SELF REPORT FACTORS RELATED TO HIV/AIDS AMONG ZULULAND UNIVERSITY STUDENTS.

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ABSTRACT

This study was aimed at describing levels of AIDS knowledge, HIV infection and risk reduction, attitudes towards AIDS and people with AIDS (PWAs), sexual behaviour, condom use as well as attitudes, beliefs and perceptions about condoms, the impact which perceived norms and self-efficacy have on condom use, sexual behaviour and AIDS preventative behaviour(APB). Results of the study have shown that knowledge levels were high among Zululand university students. A comparison of the different sexes shows that females had a slightly higher level of knowledge than males. The three most popular choices identified as sources of AIDS knowledge were campus health, clinic/doctor and a friend. The majority of the sample was negative, rejecting and intolerant with regard to the proximity to PWAs. Many also held judgemental, fatalistic and moralistic attitudes with regard to AIDS and PWAs. Half of the respondents showed compassion with regard to the legal and social welfare of PWAs. The majority of the sample was sexually active, with a substantial number of subjects engaging in sexual intercourse with multiple partners. Condoms were least used among this latter group and only a third used condoms consistently. However, the majority intended to use condoms in future sexual encounters and this intention was stronger among students with one sexual partner. The Pearson product moment correlation revealed that attitudes, perceived norms and self-efficacy were associated with condom use and sexual behaviour. Knowledge of AIDS per se had no impact on sexual behaviour and condom use. The multiple regression analysis showed that attitudes and self-efficacy are the strongest predictor variables of condom use. Finally gender had no effect on sexual activity, number of sexual partners, condom use, perceived norms and self-efficacy.

CONTENTS

Chapter 1 : INTRODUCTION

1.1. Motivation for the study
1.2. Conceptual framework
1.3. Statement of the problem
1.4. Aims of the study
1.5. Hypothesis
1.6 Value of this research

Chapter 2 : LITERATURE REVIEW

2.1 Review of relevant studies
2.1.1 A study by Perkel, Strebel and Joubert (1990)
2.1.2 A Study by Mathew, Kuhn, Metcalfe, Joubert and Cameroon (1990)
2.1.3 A study by Friedland, Jankelowitz, De Beer, De Klerk, Khoury, Csizmadia and Padayachee (1991)
2.1.4 A study by Elkonin (1993)
2.1.5 A study Mickler (1993)
2.1.6 A study by Mati (1996)
2.2 Review of relevant themes
2.2.1 Determinants of condom use.
2.2.1.1 Monogamy, trust and faith
2.2.1.2 Knowledge of and misconceptions about condoms
2.2.1.3 Access to condoms
2.2.1.4 Barrier to sexual pleasure
2.2.1.5 Drinking, drug use and unprotected sex
2.2.1.6 Communication
2.2.1.7 Condoms and the male ego/gender role expectation
2.2.1.8 Gender power relations
2.2.1.9 Self-efficacy and condom use
2.2.2 Perceived invulnerability
2.2.2.1 Unrealistic optimism
2.2.2.2 Health belief schema
2.2.2.3 Management of anxiety
2.2.3 Self-efficacy: exercising self control
2.2.3.1 Self-efficacy
2.2.3.2 Self-efficacy and adoption of safer sexual practices
2.2.3.3 Social proficiency and resiliency of self-efficacy
2.2.4 HIV/AIDS Prevention

2.2.4.1 The effect of group norms, values and beliefs: Using groups, normative influence or reference group based social influence on HIV risk behaviour and prevention
2.2.4.1.1 Social influence
2.2.4.1.2 Social network values/normative influence
2.2.4.1.3 Informational social influence
2.2.4.1.4 Making APB consistent with network values
2.2.4.1.5 The role of the media
2.2.4.1.6 Social psychology and HIV prevention

Chapter 3 : METHOD

3.1 Sample
3.2 Data collection
3.2.1 Questionnaire development
3.2.1.1 Biographical data.
3.2.1.2 Knowledge section
3.2.1.3. Attitude section
3.2.1.4 Sexual behaviour and condom use section
3.2.1.5 Validity and reliability of the questionnaire
3.2.1.6 Students' perceived norms for safer sexual practices section
3.2.1.7 Self-efficacy section
3.3 Data analysis

Chapter 4 : RESULTS

4.1 Knowledge about AIDS
4.2 Chi-square analysis for knowledge about AIDS
4.3 Correct responses to individual statements in the AIDS/HIV knowledge section
4.4 Sources of knowledge
Results on where students have learned/heard about AIDS
4.5 Results on where students would like to get information about AIDS
4.6 Results on people with whom students have discussed AIDS
4.7 Results on perceived norms
4.8 Results from the AIDS attitude scale: factor 1
4.9 Response frequencies of the AIDS attitude scale: factor 1
4.10 Results from the AIDS attitude scale: factor 2
4.11 Response frequencies of the AIDS attitude scale: factor 2

4.12 Results from the AIDS attitude scale: factor 3
4.13 Response frequencies of the AIDS attitude scale: factor 3
4.14 Attitudes towards the existence of AIDS
4.15 Results on the number of respondents who are currently sexually active
4.16 Results on the number of sexual partners over the past six months
4.17 Results on the number of sexual partners over the past two years
4.18 Results on condom use over the past six months
4.19 Results on future condom use
4.20 Results on a place where students can get condoms
4.21 Results on willingness to use condoms
4.22 Results on self-efficacy
4.23 Results on the subjects' attitudes, perceptions and beliefs about condoms
4.24 Relationship between knowledge, attitudes, perceived norms, self-efficacy and sexual behaviour.
4.25 Regression equation for predictor variables of condom use
4.26 The stepwise and enter regression methods for predictor variables of condom use
4.27 Gender and AIDS knowledge
4.28 Gender and attitudes
4.29 Chi-square for males and females on the number of sexual partners in the past six months
4.30 Chi-square for males and females on the number of sexual partners in the past two years
4.31 Chi-square for past condom use by males and females
4.32 Chi-square for future condom use by males and females
4.33 Chi-square for males and females regarding a place where they could obtain condoms
4.34 Independent t-tests for males and females on perceived norms
4.35 Independent t-tests for males and females on self-efficacy

Chapter 5: Discussion

5.1 Knowledge of AIDS
5.2 Sources of knowledge
5.3 Attitudes
5.4 Sexual behaviour and condom use
5.5 Attitudes, beliefs and perceptions about condoms
5.6 Self-efficacy
5.7 Perceived norms

5.8 Relationship between knowledge, attitudes, perceived norms, self–efficacy, sexual behaviour and condom use.
5.9 Theoretical framework
5.10 Limitations
5.11 Conclusion

CHAPTER 1 - INTRODUCTION

1.1 MOTIVATION FOR THE STUDY

Since the emergence of the epidemic in the 1980s, Acquired Immunodeficiency Syndrome (AIDS) has become an increasingly serious health threat and the most feared disease world-wide.

As there is no known vaccine for AIDS, predictions of its consequences with respect to human suffering, population growth and monetary implications have received tremendous attention. Futile attempts have been made to play down the extent of the menace by comparison with mortality figures of other major infectious and non-infectious diseases. However, this ignores the compendium of features that collectively make AIDS a dreadful disease (Schoub, 1990).

Regardless of the fact that the dread of AIDS has caused worldwide panic, research has shown that most people have been reluctant to adopt safer sexual practices in order to eliminate the likelihood of being infected with the AIDS virus (Hein, 1992). Most people still deny that anyone, irrespective of race, colour, age or gender has the potential of contracting the virus which leads to AIDS.

In recent years it has become commonly known that young people, specifically between the ages 15-29, are a high risk group for contracting HIV infection because of the high incidence of unprotected coitus among this group (Brown, DiClemente & Reynolds, 1991; Slonim-Nevo, Ozawa & Auslander, 1991; Hein, 1992; Le Roux, 1994; Sugerman, Hergenroeder, Chacko & Parcel, 1994). According to Hevesi (1989), there will be fewer 15-24 year olds in the year 2000 than in 1980 in the United States. Moreover, AIDS is the sixth leading cause of death among young people aged 15-24 years.

The fifth International Conference on AIDS, in Montreal in June 1989, highlighted the high level of awareness among young people regarding the medical and scientific facts about HIV/AIDS. It was evident that young people were aware of the Human Immunodeficiency Virus (HIV), which leads to AIDS, its mode of transmission, possible risk reduction behaviour and safer sexual practices, particularly condom use. However, at the same conference it was also emphasised that young people be targeted with more factual information regarding HIV infection and AIDS.

Du Plessis (1993), states that the focus on AIDS information programmes has up to now been mostly on empowering people with knowledge and changing attitudes, to the extent that many young people are now "fed up" with hearing about AIDS, yet still possess very little wisdom about it. However, common sense and our daily experiences tell us that there are often significant contradictions between what people know (knowledge) and what they do (behaviour), specifically regarding health matters (Aggleton & Warwick, 1989). For example, even though people may know that excessive consumption of salt may be a health hazard, they may still season their food with more salt to make it tastier. Similarly, most cigarette smokers are well informed regarding the potential hazards of tobacco use, but their smoking patterns remain unchanged as they persist in smoking twenty or more cigarettes a day.

These discrepancies may be attributed to several causes. "Firstly, they arise because human behaviour is context bound"(Aggleton & Warwick, 1989:19). Community health workers, for example, may behave differently when working professionally with adults, with the youth, with their colleagues and with their peers. They may have the knowledge about the same things in each of these situations, but they may behave differently, their actions being influenced or determined by circumstances beyond their control, expectations of those in their immediate surroundings, and objectives they are trying to achieve. The same may be true for all of us. The extent to which we are able to maintain safer sexual practices, may be mediated by our perceptions of our partner(s), circumstances beyond our control as well as external pressures on us to practice safer sex in specific ways. A study conducted on young people's beliefs regarding HIV infection and AIDS, reported that 25% of the respondents felt that external forces such as parents, boyfriends, the government and politics in general influenced their daily lives.

Bandura, 1990; Friedland, Jankelowitz, De Beer, De Klerk, Khoury, Csizmadia, Mathews, Kuhn, Metcalf, Joubert & Cameron, 1990, Padayachee & Levy, 1991; state that knowledge about AIDS and safer sexual practices are necessary but insufficient in encouraging appropriate behaviour change. A study carried among college women in New York with regard to their sexual behaviour reported little change in their patterns of sexual activity in response to new epidemics of sexually transmitted diseases. This is also consistent with results of a study which was conducted among university students in Southern California. It has been found that this attitude was prevalent irrespective of the fact that many students possessed a high level of knowledge about AIDS and related risk factors (Friedland et al.,1991).

Furthermore, past research on intervention to change premarital sexual behaviour, smoking, drinking as well as unsafe sexual practices suggests that knowledge per se neither encourages positive attitudes nor appropriate behaviour change. Therefore, in the light of the above Mathews et al., (1991) assert that many variables including one's attitudes, knowledge, values, beliefs, cultural norms and the influence of significant others (family, friends, peers) play an active role in determining whether or not socially acceptable sexual behaviour is practised.

It has also been assumed that a strong relationship exists between attitude and behaviour. However, consequent research conducted in the late 60s disputed this assumption. Results revealed a positive but rather weak relationship between attitudes and behaviour (Louw & Edwards, 1993). In other words attitudinal change does not necessarily lead to behaviour change. Several possible reasons have been suggested for this weak relationship: social norms may pre-empt us from acting on our attitudes, significant people in our daily lives may not share similar attitudes and they may play an active role in discouraging us from engaging in specific actions. For example, on the one hand, you may hold strong positive attitudes toward contraceptives (including condoms). On the other hand, you may have to contend with a social norm or a religious belief held by other significant people (peers, parents, church and friends) that strongly oppose contraceptive use.

In the light of what has been stated above, this study will research the popular KABP (knowledge, attitudes, beliefs and practices) factors which is characterised by the appraisal of knowledge of AIDS, attitudes toward AIDS and sexual behaviour/practices of the sample population. However, it will also expand on these psychosocial dimensions by incorporating the role played by social/perceived norms (parents, peers/friends), perceived invulnerability and self-efficacy in influencing sexual behaviour and condom use. The study will also investigate the role of normative pressure in HIV prevention. This study will also explore students' attitudes towards condoms and condom usage as well as their attitudes towards practices such as interfemoral sex, masturbation and celibacy.

In the present study it was predicted that knowledge about AIDS would play a non significant or minimal role in behavioural change, adoption of safer sexual practices and HIV prevention because information alone is not a sufficient determinant of self motivated behaviour change (Wulfert & Wan, 1993). This perception has been supported by empirical research from studies that have generally little or no relationship between people's knowledge about AIDS and the reduction of risk (Baldwin & Baldwin, 1988; Becker & Joseph, 1988; DiClemente, Forest & Mickler, 1989). It was also predicted that university students have a relatively high knowledge

of HIV/AIDS but this is not sufficient to encourage AIDS preventative behaviour or changes in sexual behaviour. It was also predicted that positive attitudes towards AIDS are marginally related to safer sexual practices or the adoption of HIV preventative behaviour and condom use.

Furthermore, it was also predicted that students would believe that their parents/family members and peers would influence their practising safer sexual behaviours which would in turn result in the adoption of AIDS preventative behaviour (condom use).

1.2 CONCEPTUAL FRAMEWORK

In South Africa as elsewhere, unprotected and exploratory sexual relations with multiple partners are responsible for the spread of sexually transmitted diseases (including AIDS).

Numerous models have been used in explaining people's behaviour with regard to HIV/AIDS. In view of this fact an extension of Ajzen & Fishbeins' (1990), Perceived Behaviour Control model will be adopted as a conceptual framework for this study. In accordance with this adapted model of perceived behaviour control, people's behaviour is best understood by the following factors:

- Beliefs and knowledge concerning the consequence or outcomes of performing the behaviour and the evaluations of those consequences (attitudes).
- Subjective normative beliefs concerning what others think or what the actor should do, as well as the actor's motivation to comply with these beliefs (subjective norm).
- Perceived behaviour control which refers to the ease or difficulty of performing the behaviour. The notion of perceived behaviour control also encompasses one's personal and technical skills, for instance to obtain and use condoms.

The subjective norm component takes into consideration the effects of social norms which encourage or prevent a specific behaviour as well as the motivation to comply with these norms. In other words, a student's subjective norm regarding sexual behaviour is predicted, for example, by the attitudes or beliefs of significant others (parents, peers, church, friends) concerning sexual behaviour as well as the student's need to comply with the expectations of the "significant others". If students strongly feel that condom use will lead to positive consequences like protection from being infected with the AIDS virus or prevention of pregnancy, but their parents/peers whom they do not wish to challenge, forbid them to use contraceptives or condoms, the likelihood that the subjective norm will thwart the students' decision to use condoms is high. On the other hand the subjective norm may play an active role in influencing a student to perform or not to perform a specific behaviour independently of the student's own attitude toward the behaviour in question.

1.3 STATEMENT OF THE PROBLEM

This study is done in order to obtain baseline information that could be used to design AIDS education programmes for Zululand university students. This study focuses on this group because research has shown that AIDS is predominantly high among the young (Simbayi, 1993) and young people (including university students) engage in risky sexual behaviours, such as having sex with numerous partners in a pattern of either casual sex or serial monogamy, or engaging in condomless sex (Hein, 1987; Turner, Anderson, Fitzpatrick, Fowler & Mayon-White, 1988; Turtle, Ford, Habgood, Grant, Bekiaris, Constantinou, Macek & Polyzoids, 1989; De Buono, Zinner, Daamen & McCormack, 1990; Hansen, Hahn & Wolkenstein, 1990; Health Education Authority, 1991). Since most of these university students live away from their parental homes, it would be expected that in this particular group, age, peer interaction and unlimited freedom would combine to provide many opportunities for sexual exploration (Gold, Karmiloff-Smith, Skinner & Morton, 1992). In light of the above, university students are an important target group as there are specific problems pertaining to them when creating AIDS education programmes.

1.4 AIMS OF THE STUDY

1.4.1 Since the nature of the first aim of this study is purely descriptive, hypotheses will not be formulated. This aim included the following objectives:

(a) to determine the students' level of knowledge of AIDS, HIV transmission and disease prevention or infection.

(b) to determine with whom students have discussed AIDS, where they have previously learned about AIDS and where they would prefer to receive knowledge in the future.

(c) to determine the extent of the following attitudes towards people with AIDS held by students:

(i) attitudes towards proximity to people with AIDS,
(ii) the moral and judgemental dimensions of attitudes towards AIDS and people with AIDS.
(iii) attitudes reflecting social welfare and legal issues with regard to people with AIDS.
(iv) attitudes towards certain practices associated with risk reduction (such as "interfemoral sex", "celibacy" and "masturbation")

(d) to determine the level of sexual activity and the number of sexual partners over a fixed period, the frequency of condom use, projected condom use and knowledge of a place where one can get condoms.

(e) to explore students' attitudes, perceptions and beliefs towards condoms.

(f) to establish the role played by perceived norms and self-efficacy on AIDS preventative behaviour.

1.4.2 The second aim is to investigate if any relationship exists between knowledge of AIDS, attitudes towards AIDS, self-efficacy, perception of vulnerability, perceived norms (parental/family or peer norms), sexual behaviour and condom use.

1.4.3 The third aim is to investigate the extent to which knowledge, attitudes, self-efficacy, perception of vulnerability, perceived norms (parental, family, peers) are predictor variables of condom use .

1.4.4 The fourth aim is to investigate if there are any significant differences between male and female samples on the basis of their level of knowledge regarding AIDS, attitudes towards AIDS and people with AIDS, perception of vulnerability, self–efficacy, sexual behaviour and condom use.

1.5. HYPOTHESES

Hypothesis 1: There will be a significant relationship between knowledge of AIDS, attitudes towards AIDS, self- efficacy, perception of vulnerability, perceived norms, sexual behaviour and condom use.

Hypothesis 2: Knowledge of AIDS, attitudes towards AIDS, self-efficacy, perception of vulnerability and perceived norms are predictor variables of condom use.

Hypothesis 3: There will be significant differences between male and female samples on the basis of the level of knowledge regarding AIDS, attitudes towards AIDS and people with AIDS, perception of vulnerability, self – efficacy, sexual behaviour and condom use.

1.6 VALUE OF THIS RESEARCH

This study will provide information about students' attitudes and knowledge regarding HIV/AIDS and sexual behaviour. It will also provide information on HIV prevention, the role played by perceived norms (parental or peer influence) regarding behavioural change or HIV preventative behaviour, factors associated with condom use, students' perceptions of vulnerability and self–efficacy. Since university students have been identified as one of the target groups for AIDS intervention programmes, the research

findings of this study as well as the implications for intervention may be used in the construction of comprehensive educational packages suited to specific needs of these students. It has also been acknowledged in various health publications that approaches which allow the active participation of the target group are likely to be successful. Wilson & Mehryar (1991), also write that this form of research called KABP provides a well structured, replicable methodology. They assert that this research helps to provide baseline and follow up data to evaluate programmes over time; provide data on sexual behaviour and related factors for models to estimate future impacts on health, social services and the economy; determine psychosocial concomitants of behavioural risk reduction which HIV/AIDS prevention programmes must modify to promote prevention; provide a vehicle for advocacy by focusing attention and effort on a concern and documenting the extent of such problems as misconceptions about AIDS or high risk practices.

CHAPTER 2: LITERATURE REVIEW

2.1 REVIEW OF RELEVANT STUDIES

Studies of young people's knowledge about and attitudes towards AIDS have evolved over time. Previous research studies in the mid 80's focussed primarily on young people's knowledge of and attitudes towards AIDS and prevention of HIV transmission. Subsequent studies began to make comparisons between the level of HIV knowledge and behavioural practices of different subgroups in the population as well as the effect of age and gender on these variables. Researchers also investigated whether knowledge increased over time and whether more young people engaged in safer sexual or drug use. In the late 80's as the focus of AIDS research and action was more broadened, health education became increasingly perceived as an essential part of prevention.

In Africa, heterosexual contact is mainly responsible for HIV transmission. Infection among intravenous drug-users and the homosexual community is relatively minimal (de Zalduondo, Masamanga & Chen, 1990). Therefore, intervention strategies need to target sections of the population engaging in potentially dangerous sexual practices in order to curb or contain the spread of the virus. Both adolescents and young adults have been identified as the high risk group and they are particularly vulnerable to infection in this regard. The fact that high rates of STD infection are reported in this age group, fuels the concern, as evidence is growing that HIV infection is prevalent among people with STDs and that STD infection increases susceptibility to HIV (DiClemente, Boyer & Morales, 1988; de Zaldoundo et al., 1990; Cates & Bowen, 1990). In light of the reasons stated above, most prevention programmes have focussed increasingly on tertiary and secondary education level students. This chapter will review a number of studies or research projects carried out among university or secondary education level students which assessed their knowledge, attitudes, sexual practices, condom use and behaviour change in relation to HIV or AIDS.

2.1.1 A study by Perkel, Strebel and Joubert (1990)

In a university based survey in the Western Cape (UWC), Perkel, Strebel & Joubert (1990) obtained information about students' knowledge of AIDS, their attitudes, beliefs and practices regarding AIDS, condoms and other relevant sexual practices. This study also aimed to test tentative hypotheses about the role of some psychological mediating variables in AIDS-related behaviour. Using a computer enrollment list, a randomly stratified sample of (N=668) subjects was drawn from a total of 1989 students. The sample strata comprised of roughly equal numbers of hostel males, hostel females, non-hostel full-time males, non-hostel full-time females, part-time

males and part-time females with ages ranging from 18 - 65 years and with a mean of 24.8 years and 60% of subjects below 25.

Although the questionnaire used in this study was largely interviewer administered, subjects were given a choice to complete certain sections for themselves due to the sensitive nature of the items in those sections. In order to test an association between any two factors, a loglinear model consisting of the two factors and the stratum variable was fitted. Odds ratios and 95% confidence intervals were calculated, with factors classified into two groups wherever possible. Indices were calculated for knowledge, condom attitude, media exposure and unsafe sex and categorised into high and low groups for knowledge and unsafe sex, as well as positive, negative and uncertain condom attitudes. For each index the relationship between all demographic variables and other indices was investigated. Furthermore, stepwise backward elimination logistic regressions were used to investigate the role of demographic variables, condom attitude and knowledge in some selected sexual behaviours.

