

**Exploring HIV risk perceptions amongst students at a South African
University**

by

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Declaration

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ABSTRACT

The youth has been identified as one of the most vulnerable, at risk groups of HIV infection. The effects of HIV amongst this population hold many dire consequences and subsequently much investment has been put into HIV prevention programmes amongst this population. It is important that these are prevention programmes with *impact*. Prevention programmes with impact need to understand and consider the factors that interfere with safe sexual practices. One such factor is risk perception. This study sought to explore the HIV risk perception of students at a South African University (Stellenbosch University). It further sought to understand the underlying factors which influence the risk perception amongst students with the aim of making recommendations for improved prevention initiatives. The research methods included both quantitative and qualitative methods. Data collection was done through a survey questionnaire, focus group discussions and interviews. Statistical analysis was used to analyse the quantitative data while grounded theory was used to analyse the qualitative data. The study found a low HIV risk perception amongst students. While some students low HIV risk perception were appropriate to their sexual behaviour, some factors influencing risk perception raised concern about the low risk perception rate found amongst students.

OPSOMMING

Die jeug is aangedui as een van die kwesbaarste, hoë risiko groepe vir MIV-infeksie. Die impak van hoë MIV infeksie vlakke en verhoogde kwesbaarheid onder hierdie populasie, hou moontlike katastrofiese gevolge in. Gevolglik is daar 'n groot fokus op voorkomende programme met impak onder hierdie populasie. Voorkomende programme met impak moet die faktore wat hoë risiko gedrag beïnvloed verstaan en inkorporeer. Een van hierdie faktore is risiko persepsie. Hierdie studie het gepoog om die risiko persepsie van studente by 'n Suid-Afrikaanse Universiteit (Stellenbosch Universiteit) te eksplloreer. Die studie het verder gepoog om die faktore wat die risiko persepsie van studente beïnvloed beter te verstaan met die doel om aanbevelings te maak om toekomstige programme te verbeter. Kwalitatiewe en kwantitatiewe navorsingsmetodes is gebruik. Data insameling het plaasgevind deur drie metodes: 'n vraelys, fokus groepe en onderhoude. Die ingesamelde data vanaf die vraelyste is met statistieke analise geanaliseer. Kwodering van die kwalitatiewe data (fokus groepe en onderhoude) is ook toegepas. Die studie het 'n lae risiko persepsie onder studente gevind. Sommige studente se lae risiko persepsie is op geskikte seksuele gedrag gebaseer. Van die faktore wat risiko persepsie beïnvloed is wel kommerwekkend.

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CHAPTER 1: INTRODUCTION

1.1 Problem Statement

HIV has become a world-wide epidemic. The cumulative total of individuals infected with HIV since the start of the epidemic exceeds 60 million, while deaths due to AIDS have exceeded the 25 million mark (UNAIDS, 2007). At the end of 2010 the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimated a total of 33.3 million individuals living with HIV. Sub-Saharan Africa accounts for 68% of the global prevalence (UNAIDS, 2010). The Policy Project (2001) states that 70 percent of the total infected individuals are in Sub-Saharan Africa. This implies that Sub-Saharan Africa has been worse affected by the HIV epidemic. South Africa (the country where this study will be based) is a Sub-Saharan African country, which has been significantly affected by this world-wide epidemic.

To date no person has been cured of HIV infection. In the absence of curative therapy there has been an implementation of measures to provide effective and sustainable HIV prevention programmes (Cohen, Hellman, De Cock & Lange, 2008). Salomon et al. (2005) argue that given the costs involved in prevention programmes, it is important that there is an emphasis on prevention programmes with *impact*.

HIV prevention amongst young adults has received much attention. Multiple factors contribute to the high investment in HIV prevention amongst young people. Firstly, HIV/AIDS statistics indicate that the highest HIV prevalence is amongst this population. About three-quarters of AIDS cases are amongst the ages 20 to 40 years (Policy Project, 2001). Secondly, if mortality and low productivity occurs as a result of high HIV infections, a significant number of this population will not be part of the workforce in what should be their most productive years. This holds many adverse effects on the economy of countries and organisations (Forsythe, 2002). According to the UNAIDS (2008) most workers lost to AIDS are in their most productive years. In light of these arguments sustainable, effective prevention strategies amongst young people is crucial.

HIV awareness campaigns have formed a crucial part of HIV prevention programmes amongst young people. Most of these programmes have been educational in nature, informing the audience of the various risks and prevention strategies. A primary focus of prevention methods have been the encouraging of consistent and correct condom use (Brown et al, 2001) as correct condom use is a highly effective means of preventing HIV transmission (Policy Project, 2001). There is much debate around the effectiveness of prevention programmes which aims to impart knowledge. Khumasen (2008) states that research investigating the correlation between knowledge of HIV and sexually transmitted infections (STI's) on the one hand and condom use on the other have been inconsistent. While some have found a significant relationship, many others failed to find one. Brown et al (2001) argue providing information is not enough. The authors argue that the environmental and contextual factors impacting on individuals' behavior need to be considered. Factors such as condom self-efficacy and attitudes toward condom use either interfere or foster condom use and these factors should be integrated in educational programmes on HIV/AIDS information (Okonto and Oseji, 2006). The role of social influences and individual characteristics can therefore not be neglected.

The social and individual characteristics that influence sexual behavior and HIV prevention behavior are varied. Gaining insight into the perceptions and factors influencing the youth's sexual behavioural patterns is critical in HIV and AIDS prevention (Facente, 2001). This study explores one of these factors namely risk perception. Do the youth themselves think they are at risk? This is an important factor to explore as it could influence the individual's HIV prevention behavior. Understanding risk perception amongst this population could also provide valuable insight which could improve on future prevention strategies. Limited research has focused on risk perception amongst young people, especially within South Africa. In light of the lack of knowledge on the risk perceptions of young people/students in South Africa, this research topic has been formulated. The study focuses on students at tertiary institutions as a sub-population of young people. The researcher has chosen to conduct the study at a South African University, Stellenbosch University. At many universities, especially within

South Africa, it is not known if university students themselves think that they are at risk of HIV infection. If a low risk perception exists, what factors contribute to this?

The research question of the study is therefore as follow: *What are the HIV risk perceptions amongst Stellenbosch University students?*

The aim of the study was to identify the HIV risk perceptions of students at Stellenbosch University, in order to improve HIV prevention programmes / management.

The objectives of the study were:

- To assess HIV risk perceptions amongst students.
- To explore the factors influencing students HIV risk perceptions.
- To provide recommendations to improve on existing HIV prevention programmes, if indicated.

1.2 Method of research

The study included both quantitative and qualitative research methods. A self-administered questionnaire was sent to students in residences. Cluster sampling was applied and each residence formed a cluster. Students were then randomly selected from a list of each residence list. The questionnaire explored students' perception of their level of HIV knowledge, their personal risk perception as well as the factors that influence their risk perception. Two focus groups were also facilitated. The focus group explored both participants' personal experiences as well as the impression they get from their peers and friends. The discussion focused on student's HIV risk perception and the factors influencing this. Finally, interviews were conducted with staff members who render support services (medical, social or psychological) to students. The interviews explored the professionals' opinions of students HIV risk perception.

1.3 Structure of the study

Chapter 2 provides an overview of the relevant literature. It firstly explores various factors that might hinder safe sexual practices amidst sufficient HIV knowledge. It then explores risk perception in general and looks at the youth in more detail i.e. their vulnerability and risk perception. It finally explores students at tertiary institutions and contextualises Stellenbosch University. Chapter 3 outlines the research methodology used in the study. Chapter 4 presents the findings of the research project. In Chapter 5 the findings are discussed and interpreted. Chapter 6 concludes the findings and outlines recommendations. It also outlines the limitations of the study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

According to Harem (2009) and The Centre for Disease Control and Prevention (2010) you can contract the HIV virus in the following ways: unprotected sex (oral, anal and/or vaginal) with an HIV infected person; having multiple sexual partners; coming in contact with infected blood (e.g. needles, blood transfusions) and transmission from an infected mother to her child during pregnancy, labor or breastfeeding. Sexual transmission however is responsible for the most HIV infections.

In the absence of curative therapy, there has been an implementation of measures to provide effective and sustainable prevention of HIV as well as therapy for HIV infected individuals. Cohen et al (2008) argue that no one intervention strategy has proven to be universally effective. Instead packages of a combination of behavioral prevention methods have resulted in reductions of HIV prevalence in many countries. These interventions have focused on sexual abstinence, delayed sexual debut, reduced number of sexual partners, and routine condom use. Clean needle use and the reduction of sharing needles have also been included (UNAIDS, 2010).

While governments and NGO's have launched various HIV prevention programmes since the early 1990's with the aim of decreasing new infections, for many countries or communities, this has not been achieved or it has shifted at a very slow rate (Sekrime et al, 2001) because HIV awareness and knowledge does not necessarily lead to safe sexual practices (Brown et al, 2001). Many factors contribute to a lack of HIV knowledge being translated into prevention behaviours by individuals. If prevention strategies are to be more effective, the underlying factors need to be understood and incorporated into HIV prevention initiatives. Literature on this issue is broad and some of these factors will be discussed in the literature review. The first part of this review explores some of the factors that contribute to a lack of prevention behaviours.

As the focus on this study is on a specific population, the youth, the second part of the literature review is more specific to this. It firstly discusses the risk and vulnerability

amongst the youth. It then explores HIV prevention amongst the youth. Thereafter it zooms in on the importance of addressing risk perception as this is the main focus on the study. It then specifically discusses addressing risk perception amongst the youth. The final section of the literature review briefly explores HIV within tertiary institutions in South Africa and then finally contextualises Stellenbosch University.

2.2 Factors interfering with effective prevention behavior

2.2.1 Information about HIV/AIDS

Health 24 (2007) stipulates that dangerous myths and misconceptions give individuals a false sense of their level of risk and contribute to confusion about HIV transmissions. According to Khumsaen (2008) research investigating the correlation between information about HIV/STI's and condom use has been inconsistent. While some have found a significant relationship, many others projects failed to find one. Okonto and Oseji (2006) argue that factors such as condom self-efficacy and attitudes toward condom use either interfere or fosters condom use when the knowledge of HIV occurs. They suggest an integration of these factors in educational programmes on HIV/AIDS information as the role of cognition cannot be neglected. Khumsaen (2008) highlights the importance of attitude towards condom use. If negative attitudes exist, condom use will not be implemented – even in the midst of acquiring information about HIV/AIDS, while positive attitudes significantly increases condom use.

2.2.2 Access to a condom

Brown, Franklin, MacNeil and Mills (2001) argue that access to a condom is a primary environmental and contextual issue that needs to be addressed. Numerous factors serve as barriers to access of condoms. Economic and social barriers might be prevalent. Economic barriers involve the costs of condoms – individuals might not be able to afford condoms. Social barriers involve social perceptions/pressures that might lead to reluctance by an individual to buy condoms. An example of this is an individual feeling too embarrassed to purchase condoms. Research conducted by Sokolov et al (2002) suggested that many participants do not purchase condoms prior to sex and condoms are

often not available in nearby venues. As a result access to condoms in spontaneous sexual situations is limited.

