexual behaviour is often not determined

by rational and conscious decisions, and so it is not surprising that educating people and giving them information about the dangers of HIV/AIDS does not always persuade them to give up unprotected sex. Perception of risk is to a degree determined by the social and cultural context and is not simply an individual judgment. Factors that influence young people to engage in risky sexual behaviours are cultural, economic and psychological factors.

Culture

Cultural factors include social status, gender inequalities and norms. Cultural practices play a paramount role in increasing the vulnerability of women to infection. In most African societies, women lack complete control over their lives (Nicolson, 1996). Men are considered to be of superior social status to women. This stems from the belief that women have no power over men. In a study of women and vulnerability to HIV/AIDS in Kenya, Booth (2004) found that there were inequalities governing power relations, with men yielding more power. This led to women's failure to negotiate safe sexual practice. According to Zungu-Dirwayi et al. (2004) women are often viewed as good and virtuous and therefore socially acceptable if they display no knowledge of sex and safeguard their virginity until marriage, or when playing the role of a passive sexual partner. This makes it difficult for women to be proactive in negotiating safe sex. While the tradition of virginity is meant to protect girls, it makes them to fear asking information about sex, because they will then be considered to be sexually active.

In some African societies such as in Swaziland, it is seen to be normal and prestigious for a man to have multiple or extra-marital relationships (Jackson, 2002; Mfutso-Bengo & Muula, 2003). This practice is acceptable among Swazi society. According to IRIN (2002), women are legal minors in Swaziland. This can be seen from practices that restrict women from owning land; a male relative is required to secure a piece of land.

Men were found to be at greater risk due to their sexual practices (Simbayi, et al, 2004) and Peltzer (2003), found that 50% of males and 20% of women indicated having more than one partner in the preceding 12 months. Older males were a significant predictor for HIV while young, singles and males were associated with more condom use in Peltzer's study. According to UNAIDS (2004: 32) one of the explanations for the epidemic being so extensive in South Africa is the low status of women and sexual violence.

Cultural norms and traditional practices have socialized girls to silence, which may be used as a coping strategy not to 'rock the boat', and yet may have maladaptive outcomes for women (DeMarco, Patsdaughter, Miller, Grindel & Chisholm, 1998). Women are not necessarily safe in their homes. Swazi society expects women to be subordinates and to be submissive to their husbands. This allows men to have multiple partners and to practice polygamy, which is legal in the country. Women's lack of power renders them vulnerable and unable to refuse their husbands' demand for sexual intercourse or negotiate the use of condoms (Kalipeni, et al., 2004; Jackson, 2002). This means that for most women their male partner's sexual behaviour is the most important HIV factor (Booth, 2004). Given that the predominant mode of transmission for HIV/AIDS is

through unprotected sex (UNAIDS/ WHO, 2002) and that women silence themselves to secure and maintain intimate relationships (Neely-Smith & Patsdaughter, 2004). It can be postulated that in a country such as Swaziland where cultural norms and traditional practices have socialized women to be passive during sexual encounters, more women may be at risk of HIV due to their inability or unwillingness to negotiate condom use.

Most men in Peltzer's study (2003) did not tell their partners about their STI status, did not stop having sex when having symptoms neither did they use condoms while experiencing the symptoms. In southern African cultures it is not normal for a woman to negotiate for sex issues; only men have rights to and have an upper hand on sexual resolutions.

Socio-economic factors

People are trapped in social expectations of gender roles and behaviour, even if those stereotypes often benefit males far more than they do females (Booth, 2004). Social inequalities defined by income, gender and race are key elements in the social context and environments that contribute to HIV infection risk (Ruiz, et al., 2001). These can act at individual level in cases of homelessness and drug use or at societal level such as when economic inequalities between men and women can affect perceptions of their ability to negotiate safe sex practices in a relationship.

Social inequalities create conditions that make it difficult for individuals to even comprehend the problem of HIV since other problems may be more immediate, for

example, food, shelter, and employment. In some cultures, women carry the brunt of responsibilities to meet the needs of their families. Where women struggle to keep a roof over their families, food on the table and clothes on their children's backs, it becomes understandable why such women will ignore the threat of HIV (Trotman, 2000).

Poverty tends to influence women such that they have little or no power over decisions regarding sexual relations and often find it difficult to disclose their seropositive status for fear of social ostracism and losing economic security (Kalipeni, et al., 2004). HIV is no respecter of social barriers, however poverty seems to facilitate the spread of the disease and worsen its impact (Kelly, 2000). Reasons given by Kelly are that where poverty prevails, responding to immediate short-term survival assumes greater importance than protecting long term benefits. This scenario is best illustrated by le Marcis & Ibrahim-Vally (2005: 220), who stated that girls are provided with soap, clothing and money. When this happens, the important thing is not to be the only woman for the man but to be one of the women receiving the support.

In this context where the relationship is concealed, women are exposed to abuse and/or violence and this non-existent relationship gives them less weight. They describe the status of women in such a relationship to be that of a voiceless person, with the result that even at times of crisis, the perpetrator of violence cannot be reprimanded, because any knowledge of the relationship only exists as a rumour. Meanwhile, though hidden, the relationship brings material protection for the women involved. The women who rely on their boyfriends for support are at great risk of infection, as they are at a disadvantage

since they cannot negotiate for safe sex le Marcis & Ibrahim-Vally (2005) and HRW (2003). The risk of falling ill in years to come seems remote, compared with surmounting the problems of the present. More directly lack of or inadequate income may be responsible for some women's engagement in risky sexual behaviours.

Disparities in the age of spouse often encourage compliance and passivity in women (Kalipeni, et al., 2004; Jackson, 2002, 93). Palmiere and Grant (2001) alluded that men were turning to schoolgirls who are naïve and they believe are unlikely to have contracted the virus. A young girl may be made to believe that she will not get HIV during the first sexual encounter. Most girls in cross-generational relationships do so because of economic support from the older partners, and thus have less power to resist pressure to agree to unsafe sex (UNAIDS, 2004). For these girls abstinence is out of the question because their partners, being older, feel more a sense of entitlement to sex because more people their age are sexually active (Pinquart, Rainerk & Wiesner, 2004). These older partners shower girls with gifts, which enhance their self-esteem and their status among their peers. Risky sexual behaviours occur more often for girls with older partners than for girls with same-age partners.

People who abuse drugs or alcohol find it difficult to control what they do when they are under the influence of the substance. Alcohol and drugs lowers inhibitions and puts people in situations where they have limited control over their decision-making and their partner's behaviour (Gowen, Feldman, Diaz & Yisrael, 2004; Kalipeni, et al., 2004).

Perceived norms significantly affect the willingness of an individual to initiate and continue health-positive behaviours (Hedgpeth & Helmich, 1996). Social norms are difficult to change, but sexuality education can have an impact. This can be possible through peer influence, public media campaigns and peer theatre. Perceptions of social norms are as influential on behaviour as actual norms, for instance, one study revealed that teens who perceived that their peers were using condoms were five times more likely to do so themselves (Hedgepeth & Helmich, 1996). It is therefore imperative that communities, parents, and schools should coordinate efforts to introduce and support health-positive norms. Educators should use learning activities to help learners align perceived norms with reality.

2.5.2 Influence of knowledge, attitudes and risky behaviours on each other

The KAP model has best explained the triad relationship between knowledge, attitudes and behaviour. Some factors have been found to influence more than one of these variables. Such factors will be discussed below; which include self-efficacy, self-esteem, and misconceptions.

Self-efficacy

Self-efficacy refers to "people's judgments of their capabilities to organize and execute courses of action required for attaining designated types of performance" (Bandura, 1986; 391). Self-efficacy beliefs provide the foundation for human motivation, and personal accomplishment. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentives to act or to persevere, in the face of

difficulties. There are many factors that influence human functioning such as success or failure that people experience as they engage in the myriad tasks that compromise their life. According to Semple, et al. (1999) in agreement with Bandura's (1986) SCT, knowledge and constituent skills influence how people behave. Self-efficacy has been found to be predictive of a variety of health-promoting and health-risk behaviours. In the case of HIV/AIDS, an individual judges his/her own ability to accomplish a safe sexual behaviour using the personal skills available to him/her.

Bandura's (1997; 2) key contentions with regards to the role of SCT human functioning are that "people's level of motivation, affective state, and actions are based on what they believe rather than what is objectively true". For this reason, how people behave can be better predicted by the beliefs they hold about their capabilities than by what they are actually capable of accomplishing. Self-efficacy help to determine what individuals do with the knowledge and skills they have (Pajares, 2002). This explains why people's behaviour may differ widely even when they have similar knowledge and skills or why their behaviours are sometimes disjoined from their capabilities. According to Pajares (2002) and Hedgepeth and Helmich (1996), people create and develop self-efficacy as a result of the persuasions they receive from others, practice of skills such as assertiveness, and effective communication, condom use and negotiation for safer sex; exposure to positive role models and social norms; and learning constructive ways to relieve states of anxiety or desire.

People gauge their degree of confidence by the emotional state they experience as they contemplate an action. Strong emotional reactions to a task provide cues about the anticipated success or failure of the outcome. If negative thoughts and fears about their capabilities are expected, those affective reactions can lower self-efficacy perceptions and trigger additional stress and agitation that help ensure the inadequate performance they fear.

Self esteem

Self-esteem is considered a feeling of self worth, self-respect and self-acceptance (Cast & Burke, 2002), the overall evaluation of one's own worth, value or importance (Epstein, Griffin, Gilbert & Botvin, 2004). It could be presumed that people with higher self-esteem have low risk for HIV/AIDS because their regard of self-worth discourages them from engaging in high-risk behaviours. However, findings regarding the relationship between self-esteem and risks for HIV/AIDS have been mixed. Hylton (1999) found that 83% of seropositive women had high self-esteem and concluded that self-esteem had no influence on safer sex practices. Neely-Smith and Patsdaughter (2004) found that women with high levels of self-esteem are more likely to speak their minds in intimate relationships than are women with low self-esteem. Noticeable from studies of adolescents is that findings have demonstrated either no relationship or a positive relationship. The predominance of evidence suggests that low self-esteem is generally associated with high-risk behaviour (Long-Middleton, 2001). Neely-Smith and Patsdaughter (2004) recommended that education programs must focus on skill building to increase self-esteem and enhance sexual communication with the aim of increasing

their sexual negotiation powers and thus decrease their risk for HIV/AIDS. A review of the impact of programs on sexual risk-taking behaviour among young people revealed that educational programs did improve the participants' skills and increased participants' confidence in their skills (Kirby, et al., 2005).

To increase one's self esteem one has to be assertive. Assertiveness is a skill that can help an individual to have more control over what is happening in one's life, which then leads to higher self-esteem. Assertiveness includes being able to ask for what one wants or needs, including being able to speak out one's feelings whether positive or negative and saying no to what one does not want. Self-esteem can therefore enable one to disclose his/her serostatus or even request a partner to disclose his/her serostatus and can motivate educators to feel competent in giving HIV preventive education.

Misconceptions to susceptibility

The stage of young adulthood is also marked by the denial of susceptibility to health consequences, the so-called 'personal fable' (Arnett, 2002), whereby young people view themselves as being unique. They tend to believe that it is a misfortune that befalls others and not them. Because of this belief individuals often misperceive their risk of acquiring HIV and STIs, which tends to increase their risky behavioural practices. Denial of susceptibility to infection renders young people to be discouraged to seek information that will help them to make sound decisions.

Ruiz, et al. (2001) stated that misconceptions are partly driven by uncertainty of exposure, low probability of infection per encounter and the time interval between infection and clinical manifestation of the disease. Even when individuals are worried about contracting HIV, their perception of the likelihood of actually contracting HIV is often relatively low. Individuals who do not consider themselves to be high-risk groups identify themselves to be at low risk and tend to engage in risky sexual behaviours (Ruiz, et al., 2001). Simbayi (2002) found that among those who were HIV positive, who were not aware of their serostatus, did not think that HIV could possibly infect them.

Another misperception is about an HIV positive person, that someone who looks healthy does not have the disease. This may lead individuals to be falsely confident when choosing partners. Those engaged in high risk behaviours may stop them and rationalize that they are not at risk for contracting HIV (Ruiz, et al., 2001). Individuals in committed relationships are more likely to forgo protection, perhaps because they are no longer susceptible.

Parents in the sub-Saharan region are faced with a problem of perceiving that they are unable to control the behaviour of their youth, hence the high prevalence of HIV amongst the youth. Parents still view disclosing the positive HIV status of family members as announcing their promiscuity to the world.

2.5.3 Religiosity

While living at home the family may prescribe religious practices, once away at college individuals may have more opportunities to examine different religions and beliefs. During young adulthood attitudes about sexuality develop and solidify (Arnett, 2001), thus religiosity is important for both sexual behaviour and sexual attitudes. Religiosity and sexuality are closely linked to each other, in that religion potentially influences a range of decisions about sex related issues such as abstinence, birth control and abortion (Lefkowitz, et al., 2004). According to Toon and Semin (1999) individuals not currently sexually active may develop attitudes during emerging adulthood about sex, HIV and condoms, which have the potential to influence their future sexual and contraceptive behaviour. Arnett (2001) argues that religion is important for young adults because these individuals are in the process of exploring new worldviews. The reference group theory suggests that identifying with a particular religion will lead individuals to avoid risky sexual behaviours because of the teachings of their religion (Zaleski & Schiaffino, 2000). A high rate of religiosity among African American adolescents was used to explain why they had low rates of alcohol abuse and drug abuse (Arnett, 2001). Religiosity is associated with favourable adolescent outcomes.

Many religious doctrines are against premarital sex. Some religious groups oppose sex education despite the vast amount of evidence that favour it and oppose condom use. These focus on abstinence while discrediting condom use, claiming that it is unethical and sinful. These faith groups ignore the fact that religiosity is an individual's conviction and not a group or a partner's obligation. According to Jackson (2000) most people will

publicly endorse the strict moral norms of their religion while they behave contrary privately.

Christianity, the religion most practised in Swaziland, only accepts sex within a monogamous marriage. Most traditional religions in Africa tend to support polygamy; however taboos against sex outside marriage differ widely for males and females and in specific situations (Jackson, 2000). Religious practices have been found to be a major factor in Senegal's HIV/AIDS success (Kalipeni, et al., 2004). Polygamy is a norm in Islam but promiscuity is stringently punished to promote stable poly-partner fidelity. UNAIDS (1999) reported that 99% of married women said they have not had sex with anyone except their husband in the preceding 12 months. While Christianity promotes monogamy, the message of grace and forgiveness appears to have been misconstrued for a license for promiscuity.

2.6 HIV/AIDS intervention

Interventions have been launched worldwide to try to combat the spread of the epidemic. Van Wyk & Tshivase (2005) recommended that the epidemic must be given a human face through involving affected people in the interventions geared towards creating awareness, to give the group a sense of ownership of the intervention.

AIDS is a problem of attitude and behaviour, since it is a disease that is principally transmitted through unsafe sexual practices. The primary effective route to reducing HIV transmission may be through changing sexual behaviour. In this regard sexual

abstinence, a mutually faithful and HIV-free monogamous relationship, or barrier protection that prevents the exchange of body fluids remains the only effective method for the prevention of the sexually transmitted HIV (Peltzer & Seoka, 2002). According to achieve desired outcomes, intervention programmes must therefore focus on changing the target behaviour and maintaining the new behaviour. To be effective in modifying behaviours, educational programmes must be consistent, intensive, systematic and combined with other strategies.

Peltzer (2002) argues that educational materials and behaviour change interventions must be culturally and linguistically relevant, sensitive and specific to the population of persons at risk. Hedgepeth and Helmich (1996) outlined five stages to behaviour change: precontemplation, contemplation, preparation, action and maintenance. Each person who needs to change must move successfully through all five stages, no matter how briefly. At each stage, the individual displays characteristic attitudes and requires stage-appropriate intervention methods by the educator (Hedgepeth & Helmich, 1996), hence the need for such a study as this research project before implementing intervention programmes.