Results showed that the majority of the subjects (91%) were aware of the major routes of transmission and the fact that AIDS is an infectious disease. However, misconceptions about how the virus is transmitted were also evident, with 22% of the respondents indicating that transmission could occur through cups/food, toilet seats (28%) and kissing (47%). Subjects also felt that people who were vulnerable to HIV infection were the promiscuous (51%), homosexuals (50%) and prostitutes (49%). The study showed that females were more knowledgeable about ways of preventing infection. Students identified the following as ways of preventing infection: limiting partners (49%), condom use (37%) and education (22%). Furthermore, in the month preceding the survey, 855 had seen/heard something about AIDS in the media and 78% of the sample had discussed the topic with friends, however, 37% had not seen or heard anything about the topic on the UWC campus.

Indices for knowledge revealed significantly higher scores (reflecting more knowledge) among female English speakers who read the newspaper daily. Furthermore, students who used condoms and those with a positive condom attitude as well as those who were celibate or had never engaged in a sexual relationship were most likely to have better knowledge. However, poor self image, high rationalisation, external locus of control and repression were associated with a low level of knowledge.

This study also revealed that 54% of the students did not perceive AIDS as a threat to the campus or themselves. Despite the fact that they knew the importance of engaging in safer sex practices, only a few (30%) seemed to have translated this into changed behaviour. More males reported behaviour change and they were likely to perceive themselves at risk of HIV infection.

Significant relations were found between attitudes, psychological variables and behaviour change. Subjects who perceived AIDS as a problem in South Africa, were more likely to have a low sense of denial, as were those who knew someone infected with AIDS. Furthermore, respondents who perceived AIDS as a threat to the campus at that time, in comparison to respondents who saw no threat and those who thought it would be a threat in the future compared to not, were more likely to think they were themselves susceptible to infection. In addition this study found that perceived vulnerability to infection was related to a change of behaviour, a low sense of denial, external locus of control and a likelihood of a high unsafe sex score. Perceived invulnerability was also associated with high rationalisation and a high sense of denial. Results also showed that respondents who thought their friends had changed their behaviour were more likely to have changed their behaviour. Those who thought that their friends had not changed their behaviour were more likely to be high on repression. Furthermore, subjects who reported that they had not changed their behaviour, were more likely to have a poor self image and scored high on repression.

The statement on steps to prevent the spread of the AIDS virus elicited a diversity of views, with 35% indicating that infected people should be identified and 25% saying that they should be isolated, while 16% mentioned education. Eighty-seven percent felt that the government should take steps in this regard and 23% mentioned research, while 18% mentioned treatment.

Results on practices revealed that 72% of the sample had had a sexual partner and 79% of these had a regular sexual partner. However, 33% of the subjects with regular partners had had other sexual partners in the last year. Moreover, 12% of the subjects had had more than three partners and 5% had more than five partners in the nine months prior to the interview. There was a tendency towards men, full timers and subjects with high external locus of control to engage in sex with multiple partners. High unsafe sex scores were found among Christians, men, African language speakers, full-timers, hostelites, subjects who saw themselves at risk of AIDS infection and those with poor self image. Knowledge, however, was found not to be a significant factor. In addition, 18% had been treated for sexually transmitted diseases (STDs) and of these 38% reported being treated on more than one occasion. Furthermore, a negative or uncertain condom attitude was prevalent among subjects who had been

treated for venereal diseases. Of the total sample, African language speakers and hostelites were more likely to have been treated.

Results on condom knowledge and attitude have shown that 92% of the subjects knew that condoms prevented pregnancy as well as STDs. Ninety six percent knew a place where one could obtain condoms and 41% substantially more males than females said they had used a condom. Subjects who scored high on external locus of control were less likely to have used a condom. Among those who reported having had a sexual partner, 48% never used condoms with these partners. Male subjects who had been studying at UWC for four yeas or more, those who perceived AIDS as a future threat to UWC and those who considered themselves susceptible to HIV infection were more likely to have used condoms. Furthermore, an uncertain condom attitude and external locus of control were also associated with non condom use. A diversity of negative attitudes to condoms were also revealed by this study, and these included: condoms make sex less enjoyable 38%; using condoms implied one did not trust one's partner 32%; condom use was against their religion 18%; using condoms would be offensive to their partners (23%), obtaining a condom was embarrassing (30%) and that condom use was a plot by the government to limit the size of black families (11%).

2.1.2 <u>A study by Mathews, Kuhn, Metcalfe, Joubert and Cameroon (1990)</u>

Matthews et al.; (1990) surveyed 377 students from township high schools in Cape Town. The survey was aimed at obtaining information on the student's knowledge of AIDS, attitudes towards AIDS, sexual behaviour, protective behaviour and behaviour change. The sample comprised of adolescents and young adults ranging in age from 13 years to 26 years with a median age of 17 years. Students completed a self-administered questionnaire which consisted of 32 (closed and open ended) questions assessing demographic characteristics, knowledge, attitudes, beliefs and practices pertaining to AIDS, perceived vulnerability, condom use and prevention.

Results indicate that 91,9% of the students had heard of AIDS. However, there was confusion about modes of transmission. Most students thought that casual contact such as shaking hands or contact through common objects (chairs, eating utensils) carried the danger of transmission. Although many respondents were aware of the fact that HIV is a sexually transmitted disease, this was often attributed to bad people, 'promiscuous people', prostitutes and whites. Knowledge of prevention was superficial and only two thirds of the participants indicated that AIDS could be prevented. Furthermore, AIDS prevention was confused with contraception and general prevention measures for other diseases such as regular check ups and cleanliness. Two thirds of the students were ignorant of the fact that there is no

vaccine for AIDS. Furthermore, over 50% of the students were not aware that a person infected with the AIDS virus can appear perfectly healthy.

Attitudes were measured on a 3-point Likert scale ranging from " yes", "no", to " I don't know". Seventy six percent of the respondents reported that they would not accept someone with HIV in their class for reasons related to fear of AIDS, death of the person affected and misconceptions about the modes of transmission. Examples of responses mentioned are : "He will spread it all over and in toilets at school", and " he will talk to you and spit". Another reason which was given by 94% of the respondents for not accepting an infected person was related to the fact that most AIDS sufferers are rejected, isolated and treated as social outcasts. Only 5,4% of all reasons showed compassion for the person infected with the AIDS virus.

Results also revealed that students did not perceive themselves to be in danger of contracting the AIDS virus and AIDS was associated with or externalised to groups outside the students' immediate surroundings. Furthermore, the danger of HIV infection was understood in racial terms and explanations of risk tended to take on moralistic overtones. Some of the responses given by the respondents to the question "who has AIDS are: "dirty people", "bad people" and " people who do not attend clinics".

With regard to sexual behaviour, 75,4% reported that they had engaged in sex and most of them were or had been sexually active. Of the sexually active students in the survey, 46,9% males and 44,8% female subjects (under 18 years) and 50,0% males and 74,1% females (above 18 years) had one sexual partner, while 10,9% males and 4,0% females under 18 years and 24,0% males and 4,5% females over 18 years had 2 or 3 partners. The study also found that 14,1% males less than 18 years and 12,0% males above 18 years had 4 or more sexual partners.

Results also indicated that of the 75,4% who reported having had sex, only 11,4% had ever used a condom. Of the subjects who had ever had sex and who believed that condoms prevent transmission of diseases, only 15,4% had ever used a condom. Of the total sample, 39,6% stated that they thought they would use a condom in future. Many of the young girls believed that the decision to use condoms was not theirs and they stated that they could not use condoms because they were girls.

In addition the study found that 57,1% of the respondents had made a change in their behaviour in order to prevent HIV infection. Boys (below 18 years) reported having changed their behaviour more frequently (66,2%) and 59,3% of those who reported having had sex, reported having taken some protective measures in comparison with 54,8% of those who had never had sex. Overall 25% reported no behaviour change.

Although knowledge is necessary as a prerequisite to the achievement of appropriate behaviour change, it is not sufficient. In order for knowledge to be transformed into action, individuals need to acknowledge the fact that they are personally susceptible to the disease Matthew et al.,(1990). The fact that AIDS is perceived as a problem existing in other racial groups or supposedly morally inferior people is a form of denial which poses substantial problems for the individual and it leads to blaming others. These findings pointed to a need for educational campaigns which are frank and non-judgemental with regards to gender issues and encourage non-racialism in such a way that it does not stigmatise other subgroups.

2.1.3 A study by Friedland, Jankelowitz, De Beer, De Klerk, Khoury, Csizmadia and Padayachee (1991)

In a cross sectional study of 120 randomly selected university students Friedland et al., (1991) evaluated the students' knowledge, perceptions and attitudes regarding AIDS in order to determine whether these led to changes in sexual behaviour. The mean age of the students in the sample was 21 years, with male respondents ranging in age from 17 - 30 mean age 21 years and female respondents ranging in age from 17 - 27 (mean age 20 years). The majority of the subjects in the sample were single (96,2%), two students were married and two were cohabiting.

The researchers used a self administered questionnaire which was divided into five broad categories: demographic, knowledge and perception of transmission, prevention and consequences of AIDS, sexual practices, attitudes to condoms and the educational campaign against AIDS. Results indicated a high level of AIDS knowledge. Only 58% of the sexually active and 60% of non sexually active students correctly indicated that AIDS could not be transmitted through mosquito bites. Deep kissing was perceived as a possible mode of transmission of AIDS by only 25% sexually active and 28,2% non-sexually active students.

Using the T-test to test for significant differences between males and females, Friedland et al., (1991) found that 71,4% of male participants had previously had a sexual partner of whom 53,1% had a regular partner, while 54% of the female participants had had a sexual partner and of these 76% had a regular sexual partner. Sixteen percent of the students had had two or more sexual partners in the previous 2-6 months and 45% had had one sexual partner. All female participants reported that they were heterosexual while 92,5% of the men said they were heterosexual, 5% homosexual and 2,5% bisexual. Although 73% of the students reported that they would use condoms if they were readily available, the attitude towards condoms was generally negative. Despite a high level of knowledge and despite the fact that the majority of the sexually active students (93%) felt that condoms were effective in

preventing sexually transmitted diseases (stds), only 26% of the sexually active students had used a condom in the past 6 months. Friedland et al., (1991) report that similar inconsistencies between knowledge, beliefs and behaviour have been found among Australian, American and Irish university students.

Sexual activity of the students participating in the study was similar to that found in other similar student populations worldwide. Two thirds had had previous sexual contact, 38% were sexually active at the time of the study and 51% had made changes in their sexual behaviour since the arrival of the AIDS epidemic.

These findings clearly revealed that students possess a relatively high level of AIDS knowledge but this is neither in accord with a corresponding degree of risk perception nor has attitudinal change and a good level of knowledge led to adequate behavioural change, particularly condom usage.

2.1.4 A study by Elkonin (1993)

In one of the follow up investigations, Elkonin (1993) examined a spectrum of psychosocial factors as they related to AIDS/HIV among students at two Port Elizabeth universities. The sample from both universities (A and B) comprised of male and female students with ages ranging from 18-29 years spread over the following years of study: first (n=178), second (n=126), third (n=164) and other (n=26). Only 10 (2.5%) of the sample from university A and 18(6.12%) from university B were married. A self administered questionnaire was used and the variables assessed included, level of AIDS knowledge and HIV transmission, attitudes towards AIDS and people with AIDS, current sexual practices, frequency of sexual behaviour and condom use.

Using independent T-tests to test whether the differences in means between the samples could be regarded as statistically significant, Elkonin (1993) found that there was a trend towards higher male (98.32) than female (89.20) scores from university A. However, mean scores also showed a little difference in the level of AIDS knowledge and transmission of HIV between males (83.02) and females (84.45) from university B. Results also showed that gender and age appeared to have no effect on levels of knowledge of the sample at both universities. In general, students were highly knowledgeable regarding AIDS and HIV transmission. The majority of the students, 98% at university A and 88% at university B correctly indicated that HIV could be transmitted via male/female sexual intercourse and male/male sexual intercourse. However, they were unsure of the statement regarding oral-genital sex as indicated by high percentage scores at both university A (98%) and university B (88%). Students were also unsure regarding a few number of questions as indicated by fewer correct answers for the statement whether HIV can be transmitted via

mosquitoes (85% at A and 88% at B), by kissing (81% A and 82% B), and by swimming in the same pool as an infected menstruating female (79% A and 63% B). Although the majority of the students were aware that condoms can reduce the risk of HIV infection, they were uncertain about whether there are visible signs if an individual is infected with AIDS. The least correctly answered statement concerned the problem of defining AIDS. Only a few respondents knew that HIV and AIDS were not the same thing. In addition, the respondents chose the media as a source from where they had previously obtained knowledge of AIDS.

Attitudes were measured across three factors and these were: attitudes towards proximity to people with AIDS, the moral and judgemental dimensions of attitude, and attitudes reflecting social welfare and legal issues towards people with AIDS. Although, results showed that students from both universities held positive attitudes as regards proximity towards people with AIDS (as indicated by the high mean scores of 71.85 and 69.55 respectively), 71% from A and 82% from B were strongly against marrying a person with AIDS and the majority also felt that people with AIDS (PWAs) should not be allowed to marry at all. Despite high levels of knowledge, 43% of the sample was still unsure of whether being around someone with AIDS would put their lives at risk.

The mean score of 57.10 on factor B (university A) indicates that the sample showed slightly positive attitudes as regards moral and judgemental attitudes towards AIDS and PWAs, whereas, the sample at university B showed neither a positive nor a negative inclination as indicated by their mean score of 51.65. Both samples (95%A and 84% B) agreed that support groups for PWAs would be helpful. However, the statement that AIDS could be seen as a gay plague raised divergent opinions with 73% of the students (at university A) choosing the strongly agree/agree options. However, respondents at university B were spread across the options with 34% supporting the strongly agree/ agree options, 30% choosing the neutral option, while 36% chose the strongly disagree or disagree option.

Finally results also showed that students showed intolerance with regard to social welfare and legal issues concerning PWAs as indicated by mean scores of 32.76 and 28.70 respectively. Despite this, 66% at university A and 56% at university B refuted the statement that parents who transmit AIDS to their children should be prosecuted. However, the majority of the respondents (95%) from both A and B felt that those who infect others with AIDS should be liable for medical expenses. Inconsistent but generally negative attitudes towards homosexuals were revealed in the statement that the spread of AIDS is proof that homosexuality should be illegal in South Africa.

Fourty six percent of the sample at B were supportive of this idea, while 30% were unsure, whereas, the sample at university A indicated a slight more tolerance on this item.

The results of this study also showed some divergence in the reported sexual activity between the samples at the two universities. Almost half (45.2%) of the students at A, while the majority (88.4%) of students at B reported that they are or have been sexually active at the time the study was undertaken. Furthermore, the chi-square analysis revealed significant gender differences in sexual activity and numbers of sexual partners at both universities. This study revealed that males are more sexually active than females with males having multiple partners at both universities. Previous research reported a similar pattern of sexual behaviour among males (Mathews et al., 1990; Friedland et al., 1991). In addition males tend to indulge in high risk sexual behaviours as indicated by their highest number of sexual partners, whereas, females tend to have a more monogamous approach to relationships.

Results show that despite the fact that a substantial number of students engage in sex with multiple partners, condoms are not regularly used. Apparently, the group (at university B) with the highest number of sexual encounters, rarely used condoms, with 42.6% (A) and 15.1% (B) indicating that they use condoms, while 57.4%(B) and 84.9% (B) reported not using condoms at all. The chi-square analysis revealed the X^2 value of 4.78 at 0.5 level which indicated that males and females (at A) differed significantly in their present and future condom use, with more males indicating condom use than females. Furthermore, different age groups did not differ significantly in their present use of condoms at both universities. However, only 18-20 year olds were likely to use condoms in the near future.

Elkonin (1993) states that as females show no responsibility with regard to current and future condom use, the implication is that either they are leaving the responsibility for condom purchase and decisions on their use to their sexual partners or as regards future condom use, they conceive a sexual relationship within marriage where protected sex will not be necessary. Should their apparent lack of responsibility be motivated due to the former, this could be attributed to the problem of female empowerment (Adler,1993) and a lack of communication between sexual partners.

Of concern is the small number of students who indicated future condom use despite the fact that most of them were aware that condoms prevent HIV infection.

2.1.5 A study by Mickler (1993)

In a study by Mickler (1993), ninety-five self reported heterosexual undergraduate university students completed self administered questionnaires which assessed knowledge about AIDS and modes of transmission, common misconceptions about the risks of casual contact, vulnerability to AIDS infection, AIDS preventive behaviour as well as behaviour change.

Knowledge of AIDS was measured using a 21-item scale concerning modes of HIV transmission and common misconceptions about the danger of casual contact. A three questionnaire item was used to assess perception of vulnerability and these included: (1) participants' perception of personal risk of contracting AIDS, rated on a 10-point scale, (2) their degree of worry contracting AIDS, and (3) their percentage estimate of their own chance of becoming infected with HIV within the next 2 years (estimate range = 0%-100%). Percentage estimates of eight hypothetical other persons' chances of contracting (being infected with AIDS virus) were also obtained using this same (0%-100%) scale. These others included both members of high and low risk groups. Subjects were asked to evaluate the extent of risk for the following persons: the average heterosexual college woman and man, the average college-aged heterosexual woman and man who do not attend college, the average homosexual college woman and man, the average college-aged homosexual woman and man who do not attend college. High-risk and AIDS preventative behaviour were assessed by asking participants the extent to which they had increased or decreased the frequency of several sexual behaviours from previous levels after they learned about AIDS as a public health problem. These included, number of sexual partners, use of condoms, oral and anal sex.

ANOVAS were conducted using level of knowledge as independent variable and risk estimate for self and others as dependent variables. Results revealed that risk estimates made by high-knowledge respondents were significantly lower for all eight hypothetical target others than the estimates of low-knowledge participants. Furthermore, AIDS knowledge had no effect upon estimate of own risk. Although there was a smaller discrepancy in high-knowledge participants' estimates of risk to self and others, they also, like those with moderate or low knowledge, evaluated their own risk as significantly lower than risk to others. Results also showed that there was no relationship between level of knowledge, degree of worry, risky or AIDS-preventive behaviours. A significant but marginal effect for condom use indicated that respondents with moderate AIDS knowledge tended to decrease their condom usage in response to the AIDS epidemic while those with high and low knowledge reported no change in condom use. A trend also related to condom use showed the same pattern of means: For percent of times condoms are used during intercourse (0-100%), moderate-

knowledge respondents reported using condoms less (M = 40.37) than low or high-knowledge (M = 65.32) participants.

Using correlational analyses to examine the relationship between perceptions of AIDS risk, worry about AIDS knowledge and behaviour, Mickler also found that perceived risk was related positively to AIDS worry (r[78] = .513,p <.0001) and negatively to AIDS knowledge (r[78] = -.264, p,.02) such that greater worry and less knowledge were associated with higher perceived risk, respectively. Results also showed that worry about AIDS was unrelated to AIDS knowledge (r[78] = -.156, p <.16) but correlated negatively with sexual activity (r[78] = -.238,p < .04), (in other words greater worry was associated with decreased oral sexual activity. The most interesting finding was that AIDS knowledge was not related to any of the behaviour change variables.

Since there was a significant correlation between perceived AIDS risk and worry, they were combined to create a composite variable labelled "perceived AIDS vulnerability". In constructing a composite of the behavioural variables, number of partners was found to be correlated to oral sexual activity, r(78) = .204,p<.07 and anal sex, r(78) = ,201,p<.07. Changes in condom use were correlated to percent estimates of frequency of condom use, r(71) =.451,p<.0001. Results showed that the perceived AIDS vulnerability was significantly related to changes in oral sexual activity, r(76)=-.256,p<.03; the higher the perception of vulnerability, the greater the decrease in oral sexual activity. No significant relationship was found between perceived vulnerability and the composite behaviour indices, condom use r[69]=-.015,p<.90) and sexual risk taking r[76]=-.194,p<.09). Perceived AIDS vulnerability was also correlated to knowledge, r(78)=-.247,p<.03, such that lower perceived vulnerability was associated with higher knowledge. Furthermore, a positive relationship was found between perceived AIDS vulnerability and percent estimates of risk to self (r[78]=.296,p<.009), indicating that persons with greater perceptions of vulnerability made higher estimates of their likelihood of contracting AIDS.

In addition results also showed that the average respondent rated his or her own chances of getting infected with AIDS was less than 8 in 100, while the grand mean estimate for other people was approximately 38 in 100 even when those others are of the same sex, sexual orientation and vocation.

This study clearly showed that knowledge about AIDS was not a strong predictor variable of AIDS preventative behaviour. Even among participants who were well informed about AIDS there was no greater enthusiasm to practise APB.

2.1.6 A Study Mati, 1996

In one of the recent studies, Mati (1996) addressed the level of knowledge regarding AIDS and HIV, sources of previous information, attitudes towards people with AIDS, sexual behaviour, condom use and preferred sources for future AIDS information among rural high school students in the Algoa region. The sample consisted of 206 subjects with 90 males and 136 females. Out of the 206 subjects, 96 were adolescents and 110 young adults.

A self administered questionnaire measuring knowledge, attitudes, sexual behaviour and condom use was used. Mati (1996) found that the overall level of knowledge was very high as indicated by a mean score of 90.63 out of 100. However, there were misconceptions regarding the transmission of AIDS/HIV. This was evidenced by a high number of subjects who indicated that HIV/AIDS can be transmitted through kissing (85.9%), through mosquitoes and bedbugs (80.6%). Elkonin (1993) reported similar misconceptions among university students in Port Elizabeth. Compared to a high percentage of students in Elkonin's (1993) study, only 41% of the sample did not know that AIDS and HIV are not the same thing, indicating that knowledge has improved with regard to the definition of HIV and AIDS. Seventy three percent believed that AIDS can be cured. A few subjects (10.7%) thought that there are visible signs when someone is infected with HIV. This also shows an improved level of knowledge in comparison to the majority of the students who were not aware of this fact in Elkonin's (1993) study. The majority (96.1%) were well informed about the prophylactic properties of condoms.

Using the computation of means and frequency counts it was found that overall, the subjects held positive attitudes (mean score 90.63). Despite this, the sample was slightly negative (mean score 67.34) with regard to attitudes towards proximity to people with AIDS. Only a few subjects (18%) agreed that limiting the spread of AIDS is better than protecting the rights of people with AIDS. The subjects' negative attitudes towards PWAs were also manifested by 60.2% of the sample who supported the statement that PWAs should not be allowed to marry. However, 59% of the sample would not avoid a friend if s(he) had AIDS. Although the subjects were highly knowledgeable about casual contact, quite a high number of students (59%) would not allow their children to play with children of someone infected with AIDS. Furthermore, a high percentage of subjects (65.9%) expressed that they would not be afraid for caring for a family member with AIDS and 68% would be tolerant of classmates infected with AIDS.