2.2.3 Skills to use a condom

Consistent and correct condom use is a highly effective means of preventing HIV transmission (Policy Project, 2001). Once the condom is in an individual's possession, it is important that it be used correctly to prevent HIV-infection. Brown et al (2002) argues that many barriers may arise. Some individuals lack the knowledge how to apply the condom. Some social barriers such as religion might even oppose the teaching of condom use. A study done by Bortot as cited in Kennedy et al (2007) reported that the majority of participants learned to use condoms at home or at school, while a few learnt from community programs. The study also suggested that the preferred perceived method of learning how to use a condom was the packaging of the condom.

Cross-sectional studies on condom use knowledge and practice have indicated different errors in the application of condoms. These include a failure to secure the condom on withdrawal, the loss of erection prior to condom removal and a failure to leave space at the tip of the condom (Kennedy et al, 2007). Khumsaen (2008) suggests that a positive relationship exist between condom use self-efficacy and actual condom use. Individuals who are confident about their condom use ability are more likely to consistently use condoms. Condom use self-efficacy could be one of the key elements associated with knowledge which is required to modify risky sexual behaviours. Condom use does not merely consist of applying mechanic skill. It also requires negotiation and decision-making with partners (Brown et al, 2002). Impaired judgment due to substance use can impede on condom use. Khumsaen (2002) also highlights a negative relationship between alcohol/drug use and condom use. Individuals who consume drugs/alcohol are less likely to use condoms during sexual activity.

2.2.4 Personal concerns and motivations

The results of a study done by Khumsaen (2008) suggested that only 16.7% of the participants consistently used condoms. The main reason for condom use was to avoid pregnancy and HIV-infection. Reasons provided for the lack of condom use included condom 'not being natural', while other participants felt that other means of contraception was already taken. According to Bralock and Koniak-Griffin as cited in Khumsaen (2008) the lack or inconsistent use of condoms increases with the duration of the relationship as the trust which develops leads to assumptions about partner fidelity. A study done by Gimenez-Garcia (2012) also found that a perceived loss of pleasure associated with condom use was an important barrier amongst young males.

2.2.5 Past experience

Past experiences have shown a correlation with condom use. A study done by Hanifah and Herdayati (2000) suggests that previous STD experience has a correlation with condom use behavior. Latkin et al (2003) state that previous experience with peers' impact on sexual risk behaviors. Individuals who engaged in talking about condoms to friends, encouraging condom use amongst peers/friends or who know peers are using condoms are more likely to engage in condom use.

2.2.6 Partner willing to use a condom

Health 24 (2007) argues that young people might lack the skills to negotiate abstinence or condom use or be fearful of openly talking with their partner about sex. Khumsaen (2008) argues that individuals with a positive communication self-efficacy with their partner are more likely to use condoms. According to Kennedy et al (2007) research has indicated that consistent use of condoms have been correlated with a greater self-efficacy to persuade one's partner about the importance of condoms.

Brown et al (2002) states societal norms or cultural beliefs often serve as a barrier to an individual's willingness to use a condom. The partner may hold their own views on condoms. Kennedy et al (2007) state a negative attitude on condom use is still highly

prevalent. Sexually experienced men have reported that condoms reduce physical pleasure, are embarrassed about purchasing condoms, and the use of condoms might be seen as a sign of infidelity. Kennedy et al (2007) further argue that individuals' whose partners consider HIV/STDs to be an important health issue is more likely to use condoms.

2.2.7 Social pressures

The low social and economic status of women contributes to the high-risk sexual behavior and vulnerability to HIV (Policy Project, 2001). According to Health 24 (2007) women's low social status makes it challenging for them to negotiate condom use or refusal without it. Many women are financially dependent on their male partners, which leads to a fear of being rejected if they deny sex or insist on condom usage.

Health 24 (2007) states constructions of femininity and masculinity within society also contribute to high risk sexual behavior amongst men. Sokolov et al (2002) suggest that gender differences might be evident in the perceived responsibility for the initiation of condom use. A study conducted by them suggested that men were of the opinion that it is a women's responsibility, while women thought it was the responsibility of the male partner.

Latkin et al (2003) examined the impact of peer norms on sexual risk behaviors. The results suggested that peer norms (amongst a group aged 18 to 25) about condom use (friends talking about condoms, encouraging condom use, and using condoms) were significantly associated with condom use. This is supported by Murphy and Boggess (1998) who argues that peer and partner social norms are significantly related to condom use.

2.2.8 Risk perception

According to the Policy Project (2001) people seem to be overconfident in their ability to avoid getting AIDS. Prata et al (2006) investigated the relationship between HIV risk perception and condom use amongst participants in Mozambique (a national-based

sample, aged 15-24). The study found a tendency amongst young adults, especially men to underestimate their risk of contracting HIV. It was also found that in spite of accurate knowledge about HIV transmission, some participants remain unable to assess their risk. Results from a study by Sokolov et al (2002) suggests that individuals believe that condoms are not necessary within a steady relationship since they do not perceive themselves at risk for HIV/STI's.

2.3 The importance of addressing risk perception

“Understanding how knowledge of HIV relates to personal risk perception and avoidance of risky behaviours is critical to devising effective HIV prevention strategies” (Stringer et al, 2004). People seem to be overconfident in their ability to avoid getting AIDS (Policy Project, 2001) and HIV prevention amongst heterosexuals are hampered by beliefs about their own risk (De Souza Praca, Latorre & Hearst, 2003). Health 24 (2007) stipulates that dangerous myths and misconceptions about HIV/AIDS also give individuals a false sense of their level of risk and contribute to confusion about HIV transmissions.

Many studies exploring risk perception has found that people seem to have an inaccurate perception of their risk. De Souza Praca, Latorre and Hearst (2003) assessed the factors associated with HIV risk perception amongst a group of postpartum women. They interviewed 273 women. From this sample, 71% of participants showed no risk perception. The mean age of this population was 23.5 years, which falls within the youth category being explored in this study. These results are disconcerting given the literature on the high risk amongst youth. Risk perception was also not a reflection of their actual risk as 70% of the participants indicated one or two prior pregnancies, 85% of them had their first sexual experience before the age of 20 and 46% had had more than one partner in their lifetime.

Stringer et al (2004) explored personal risk perception amongst an urban obstetric population in Zambia. The sample size was 858, of which 248 were HIV positive. 31% perceived themselves to be at no risk, 25 % at low risk, 20% at moderate risk and 26% at high risk. 52% percent of the women that indicated no or low risk were in fact HIV

positive. Age, parity, tribe origin, education level, income and marital status did not significantly influence risk perception. Having more knowledge about HIV did not correlate significantly with risk perception either. In fact women with more knowledge appeared to participate in more risky behavior. In light of these inaccurate risk perceptions it is only logical that risk perception is an important factor that needs serious attention for those implementing HIV prevention programmes.

2.4 Risk and vulnerability amongst youth

Youths are the most vulnerable group affected by HIV/AIDS with the most rapid spread of the virus amongst this population (Unadike, Ekrikpo & Bassey, 2012). The optimisation of HIV prevention has been indicated as a strategic focus of the Global Health Sector Strategy on HIV/AIDS 2011-2015. One of the targets for 2015 is to reduce new infections amongst young people aged 15-24 years by 50% (World Health Organisation, 2011) as sexually transmitted diseases remain an important cause of morbidity and mortality among the youth (Sekirime et al, 2001). Sub-Saharan Africa with its high prevalence rate “will require intensified efforts in HIV prevention, treatment, care and support in order to reverse the spread of HIV and treat all those in need with a stronger focus on the needs of women, girls and other vulnerable population” (World Health Organisation, 2011, p.4).

Young people have been at the forefront on HIV/AIDS prevention in Southern Africa as young people have been identified as one of the at risk groups in need of intensified HIV prevention strategies (Campbell, 2003). About three-quarters of AIDS cases were reported amongst the ages 20 to 40 years (Policy Project, 2001). In spite of the decline in prevalence amongst young people aged 15-24 in some countries in recent years (World Health Organisation, 2011) the high prevalence rates amongst the youth remains a concern due to the increased risk and vulnerability amongst this population (UNAIDS,2010). Within the youth also exists different degrees of risk and vulnerability with some groups having HIV infection levels of up to 60% (Campbell, 2003). Specific groups of young people are at high risk of infection from HIV and other sexual and reproductive health outcomes. Three subgroups are considered most at risk and include

men who have sex with men, young people who sell sex and those who inject drugs. Other groups at a higher risk are those who have unprotected sexual relations with people who are HIV positive or likely to be infected with HIV. This broad group includes clients of sex workers, wives of these clients, an HIV-negative partner in a discordant couple and adolescent girls who have sex with older men (UNAIDS, 2010).

In an attempt to optimise HIV prevention strategies amongst young people, it is important to understand the factors which contribute to the risk and vulnerability amongst this population. Risk can be defined as the “probability or likelihood that a person may become infected with HIV. Certain behaviours create, increase and perpetuate risk. Examples include unprotected sex with a partner whose HIV status is unknown, multiple sexual partnerships involving unprotected sex, and injecting drug use with contaminated needles and syringes” (UNAIDS, 2008, p. 65). Vulnerability on the other hand results from a range of factors outside the control of the individual that reduce the ability of individuals and communities to avoid risk. These include factors such a lack of knowledge and skills required to protect oneself, inaccessibility of services, societal factors such as gender roles and dynamics, cultural norms, societal norms etcetera. Factors like these may create or exacerbate individual and collective vulnerability to HIV (UNAIDS, 2008).

2.5 Factors influencing risk and vulnerability amongst the youth

Many young people are located in an already established institutional framework (e.g. school or tertiary institution) within which HIV- prevention programmes could be implemented (Campbell, 2003). For effective prevention measures to be instituted it is important to establish the predisposing factors and profile of knowledge amongst susceptible young people (Sekirime et al, 2001).

It is important that one understand the developmental stage of the youth. Teenagers often perceive themselves as invincible in spite of the alarming HIV prevalence amongst this group (Facente, 2001). UNAIDS (2010) postulates late adolescence is marked by important transitions such as leaving school, entering labor force or going to university,

initiation of sexual practices, forming relationships and even having children. It is a period characteristic of first experiences, exploration and risk taking, of which sex and substances are part of. These young adults need to deal with all these opportunities and challenges. How they deal with it is influenced by many factors such as their developing capacity for complex thinking. UNAIDS (2010) further state that people involved in HIV programmes need to understand the changes that take place during adolescence as these changes affect how youth understand information, what information and which channels of information influence their behavior, how they think about the future and make present decisions, how they perceive risk during a period of first-time experiences and how they form relationships, respond to social values and norms and how they are influenced by the attitudes of their peers and others.

Gender relations and the economic context in which young people's sexuality is practiced are important factors to consider (Campbell, 2003). Young women's ability to negotiate condom use by their male partners is limited by the imbalance of power experienced in heterosexual relationships. Sexual relationships are often centered around male pleasure with women being relatively powerless in establishing relationships on their terms (Campbell, 2003). In some instances negotiation of condom use even lead to violence against the women (Corbett, Dickson-Gomez, Hilario & Weeks, 2009). Harrison et al (2012) argue that HIV prevention initiatives should build on existing gender equitable beliefs and should strive to promote others such as sexual communication, negotiation skills and positive modeling of peer norms.