2.6.1 Sexuality education

The quality of information students gain equips them with knowledge and tools with which they can plan their future, even while they protect themselves from debilitating and fatal conditions such as unwanted pregnancies and sexually transmitted infections that includes HIV/AIDS (Essah, 2002). Family life education focuses on improving people's

quality of life in terms of their relationship with their families and their society and develops them to take responsibility for their behaviours. According to Essah (2002) detailed and consistent family life education should guide students to postpone initiation of sexual relationships or to use scientifically proven contraceptive methods when they choose to be sexually active.

Communication on sex education, health related behaviour, contraception, abstinence and STIs must be facilitated in order to avoid problems associated with HIV/AIDS transmission. This concurs with Fischer in Cupido (1998) who found that there was a relationship between the sexual attitudes of young adults and the previous parent-child discussion of sex. In a study conducted by WHO it was found that sex education influenced adolescents to postpone sexual debut and to use contraception effectively when they became sexually active (Jackson, 2002).

An analysis of 250 North American education programmes found that among sexually active young people, AIDS education was effective in decreasing the number of sexual partners and increasing condom use (UNAIDS, 2004). Due to intensified educational programmes on HIV, secondary school students were found to be having adequate knowledge on HIV/AIDS in Swaziland (SHAPE, 2003). In the case of college students' sexuality education is a prerequisite to ensure maximum accuracy in disseminating HIV/AIDS information to school students. Sexuality education must also take into consideration the skills that the students need to act on the knowledge they have.

2.6.2 Life skills

A life skill is viewed as a means of empowering young people in challenging situations such as violence, gender and ethnic discrimination. It is the ability to act on knowledge and beliefs, to apply information relevant to particular situations, and to utilize social support (Hedgepeth & Helmich, 1996). Life skills help young adults to increase self-responsibility and to reach their full potential (Davis, 2000). Life skills include assertiveness, self-efficacy, self-esteem, life planning motivation, problem-solving, decision-making and peer support. Many young people lack essential skills for dealing with potential sexual risks or relationship issues. One study found, for instance, that approximately 40% of heterosexuals were unable to communicate about safer sex with a potential sex partner (Hedgepeth & Helmich, 1996). Research has shown that sexuality education combined with life skills development tend to delay the onset of sexual activity and to make young peoples' sexual activity safer (Jackson, 2002). Magnami, et al. (2005) found that school-based life skills' education appeared to be capable of communicating information and helping youth develop skills relevant to reducing HIV risk. Pick, et al. (2003) found that after a life skill training, adolescents' likelihood of using protection was significantly increased if training was received before their sexual debut.

Youth must be empowered with skills to enable them to make their own decisions, helping them to learn social skills, to support one another, to respect each other, to reduce gender inequality particularly around sexual relationships and help them to find gainful employment or be self employed (Davis, 2000). While life skills have been identified as

an answer to the challenges of HIV/AIDS it is a long-term approach, meanwhile, a humanitarian approach is needed as a short-term measure (Coombe, 2003). This will target to save lives, keep learners safe, and support the build-up of capacity to deliver life skills and care for those at risk. Life-skills appear to be important in assisting young people in making rational decisions that pertains to their lives. However it must be noted that in order for life skills to be effective they must be placed in the correct context of the lives of the particular audience.

2.7 Chapter summary

The chapter has given a summary of theories used in the study of HIV/AIDS with emphasis on the ASE model, which incorporates the TRA and the SCT. The developmental stage of young adults and its ability to increases their vulnerability to risk of HIV has been described. Factors that influence knowledge, attitudes and sex behaviours have been briefly discussed with possible interventions to help prevent infection, forming the exit point of the chapter.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter justifies the paradigm inclination of the study and describes the study design chosen. The population, data collection, validity and reliability of the instrument are described. As a point of departure, the ethical considerations regarding the study are explained.

3.2 Paradigm inclination

The study is inclined towards the natural science paradigm. The belief is in the ideology where-by reality can be measured objectively (Alston & Bowles, 2003), and that knowledge is based on observation and measurement that is systematically and methodologically applied (Seedat, 2001). According to Cournoyer and Klein (2000) anything that is understandable well enough to be recognized consistently, can be quantified. The study aimed at describing knowledge, attitudes and risky sexual behaviours with regards to HIV/AIDS, which are concepts of abstract nature. Through the use of operational definitions, abstracts concepts can be quantified (Terre Blanche & Durrheim, 2002). SHAPE (2003) recommended the use of quantitative methods for baseline studies, as a way of providing basic information, which could identify areas of further research and to design intervention programmes.

3.3 Research design

The research design is a set of guidelines and instructions to be followed in conducting the research (Babbie & Mouton, 2001). To address the research problem the study used a

quantitative design employing a cross-sectional survey. Seedat (2001) alluded that amongst the methods used in the quantitative paradigm included are surveys, because it is an inquiry into a social problem, measuring it with numbers and analyzing it with statistical procedures. Balnaves and Caputi (2001) define a cross-sectional study as a method, which describes the population under study at a given point in time. This design will provide information about the social experiences of the population under study. It was also deemed appropriate since sensitive information had to be obtained from the college students. It made possible the collection of information from a large group, which will provide basis for in-depth exploration.

3.4 Study Population and sampling

The population understudy were college students in their third year of study enrolled for the Primary Teachers Diploma programme at the Nazarene teacher training college in Swaziland. The population constitutes 100 students composed of male and female students. The group has been targeted for they are in their final year of study and therefore have attained most of the knowledge they need for their practice in schools. College students have been found to be sexually active, which makes them to be considered a high-risk group. Capturing their knowledge, attitudes and risky sexual behaviours will help to inform an educational intervention for this group.

All the students in their third year of study were requested to participate in the study; however, participation was strictly on voluntary basis. A convenient sample was therefore used in the study. Alston and Bowles (2003; 92) recommended that a sample

of 79 students would be sufficient to proceed with the analysis with a 95 percent confidence level and a five percent margin of error. All the students were given the questionnaire and a total of 97 were returned and used in the analysis, giving a response rate of 97%.

3.5 Development and Description of the instrument

A structured self-administered questionnaire with closed-ended questions (Appendix A) was used to collect the data. The questionnaire was adapted from DiClemente, et al., 1993, Whiteside, et al., 2003, Gokengin, et al., 2003 and College Student Behaviour Questionnaire-Revised (CSBQ-R) by Forrest, et al. (1998), who conducted a similar study on HIV/AIDS knowledge, attitudes, and self-perceptions of behaviour among Radford University students. Since HIV/AIDS is currently under study, new information must be included to capture current knowledge and understanding of the group in question. The questionnaire was updated with information on items of attitude obtained from Akande (2001) and from section C and D of the Institute for Counselling Biographical Questionnaire from UWC.

The questionnaire consisted of four sections namely: demographic information, knowledge, attitudes, and risky sexual behaviours with regards to HIV/AIDS. The knowledge section was divided into four sections representing the general characteristics of the disease, knowledge on transmission of the virus, prevention of infection and HIV/AIDS policy at the college. The panel of experts who assisted in the establishment of validity suggested the addition of statements from number 29 to 38. A self-rating four

point likert scale ranging from agree, maybe agree, maybe disagree, disagree was provided; and respondents had to choose one answer.

Attitude statements were divided into five sections namely; fatalistic and anti-precautious statements, denial of risk, tolerance and non-tolerance of people living with HIV, fear and stigma, and precautious statements. The validating panel suggested the addition of statements from number 77 to 80 of the questionnaire under the above themes. These statements had a four-point self-rating likert scale ranging from strongly disagree, to strongly agree, respondents had to choose one answer.

Sexual behaviour statements were grouped into sexual practices, condom use, perceived risk, communication skills and self-efficacy. The following changes were suggested by the validating panel: question 87 was changed to read 'did you use a condom during the last sexual intercourse with your partner, correctly and consistently?' question 91T was added and question 93b an asterisk '*' was added and an explanation for a high-risk partner was provided at the bottom of the page. Risky behaviour statements consisted of responses where a self-rating likert scale was used with very unlikely, unlikely, somewhat likely and very likely responses; 'yes, no and do not know' responses; and 'agree, disagree and do not know' responses.

3.6 Pilot testing

Prior to the study a pilot study was carried out to verify clarity; understanding of the questionnaire and to determine amount of time required to complete the questionnaire. The pilot was conducted amongst ten second-year students of the Nazarene college. These were selected randomly. The questionnaire took about 25 minutes to complete and alterations made included the following:

Section a. The answering grid was removed, as it was confusing to respondents. Respondents had to make a tick on their choice of answer.

Section b. Question 10. It was noticed that researcher must make clarity to research assistants so that they explain to respondents what donating blood is and how it was different from receiving donated blood, while statements were not altered. The terms HIV and AIDS were used interchangeably. The term 'heterosexual' had to be explained by research assistants to the groups before they commenced answering the questions. Research assistants went through the questionnaire together with the researcher and clarity was provided whenever it was required.

Section c. The term 'promiscuous' had to be explained to the respondents.

Section d. The difference between correct use of a condom and consistent use had to be clarified to respondents. Statements were not altered.

3.7 Validity

Validity refers to the degree to which an account truthfully represents the social phenomena to which it refers (Silverman, 2000). Content validity of the instrument was

obtained from a panel of experts constituting of two members of Swaziland National AIDS Programme and one member from SHAPE. Comments and changes suggested by the team have been included in the final version of the questionnaire. Changes have been indicated in the instrument development section. A dendrogram was used to identify themes for the study (see Appendix J).

3.8 Reliability

Reliability is the degree of consistency with which it measures the attributes it is supposed to measure (Bless & Higson-Smith, 2000). To determine the reliability of the instrument after modifications, 10-second year Human Ecology students of the University of the Western Cape filled in the questionnaire. The Croanbach alpha coefficient was used to measure the reliability for each section of the knowledge and attitude items. The Croanbach alpha coefficient for the characteristics of the disease is 0.88; knowledge on transmission is 0.73; and for prevention knowledge is 0.67. The Croanbach alpha coefficients for the fatalistic statements is 0.71; for denial of risk = 0.69; for tolerance and non tolerance the split half coefficient was used with non-tolerance items recording 0.78 and tolerance items recording 0.84; fear or no fear items recorded 0.73; while precautious statements had a Croanbach alpha coefficient of 0.84. The Croanbach alpha coefficient was used for the reliability of the risky sexual practices and the coefficient value for condom use items is 0.85; for self-efficacy 0.82; and for self-esteem it was 0.72. When the Croanbach alpha coefficient is closer to the figure 1 it is said to be statistically reliable.

3.9 Procedure

The study was conducted in the Manzini Nazarene Teacher training College in Swaziland. Permission to conduct the study was obtained from the authorities of the college and from the students. Three research assistants were employed to administer the questionnaire to eliminate interference of the researcher. The assistants were trained so as to increase validity. Data was collected between the 27th to the 29th of April 2005. The questionnaire was administered during the free period that they have on their schedule and that was when the assistant also gave the instructions and made clarifications. To ensure a high response rate, students were asked to return the questionnaire before departure in provided sealed envelopes to the assistants.

3.10 Data Analysis

Most of the data was ordinal and to a lesser extent nominal. Age was the only interval measurement. The data was analysed using the SPSS® and excel® computer programs. Descriptive statistics were used to summarize patterns of data as obtained from the sample. The chi-square test was used to determine the significance of the differences between selected variables. The level of significance used was 10% or better as recommended by Alston and Bowles (2003; 269).

3.11 Ethical consideration

Ethical issues were observed in all aspects of the research. The Senate Research committee of the University of the Western Cape approved the methodology of the research. Permission was sought from the authorities of the college. The aim of the

study was explained to the respondents in a letter accompanying the questionnaire (Appendix D). Informed consent was obtained before carrying out the study (Appendix E). Prior to the study, the respondents were informed that participation was voluntary and that they had the right to withdraw at any time. Respondents were assured of confidentiality of the information given and that names were not to be written anywhere in the study to maintain anonymity. Referring students to the psychiatric counsellor adjacent to the Nazarene college provided support in the form of counselling should there be need.

3.12 Chapter summary

This chapter provided the methodology used in the study. The choice of the paradigm inclination was motivated. The results from the respondents are presented in the next chapter.

CHAPTER 4: RESEARCH FINDINGS

4.1 Introduction

The findings will be discussed in relation to the sub-problems of the study, with demographic information forming section A. Section B determines the extent of the knowledge of the college students on HIV/AIDS, and sections C and D are on the attitudes and risky sexual behaviours of the college students respectively. The following headings are used: demographic information; knowledge on HIV/AIDS, with subsections that include characteristics of the disease, transmission, prevention and policy; attitudes towards HIV/AIDS, which includes subsections such as fatalistic, denial of risk, acceptance/tolerance, fear/stigma or no fear and precautious statements; while statements concerning risky sexual behaviours include questions on sexual practices, condom use, perceived risk, self-esteem and self-efficacy.

The respondents were clearly informed about the purpose of the survey and that the responses they gave would be totally anonymous. Students were requested to sign a consent form prior to completing the questionnaire. (See appendix E).

4.2 Demographic information

The respondents consisted of 97 out of a possible 100 third-year students of the Manzini Nazarene teacher training college. It could not be established as to why the three could not return the questionnaire. There were 24 male and 73 female students who volunteered to participate in the study. Their ages ranged from 20–37 years (mean age

24.3 years, standard deviation 2.99; modal age 23 years). The demographic data is documented in Table 4-1

Table 4-1 Demographic Profiles of Respondents (n=97)

Characteristic variable		**Number of Respondents**	**Percentage**
Gender	Male	24	25
	Female	73	75
Age	20 – 29	92	95
	30 - 39	5	5
Marital Status			
	Single	82	84.5
	Married	10	10.3
	Unidentified	5	5.2
Religious affiliation			
	Roman Catholic	15	15.5
	Protestant	73	75.3
	Others	9	9.2
Church Participation			
	Active	75	77.3
	Not active	21	21.6
Living arrangement			
	With parents	51	53
	Alone	20	20.6
	With Roommates	9	9.3
	With Partners	13	15.5
Drink Alcohol			
	Yes	9	9.3
	No	88	90.7

Analysis of the difference between males and females on marital status shows that females and males are not significantly different ($\chi^2 = 1.19$, d. f. = 1, P = 0.19). Females therefore do not have a greater likelihood of being married than males.

4.3 Sub-problem 1: Knowledge of HIV/AIDS

Scholars such as Peltzer, 2003, UNAIDS 2004, Shisana and Simbayi (2002); RCAP (2003) and Akande (2001) have found knowledge of HIV to be an important factor in the cognitive processing of information and therefore important in influencing the attitudes and the behaviour of individuals and groups. Questions regarding knowledge of HIV/AIDS ask how much the respondent agrees or disagrees with specific facts or common misconceptions about prevention, transmission, treatment and symptoms of HIV/AIDS. The subtopics considered in this study include characteristics of the disease, transmission, prevention and policy.

4.2.1 Characteristics of the disease

This section includes information on the nature of the disease, such as the cause, definition and detection of the virus, treatment, signs and symptoms of infection and who the victims are. This section also inquired about holistic views about HIV/AIDS. The knowledge of the college students on the characteristics of the disease is shown in Table 4-2.

Table 4-2 Characteristics of the disease (n=97)

STATEMENTS	Agree		Maybe agree		Maybe disagree		Disagree		Missing
	%	*n*	*%*	*n*	*%*	*n*	*%*	*n*	
AIDS is caused by HIV	92.9	90	4.1	4	0	0	1	1	2
AIDS a condition where the immune system is unable to fight infection	88.7 8	86	7.2	7	0	0	1	1	3
AIDS can be detected in the blood immediately	21.3	21	17.5	7	8.2	8	60.8	59	2
People with AIDS contract other diseases	92.5	90	13.4	3	0	0	2.1	2	2
Always visible signs are obvious when one is infected	15.5	15	21.6	21	13.4	13	48.5	47	1
Traditional doctors can heal AIDS	1	1	8.2	8	9.3	9	79.4	77	2
AIDS affects people with loose morals	6.2	6	14.4	14	18.6	18	59.8	58	1
Persons with HIV can look very healthy	81.4	79	14.4	14	3.1	3	0	0	1
AIDS affects only gay men	0	0	0	0	1	1	96.9	94	2

Generally, the college students displayed inconsistent understanding of the disease, with most of them showing adequate knowledge on items such as the cause of AIDS and that people with AIDS contract other diseases. About 37% were not completely certain that AIDS could be detected in the blood immediately after infection. While 81% acknowledged that a person with HIV could look very healthy, about 51% of the students had no complete knowledge of visibility of signs when one is infected and only less than half (48.5%) strongly disagreed with the statement that there are always visible signs when one is infected.