The subject of homosexuality evoked mixed feelings with 31.5% indicating that they would prefer not to be around homosexuals for the fear of catching AIDS and 45.1% disagreeing with the statement, while 23.3% were unsure. Seventy six percent of the

sample supported the view that health workers should care for PWAs and 70% also agreed that hospitals should not refuse to admit PWAs. Although they showed concern, many also felt that PWAs should be sent to special hospitals in order to protect others.

The subjects' overall attitudes with regard to the moral and judgemental views towards PWAs were positive. The majority (75%) of the sample were in agreement with support groups for PWAs. This positive attitude was also shown by 77% of the sample who refuted the statement that only disgusting people get the disease. This also concurred with their response to the statement "people with AIDS should not be looked down upon by others, which was supported by 70% of the sample. Furthermore, 67% disagreed with the statement that those who get infected with AIDS get what they deserve and 68% believe that no one deserves a disease like AIDS. The majority (75%) strongly disputed the statement that AIDS is a disease which only affected black people. The statement that AIDS is a punishment for immoral behaviour evoked a diversity of opinions with 38.9% disagreeing with the statement and 39.3% agreeing with statement, while 21.8% were unsure. Many respondents (96.35%), however, support continued expenditure on AIDS research.

The subject of homosexuality once again evoked mixed feelings and confusion. Twenty nine percent agreed with the statement that the best way to get rid of AIDS is to get rid of homosexuality and 48% rejected it, whilst 22% remained neutral. Despite this, 58.8% strongly disagreed that AIDS is a homosexual disease. However, their intolerance of homosexuals was realised in that 53.3% agreed with the statement that they have no sympathy for homosexuals who contract AIDS.

A mean score of 90.63 also showed that the respondents held positive attitudes with regard to social welfare and legal issues of people with AIDS. However, an analysis of the mean scores revealed that subjects held divergent views with regard to the statement that people who give AIDS to others should face criminal charges. Fourty percent concurred with this statement and 33% refuted it, while 20% were unsure. The statement that parents who transmit AIDS to their children should be prosecuted as child abusers evoked a similar diversity. Inconsistency emerged in the statement that a person who gives AIDS to someone else should be legally liable for any medical expenses, with 40% supporting this viewpoint and 35% disagreeing with the statement, while 21% remaining neutral. More than half of the sample (59%) strongly felt that the identity of AIDS infected people should remain confidential. Many also supported the statement that insurance companies should not be allowed to cancel insurance policies for AIDS related reasons.

Once again the subject of homosexuality was met with a mixed reaction, with 45% indicating that homosexuality should be legalised in South Africa and 27% disagreeing with the statement, whilst 24.3% were unsure. Despite this mixed response, 61.2% maintained that the homosexual community should not be blamed for the spread of AIDS in South Africa and 48% believed that abolishing homosexuality will not solve the problem of AIDS.

Results on sexual behaviour showed that the majority of the subjects (78.6%) have had previous sexual experience and only a few had no sexual experience at all. Consistent with previous research this study also found that significantly more males than females have had previous sexual encounters and more male than females engaged in promiscuous behaviour. Furthermore, only a few subjects 30% male and 15.8% female had previously used a condom. The majority reported that they intended using condoms in the future. However, Mati (1996) also reported that since the studies were conducted, there has been an increase in the number of HIV and STD cases which implied that the students were not practising safe sex as indicated.

2.2 REVIEW OF RELEVANT THEMES

2.2.1 Determinants of condom use

Although celibacy is the most effective protective strategy against the AIDS virus and other venereal diseases, very few young people use this method once they become sexually active. Regular condom use during sexual intercourse is the only primary means of HIV prevention for people who are sexually active. While condoms primarily prevent the transmission of viral pathogens including HIV, reliability as a risk-reduction strategy is dependent on appropriate and regular use. However, many young people who are sexually active rarely use condoms (Le Roux, 1994). The introduction of adequate and regular usage of condoms among these young people faces various kinds of problems and these will be discussed below.

Numerous surveys of knowledge, attitudes and sexual behaviour have shown that knowledge does not correlate well with condom use. Wells (1992) found no direct relationship between knowledge and condom use among 6000 heterosexual and homosexual participants across France, UK and USA. A household Ugandan survey by Musagara (1993) has shown high levels of risky behaviours despite the fact that participants were well informed about HIV/AIDS. De Vincenzi (1994) found that 48% of the sexually active participants failed to use condoms consistently despite knowledge of risk and safer sex counselling. He also found that safer sex practices (including condom use) were also inconsistent despite the fact that they had been initiated. Loo (1990) reported that 61% of the Mexican prostitutes in his survey stated

having used condoms during the past four months, however, 80% continued to engage in unprotected vaginal sex at times despite knowledge of risks. Bakouan (1991) reports that, in Burkina Faso where 47% of prostitutes were infected with the AIDS virus, the level of HIV knowledge was very low, although 89% of the women participating in the survey claimed to have used condoms.

A number of studies have also examined adolescent groups, many finding a high prevalence of risky behaviours. The average US female did not use protection until a year after becoming sexually active and genital infections were more prevalent among young people between the ages of 10 -19 than in adults, which suggests a higher level of unprotected sexual intercourse and multiple partners (Fullilove, 1990). Only 15% of these young people reported consistent condom use while 50% stated that they used condoms occasionally. In a survey of adolescent American males, Ku (1994) found that condom use was high, having significantly increased from 21% to 58% over a period of 9 years, however, it was the least used method of protection amongst those at highest risk of HIV transmission. Ku also reported that 34% of the sexual acts amongst the youth are protected with a condom. A Brazillian street youth survey found that 80% were sexually active and only 7,3% used condoms despite 60% reporting knowledge of HIV (Antunes, 1993).

Studies of homosexual men found that even in countries where health education programmes are well established, there is a high level of risk behaviour among younger gay men. Hays (1994) reported that, in San Franscisco, 43% of younger homosexual men between the age of 18-25 engaged in anal intercourse without protection. A similar survey of homosexual men younger than 21 years in the UK, revealed that only 48% reported consistent condom use for anal sex. Izazola (1993) also reported 30% condom use amongst Mexican homosexual men engaging in anal sex, but he also found higher rates in urban areas where AIDS prevention programs had run longer, thus predicting that condom use was still increasing.

Doll (1993) emphasised the importance of investigating high risk behaviours as he found that 24% of seropositive men who sometimes engaged in sex with other men did not regard themselves as homosexual but heterosexual and that this group are most likely to consider themselves at low risk from HIV infection and to have sex without protection.

As numerous studies have shown a weak relationship between correct knowledge of tansmission or prevention and safer sexual practices, such knowledge is necessary but insufficient for adoption of safer sexual behaviour. Therefore, the latter part of this discussion will focus on factors associated with safer sexual practices and which have been identified as predictors or determinants condom use or as factors which determine whether or not condoms will be used.

2.2.1.1Monogamy, trust and faith

Many young people hold the mistaken belief that being in a monogamous relationship which promises to be long term justifies their not using condoms (Turtle, Ford, Habgood, Grant, Bekiaris, Constantinou, Macek, & Polyzoids, 1989; Rosenthal & Moore 1991; Meyer-Wietz, 1994). However, these type of relationships are a relatively common occurrence among young people as is the mistaken belief about the partners fidelity (Sorenson, 1991). For the reasons stated above, endorsing monogamy as a preventative measure against AIDS is misleading, simply because the ideals of true monogamy will not always be achieved. Therefore, it is of utmost importance to emphasize the potential dangers of unsafe sex even within seemingly "trusting, monogamous relationships". This may be specifically applicable to women as one study has shown that they were more likely than men to report non condom use during oral and vaginal intercourse because of a lack of perceived risk of contracting the AIDS virus from their current partner (Seal & Seal, 1996). This finding raises a concern as recent Centers for Disease Control (CDC), (1995) statistics have shown that the major primary source of HIV exposure for the majority of women is through heterosexual sex with an 'exclusive' male sexual partner (Seal & Seal, 1996).

2.2.1.2 Knowledge and misconceptions about condoms

Numerous studies have shown that the extent and depth of knowledge about condoms varies widely. Only 32,5% of township school students in Cape Town had no knowledge of what a condom was (Preston-Whyte, 1991; Abdool-Karim, Preston-Whyte & Sankar, 1992). A serious misconception cited by some of the students was that a woman will get severely ill and die if the condom is left behind in her vagina. Apparently this myth is not limited to this group of students but women in Rwanda have reported a similar concern. Other popular misconceptions held by these students were that condoms could be washed and reused and that they restricted the flow of blood to the penis.

Valdisceri, Arena, Proctor & Bonati, (1989) reported that, although results revealed a relatively high level of awareness about condoms and HIV transmission among young females attending family planning clinics in Pennsylvania, a number of erroneous beliefs were noted. These included such beliefs as vaseline being the best lubricant to use with condoms and withdrawal of the penis before ejaculation being as safe as using a condom in terms of preventing AIDS. While, students interviewed in Maticka-Tyndale's (1991a) study demonstrated a high level of knowledge regarding condoms, they also held the belief that condom use was only necessary if one's sexual partner was infected. Gold, Karmiloff-Smith, Skinner & Morton, (1992); Palmer-Seal & Seal, (1996) also found that many young people believed that condoms are unreliable but "knowing one's partner or judging one's partner by appearance will protect one from being infected. In other words, partner selection is a more reliable form of protection. This is based on the misconception that that they are able to discriminate between "safe and unsafe" sex partners and the belief that engaging in condomless sex with a "safe" partner will not put them at risk of HIV infection (Chapman & Hodgeson, 1990; Crawford, Turtle & Kippax, 1990; Maticka-Tyndale, 1991a; Woodcock, Stenner & Ingham, 1992; Ingham, Woodcock & Stenner, 1993).

However, researchers using qualitative techniques have reported that "knowing partners" is often equated with being acquainted as opposed to having accurate knowledge about a partner's past and concurrent sexual history (Ingham, Woodcock & Stenner, 1991; Woodcock, Stenner & Ingham, 1992). Furthermore, other related studies conducted among university samples have shown that both men and women usually lied about their past sexual history to their regular or prospective partners (Cochran & Mays, 1990; Stebleton & Kortherberger, 1993). Therefore, this puts them at risk if they engage in unprotected sex with a partner which they think is "safe".

Furthermore, 11% of students at the university of the Western Cape still believed that condoms were a plot by the previous government to reduce the size of black families (Perkel & Strebel, 1990). Many young black South Africans viewed all forms of contraception including condoms as the cause of sexually transmitted diseases and infertility (Simbayi, 1993). Such misconceptions are a cause for concern and should be taken into consideration when designing campaigns aimed at educating students about condoms.

2.2.1.3. Access to condoms

According to Meyer-Weitz, (1994) most young people have knowledge about where condoms could be obtained. However, Abdool-Karim, Preston-Whyte & Sankar, (1992) found that this knowledge was lacking among township school students in

Cape Town. The cost and availability of condoms were some of the factors cited by students which limit access. However, contrary to this result, Friedland et al., (1991) found that the cost and ease of obtaining condoms were not deterring factors.

Apparently, clinics and hospital in certain areas are situated too far and money was needed for transport. Other factors mentioned by students include: embarrassment at using condoms or going to the family planning clinic (Friedland et al., 1991; Gold et al., 1992) as well as the hostile and uncaring attitudes of some of the family planning staff and market cashiers particularly towards young people seeking or purchasing condoms (Abdool-Karim et al., 1992). In addition, condoms are seen as a secondary, unreliable and unacceptable form of contraception, and their use is widely discouraged by some of the staff at family planning clinics (Abdool-Karim et al., 1992).

2.2.1.4 <u>Barrier to sexual pleasure</u>

Decisions as to whether or not to use a condom is also determined by negative attitudes towards condoms. The negative attitude expressed by most students is related to the discomfort associated with condom use. The popular view that condoms diminish sexual pleasure has been widely reported by students (Matthews et al. 1990; Perkel & Strebel, 1990; Preston-Whyte, 1991; Friedland et al., 1991; Abdool-Karim, 1992; Makhaba, 1993; Simbayi, 1993; Meyer-Weitz, 1994). A similar finding was reported with regard to heterosexual students in Glasgow in the United Kingdom. The majority of the students interviewed in these studies expressed that they prefer "flesh to flesh" interaction or "natural sex" as it is satisfying to both partners because condoms act as a barrier to physical contact (Meyer-Weitz, 1994; Seal & Palmer-Seal, 1996; Simbayi, 1993).

Other negative views expressed by students are that condoms interrupt the steps of sex (Seal & Palmer-Seal, 1996) and made sex painful for both partners (Abdool-Karim et al., 1992; Seal & Palmer-Seal, 1996). Condoms are also viewed with utter cynicism by those teenagers who wished to prove their fertility.

2.2.1.5 <u>Drinking, drug use and unprotected sex</u>

Many researchers have reported that alcohol consumption as well as drug use may be implicated in the occurrence of unsafe sex (Stall, McKusick, Wiley, Coates & Ostrow,1986; Robertson & Plant, 1988; Siegel, Mesagno, Chen. & Christ, 1989; Hingson & Srutnin,1991; Cooper, Skinner, & George, 1991; Bagnall, Plant, & Warwick, 1992; Scott & Griffin, 1992). These researchers found that drinking alcohol or taking drugs prior to or during sex was linked to failure to use a condom or

engaging in potentially dangerous behaviour. Similar findings among homosexual men in San Franscisco have been reported by Pollock (1993) who found that more than a third of these men combined alcohol and drug use with sex.

It is common knowledge that heavier drinkers and drug users have a high probability of engaging in unprotected sex (Plant, 1990). A number of hypothesis could be advanced to explain these relations. The problem theory states that heavy drinkers and drug users may be more likely to be risk takers in general and thus be less likely to engage in protected sex (Jessor & Jessor, 1991). Furthermore, drinking and drug use may take place in venues where strangers meet in hopes of sexual encounters. As a result they may fail to negotiate condom use with new partners if they think the question will interfere with the spontaneity of sex and therefore reduce the likelihood of its occurrence (Plant, 1990). Consumption of alcohol in these social circumstances may lead people to a temporary denial of one's risk of HIV infection (Mckirnon & Peterson, 1990). Not only may alcohol and drugs reduce the enjoyment of sex but they may also cause insensitivity to the wishes of others that condoms be used. If an individual has been consuming alcohol, his or her efforts to convince the partner to practice safe sex may be ignored and consequently be less effective.

Numerous studies of homosexual men have shown that even after the advent of the AIDS pandemic, homosexual men were less likely to use condoms or adopt safer sex practices after consuming alcohol than when sober (Coates & Ostrow, 1986; Ostrow, 1987; Coates, Stall, Catania & Kegeles, 1988; Stall, McKusick, Wiley & Valdiscerri, 1988; McKirnon & Peterson,1989; Siegal, Mesogno, Chen & Chiel, 1989). Two studies of homosexual men also found that one fifth of those who engaged in safe sex eventually reverted to unsafe practices. Apparently, alcohol consumption as well as the use of drugs were among the most frequently reported reasons for relapse, specifically among men with no regular partner (Kelly, St., Lawrence & Brasfield, 1991; Stall, Ekstrand, Pollock, McKusick & Coates, 1990).

Stall et al., (1990) also found that white men who cut down on their alcohol intake reported a reduction in unsafe sex practices. However, those whose drinking habits were either sustained or increased were twice as likely to continue indulging in dangerous sexual behaviour.

2.2.1.6 Communication

Various studies have found that university students fail to discuss safer sexual practices and rarely inquire about a partner's past sexual history, prior to commencing a sexual relation with a new or prospective partner (Chervin & Martinez, 1987; Fisher & Misovich, 1990; Loos & Bowd,1989; Seal & Palmer-Seal, 1996).

The apparent absence of communication about sex among couples has two serious implications regarding HIV transmission. Not only does it deny partners the opportunity to learn more about each other's sexual histories but it also hampers the negotiation of sexual behaviour. Qualitative research has shown that only a few individuals openly talk with their partners about their past sexual history prior to their initial sexual intercourse. Furthermore, the information learned often takes the form of issues like whether or not they are virgins and it rarely involves detailed discussions of

a partner's sexual practices (Ingham et al., 1991). Even among those couples who do talk about safe sex, only a minority report discussing topics directly relevant to decreasing the threat of HIV infection within their own relationship (Cline, Johnson & Freeman, 1996; Wight, 1990). Thus, it is not surprising that they learn very little to inform them of their partner's serostatus. However, this does not deter them from assuming that the threat of infection is remote. Predictably, the shorter the period a couple have known each other prior to their initial intercourse the less knowledge they have of each other's past sexual histories.

Ingham et al., (1991) found several strong reasons for not inquiring about one's partner's sexual history. For some young people, trust in a relationship means that details of their sexual behaviour together will be treated with the strictest confidence. For a lover to divulge information about his/her previous sexual history would destroy that trust. Furthermore, discussions about safer sex options involves far more explicit reference to genitals and different sexual behaviours and even raising the issue of condom use other than for contraception may be extremely difficult. It may suggest bisexuality, promiscuity, intra-venous drug use and/or sexually transmitted diseases (Wallman & Sachs, 1988; Holland, Ramazanoglu, Scott, Sharpe & Thomson, 1991; Wilton & Aggleton, 1992; Scott & Griffin, 1992).

On the other hand Choi (1990) states that discussions about safe sex with one's partner may also predict the adoption of safer practices. He reports that couples who talked about using condoms were almost four times more likely to engage in protected

sex than those who had no such discussions. This is consistent with findings which were reported by Rasmussen (1993) who found that adolescents who lived in families where sexual subjects were discussed freely, were more likely to talk about contraception before engaging in sexual intercourse.

The findings above raise the need to improve and develop sexual communication skills in order to reduce barriers associated with condom use.

2.2.1.7 Condoms and the male ego/gender-role expectation

Using condoms seems unfavourable with regard to the notion of virility held by most men. According to the "male sex ego" as described by (Hollway,1995) men's sexuality is conceptualised as being driven by a biological necessity and overwhelming desire which is beyond conscious control (Ingham, 1992). Using this discourse, some of the male respondents in Wood & Foster's (1995) study at UCT indicated that it was unmanly to initiate the use of condoms. A similar finding was reported by Abdool-Karim (1992) whereby male students expressed the opinion that "real men do not wear condoms".

Condoms are also perceived as a challenge to the male ego when their use is initiated by a female partner. It has also been found that the poor acceptance of condoms among South African black males is related to the fact that many black men value their masculinity very highly (Makhaba, undated). This is attributed to the patriarchal structure of many black communities where male dominance still exists. Condom usage would imply that the male is not"man enough". Furthermore, the erect penis may be equated with manhood and therefore, covering it with plastic may be perceived as hiding away that manhood and a sign of weakness. Within the context of the "male sex drive" discourse, Hollway (1984) argues that women are perceived as the objects of men's sexual desires and apart from curtailing these sexual impulses, they are passive and silent. As a result this limits the ability of women to negotiate safe sex within this discourse (Kippax , 1995). Men may be seen as pursuers of women and because the "male sex drive" discourse seems also to prevents men from raising the issue of condoms, they will not get used because neither parties will initiate the matter.

As stated above within the "male sex drive" women's sexuality is predominantly seen as something which does not exist or as complimentary to men's sexuality (Hollway, 1984; Kippax, Tillet, Crawford & Cregan, 1991). Within the context of this discourse women will remain powerless to negotiate safer sex. However, the need for women to initiate condom use has been largely emphasised as they are supposedly more

responsible as male sexuality is believed to be more irrational and uncontrollable. To expect women to carry condoms around in order to prepare for sex is problematic when traditional beliefs vehemently prohibit this through emphasis of female passivity. Hence, some of the female respondents in Wood & Foster 's (1995) study struggled with the dilemma between the AIDS prevention discourse and this dominant discourse of sexuality.

Furthermore, sexual activity specifically for women is also socially perceived as a mysterious, natural and spontaneous act. One is forbidden to prepare, contemplate or even discuss it with a partner. It should just happen (Ingham et al., 1992). Sex can only be romantic when it happens spontaneously and when a women is being carried away by the moment (McRobbie, 1992; Ingham,1992) which made it preferable for some women to fall pregnant through unplanned sex than to use a condom and be scorned as promiscuous (Bostock & Learther, 1982; Spencer, 1992). This construction of sexuality creates serious problems especially for women as it denies them the opportunity to initiate or even raise the issue of condom use. If one anticipates or contemplates the act, the spontaneity of the moment is lost. Carrying condoms around on you is perceived as a violation against the dominant constructions of sexuality that men who carry condoms are just "after one thing" and women who take precautions against infection by planning and preparing for sex are scorned and labeled as "slags" or as being sexually immoral (Scott & Griffin, 1989; Wood & Foster, 1995). Abrams, Abraham, Spears & Marks (1991) also found that women were uncomfortable with carrying condoms because it would give the impression that they wanted casual sex.

2.2.1.8 Gender power relations

Some researchers have contended that the factors discussed above regarding the negotiation of sexual behaviour can be understood within a context of gender power relations responsible for constructing and limiting our choices and decisions regarding preventative behaviour (Holland, Ramazanoglu, Scott, Sharpe & Thomson, 1991). There are various dimensions at which these gender inequalities might operate. Holland, Ramazanoglu, Scott, Sharpe & Thomson, (1990) say that if young women's predominant experience of a pattern of relations between the sexes is of men exercising authority over women, this might become a template on which their future behaviour is shaped in a sexual encounter. If women anticipate that men will, if necessary, exercise their control in order to get their way by refusing to have sex with a condom, threatening to terminate the relationship, tarnish the woman's reputation or by rape then they might well be discouraged to pursue their own interests, realising that their chances of succeeding are minimal (Holland et al., 1992).

Economic factors also play a substantial role in maintaining the gender inequalities because they frequently disadvantage women in their negotiations over sexual behaviour. Since convention often dictates that men should take women out based on their higher earning potential coupled with their greater access to cars and restrictions on women's mobility at night, this means that they possess more power to decide on the venue of their meeting. Therefore, this can be contrived to make sexual activity more probable and to make a woman's departure alone difficult (Kent, Davies, Deverel & Gottesman., 1992). Furthermore, some women have a vested interest in the relationship and they will try very hard to keep their boyfriends in order to be able to go out at night. They may also have a long term goal of finding a husband before they are "left on the shelf". It may be particularly difficult for a woman to negotiate safe sex if she has such an interest in the relationship. Since a woman's economic and social status is/was largely determined by her husband, whereas a man's is determined by his job, young women have far more to lose if they express their needs and interests as this would jeopardise their relationship (Leonard, 1992).