The issue of condom use in primary relationships is also complex. Condoms are less likely to be used in primary relationships than in other relationship types (Corbett, Dickson-Gomez, Hilario & Weeks, 2009). Nkomazana and Maharaj (2012) conducted a study on the prevalence of condom use amongst university students in Zimbabwe and found that consistent condom use were lower in regular sexual partnerships that it was in casual partnerships. Corbett et al (2009) investigated condom use in primary relationships and found that participants described nonuse of condoms as a strategy to find and maintain primary relationships, establish trust and increase intimacy. In fact

many participants had unprotected sex while recognising their risk of HIV and other STD's. These participants would rather put their love for their partner and their other emotional needs above concerns about their health. In their quest for love people do not always act rationally and sometimes unprotected sex maintains the fantasy of one's partner's fidelity (Corbett et al, 2009).

“Studies from more than 50 countries have identified a number of common determinants that are associated with behaviours that could undermine adolescents' health, such as early sexual activity and substance use. These determinants could either increase the risk of negative behaviour (risk factors) or protect them (protective factors)...Protective factors in preventing early sexual debut are a positive relationship with parents, a positive school environment, and spiritual beliefs. Risk factors associated with early sexual debut include having friends who are negative role models and engaging in other risky behaviours, such as substance use” (UNAIDS, 2010, p.9). Other factors are a lack of access to information and services, living without parental guidance and support or living in societies where laws or social values force them to behave in ways that place them at risk (e.g. homophobia) (UNAIDS, 2010).

2.6 HIV prevention and the youth

As stated earlier the alarming high prevalence amongst the youth has led to an increased emphasis on HIV prevention with impact amongst this population. Implementing effective prevention strategies remains a challenge amongst this population group due to the developmental stage they find themselves. Their view of themselves as invincible poses many challenges (Facente, 2001), one being that they themselves do not perceive themselves at risk of contracting HIV/AIDS in spite of the HIV prevalence rates.

Prevention strategies have primarily focused on the general population of young people, not on the high risk groups. Research has begun to highlight the importance of focusing on the most-at-risk groups among the youth. However, many challenges arise from this. Prevention strategies need to be adapted to be effective within these groups. This is

further complicated by the significant differences in youth between the ages of 10 and 24 (UNAIDS, 2010).

Brown et al (2000) argue that early prevention strategies were based on the information provision model. In those days it was believed that informing people about HIV, HIV transmission and protection from it, would lead to sufficient behavioural change. Unfortunately these initiatives failed in producing significant behavioural change. Effective prevention works at multiple levels, which include the super structural (large-scale social and political), structural (e.g. policies at national and institutional level), environmental (factors in the local environment) and individual (factors influencing decisions and skills regarding prevention) levels and argues that the failing to acknowledge these levels the information provision model does not address risk and vulnerability (Sweat and Denison, 1995). Brown et al (2000) propose a new model for prevention strategies. They argue that effective prevention needs to take into account the context in which behavior occurs. Corbet, Dickson-Gomez, Hilario and Weeks (2009, p.218) support this paradigm shifting stating “regardless of the population, HIV prevention efforts primarily focused on the individual, emphasising risk reduction through safer sex, often neglecting the context in which the behavior occurs”.

Prevention programmes should therefore address behavior with an understanding of the context as well as aim to address the factors which influence these behaviours. In doing so the new model addresses risk and vulnerability to HIV (Brown et al, 2000). A discrepancy between knowledge on HIV and sexual practices often exists. HIV prevention programmes should therefore include both education and encounters that heightens the perception of seriousness and concern about HIV, which may facilitate improved sexual practices (Oyeyemi & Oyeyemi, 2012).

2.7 Risk perception amongst the youth

Campbell (2003) argues that feeling a personal vulnerability to HIV infection is an important requirement for translating knowledge into behavior. Low levels of perceived vulnerability despite HIV levels of infections amongst their peers therefore remain a concern amongst young people (Campbell, 2003). Campbell (2003) further argues that

both in South Africa and internationally there has been a process of externalisation of the threat of HIV to identifiable out-groups such as homosexuals or commercial sex workers which have resulted in an unrealistic, optimistic assessment of one's own risk. Facente (2001) highlighted the importance of understanding the health beliefs and perceptions of youth as this significantly affects the health decision making process. Understanding the HIV risk perception of young adults is vital to understanding sexual behavioral patterns. Despite findings and strong literature support for the prevalence of inaccurate HIV risk perception amongst young people, few researchers have explored this phenomenon, especially within South Africa.

A few studies have investigated HIV risk perception amongst the youth. Facente (2001) investigated the perceived susceptibility of adolescents. The study found that 80% of participants who engaged in risky sexual behavior felt that they were not personally at risk of HIV infection. Prata et al (2006) investigated the relationship between HIV risk perception and condom use amongst participants in Mozambique. The study found a tendency amongst young adults, especially men to underestimate their risk of contracting HIV. It was also found that in spite of accurate knowledge about HIV transmission, some participants remain unable to assess their risk. Beltzer et al (2012) investigated HIV knowledge, risk perception and practices amongst young people living in France over a period of 18 years. The study also found a low level of risk perception and a decrease in adopting prevention practices in spite of decrease in condom use, which the authors argue highlight the need to adapt prevention strategies. Buzi et al (2013) explored the individual, interpersonal and contextual factors influencing HIV risk perceptions amongst adolescents attending family planning clinics in the United States of America. The study found the majority of participants perceived themselves to be at no or low risk. However, contrary to the other studies their perceptions were not incongruent with risky sexual behaviour. Those with no or low risk perception felt they could control situations where they have to refuse sex or insist on condom use. They also had more frequent communication with their partners about condom use and held perceptions that peer norms support condom use.

2.8 Students at tertiary institutions

2.8.1 Contextualising students at tertiary institutions

The sexual practices of some students in tertiary institutions are a major concern within the current realities of HIV and AIDS (Kurebwa, Wadesango & Kurebwa, 2012). “Tertiary institutions have numbers of young people in the age bracket of 19-25, who have been found to engage in risky sexual behaviour” (Kurebwa, Wadesango & Kurebwa, 2012, p. 85). The campus atmosphere in which students enjoy independence from their watchful parents set some conditions for sexual exploration or risky sexual behaviour (Kurebwa, Wadesango & Kurebwa, 2012; Nkomazana & Maharaj, 2012). “Both male and female students (more commonly males) indulge in risky sexual behaviour having partaken alcohol especially at club scenes and night functions where these young people feature to acquire entertainment” (Kurebwa, Wadesango & Kurebwa, 2012, p. 86). Tertiary institutions also offer conditions for sexual networking and sexual mixing as they absorb a significant portion of the young people and these institutions tend to be the focal point in the lives of many of these students (Kurebwa, Wadesango & Kurebwa, 2012).

For effective prevention measures to be instituted it is important to establish the predisposing factors and profile of knowledge amongst susceptible young people, such as university students (Sekirime et al, 2001). “Institutions of higher learning have the responsibility to not only fight against the HIV and AIDS pandemic but also to take a prominent leadership position. As one of the major socialising forces in society, tertiary institutions thus have a grave obligation to educate the young adults on this matter through knowledge provisions, awareness fostering, and promoting life-asserting attitudes (Kurebwa, Wadesango & Kurebwa, 2012, p. 86).

Numerous studies have researched HIV related topics such as knowledge, attitudes, and behaviours amongst students at tertiary institutions. Odu et al (2008) investigated the knowledge, attitudes to HIV and sexual behaviour amongst students in a Nigerian tertiary institution. Although most respondents were knowledgeable on HIV transmission and prevention routes (89.4%), the authors found a gap in knowledge of HIV/AIDS and

translation into appropriate sexual behaviour. Less than a quarter of the respondents thought they were vulnerable to HIV/AIDS. Similarly Unadike, Ekrikpo and Bassey (2012) also found that medical students at a Nigerian university were knowledgeable on HIV transmission and prevention routes. In spite of having adequate knowledge, certain risk behaviour like inconsistent condom use still persists. Similar results were found by Nkomazana and Maharaj (2012) who therefore recommend that HIV programmes at tertiary institutions encourage students who have not initiated sex to use condoms at their initial sexual intercourse. Improving personal risk perceptions were also encouraged in an attempt to improve on protective sexual behaviours.

A few studies have also investigated HIV risk perceptions amongst students at tertiary institutions. Maswanya et al (2012) found that in spite of high prevalence of risky sexual behavior, 64% of students at tertiary institution in Tanzania rated themselves' to be at low or no risk to HIV infection. Mattson (1999) explored perceptions of severity of HIV and AIDS and perceptions of personal susceptibility to HIV amongst college students. The study found no correlation between perceptions of severity of HIV and AIDS and compliance with safe sex recommendations. Perceptions of personal susceptibility, on the other hand, were moderately related with safe sex recommendations. This study suggests that when individuals perceive themselves at risk of HIV transmission, they are more likely to practice safer sex recommendations, and vice versa. Brown (1998) and Manning et al (1989) studied college students AIDS risk perception. Both studies concluded that college students tend to underestimate their AIDS risk within the context of their sexual practices. Brown (1998, p.29) found this particularly alarming stating "If a well-educated college student has these perceptions and behaviours, then what are other adolescents and young adults thinking and doing?"

2.8.2 HIV within tertiary institutions within South Africa

The vast majority of university students fall within the age category of 18-30 years, the age group with the highest HIV prevalence rates. HIV awareness campaigns are implemented on campuses, which provide students with the necessary knowledge to make safe sexual practice choices. For effective prevention measures to be instituted it is

important to establish the predisposing factors and profile of knowledge amongst susceptible young people, such as university students (Sekirime et al, 2001). Doing so will assist in providing more effective program implementation on campuses.

The Department of Higher Education South Africa (HESA) has initiated the Higher Education HIV/AIDS Programme (HEAIDS). HEAIDS is a nationally coordinated initiative which aims to enable higher education institutions to address HIV/AIDS not only in the higher education sector but to also play a leadership role in the South African HIV response (HESA, 2012). As part of its response, HESA commissioned a national study in 2007. During 2008 and 2009 the study was conducted across 21 higher institutions in South Africa and aimed to establish the knowledge, behaviours and practices related to HIV and AIDS. It also measured the prevalence levels amongst both staff and students (HEAIDS, 2010).

The study conducted by HEAIDS (2010) during 2008 and 2009 showed the following results. Overall knowledge of HIV amongst students was high. The mean age for HIV prevalence for students was 3.4%. The Eastern Cape had the highest HIV prevalence with 6.4%, while the Western Cape was the lowest at 1.1%. The highest prevalence of HIV occurred amongst African students – 5.6% with only one case of HIV amongst a sample of 3 122 white students. African females showed some significant differences in comparison to other racial groups combined. African females were more likely to: ever have had sex; have had more than one sexual partner in the past month; have had a partner 10 or more years older, report sores on genitals, report unusual discharge from genitals. African males and females on the other hand were significantly less likely to report having had sex while drunk compared to other racial groups.

2.8.3 Contextualising Stellenbosch University

Stellenbosch University is a South African tertiary institution. It is situated in the Western Cape Winelands. It has a student population of more than 27 thousand. In 2012 a total of 27 823 students were enrolled. Male students are 49.3% of the student population while 50.7% are females. The racial profile for 2012 were as follow: White

students accounted for 66.9%, 15.5% were Black, 15.5 % were Coloured and 2% were Indian. The majority of students range from 18 to 25 years, while some postgraduate students are slightly older (University of Stellenbosch, 2012).