It has been well documented (Akande, 2001; Gokengin, et al., 2003; Otaala; 2000; UNAIDS, 2004; Uwalaka & Matsuo, 2002; Van Wyk & Tshivase, 2005) that knowledge alone does not lead to behaviour changes; however, there is general concurrence that it is a necessary pre-condition to action. Understanding of the disease by college students is critical as it provides confidence, which they need in order to be proactive in the struggle

against the spread of HIV. Students either had doubts or did not know that AIDS cannot be detected in the blood immediately after infection. This was an indication of insufficient knowledge and understanding of the life cycle of the virus. A greater proportion was not cognisant of the long latency period of HIV, whereby a person leads a normal life with the virus but exhibits no signs. Meanwhile, the virus can be passed on to others. Lack of knowledge on detection of the virus can have implications for decisions pertaining to testing.

The inconsistency of knowledge displayed by the college students may be attributed to insufficient attention given to college students by HIV/AIDS interventions. According to SHAPE (1999), high school students have high levels of knowledge because of the attention they have received from interventions specifically tailored for them. Akande (2001) noted that though knowledge levels about HIV amongst youth seem to be high, deficits are reflected by incorrect responses or uncertainty in responses, which have been identified in this study on items such as "there are always visible signs when one is infected" and "HIV/AIDS can be detected in the blood immediately after infection"

4.2.2 Transmission

Knowledge about transmission of the disease is vital, as one needs to understand the routes of transmission in order to know how to avoid contracting it. Questions on knowledge of transmission measure how HIV can or cannot be transmitted. The degree of knowledge of college students is shown in Appendix F, Table 1

Knowledge of the college students pertaining to transmission was above average, but lack of knowledge in statements that relate to oral sex and donating blood was observed. About 47.5% certainly agreed with the statement that one could get AIDS during oral sex and 51% were not completely knowledgeable on whether oral sex is safer than penile-vaginal sex. A greater percentage (48.5%) seemed not to be certain about getting AIDS by donating blood. About 20% of them responded with 'agree' and another 20% with 'maybe agree'. Further analysis shows that there is no significant difference between males and females ($\chi^2 = 3.71$, d. f. = 3, P = 0.29) on the statement that one can get AIDS by donating blood. Insufficient knowledge on HIV transmission may also be responsible for the fear of taking a blood test as knowing that HIV is associated with blood may trigger fear on any subject that concerns blood. The finding is in accordance with Whiteside, et al. (2003) who stated that misconceptions lead to fear. If students had full knowledge regarding blood and the transmission of HIV, they would have nothing to fear. About half the group was certain that one couldn't get AIDS by donating blood. The rest were either uncertain or did not agree with the statement. Blood is such an important entity for saving lives. A perception that one may get AIDS by donating blood can have a negative influence when students are asked to donate blood to help save lives. More clarity is required, and the hygienic conditions ensured when collecting blood need to be emphasized.

Less than half (48.5%) the number of respondents were certain that oral sex is not safer than penile-vaginal sex. A greater proportion of the students were either incorrect or

uncertain about contracting HIV through oral sex. According to Simbayi (2002), misconceptions and myths cause people to have incorrect information and he recommended that communication of accurate information would help counteract misconceptions. UNAIDS (2004), in agreement with Simbayi (2002), identified accurate knowledge of transmission as the first step towards risk reduction.

A lot of doubts were associated with the statement that all babies born to HIV-positive mothers have the disease. This was shown by 34% of 'maybes' in the responses and 8% of certainly 'wrong perceptions'. There was no significant difference between genders with respect to the scores (χ^2 = 3.35, d. f. = 3, P = 0.35). Students may not have sufficient information on the availability of ARVs given to pregnant women in order to minimize transmission of the virus from mother to unborn baby. Such information is vital as they are also at the stage when they will soon be starting families.

4.2.3 Prevention

Knowledge on prevention of HIV is important, as an individual needs to be able to decide on the method of prevention that is preferable. It also helps one determine what safer sex is and what is not. College students' responses on prevention of HIV are shown in Table 4-3.

Table 4-3 Prevention (n = 97)

STATEMENTS	Agree		Maybe agree		Maybe disagree		Disagree		% Missing
	%	n	%	n	%	n	%	n	
Condoms can lower the risk of infection	73.2	71	18.6	18	2.1	2	5.2	5	1
VCT is key response to pandemic	35.5	34	33	32	0	0	15.5	15	1
Condoms are the only protective barrier if engaging in sex	34	33	23.7	23	9.3	9	33	32	0
Female and male condoms complement each other	20.6	20	40.2	39	21.6	21	14.4	14	3
Correctness and consistency underlie condom usage	42.3	41	26.8	26	18.6	18	8.2	8	4
Free condoms are as effective as commercial ones	32	31	28.9	28	17.5	17	20.6	20	1
Pregnant mother can take medication to prevent infecting unborn baby	68	66	17.5	17	5.2	5	7.2	7	2
Know where to go for an HIV test	89.7	87	9.3	9	0	0	1	1	0
Birth control pills reduces chances of infection	4.1	4	4.1	4	3.1	3	87.6	85	1

While the college students' responses on knowledge of HIV/AIDS seem to be generally above average, knowledge of prevention of HIV/AIDS seems to be low. About 73.2% agreed that condoms lower the risk of infection, (34%) felt that condoms are the only protective barriers if one engages in sex. A possible explanation for this difference in opinion could be that while they are aware that condoms do lower the risk of infection, some may fail to acknowledge this because of either their religious beliefs or because they are not sexually active. Some may be doubtful of the effectiveness of condoms, as indicated in Human Rights Watch (2003), where it was contended that most men argue that condoms are ineffective in the prevention of HIV. In-depth analysis indicates that 33% of the males (Table 4.4) agree with the statement, which indicates that they believe that condoms might not work or that a condom is not a safe barrier. Hoosen and Collins

(2004) found that men viewed condoms as a barrier to pleasure. While 66% of the females agreed that condoms are safe barriers when engaging in sex, the predicament they are likely to face is the disempowered state of women, which makes it difficult for them to heed to this injunction (Hoosen & Collins, 2004).

Table 4-4 Gender and condoms the only barrier when engaging in sex

Gender	Condoms the only barrier when engaging in sex						
	Agree	Maybe agree		Maybe disagree	Disagree		Total
Male	3	5	8	3	13	16	24
			33%			67%	
Female	30	18	48	6	19	25	73
			65%			35%	
Total	33	23	56	9	32	41	97

The Chi-square test indicated a significant difference between males and females on condoms being the only protective barrier ($\chi^2 = 9.14$, d. f = 3, P = 0.027) (see Table 4-4). Females are more likely to be positive on condom use as a protective barrier.

Further analysis on the female responses indicates a U-shaped distribution. From this, it can be deduced that there are two distinct groups: one is of the opinion that a condom is a safe barrier and the other female group felt that it is not a safe barrier. According to Bandura (1986), one's perception of self-efficacy towards particular phenomena may be relatively low because the situations involved are unfamiliar. Considering that some respondents in the study are postponing sexual activity, it is possible that they are unfamiliar with the subject.

Cross tabulations of condoms being the only protective barrier when engaging in sex and the quality of free condoms shows that females who felt that free condoms are of the same effectiveness as commercial condoms but are not a good protective barrier (n=23) were no different from those who felt that free condoms are not the same in effectiveness as commercial condoms but are a good barrier (See Appendix H, Table 3). Males who felt that free condoms are as effective as commercial ones but are not a good protective barrier (n=12) were twice the number of those who felt that free condoms are not as effective as commercial ones but are a good barrier (n=6). (See Table 4-5).

The issue of condom use dominates the prevention of HIV/AIDS where concern is about a sexually active group. College students are at the stage when most are becoming sexually active. Condoms have been marked by misconceptions and negative attitudes, which have grossly affected their acceptance (Peltzer, 2003). The poor performance of the students on the section regarding knowledge on condom use can be attributed to the negative discourses about condoms and the negativity associated with condom use in Christian environments that emphasize abstinence.

Table 4-5 Male perceptions on condoms being the only protective barrier and the effectiveness of free condoms

Condoms the only protective Barrier	Free condoms as effective as commercial ones				
	Agree	Maybe agree	Maybe disagree	Disagree	Total
Agree	2	1	0	0	3
Maybe agree	1	0	2	2	5
Maybe disagree	0	1	1	1	3
Disagree	4	2	4	3	13
Total	7	4	7	6	24

Diagonal of agreement S of numbers below ? = 12 S of numbers above ? = 6

This finding is in line with Jackson (2000), who stated that most people would endorse the strict moral norms of their religion, while Zaleski & Schiaffino (2000) argued that religious affiliation influences one's cognition because of the teachings of that religion. The majority of the students are Protestants and Roman Catholics, both of which contest the use of condoms.

The negative attitude towards free condoms may have implications for the free supply of condoms. Even if free condoms are made available, the students will have doubts about their quality and might not use them. This finding is in line with SHAPE (2003), which found that pupils were saying that free condoms were of poor quality. According to Abreu, et al. (2003), the quality of condoms is important for preventing disease transmission and maintaining consumer satisfaction and confidence, which are both crucial for encouraging safer sexual behaviours. The HBM posits that a positive expectation, such as the effectiveness of condoms in preventing HIV, can lead to a

positive behaviour change (CIS, 2003). This means that those students who do not believe in the effectiveness of free condoms are less likely to use them.

About 36% agreed that VCT was a key response to the HIV pandemic (see Table 4-3). The collapsed table (see Table 4-6) shows that there is a significant difference between the males and females with respect to the score ($\chi^2 = 2.82$, d. f = 3, P = 0.09). About 90% knew where to go for an HIV test.

Table 4-6: Male and female perceptions on VCT being a key response to the pandemic.

	Voluntary Testing and Counselling		
Gender	Agree	Disagree	Total
Males	13	11	24
	54.2%	45.8%	100%
Females	53	20	73
	72.6%	27.4%	100%
Total	66	31	97

Though 68% agreed that female and male condoms complement each other, 40% were uncertain. While 60% agreed that free condoms were as effective as commercial ones, only 32% were certain. Less than 45% certainly agreed that correctness and consistency are vital in condom usage. A Chi-square test shows that there is no significant difference between males and females on the statement that correctness and consistency underlie condom use ($\chi^2 = 0.30$, d. f. = 3, P = 0.58).

4.3.4 AIDS policy

The knowledge of the students on the HIV/AIDS policy of the college is shown in Figure 1.

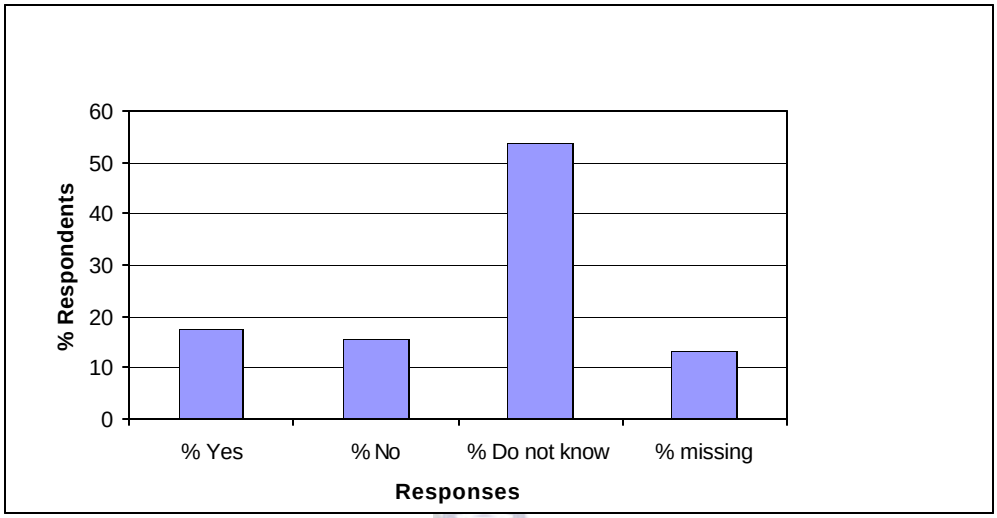


FIGURE 1: **Does the college have an HIV/AIDS policy? (n = 97)**

The majority of the students did not know whether the college has an HIV/AIDS Policy. This can be seen from the greater proportion of the students who identified with 'do not know' responses (54%) and those who declined to respond (12%). About 16% said that the college does not have an HIV/AIDS policy.

The absence of an HIV policy in an institution indicates minimum commitment on the prevention of HIV transmission or on caring and protecting HIV victims in the institution. This may have a serious impact on students who may wish to disclose their status as they will be ignorant of the protection the institution has for them and will not be able to predict the consequences of their disclosure. This is supported by the SCT

(Bandura, 1996), which states that outcome expectancies have an effect on one's behaviour. The Zambia Copperbelt University instituted policy guidelines for HIV/AIDS, which stressed that there shall be no discrimination and those with AIDS shall be treated like those with any other illness (Lawrence, 2002). This helps to ease the burden, as students know that support is available from the institution. According to Coombe (2003), students who are trained at an institution that is a change agent will be change agents themselves.

The findings of the study are in agreement with Whiteside, et al. (2003), who noted that there was insufficient knowledge of HIV/AIDS in Swaziland and that the information that people received sometimes conflicted, thereby causing confusion. The difference is that this study has identified the specific information that needs to be supplemented for the target group.

4.3 Sub-problem 2: Attitudes towards HIV/AIDS

The evaluation of attitudes to HIV is crucial, as it has been found that knowledge of protective strategies alone is an insufficient precursor to behaviour change. Attitudes help to determine the success or failure of services in an area. The students' attitudes towards the disease were measured according to how they agreed with or disagreed with statements depicting fatalistic and anti-precautious and precautious attitudes; denial of risk; stigma and non-tolerance; acceptability of people living with AIDS; and freedom in talking about HIV/AIDS.

4.3.1 Fatalistic and anti-precautious attitudes

The fatalistic statements included statements such as “There is nothing one can do to avoid AIDS” and “Everybody has AIDS, so I wouldn’t worry”. Anti-precautious statements include “Safe sex is difficult to practice”, “There is nothing much one can do with AIDS” and “If HIV positive, give up as there is no future for you”. Respondents who disagreed with these statements were considered to have positive attitudes and those who agreed were considered to show negative attitudes. The fatalistic attitudes of the students are shown in Table 4-7.

Table 4-7 Fatalistic and anti-precautious (n=97)

Fatalistic /anti-precautious statements	**Strongly disagree**		**Disagree**		**Agree**		**Strongly agree**		**% Missing**
	%	n	%	n	%	n	%	n	
Everybody has AIDS, I wouldn't worry	59.8	58	26.8	26	3.1	3	9.3	9	1
Careful how I choose sexual partners	35.1	34	29.9	29	15.5	15	13.4	13	6
Safe sex is difficult to practice	18.6	18	27.8	27	27.8	27	21.6	21	4
Nothing much one can do with AIDS.	56.7	55	20.6	20	5.2	5	13.4	13	4
If HIV positive, give up as there is no future for you	57.7	56	27.8	27	2.1	2	11.3	11	1

Noticeable is the attitude expressed by the students that safe sex is difficult to practice (about 22% strongly agreed, 28% agreed and about 19% strongly disagreed) and the illusion that one is careful when choosing partners (only 35% strongly disagreed). A possible explanation could be that some are not yet sexually active due to the religiosity factor. About 57% of the students were certain that there is something one can do when one has AIDS, the rest were either uncertain (21%) or positive that there is nothing they can do. The Chi-square test indicated no significant difference between males and females save the statement “Safe sex is difficult to practice” (?2 = 6.47, d. f. = 3, P =

0.09), with females more likely to agree with this statement (see Appendix H, Table 3). That women find it difficult to practice safe sex is supported by the gender inequalities that exist within the society. Women have been considered to be legal minors and have been socialized to be subservient to men, which makes them vulnerable to HIV infection. According to Booth (2004), inequalities governing gender relations were responsible for the failure of women to negotiate safe sexual practices; hence, they find safe sex difficult to practice.