Furthermore, on various levels women do not have an equal status with their partners; most are relatively powerless within heterosexual relationships. In addition the negotiation of condom use is further complicated by the tensions and contradictions which exist within these relationships. As it has been found that the ability of a woman to successfully negotiate condom use on one occasion does not necessarily guarantee that in other situations or with subsequent relationships she will have the efficacy to negotiate condom use again (Holland et al., 1992a). The extent to which a woman has control within a relationship will determine how successfull she will be able to negotiate condom use. Even if condoms were used in the initial stages of the relationship, once the partners decide to abandon them, it is difficult to use them again. Condoms are only desirable in these circumstances as a substitute for other forms of contraception.

Another aspect of the gender imbalances that structure the negotiation of sex is the stereotype that the man's sexual needs are a priority in a sexual relationship. If the satisfaction of the man's sexual needs are a priority then for a woman to ask her partner to use a condom is a potentially destructive demand (Holland et al., 1992; Wood & Foster 1995). There may be the additional demand that for a woman to satisfy the sexual needs of her man she should have sex without a condom because it can only be pleasurable if it is "real".

The facts above clearly demonstrate how women often find themselves caught in a deadlock over whether to express their desires and thereby upset their partner. Holland et al., (1990a) assert that by defining coitus in terms of affection, romance and relationship, many women tend to view sexual behaviour in terms of men's desires being a priority in a sexual encounter. In this context for women to introduce the subject of condom use would be perceived to interfere with men's pleasure.

Kippax and his colleagues (1990) have argued that for women to be able to negotiate condom use successfully, a new women-centered discourse of sexuality needs to be developed from which women can freely and openly assert their needs or desires, a discourse which prioritizes their sexuality and from which male sexuality can be problematised. Such a discourse would empower women to be able to challenge the prevailing status quo which is characterised by dominant male discourses and thereby enable safer sex practices.

2.2.1.9 Self-efficacy and condom use

According to Bandura, (1993) behaviour is not directly determined by knowledge and skills but is mediated by a process of cognitive appraisals by which people integrate knowledge, outcome expectancies, consequences expected to result from using condoms, emotional states, social influences and past experiences to form a judgment of their ability to deal with a difficult situation successfully. The judgment of self-efficacy (SE) mediates behaviour and acts as a determinant of whether people initiate action, how much effort they expend and how long they persevere in the face of difficulty. Hence, people will engage in safe sex only to the extent that they believe they can protect themselves when needed.

In a survey of heterosexually active university students on condom use, Wulfert &Wan, (1993) found that outcome expectancies were related to condom use indirectly through self-efficacy. More specifically, beliefs that using condoms resulted in undesirable consequences, such as reduced sexual pleasure, were correlated with a low sense of self-efficacy and less consistent condom use, whereas beliefs that condoms effectively prevent pregnancy and disease were associated with a greater sense of self-efficacy and more consistent condom use. The study also found that, the majority of participants (both men and women) reported using condoms mainly for contraceptive purposes rather than disease prevention, a finding consistent with other studies (Baffi, Schroeder, Redican & Mckluskey, 1989; Macticka-Tyndale, 1990). According to the authors this highlights a need for a fundamental attitudinal change towards condom use among monogamous or serially monogamous heterosexual men and women.

A relationship between condom use and social modeling influence was also revealed by the study. Participants who compared themselves favourably with their peers and believed they were engaging in protected sex at least as frequently as their peers, reported a higher sense of self-efficacy and more consistent condom use. This finding suggests that a peer referral system plays an important role in their sexual behaviour. Similarly, Wilson (1990) found that a belief in the efficacy of prevention together with social support for this behaviour were factors predictive of intended condom use amongst male (58%) and female (45%) Zimbabwean school pupils who reported sexual experience.

Smith, McGraw, Costa & McKinlay, (1996) found that recent sexual activity, condom purchases and condom usage were all positively associated with efficacy scores. The validity analyses also indicated that recent sexual activity and condom usage greatly influenced self-efficacy assessments. This suggested that self-efficacy will inevitably rise over time as young adults become more experienced with sexual partners and condoms. In order to be effective, interventions must improve confidence in these abilities faster than this natural upward trend in self-efficacy appraisals.

The findings above have shown that self-efficacy functioned as a central mediator through which other cognitive factors, including expectancies and self comparison with one's peers exerted their influence on condom use. General guidelines for the design of educational programmes should promote condom use among sexually active young people. According to the authors such programmes should target self-efficacy beliefs and attempt to enhance them by increasing positive and decreasing negative outcome expectancies related to condom use. Furthermore, group-level interventions with peers who model effective behaviour might be useful as they would provide a social context within which more adaptive peer norms could develop.

2.2.2 Perceived invulnerability

Numerous methods used to persuade the general population to adopt safe sex practices have been derived from conceptual models of the factors associated with the adoption of preventive health practices, such as the Health Belief Model (HBM) (Bauman & Siegel, 1987).

The Health Belief Model is a conceptual framework most widely used to describe health related preventative behaviours. Bauman & Siegel, (1987), gave a summary of dimensions which play a role in influencing the adoption of health action : (1) perceived vulnerability to developing a health problem (2) perceived severity of the illness; (3) perceived benefits of the change; (4) perceived barriers of possible negative effects of the change; and (5) cues or a stimulus to change, such as a symptom or a health communication (Janz & Becker, 1991).The Health Belief Model views health

related behaviours as likely to be performed by persons who are motivated to perform them (express concern about health matters in general, are willing to and intend to comply with medical direction and already engage in positive health activities), (2) perceive value to reducing the threat of disease (perceive themselves susceptible to a given disease in general, perceive disease as affecting them physically or socially or currently perceive symptoms of disease), and (3) believe that health action will reduce this threat (perceive the action to be safe and effective), and are all modified by (4) a set of demographic, structural and enabling factors (Harris & Guten, 1991:p33).

Most models of preventive health behaviour seem to agree that acknowledgement of personal susceptibility plays a major role in the adoption of disease preventive behaviour. In the review of literature regarding this idea of vulnerability, Bauman & Siegel (1987) identify two patterns: (1) perception of vulnerability to an illness is associated with adopting preventive health practices and (2) people tend to systematically underestimate the degree to which they are at risk. This latter pattern has been shown in a study carried out among sexually active black university students in Johannesburg in which Friedland and his colleagues (1991) found that over 30% of these students perceived no risk of contracting AIDS infection and neither did they engage in safe sexual practices such as using condoms. Perkel, Strebel & Joubert (1990) also found this denial of personal vulnerability among 54% of their sample at the University of the Western Cape. This is consistent with results which were found in a study conducted among sexually active heterosexual university students in New Jersey. Findings of this study indicate that the majority of participants believed that they personally are at a low risk of being infected with the AIDS virus and that they are relatively less vulnerable to HIV infection than other people, even when those others are similar to them in terms of gender, sexual orientation and vocation (Mickler, 1993). Similar findings were also found in New York where students indicated that AIDS was no threat to them even though the majority indulged in risky sexual practices (Wulfert & Wan, 1993; Seal & Seal, 1996).

A phenomenon called illusion of invulnerability is responsible for such inaccurate perceptions of susceptibility to AIDS infection (Perloff, 1991; Mickler,1993; Simbayi, 1993). This denial of personal vulnerability is a self-fulfilling prophecy or self-serving bias that influences people's evaluations of the possibility of negative events occurring to them. Three psychosocial processes have been suggested to account for this phenomenon (Bauman & Siegel, 1987). These will be discussed below.

2.2.2.1 Unrealistic optimism

Research by Weinstein, (1980) suggests that both cognitive processes and defensive mechanisms are closely associated with an unrealistically biased evaluation of risk. Weinstein's research show that people tend to create a stereotype in their minds of the

kind of people to whom a specific event might occur (for example AIDS) and then evaluate themselves against that stereotype. Because it is common for people to perceive themselves as being considerably different to the stereotype, this is evidence of unrealistic optimism in evaluating own risk.

A study conducted by Weinstein (1980) aimed at attempting to reduce unrealistic optimism by increasing the participants' knowledge of risk factors failed in its aims, resulting instead in increased optimistic bias. A possible reason for this could be that people operate from the assumption that other people are more at risk and initiate fewer preventive health behaviours.

2.2.2.2 Health belief schema

Taute (1991) states that the manner in which people store, retrieve and apply information about their health belief has been the focus of much research in recent years. Findings from such research suggest that, although people appear moderately knowledgeable about health related matters, they apply the information differently to their own actions than when explaining the behaviour of others. According to Morgan & Spanish (1991) health beliefs are transformed into a schema following a progression of levels of organisation of information from episodes to categories to abstractions. In applying this schema to AIDS, Bauman & Siegel (1991) assert that people begin by collecting stories or episodes about the illness. Conclusions reached are then dependent upon an individual's particular attributes and experience and are not necessarily in accord with prevailing medical opinion.

2.2.2.3 Management of Anxiety

There has been increased recognition that under conditions of high stress, denial serves as a constructive strategy and effective defense mechanism in protecting the individual in the face of overwhelming anxiety. Taylor (1992) suggests that the individual's ability to cope successfully with a threatening situation depends partly on his/her ability to sustain a set of "illusions" that require that certain facts be interpreted in a positive and optimistic way. Although denial succeeds in reducing emotional distress, it often hampers the implementation of actions necessary to optimise certain goals such as safety and survival. Mickler, (1993); Archer, (1989) assert that perceptions of susceptibility to threat are not always accurate and are often distorted as coping strategies in order to reduce the threat of HIV infection. They further say that, in the face of personally relevant threat to one's health, individuals tend to distort the threat in an attempt to contain or minimise it.

A study by Bauman & Siegel (1987) which investigated the misconception among homosexual men of the risk for AIDS infection associated with their sexual behaviour, found that these men significantly underestimated their own personal susceptibility to

AIDS, relative to other heterosexual men. This study further suggested that the nature of health beliefs of homosexual men developed about AIDS served as another mechanism through which men underestimated the riskiness of their sexual behavior. A major problem in this regard appears to be the double bind nature of many risk-reduction strategies. For example, such recommendations often convey the message that reducing the number of sexual partners from 15-20 to 2-4 a year may decrease the danger of exposure to HIV proportionately, but given the high prevalence of HIV infection within the homosexual community/general population this behaviour still exposes one at significant risk if other precautionary measures such as condom use are not also adopted.

It is suggested that it may be necessary to review and reconstruct safe-sex guidelines to be very specific about the kinds of sexual behaviours that are always classified as risky such as unprotected anal intercourse. It must be emphasised that such practices are dangerous, irrespective of the fact that one has a few partners with whom one engages in such practices (Taute, 1991). Another misconception revealed by the study was that, adopting certain behaviours such as showering and inspecting one's partner for lesions would reduce one's risk to HIV infection when, in fact, they guarantee no protection.

The study also suggested an important relationship between anxiety and perception of vulnerability. It indicated an association between low levels of anxiety and a tendency to underestimate the riskiness of one's sexual behaviours.

This result is in line with the model of preventive health behaviour discussed earlier where it is proposed that a prerequisite to the adoption of safer-sex practices is that one must recognise and acknowledge that one is personally vulnerable to AIDS before one can experience heightened anxiety. The struggle between a need for denial on the one hand and overwhelming anxiety on the other provides a further explanation for these results. The authors concluded by motivating that, although health education has apparently succeeded in disseminating information and teaching people about AIDS and its modes of transmission, additional strategies need to be developed to assist those at high risk to integrate and implement this information in ways that will ensure protection and prevent people from contracting or spreading the AIDS virus (Baumen & Siegel, 1993).

In general, although people may be fairly accurate in assessing the probability that others will experience misfortune, they tend to underestimate their own chances of encountering negative outcomes, be it divorce, natural disasters or disease vulnerability. The illusion of invulnerability has been shown to occur even when people are faced with statistical probabilities about their own chances of encountering

an undesirable event. They seem to harbour the misconception that they personally are protected against such undesirable events (Kunda, 1993). Other possible explanations as to why university students even with a high level of awareness, still underestimate the possible danger of AIDS infection and are hesitant to adopt safer sexual practices include the long asymptomatic period, peer or social pressure to experiment with sex and drugs such as alcohol and a tendency to underestimate a partner's risky sexual history.

Furthermore, perceptions of susceptibility to AIDS infection may be distorted among members of the general population. Some heterosexuals who do not use drugs intravenously believe that they are immune from HIV infection. They also tend to underestimate the incidence of HIV infected people in the majority of the population (DiClemente, Zorn & Temoshok, 1993; Laumann, Gagnon, Michaels, Michael & Coleman, 1989). Another factor which contributes to perceptions of invulnerability is the fact that AIDS is viewed as an outgroup problem. Mickler's (1993) study provides a substantial amount of data supporting this notion. According to Mickler (1993), males, homosexuals and persons not attending university were thought to be more likely to be infected with the AIDS virus than females, heterosexuals or university students. However, it is important to take note of the fact that Mickler's sample was predominantly female (70%), entirely heterosexual and enrolled in college. It is plausible that dissimilar others are viewed as more likely to be infected with the AIDS virus. Similar but slightly different findings were reported by Wood & Foster (1995) who found that promiscuous people, less educated people, prostitutes, intravenous drug users, people of lower class or income group, health care workers and women were identified to be at a higher risk of contracting HIV infection. These findings reflect an in-group bias whereby participants believe that "people like me don't get AIDS" or deny that "it won't happen to them. This denial, that "it won't happen to me", is a strategy which enables individuals to minimize the fear and anxiety associated with the possibility of being infected with HIV (DiClement, Zorn, & Temoshok, 1993; Archer, 1989: Perkel, Strebel & Joubert, 1991; Perkel 1992; Joffe,1993a). Joffe (1993a) also argues that this attribution of AIDS vulnerability onto deviant 'others' is a coping strategy often used by individuals to distance themselves from this fatal disease.

On the other hand, Mickler (1993) also asserts that it is fairly reasonable that respondents in his study believe that other people indulge in high-risk sexual behaviour because it has been shown that such beliefs are not unfounded. Generally, higher rates of adolescent sexual activity have been reported among males than females (Kinsey Institute, 1990). Furthermore males are also at a higher risk than females in that they are more likely to engage in sexual activity at an early age (Fisher, Fisher & Misovich,

1993) and male homosexuals who engage in unprotected anal sex are at a higher than average danger (Hearst & Halley, 1993). Some may think it likely that university-educated people possess more knowledge regarding the dangers and preventative aspects of sexual behaviour and so are more discreet regarding sex. However, the reported high figures of sexual activity and high incidence of sexually transmitted diseases on university is contrary to this perception (Mickler, 1993). The belief that AIDS is an outgroup problem may be reduced as the number of infected heterosexuals increase, but by then it may be too late to combat this killer diseases. Statistics show that in South Africa the AIDS virus is predominantly transmitted through sexual contact with young heterosexual men and women having the highest HIV prevalence rate (Strebel, 1991; Strebel & Perkel, 1991). Beliefs of invulnerability may also be reinforced among the heterosexual community by the distinction often made between high risk groups by epidemeologists as well as other members of the medical community. This may have been responsible for fostering the widespread misperception of vulnerability in the general population because the HIV incidence was in its early years, associated with the homosexual male and IV-drug user communities in the United States. These pronounced differences have been a major contributory factor to the prevalent belief that AIDS is a disease for other different people with whom the majority does not identify.

While it is true that sexual intercourse with a partner not in high-risk group carries a relatively minimal risk of HIV infection, there is a greater chance that one can contract HIV through one unsafe sexual encounter than numerous sexual encounters with safe sex precautions (Jagoe, 1992; Hearst & Halley, 1993). However, the danger increases exponentially with multiple 'unsafe' sexual encounters.

2.2.3 Self-efficacy: exercising control over HIV infection

2.2.3.1 Self-efficacy

As already discussed in the previous section Bandura (1991) looks at a concept he refers to as self-efficacy that examines HIV prevention from a social cognitive approach. According to Bandura self-efficacy refers to people's beliefs that they are able to exercise control over their motivation, actions and social milieu. He asserts that people's beliefs about their abilities influence the choice of things they do, how much effort they mobilise, the extent to which they will persevere in the face of difficulties and whether they engage in self-destructive or self-empowering thought patterns. A number of studies linking self-efficacy to health promoting and health impairing actions have shown that perceived efficacy can influence every facet of personal change (O'Leary, 1985; Bandura, 1986; Bandura, 1991). This occurs whether people even consider modifying their health habits,

how hard they try should they choose to do so, the extent to which they change, and the extent to which they sustain the changes they have successfully achieved.

Bandura further states that in order to translate health knowledge into effective self-protective behaviour one requires social and self regulative skills as well as a sense of personal power to maintain control over sexual matters. However, managing sexuality also involves the ability to manage interpersonal relationships (Gagnon & Simon, 1973). Thus reducing the risk of infection requires enhancement of interpersonal efficacy. A major concern is empowering people with skills necessary to practice safer sex guidelines consistently in the face of counteracting pressures. Difficulty usually occurs in adhering to safer sex methods because self protection often contradicts with interpersonal pressures. In these interpersonal circumstances, the influence of coercive threat, allurements, a desire to be socially accepted by one's peers, social pressures, situational constraints, fear of being ostracised and personal embarrassment can overcome the influence of the best of informed judgment. The weaker the perceived self-efficacy, the more such social factors can increase the likelihood of an individual engaging in dangerous sexual behaviour.

Furthermore, exercise of self control requires that one should have skills, self-efficacy, an ability to communicate openly and assertively about sexual matters, precautionary measures and means of ensuring their use. Some people who acknowledge the fact that they are personally susceptible to sexually transmitted diseases are decreasing their number of sexual partners and are less likely to have sex with casual partners. Ignorance of a partner's past and current sexual and drug habits has become a risk factor. To rest self-protection on partners' accounts of their sexual and drug history, is a dangerous and unreliable safeguard. Sexual ardour and impression management can expurgate risky histories in personal disclosures. Survey studies have shown that even a majority of so called monogamous relationships exist in name rather than in real life. Because the AIDS virus is communicable through heterosexual contact, casual sex with partners beyond the boundaries of a monogamous relationship, particularly those who have had bisexual and drug involvement, increases the range of potential risk.

Subjective evaluations of risk for HIV infection is often unrealistic and highly unreliable because HIV infected individuals remain in the asymptomatic phase for a long time. Furthermore, their sexual and drug histories are often a closed and confidential subject. If people lack the knowledge of the behavioural history and serostatus of sexual partners, they tend to make their risk assessments based on social and physical appearances which can be highly inaccurate. Research has shown that most men would deliberately lie about their sexual history in order to procure a sexual favour (Keeling, 990). Therefore, seeking protection through probing inquiry provides false safety. Indeed, the stronger the individual's belief in his or her personal efficacy to evaluate by inquiry the risk status of a

new partner, the more likely he/she will indulge in unsafe sex (O'Leary, Goodhart, Jemmot & Boccher-Lattimore, 1992).

Even individuals who are highly knowledgeable about safer sex guidelines often make a mistake in their subjective evaluations of the extent to which they are exposing themselves to danger of HIV infection. In a study of homosexual men, Bauman & Siegel (1991) found that those who indulged in unsafe sex tended to underestimate the danger of their actions as judged against epidemiologically established linkage to seropositivity.

Misappraisals of riskiness of one's sexual behaviour tend to be associated with underestimation of personal vulnerability to infection and with misconceptions that risky sexual activities with a few regular partners is safe and that precautionery measures actually having no protective value (for example. having a shower prior to and after sexual intercourse, healthful regimens, inspecting partners for lesions will render risky sex safe. Such findings create the need for risk reduction messages to put more emphasis not only on risky sexual activities but also on the prevalent misconceptions about factors that invest risky behaviours with false safety.

In a nutshell a sense of self efficacy is necessary for the prevention of HIV infection since people must exercise influence over their own motivation and behaviour as well as over behaviour of their sexual partners. They must be able to develop interpersonal relationships in which open communication is possible. Apart from simply conveying information to people, effective health communications should instil in people the belief that they possess the ability to transform their health related behaviour, in addition to instruction on how to change (Bandura, 1992).

2.2.3.2 Perceived self-efficacy and adoption of safer sexual practices

People's beliefs that they can encourage themselves and maintain control over their own actions play a major role in whether they even consider changing habits that are potentially harmful to health. However, they see little or no reason at all for even making an attempt if they strongly believe that they are incapable of maintaining control over their own actions and that of others. Furthermore, even people who believe their detrimental habits may be obnoxious to their health often fail in curbing their actions unless they evaluate themselves as having some efficacy to challenge the instigators to it. This observation is supported by evidence collated in a longitudinal study conducted by McKusick, Wiley, Coates & Morin (1986) in which numerous psychological factors that could influence sexual risk taking behaviour were evaluated. Belief in one's self-efficacy emerged as the best determinant of whether or not one engages in risky sexual behaviour. The lower the perceived self-efficacy, the higher the likelihood of engagement in sexual practices that carry a potentially high danger of being infected with the AIDS virus.

The role of perceived self-efficacy in the adoption and sustained practice of self-protective behaviour is supported in other lines of research. Siegel, Mesagno, Chen & Christ (1989) say that even though individuals admit that safer sex practices lower the danger of HIV infection, they fail to adopt them if they believe they are incapable of maintaining control in sexual relations. A strong sense of self-efficacy to negotiate condom use predicts safer sex practices in adolescents (Rosenthal, Moore & Flyn, 1991) and adults (Bradfford & Beck, 1991; O'Leary et al., 1992). However, drinking alcohol and taking drugs in the context of sexual activity fosters risky sex. Drugs and alcohol reduce perceived self-efficacy to adhere to safer sex practices (Rosenthal et al., 1991). The spread and the threat of the AIDS virus is responsible for the apparent changes in sexual practices in the homosexual community, as evidenced in reduction of high-risk sexual behaviour and number of sexual partners. In the study of longitudinal predictors, McKusick, Coates, Morin, Pollack & Hoff, (1990) found that a strong sense of efficacy to maintain self-protective control, association with social networks that espoused safe sex as the group norm and knowledge of the a partner's HIV status were identified as the significant predictors of enduring reductions in high-risk sexual practices. These longitudinal predictors emphasise the importance of self-efficacy enhancement through skill development and modification of subculture norms in programmes aimed at producing sustained behaviour change (Bandura, 1991).