In 2008 HIV policies were compiled for students and staff. The Stellenbosch University's policy for staff and students set guidelines for the following:

- creating a non-discriminatory work and academic environment
- HIV testing, confidentiality and disclosure
- providing equitable employee benefits
- preventing and handling incidents of exposure to HIV during injury at work
- dealing with dismissals
- managing grievance procedures

(University of Stellenbosch, 2008).

The university has a unit *The Office for Institutional HIV Co-ordination (OIHC)* which is responsible for its HIV programmes for staff and students. "The OIHC is responsible for the implementation of a comprehensive institutional HIV strategy for Stellenbosch University. As the University's HIV unit, the OIHC serves as consultant on HIV prevention, education and service delivery to both students and staff, and forms a strategic link with other higher education institutions, as well as national and international HIV organisations. The OIHC furthermore performs a leadership function in the realisation of shared responsibility for the vision of a campus free of new HIV infections" (Stellenbosch University, 2012). The university's vision is to have no new HIV infections on campus by 2012. However based on information provided by the OIHC they may not have been successful in achieving this. Increasingly more infections have been reported (OIHC, 2012).

The study conducted by HEAIDS in 2008/9 provided the following results on Stellenbosch University. A very low prevalence rate was found at the University, 0.3% for students. Self-reported symptoms of other sexually transmitted infections (STI's) were also low. It must be noted that the sample included 66% white students and 11%

African students. This was likely a contributing factor to the low prevalence rate as race is a strong influencing factor in the likelihood of being HIV infected. Focus groups discussions suggested high levels of sexual activity amongst some sections of the student population. However the study suggested that only 44% of the student population has ever been sexually active, which was likely to be a strong contributing factor to the low prevalence rate. Fewer students and staff reported multiple partners in comparison to most other higher education institutions included in the study. Transactional sex (whereby sex is exchanged for money and/or other benefits) was found not to be a feature of sexual practice at Stellenbosch University. Condom use at last sex was at 50% but focus groups indicated that the main purpose of condom use was pregnancy prevention, not HIV/STD prevention. 36% of the students had ever been tested for HIV. Most respondents were knowledgeable on the basic facts on HIV prevention. In general staff and students had a relatively conservative approach to sex and condom use was relatively high (HEAIDS, 2010).

HEAIDS (2010) made extensive recommendations based on the research findings from the 2008-2009 national study. The low prevalence rate at Stellenbosch University posed some risk that the students and staff at Stellenbosch University would lose their HIV prevention motivation and the University was cautioned against this. The University's goal of no new infections seemed like a realisable aim and it was encouraged to maintain commitment to this goal. It was further recommended that HIV prevention initiatives focus on areas of highest risk. Two areas identified were disrupting sexual networks and emphasising the need to know one's partner's status before having a sexual relationship. Stigma was indicated as a concern at Stellenbosch University and the need for stigma reduction programmes were emphasised. It was suggested that Voluntary Testing and Counselling (VCT) remain an important focus on the institution with an emphasis on couples counselling and disclosure of one's status in long-term relationships or where condoms are not being used.

2.9 Conclusion

HIV awareness and knowledge does not necessarily lead to safe sexual practices (Brown et al, 2001). The literature review has shown how factors such as risk perception either fosters or hinders condom use, irrespective of the individual's level of HIV awareness. Given the vulnerability of young people much investment has been made into HIV prevention programmes amongst this population. The literature explored some of the factors contributing towards vulnerability and risk amongst this population. One of these factors, risk perception, has been the focus of the literature review and the importance of risk perception has been indicated. The presence of a low risk perception has been explored as this often occurs amidst high risk sexual behaviour. Understanding the factors contributing towards risk perception amongst young people is important if prevention strategies were to be more effective amongst this population. It is important that the risk and vulnerability amongst the youth be explored and considered when initiating prevention programs. Risk perception amongst young people should therefore be addressed in the pursuit of implementing more effective prevention programmes.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Research paradigm

Both quantitative and qualitative research approaches were used as paradigm. The quantitative approach aims to find out how much and how many and is concerned with the relationship between variables. It generally applies statistical methods to test the significance of the relationship between two or more variables (Babbie & Mouton 2001; Polit & Beck 2004). In this study particularly, the quantitative paradigm would enable the researcher to describe how many students rate their risk perception in a particular way and it could possibly look at correlations between race/gender and other variables. In addition to the numerical data that the quantitative approach would provide, the researcher also wanted to understand the students' risk perception in more depth. Hence a qualitative approach was also used as this paradigm attempts to describe and understand human action from the insider's perspective (Babbie & Mouton, 2001).

3.2 Research design

Research design refers to the planning of scientific inquiry that is the strategy the researcher would use to find out something (Babbie & Mouton, 2001; Polit & Hungler, 1999). The research design of this study included a survey, focus groups and interviews. The survey enabled the researcher to gain the quantitative data sought by the quantitative paradigm, while the focus groups and interviews allowed the deeper understanding characteristic of the qualitative approach.

3.3 Research population and sampling

The target group for the study was students at the Stellenbosch University main campus (Stellenbosch). The two different paradigms incorporated into this research project meant that both quantitative and qualitative data methods were used. This had an impact on how the research population was recruited for the study. Each data collection method utilised a unique selection procedure.

3.3.1 Sampling for quantitative data

Within the quantitative paradigm “the ultimate purpose of sampling is to select a set of elements from a population in such a way that descriptions of those elements (statistics) accurately portray the parameters of the total population from which the elements are selected. Probability sampling enhances the likelihood of accomplishing this aim and also provides methods for estimating the degree of probable success” (Babbie & Mouton, 2001, p. 175). For the purpose of the survey the researcher decided on cluster sampling, a form of probability sampling. Cluster sampling involves dividing the target population into clusters and then randomly selecting participants from a list of all individuals within each cluster (Terre Blanche & Durrheim, 1999). Each university residence formed a cluster and random sampling was done within each cluster by randomly selecting students from a list. This sampling method is often used when it is difficult to obtain a list of all members of a very large population (Terre Blanche & Durrheim, 1999; Babbie & Mouton, 2001), as in the case with this study. This sampling method is fairly representative, convenient and economical. The disadvantage however is that the sampling method is not as representative as simple random sampling and requires a larger sample (Babbie & Mouton, 2001). Breakwill, Hammond and Fife-Schaw (2000) argue that a bigger sample is better for survey research purpose. With the researcher deciding on cluster sampling, a bigger sample was even more desirable.

3.3.2 Recruitment for qualitative data

Students from the private accommodation were targeted for the qualitative data (focus groups) as the survey questionnaire was only distributed in university residences. The focus groups were extensively advertised amongst students from private accommodation. After extensive advertising, the researcher was unable to find enough participants to participate in the focus groups and the focus groups were then advertised in the residences as well. The target population for the focus groups were therefore extended to all students, residence and private accommodation included. The response was much better from the students in the residences and had it not been for this the researcher would not have facilitated focus groups at all. Qualitative data was also obtained from

healthcare professionals working with the students. For this data, specific professionals were approached as per the nature of their work with the students.

3.4 Data collection methods

3.4.1 Introduction

A mixed-method approach was used. A questionnaire, focus groups and interviews all formed part of the data collection methodology of this research project.

3.4.2 Questionnaire

3.4.2.1 Rationale and answering format

The researcher developed a structured questionnaire. A questionnaire was used for reliability and because it is a flexible tool that ensures objectivity (Seliger & Shohamy 1989; Nunan, 1992). The questionnaire enables the researcher to collect data in field settings where data can be quantified to produce the responses required for analysis (Nunan, 1992). It is a cheap tool and can be administered easily. The questionnaire included Likert scale comparisons, with questions requiring the respondent to select responses from a choice of options. An example is “How would you rate your personal level of risk of contracting the HIV-virus?” The following choices would then be offered: no risk; mild risk; risk and severe risk. It was decided to include Likert scale formats as it one of the most rigor and structured question formats (Babbie & Mouton, 2001).

3.4.2.2 Pilot study

According to Babbie and Mouton (2001) a pilot study or pretest is crucial where multiple language- or cultural groups are included in a study. As this is the case with Stellenbosch University a pilot test was conducted to establish the validity and reliability of the questionnaire (see addendum A for pilot questionnaire). Twelve students on campus were asked to critique the questionnaire and comment on the clarity and appropriateness of the questions. Piloting was therefore used to ensure the survey questionnaire’s readability and coherence, and that pitfalls in questionnaire construction are avoided

(Frankfort-Nachmias & Nachmias, 1996). The feedback from the pilot study was incorporated and some adjustments were made to the final version of the questionnaire (see addendum B). The question “When did you last test for HIV” was added; a “not applicable” option was offered with the question “How often do you protect yourself from contracting the HIV-virus?” and “I’ve tested negatively for HIV over the past year” was added to the options on factors influencing their risk perception.

3.4.2.3 Conducting the survey questionnaire research

A total of 500 questionnaires were distributed to the sampled students within their residence. Unfortunately only 69 completed questionnaires were returned, which means the response rate was a low 14%. All completed questionnaires were then analysed. Descriptive statistics were used to summarise and present data in a meaningful way and inferential statistics were used to explore the data further.

3.4.3 Focus groups

3.4.3.1 Rationale for using focus groups

In addition to the questionnaire, two focus groups were also conducted. Linford and Taylor (2002) define a focus group as a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs and attitudes towards a concept. Focus groups are used to gain inter-subjective experience of a group of people (Terre Blanche & Durrheim, 1999). For the purpose of this study the students’ perceptions of their own risk of contracting HIV was explored. The rationale behind their risk perception was also explored. Focus groups were therefore well suited to gain in depth information on students’ risk perceptions. Group discussion, like a focus group, also produces data and insights that may be less accessible without the interaction found in a group setting (Linford & Taylor, 2002). This was evident in the focus groups as participants’ influenced each other positively to open up and honestly reflected on HIV within their context. All members participated equally and gained insight from each other which initiated further discussion.

3.4.3.2 Conducting the focus groups

A focus group schedule was drawn up to provide some structure (see addendum C). However focus groups also allow participants to freely and interactively talk within the group setting (Linford & Taylor, 2002). The focus groups were advertised extensively to students via e-mail. The groups were constructed based on the level and nature of interest. Similarly to the survey questionnaire, the researcher received a poor response. Two focus groups were conducted: one comprising of five participants and the other of four. All participants could not be accommodated in one focus group due to limited availability of the participants. This was not ideal and posed some limitation to findings of the focus group discussions. Focus groups are critiqued for not necessarily being representative of the whole population due to the small number of participants (Linford & Taylor, 2002). In spite of the small groups interesting insights were gained during the 90 minute long focus groups.

3.4.4 Interviews

3.4.4.1 Rationale for using interviews

Interviews involve verbal communication between the researcher and the interviewee during which information is provided (Burns & Grove, 2001). Individual interviews are one of the most frequently used data gathering methods used to gain qualitative data (Babbie & Mouton, 2001). “It differs from most other types of interviews in that it is an open interview which allows the object of the study to speak for him/herself rather than to provide our respondent with a battery of predetermined-based questions” (Babbie & Mouton, 2001, p.289). This type of data collection was ideal for acquiring the needed information from the participants. The researcher needed to gain an understanding of the students’ risk perception from those who closely work with them. The researcher had no hypothesis to be tested but wanted to gain insight from the professionals. Interviews are critiqued for respondents being more removed from their context than in other qualitative data collection methods, which could lead to a bias in data collected as respondents might feel threatened (Burns & Grove, 2001). In an attempt to minimise this, the researcher conducted the interviews in the relevant professionals’ offices. The fact that the

researcher worked in the same field as the interviewees also made it easier for them to openly speak to the researcher. In fact the respondents were very happy that this study was being conducted and gave their full co-operation.