This finding was in line with Akande (2001), who found that young people believed that one has little control over what happens when one has HIV. This implies that a reasonable proportion of students are doubtful about their ability to control their sexual drives. By indicating that safe sex was difficult to practice, students demonstrated an anti-precautious attitude: 18.6% strongly disagreed; the rest were either uncertain or agreed with the statement. Those who are not sexually active may account for the uncertainty. This may suggest the doubt the youth have in their ability to control whether or not they contract HIV. Bandura's (1996) SCT posits that the beliefs that people hold about themselves is a critical element in the exercise of control. According to the TRA, one's intention to perform an action is determined in part by one's attitude towards the specific behaviour. Fatalistic and anti-precautious attitudes will then contribute towards not acting positively in combating the spread of HIV if a person doubts his/her ability to act positively.

4.3.2 Denial of risk

Understanding one's risk of exposure to infection is a crucial factor in the decision-making process necessary to prevent one from contracting the disease. The students' attitudes on the denial of risk are shown in Table 4-8.

Table 4-8 Denial of risk (n=97)

DENIAL OF RISK ITEMS	Strongly disagree		Disagree		Agree		Strongly agree		Missing
	%	n	%	n	%	n	%	n	
People I mix with do not have HIV	38.1	37	41.2	40	5.2	5	12.4	12	3
If I talk about AIDS, my partner will be insulted	38.1	37	38.1	37	12.4	12	7.2	7	4
If my partner asked me to use condoms, I would suspect his/her behaviour	47.4	46	25.8	25	16.5	16	7.2	7.2	3
HIV is not a problem in my community	48.5	47	34	33	8.2	8	8.2	7	2
AIDS does not concern me	73.2	71	13.4	13	0	0	12.4	12	1

The students exhibit attitudes of denial of risk. This is shown by the fact that 38% strongly disagreed that the people they mix with do not have HIV; and the same proportion strongly disagreed with the statement that if they talk about AIDS, their partners will be insulted. Less than half of the respondents (47%) disagreed with the statement, 'If a partner asked me to use condoms, I would be suspicious of his/her behaviour'; and about 49% strongly disagreed with the statement that 'HIV is not a problem in my community'. No significant difference was shown by the Chi-square test between males and females in all the statements save the statement 'If my partner asked me to use a condom, I would suspect his/her behaviour (see Table 4-9). Females were more likely not to think of the worst when asked to use condoms (χ^2 = 8. 25, d. f. = 3, P = 0.04).

These findings imply that most of these young people still deny their susceptibility to the risk of contracting HIV. The belief that being asked to use a condom prompts suspicion of behaviour may interfere with the intent to practice safer sex. According to the ASE model (Akande, 2001), what people think and believe affects how they behave.

Table 4-9 Correlation between gender and the statement "If my partner asked me to use a condom, I would be suspicious of his/her behaviour" (n= 94)

		If my partner asked me to use condoms, I would be suspicious of his/her behaviour					
		Strongly disagree	Disagree	Agree	Strongly Agree	Missing	Total
Gender	Male	7	9	3	4	1	23
	Female	39	16	13	3	2	71
Total		46	25	16	7	3	94

While intention has been claimed to be a predictor of behaviour, this finding indicates that other factors at play may prevent the expected behaviour, such as outcome expectancy. If the intention is to discuss AIDS but the feeling is that the partner will be insulted or there will be suspicion regarding behaviour, that negative outcome expectancy or even the subjective norm will interfere with the intention. Cultural beliefs may also contribute to the denial of risk as discussion of AIDS inherently means discussing sexual issues across gender, which is culturally considered taboo, as highlighted by Hendricks (2003).

While HIV transmission may be associated with the nature of certain practices, people must not be deceived that only those associated with such practices will carry the virus. If someone is not publicly involved in such practices, that person is considered safe,

which may be a misconception. Jackson (2000) argued that people would publicly endorse the moral norms while behaving contrary in private. The implication is that most of these young people will not bring up the subject of AIDS in their communication because of the expectations that they embrace. Programmes intended for this group must seriously deal with young people's lack of confidence in this area and emphasize the importance of assertiveness and communicating with potential sex partners so that discussion can be open and honest.

College students who hold the belief that the people they interact with do not have HIV are misleading themselves. This is because one cannot tell who has HIV by simple looking. Research has shown that most people do not disclose their status, especially if they are seropositive (Peltzer, 2003). This has a negative effect as it forms a barrier to perceived risk. The denial is also confirmed by the fact that less than half the group certainly agreed that HIV is a problem in their communities.

4.3.3 Tolerance/non-tolerance

Attitudes towards people living with AIDS are important as they determine how people living with HIV will be treated in the community. Negative attitudes about PLWHA are used to measure stigma. People's disclosure of their positive status depends a great deal on the outcome expectancies of the disclosure. Disclosure will be done if the outcome of the disclosure is associated with positive responses. The attitudes of the students are shown in Appendix G, Table 2.

Generally, college students exhibited little tolerance towards people living with AIDS. While the table shows positive attitudes towards people living with HIV in 8 of the statements, they were non-tolerant in 13 of the statements. Most students displayed tolerant and accepting attitudes by indicating these in statements such as "My friend with AIDS will remain a friend"; "People with AIDS should not be looked down upon"; and "I would teach an HIV positive student". More than half the students displayed negative attitudes through statements such as "Patients at home are a threat to others"; "I would avoid someone with AIDS"; "people with AIDS are dangerous in public"; and "I would be surprised to see a pastor carrying condoms".

Discrimination against AIDS patients can be seen in statements such as "Patients must be taken to special hospitals" (47%); and "I cannot eat with an HIV positive person" (21.6%); and 37% strongly disagreed that they would marry someone with AIDS. There were 62% responses that indicated that they acknowledge they know of someone who has died of AIDS in their community. A greater percentage of the students (63%) did not respond to the statement on reporting those who are HIV positive. The Chi-square test shows that there is no significant difference between males and females among those who did not respond with respect to the score (χ^2= 0.28, d. f =1, P= 0.59).

Noteworthy is the response to the statement about AIDS patients at home being a threat: 20% strongly agreed; this contradicted the response given by most (82%) who stated that they would care for a family member with AIDS. Chi-square analysis shows that there is

no significant difference between genders with respect to the statement that AIDS patients at home are a threat to others (χ^2= 1.4, d. f. = 3, P= 0.23).

The students were positive about teaching pupils with AIDS and that they should attend public schools, though 40% were not so certain. However, when it came to marrying someone with AIDS, most were negative (37% strongly disagreed, 35% disagreed). This may be due to the general understanding that AIDS is a death warrant. This finding may have a negative effect on people disclosing their status. Studies have revealed that disclosure of status is associated with expectancies regarding the outcome of the disclosure (Van Dyk & Van Dyk, 2003). Knowing that a potential life partner will decide otherwise if s/he knows that one is seropositive will not encourage a person to disclose his/her serostatus. Refusal to marry an HIV-positive person may be attributed not only to fear of contracting the virus but also to the fear of not bearing children and the cultural fear of inheriting the stigma of being a young widow/widower. Educational programmes may counteract this misconception by discussing other means of getting children with discordant couples and helping people not to think of AIDS as a death warrant.

The number of those who did not respond to the statement on reporting HIV cases was notable. Reasons for students not responding to this question are not known. This gap can be filled by an in-depth study in future to find out the reasons why a majority of the students would not want to be associated with any of the responses to this statement. It may be postulated that students fear that, if they agree, it may backfire when the

individual or a friend is the affected party. The stigma associated with HIV may also contribute to the non-responses. Reporting helps to provide statistics for informing and influencing policy.

About 18% of the students strongly agreed with the statement that AIDS patients must be taken to special hospitals, and about 20% strongly disagreed that people with AIDS live promiscuous lives; however, the difference between males and females was not significant (χ^2 = 0.98, d. f. = 3, P = 0.32). These negative attitudes may contribute to the stigma and discrimination that is attached to people living with HIV/AIDS. It may also account for why the students do not go for HIV-testing: because they fear being associated with HIV and promiscuity. This finding is in line with Abreu, et al. (2003), who found that most Latin Americans living with AIDS did not know because they had not been tested. Reasons given were that some avoid being tested because of the fear of the stigma or do not acknowledge that they are at risk. Educational programmes must deal with the judgemental attitudes against people living with AIDS as they are often wrong and propagate the silence associated with AIDS. Meanwhile, the virus is spreading and killing people.

Table 4-10. Does knowing someone who has died of AIDS influence willingness to refrain from unsafe sexual activity?

		Willing to refrain from unsafe sexual activity		
		Disagree	Agree	Total
Knowledge of someone who died of AIDS	Disagree	6	6	12
	Agree	6	68	74
Total		12	74	86

($?^2$ = 15.1, d. f. = 1, P = 0.001)

Cross tabulation of 'knowing someone who has died of AIDS' and 'willingness to refrain from unsafe sexual activity' shows that there is a relationship between the two (see Table 4-10).

Knowing someone who has died of AIDS was associated with willingness to refrain from unsafe sexual activity. Knowing someone who has died of AIDS was also associated with willingness to take a free blood test if available (?2 = 24.17, d. f. = 9, P = 0.004), encouraging condom use and willingness to inform a partner if a serostatus test indicates positive results (?2 = 3.42, d. f. = 1, P = 0.064) (see Appendix I Table 6a & b). The implication is that if more people disclose their positive serostatus, more people may be willing to refrain fom unsafe sexual activities, use or encourage condom usage and inform their partners of their positive serostatus. Intervention may achieve much by encouraging disclosure of serostatus, even at funerals, so that young adults may accept the reality of HIV/AIDS.

4.3.4 Fear

Fear of talking about HIV/AIDS renders people vulnerable to contracting the disease. Fear is also associated with stigma and discrimination. The attitude of the students is illustrated in Table 4-11.

TABLE 4-11 Fear/no fear (n=97)

FEAR/NO FEAR STATEMENTS	Strongly disagree		Disagree		Agree		Strongly agree		Missing
	%	n	%	n	%	n	%	n	
Have no fear to talk about AIDS to pupils	8.2	8	7.2	7	43.3	42	37.1	36	4
If I talk about AIDS, my partner is insulted	38.1	37	38.1	37	12.4	12	7.2	7	4
Cannot bring up the subject of AIDS with partner	35.5	34	29.9	29	22.7	22	9.3	9	3.
Can confidently lead an HIV discussion in church	16.5	16	8.2	8	37.1	36	34	33	4

Most of the students feared communicating with pupils about AIDS; a lesser proportion (37%) strongly agreed--an indication of more doubts or rather not being completely convinced about their communication skills, either due to inadequate knowledge or lack of self-confidence. About 38% felt that if they talk about AIDS, the partner will not be insulted; an equal proportion was positive but not so certain; and about 9% were certain they would not bring up the subject of AIDS with a partner. There was no significant difference shown by the Chi-square test between the genders (χ^2 = 5.33, d. f. =3, P = 0.15). About 35% were confident that they could bring up the subject of AIDS with a partner. About 34% felt that they could confidently lead an HIV discussion in church, while 66% were either not confident or could not lead an HIV discussion in church. The findings shows that about one-third of the students do not have fear of communicating about AIDS, either with pupils, with a partner, or in a public place like the church. Since the Chi-square found no difference between genders, intervention programmes must target both genders on the subject of fear.

Generally, students' attitudes are overwhelmed with fear, as about one-third of the group was absolutely positive in all the fear items. According to Keller (1998), fear is due to stepping out of one's comfort zone, a zone where one will discuss a subject without discomfort. A positive attitude is essential for establishing a comfort zone. This comfort zone is essential for college students, as they need to engage in discussions with pupils and with their potential sex partners. According to Hedgepeth and Helmich (1996), the comfort level of the educator is important for the learner because it can support or interfere with knowledge acquisition. This finding concurs with the previous finding in

the study that most students are not confident of their communication skills in the subject of HIV/AIDS.

Fear may also be due to the stigma associated with HIV and the anticipated effect, which tends to engender violence. HRW (2003) found that women could not discuss HIV with partners because violence ensued as HIV is coupled with promiscuity and or implies infidelity. According to Whiteside et al. (2003), women in Swaziland lack power, relatively, and men are superior in strength and in law. These factors, coupled with economic factors, render women vulnerable to infection because of the general fear of men.

4.3.5 Precautions

The attitude of college students towards precautions on preventing contracting the disease is important for the individual and for communicating with pupils. The students' attitudes are shown in Table 4-12.

TABLE 4-12 Precautious statements (n=97)

STATEMENTS	Strongly disagree		Disagree		Agree		Strongly Agree		% Missing
	%	n	%	n	%	n	%	n	
Would encourage condom use	7.2	7	6.2	6	41.2	40	43.3	42	2
If HIV positive, would tell my partner	8.2	8	6.2	6	43.3	42	39.2	38	3
Would take a free blood test if available	10.3	10	19.6	19	40.2	39	27.8	27	2
Willing to refrain from unsafe sexual activity	9.3	9	5.2	5	26.8	26	49.5	48	9
Students should learn about AIDS in their classes	6.2	6	1	1	23.7	23	68	66	1
Virginity is the most precious gift one can ever give	8.2	8	3.1	3	80.4	78	2.1	2	6

Generally, the college students rated low on precautious statements as less than half the group was certain in almost all the positive statements. While most of the students were in agreement with most of the precautious attitude statements, most of those assenting do not 'strongly agree'. About 28% strongly agreed they would take a blood test if available free. Less than half (49.5%) of the students were entirely willing to refrain from unsafe sexual activity. Only 2% strongly agreed that virginity is the most precious gift one can ever give, while 80% agreed with the statement.

The evaluation of attitudes to precautionary behaviours is crucial, as it has been documented that knowledge alone of protective strategies is an insufficient precursor to behaviour change. The low performance of college students on precautious statements can be explained by Akande's (2001) findings, which show that when in the developmental stage, young people tend to think that responsibility for precaution lies with one's partner and thus make an excuse for not initiating a discussion of such a precaution. The low proportion of college students who would take a blood test if available at no cost may be ascribed to the beliefs the students have concerning revealing their serostatus and the negativity associated with VCT. It also has implications for further study to find out the reasons students would not be motivated to take a blood test if available free and to get an explanation for their reluctance to refrain from unsafe sexual activity. This concurs with the fatalistic attitude in the study, where the college students indicated that there is very little one can do with HIV.

4.4 Sub problem 3: Risky sexual behaviour

The TRA suggests that subjective norms and one's attitude towards a particular behaviour influences one's intention to perform a behaviour (Rutter & Quine, 2002), while the SCT includes environmental factors. These theories underscore the importance of one's cognitive and interpersonal skills in processing information and the value of the significant others in influencing one's behaviour. Knowing risky sexual behaviours of the college students will assist in developing programmes that will enhance the comfort level of the student teacher and enable her/him to clarify information for pupils. Statements used to capture the risky sexual behaviours of the college students were divided into statements concerning sexual practices, perceived risk of contracting HIV and condom use. Self-efficacy and self-esteem have been used to determine the ability of the young people to execute a desirable behaviour.

4.4.1 Sexual practices

The frequency of sexual intercourse of the college students is shown in Figure 2. The sexual practices of the students show that 46.8% do not engage in sex even though 78% were involved in ongoing relationships (see Appendix H Table 4). About 18.2% engage in sex more than twice a month. The results show that a substantial proportion of the students do not engage in sexual intercourse. This finding is in line with Zaleski and Schiaffino (2000), whose reference group theory suggested that identifying with a particular religion would lead individuals to avoid risky sexual behaviour because of the teachings of their religions. The majority of the students are Protestants and Roman Catholics (75% & 15% respectively) and 75% indicated that they were active in their

churches. Both religions oppose premarital sex and condom usage. This finding has an implication for the role religious groups can have in influencing young people to abstain from premarital sex. Arnett (2001) also found that religiosity is associated with favourable adolescent outcomes.