However, it is not sufficient to persuade people that they should change unacceptable and harmful habits. Most of them also need direction and guidance on how to translate their concerns into efficacious actions. In a campus survey, Chervin & Martinez (1987) found that after exposure to an intensive educational campaign, less than 50 % of the sexually active students adopted safer sex practices designed to protect them against infection or sexually transmitted diseases. Most of them not only failed to discuss this issue, they even avoided to raise it with their sexual partners. This is consistent with similar studies conducted on other campuses which also confirmed that most sexually active students with a high level of knowledge about AIDS do not adopt safer sex practices (Edgar, Freimuth & Hammond, 1988). McKusick, Horstman & Coates (1985) found that homosexual men were uniformly consistently highly knowledgeable about precautionary measures against HIV infection, however, those who had a low sense of self-efficacy that they were able to control their actions and sexual relationships were incapable of acting on their knowledge.

As was mentioned earlier, human competency requires not only skills but also a self-belief that one has the ability to use and apply those skills well. A number of studies on diverse health habits and physical dysfunctions have shown that the impact of different strategies of influence on health behaviour is partly mediated through their effects on perceived self-efficacy (Bandura, 1991). The stronger the self-efficacy beliefs they instill, the more likely

are people to enlist and maintain the effort necessary to transform habits that are harmful to health. Modeling influences therefore should be designed to foster self- confidence as well as communicate strategies on how to handle social pressures which encourage risky practices. The influence of modeling on beliefs about one's abilities relies on comparison with similar others. According to Bandura (1991) people evaluate their own abilities in part from how those whom they regard as similar to themselves exert control over situations. People develop a stronger belief in their abilities and utilise modeled ways if they see models similar to themselves solve problems successfully. To reinforce the impact of modeling, the characteristics of models, such as their age, sex and status, the type of problems with which they cope, and the situation in which they apply their skills should simulate their own real life situations.

2.2.3.3 Social proficiency and resiliency of self-efficacy

Proficiency requires consistent and extensive practice, and this is no less true of managing the interpersonal aspects of sexuality. After people acquire knowledge of new skills as well as social strategies they need guidance and ample opportunities to practice in order to perfect these skills. Initially people should practice in a non-threatening simulated environment in which they can feel at ease even when they appear inept or make mistakes. This is best achieved by role playing the various types of situations they have to manage in their social millieu. Through this process, they receive informative feedback on their progress and corrective changes that need to be implemented. The simulated practice is repeated until the skills are performed proficiently and spontaneously. However, while improving the skills, one should also raise people's beliefs in their ability.

The influential role played by perceived self-efficacy in the management of sexual behaviour is recorded in a number of studies of contraceptive use by teenage women at high risk because they often engage in unsafe sex (Levinson, 1986). Such research has revealed that perceived self-efficacy in sexual relationships is associated with more effective use of contraceptives. The predictive relation remains when controls are applied for demographic factors, knowledge and sexual experiences.

Gilchriist & Schinke (1983) applied the main features of the multicomponent model of personal change to inform and equip young people with skills on how to exert self-protective control over sexual situations. The teenagers were given essential factual information about potentially dangerous sexual practices as well as preventative measures against infections. Through modeling they were taught how to express themselves openly with regards to sexual matters and contraceptives, how to handle conflicts regarding sexual activities and how to withstand and oppose unwanted sexual advances. They also learned how to apply these social skills through practice and role play in simulated

situations while receiving instructive feedback. The teenagers' perceived self-efficacy and skills in handling sexuality were significantly enhanced by this programme. Because people learn and perfect effective ways of behaviour under simulated life situations, problems usually encountered in applying these newly learned skills to everyday life are reduced.

Jemmot, Jemmot & Fong (1992), also found that adolescent black males significantly reduced high risk behaviours after being exposed to a programme which incorporated many elements of the self-regulative model. Those who benefited from the programme possessed more knowledge about infective risks, rejected risky practices and reported more behaviour changes such as reducing the number of sex partners in follow up assessments than did those in a control condition.

2.2.4 HIV prevention

2.2.4.1 Using groups and normative pressures on AIDS risk behaviour and prevention : the effect of group norms, values and beliefs

2.2.4.1.1 Social influence

Okeeffe, Nesselhof-Kendall & Baum (1990) state that the importance of social context in decreasing behaviours that expose individuals to the danger of contracting the AIDS virus has been suggested by numerous models emphasising normative factors. Fisher (1990) has applied numerous theoretical perspectives in a model for AIDS prevention that considers the influence of reference group norms or "reference group based social influence" on behaviour change and adoption of AIDS-preventative behaviour. Fisher also introduced "reference group based social influence" as a possible predictor of AIDS-risk behaviour and prevention. According to Fisher, people often comply with the attitudinal and behavioural norms of their social group and such norms are a strong source of social influence. Social influence is defined as direct and indirect ways in which people can influence each other and this is primarily based on social pressure. Research has shown that the attitudes of significant others regarding a specific preventive behaviour (e.g. using contraceptives) were an important predictor of the individual's own actions (Ajzen & Fishbein, 1975). With regard to AIDS, relevant group norms may either discourage the use of condoms during sexual contacts or encourage engaging in potentially dangerous sexual practices, sharing intravenous (IV) needles and so on. These actions are a major contributory factor to the proliferation of HIV and it is hoped that they can be substituted with values that are pro-prevention and ensure lower risk.

Two reasons why people adhere to group norms and support group values is because they dread being rejected for non-compliance (Homans, 1965; Schacter, 1951) and they are driven by a need for acceptance by significant others (Byrne, 1971; Nadler & Fisher, 1988). If the common trend for sexual relations dictates that one should have them without a presex discussion regarding prevention, individuals will fear rejection for failing to comply with this trend. Interviews conducted among heterosexual college students indicated that they found it easier to engage in unprotected sex than to talk about prevention of STD's (Fisher & Misovich, 1991b). Both male and female respondents expressed fear of being rejected by their sexual partner if they refused to comply with group expectations. In some minority groups with a relatively high incidence of HIV infection, cultural constrains prohibit partners to talk openly about sexual matters (Morales, 1987; Fisher, 1988; Fisher & Misovich, 1991). Such topics are taboo and might be considered unacceptable because they may result in rejection. Similarly, in the homosexual community the vestige of 'free sex' norms from the 1970s and early 1980s may have made it impossible for some men to initiate safe sex discussions with their partners and in certain sectors of the IV drug – using community, social norms which encouraged sharing the "works" may have also made it difficult to talk about safe injection practices (Des Jarlais, Friedman & Strug, 1988).

2.2.4.1.2 Social network values/normative influence on AIDS preventative behaviour (APB)

Fisher (1988) proposed a model which suggested that when social network and reference group norms are congruent with AIDS preventative behaviour (APB), the group will exert normative social influence supportive of APB and this will in turn result in higher APB and less risky behaviour. The extent to which norms of influential referral systems are in accord with values that are necessary for AIDS prevention determine whether or not APB will be adopted. It is suggested that for desired behaviour change to be achieved, the goals of AIDS prevention must be in line with the values of appropriate and influential social networks. Failure to comply with group norms may result in rejection. In contrast, when social network and reference group norms are incongruent with APB, group level social influence will be focussed on inhibiting APB and encouraging risky behaviours.

Thus in sectors of the homosexual community where group values endorse APB, group member's changes in that direction will be highly commended and group social influence may encourage members to display them. However, if group norms promote casual sex (as in many sectors of the heterosexual community) behavioural changes consistent with these norms will be endorsed and a conservative approach toward sex will be rejected.

2.2.4.1.3 Informational social influence

Fisher (1991) also introduced another concept which he refers to as informational social influence. According to (Deutch & Gerard, 1988) social network members can exert informational influence by serving as sources of information for each other. As a source of social informational influence, the social group members derive much of its strength from the individuals' drive to be knowledgeable about facts- what is true or correct. Since peer referral systems may in general represent a reliable source of information about the actions and outcomes of similar others, they can effectively communicate informational social influence. In addition, they may convey information because they contain conspicuous, prominent and socially meaningful models which may serve as sources of peer group comparison for individual group members. In peer referral systems where HIV prevention is the norm, there may be ample opportunities to be exposed to and learn about the actions and outcomes of similar others. In networks where APB is in line with network values, the members may display APB and learn ways to incorporate it into their sexual habits, which may in turn lead to increased cautious behaviour. However, peer support systems in which models discourage APB, such opportunities are less likely to be available and instead there would be opportunities to display sexual risk taking behaviour.

The literature discussion above suggests that similar people, such as found in many social networks serve as especially powerful and influential role models. Possible reasons for this involve the synergy effect of both informational and normative social influence. Relevant research which supports the above assertions has found that, involvement of gay men in peer support systems in which APB was in accord with network values correlated with greater perceived knowledge about AIDS and predicted a trend toward greater actual knowledge. In addition, high involvement resulted in greater sexual impulse control, increased belief in efficacy of APB and higher levels of APB both in the present and intended for the future (Fisher & Misovich, 1991).

In a nutshell, membership to a referral system which endorses APB, may be associated with normative and informational social influence that may result in greater AIDS knowledge and prevention. Individuals who are not involved with such social networks may lack exposure to important sources of social influence and may fail to practice HIV prevention.

2.5.4 Making AIDS preventative behaviour consistent with network values

Fisher & Fisher (1992) further make several suggestions on how APB can be made consistent with network values to increase prevention. Reviewing his literature (Fisher,1991; Fisher;1992) say that it is important to identify the HIV prevention relevant norms of the target group under investigation. Then the intervention planners may use this

information to determine the extent to which core values must be modified. According to Fisher & Fisher (1991) changing prevention related norms involves the presence of attractive, popular peers who are continually supportive of HIV-prevention and who attempt to make it the "trend to follow". In light of the minority influence literature (Moscovic & Faucheux, 1992), say that it would appear that individuals who advocate preventative behaviours in a peer refferral system that is generally against prevention will be most likely to influence majority behaviour when they are (1) similar to the majority except in the particular position they are supporting (2) consistent in their views over time (3) not inflexible and dogmatic in upholding their views (Baron & Byrne, 1992).

Research supporting the above assertions found that workshops in which influential, popular and attractive undergraduate fraternity and sorority members were trained to promote prevention in their respective fraternity and sorority groups by behaving in the above described manner proved to be a success (Fisher & Misovich, 1990).

2.2.4.1.5 The role of the media

Fisher further suggests that the media can play a major role by marketing and selling APB as the "fashionable" thing to do. Following these media recommendations would result in social rewards of "acceptance", "popularity" and "favourable presentation". He asserts that as APB becomes more in line with heterosexual values, changing group norms as well as group level social influence will reinforce prevention at an individual level. A third option involves restructuring APB so as to appear consistent with group norms. For example, for groups that advocate machismo norms, APB could be reframed to promote such behaviour as " the masculine thing to do". However, until AIDS prevention constitutes a normative behavior or a valued ideal in peer support systems, group social influence may either inhibit rather than encourage APB (Fisher, 1991).

However, Des Jarlais, Friedman & Strug, (1986) state that, to some extent, the very behaviours that expose people in danger of contracting the AIDS virus are those that play a pivotal role in identification with social networks. Many homosexual men have previously identified their sexual freedom and expression as a sign of group unity. Similarly, the sharing of needles among many drug users is not necessarily a response to the scarcity of sterile equipment but also a part of the social experience of drug administration.

2.2.4.1.6 Social psychology and AIDS prevention

The discussion below will concentrate on interventions that have drawn from existing social psychological theories. O'keeffe et al., (1990) assert that the task of reducing the occurrence of behaviours that exposes people to the danger of contracting the AIDS virus

is complex and involves more than educating people about the potential dangers and appropriate responses. This is hardly surprising for the social psychologist who has traditionally perceived behaviour as the product of a series of interconnected attitudes, beliefs, knowledge, intentions as well as other psychological factors, on the one hand, and of enviromental factors on the other. O'keeffe and his colleagues (1990) introduced a model of risk reduction which incorporates all the factors mentioned above. They maintain that knowledge about HIV and how to avoid it is necessary in developing desirable attitudes regarding AIDS, condom use and other related issues. Although attitudinal change is a step in a good direction, it is not enough because behaviour is not shaped by attitudes alone. Having knowledge that condoms will lower the danger of infection does not necessarily guarantee their use.

Somewhere along the line each individual has to make a decision or series of decisions about whether or not to engage in high risk behaviours. Another critical factor is the motivation to attend to attitudes and the intention to act in accordance with them. Once one is knowledgeable, the reasons for lowering risk must be clearly defined. However, intent is not predictive of behaviour. The problem is not that we are unable to influence people's intentions but that the decisions that people make may not be carried out due to a series of decisions made or external coercion or confounding factors. For example, an individual with the intention not to have sexual intercourse with strangers can undermine this intent by going to a pick up bar. The decision to go to the bar is justified by the individual's intention to refuse sex. However, the likelihood of being able to prevent this dangerous act is reduced by the decision to go. If the individual decides to have a few drinks, the situation is further complicated by this decision and the fulfillment of the individual's intention not to have sex is even less likely.

At the same time, the decision to prevent oneself from engaging in risky behaviours may be negated by resistance from others. Dealing with coersion from a sex partner who refuses to use a condom may be extremely difficult. Risky behaviours in some situations may be indicative of the course of least resistance, and efforts to practice safe sex may lead to rejection or loss of affection (Fisher & Misovich, 1990). Sexual arousal or withdrawal from drugs may make decision making more difficult, and the implementation of decision and the accomplishment of risk reduction may be a product of a number of factors at several levels.

According to Okeeffe et al., (1990) successful interventions will be directed at all levels and this involves empowering people with knowledge, changing attitudes, motivating people to act upon these efforts through practice of the desired behaviour, assisting people to recognise the factors influencing behaviour in different situations, help them avoid situations in which high risk behaviour is likely and equipping them with negotiation skills and offer support for implementing decisions. A similar model presented by Flora &

Thoresen (1988) suggested that prevention efforts must involve cognitive/affective components, behaviour/outcome expectancies, skill training and environmental components ranging from normative support to social reinforcement.

CHAPTER 3: METHOD

3.1 SAMPLE

Table 3.1 Distribution of subjects in the study sample

SEX	**MALE**	**FEMALE**	**AGE RANGE**	**MEAN AGE**
N	29	55	17-25years	22 years
YEAR OF STUDY	**FIRST**	**SECOND**	**THIRD**	**POST GRAD**
N	24	20	20	20

The final sample comprised of a total number of N = 84 students with an unequal distribution of the two sexes with (N=55) females and (N=29) males. The sample was also spread over the following years of study: first (N=30), second (N=30), third (N=30), and post grad (N=20). Ages ranged from 17-25 with an average mean age of 22 years. Since it was difficult to track the students who had been randomly selected through a computer programme, it was arranged with lecturers from the various faculties to administer the questionnaires during their lessons. The subjects were proportionately selected from each faculty of study and classes were randomly selected until the minimum number of subjects required from each faculty had been selected. The cell size of 20-25 was chosen because it is considered adequate to provide a credible sample of behaviour and opinion (Elkonin, 1993).

3.2 DATA COLLECTION

A questionnaire was designed to collect information about AIDS knowledge, modes of HIV transmission, attitudes towards AIDS, condom use, self-efficacy, perceived vulnerability of HIV infection and the participant's perceived norms for safer sexual practices. The validity and reliability of the scales used were not directly assessed as they were based upon previous research studies. The questionnaire consisted of the following sections

3.2.1 Questionnaire development

3.2.1.1 Biographical data

The questions on this section comprised data such as sex, age, year of study and religious denomination.

3.2.1.2 Knowledge section

The scale was adapted from Elkonin's (1993) study in which she assessed university students' knowledge of AIDS, attitudes and sexual practices regarding AIDS. The questionnaire followed a fixed response style with the option of yes or no. It consisted of 24 questions addressing the dimensions of the nature of AIDS and HIV, the modes of transmission and risk reduction. This section concludes with questions regarding previous sources of knowledge about AIDS and an option of choosing where to get information about AIDS and the people with which AIDS or related issues have been discussed in the past 6 months.

3.2.1.3 Attitude section

This section consists of the AIDS Attitude Scale (AAS) that was adapted from Elkonin's study as compiled by Shrum, Turner & Bruce (1989) and was utilised to assess attitudes. A five point Likert scale, ranging from strongly agree to strongly disagree was used. The AIDS Attitude Scale isolates three factors:

Factor 1 (consists) of items relating to proximity to people with AIDS, (statements 8, 9, 12, 14, 15, 16,19,20, 21, 24, 25, 28). These included statements such as 'I would not avoid a friend if s/he had AIDS' and 'If I discovered that my roommate had AIDS I would move out'.

Factor 2 includes moral and judgemental dimensions of attitudes towards AIDS, (statements 3,4,5,7,13,18,23). These included statements such as 'AIDS is a punishment from GOD' and 'People who contracted AIDS got what they deserve'.

Factor 3 (focussed) on social welfare and legal issues, (statements 17,22, 26). Some of the statements included in this section were, 'People who intentionally give AIDS to others should face criminal charges' and 'Churches should take a strong stand against homosexuality to prevent the spread of AIDS'.

Additional items were also included in this scale which illicited attitudes towards specific sexual practices associated with risk reduction of HIV infection such as " interfemoral sex" and "masturbation". A statement which measured perception of vulnerability was also included.

3.2.1.4 Sexual behaviour and condom use section

This was also adapted from Elkonin's study (1993) and it was compiled to assess specific information regarding sexual activity and methods of prevention, specifically condom usage. Preferences were indicated by marking a cross in the relevant space.

3.2.1.5 Validity and reliability of the questionnaire

To test the validity and reliability of the scale Elkonin (1993) pilot tested the questionnaire on a sample of 20 fourth year psychology students. Through the pilot study the researcher could also check for ambiguities and any difficulties which had risen regarding language or administration. During the test administration overhead transparencies were used to explain the ambiguous and difficult terminology which was identified through the pilot study.

3.2.1.6 Students' perceived norms for safer sex practices

This determined the extent to which university students perceived their parents/family members and peers as supporting safe sex practices and explored the relationship between this perception and their actual levels of HIV prevention. This scale was adapted from a scale used by Fisher & Misovich (1991b) which tapped into the respondent's perceived peer/parental norms for safer sexual practices.

3.2.1.7 Self-efficacy

This was adapted from a scale developed by Smith, McGraw, Costa & McKinlay (1996) to measure self-efficacy with respect to risk behaviours for HIV infection. The items for this scale included condom use, drug use with friends and negotiations with potential sexual partners. The items of the scale were tested with a sample of Latinos aged 14 - 22 years in Boston neighbourhoods. A nine-item self-efficacy scale was found to have a high level of internal consistency (Cronbach's alpha=.77). Reliability coefficients were similar for men, women and both English and Spanish speaking respondents. Strong associations with recent performance accomplishments, as specified in Bandura's social cognitive theory, supported the construct validity of the scale.

3.3 DATA ANALYSIS

Descriptive statistics included cross tabulation, the computation of means and standard deviations in order to obtain a total for knowledge scores. Using the same procedure, the three factors of the attitude scale were also computed. In addition, frequency counts and percentages were calculated in order to determine the frequency of individual responses to both the knowledge section and attitude section as well as to describe the sexual behaviour of the subjects.

Furthermore, independent t-tests were used to reject or accept the null hypothesis as well as to test whether the differences in means between males and females could be regarded as statistically significant. Levene's F test was used to test for homogeneity of variance between the male and female samples participating in the study and where

this was found to be significant ($p < .05$) t – separate scores were used. If Levene's F test was not significant, ($p > .05$) t – pooled scores were used. In order to test whether gender had any effect on sexual activity the contingency chi-square for cross tabulation (X^2) was used. The multiple regression analysis was used to test the second hypothesis and this included both the enter and stepwise methods.

CHAPTER 4 : RESULTS

The first aim of the study was to assess and obtain information about the levels of AIDS knowledge, HIV transmission and risk reduction, attitudes held by students towards AIDS and PWAs, sexual behaviour and condom use, perceptions, beliefs and attitudes about condoms, sources of previous information regarding AIDS and future preferences for sources of knowledge as well as the impact of perceived norms and self-efficacy on sexual behaviour and condom use.

The second aim of this study investigated the relationship between knowledge, attitudes, perception of vulnerability, self-efficacy, perceived norms, sexual behaviour and condom use.

The third aim investigated whether knowledge, attitudes, perception of vulnerability, self-efficacy and perceived norms were predictor variables of sexual behaviour and condom use.

The fourth aim investigated whether significant differences existed between male and female samples with regards to levels of AIDS knowledge, attitudes towards AIDS and people with AIDS, perception of vulnerability, self–efficacy, sexual behaviour and condom use.

4.1 Results from the First Aim

Table 4.1 Knowledge about AIDS

	Frequency	Mean score	Percentage	Average mean score	Min mean score	Max mean score
Above the $\bar{x}$	35	39.43	41.7	35.0595	29.0412	41.456
Below the $\bar{x}$	49	33.37	58.3			
Total	84		100.0			

Table 4.1 indicates the overall level of knowledge held by students on AIDS at the university of Zululand. Results show that 58.3% of the students have a slightly low level of knowledge as indicated by a mean score of 33.37 out of an average mean score of 35.0595. Forty one percent of the respondents have a high level of knowledge as indicated by a mean score of 39.4286 out of an average mean score of 35.0595. However, the chi-square analysis for knowledge (Table 4.2) reveals that the X^2 value of 2.333 is not significant at the 0.05 level.