3.4.4.2 Conducting the interviews

The researcher decided on semi-structured interviews as this type of interview allowed some structure in the form of knowing what the focus of the interviews would be, but it also enabled a flexibility and openness to emerging themes from the professionals. Semi-structured interviews were conducted with health care professionals working with students. According to Linford and Taylor (2002) a semi-structured interview is a more flexible form of interview. The interviewer had an interview guide (see addendum D) with a framework of themes to explore, but this type of interview allowed the researcher to explore new questions too as the relevance unfolded during the interview. The researcher approached the various divisions who provide health care services to students and the most suitable candidates to partake in the research project were identified by each. These specific professionals were then interviewed and included medical doctors, psychologists, nurses and other health care professionals working with students. Five interviews were conducted. The participants were given the consent form in advance to familiarise themselves with the rationale and focus of the study. They were also able to ask questions beforehand and during the interview if they had any.

3.5 Data analysis

As mentioned earlier, the questionnaires were analysed using statistical measures. Descriptive statistics were used to summarise and present data in a meaningful way. Dooley (1995) recommend the use of descriptive statistics, particularly frequency distributions, and non-parametric tests in studies with small sample sizes. As this study had a small sample descriptive statistics was primarily used. Inferential statistics were used to explore the data further and to assess for any correlations. The interviews and focus groups were analysed using qualitative data analysis, specifically grounded theory. The grounded theory method is a systematic methodology in the social sciences that involves the discovery of theory through the analysis of data. Rather than beginning with

a hypothesis grounded theory collects data through a variety of methods and a theory is then formed based on concepts that emerged from the data collected. Grounded theory method does not aim for the "truth" but to conceptualise what is going on by using empirical research (Charmaz, 2000). The researcher thought that this data collection method would be ideal for the study as risk perceptions were being explored without preconceived hypothesis in both the interviews and focus groups. Instead the researcher sought to gain insights from the participants in order to generate some themes.

3.6 External Validity

According to Goode and Hatt (1983) a random sample is one where the researcher has no reason to believe that a bias will result. Random sampling (cluster sampling) was used in the study which limited the bias of the result. However, the study had a small response rate of 14%. As alluded to earlier, a disadvantage of cluster sampling is that the sampling method is not as representative as simple random sampling and requires a larger sample (Babbie & Mouton, 2001). A bigger sample is better for survey research purpose (Breakwill, Hammond & Fife-Schaw, 2000). With the researcher deciding on cluster sampling, a bigger sample was desirable. In light of this, the low response rate therefore limits the external validity of the study.

3.7 Ethical considerations

Permission was gained from the organisation (Stellenbosch University) to conduct this study. Participation in this study was voluntary. Participants provided written informed consent to participate in the study (see addenda E, F & G for consent forms). Participants were allowed to discontinue at any stage had they preferred to do so. Participants were not required to provide any personal details and remained anonymous. The data collected was safeguarded by using a password for computerised programmes. While the data was being analysed it was be locked up in cabinets for storage.

CHAPTER 4: FINDINGS

4.1 Survey Questionnaire

4.1.1 Demographic details of participants

The demographic details of the participants from the survey questionnaire are outlined in Table 4.1 and Table 4.2 and include age, gender, race, year of study and nationality. The vast majority of students fell within the 19-24 years category (94%) with the other 6% falling within the 18 and younger category. 58% of the respondents were male while 42% were female. The racial profile were as follow: the vast majority of students were White (72%), 12% were Coloured, 10% were Black, 1% were Asian and 3% indicated the “Other” category. The year of study was as follow: 33% of respondents were in their first year, 33% in their second year, 28% in their third year and 6% in their fourth year. No respondents were studying beyond their fourth year. The vast majority of the students were of South African Nationality (93%), Other African Nationalities were 6% and Other International Nationalities 1%.

Table 4.1 - Demographic details of participants

Age		Gender		Race	
18 and younger	6%	Male	58%	Asian	1%
19-24	94%	Female	42%	Black	10%
25-29	0%			Coloured	12%
30 and above	0%			White	72%
				Other	3%

Table 4.2 - Demographic details of participants

Year of Study		Nationality	
1 st year	33%	South African	93%
2 nd year	33%	Other African Nationality	6%
3 rd year	28%	Other International Nationality	1%
4 th year	6%		
5 th year	0%		
≥ 6 th year	0%		

4.1.2 Self-rated knowledge on HIV transmission

Question 7 asked students to rate their HIV knowledge. It aimed at assessing whether students knew enough about HIV transmission to protect them. The frequency distribution of responses for Question 7 is given in Figure 4.1. 3% of the respondents stated that they knew very little, 49% indicated that they knew enough to protect themselves while 49% of them stated that they knew all the facts.

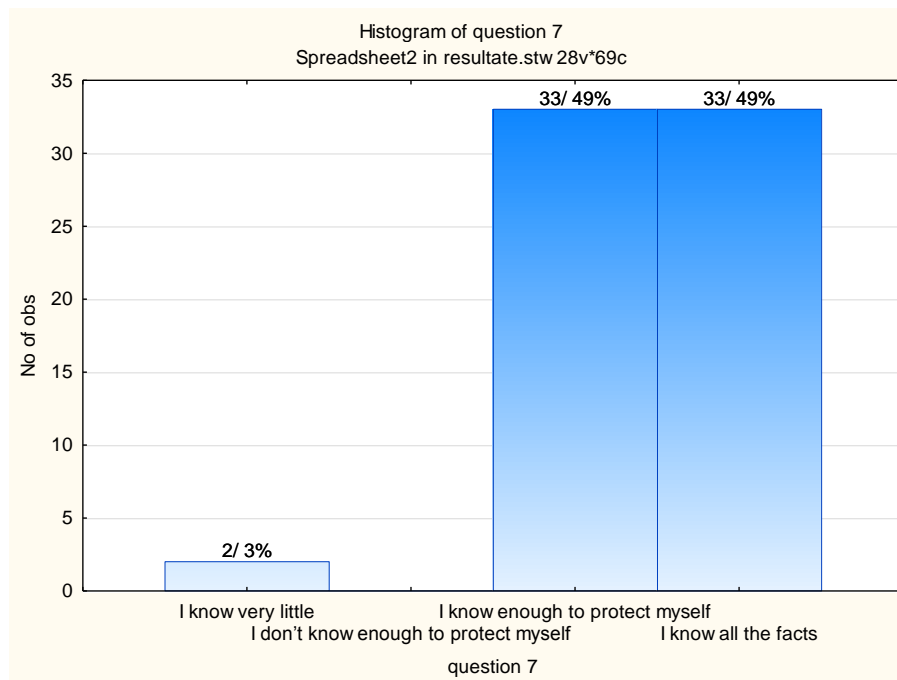


Figure 4.1: Self rated knowledge on HIV transmission

4.1.3 Self-rated personal level of risk

Question 8 asked students to rate their level of risk. The question assessed their personal level of risk. The frequency distribution of responses obtained for question 8 is given in Figure 4.2. 49% of respondents indicated no risk, 48% indicated a mild risk while 3% rated themselves as at risk. Inferential statistics were run on this question investigating whether there was a correlation between personal level of risk and gender, race and/or year of study. On gender, the ANOVA test did not show any significance on the 5% interval, but it did show a significant correlation on the 10% interval. On the 10% interval there was a statistical correlation between self-rated personal level of risk and gender ($p=0.85959$). Male participants frequently indicated a 'no risk' (59%) while females had a 39% response rate. Females tended to indicate a mild risk (61%) compared to males (31%) who opted for the no risk category instead (see Figure 4.3). No statistical correlation was found between self-rated personal level of risk and race. However Black participants had a tendency to indicate no risk more often than the other racial groups (5 out of 6 respondents indicated a no risk) (see Figure 4.4).

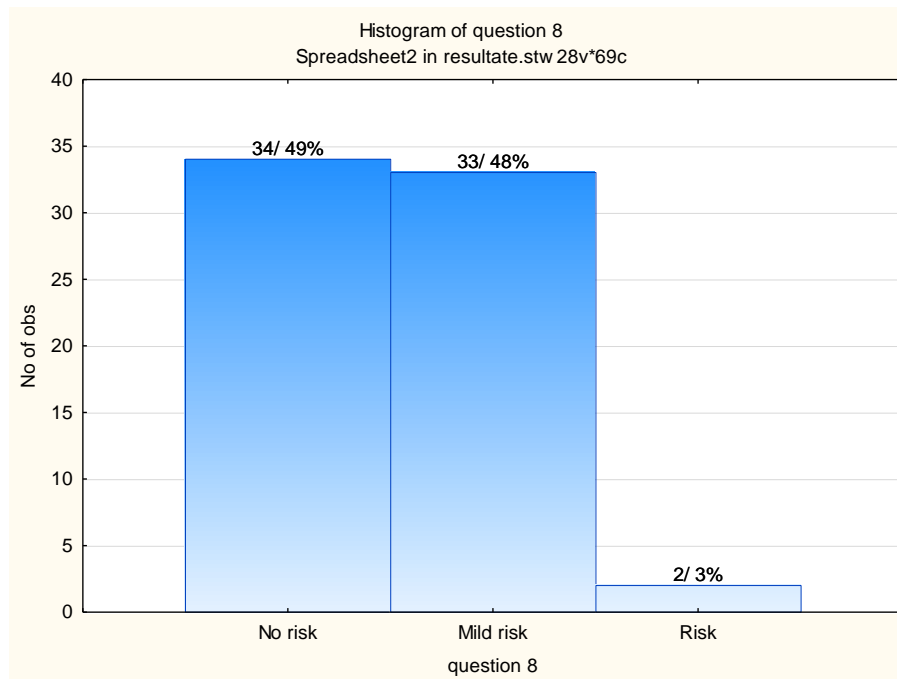


Figure 4.2: Self rated personal level of risk

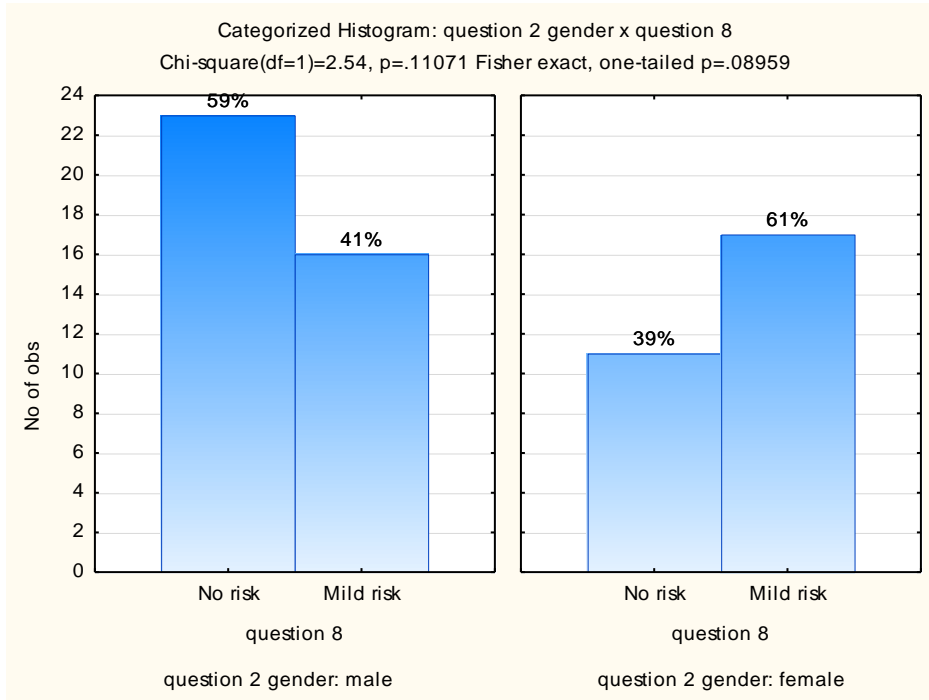


Figure 4.3: Correlation between self-rated personal level of risk and gender

Marked cells have counts > 10. Chi			
question 3 race	question 8 No risk	question 8 Mild risk	Row Totals
Black	5	1	6
Row %	83.33%	16.67%	
Coloured	4	4	8
Row %	50.00%	50.00%	
White	22	28	50
Row %	44.00%	56.00%	
Totals	31	33	64