Whether or not they have engaged in sex with a high-risk partner, worth noting is the 14.6% of those who were uncertain of the risky status of their partners. Among those who indicated that they have been involved with a high-risk partner (76%), 56% stated that they did not use the condom correctly in the last sexual encounter. The proportion of those who do not engage in sex can account for the greater percentage of those who disagreed. While one cannot be certain about the partner's risk involvement, one needs to be careful even with those who think they are certain of their partner's positive behaviour, as this can be deceiving (Ruiz, et al. 2001). Those who plan intervention must consider encouraging protective measures for all who engage in sex because one can never be certain of the behaviour of the partner when not under surveillance, especially in a country where multi-partners are a norm, coupled with an alarming HIV prevalence rate.

According to Shisana and Simbayi (2002), 62% of those who were found to be HIV positive thought they were at low or no risk of infection. It is encouraging to note that about 52% felt that it is possible to abstain from sex after being sexually active. The implication is that the idea of abstinence can be promoted, even among a sexually active

group, for safety measures. This finding is in line with Shisana and Simbayi (2002), who found that young people were now opting for secondary abstinence.

About 40 % have not seen any behaviour changes from their friends due to HIV. The effect of subjective norms is important because, according to the SCT, people learn not only from their experiences but also from observing the behaviour of others. Hedgepeth and Helmich (1996) say that the important others, such as friends, influence one's behaviour and the TRA posits that the significant others influence one's intention to perform a behaviour.

On the number of partners in the past 12 months, 45% indicated that they had no sexual partners, while 43% had one sexual partner. About 12% had two or more partners in the past 12 months (See Figure 3). Further analysis shows that 29% of the males and 48% of the females had no sex partners. There is a difference of nearly 20% in the prevalence of no partners, meaning that more females are delaying sexual activity.

The Chi-square test found a significant difference with respect to gender on the number of partners in the past 12 months ($?^2 = 7.40$, d. f. = 3, P = 0.06) (see Table 4-13). Females are more likely to have had one or no partner in the past 12 months.
It must be noted that those who indicated a zero number of partners included students with partners but not engaging in sex. The practice of having zero or one partner needs to be encouraged as it keeps people away from the risk of contracting HIV.

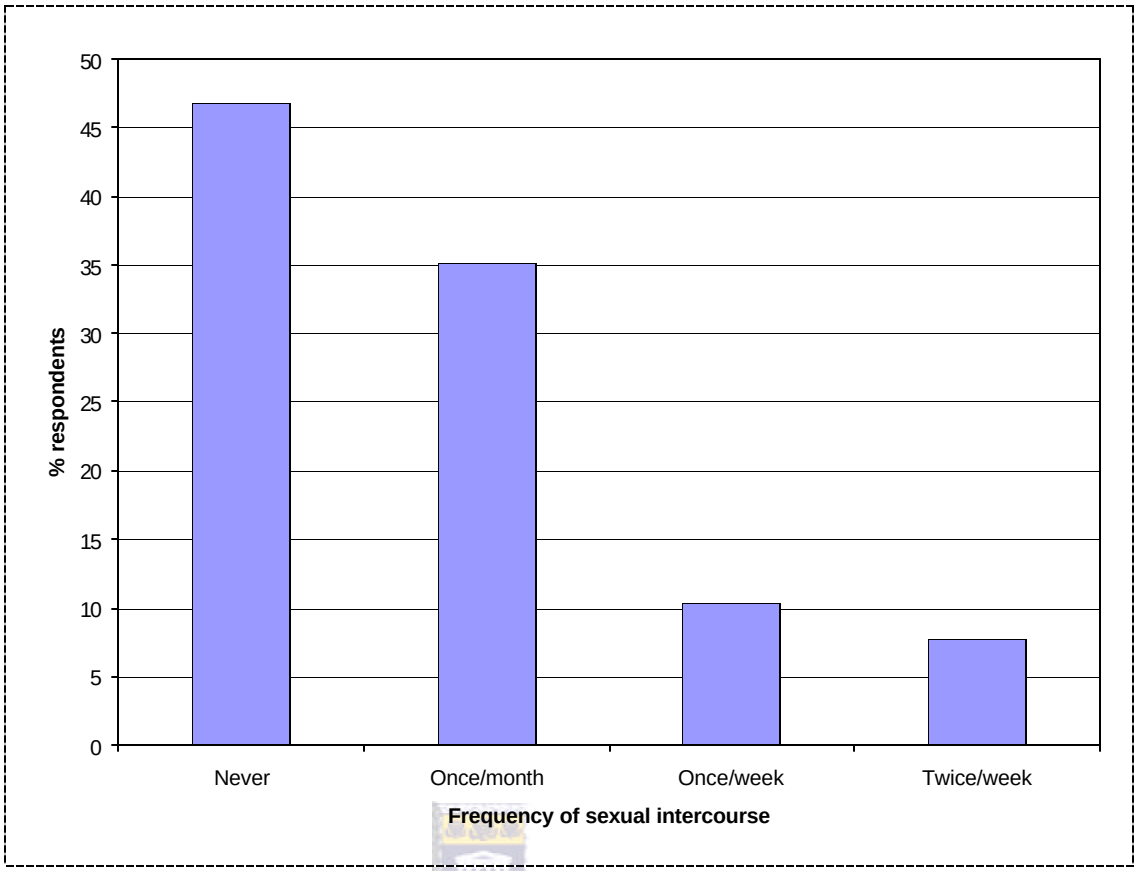
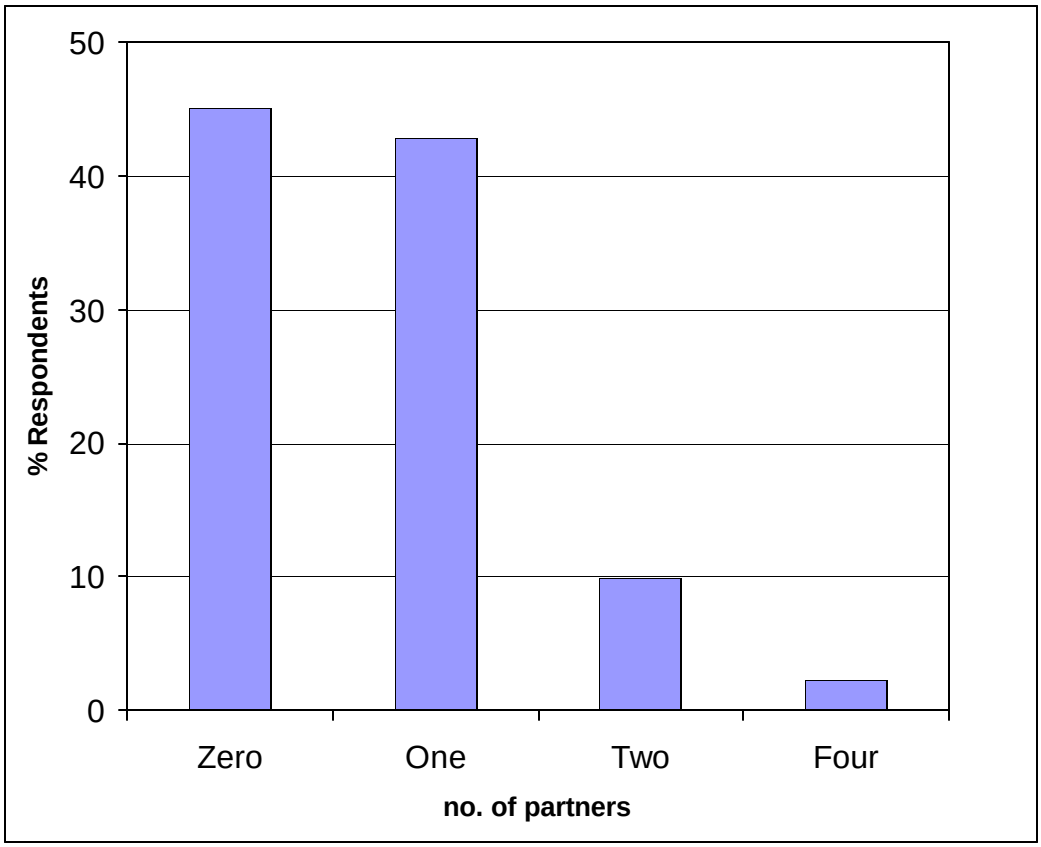


Figure 2 Sexual intercourse frequency (n= 77)

Table 4-13 Gender and number of partners in past 12 months

	No. Of partners in the past 12Months					
Gender	0	1	2	4	Unknown	Total
Males	7	9	4	1	3	24
Females	35	30	5	1	2	73
Grand Total	42	39	9	2	5	97

This finding contradicts the belief that college students have a tendency to change partners frequently (Anderson, et al. 1996; Gokengin et al., 2003), and can be attributed to strong religious affiliation.



(n= 91)

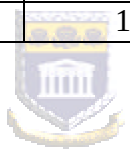
Figure 3 Number of sexual partners in past 12 months

Table 4-14 shows the responses of the college students as to how they handle sex and their perception of how their partners handle sex. About 31% indicated that they did not engage in sex with their partners, and 12.8% indicated that their partners do not engage in sex. About 64% of those who responded (n=61) stated that they had sex only with their partners, and about 32% thought their partners had sex only with them. About 8% felt their partners had sex with other people, and 46% felt that they did not know the sexual practices of their partners well. It was also encouraging to note that greater proportions

(63.9%) of the students in relationships were engaging in sex with their partners only. All the married students indicated that they had sex with their partners only. This needs to be encouraged because faithfulness to one partner is one of the desirable practices to be adopted in order to combat the spread of HIV.

Table 4-14 Handling sex

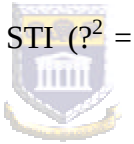
Handle sex options	% Respondent (n=61)	% Partner (n = 61)
Do not engage	31.2	12.8
Have sex only with partner	63.9	31.7
Sex with other people/anybody	1.6	7.9
Include same sex in relationship	3.3	1.6
Do not know	-	46
TOTAL %	100	100



Whether or not they have engaged in sex with a high-risk partner, worth noting is the 28% who were uncertain and the 8% who were certain that their partners are high-risk partners. A high-risk partner was defined as a partner who includes more than one partner in a sexual relationship, who injects drugs, has sex with others of the same sex, is HIV infected, or is an alcohol abuser. Less than a third (29.5%) indicated that they have heard of changes in behaviour due to HIV from friends. A majority (90%) would not exchange sex for money. A positive attitude was also observed from those who were honest about how their partners handle sex by indicating that they do not know, since one cannot know or confirm a person's behaviour. People have a tendency to say something yet behave contrary, especially where sexual issues are concerned.

STIs are associated with HIV infection and therefore the control and prevention of STIs is critical in the prevention of HIV (Shisana & Simbayi, 2002). On whether they have been treated for STIs in the past 12 months, 91% indicated that they have not, while 9% have been. The prevention and early treatment of STIs is a key strategy to help curb the spread of HIV as many STIs raise biological vulnerability to infection. The possible counselling of STI patients may help influence safe sex behaviour, thus possibly preventing potential HIV transmission.

Further analysis shows that some of those who have had STIs in the past 12 months also had more than one partner in the past 12 months. This implies that they are at high risk of contracting the virus. The Chi-square test indicated no significant difference between males and females with respect to STI ($?^2$ = 2.65, d. f. = 1, P = 0.27) in the past 12 months.



4.4.2 Perceived risk of contracting HIV

HIV risk perception can be defined as the respondent's opinion of their chances of contracting HIV/AIDS. The developmental stage of most college students renders them vulnerable to risky behaviours because they do not associate themselves with the consequences of the risks they may be involved in. Figure 4 depicts the responses of the students towards their perceived risk of contracting HIV.

The college students' perceived risk shows that 20% felt they were not at risk, 35% felt they were at risk and 45% did not know whether they were at risk or not. It can be

postulated that those who indicated that they did not know if they were at risk did so because they were not certain of the risk they were involved in due to uncertainty regarding their partners' status and because they themselves never took safety precautions when engaging in sex.

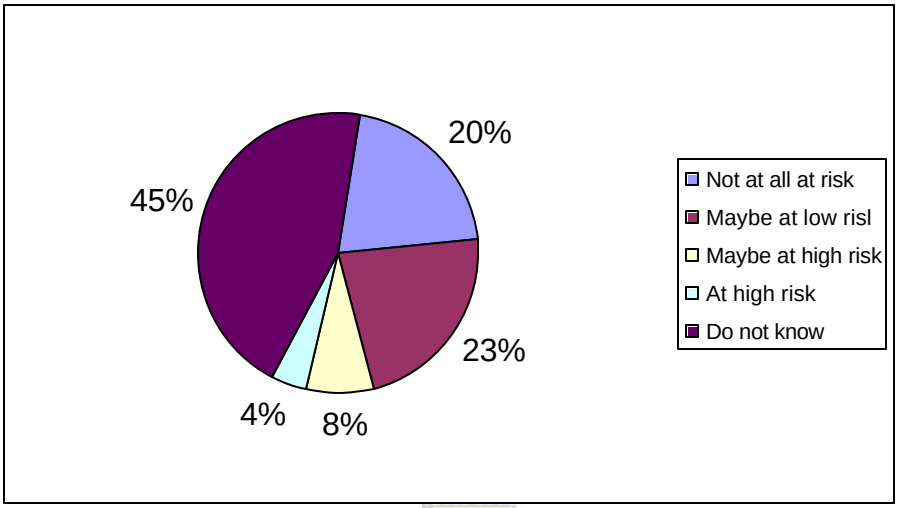


Figure 4 Perceived risk of contracting HIV (n=93)

This stage of young adulthood has been marked by a mode of thinking known as the personal fable (Arnett, 2001) or unrealistic optimism (Rutter & Quine, 2002), whereby the young person does not associate him/herself with the consequences of a risky behaviour. This finding concurs with Ruiz, et al. (2001), who found that even if individuals are worried about contracting HIV, their perception of the likelihood of actually contracting HIV is relatively low. Another danger is that those who consider themselves to be at low risk or not at all at risk may involve themselves in risky behaviour and contract the virus because of not taking precautions. They may also not consider going for testing because they consider themselves not at risk.

While the proportion of those not at all at risk (20%) may be explained by their not being involved in sexual encounters, the theory may not be discarded that some will never acknowledge the risk due to the personal fable or the unrealistic optimism described above. According to Abreu, et al. (2003), some do not or will not acknowledge that they are at risk. Shisana and Simbayi (2002) found that 62% of those who tested positive did not know because they never thought they were at risk.

When asked whether they knew their HIV status, 26% knew their status and 73% did not know their status. About 53% were willing to disclose their HIV status anonymously, and the 26% who disclosed their status had negative serostatus. The others could not disclose their status because they did not know their status, as they have indicated. Students need to be encouraged to go for testing so as to live positively. Implications for research are that a more in-depth search has to be conducted to elicit factors that inhibit students from finding out about their status, when more than 40% of the population is infected.

About 18% were concerned about contracting the virus from their partners. About 65% thought they could guess if a partner has been exposed to HIV and 35% felt it was unlikely for them to guess about a partner's exposure. Guessing about a partner's exposure is dangerous as people can behave differently in private from the way they do in public.

4. 4.3 Condom use

Condoms have been identified as an important barrier for avoiding contracting the disease among a sexually active group. The behaviour of college students has been displayed in Table 4-15a and 4-15b.

TABLE 4-15a Condom use

.

Condom use	% Yes		% No		Do not know		n =
	%	n	%	n	%	n	
Used condoms correctly in the last sexual encounter	71.2	37	28.8	15	-	-	52
Use condoms consistently	37.8	14	62.2	23	-	-	37
If provided free, would use condoms regularly	59.7	4	6.5	4	33.9	21	62

Amongst those who responded to this section, while 71% used condoms correctly, 62% could not use condoms consistently in the last sexual encounter. About 44 non-responses were obtained from the consistency section. This number includes those who are not sexually active because they do not have partners, those who have partners but are not engaging in sexual activity and those who are involved in sexual activity but do not use condoms consistently.