Table 4.2 Chi-square analysis for knowledge about AIDS

Below the mean	Above the mean
49	35

$P < 0.05$
N=84
$X^2 = 2.33$
Df = 1

Table 4.3 Correct responses to individual statements in the AIDS/HIV knowledge section

Statement	N	YES	%	NO	%
Knowledge about AIDS and HIV					
Is AIDS an infectious disease.(yes)	81	76	93.8	5	6.2
AIDS is prevalent among people with stds.(yes)	80	57	71.3	27	28.7
All people with AIDS will eventually die.(yes)	83	75	90.4	8	9.6
AIDS and HIV are the same thing.(no)	83	49	59.1	34	40.9
There are always visible signs when one is infected with the AIDS virus.(no)	83	50	60.2	33	39.8
Knowledge of AIDS/HIV transmission	**N**	**YES**	**%**	**NO**	**%**
through sexual intercourse (yes)	83	80	96.4	3	3.6
through anal sex (yes)	82	75	91.5	7	8.5
through oral sex (yes)	82	7	8.5	75	91.5
through blood transfusion(yes)	83	78	94.0	5	6.0
through sharing of infected needles (yes)	83	78	94.0	5	6.0
from mother to her unborn child(yes)	83	81	97.6	2	2.4
through kissing(no)	82	73	89.0	9	10.9
through cuddling(no)	81	75	92.6	6	7.
through touching (no)	82	79	96.3	3	3.7
through sex with prostitutes (yes)	83	60	72.3	23	27.7
through mosquito bites(no)	83	66	79.5	17	20.5

Knowledge of prevention, infection and risk reduction	N	YES	%	NO	%
can one get the AIDS virus from a perfectly healthy person(yes)	82	34	41.5	48	58.5
can a person avoid getting HIV/AIDS by changing his/her sexual behaviour.(yes)	82	69	84.1	13	15.9
one can reduce the risk of contracting HIV/AIDS by abstinence (not having sex).(yes)	82	72	87.8	10	12.2
one can reduce the risk of contracting HIV/AIDS by using condoms.(yes)	83	75	90.4	8	9.6
one can reduce the risk of contracting HIV/AIDS by having sex with one person.(yes)	83	64	77.1	19	22.9
one can reduce the risk of contracting HIV/AIDS by having heterosexual relationships.(yes)	80	25	31.3	55	68.7
one can reduce the risk of contracting HIV/AIDS by engaging in interfemoral sex.(yes)	82	70	85.4	12	14.6
one can avoid getting HIV/AIDS by masturbating.(yes)	81	67	82.7	14	17.3

Table 4.3 indicates the responses which were correctly identified in each individual statement by the total sample. A breakdown of the separate items which constitute the knowledge section of the questionnaire include: knowledge about AIDS and HIV, HIV transmission and knowledge about risk reduction, infection and prevention. The results are presented in terms of the total numbers who responded to statements and the percentages these represent of the total sample.

A close examination of the results in table 4.3 reveal that students are relatively highly knowledgeable about AIDS/HIV. This is consistent with similar studies done in SA, USA and France. Ninety three percent (93%) correctly indicated that AIDS is an infectious disease, while (71,3%) was aware that AIDS is prevalent among people with sexually transmitted diseases (stds) and that people with AIDS (PWAs) will eventually die (90,4%). Consistent with previous research (Elkonin,1993; Mati,1996), this study also found that there was still a problem with the definition of AIDS and HIV. A substantial number of students (41%) did not know that AIDS and HIV are not the same thing.

The majority of the students also reflected a high level of knowledge regarding the transmission of AIDS/HIV with 94,4% correctly identifying that AIDS/HIV can be transmitted trough sexual intercourse and anal sex (91,5%). However, there was uncertainty regarding the statement on whether AIDS/HIV can be transmitted through

oral sex as indicated by fewer correct answers (8,5%) to this question. The sample was well informed with regard to casual contact as a form of possible infection, with 96,3% correctly indicating that HIV cannot be transmitted through touching (96.3%), kissing (89,0%) and cuddling (92,6%). According to Elkonin (1993) information about casual contact receives extensive media coverage as reflected in the high scores and correct answers obtained on these statements. A sizable proportion of the sample knew that HIV can be transmitted through blood transfusion (94%) and sharing of infected needles (94%). This also confirms the success of the media in increasing AIDS awareness. Most of the subjects were also aware that HIV can be transmitted from mother to her unborn child (97,6%) and that HIV cannot be transmitted through mosquito bites (79,5%). Furthermore, 72.3% of the sample was aware that HIV can be transmitted through sex with prostitutes.

Despite a high level of knowledge, students were still unsure of whether one can get AIDS from a perfectly healthy person as indicated by fewer correct answers for this statement (41%). This is consistent with a US based study by Hingson & Strutnin, (1990) who found that 57% of immigrant and 41% US born students held the belief that one could not become infected by having sex with someone who appears to be healthy. A substantial fraction of the sample was well informed about the various ways of reducing the risk of HIV infection. Eighty seven percent (87%) knew that abstinence, use of condoms (90,4%), having sex with one person (77,1%), engaging in interfemoral sex (sex between thighs) (85,4%) and masturbation (82,7%) reduce the risk of contracting the AIDS virus.

It was interesting to find that (31,3%) of the sample knew that heterosexual relationships reduces the risk of HIV infection. Finally, 60,2% of the respondents were aware that there were no visible signs when one is infected with the AIDS virus.

4.4 Sources of knowledge

This section was aimed at:

(i) determining the source where students have learned or acquired knowledge of AIDS.
(ii) where they would prefer to get information about AIDS and
(iii) with whom had they discussed AIDS

Table 4.4 Where students have learned/heard about AIDS

Subjects	Campus Health	Religious Group	Parents/Family members	Friends	Clinic/ Doctor
n	48	19	28	38	74
%	23.2	9.2	13.5	18.4	35.7

Please note that subjects were allowed to choose as many or as few of these options as applied to them.
*N =207

Table 4.4 indicates that the most popular choice was that of a clinic/doctor (35.7%) followed by campus health (23.2%). The least popular choice was that of a religious group (9.2%) and parents/family members (13.5%). These results suggest that clinics and authority figures such as medical doctors play an important role in disseminating AIDS information and in increasing awareness among young people.

Table 4.5 Where students would like to get information about AIDS

Subjects	Campus Health	Religious Group	Parents/Family members	Friends	Clinic/ Doctor
n	45	14	31	51	58
%	22.6	7.0	15.7	25.6	29.1

* N = 199

Table 4.5 shows that students have a strong preference for clinic/doctor (29.1%) and the other two most popular choices were friends (25.6%) and campus health (22.6%), with religious group being the least chosen option (7.0%).

Table 4.6 People with whom students had discussed AIDS

Subjects	Parents/ Family members	Friends
n	42 (more often)	62 (more often)
%	40.4	59.6

* N = 104

Table 4.6 shows that the most popular option chosen by the respondents (59.6%) was that of a friend. This should be taken into consideration especially in designing HIV prevention programmes targeted at this specific group of students.

Table 4.7 Results on perceived norms

Statement	SA	A	N	D	SD	N
31.My parents/family members believe I should always use condoms.	n 39 % 48.8	22 27.5	14 17.5	1 1.2	4 5	N=80
32 .My friends believe I should always use condoms	n 33 % 41.3	30 37.5	10 12.5	4 4.9	3 3.8	N=80
33.My parents/family members believe I should refuse to have unsafe sex.	n 36 % 44.4	19 23.5	19 23.5	1 1.2	6 7.4	N=81
34. My friends believe I should refuse to have unsafe sex.	n 29 % 35.8	32 39.5	11 13.6	6 7.4	3 3.7	N=81
35. My parents believe I should try to persuade my partner(s) to practise safe sex.	n 36 % 44.4	20 24.7	20 24.7	4 4.9	1 1.3	N=81
36. My friends believe I should try to persuade my partner(s) to practise safe sex .	n 33 % 40.7	30 37.0	11 13.6	5 6.2	2 2.5	N=81

The aim of this section was to determine what students thought their parents, family members and peers thought they should do with regard to protective behaviour/condom use. Table 4.7 illustrates students' perceived norms for preventative behaviours. For each preventative behaviour the percentage of subjects who believed that their friends, parents and family members supported or did not support their performance of a specific behaviour is presented.

The data indicate that for all the preventative behaviours measured, the degree of perceived support both from parents/family members and friends was uniform. In effect a substantial number of students believed that peers (friends) and family members/parents were supportive of their performance of AIDS preventative behaviour (refusing to have unsafe sex, using condoms, persuading partners to practise safe sex). Seventy six percent (76,3%) of the respondents chose the strongly agree and agree options respectively to the statement "my parents/family members believe that I should always use condoms. Furthermore, 78.8% of the sample was in agreement with the statement that "my friends believe that I should always use condoms". Results also show that both parents/family members and friends were pro-prevention and discouraged unsafe or unprotected sex. This is indicated by 75.3% and 67.9% of the subjects who were in agreement with the statement "my parents/family members and friends believe I should refuse to have unsafe sex". This is also confirmed by the strong endorsement of the strongly agree and agree scores 69.1% and 77.7% respectively on the statement "my parents/friends believe I should try to persuade my partner(s) to practise safe sex.

4.8 Attitudes towards AIDS and people with AIDS

This section was aimed at determining attitudes across three factors held by respondents towards people with AIDS and these factors are :

(i) attitudes towards proximity to people with AIDS
(ii) the moral and judgmental dimensions of attitudes towards AIDS and people with AIDS
(iii) attitudes reflecting social welfare and legal issues
(iv) This section also consisted of a statement which measured the subjects' perception of vulnerability to AIDS infection, attitudes or beliefs towards the existence of AIDS, specific practices related to prevention of HIV (e.g. masturbation and interfemoral sex) as well the subjects' attitudes towards sex before marriage.

Table 4.8 Factor 1: Attitudes towards proximity to people with AIDS

	Frequency	Percentage	Mean score	Average mean score	Min mean score	Max mean score
Above the $\bar{x}$	46	54.8	43.0217	39.2381	11.00	50.00
Below the $\bar{x}$	38	45.2	34.6579			

* N = 84

Table 4.8 indicates that 54.8 % of the sample held positive attitudes, while 45.2% held negative attitudes with regards to proximity towards people with AIDS. This is indicated by the mean scores of 43.02 and 34.66 respectively out of an average mean score of 39.2381.

Table 4.9 Response frequencies of the AIDS attitude scale: factor 1

		SA	A	N	D	SD	n
8. People with AIDS should be avoided at all costs.	n	45	22	5	5	6	N = 83
	%	54.3	26.5	6.0	6.0	7.2	
9. I would accept someone with AIDS in my class.	n	4	3	4	32	40	N = 83
	%	4.8	3.6	4.8	38.6	48.2	
12. Limiting the spread of AIDS is more important than protecting the rights of people with AIDS.	n	4	1	16	24	37	N = 82
	%	4.9	1.2	19.5	29.3	45.1	
14. I would quit my job before I would work with someone with AIDS.	n	35	23	11	4	8	N = 81
	%	43.2	28.4	13.6	4.9	9.9	

15. Being around someone with AIDS would not put my health in danger.	n 7 % 8.5	9 10.0	15 18.3	20 24.4	31 37.8	N = 82
16. People with AIDS should not be prohibited from working in public places.	n 11 % 13.6	5 6.2	16 19.8	23 28.4	26 32.0	N = 81
19. An employer should have the right to fire an employee with AIDS.	n 41 % 50.6	20 24.7	9 11.1	8 9.9	3 3.7	N = 81
20. Health care workers should not refuse to care for people with AIDS.	n 6 % 7.4	3 3.7	8 9.9	23 28.4	41 50.6	N = 81
21. Children who have AIDS should not be prohibited from going to schools.	n 9 % 11.0	5 6.1	7 8.5	20 24.4	41 50.0	N = 82
24. I would not be afraid to take care of a family member with AIDS.	n 1 % 1.2	8 9.9	10 12.3	25 30.9	37 45.7	N = 81
25. If I discovered that my roommate had AIDS I would move out.	n 28 % 34.6	26 32.1	13 16.0	8 9.9	6 7.4	N = 81
28. I would not avoid a friend if s/he had AIDS.	n 7 % 8.5	5 6.1	10 12.2	30 36.6	30 36.6	N = 82

This factor dealt with issues related to proximity to people with AIDS (PWAs). Results show that respondents showed fear with regards to proximity to PWAs. The majority were in agreement with the statement that people with AIDS should be avoided at all costs. The combined strongly agree and disagree options for the whole sample was 80.8%, while 13.2% chose the opposite option and 6.0% was undecided. This fear and rejection of PWAs is emphasised by the strong endorsement of the disagree and strongly disagree options on the statement " I would accept someone with AIDS in my class. This is further reiterated in the statement that if they discovered that their roommate had AIDS they would move out, with 66.7% choosing the strongly agree and agree options.

Furthermore, the response to the statement " I would quit my job before I would work with someone with AIDS " also confirms these undesirable and intolerable attitudes towards PWAs. The combined strongly agree and agree options for the sample was 71.6%. Results also indicate that, inspite high levels of knowledge as indicated in the previous section (table 4.3), a high number of respondents chose the disagree and strongly disagree options on statement 15. This is a reflection of the fact that 62.2% of the sample is still uncertain of whether being around someone with AIDS would not put their health in danger. This is also in line with previous research which reported a similar finding at two Port Elizabeth universities (Elkonin, 1993). Sixty percent of the

sample was against the employment of PWAs in public places. This discriminatory attitude is also emphasised in the statement that an employer should have the right to fire an employee with AIDS, with 75.3% choosing the strongly agree and agree options.

As regards the subject of health care for PWAs, 79% were in disagreement with the statement that "health care workers should not refuse to care for people with AIDS. A negative and discriminatory attitude was also evoked by the statement " children who have AIDS should not be prohibited from going to schools", with 74.4% of the sample endorsing the strongly disagree and disagree options.

The majority of the sample also showed fear of taking care of a family member with AIDS. The combined strongly disagree and disagree options on this statement (24) were 76.6% for the whole sample. Many (73.2%) would avoid a friend if s/he had AIDS. Finally, 74.4% were in disagreement with the statement that limiting the spread of AIDS is more important than protecting the rights of people with AIDS.

Table 4.10 Factor 2: Moral and judgmental attitudes towards AIDS and people with AIDS.

	Frequency	Percentage	Mean score	Average mean score	Min mean score	Max mean score
Above the $\bar{x}$	37	44.0	24.6389	20.9643	5.00	30.00
Below the $\bar{x}$	47	56.0	18.2083			

* N = 84

Table 4.10 shows that 56.0% of the sample held negative attitudes as regards moral and judgmental attitudes towards AIDS and PWAs as indicated by the mean score of 18.21 out of a maximum score of 30.00. Fourty four percent (44.0%) of the sample held positive attitudes with regards to this factor as reflected by the mean score of 24.64 out of a maximum score of 30.00.

Table 4.11 Response frequencies of the AIDS attitude scale: factor 2

		SA	A	N	D	SD	n
3. AIDS is a homosexual disease.	n	42	13	17	6	5	N =83
	%	50.6	15.7	20.5	7.2	6.0	
4. AIDS is a black person's disease.	n	64	15	2	1	1	N = 83
	%	77.1	18.1	2.4	1.2	1.2	
5. AIDS is a white person's disease.	n	52	13	5	6	7	N = 80
	%	62.7	15.7	6.0	7.2	8.4	
6. AIDS can be contracted by all people irrespective of race, colour or sexual orientation.	n	7	7	10	16	40	N = 80
	%	8.8	8.8	12.5	20.0	50.0	
7. People who contracted AIDS got what they deserved.	n	32	18	18	7	8	N = 83
	%	38.6	21.7	21.7	8.4	9.6	
13. Support groups for people with AIDS would be very helpful to them.	n	4	7	2	30	40	N = 83
	%	4.8	8.4	2.4	36.2	48.2	
18. People should not blame the homosexual community for the spread of AIDS in South Africa.	n	14	10	16	20	21	N = 81
	%	17.3	12.3	19.8	24.7	25.9	
23. AIDS is a punishment from God.	n	33	15	19	5	10	N = 82
	%	40.2	18.3	23.2	6.1	12.2	

This section dealt with issues concerned with moral and judgemental views towards people infected with AIDS. Results show that 66.3% were in agreement with the statement that AIDS is a homosexual disease. The majority of the sample agreed overwhelmingly that AIDS is a black person's disease. The combined scores for the strongly agree and agree options were 77.1% and 18.1% respectively. It was interesting to find that AIDS was equally perceived as a white person's disease by 78.4% of the sample. One could hypothesise that the majority of the sample was aware that AIDS is not a disease for a specific group of people but it affects all of us equally. However, their response to statement (6) is in contradiction with this high level of awareness because 70% of the sample refuted the statement that AIDS can be contracted by all people irrespective of colour, race and sexual orientation.

Furthermore, the subject of the spread of AIDS evoked overtly negative and prejudicial attitudes towards homosexuals. Half (50.6%) of the sample strongly felt that the homosexual community should be blamed for the spread of AIDS in South Africa. Many also showed strong judgemental attitudes towards PWAs as indicated by

the combined strongly agree and agree score (60.3%) on the statement "people who contracted AIDS got what they deserve". The majority of the sample (84.3%) felt that support groups for PWAs would not be helpful. A substantial number of the respondents showed a moralistic view of AIDS as indicated by 58.5% who were in agreement with the statement that AIDS was a punishment from GOD.

Table 4.12 Factor 3: Social welfare and legal issues with regard to people with AIDS

	Frequency	Percentage	Mean score	Av mean Score	Min mean Score	Max mean Score
Above the x̄	44	52.4	15.2273	13.1548	.00	18.00
Below the x̄	40	47.6	10.2273			

* N = 84

Table 4.12 indicates that 52.4% of the sample showed compassion, while 47.6% showed intolerance with regard to social welfare and legal issues concerning PWAs. This is reflected by the mean scores of 15.23 and 10.23 respectively out of an average mean score of 13.15.

Table 4.13 Response frequencies of the AIDS attitude scale: factor 3

	SA	A	N	D	SD	n
17. People who intentionally give AIDS to others should face criminal charges.	n 9	7	3	17	46	N = 82
	% 11.0	8.5	3.7	20.7	56.1	
22. AIDS blood test results should be confidential.	n 8	6	2	19	45	N = 80
	% 10.0	7.5	2.5	23.8	56.3	
26. Churches should take a strong stand against homosexuality to prevent the spread of AIDS.	n 12	9	20	22	17	N = 80
	% 15.0	11.3	25.0	27.5	21.3	
27. Money being spent on AIDS research is a waste.	n 32	29	10	5	6	N = 82
	% 39.0	35.4	12.2	6.1	7.3	

This section dealt with social welfare and legal issues regarding PWAs. A surprising view that came out of this section was that the majority (76.8%) of the sample disagreed with the statement that people who intentionally infect others should not face criminal charges.

The subject of confidentiality also yielded definite attitudes. Eighty percent were in disagreement with the statement that AIDS blood test results should be confidential. A conflicting view of homosexuals was also noted. While the subjects blamed the gay community for the spread of AIDS, however, half of the sample also disagreed with

the statement that Churches should take a strong stand against homosexuality to prevent the spread of AIDS. Definite attitudes were also yielded by the statement that money being spent on AIDS is a waste. The strongly agree and agree total for the sample was 74.4%.

Table 4.14 Attitudes towards the existence of AIDS

		SA	A	N	D	SA	n
1. AIDS does not exist	n	64	5	3	2	4	N = 79
	%	82.1	6.4	3.8	2.6	5.1	
2. AIDS is a ploy developed by the past government to stop blacks from having babies.	n	61	10	5	1	5	N = 82
	%	74.4	12.2	6.1	1.2	6.1	
10. I feel at risk of contracting AIDS.	n	12	16	18	22	15	N = 83
	%	14.5	19.3	21.7	26.5	18.1	
11. I would inform my partner if I had AIDS.	n	4	4	14	25	36	N = 83
	%	4.8	4.8	16.9	30.1	43.4	
29. If I had AIDS I would spread it	n	51	21	2	3	3	N = 80
	%	63.8	26.3	2.5	3.7	3.7	
30. Young people should be discouraged from engaging in sex before marriage	n	6	9	10	27	29	N = 81
	%	7.4	11.1	12.3	33.3	35.9	
31. Interfemoral sex ("ukusoma"/ sex between thighs") is outdated.	n	16	11	27	17	8	N = 79
	%	20.3	13.9	34.2	21.5	10.1	
32. Masturbation is an immoral practice	n	29	14	21	5	7	N = 76
	%	38.2	18.4	27.6	6.6	9.2	

This section covered statements which yielded attitudes or beliefs towards the existence of AIDS, specific practices related to prevention of HIV (e.g. masturbation and interfemoral sex), sex before marriage and perception of vulnerability.

The statement that AIDS does not exist evoked a surprising response. A high number of respondents (82.1%) chose the strongly agree and agree options while only 6.4% chose the opposite option. This finding does not concur with their high level of knowledge demonstrated in the previous sections. The sample was divided on the issue of vulnerability to AIDS infection, with 33.8% choosing the strongly agree and agree options and 44.6% endorsing the strongly agree and agree options while 21.7% remained neutral.

This is a cause for concern because perceptions of invulnerability may hamper any attempts aimed at encouraging this group to adopt AIDS preventative behaviour. The statement that I would inform my partner if I had AIDS produced disturbing results, with 73.5% choosing the strongly disagree and disagree options and only 9.6% choosing the strongly agree and agree options. A negative attitude was also noted on the statement that "if I had AIDS I would spread it". The combined score for strongly agree and agree options for the sample was 90.1%.

Although respondents had in the knowledge section identified masturbation as a risk reduction method, 56.6% strongly felt that it was an immoral practice, while 27.6% were unsure and 15.8% choosing the opposite option. The subject on interfemoral sex (sex between thighs) yielded a diversity of scores across the options. Thirty four percent (34%) endorsed the strongly agree and agree options and 31.6% chose the strongly disagree and disagree options, while 34.2% were neutral to the statement that interfemoral sex is outdated. The subject of coitus before marriage evoked a definite attitude. Sixty nine percent (69.2%) of the sample was in disagreement with the statement that young people should be discouraged from engaging in sex before marriage. Finally, the previous government was viewed with suspicion and prejudice. This is indicated by 86.6% who strongly agreed that AIDS was a ploy by the past government to stop blacks from having babies.

4.15 Results on sexual behaviour and condom use

This section was aimed at determining the following :

(i) the level of sexual activity of the students
(ii) the number of sexual partners over a fixed period
(iii) the frequency of condom use
(iv) self-efficacy (how sure are they that they will be able to perform specific behaviours associated with AIDS prevention)
(v) if they were aware of a place where they can obtain condoms and
(vi) their attitudes, beliefs and perceptions towards condoms.

Table 4.15 The number of respondents who are currently sexually active.

Subjects	Sexually Active	Not sexually Active
n	60	21
%	74.1	25.9

* N = 81

These figures show that the majority of the sample (74.1%) is sexually active and only 25.9% are not sexually active. A similar pattern of sexual activity has emerged in other studies done elsewhere (Friedland et al., 1991).