Figure 4.4: Correlation between self-rated personal level of risk and race

4.1.4 Protection from HIV infection

Question 9 required the participants to state how often they protected themselves from HIV infection. The frequency distribution of responses obtained for question 9 is given in Figure 4.5. 7% of the respondents indicated that they never protect themselves from HIV, 4% indicated at the beginning of a new relationship, 12% most of the time, 32% always and 45% indicated that the question was not applicable to them suggesting that they are not sexually active. Inferential statistics on the Mann-Whitney test did not indicate a statistical correlation between HIV protection behavior and gender. However more females tended to indicate that they always protect themselves from HIV infection (see Figure 4.6).

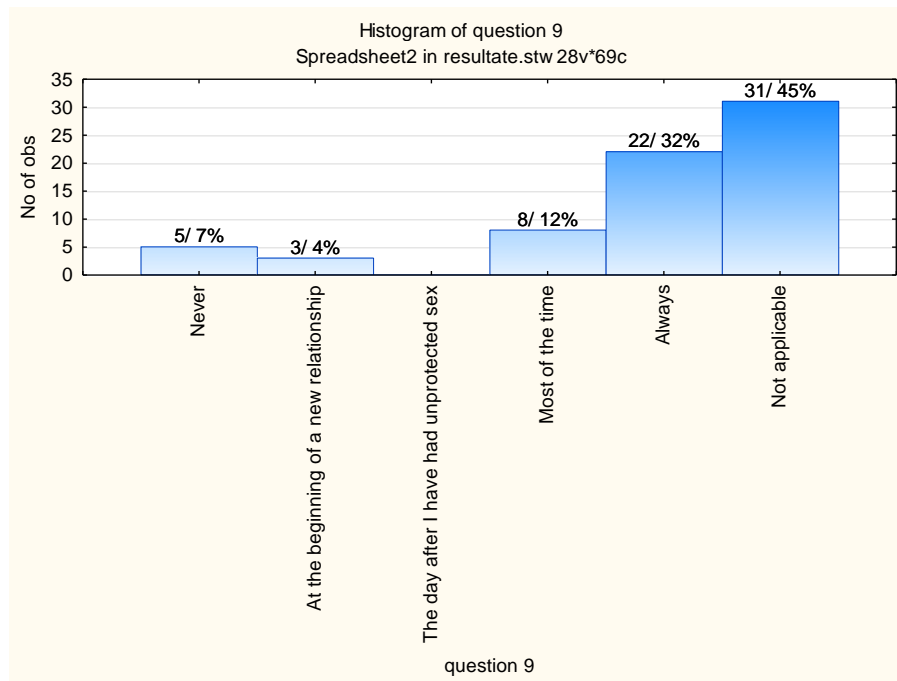


Figure 4.5: Protection from HIV

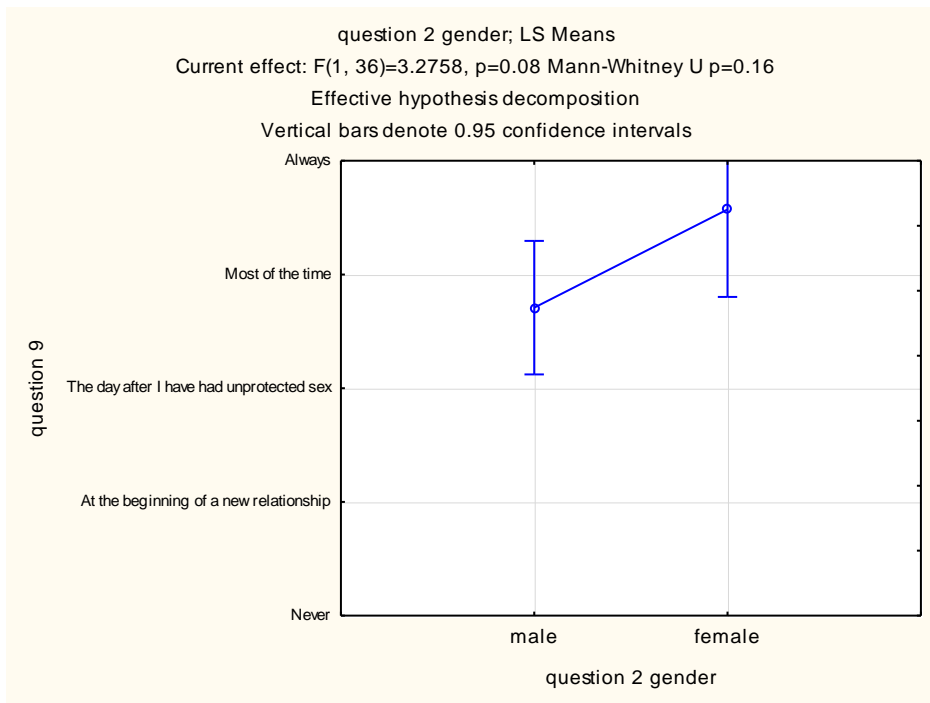


Figure 4.6: Correlation between gender and frequency of protection against HIV infection

4.1.5 Last HIV test

Question 10 required the participants to indicate when they had their last HIV test. The frequency distribution of responses obtained for question 10 is given in Figure 4.7. The results indicate that 41% of the respondents have never been tested, while 59% have been tested before. From the respondents who have been tested, 14% have been tested over the last 2-5 years, 23% have been tested over the last year, 17% over the past month and 4% during the past month. It must further be noted that 31% of the students who had been tested indicated that they are not sexually active.

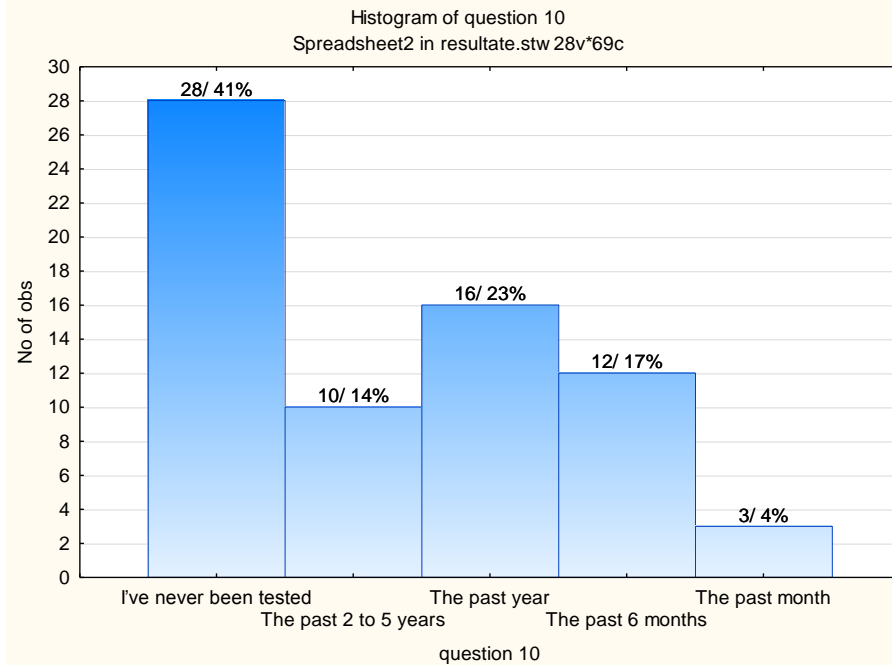


Figure 4.7: Last HIV test

4.1.6 Factors influencing risk perception

Question 11 presented multiple factors that may influence participants' risk perception. Students were asked to tick off all the factors which influence their own HIV risk perception. Question 11 assessed the underlying factors which contributed to their HIV risk perception, irrespective of a low or high risk perception. The frequency distribution of responses obtained for question 11 is given in Figure 4.8. The most common responses were 'I've tested negatively for HIV over the past year' (39%), 'I only have one partner' (32%), 'I trust my partner' (32%), 'I always use condoms' (26%) and 'Partner's HIV status known' (22%).

Statistical analysis was done to assess for correlations between the level of risk perception and the type of factors influencing it. Question 8 (the rating of personal risk) were therefore correlated with question 11 (factors influencing risk perception). No statistically significant correlations were found but there were some tendencies. Students who indicated a mild risk tended to tick off that they *always use condoms*. However, Black students who indicated a mild risk tended to indicate that they *do not use condoms*

each time. Students who indicated a mild risk also tended to know their partner’s status. Respondents who indicated no risk tended to indicate that their partner does not look like he/she is HIV positive.