With respect to correctness of condom use in the last sexual encounter, there was a small difference between genders but this was not significant ($?^2$ = 2.08, d. f. = 1, P = 0.35). This issue of consistency and correctness of condom use needs to be emphasized as being parallel because one cannot be effective in the absence of the other.

The students rated averagely with condom use, an issue to be concerned with as most are sexually active. To be noted is that while 71% (n = 52) used condoms correctly in their last sexual encounter, only 38% agreed to having used condoms consistently (n=37).

TABLE 4-15b Condom use

Condom use items	Very un likely		Some what unlikely		Some what likely		Very likely		n =
	%	n	%	n	%	n	%	n	
Insist on condom use when engaging in sex	10.7	8	12	9	14.7	11	62.7	47	75
Provide condoms for us to use	9.3	7	12	9	16	12	62.7	47	75
Discuss condom use before having sex	10	8	3.8	3	15	12	71.3	57	80
Keep condoms in my purse or wallet	27.3	21	22.1	17	23.4	18	27.3	21	77
Look for condoms when sexually aroused	35.1	27	9.1	7	13	10	42.9	33	77
Use condoms with someone who insist is not infected	13.9	11	10.1	8	15.2	12	60.8	48	79
Tell partner no sex without condoms	10.2	8	5.1	4	19.2	15	65.4	51	78

About 60% of those who responded (n=62) could use condoms regularly if they were provided free. This undermines the issue of affordability because even if they were free, a reasonable proportion (40%) would still not use them, or rather are not certain if they would use them. The study found that these college students are doubtful about the effectiveness of freely distributed condoms, which also explains their reservations on using condoms if provided free. Beliefs about condoms are also clouded by religious inclination and cultural discourses about condoms in general. Further in-depth study needs to be carried out to identify reasons why this group may not prefer condoms.

Most students thought they could discuss condom use with partners before sex (71%; n=80) and that they could tell partners, "No sex without condoms" (65.4%; n=78), and more than half (61%; n=79) could insist on condom use with someone who insists s/he is not infected. Equal proportions (27.3%) would not keep condoms in proximity in case they are needed, but those who are positive would keep them. The reasons could be that most people delegate the duty of providing condoms to the partners and not to themselves. The danger of this practice is that both partners may not have them when they are needed, which destabilizes the intent of using them. This may inherently lead to unprotected sex. The possibility of not having condoms when they are needed may pose the prospect of not having them when they are required. With more than a third of the students not likely to look for condoms when they are sexually aroused, coupled with not taking the initiative of providing them, there is a likely danger of not using them even if the intention was to use them. I argue that while the ASE model suggests that intentions are a good predictor of behaviour, findings in the study suggests that there are other factors that may interfere with intentions, such as the initiative to keep condoms within reach when they are required. However, we can note that this group has shown negative attitudes towards condom use, which may account for their not being keen in keeping them for use.

Most African societies are dominated by cultural paradigms that have influenced men negatively on the issue of condom use. Hoosen and Collins (2004) found that men viewed condoms as barriers to pleasure. The condom has been viewed as a symbol of

promiscuity and an admittance or suspicion of infidelity (Kalipeni, et al., 2004; HRW, 2003).

Further analysis shows a U-shaped distribution on the statement of looking for condoms when they are sexually aroused (see Table 4-16). One group of the students seem to be saying that they would look for condoms and another group seem to be saying that it is very unlikely that they would look for condoms when sexually aroused. Intervention planning needs to promote condom use among sexually active groups or encourage people to be faithful to their partners and counteract myths associated with condom use.

Table 4-16 looking for condoms when sexually aroused (n = 77)

Look for condoms when sexually aroused	Very unlikely	Unlikely	Likely	Very likely
	37%	9%	13%	43%

There was no significant difference identified by the Chi-square test between males and females on condom use items.

4.5 Self-efficacy

Self-efficacy is important as it determines one's ability to execute a desired action even where there are obstacles. In this study, it was used as an important determinant of a desired behaviour. The responses of college students are shown in Table 4-17.

TABLE 4-17 Self-efficacy

Self-efficacy statements	Very unlikely		Some what unlikely		Some what likely		Likely		n =
	%	n	%	n	%	n	%	n	
Have us both tested	16.9	13	10.4	8	24.7		48.1	37	77
Insist on condom use if partner does not want to use condoms	15.2	12	11.4	9	12.7	10	60.8	48	79
Insist on condom use if partner gets angry	16.9	13	9.1	7	14.3	11	59.7	46	77
Insist on condom use when you know partner sleeps with other people	11.5	9	9.0	7	14.1	11	65.4	51	78
Insist on condom use when partner is under the influence of liquor	10.3	8	11.5	9	16.7	13	61.5	48	78

The self-efficacy of the students seems to be above average as most (more than 50%) could perform positively in all the self-efficacy items, but did not indicate strength. About 48% of the students were certain they could have both partners tested. Convincing a partner to go for testing requires negotiation skills, which may be lacking with most of the respondents. While most of the students have not seen the need or have not gone for testing themselves, it may not be easy to convince someone else to do it. It is usually equated to mistrust of the partner and may possibly thus sound not befitting to a potential sexual partner. According to the ASE model, the behaviour of the individual can be better predicted from the belief they hold about their capabilities than what they are actually capable of accomplishing. More than half the respondents believed they were not capable of convincing their sex partners to go for testing. It suffices to say that most will not effectively convince their partners. According to Parajes (2002), if negative thoughts and fears about capabilities are expected, self-efficacy perceptions are lowered and may trigger additional stress and agitation, which might underscore the inadequate performance they fear.

4.6 Self-esteem

Self-esteem is the overall evaluation of one's own worth (Epstein, et al., 2004). Self-esteem is considered a foundation for confidence and motivation (Norton & Dawson, 2000) to be able to say no to unwanted peer pressure, forced sex, and unprotected sex. Young men need to be emotionally aware so that they do not resort to violence to express self-worth, and women need to be able to resist destructive male dominance. In the HIV scenario, self-esteem is important, as a person who considers himself/herself to be worthwhile will refrain from endangering his/her life through exposure to HIV. The self-esteem of students is shown in Table 4-18.

TABLE 4-18 Communication skills for self esteem

Self-esteem items	Very Unlikely		Some What unlikely		Some What likely		Likely		n =
	%	n	%	n	%	n	%	n	
Ask partner about number of sex partners	18.5	15	14.8	12	17.3	14	49.4	49	90
Ask if partner has used intravenous drugs	12.5	10	12.5	10	26.3	21	48.8	39	80
Ask if s/he has had sex with intravenous drug user	13.2	10	22.4	17	28.9	22	35.5	27	76
Ask about exposure to HIV/AIDS	17.1	13	15.8	12	30.3	23	36.8	28	76
Ask if partner has had a relationship with a gay man/ lesbian	29.1	23	26.6	21	15.2	12	29.1	23	79
Ask to have a monogamous relationship	27.3	21	16.9	13	16.9	13	39	30	77
Tell partner if no condoms will end relationship	15.4	12	11.5	9	17.9	14	55.1	43	78

The students rated themselves low, as they cannot communicate acts that show their recognition of self-worth. Less than half the respondents do not consider themselves capable of finding out about the past of the partner or of requesting a partner to have a

monogamous relationship. Slightly more than half (55%) will be able to tell the partner that if they do not use the condom, they will end the relationship.

The lack of the students' communication skills may be attributed to the cultural socialization, which considers women to be legal minors and thus teaches them to be subservient to men (Whiteside, et al., 2003). This socialization renders women vulnerable and virtually unable to initiate a sexually related discussion. The majority of the respondents are women. The low self-esteem has also been confirmed by the low disclosure of serostatus of the respondents in the study. Intervention planners for this group must seriously consider programmes that will help the group to develop positive self-esteem, such that the college students will value themselves and engender discussions that will reveal the risks they may be involved in. According to Long-Middleton (2001), low self-esteem is associated with high-risk behaviour and with low precautious measures. That they did not rate so high on self-efficacy confirms the low self-esteem of the students.

Pearson's correlation coefficients for the instrument.

The correlation coefficients indicate a small positive relationship between the *attitude* items and the *knowledge* items. The measure of the internal correlation coefficient for knowledge items was 0.25 and for attitude items it was 0.62 (See Appendix I Tables 6c). These correlation coefficients indicated that there was a positive relationship between the items. The instrument used in the thesis was quite long and, as a result, the average number of miscounts increased from 0.014 to 0.197 per question (from knowledge to risky sexual practice items) towards the end of the questionnaire. This was an indication

of fatigue from the respondents. A much more condensed questionnaire could be used in future.

4.8.1 Chapter summary

The chapter considered the knowledge, attitudes and risky sexual behaviour of college students from the self-ratings responses. The study found that college students displayed inconsistent knowledge and negative attitudes towards people living with HIV/AIDS. The college students did not know their HIV serostatus and their risks of contracting HIV. Encouraging is the indication that a good proportion are delaying sexual activity or engaging with a single partner.

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the findings, the conclusion and recommendations based on the findings. The study aimed at describing the knowledge of HIV/AIDS, the attitudes towards it, and the risky sexual behaviours of college students of the Manzini Nazarene Teacher Training College in Swaziland. Before considering the findings, one must understand that Nazarene Teacher Training College is a missionary college with a strong Christian background. It is being run according to principles that strongly adhere to Christian beliefs. The results of this study cannot therefore be generalized to students from other national colleges.

5.2 Summary of the key findings

5.2.1 Knowledge of HIV/AIDS

The results of the study indicate that the college students have insufficient knowledge about the characteristics of the disease, in particular the asymptomatic and the window periods. Knowledge on transmission seems to be adequate, but they have great uncertainty and little understanding of transmission through oral sex and donating blood. Knowledge of prevention of infection is very low. The college students have doubts about the effectiveness of freely distributed condoms, which undermines the purpose of making free condoms available. The college students do not perceive condoms as the only protective barrier when engaging in sex and do not understand how female condoms

and male condoms complement each other. There was not much understanding of the female condom as some indicated that they could not imagine how the female condom works. Generally, there was lack of knowledge of and exposure to the female condom. Female students perceive condoms as a protective barrier but are faced with the obstacle of imbalance of power relations. The college students do not recognize VCT as a key response to the pandemic. Literature has shown that intensive counselling and knowledge of HIV status help individuals assess their level of risk, develop realistic plans to reduce their risk and increase safer sex practices (USAIDS, 2004). There was lack of knowledge on the policy of the college and its existence. Lack of policy or knowledge of the policy may have implications for the disclosure of serostatus, as students will not know what to do when they discover that they are seropositive.

5.2.2 Attitudes toward HIV/AIDS and people with AIDS.

5.2.2.1 Fatalistic attitudes and denial of risk

The findings reflect fatalistic attitudes as students felt that there was nothing one can do to avoid AIDS, safer sex was difficult to practice and that they were careful when choosing their partners. Students had doubts about whether they could have control over contracting HIV. This doubt might interfere with their self-efficacy. There was denial of risk as the students believed that the people they mix with do not have the virus; that if a partner asked them to use a condom, they would be suspicious of that person's behaviour; and that HIV/AIDS was not a problem in their communities. This may be attributed to the silence linked to people who die of AIDS, because doctors label opportunistic infections as causes of death. Cultural beliefs have been linked to the denial of risk, as

females have no control over their bodies and discussion of sex across gender is taboo. The presence of the HIV/AIDS pandemic is not acknowledged. The college students lack confidence and communication skills concerning HIV/AIDS. This is a serious matter as college students are prospective teachers and it is inherently their duty to communicate HIV information to pupils. Communication skills are particularly important for communicating with young pupils in primary schools.

5.2.2.2 Tolerance/non-tolerance.

Attitudes toward PLWA are mostly negative, as seen in statements such as that patients at home are a threat to others; PLWA must be taken to special hospitals; they cannot eat with someone with AIDS; and they would not consider marrying someone they knew to have the virus. They also have judgemental attitudes such as claiming that those with AIDS live promiscuous lives. Negative attitudes are associated with lack of knowledge on causes and transmission of the virus (Salati, 2004).

Many college students also hold positive attitudes; for instance, most stated that a friend with AIDS would remain a friend; that they would not avoid households with PLWA; that they have sympathy for PLWA; that AIDS is not a punishment for immoral behaviour; that people with AIDS should not be looked down upon; and that they would be prepared to teach an HIV-positive pupil. Positive attitudes may be attributed to the minimal knowledge the students have and the fact that caring attitudes are inherent in their personal characteristics as teaching naturally attracts personalities with a caring element. Knowing someone who has died of AIDS was associated with willingness to

refrain from unsafe sexual activity; willingness to take a blood test; encouraging condom use and willingness to inform a partner if a positive result is obtained from a test.

5.2.2.3 Fear

Fear is associated with talking about AIDS to pupils, partners and in public places. This raises concern, as the students are prospective teachers who need to display all the confidence they have to the pupils in order to be convincing. The fear may be attributed to lack of communication skills and/or to the cultural or religious beliefs they hold. Culturally, virtue is associated with naivety where sexual issues are concerned. There is a general understanding that when one talks about AIDS, s/he implies infidelity, promiscuity or mistrust and, therefore, violence may ensue. This is indicated by fear of bringing up the subject of AIDS with a partner. This silence is dangerous as it inherently increases the risk of infection.

5.2.2.4 Precautions

As most students could not 'strongly agree' with the precautious statements, there is an indication of hesitation with most precautious statements. These doubts have to be addressed as the college needs to produce a cadre of teachers who are sensitive, well informed and confident, to be able to create a positive, safe environment to educate children about HIV/AIDS. The fears that students have concerning HIV/AIDS are responsible for lack of confidence in taking precautions and communicating HIV/AIDS information. Intervention meant to address fear must assist students to gain confidence and empower them to fight the HIV pandemic.

5.2.3 Sexual practices

Most of the college students (78%) are involved in relationships, with a recognizable proportion abstaining from sexual practices. This is an indication that they are delaying sexual activity or opting for secondary abstinence. In this group, religious conviction and the fear of contracting the virus may be responsible for this abstinence. It is also encouraging to note that most students are either abstaining from sex or sticking to a monogamous relationship. Also, a majority would not exchange sex for money. This needs to be applauded, encouraged and reinforced as it deters students from risky sexual behaviours and reduces the chances of being at risk of infection.

The findings indicate that most students perceive their partners not to be at high risk. Students must be made aware of the fact that, in private, most people are capable of behaving contrary to what they proclaim publicly.

Most of the students do not know their HIV serostatus, and, as a result, they cannot get their partners to go for testing when they have not tested themselves. Research has revealed that one reason people will not consider testing for HIV is because they consider themselves not at risk of contracting the virus. Furthermore, those who are sexually active do not use condoms consistently. The students do not view condom use as an important barrier to infection for those engaging in sex, and, coupled with the questionable quality or effectiveness of freely distributed condoms, regular usage was not indicated even if condoms were provided free. Religious beliefs and culture had more influence on the issue of condom usage. While religion promotes abstinence as the most

effective protection against HIV, to those not yet converted, condoms may be promoted as an alternative, as findings show that there are students who are sexually active and at high risk of contracting HIV.

A majority of the students do not know if they are at risk or not. This suggests that these may not be practicing safer sex or that they are not certain about their partners' risky behaviours, as indicated by responses to the effect that they do not know about their partners' sexual activities.

College students rated averagely on self-efficacy and very low when testing involved the partner, which is understandable, as they have not realized the need for testing themselves. Females were more positive on insisting on condom use than their male counterparts. Given the background of the power imbalance that renders women vulnerable, this positive intention can be reinforced by empowering women to be able to resist HIV risk factors. The males also need to be empowered so that they take responsibility for their own health and for that of those around them.