Table 4.16 Number of sexual partners over the past six months

Subjects	Sexual Partners			
	1	2	3/more	0/none
n	42	16	12	11
%	51.2	19.5	14.6	13.4

* N = 81

Only 14,6% of the sample reported that they had three/more sexual partners in the past six months. This finding differs slightly with results reported by Elkonin (1993) who found that only 12.6% of the sample participated in multiple sexual encounters. Half of the students (51,2%) had only one sexual partner and 19,5% had two partners, while 13,4% had no sexual partner over the past six months.

Table 4.17 Number of sexual partners over the past 2 years

Subjects	Sexual Partners			
	1	2	3/more	0/none
n	34	11	25	10
%	42.0	13.6	42.9	12.3

* N = 80

Table 4.17 shows that quite a substantial number of students (42,9%) were engaging in sex with multiple partners. Fourty two percent reported that they had had one sexual partner, while 13,6 % had two sexual partners and only 12,3 % had no sexual partner over the past two years.

Table 4.18 Condom use over the past 6 months

Subjects	Condom Use		
	Always	Sometimes	Never
n	24	33	21
%	30.4	41.8	26.6

* N = 78

Results indicate that only (30,4%) of the subjects always used condoms, while 41,8% reported that they sometimes used condoms and 26,6% never used condoms at all.

Table 4.19 Future condom use (next 6 months)

Subjects	Condom Use		
	Always	Sometimes	Never
n	44	29	6
%	55	36.7	7.6

* N = 79

More than half the subjects (55%) reported that they will use condoms, while 36.7% will sometimes use condoms and only a few (7.6%) will never use condoms in future sexual encounters.

Table 4.20 A place where one can get condoms

Subjects			
	Yes	No	Unsure
n	76	1	3
%	95	1.3	3.3

* N = 80

The figures above indicate that the majority of the subjects (95%) have knowledge of a place where one can get condoms.

Table 4.21 Willingness to use condoms

Subjects			
	Yes	No	Unsure
n	60	6	12
%	76.9	7.7	15.4

* N = 78

Results indicate that the majority (60.0%) of the subjects are willing to use condoms if they were readily available and only 15.4 % were uncertain.

Table 4.22 Self-efficacy with regard to protective behaviour

How sure are you that you could...		Not at all sure				Very sure
		1	2	3	4	5
8. Talk about safe sex with a sexual partner?	n = 80	20	10	21	20	9
	%	25.0	12.5	26.3	25.0	11.2
9. Buy condoms in a pharmacy?	n = 80	19	12	12	18	19
	%	23.8	15.0	15.0	22.5	23.8
10. Refuse to have sex with someone you didn't know very well?	n = 84	5	4	2	12	61
	%	5.9	4.8	2.4	14.3	72.6
11. Use a condom correctly if your partner wanted to?	n = 80	5	7	16	19	33
	%	6.3	8.8	20.0	23.8	41.2
12. Convince a partner that he or she should use a condom?	n = 80	19	13	16	14	18
	%	23.8	16.2	20.0	17.5	22.5
13. Ask a partner about his or her other sexual partner.	n = 80	26	12	20	14	8
	%	32.5	15.0	25.0	17.5	10.0

The aim of this section was to determine the role played by self-efficacy with regards to protective behaviour. Table 4.22 indicates the subjects' self-efficacy for AIDS preventative behaviour (APB) on a Likert scale of 1-5, with 1 equivalent to "not at all sure" and 5 implying "very sure".

The percentages of the subjects' perceived ability to perform a specific behaviour related to HIV prevention are presented. The data reveal that respondents were almost evenly divided with regards to their ability to discuss safe sex with sexual partners. Thirty seven percent (combined score for options 1 and 2) were not sure, while 36.2% were sure that they will talk about safe sex with a sexual partner. A substantial number of students (46.3%) were sure, while 38.8% reported that they were not sure that they would buy condoms in a pharmacy. It was interesting to find that the majority of the students were cautious about having sex with strangers. This is illustrated by a very high number of students (72.6%) who were very sure that they would refuse to have sex with someone they didn't know very well. The sample was also equally divided with regard to their ability to negotiate safe sex. This is indicated by 40% of the respondents who were sure and 40% who were not sure that they would convince a partner to use a condom. Furthermore, 65% of the sample indicated that they were sure of their skills to use a condom correctly and 20% were uncertain, while only a

few (15.1%) were not sure. Only 27.5% were confident that they will be able to ask a partner about his/her other sexual partner, while 47.0% reported that they were not sure if they could do this.

Table 4.23 Results on the subjects' attitudes, beliefs and perceptions about condoms

		SA	A	N	D	SD	n
14. Condoms are appropriate for use in steady/established relationships.	n %	10 12.2	13 15.9	10 12.2	21 25.6	28 34.1	N = 82
15. Condoms are appropriate for use in casual relationships.	n %	10 12.2	8 9.8	9 11.0	23 28.0	32 39.0	N = 82
16. Condoms are appropriate for use in new relationships.	n %	10 12.3	8 9.9	5 6.2	21 25.9	37 45.7	N = 81
17. Condoms prevent diseases and unwanted pregnancies.	n %	55 67.0	18 22.0	2 2.4	3 3.7	4 4.9	N = 82
18. Getting condoms is embarrassing and uncomfortable for me.	n %	32 39.6	21 25.9	12 14.8	10 12.3	6 7.4	N = 81
19. Condoms make sex less enjoyable.	n %	17 20.7	21 25.6	21 25.6	13 15.9	10 12.2	N = 82
20. Condoms make my partner think that I don't trust him/her.	n %	24 29.3	23 28.0	10 12.2	17 20.7	8 9.8	N = 82
21. When my partner suggests using condoms I think that s/he has a sexually transmitted disease or AIDS?	n %	21 25.6	26 31.7	13 15.9	11 13.4	11 13.4	N = 82
22. It is possible for people to use condoms every time they have sex.	n %	4 4.9	8 9.9	11 13.6	29 35.8	29 35.8	N = 81
23. Condoms are part of sex these days.	n %	3 3.8	3 3.8	12 15.0	35 43.7	27 33.7	N = 80
24. Condoms are too expensive.	n %	50 61.8	18 22.2	4 4.9	2 2.5	7 8.6	N = 81
25. Condom use is against my religion.	n %	35 43.2	25 30.9	8 9.9	3 3.7	10 12.3	N = 81
26. Churches should not prohibit their members from using condoms.	n %	4 5.0	5 6.3	10 12.5	16 20.0	45 56.2	N = 80

Results indicate that more than half of the sample disagreed that condoms are appropriate for use in steady/established relationships. The combined strongly agree and agree scores for the sample was (59.7%). A similar attitude was found among high school students at Umzinoni township in Bethal (Meyer-Wietz, 1994). Sixty seven percent (combined strongly disagree and disagree scores) of the subjects were against the use of condoms in casual relationships. Furthermore, the combined strongly disagree and disagree scores (71.6%) on statement (16) also suggests that many were

strongly against the use of condoms in new relationships. Despite this, the majority of the subjects (89.%) were in agreement with the statement that condoms prevent diseases and unwanted pregnancies, with 67.1% and 22.0% choosing the strongly agree and agree options respectively. However, the subjects indicated some ambivalence with the combined strongly agree and agree totals of (46.3%) of the sample indicating that condoms make sex less enjoyable and 25.6% neither agreeing nor disagreeing, while 28.1% disagreeing with the statement. Getting condoms was embarrassing and uncomfortable for many of the students and this is confirmed by the combined strongly agree and agree scores (65.5%) on this statement.

The statement that "it is possible for people to use condoms every time they have sex" was refuted by the majority of the sample with 71% endorsing the strongly disagree and disagree options. The majority of the sample did not perceive condoms as part of sex these days as indicated by 77.4% who endorsed the strongly disagree and disagree options on this statement. The majority (74.1%) of religions were against condom use and many (76.2%) of the respondents were also supportive of the idea that churches should prohibit their members from using condoms.

4.24 Results from the first hypothesis

The aim of this section was to investigate if any relationship exists between knowledge of AIDS, attitudes towards AIDS, self-efficacy, perception of vulnerability, perceived norms (parental/family or peer norms), sexual behaviour and condom use.

Hypothesis 1: There will be a significant relationship between knowledge of AIDS, attitudes towards AIDS, self-efficacy, perceptions of vulnerability, perceived norms, sexual practices and condom use.

The Pearson product moment correlation was utilised to test this hypothesis.

Table 4.24 Relationship between knowledge, attitudes, perceived norms, self–efficacy, sexual behaviour and condom use

		Know	Attit	Self-effic	Perceived Norms	Condom use	Sexual beh
Know	Pearson Correlation	1.000	-.058	-.192	-.003	-.116	.105
	Sig.(2-tailed)		.600	.080	975	.293	.340
	N	84	84	84	84	84	84
Attit	Pearson Correlation	-.058	1.000	.146	.067	.484**	.251*
	Sig.(2-tailed)	.600	.	.185	.546	.000	.021
	N	84	84	84	84	84	.84
Self-Eff	Pearson Correlation	-.192	146	1.000	.265*	.679**	.234*
	Sig.(2-tailed)	.080	185		.015	.000	.032
	N	84	84	84	84	84	84
Perceived Norms	Pearson Correlation	-.003	-.067	.265*	1.000	.266*	.235*
	Sig.(2-tailed)	. 975	.546	.015	.	.014	.032
	N	84	84	84	84	84	84
Condom Use	Pearson Correlation	-.116	.484**	.679**	.266*	1.000	.273*
	Sig.(2-tailed)	.293	.000	.000	.014	.	.012
	N	84	84	84	84	84	84
Sexual beh	Pearson Correlation	.105	.251*	.234*	.235*	.273*	1.000
	Sig.(2-tailed)	.340	.021	.032	.032	.012	.
	N	84	.84	84	84	84	84

** = significant at the 0.01 level.

* = significant at the 0.05 level.

* N = 84

Please note that sexual behaviour in this context means one partner over the past 6 months and past 2 years.

Table 4.24 shows a summary of correlations between the various variables mentioned above. A positive(r=.484) relationship is noted between attitudes and condom use. While this is significant at the 0.01 level, it also suggests that subjects with positive attitudes towards AIDS are likely to use condoms. Results of the Pearson product moment correlation revealed a definite and positive (r=.251) relationship between attitudes and sexual behaviour. While this is significant at the 0.05 level it also suggests that positive attitudes have an influence on sexual behaviour. Those with positive attitudes towards AIDS are likely to engage in desirable sexual behaviour (having one sexual partner).

Results also indicate that self-efficacy is positively (r=.265) and significantly (0.05 level) correlated with perceived norms, suggesting that subjects who perceived their parents and peers as supportive of AIDS preventative behaviour (APB) are likely to have a high sense of self-efficacy. Results also indicate a positive (r=.679) and significant (0.01 level) relationship between self-efficacy and condom use. This suggests that a high sense of self-efficacy is associated with condom use. Consequently, those with a high sense of self-efficacy are likely to use condoms.

Results of the Pearson product moment correlation further note that self-efficacy is positively (r=. 234) correlated with sexual behaviour. While this is significant at the 0.05 level, it also suggests that a high sense of self-efficacy is associated with appropriate sexual behaviour. Consequently students with a greater sense of self-efficacy are likely to have one sexual partner.

A positive (r=.265) and significant (0.05 level) relationship is shown between perceived norms and self-efficacy. This suggests that those who perceive their parents and peers as pro-APB are likely to have a greater sense of self–efficacy. Results also show a positive (r=.266) and significant (0.05 level) correlation between perceived norms and condom use. This suggests that subjects who thought that their parents and friends approve of their performance of APB are likely to engage in consistent condom use. Furthermore, perceived norms are positively correlated with sexual behaviour. While this is significant at the 0.05 level it also suggests that perceived norms are associated with appropriate sexual behaviour. Those who perceived significant others as supportive of APB are likely to have a monogamous approach in sexual relationships.

A positive but insignificant relationship is also noted between attitudes and self-efficacy. The correlation (r=.146) is also weak and almost negligible in magnitude. Finally, results also reveal a negative and insignificant relationship between knowledge of AIDS, attitudes, self-efficacy, perceived norms and condom use. This implies that knowledge per ser has no impact on these variables.

Table 4.25 Regression equation for predictor variables of condom use

Model	Sum of squares	Df	Mean square	F	Sig[a]
Regression	7557.788	4	1889.447	33.67	.000
Residual	4430.914	79	56.088		
Total	11988.702	83			

a. Predictors: (Constant), Knowledge, Attitudes, Perceived norms, self-efficacy.

b. Dependent variable: Condom use

In examining the hypothesis concerning the predictive value of knowledge of AIDS, attitudes towards AIDS, self-efficacy, perception of vulnerability and perceived norms in relation to condom use, these correlates were entered into the regression equation. Condom use served as the dependent variable.

The multiple regression analysis was used to test this hypothesis because this procedure makes use of a number of options and in this study, the enter and stepwise methods were utilised. The enter method examines all the independent variables in the equation and the stepwise selects only the most significant predictors.

Table 4.25 shows highly significant results suggesting that a combination of all these correlates has a great impact on condom use.

Table 4.26 The stepwise and enter regression methods for predictor variables of condom use

Model	Unstandardized coefficients		Standardized coefficients	t	sig
	B	Std.Error	Beta		
1. (Constant)	3.674	14.148		.260	.796
Knowledge	9.677E-02	.329	.021	.294	.796
Attitude	.424	.072	.409	5.880	.000
Self-efficacy	.962	.116	.586	7.991	.000
Perceived Norms	.263	.136	.138	1.937	.056

Table 4.26 reveals that both the stepwise and enter regression methods indicate that attitudes and self-efficacy are the most significant and strongest predictors of condom use.

Results also suggest a highly significant and positive relationship between attitudes, self-efficacy and condom use. This is reflected by the direction of the Beta measure for attitudes (Beta = .409) and self-efficacy (Beta = .586). This also implies that positive attitudes towards AIDS and a high sense of self-efficacy are associated with condom use.

4.27 Results from the third hypothesis

The hypothesis states that there will be significant differences between male and female samples with regards to levels of AIDS knowledge, attitudes towards AIDS and people with AIDS, perception of vulnerability, self-efficacy, perceived norms, sexual behaviour (number of sexual partners) and condom use. The t-test was used to test significant differences between the two samples. Levene's F test for homogeneity of variance was reported where it was found to be significant ($p < .05$). Contingency chi-squares were employed where applicable.

Table 4.27 Gender and AIDS knowledge

Group	N	Mean	SD	df	t	P	S/NS
Male	29	34.8	1.7603	81	3.624	.061	NS
Female	54	35.14	2.8905				

Note: SD - Standard deviation
df - Degrees of freedom
P - Probability level
S - Significant
NS - Not significant

**N = 83
**P > 0.05

As this is a non-significant result the null hypothesis may not be rejected and for this sample, males and females do not differ significantly with regard to the levels of knowledge of AIDS and HIV transmission. The mean scores reflect little difference in the level of knowledge of AIDS and transmission of HIV between males and females.

Table 4.28 Gender and attitudes

Group	n	Mean	SD	df	t	P	S/NS
Male	29	92.3	13.79	81	.252	.617	NS
Female	54	93.80	10.07				

Note ** N = 83
** P > 0.05

This result is not significant, therefore the null hypothesis cannot be rejected. Males and females do not differ significantly with regard to their attitudes towards AIDS. The mean scores reflect little difference between males and females in their attitudes towards AIDS.

Table 4.29 Chi-square for males and females on the number of sexual partners in the past six months.

Group	n	%
No Partner		
Male	1	3.6
Female	10	18.5
1 Partner		
Male	14	50.0
Female	28	51.9
2 Partners		
Male	5	17.9
Female	11	20.4
3/more Partners		
Male	7	25.0
Female	5	9.3

Chi – square analysis			
df	X^2	P	S/NS
4	8.19347	.0847429	NS

Note ** N = 81
** P > 0.05

Table 4.29 indicates that the X^2 value of 8.19347 is statistically non- significant at the 0.05 confidence level, therefore the null hypothesis cannot be rejected. Males and females do not differ significantly with regard to the number of sexual partners in the past six months.

Table 4.30 Chi-square for males and females on the number of sexual partners in the past two years

Group	n	%
No Partner		
Male	2	7.1
Female	8	15.1
1 Partner		
Male	9	32.1
Female	25	47.2
2 Partners		
Male	4	14.3
Female	7	13.2
3/more Partners		
Male	12	42.9
Female	13	24.5

Chi – square analysis			
df	X^2	p	S/NS
4	5.82658	0.212479	NS

Note ** N = 80
** P > 0.05

The X^2 value of 5.82658 is statistically not significant at the 0.05 confidence level, therefore the null hypothesis cannot be rejected. Males and females do not differ significantly in their number of sexual partners in the past two years.

Table 4.31 Chi-square for past condom use by males and females

		Always	Sometimes		Never	
Group	n		n		n	
Males	8	28.6	14	50.0	5	17.9
Females	16	31.4	19	37.3	16	31.4

Chi-square analysis			
df	X^2	P	S/NS
3	3.81316	0.282360	NS

Note * N = 78
**P> 0.05

Table 4.31 shows that the X^2 value of 3.81316 is statistically not significant at the 0.05 confidence level, therefore the null hypothesis cannot be rejected. Males and females do not differ significantly in their past use of condoms.

Table 4.32 Chi-square for future condom use by males and females

	Always		Sometimes		Never	
Group	n					
Males	13	46.4	13	46.4	1	3.6
Females	31	59.6	16	30.8	5	9.6

Chi-square analysis			
Df	X^2	P	S/NS
3	4.55016	0.207859	S

Note ** N = 79
**P> 0.05

The chi-square indicates that the X^2 value of 4.55016 is not significant at the 0.05 confidence level. Therefore, the null hypothesis cannot be rejected. Males and females do not differ significantly in their projected future use of condoms. However, an examination of the frequency counts indicate that more females than males appear to be more determined to use condoms in the future.

Table 4.33 Chi-square for males and females regarding a place where they could obtain condoms.

Group	n	Yes	No		Unsure	
Males	24	85.7	1	3.6	2	7.1
Females	52	98.1	0	.0	1	1.9
		Chi-square analysis				
Df		X^2	P		S/NS	
3		5.45248	0.141509		NS	

Note ** N = 76
** P >0.05

The X^2 value of 5.45248 is not significant at the 0.05 confidence level, therefore the null hypothesis cannot be rejected. There were no significant differences between males and females with regard to their knowledge of where they could obtain condoms.

Table 4.34 Independent t-test for males and females on perceived norms

Group	N	Mean	SD	df	t	NS
Male	29	23.5172	6.6742	81	-.077	.687
Female	54	23.6296	6.1928			

Note ** N = 83
** P >0.05

These results are insignificant and therefore the null hypothesis may not be rejected. Males and females do not differ significantly with regard to perceived norms.

Table 4.35 Independent t-test for males and females on self-efficacy

Group	N	Mean	SD	df	t	NS
Male	29	18.6207	8.1215	81	-.480	.348
Female	54	19.4630	7.3426			

Note ** N = 83
**P >0.05

These results are not significant and therefore the null hypothesis may not be rejected. Males and females do not differ significantly with regard to self-efficacy.

CHAPTER 5

DISCUSSION

5.1 Knowledge of AIDS

The findings of reasonably accurate information among the majority of the students with regard to the fatality of the illness, its infectiousness, its prevalence among people with STDs, risk reduction as well as the major routes of transmission are in line with findings of similar studies conducted among South African university students (Friedland et al., 1990, Perkel & Strebel 1990; Ellkonin, 1993, Mati, 1996).

The overall level of knowledge was high and gender had no impact on the subjects' level of knowledge. Despite this, students also showed uncertainty regarding the infectiousness of HIV in the absence of symptoms. More than half of the sample was not aware that one could be infected with HIV from a perfectly healthy looking person. Although knowledge on transmission was high, only a few number of students were sure on whether HIV could be transmitted through oral sex. They were well informed with the various risk reduction methods, however, this was translated into positive action by only 40% of the sample who reported always using condoms in the past 6 months. Furthermore, two thirds of the sample (66.3%) was not aware that having heterosexual relationships reduce the risk of HIV infection.

There was a problem with the definition of AIDS and HIV. It is expected that university students should be aware of such concepts but 40% of the sample did not know that AIDS and HIV are not synonyms. Mati (1996) reported a similar finding among high school students in the Algoa region. The majority of the students were also aware that AIDS could be transmitted through sex with prostitutes. The problems highlighted above suggest that some basic factors regarding AIDS are still poorly understood even among university students. These are some of the issues, which should be addressed until AIDS information is easily understood.

5.2 Sources of knowledge

The most popular choice for a source where students have learned about AIDS was a clinic/doctor and campus health. The least popular choice was parents and religious group. These results also confirm Preston-Whyte's (1991) finding that very few parents discuss AIDS with their children. The reason for this is because discussions about AIDS must also focus on sexual matters or sex. According to Preston-Whyte most white parents are embarrassed to discuss matters of this nature with their children. They hope that this type of information will be given in schools. In actual fact, this does not happen because other parents and religious groups have lobbied

against sex education outside the home. This is also confirmed by this research because the majority of the sample in this study also reported that their churches were against condom use.

Furthermore, in the black community there is an even greater parental resistance to discussing sexual matters with teenagers. Conservative parents refuse to know anything about their children's courting and love affairs. Many parents both black and white assert that it is unacceptable to introduce unmarried teenagers to full sexual knowledge. Jemott, Jemmot & Fong, (1992) also expressed the fact that another argument against AIDS education for young people has been that exposing them to information about sex will encourage them to engage in sexual activity. However, he found evidence that the opposite was in fact true because adolescents who received the AIDS intervention were less likely to engage in sexual intercourse and those who did were more likely to engage in safer sexual activity. Parents, the community and the church should take a stand and fight as one. Furthermore, our values and parenting styles should be evaluated because many families practice an authoritative parenting style and as such are not open to their children about sexual matters (Mati, 1996).

Finally the most popular choice for having discussed AIDS was with friends. The role of peer group norms especially in HIV prevention has been emphasised (Fisher & Fisher, 1991). Furthermore, peer groups can be used as motivating factors to take a positive stance in dealing with AIDS (Mati,1996). Research has also shown that adolescents are easily influenced by their peer's beliefs and for this reason peer group discussion should be encouraged.

5.3 Attitudes

A significant number of subjects (54.8%) held positive attitudes towards people with AIDS and no significant differences were found between males and females regarding attitudes towards AIDS and people with AIDS.