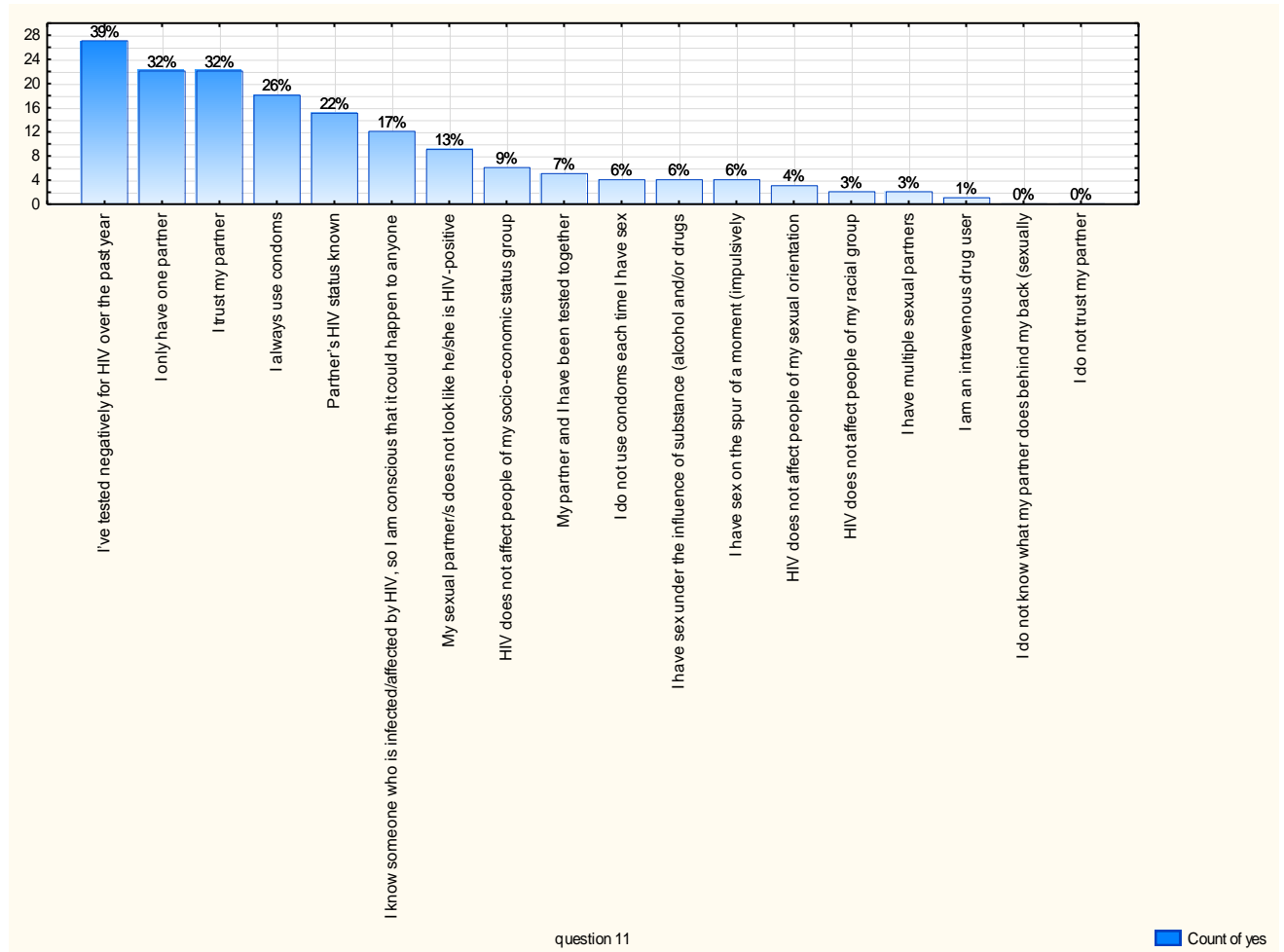


Figure 4.8: Factors influencing risk perception

4.2 Focus groups findings

4.2.1 Introduction

The participants shared their personal views as well as the views of the friends and peers they spend time with. The findings therefore not only reflect their personal views.

4.2.2 Existing knowledge on HIV/AIDS

The students all had sufficient knowledge on how to protect themselves from HIV. They thought most students do as they are educated on the subject matter during their school years already. The information does not translate into preventive behavior though.

4.2.3 HIV risk perception amongst students - *Never mind risk perception, we don't even think about HIV*

Participants felt that most students on campus do not even think about HIV, which leads to them not thinking about their own HIV risk perception. They identified a few factors which contribute to this. These will be elaborated on below.

4.2.3.1 Culture of denial by students

The participants reported that most students on campus don't think of HIV. While some students do not need to think about HIV prevention as they are not sexually active, those who are sexually active do not think about protecting themselves either. Students are more likely to use contraception as the aim is to prevent pregnancy, not STD's or HIV. A few contributing factors were highlighted. The first factor is related to the developmental stage of students. They experience a sense of invincibility, "it won't happen to me". They also thought that many students do not take responsibility for much at this age, and their sexual health is no different. They identified support structures as another factor influencing a sense of responsibility. Participants felt that a solid base at home served as a protective factor. They felt that students with a good family support structure were more responsible and had their parents as reference on what is good or bad. A lack of support at home leads to an increased influence by friends and increased exploratory and risk behaviour, which leaves them vulnerable to HIV/AIDS.

4.2.3.2 The culture at Stellenbosch University

Participants spoke extensively about the social context of this particular University. They mentioned that there is a culture of striving to be perfect; a superficial culture where only good things are talked about and shared and where real issues are avoided. This culture makes it difficult for students to talk about issues such as sex and HIV and makes it very difficult to disclose that they are in fact sexually active, as this would be imperfect. They further mentioned that the residence context is worse, as it is deeply founded in traditions and idealistic expectations of how one should behave. They describe the University as a “Conservative, “White, Afrikaans, Christian” space, and this conservative nature does not enable a space to speak about issues such as HIV and sex.

4.2.3.4 Getting tested for HIV

The participants all knew their HIV status but expressed great anxiety about getting tested. They stated that even if they knew they were at mild risk, they were still scared to be tested. Their friends who are at risk are petrified to get tested and avoid being tested. They therefore experience that those who get tested are at a lower risk and that students who are actually at a higher risk refrains from testing due to high levels of anxiety.

4.2.3.5 Recommendations for future HIV prevention programs

They felt the approach to prevention programmes needs to be changed. Students need to be exposed to more “realness” for example they need to be shown more graphic photos of how an infected person or their genitals look. These they argue serve as a reference as it is an image they cannot easily erase from their memory. They felt that alcohol abuse is the main factor contributing to high risk sexual behaviour on campus and that the alcohol abuse in itself needs to be addressed.

4.3 Findings from the interviews

4.3.1 Students' knowledge of HIV

All respondents felt that most students are knowledgeable on HIV. They were of the opinion that students knew enough to protect them from HIV infection. However all of them felt that this knowledge does not translate into protective behaviour from HIV/AIDS.

4.3.2 Different levels of risk amongst students

The respondents felt that the majority of the students were sexually active – anally, vaginally or orally. However some students think that they are not sexually active, especially girls, if they were not vaginally sexually active (these girls would have oral sex though). Differences in the levels of sexual activity could possibly exist in year of study with students becoming increasingly more sexually active as their years of study continued. Respondents felt that there were different levels of risk amongst students. Differing opinions were shared on who the high risk groups were. Black females and Postgraduate African Nationality students were identified. International students from outside Africa were also identified as a possible high risk group. These students often come from countries with low prevalence rates, which might predispose a detachment from HIV leading to lack of consistent protection against the HIV virus. White males were also identified as a possible high risk group due to the presence of using the services of sex workers amongst this group. This was described as a phenomenon that most people on campus were not aware of. Concentrated epidemics were also identified on campus and concern was raised about HIV infections being spread to the general population who had a low HIV prevalence.

4.3.3 Students' HIV risk perception

Respondents felt that some students had a low risk perception while others were aware of their level of risk but went into denial about it as they had other things to focus on such as maintaining their relationships, their studies, peer related issues etcetera. Respondents

thought that high risk students in particular were aware of their risk but still did not exercise safer sex.

4.3.4 Factors influencing students' risk perception

4.3.4.1 Existing stereotypes

Some respondents felt the stereotype that HIV is a “Black people” disease definitely influences a low risk perception rate amongst White students.

4.3.4.2 Culture of denial

There was a sense that students don't engage with HIV. It is not openly spoken about by students. In individual consultations with health care professionals many students do not raise the issue of HIV testing.

4.3.4.3 The power of emotional needs

While some students were aware of the risk involved in not consistently using condoms female students tend to put more value on the need for love and acceptance. Being in a relationship and the level of intimacy experienced by it took preference over their rationality. Emotional needs were therefore more powerful, which sometimes led to a denial of their risk.

4.3.4.4 Having been tested with their partner

It was identified that students who have been tested with their partners do not perceive themselves to be at risk. Concern was raised that these students may have been in the window period at the time of testing. Once both partners have been tested condom use did not occur, which raised concern by some of the health care workers. They felt that these relationships have not been long in duration and partners do not know each other well. Trusting a partner that you have not known for long to be faithful was risky in their opinion.

4.3.4.5 Recommendations for future HIV prevention programmes

The following recommendations were made by the health care workers:

- Some respondents felt that gay students should take high priority in HIV prevention programmes due to the high risk amongst this group
- HIV needs to be addressed with improved collaboration amongst relevant professionals at the University

CHAPTER 5: DISCUSSION AND FINDINGS

5.1 Students' knowledge of HIV

Although the study focused on students' HIV risk perception the research also assessed whether or not they thought they knew enough about HIV transmission to protect them. The results from the survey questionnaire showed that 98% of the students felt they knew enough about HIV transmission to protect them. This high level of HIV knowledge was also corroborated by the focus group discussions and the health care professionals who had been interviewed. This finding was also found by the national study conducted by HEAIDS (2010). It seems that students' therefore are equipped with the knowledge on how to protect themselves but that this HIV knowledge does not necessarily lead to safe sexual practices as argued by Brown et al (2001). This finding has been consistent with most other research on HIV knowledge amongst students/young people. Odu et al (2008) found that students' were knowledgeable on HIV transmission routes but that this knowledge still did not translate into appropriate sexual behaviour. Unadike et al (2012) and Nkomazana and Maharaj (2012) found similar results amongst students. Stringer et al (2004) found that having more knowledge about HIV did not correlate significantly with risk perception either.

Some students indicated consistent condom use, suggesting that some students are practicing responsible, safe sex. When asked how often they protected themselves against HIV 32% stated always, while 12% stated most of the time. It must be noted that 45% of the students indicated that this question was not applicable to them suggesting that they were not sexually active. Having taken this into account, many students seem to use condoms consistently with only 7% stating never and 4% indicating at the beginning of a new relationship. The question assessing factors that influence risk perception suggests a different scenario though. Only 26% of students who are sexually active indicated consistently using condoms as a factor contributing to their risk perception. One would expect a higher response to this question given that 45% of students who are sexually active stated that they always use condoms. Whether the motivation behind consistent condom use is protection against sexually transmitted diseases and HIV is therefore questionable. The focus groups and interview participants were of the opinion

that the reason for condom use is prevention of pregnancy. HEAIDS (2010) also found the primary motivation for condom use to be pregnancy prevention at Stellenbosch University. In a study done by Khumsaen (2008) it was found that the reason for condom use was to avoid pregnancy and HIV-infection. The qualitative data of this study however does not suggest that HIV prevention is a primary reason for condom amongst students.

5.2 Students' HIV risk perception

This study found that a low risk perception exist amongst students. The survey questionnaire indicated that 97% of students rated themselves as mild or no risk (48% mild risk and 49% no risk). These findings were self-rated perception of risk by students. This finding seems to be consistent with most studies exploring risk perception amongst young people. De Souza Praca, Latorre and Hearst (2003) also found that 71% of participants showed no risk perception. Facente (2001) investigated the perceived susceptibility of adolescents. The study found that 80% of participants who engaged in risky sexual behavior felt that they were not personally at risk of HIV. Beltzer et al (2012) investigated HIV knowledge, risk perception and practices amongst young people living in France over a period of 18 years. The study also found a low level of risk perception and a decrease in adopting prevention practices in spite of decrease in condom use, which the authors argue highlight the need to adapt adaptive strategies. It must be highlighted that 45% of the student who completed the questionnaire indicated that they were not currently sexually active. This does indicate a low risk perception, which suggest that many of the students accurately rated themselves at no risk.

In this study the survey questionnaire suggested a lower risk perception amongst males than females, with 59% of males indicating that they were at no risk compared to 39% of females. This was a statistically significant finding on the 10% interval ($p=.08959$). In a study investigating the relationship between HIV risk perception and condom use amongst youth in Mozambique, Prata et al (2006) also found a tendency amongst young adults, especially men to underestimate their risk of contracting HIV.