The self-esteem of the students is quite low, which explains why their efficacy is not so high. This was reflected in responses that required the students to find out about the past and present behaviours of the partner that could put their own lives at risk. Students do not realize the importance of self-worth, which triggers concern about protecting the virtuous person s/he is. Intervention planned for this group must consider cultivating life

skills that are vital for protection against HIV infection. Such skills can be easily transferred to pupils if teachers possess them.

5.3 Conclusion

In conclusion, the study has achieved its objectives of describing the gaps in knowledge concerning AIDS, attitudes towards it and the risky sexual behaviours of college students. The gaps identified by the study are as follows:

5.3.1 There are gaps in knowledge of the asymptomatic and the window periods of HIV. Knowledge of transmission is insufficient where oral sex and donating blood are concerned. Condoms are not fully embraced as important barriers when engaging in sex, and the effectiveness of free condoms is questioned and doubted by the students. There is inadequate understanding of VCT as a key response to prevention of HIV. There is lack of knowledge on AIDS policy in the college.

5.3.2 Attitudes about PLWA and toward the disease revealed the following gaps:

Students display fatalistic attitudes by thinking that safer sex is difficult to practice. They are in denial of risk as they feel that AIDS is not a problem in their communities and that the people they interact with do not have the virus. Knowing someone who has died of AIDS was associated with positive attitudes such as encouraging condom usage, going for an HIV test and informing their partners of their serostatus when test results are positive. There are discriminatory and intolerant attitudes toward PLWA.

Most of the students would not consider marrying someone with HIV/AIDS.

Positive attitudes shown by the college students included caring for a family member with HIV/AIDS, teaching an HIV positive pupil, and that a friend with AIDS will remain a friend.

5.3.3 Risky sexual behaviours of college students include inconsistent use of condoms, not knowing their serostatus, and the risky sexual behaviours of their partners. Most would not keep condoms in proximity in case they are needed, and they would not look for condoms when they are sexually aroused. Those who use condoms do so inconsistently. The communication skills of the students are quite low, an element that renders them at risk since they cannot discuss with potential sex partners on matters pertaining to their safety of condoms. This is because they are reluctant to question their partners' past and current involvement in risky sexual behaviours.

5.4 Recommendations

It is important for college students to be knowledgeable about the disease and to have a positive attitude in order to teach pupils how to avoid HIV/AIDS infection. Schools have been identified as capturing a large audience of the youth with receptive minds and therefore are ideal places for imparting HIV/AIDS information. Based on the findings of the study, I would like to make recommendations for intervention for students doing teacher training:

5.4.1 There is need for information on the asymptomatic and the window period of HIV and these components need to be included in training programmes. Understanding these aspects will help make students aware that people can have the virus and it may not be detected because of the window period, yet is still capable of spreading the infection.

Oral sex must be included as one of the methods that can transmit the virus from one person to another, and understanding that oral sex is not a safe practice is to be emphasized.

Clarity on the hygienic conditions maintained when donating blood, which makes it impossible to contract the virus, should be provided. This will help prevent students from being deterred from donating blood as a vital entity for saving life.

5.4.2 VCT should be promoted as it is acknowledged within the international arena as an effective essential strategy for both HIV prevention and AIDS care. It will help to minimize the silence and the stigma associated with AIDS. This will also help to raise awareness of the magnitude of the disease in communities so that students will acknowledge themselves to be at risk. Knowing their positive serostatus will help people to assess their treatment options, live positively and obtain help early, before the development of AIDS. Those who test negative can be empowered to remain disease-free. All barriers that may hinder people from testing need to be addressed,

including availability of VCT centres. Intervention programmes must emphasize the importance of utilizing VCT services.

5.4.3 There is need to incorporate life-skills education such as means of communicating and negotiation of HIV/AIDS issues with pupils, partners and the general public so that college students are confident and are in a comfort zone to discuss AIDS.

College students should be empowered to be knowledgeable and to develop confidence so that they are able to discuss HIV/AIDS issues without fear, either with a potential sex partner, a pupil or in a public place.

There is need to improve the self-esteem of the college students so that they may be able to determine their risk of infection and be assertive enough to be able to initiate protective behaviour. Self-esteem will also help students to gain the confidence to discuss HIV/AIDS issues.

Intervention can also focus on encouraging both genders to take responsibility for their health and the health of those in their care so that HIV is viewed as everybody's responsibility.

5.4.4 Intervention strategies should concentrate on developing positive attitudes towards PLWA so that the fear and stigma are minimized.

5.4.5 The current training of staff in PLWA should sensitise these persons with judgemental attitudes which could negatively impact on HIV/AIDS

intervention programme as it could propagate the silence associated with HIV/AIDS.

5.4.6 The college, as an institute, should be encouraged to develop an HIV policy so as to set a good example to the students to be change agents. This will also add strength and support to the national AIDS policy.

The medical field has been able to design successful intervention programmes to combat diseases such as malaria, cholera, dysentery and the same can be done for HIV/AIDS. The message should be conveyed such that excessive levels of fear are not generated.

5.5 Recommendations for further research.

Further research should be conducted on the college students to identify:

5.5.1 Reasons for negative attitudes associated with condoms and lack of consistency in condom usage.

5.5.2 Reasons why college students could not respond to the issue of reporting AIDS cases.

5.5.3 Why a majority will not consider marrying someone who is HIV positive.

5.5.4 PLWAs in the college and find out about their feelings, treatment and disclosure of their serostatus.

5.5.5 The study employed a quantitative design with closed-ended questions. This posed restrictions on explanations that could have been provided by respondents in an interpretive paradigm. I recommend that a combination of focus-group discussions

and questionnaires could give much depth and voice to the responses.

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APPENDIX A: QUESTIONNAIRE

CONFIDENTIALITY: You are reminded that results will only be made known for the complete group; **NO** individual data will be disclosed.

SECTION A

WRITE YOUR ANSWERS IN THE SPACES PROVIDED.

1. How old were you in your last birthday? ……. Years.

Please put a cross over the one that corresponds to the answer you want to give.

2. What is your gender?	Male	Female
3. What is your marital status?	Single	Married

4. What is your religious affiliation?

Roman Catholic	Protestant
Moslem	Islam
Other (specify)…….	

5. Are you active in your church?	Yes	No

6. Which of the following best describe your living arrangement? Tick one.

Living alone	Living with parents
Living with roommates	Living with my spouse
Cohabiting with partner of opposite sex	Cohabiting with spouse of same sex
Other, please specify……..	

7. Do you drink alcohol?	Yes	No

SECTION B- KNOWLEGDE ITEMS

State whether you agree, may be agree, maybe disagree or disagree with the statements by putting a cross on the number corresponding to your answer.

	Statements	Agree	Maybe Agree	Maybe Disagree	Disagree
Example	HIV stands for Human- Immuno deficiency Virus.	1	2	3	4
1	AIDS is caused by HIV	1	2	3	4
2	AIDS is a condition in which the body's immune system is unable to fight infection.	1	2	3	4
3	AIDS can be detected in the blood immediately after becoming infected.	1	2	3	4
4	People with AIDS usually contract other diseases.	1	2	3	4
5	AIDS only affect gay men.	1	2	3	4
6	A person can get AIDS from sharing needles used to inject drugs.	1	2	3	4
7	Can get AIDS from shaking hands with someone	1	2	3	4
8	Can get AIDS by having sex with a prostitute without using a condom.	1	2	3	4
9	Can get AIDS from a mosquito bite.	1	2	3	4
10	Can get AIDS when donating blood.	1	2	3	4
11	Can get AIDS by being in the same class with an infected person.	1	2	3	4
12	Can get AIDS through having a blood test.	1	2	3	4
13	All babies born from HIV infected mothers have the virus.	1	2	3	4
14	It is not possible to contract the HIV virus if you use the withdrawal method of contraception.	1	2	3	4
15	Can get AIDS through unprotected sexual intercourse with infected people.	1	2	3	4
16	HIV can be transmitted from an infected mother to her unborn baby.	1	2	3	4
17	The virus can be passed on to some one else while the person appears very healthy.	1	2	3	4
18	A pregnant mother can take some medication to prevent infecting her unborn baby.	1	2	3	4
19	Traditional doctors can heal AIDS.	1	2	3	4
20	Birth control pills reduce chances of HIV infection	1	2	3	4
21	A person with HIV can look very healthy.	1	2	3	4
22	I know where to go to test for HIV.	1	2	3	4
23	Using a condom during sex can lower the risk of getting an HIV infection.	1	2	3	4
24	There are always visible signs when someone is infected.	1	2	3	4
25	Persons who are exclusively heterosexual are not at risk for AIDS.	1	2	3	4
26	Oral sex is safer than penile-vaginal sex	1	2	3	4
27	A person can be exposed to the virus in one sexual	1	2	3	4

	contact				
28	Can get AIDS during oral sex.	1	2	3	4
29	People who engage in anal sex cannot get infected.	1	2	3	4
30	College students cannot get infected because they are educated	1	2	3	4
31	VCT is key to the response to HIV/AIDS pandemic	1	2	3	4
32	Condoms are the only protective barriers to people who engage in sexual intercourse.	1	2	3	4
33	Female and male condoms complement each other.	1	2	3	4
34	Correctness and consistency underlines condom usage	1	2	3	4
35	Condoms reduce the chances of HIV infection	1	2	3	4
36	Freely distributed condoms are as effective as socially and commercially marketed condoms.	1	2	3	4
37	Persons affected with HIV/AIDS have loose morals	1	2	3	4
38	A pastor cannot get HIV	1	2	3	4

39. Does your college have an AIDS policy?	Yes	No	Do not know

SECTION C – ATTITUDE ITEMS

Make a cross on the number that corresponds to your response to the statements below.

	Statements	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
Example	AIDS is a worldwide problem	1	2	3	4
40	Everybody has AIDS, so why should I worry.	1	2	3	4
41	The people I mix wouldn't have AIDS	1	2	3	4
42	I am careful about how I choose my sexual partners, so I don't worry about AIDS.	1	2	3	4
43	I have no fear to talk about AIDS with pupils.	1	2	3	4
44	If I talk about HIV with my partner s/he may be insulted.	1	2	3	4
45	If my partner asked me to use a condom I'll be suspicious of His/her behaviour.	1	2	3	4
46	I would like to discuss AIDS precautions with my partner, but I cannot bring up the subject.	1	2	3	4
47	Safe sex is possible but difficult to practice.	1	2	3	4
48	There is nothing much one can do about AIDS; it is not worth taking precautions.	1	2	3	4
49	I would encourage the use of a condom.	1	2	3	4
50	I would teach a student who is HIV positive.	1	2	3	4
51	I know someone who has died of AIDS.	1	2	3	4
52	If my friend gets HIV, I will remain his/her friend.	1	2	3	4
53	I cannot eat together with an HIV positive person.	1	2	3	4

54	I would hug someone who is HIV positive	1	2	3	4
55	HIV is not a problem in my community.	1	2	3	4
56	People with HIV should be allowed to work and live in their community.	1	2	3	4
57	AIDS patients taken care of at home pose a threat to other family members.	1	2	3	4
58	If you are HIV positive, must give up because there is no future for you.	1	2	3	4
59	Households with HIV people must be avoided.	1	2	3	4
60	If I found out that I'm HIV positive, I will tell my partner.	1	2	3	4
61	I feel no sympathy for someone with AIDS.	1	2	3	4
62	People with AIDS are probably leading promiscuous lives.	1	2	3	4
63	I would frequent a business, which employed people with AIDS.	1	2	3	4
64	I would avoid someone if I knew they had AIDS.	1	2	3	4
65	People with AIDS are dangerous in public.	1	2	3	4
66	People with AIDS should be allowed to attend public school.	1	2	3	4
67	If a free blood test is available, I would take it.	1	2	3	4
68	I'm willing to refrain from unsafe sexual activity.	1	2	3	4
69	It is important that students learn about AIDS in their classes.	1	2	3	4
70	AIDS does not concern me	1	2	3	4
71	I will consider marrying someone with AIDS.	1	2	3	4
72	People with AIDS should not be looked down upon.	1	2	3	4
73	I will take care of a family member who has AIDS.	1	2	3	4
74	People with AIDS must be taken to special hospitals.	1	2	3	4
75	AIDS is a punishment for immoral behaviour.	1	2	3	4
76	AIDS cases should be reported.	1	2	3	4
77	People with AIDS are not going to heaven	1	2	3	4
78	I can confidently lead a discussion on HIV in church	1	2	3	4
79	I will not be surprised to see my pastor carrying condoms	1	2	3	4
80	Virginity is the most precious gift one can ever have	1	2	3	4

SECTION D – SEXUAL BEHAVIOUR

Please cross one number that corresponds to your response or write the answer in the space provided.

81. Which one of the following comes closest to describing your own sexual intercourse experience? Please put a **cross (X)** next to one below.

Never had sexual intercourse	Have sexual intercourse twice a day
Have sexual intercourse once a week	Have sexual intercourse twice a week
Have sexual intercourse once a month	

82. How many different partners have you had during the past 12 months? (If none please write 0)

Number of partners in the past twelve months…….

83. How would you rate your risk of contracting HIV?

Not at all at risk	Maybe at low risk
Maybe at high risk	At high risk
Do not know	

84. a. Do you know your HIV status?	Yes	No
b. Are you willing to disclose it anonymously?	Yes	No
c. What is your status	HIV positive	HIV negative
85. Do you have an ongoing relationship?	Yes	No

IF YOU DO HAVE A PARTNER CONTINUE TO ANSWER THE FOLLOWING QUESTIONS.

87. Did you use a condom during the last intercourse with your partner / partners?

Correctly	Yes	No
Consistently	Yes	No

88. Would you use condoms regularly if they were provided free?	Yes	No	Do not know

89. Which one of the following best describes how you and your partner handle sex? (**Cross one for prime respondent and one for your partner**).

Prime respondent		With respect to partner	
We do not engage in sexual activity		Does not engage in sexual activity	
I have sex only with my partner		Has sex only with me	
I have sex with anybody		Have sex with other people	
I include same sex in a relationship		Include same sex in a relationship	

90. Are you concerned about contracting HIV from your partner	Yes	No

91. Below is a list of things you may do or may not do when getting to know a new potential sex partner. Please indicate how likely it is that you would do each of the following. (**Cross one number for each).**

	Statement	Very unlikely	Somew hat unlikely	Some what Likely	Very likely
A	Ask how many sexual partners s/he has.	1	2	3	4
B	Discuss using a condom before having sexual intercourse.	1	2	3	4
C	Ask if she/he has used drugs intravenously (with a needle).	1	2	3	4
D	Ask if s/he has had a sexual relationship with an intravenous drug user	1	2	3	4
E	Try to guess if he/she has been exposed to AIDS.	1	2	3	4
F	Ask if he/she has been exposed to AIDS.	1	2	3	4
G	Keep a condom in my wallet or purse.	1	2	3	4
H	Have us both tested for AIDS	1	2	3	4
I	Ask if the person has had a relationship with a gay man.	1	2	3	4
J	Ask to have a monogamous relationship	1	2	3	4
K	Insist on using condoms when having intercourse	1	2	3	4
L	Provide the condoms for use.	1	2	3	4
M	Insist on regular condom use when your partner is under the influence of alcohol.	1	2	3	4
N	Stop, to look for a condom when you and your partner are sexually aroused.	1	2	3	4
O	Insist on condom use if your partner does not want to use one.	1	2	3	4
P	Continue to insist on condom use with a person who gets angry when you suggest it.	1	2	3	4
Q	Continue to insist on condom use with someone who says s/he is not infected with any disease.	1	2	3	4
R	Insist on condom use whenever you are with someone you know has sex with other people.	1	2	3	4
S	Tell your partner you are not going to have sex if condoms are not being used.	1	2	3	4
T	Tell him/her that true love never hurts or kills, so without a condom no sex or end of relationship.	1	2	3	4

92. Have you been treated for sexually transmitted infection in the last 12 months	Yes	No

93. State whether you agree or disagree with the following statement.

	Statement	**Agree**	**Disagree**	**Do not know**
a.	It is possible to abstain from intercourse for 6 months after	1	2	3

	you have had sexual intercourse?			
b.	I have engaged in sex with a high risk partner* in the last 12 months	1	2	3
c.	I have heard of changes in sexual behaviour from my friends because of AIDS.	1	2	3
d.	I would exchange sex for money.	1	2	3

* A high risk partner is a partner who engages in one or more of the following: men who have sex with other men, injection drug user, HIV infected person, alcohol abuser, men who have sex with multiple partners.