A high degree of negativity, rejection and intolerance was demonstrated with regards to factor 1 (proximity to people with AIDS). These attitudes took the form of avoiding, firing and refusing PWAs to work in public places and preventing them from receiving health care. According to Van De Ven et al.,(1996) HIV and AIDS related discrimination is quite pervasive, extensive and destructive and discriminatory practices at a personal level are a common place in our society. These include avoidance, stigmatisation, and persistent personal abuse and violence against PWAs (Kippax et al., 1991). A recent example which took place in Durban at Lamontville where a female infected with HIV was brutally murdered for divulging her serostatus in public. These discriminatory practices are equally severe in public life at the institutional level. Instances of HIV discrimination have been prevalent in areas of

employment, accommodation, law, policy, health care, the media, social services, prisons and insurance (Tindall & Tillet, 1990; Kippax et al., 1991; Altman, 1992; Nielsen & Young, 1994; Leach, 1995; Van de Ven et al., 1996). Schlebush et al., (1991) also provide a possible explanation by saying that such attitudes are engendered within the general population via the mass media. Since students form part of the general public they are not immune from the prejudice propagated by some members of the general public

A surprising point which was noted was the tendency of students to contradict their own previously answered statements. This was prevalent on all factors of the attitude scale. Furthermore, 62.2% of the respondents were uncertain of whether being around someone with AIDS would put their lives in danger. This is inconsistent with their high levels of knowledge on casual contact as demonstrated in the previous discussion on the knowledge section.

Another salient contradiction which came out of this section was that students were aware that AIDS affected everyone and it was not associated with any specific group. However, they also held the belief that all people irrespective of colour race or sexual orientation could not contract AIDS.

Intervention programmes should be focussed on dispelling myths about PWAs, for example being around someone with AIDS does not put one's live in danger. It has also been suggested that these educational programmes should also consider attitudes that lead to prejudice stigmatisation and victimisation of PWAs (Schlebush et al., 1991).

The second factor which focussed on moral and judgemental views towards PWAS revealed a high degree of intolerance, unsympathetic and judgemental views towards PWAs. Many felt that PWAs got what they deserve and were against support groups for PWAs. More than half of the sample perceived AIDS as a punishment from GOD and the homosexual community was blamed for the spread AIDS in South Africa. Implications for this could be interventions, which include education on homosexuality with the aim of changing attitudes towards a better understanding of this group.

The third factor covered legal and social welfare issues of PWAs. Some inconsistencies were also noted on this factor. One would expect that if subjects held the belief that PWAs got what they deserve then it is plausable to think that they would be denied protection against criminal charges. However, half of the sample strongly felt that they needed protection. The majority also strongly felt that the confidentiality of AIDS test results should be breached, while 74.4% perceived no benefit of AIDS research. The subject of homosexuals appeared to be problematic. On

the one hand the sample attributed the spread of AIDS to homosexuals and on the other hand they disagreed with the church's strong stance against homosexuality. A possible explanation could be that the subject of homosexuality is sensitive and an emotive issue. Most people are still ambivalent about their feelings towards homosexuals. Black students in Mati's (1996) study also held similar feelings with regard to homosexuals. Furthermore, this is a relatively new phenomenon in black communities and most people are not sure as to how to respond to or handle issues of homosexuality.

The final section covered statements which evoked attitudes with regard to specific practices (such as masturbation, interfemoral sex), sex before marriage and the subjects' perception of vulnerability to AIDS. Disturbing and fatalistic attitudes were noted on this section. Quite a high number of students had no intentions of informing their partners about their positive serosatus and they would spread the disease if they were infected. The implications of this might be that HIV will be spread among the student population at very high rate, because carriers of the disease will ensure that other people get it. The sample was divided on the subject of vulnerability, with a third feeling at risk , while 44.6% felt that they were not susceptible to HIV infection. In light of this fact, students must be convinced that they too are susceptible. They must be informed that that there is at least some slight possibility that they could contract the disease. The health belief model and protection motivation theory assert that preventative behaviour is likely to be adopted if one perceives some degree of risk (Mickler, 1993). Mickler (1993) also observed that college students were surprised and shocked when they learned of the 300%-400% increase in HIV infections in the 13-30 year old population. Apparently they were disturbed when they became aware that the heterosexual community was becoming increasingly infected. In light of this fact such information should be included in educational programmes not to arouse fear but to enhance their sense of vulnerability which would hopefully motivate their adoption of preventative behaviours.

The fact that the majority felt that AIDS does not exist contradicts their high level of knowledge as demonstrated in the knowledge section. However, a possible explanation for this attitude could be attributed to denial which is evoked by a fear of the threat of this fatal disease. Denial in this situation serves as a defence mechanism, which reduces emotional distress associated with this threat (Taylor, 1992). Although masturbation was identified as a risk reduction method (in the knowledge section), it was also regarded as an immoral practice by 56.6% of the sample. The majority were comfortable with engaging in sex before marriage.

It is recommended that intolerable and negative attitudes be changed to more tolerable and accepting attitudes towards PWAs. This could be achieved by providing accurate

information and by the involvement of students in AIDS counselling. Students must also be encouraged to get contact with infected persons. Inviting PWAs to address student audiences in campus meetings could do this. Furthermore, Van De Ven et al., (1996) also state that the present social climate has improved (in comparison to the late eighties) and it is conducive to alleviating the burden of prejudice from those infected with AIDS/HIV. This could be a foundation for the shift in attitudes because there are a few people in developed countries who have not been directly touched by the epidemic in either their personal or public spheres. People have become increasingly aware of the fact that we are all affected by HIV/AIDS.

5.4 Sexual behaviour and condom use

The majority of the students were sexually active while only a quarter reported not being sexually active. Gender appeared to have no effect in terms of sexual activity, number of sexual partners, past and future condom use.

Half of the students had one sexual partner over the past 6 months. However, quite a substantial number are engaging in high-risk sexual activity by having multiple sexual partners. This is a cause for concern because condoms were least used among students who reported having sex with more than three partners. This finding concurs with previous research by Elkonin (1993) who reported a similar pattern of behaviour among university students in Port Elizabeth.

Only a third used condoms consistently, while 6% have never used condoms. The majority knew where to obtain condoms and they intended to use condoms in the near future. They were also willing to use condoms should they become readily available on campus. However, the intention to use condoms was stronger among females and subjects with one sexual partner. This fact should be taken into account because not only should condoms be disseminated at outlets like campus clinic/health but for example they should be available in lecture halls, campus and hostel toilets as well as in TV rooms. It should be also emphasised that condoms are freely available because the majority of the students in this study believed that condoms were expensive.

Future studies should also make a follow up on condom usage to check whether students are really engaging in safe sex because Mati (1996) reported an increase in STDs and AIDS cases even after the majority of the subjects in her study showed a determination to use condoms in the future.

5.5 Attitudes, beliefs and perceptions about condoms

More than half of the respondents felt that condoms were not desirable in established/steady relationships. One of the reasons for this could be that couples in steady relationships believe that their relationship is based on faith and trust (Maticka-Tyndale, 1992). If both partners envisage marriage, condoms might be considered inappropriate especially if the couple intends to have children. Surprisingly, many subjects were against condom use in casual and new relationships. This could be attributed to the fact that it may be difficult to introduce condoms for example with a one-night stand especially if one predicts that one may miss the opportunity for sex by raising this subject. On the other hand this study found that most students find it difficult to talk openly about sex related matters (including protection) particularly with their partners. Furthermore, most of the students in this study were not confident of their ability to negotiate condom use with a sexual partner. Friemuth et al., (1992) also found that college students who did not use a condom during a sexual encounter, none had discussed condom use prior to intercourse.

Despite the fact that many of the students intended to use condoms in the near future, a sizable amount of the sample felt embarrassed and uncomfortable at getting condoms. Many also felt that condoms were expensive. Intervention programmes should focus on selling condoms as the most fashionable and desirable thing to do until this is assimilated and young people are comfortable with this idea.

5.6 Self-efficacy

Discussions about sex related matters are still a difficult and embarrassing topic for most students. Many were neither confident of their ability to talk about a partner's sexual behaviour nor confident of their skills to negotiate safe sex. However, the majority of the students considered engaging in sex with strangers taboo. Almost half of the subjects were confident in their ability to buy condoms in a pharmacy, while the majority was also sure of their skills to use a condom correctly if their partners wanted to. Gender was found to have no significant effect on self-efficacy.

Intervention should focus on increasing competency in communication skills. However, it has been pointed out that communication about sex presents difficulties particularly in a conservative society like ours. Elkonin (1993) emphasises that all parties concerned i.e. parents, educators as well as peers should make an effort to encourage open communication and find ways of overcoming resistance.

5.7 Perceived norms

Both family members as well a peers were pro-prevention and discouraged unprotective behaviour. The role played by significant others in shaping individuals' own actions have been emphasised. Numerous researchers have asserted that the

attitudes of significant others with regard to a specific preventative behaviour (for example using condoms or refusing to have unsafe sex) were an important determinant of the individual's actions (Ajzen & Fishbein 1975; Fisher, 1988; Fisher, 1992). In this study group norms played a major role in encouraging protective behaviour while discouraging unsafe sexual practices.

Concerning the influence of gender, no significant effect on perceived norms was evident.

5.8 <u>Relationship between condom use, knowledge, attitudes, perceived norms, self--efficacy and sexual behavuior</u>

The multiple regression analysis revealed that attitudes and self-efficacy were the strongest predictor variables of condom use. A positive and significant relationship was also found between attitudes, condom use and sexual behaviour. In other words positive attitudes towards AIDS were associated with consistent condom use and appropriate sexual behaviour (one sexual partner in the past 6months/2years).

A positive and significant relationship was also found between perceived norms, condom use and sexual behaviour. In essence, a greater sense of self-efficacy was associated with perceived norms, consistent condom use and appropriate sexual behaviour. Consequently, subjects who perceived their family members, parents and peers as supportive of their performance of AIDS preventative behaviour were likely to engage in appropriate sexual behaviour (one sexual partner) and use condoms consistently. These findings support research by (Fisher, 1991; Maticka-Tyndale, 1992) who reported that when condoms are used in the context of a peer support system, condoms are acceptable. However, when peer norms discourage condom use, they are not used.

A significant relationship was also found between self--efficacy and condom use. This finding suggests that those with a high sense of self-efficacy engaged in protected sex

(used condoms). This finding also supports previous research by Wulfert & Wan (1993) who found that consistent condom use was associated with greater self-efficacy. A recent study by Wyatt-Seal & Palmer-Seal (1996) found that a lack of perceived self-efficacy influenced condom use during vaginal intercourse. It has been suggested that educational programmes could be effective when individuals are empowered with the behavioural skills which they believe are able to effectively protect them from infection (Taute,1991).

Consistent with previous research by Diclement et al., (1990) and Mickler (1993), this study also found that knowledge about AIDS had no significant relationship with

condom use and sexual behaviour. In fact, in this study, high levels of knowledge were associated with a low sense of self–efficacy, inconsistent condom use and negative attitudes towards AIDS. Furthermore, a substantial number of students still engaged in unprotected sex with multiple partners.

It has been suggested that education programmes should shift their focus from information dissemination to skill development and the enhancement of self-efficacy. This will help students translate this knowledge into positive action by enacting AIDS preventive behaviour. Peer group involvement is also vital as this would help define peer group norms and values and convey the message in a more acceptable manner.

5.9 Theoretical framework

In accordance with our model of perceived behaviour control it was hypothesised that people's behaviour is best understood by:

- beliefs and knowledge concerning the outcomes of performing the behaviour and
- the evaluations of those consequences (attitudes) and
- the subjective normative beliefs concerning what others think or what the actor should do, as well as the actor's motivation to comply with these beliefs (subjective norm) and
- perceived behaviour control (self-efficacy) which refers to the ease or difficulty of performing the behaviour. The notion of perceived behaviour control also encompasses one's personal and technical skills, for instance to obtain and use condoms.

In this study attitudes and self-efficacy emerged as the strongest predictor variables of condom use. In other words positive attitudes and a high sense of self-efficacy (perceived behaviour control) influenced safer sex or condom use. However, the results also showed that a combination of all these variables i.e. knowledge of AIDS, attitudes towards AIDS, perceived norms and self efficacy had a great impact on

condom use. This finding supports Mathews et al.'s, (1991) statement that protective behaviour is influenced by many variables including one's knowledge, attitudes, cultural values or norms as well as significant others.

Furthermore, this study also showed that the subjective norm (which takes into consideration the effects of social norms and the motivation to comply with these norms) had an impact on preventative behaviour. In other words, the respondents' subjective norm regarding condom use and sexual behaviour was predicted by the attitudes and beliefs of significant others (parents, family members and peers). Parents, family members and peers strongly supported AIDS preventative behaviour. This had

a great influence on the respondents' behaviour because they complied with these expectations. In this instance, the subjective norm encouraged the students' decision to stick to one sexual partner and to use condoms. Finally knowledge on its own did not have any impact on sexual behaviour and condom use.

5.10 Limitations

The study is purely correlational and therefore subject to all problems associated with research of this nature. A salient limitation of this study is methodological because using a formal model like Azjen & Fishbein's (1990) theory of perceived behaviour control require the use of questionnaires in order to produce scores on the relevant dimensions. Furthermore, not only do we experience difficulties in interpretation but ensuring that the items are understood by all subjects in a similar fashion and that the response categories are unambiguous and appropriate is almost impossible. For example, Ingham et al., (1991) say that the probability that the same response to a specific item may be produced for a number of different reasons is often ignored and the aggregated statistical relationships between variables are usually interpreted in simple explanatory modes. The range of possible explanations is restricted by the variables incorporated in the model and the fixed response style required by the questions.

A major weakness is also that the sample size is too small to make generalisations and therefore the reliability of the results is questionable in light of this fact. Another major weakness of this study is that there was no instrument available to measure HIV prevention at the time this study was undertaken and this does not comply with the original aims. Furthermore, perception of vulnerability could not be fitted into the regression model due to the poor construction of this correlate. Furthermore, although this study found the intention among students to use condoms in the near future, it failed to make a follow up assessment to measure if condoms were actually used as indicated.

Furthermore the statement on oral sex sounded ambiguous and this could have been responsible for the few correct responses found with regard to this question. Perhaps a more appropriate question could have been as follows: HIV can be transmitted through oral sex where semen is emitted.

5.11 Conclusion

Despite its limitations, this research was able to provide a wealth of data on self report factors related to HIV/AIDS by Zululand university students and paved the way for future similar South African studies.

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Appendix 1

The questionnaire used in the study

SECTION A

INSTRUCTIONS: PLEASE ANSWER ALL QUESTIONS BY MARKING A CROSS.

BIOGRAPHICAL DATA

1. Sex

M	1
F	2

2. Age in years

______

3. Education in years (e.g. BA 1, BSC 1 , BCOMM 2, etc)

____

4. Religious denomination(please specify e.g. Roman Catholic)

____

SECTION B

INSTRUCTIONS: PLEASE RESPOND TO ALL ITEMS ON THE QUESTIONNAIRE. PLEASE INDICATE YOUR RESPONSE BY MARKING A CROSS IN THE APPROPRIATE SQUARE.

1. Is AIDS an infectious disease

yes	1
no	2

2. All people with AIDS will eventually die.

yes	1
no	2

3. Can HIV be transmitted through sexual intercourse.

yes	1
no	2

4. Can HIV be transmitted through anal sex.

yes	1
no	2

5. Can HIV be transmitted through oral sex.

yes	1
no	2

6. Can HIV be transmitted through blood transfusion.

yes	1
no	2

7. Can HIV be transmitted through sharing infected needles.

yes	1
no	2

8. Can HIV be transmitted from mother to her unborn child.

yes	1
no	2

9. Can HIV be transmitted through kissing.

yes	1
no	2

10. Can HIV be transmitted through cuddling.

yes	1
no	2

11. Can HIV be transmitted through touching.

yes	1
no	2

12. Can HIV be transmitted through sex With prostitutes.

yes	1
no	2

13. Can HIV be transmitted through mosquito bites.

yes	1
no	2

14. Can one get the AIDS virus from a perfectly Healthy person.

yes	1
no	2

15. There are always visible signs when one is *infected with the AIDS virus.*

yes	1
no	2

16. AIDS is prevalent among people with sexually transmitted diseases.

yes	1
no	2

17. AIDS and HIV infection are the same thing.

yes	1
no	2

18. Can a person avoid getting HIV/AIDS by changing his/her sexual behaviour.

yes	1
no	2

19. One can reduce the risk of contracting AIDS by abstinence (not having sex).

yes	1
no	2

20. One can reduce the risk of contracting HIV/AIDS by using condoms.

yes	1
no	2

21. One can reduce the risk of contracting HIV/AIDS by having sex with one person.

yes	1
no	2

22. One can reduce the risk of contracting HIV/AIDS by having heterosexual relationships.

yes	1
no	2

23. One can reduce the risk of contracting HIV/AIDS by engaging in interfemoral sex "ukusoma"/"sex between thighs" .

yes	1
no	2

24. One can avoid getting HIV/AIDS by masturbating.

yes	1
no	2

25. From whom would you prefer to get your information about AIDS?

	YES	NO
Campus Health	1	2
Religious Group	1	2
Parents/Family Members	1	2
Friends	1	2
Clinic/Doctor	1	2

26. From whom (or which source) have you heard/learned most about AIDS?

	YES	NO
Campus Health	1	2
Religious Group	1	2
Parents/Family members	1	2
Friends	1	2
Clinic/Doctor	1	2

30. Over the last 6 months, how many times have you discussed AIDS with:

(a) Parents/Family members

once/twice	1
more often	2
never	2
not sure	4

(b) Friends

once/twice	1
more often	2
never	3
not sure	4

INSTRUCTIONS: for each of the following statements, please indicate whether you agree or disagree with the statement. Please respond to all items on the questionnaire. Use the following scale.

SA : Strongly agree with the statement
A : Agree with the statement
N : Neither agree nor disagree with the statement
D : Disagree with the statement
SD : Strongly disagree with the statement

31. My parents/family members believe I should always use condoms.	SA	A	N	D	SD
32. My friends believe I should always use condoms.	SA	A	N	D	SD
3. My parents/family members believe I should refuse to have unsafe sex.	SA	A	N	D	SD
34. My friends believe I should refuse to have unsafe sex.	SA	A	N	D	SD
35. My parents believe I should try to persuade my partner(s) to practice only safer sex.	SA	A	N	D	SD
36. My friends believe I should try to persuade my partner(s) to practice only safer sex.	SA	A	N	D	SD

SECTION C

INSTRUCTIONS: for each of the following statements, please indicate whether you agree or disagree with the statement. Please respond to all items on the questionnaire. There are NO right or wrong answers. Use the following scale.

SA : Strongly agree with the statement
A : Agree with the statement
N : Neither agree nor disagree with the statement
D : Disagree with the statement
SD : Strongly disagree with the statement

MARK WITH X

1. AIDS does not exist.	SA	A	N	D	SD
2. AIDS is a ploy developed by the past government to stop blacks from having babies.	SA	A	N	D	SD
3. AIDS is a homosexual disease.	SA	A	N	D	SD
4. AIDS is a black person's disease.	SA	A	N	D	SD
5. AIDS is a white person's disease.	SA	A	N	D	SD
6. AIDS can be contracted by all people, irrespective of race, colour or sexual orientation.	SA	A	N	D	SD
7. People who contracted AIDS got what they deserved.	SA	A	N	D	SD

8. People with AIDS should be avoided at all costs.	SA	A	N	D	SD
9. I would accept someone with AIDS in my class.	SA	A	N	D	SD
10. I feel at risk of contracting AIDS.	SA	A	N	D	SD
11. I would inform my partner if I had AIDS.	SA	A	N	D	SD
12. Limiting the spread of AIDS is more important than protecting the rights of people with AIDS.	SA	A	N	D	SD
13. Support groups for people with AIDS would be very helpful to them.	SA	A	N	D	SD
14. I would quit my job before I would work with someone with AIDS.	SA	A	N	D	SD
15. Being around someone with AIDS would not put my health in danger.	SA	A	N	D	SD
16. People with AIDS should not be prohibited from working in public places.	SA	A	N	D	SD
17. People who intentionally give AIDS to others should face criminal charges.	SA	A	N	D	SD
18. People should not blame the homosexual community for the spread of AIDS in South Africa.	SA	A	N	D	SD
19. An employer should have the right to fire an employee with AIDS.	SA	A	N	D	SD
20. Health care workers should not refuse to care for people with AIDS.	SA	A	N	D	SD
21. Children who have AIDS should not be prohibited from going to schools.	SA	A	N	D	SD
22. AIDS blood test results should be confidential.	SA	A	N	D	SD
23. AIDS is a punishment from God.	SA	A	N	D	SD
24. I would not be afraid to take care of a family member with AIDS.	SA	A	N	D	SD
25. If I discovered that my roommate had AIDS I would move out.	SA	A	N	D	SD
26.Churches should take a strong stand against homosexuality to prevent the spread of AIDS.	SA	A	N	D	SD
27. Money being spent on AIDS research is a waste.	SA	A	N	D	SD
28. I would not avoid a friend if s/he had AIDS.	SA	A	N	D	SD
29. If I had AIDS I would spread it.	SA	A	N	D	SD
30. Young people should be discouraged from engaging in sex before marriage	SA	A	N	D	SD

31. Interfemoral sex ("ukusoma"/ sex between thighs") is outdated.	SA	A	N	D	SD
32. Masturbation is an immoral practice	SA	A	N	D	SD

SECTION D

DISCUSSIONS ABOUT AIDS USUALLY INVOLVE DISCUSSIONS ABOUT SEX AS WELL AS CONDOM USE. PLEASE ANSWER THESE LAST QUESTIONS ABOUT YOUR SEXUAL HABITS TO ASSIST US IN KNOWING WHAT INFORMATION TO INCLUDE IN AN AIDS EDUCATION PROGRAM. REMEMBER THIS INFORMATION IS ANONYMOUS AND CONFIDENTIAL.

1. Are you sexually active

yes	1
no	2

2. How many sexual partners did you have in the past 6 months?

one	1
two	2
three/more	3
none	4

3. How many sexual partners did you have in the past 2 years?

one	1
two	2
three/more	3
none	4

4. How often did you use condoms in the past 6 months?.

always	1
sometimes	2
never	3

5. Do you intend using condoms in the next coming six months.

always	1
sometimes	2
never	3

6. Do you know of any place/person where you can get condoms?

Yes	1
No	2
Unsure	3

7. If condoms were readily available on campus would you use them?

Yes	1
No	2
Unsure	3