APPENDIX B: LETTER OF REQUEST FOR PERMISSION

UNIVERSITY OF THE WESTERN CAPE
Private bag X17, Bellville 7535. South Africa.
Telephone (021) 9592350/2273: Fax: (021) 959 3688.

DEPARTMENT OF HUMAN ECOLOGY

March , 2005.

The Principal.
Manzini Nazarene Teacher Training College.
P.O. Box 602.
Manzini. M200.
Swaziland.

Dear Madam,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH.

In response to the acknowledgement that HIV/AIDS is the most severe public health problem today, particularly among the youth, we are requesting to conduct a baseline study of the knowledge, attitudes and risky sexual behaviour of college students. In the absence of the vaccine, education remains the only defense against the progression of this global pandemic. It is imperative that educational programmes have to be developed. The aim of the study is to describe the knowledge, attitudes and risky sexual behaviours of the college students so that intervention programmes may be designed inline with gaps identified by this study.

The study will involve students in their third year of study, both males and females. Students will participate voluntarily and they can withdraw anytime when they no longer feel comfortable to continue with the process. No names or numbers will be used on the questionnaires to maintain confidentiality and anonymity. A counseling session has been arranged for students who may feel intimidated by the research. We assure you that the results will be published without distortion and used only for professional purposes. We undertake to provide the institution with a copy of the final report.

We sincerely hope that our request receives your favourable consideration and I thank you in anticipation.

Yours sincerely,

……..
Nomcebo Simelane

Supervisor:

……
Prof. P. Daniels

APPENDIX C: LETTER OF PERMISSION

APPENDIX D: LETTER TO PARTICIPANTS

UNIVERSITY OF THE WESTERN CAPE

Private bag X17, Bellville 7535. South Africa.

Telephone (021) 9592350/2273: Fax: (021) 959 3688.

DEPARTMENT OF HUMAN ECOLOGY

12th April, 2005.

Dear Respondent,

I am a Masters student in the Department of Human Ecology at the above-mentioned University. I am currently conducting a research on the knowledge, attitudes and risky sexual behaviours of college students with regards to HIV/AIDS. All the students in your class have been selected to form part of the study. The findings of the study will be used to design intervention programmes on the fight against the disease. Answering the survey is entirely voluntary.

You will see that although personal questions are asked, you do not identify yourself. The information you provide is completely confidential. I will not know who answered the questionnaire. The answers you give will form part of a large database, which cannot be used to identify individuals. For this reason we ask you to be entirely honest when answering. Please try to answer all questions that are applicable to you, however, if in the process you feel uncomfortable, you can withdraw your participation.

Your time in filling in the questionnaire is greatly appreciated. When you have completed the questionnaire please give it back to the lecturers concerned before going home in a sealed envelope provided.

Thank you for your cooperation.

Yours sincerely,

……..

Nomcebo Simelame.

Supervisor

……

Prof. P. Daniels.

APPENDIX E: CONSENT FORM

CONSENT PROTOCOL

I freely and voluntarily consent to participate in the research project under the supervision of Ms N. Simelane. I understand that I'm free to withdraw my participation in the research at any time.

The purpose of the research has been explained to me and I have been given the opportunity to ask questions about the research.

I understand that any information or personal details gathered in the course of this research about me are confidential and that neither my name nor any other identifying information will be used or published without my written permission.

I understand that if I have any complaints or concerns about this research I can contact the Ministry of Education at 404 24 91.

Signed:…….

Date:……

APPENDIX F: Table 1 knowledge on transmission (n = 97)

STATEMENTS	Agree		Maybe agree		Maybe disagree		Disagree		% Missing
	%	n	%	n	%	n	%	n	
Can get AIDS from sharing needles (drug use)	83.5	81	6.2	6	1	1	8.2	8	1
Virus can be passed on while the person appears very healthy	73.2	71	9.3	9	6.2	6	9.3	9	2.1
People can be exposed to the virus in one sexual contact	72.2	70	10.3	10	4.1	4	8.2	8	5.2
Can get AIDS by having sex with a prostitute without using a condom	63.9	62	17.5	17	8.2	8	9.3	9	1
Can get AIDS through unprotected sex with infected person	87.6	85	7.2	7	0	0	3.1	3	2.1
HIV can be transmitted from infected mom to unborn baby	69.1	67	21.6	21	1	1	7.2	7	1
Can get AIDS during oral sex	47.5	46	25.8	25	9.3	9	16.5	16	1
Can get AIDS by donating blood	19.6	19	19.6	19	9.3	9	50.5	49	1
Can get AIDS through having a blood test	8.2	8	12.4	12	8.2	8	71.1	69	0
All babies born from HIV positive mothers have the virus	8.2	8	14.4	14	19.6	19	57.7	56	0
Can get AIDS by being in the same classroom with an infected person	3.1	3	1	1	3.1	3	91.8	89	1
Not possible to get HIV when using the withdrawal method of contraception	6.2	6	2.1	2	8.2	8	83.5	81	0
Persons exclusively heterosexual are not at risk	2.1	2	18.6	18	14.4	14	62.9	61	2.1
Oral sex is safer than penile-vaginal sex	12.4	12	21.6	21	15.5	15	48.5	47	2.1
A pastor cannot get AIDS	10.3	10	0	0	1	1	87.6	85	1
People engaging in anal sex cannot be infected	8.2	8	4.1	4	7.2	7	80.4	78	0
College students cannot be infected	6.2	6	1	1	2.1	2	88.7	86	2.1
Can get AIDS from a mosquito bite	4.1	4	7.2	7	10.3	10	78.4	76	0
Birth control pills reduces chances of infection	4.1	4	4.1	4	3.1	3	87.6	85	1

APPENDIX G: TABLE 2 Tolerance/ non-tolerances (n=97)

TOLERANCE/NON-TOLERANCE	Strongly disagree		Disagree		Agree		Strongly Agree		% Missing
	%	n	%	n	%	n	%	n	
AIDS patients at home are a threat to others	14.4	14	25.8	25	38.1	37	19.6	19	2.1
Would avoid households with HIV people	55.7	54	24.7	24	3.1	3	11.3	11	5.2
Feel no sympathy for someone with AIDS	57.7	56	21.6	21	4.1	4	13.4	13	3.1
People with AIDS live promiscuous lives	21.6	21	37.1	36	22.7	22	10.3	10	8.2
Would avoid someone with HIV/AIDS	41.2	40	39.2	38	4.1	4	9.3	9	6.2
People with AIDS are dangerous in public	38.1	37	38.1	37	10.3	10	9.3	9	4.1
People with AIDS must be taken to special hospitals	22.7	22	25.8	25	29.9	29	17.5	17	4.1
AIDS is a punishment for immoral behaviour	63.9	62	16.5	16	9.3	9	8.2	8	2.1
AIDS cases should be reported	14.4	14	9.3	9	9.3	9	4.1	4	62.9
People with AIDS will not go to Heaven	74.2	72	11.3	11	1	1	11.3	11	2.1
Cannot eat with an HIV positive person	30.9	30	25.8	25	18.6	18	21.6	21	3.1
Would teach an HIV positive student	7.2	7	1	1	40.2	39	50.5	49	1
Know of someone who died of AIDS	5.4	5	7.2	7	21.6	1	61.9	60	4.1
Would hug someone who is HIV positive	8.2	8	7.2	7	35.1	34	46.4	45	3.1
Would frequent a business employing HIV + people	8.2	8	26.8	26	44.3	43	18.6	18	2.1
Pupils with AIDS should attend public schools	8.2	8	10.3	10	40.2	39	39.2	38	2.1
Will not be surprised to see a pastor carrying condoms	21.6	21	6.2	6	25.8	25	42.3	41	4.1
People with AIDS should not be looked down upon	12.4	12	3.1	3	27.8	27	54.6	53	2.1
Will care for a family member with AIDS	10.3	10.3	8.2	8	32	31	49.5	48	0
My friend with AIDS will remain a friend	8.2	8	6.2	6	26.8	26	54.6	53	4.1
Will consider marrying someone with AIDS	37.1	36	35.1	34	16.5	16	8.2	8	3.1

Table 2 perceptions on safe sex difficult to practice

		Safe sex possible but difficult to practice				Total
		Strongly disagree	Disagree	Agree	Strongly agree	
Gender	Male	4	9	5	5	23
	Female	14	16	24	16	70
Total		18	25	29	21	93

APPENDIX H

Table 3 Females perceptions on condoms being the only protective barrier and the effectiveness of free condoms.

Condoms the only protective Barrier	Free condoms as effective as commercial ones				
	Agree	Maybe Agree	Maybe Disagree	Disagree	Total
Agree	9	11	5	5	30
Maybe agree	7	7	2	2	18
Maybe disagree	2	2	1	2	6
Disagree	6	5	1	6	19
Total	24	25	10	15	73

Diagonal of agreement

S of numbers below ? = 23
S of numbers above ? = 27

Table 4 Are you involved in an ongoing relationship?

		Frequency	Valid Percent	Cumulative Percent
Valid	Yes	71	78.0	78.0
	No	20	22.0	100.0
	Total	91	100.0	
Total		97		

Table 5 Chi-square test for gender on consistency for condom use

	Males	Females
Consistency of condom use	Total	Total
No	4	10
Yes	8	15
Blanks	12	48
	24	73

Test Statistic CHI-Squared = 2.0801
P-Value = 0.3534

APPENDIX I

Table 6a knowledge someone with AIDS influence of taking a blood test

		Would take a free blood test if available free		
		Disagree	Agree	Total
Knowledge of someone	Disagree	7	5	12
	Agree	20	60	80
Total		27	65	92

Table 6b knowledge of someone with AIDS influence on telling partner positive serostatus

		Would take a free blood test if available free		
		Disagree	Agree	Total
Knowledge of someone	Disagree	4	8	12
	Agree	10	69	79
Total		14	77	91

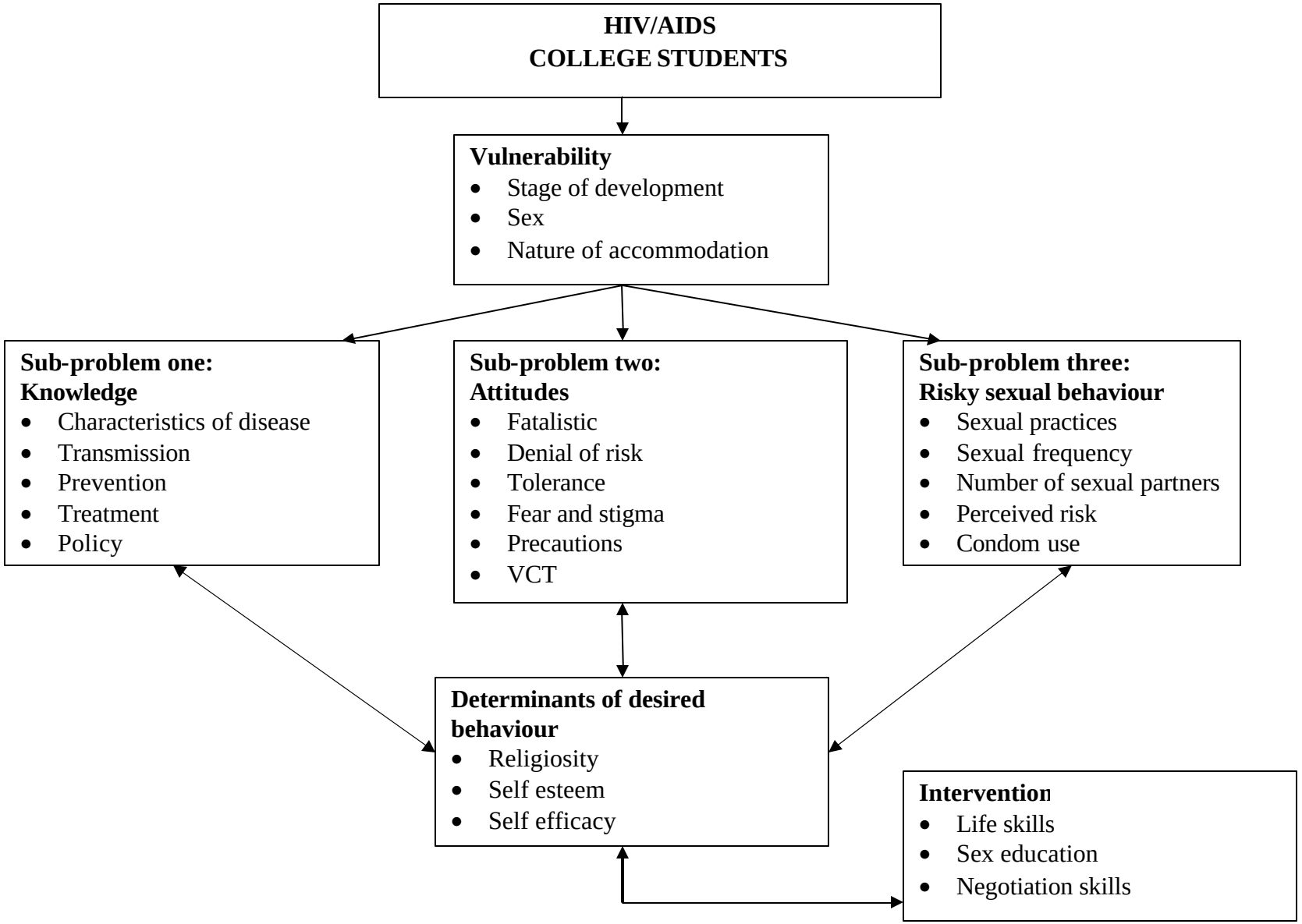
Table 6b Summary of Correlation coefficients between the items of attitude and knowledge.

	Age	*TransQ*	*TransS*	*Charac*	*Prevent*
Age	1	-0.156	0.124	0.070	0.192
TransQ	-0.156	1	0.069	0.419	0.244
TransS	0.124	0.069	1	0.200	0.222
Charac	0.070	0.419	0.200	1	0.333
Prevent	0.192	0.244	0.222	0.333	1
Fatalistic	-0.069	0.178	0.143	0.241	0.135
Denial	-0.128	0.181	0.207	0.095	0.038
Tolerance	-0.074	0.268	0.291	0.150	0.162
Fear	0.000	0.071	0.180	0.162	0.187
Precautious	-0.089	0.111	0.297	0.091	0.106

Table 6b

	Age	*Fatalistic*	*Denial*	*Tolerance*	*Fear*	*Precautious*
Age	1	-0.069	-0.128	-0.074	0.000	-0.089
TransQ	-0.156	0.178	0.181	0.268	0.071	0.111
TransS	0.124	0.143	0.207	0.291	0.180	0.297
Charac	0.070	0.241	0.095	0.150	0.162	0.091
Prevent	0.192	0.135	0.038	0.162	0.187	0.106
Fatalistic	-0.069	1	0.665	0.625	0.625	0.510
Denial	-0.128	0.665	1	0.645	0.646	0.631
Tolerance	-0.074	0.625	0.645	1	0.567	0.728
Fear	0.000	0.625	0.646	0.567	1	0.586
Precautious	-0.089	0.510	0.631	0.728	0.586	1

APPENDIX J


HIV/AIDS
COLLEGE STUDENTS
Vulnerability
Stage of development
Sex
Nature of accommodation
Sub-problem one:
Knowledge
Characteristics of disease
Transmission
Prevention
Treatment
Policy
Sub-problem two:
Attitudes
Fatalistic
Denial of risk
Tolerance
Fear and stigma
Precautions
VCT
Sub-problem three:
Risky sexual behaviour
Sexual practices
Sexual frequency
Number of sexual partners
Perceived risk
Condom use
Determinants of desired behaviour
Religiosity
Self esteem
Self efficacy
Intervention
Life skills
Sex education
Negotiation skills

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