A study conducted by De Souza Praca, Latorre and Hearst (2003) found that risk perception was not a reflection of people's actual risk. This specific study cannot make definite statements on whether or not the students' risk perception is a reflection of their actual risk as this was not a primary focus of the survey questionnaire. However the results from the interviews suggest that risk perception might not be a reflection of actual risk. In the interviews health care professionals alluded to various forms of sexual activity taking place amongst students, including oral sex. This sexual activity also poses a risk to HIV infection as the HIV-virus can be contracted through unprotected vaginal, anal and/or oral sex (Harem, 2009). The study suggested that 45% of the survey questionnaire sample was not sexually active. However further investigation needs to assess whether these students are not engaging in any form of sexual activity or whether oral sex practices exist but are not viewed as sexually active or risky by students.

Amongst the youth there are different degrees of risk and vulnerability, with some groups having HIV infection levels of up to 60% (Campbell, 2003). Specific groups of young people are at high risk of infection from HIV and other sexual and reproductive health outcomes (UNAIDS, 2010). The health care professionals interviewed in this study had differing views who the high risk groups on campus were. One of the possible at risk groups identified was Black females. The national study done by HEAIDS (2010) found the highest prevalence rate amongst Black students at South African tertiary institutions. African females were also identified as a high risk group by the study as they were more likely to have had more than one sexual partner in the past month, more likely to have had a partner 10 or more years older and were more likely to have reported sores and/or discharges from their genitals. Ironically the survey questionnaire found a tendency amongst Black students to rate themselves at no risk compared to other racial groups. Black students who indicated a mild risk in the survey also tended to indicate that they *do not use condoms each time*, which suggest an inaccurate risk perception, which is concerning with this group. Understanding the factors contributing to this would be highly beneficial as these tendencies are surprising given the high prevalence rate of HIV amongst the Black population (UNAIDS, 2010). Another possible high risk group identified was White male students making use of sex workers. As mentioned, this

phenomenon was reportedly not public. This means that some of these White male students are having sex with high risk sexual partners as sex workers are one of the groups with high HIV prevalence rates (UNAIDS, 2010). Tertiary institutions offer conditions for sexual networking and sexual mixing (Kurebwa, Wadesango & Kurebwa, 2012) and these possible high risk groups therefore pose a danger to the low prevalence rate currently experienced by Stellenbosch University.

Prevention strategies amongst young people have primarily focused on the general population of young people, not on the high risk groups. Research has begun to highlight the importance of focusing on the most-at-risk groups among young adults (UNAIDS, 2010). If Stellenbosch University wishes to maintain its low HIV prevalence rate it would need to implement more focused prevention strategies aimed at high risk groups.

This recommendation was also made by the HEAIDS (2010) following the national study conducted in 2008/9. Prevention strategies need to be adapted to be effective within these high risk groups (UNAIDS, 2010). The possible high risk groups identified in the study should also be explored further. Campbell (2003) argues that feeling a personal vulnerability to HIV infection is an important requirement for translating knowledge into behaviour. Low levels of perceived vulnerability despite HIV levels of infections amongst their peers remain a concern amongst young people (Campbell, 2003). It would therefore be worthy investigating whether the low risk perception amongst students at Stellenbosch University is an accurate reflection of their actual risk.

5.3 Factors influencing students' risk perception

Brown et al (2000) argue that effective prevention programmes need to take into account the context in which behavior occurs. HEAIDS (2010) found that staff and students at Stellenbosch University had a relatively conservative approach to sex. The focus groups also described the Stellenbosch University culture as conservative. In fact participants spoke about a culture that encourages students to strive towards perfection. Talking about sex is therefore not common practice within such a context. This context also exacerbates the culture of denial of HIV that was described in the focus groups and interviews. The poor response to this study would then not be surprising if this culture

exists and this culture may have directly influenced the poor response. The culture of denial that HIV is an issue that affects Stellenbosch University seems to contribute to a sense of low risk amongst students, which is problematic given the presence of high risk groups at Stellenbosch University. As mentioned earlier, high risk groups pose a threat to the general population, especially if some high risk groups have not been identified (e.g. white male students utilising the services of sex workers). Living in societies where laws or social values force young people to behave in ways that place them at risk is of concern for prevention programmes amongst the youth (UNAIDS, 2010). Conditions of denial, striving towards perfection, and having a conservative approach to talking about sex have been suggested to be associated with the Stellenbosch University context. This context is problematic as it sets conditions for high risk sexual practices to be hidden and a possible reluctance of high risk populations to utilise the necessary sexual health services.

Another factor negatively influencing students' risk perception is the developmental stage they find themselves in. Teenagers often perceive themselves as invincible in spite of the alarming HIV prevalence amongst this group (Facente, 2001). This was also alluded to in the focus groups with participants stating that many students think it "won't happen to me". A lack of taking responsibility was also said to be characteristic of their developmental stage, which further influence their sense of invincibility. HIV prevention programmes should include both education and encounters that heightens the perception of seriousness and concern about HIV (Oyeyemi & Oyeyemi, 2012) especially within a culture of denial amongst students, as in the case of Stellenbosch University.

Having tested negatively for HIV over the past year was the most common factor indicated in influencing the HIV risk perception of students (39%) in the survey questionnaire. "I only have one partner" and "I trust my partner" was the second highest at 32%. Results from a study by Sokolov et al (2002) suggests that individuals believe that condoms are not necessary within a steady relationship since they do not perceive themselves at risk for HIV/STI's. Khumsaen (2008) states the lack or inconsistent use of condoms increases with the duration of the relationship as the trust which develops leads

to assumptions about partner fidelity. Nkomazana and Maharaj (2012) found that consistent condom use were lower in regular sexual partnerships than it was in casual partnerships amongst students. While having been tested in the past year is a good step, assuming fidelity as the frequency of sexual activity and trust increases remains problematic. It remains desirable to also know your partner's status. Only 22% of the students identified knowing their partner's status as a factor contributing to their risk perception. As suggested by HEAIDS (2010) Stellenbosch should focus on VCT testing with one's partner, especially since only 9% of the students who completed the survey questionnaire indicated that having been tested with their partner influences their risk perception. It must also be taken into account that the focus groups highlighted the fact that their friends who were at risk are petrified to get tested and subsequently avoid being tested. They therefore experience that those who get tested are at a lower risk and that students who are actually at a higher risk refrains from testing due to high levels of anxiety. From the survey questionnaire 31% of the students who had been tested indicated that they are not sexually active, which supports the possibility that those students who go for testing are not likely to be the high risk students.

Health 24 (2007) stipulates that dangerous myths and misconceptions give individuals a false sense of their level of risk and contribute to confusion about HIV transmissions. In the survey questionnaire 13% of the students indicated that their sexual partner not looking like a HIV infected person was a factor contributing to their risk perception. 9% of the students completing the questionnaire indicated 'HIV does not affect people from my socio-economic status group' as a factor influencing their risk perception. The health care professionals also identified existing stereotypes as a factor influencing risk perception. It was stated that the stereotype that HIV is a "Black people" disease influences a low risk perception amongst White students. It must be noted that the questionnaire sample comprised of predominantly White students (72%). The study conducted by HEAIDS (2010) showed a similar profile of 66% White students in the sample. The low prevalence at Stellenbosch University as suggested by HEAIDS (2010) could also further strengthen stereotypical racial beliefs as the low prevalence rate was partly attributed the vast majority of White students who were sampled. HEAIDS (2010)

argued that this was a contributing factor to the low prevalence rate found at Stellenbosch University as race is a strong influencing factor in being HIV infected.

Corbett et al (2009) investigated condom use in primary relationships and found that participants described nonuse of condoms as a strategy to find and maintain primary relationships, establish trust and increase intimacy. In fact many participants had unprotected sex while recognising their risk of HIV and other STD's. These participants would rather put their love for their partner and their other emotional needs above concerns about their health. The health professionals also identified this rationale amongst students, stating that while some students are aware of the risks involved in their sexual practices, they were unable to genuinely engage with this. Their emotional needs such as longing for acceptance and intimacy led to them not even thinking about being at risk, as this would hamper the level of intimacy received from their partner. In their quest for love people do not always act rationally (Corbett et al, 2009). This is an important fact of human experience that needs to be considered when implementing HIV prevention programmes.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions

HIV has become a world-wide epidemic. The statistics indicate that the highest prevalence rate is amongst the individuals aged 20 to 40 years. In light of this many prevention programmes have been implemented amongst young adults. In spite of these prevention programmes and high HIV prevalence, young people still seem overconfident in assessing their own risk of HIV infection. This study explored the risk perception of young people (specifically university students). This study was conducted at a South African University, Stellenbosch University. Data was collected using a mixed-method approach. A questionnaire, focus groups and interviews all formed part of the data collection process. The study found a low risk perception rate amongst students. While this low perception rate is an accurate reflection of some students' behaviour, it is not the case for all students. Many factors contributing to their risk perception were identified by both students and health care professionals. While some of these factors were rational e.g. consistently using condoms, some were problematic e.g. feeling a sense of invincibility as a young person. These factors were explored in the discussion and recommendations will be made based on these.

6.2 Recommendations

- Relevant stakeholders should further explore whether the low HIV risk perception rate is appropriate to sexual behaviour.
- Prevention programmes at Stellenbosch University should have two separate focus areas: one on high risk populations and one on the general population.
- High risk groups on campus should be re-evaluated and prevention initiatives should be adjusted towards the specific needs of these groups.
- Prevention programmes targeting the general student population should not focus on HIV and other sexually transmitted diseases, but should rather be offered under wellness (of which sexual wellness forms part of). This could help motivate students to maintain their HIV negative status as part of their wellness, irrespective of their race and socio-economic status. It could also assist in destigmatising HIV/AIDS on

campus.

- More couples VCT should strongly be promoted on campus with follow up testing after the window period.
- It is recommended that the different centres/departments working in the field of students' wellness collaboratively work on HIV prevention programmes on campus.

6.3 Limitations of Research

The survey questionnaire had a small sample size, which compromised the external validity of the study. Focus groups were also small. Ideally bigger focus groups should have been facilitated to increase the chances of findings being representative of the general population. However, the lack of interest both for the survey questionnaire and focus groups provided data in itself and assisted the researcher in better understanding the Stellenbosch University context. While good insights have been gained into the Stellenbosch University context, other contexts might differ which also limits the external validity of the study.

6.4 Areas for further research

- It is recommended that a similar study is replicated at Stellenbosch University with a bigger sample.
- Other tertiary institutions could also benefit from similar research as the findings could significantly improve on the impact of their HIV programmes.
- It is recommended that Stellenbosch University itself further explore the contextual factors at the University which might pose a barrier to effective HIV prevention strategies and their strategic goal of no new infections by 2012, which has not been reached.
- Stellenbosch should also conduct research aimed at establishing who the high risk populations on campus are.

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Addendum A – Survey of Students’ HIV Risk perception - PILOT

Demographic Questions: *Please circle the applicable option*

1. What is your age?
 - 1) 18 and younger
 - 2) 19-24
 - 3) 25-29
 - 4) 30 and above

2. Are you male or female?
 - 1) Male
 - 2) Female

3. Which racial category do you belong to?
 - 1) Asian
 - 2) Black
 - 3) Coloured
 - 4) White
 - 5) Other

4. What is your social year of study (i.e. how long have you been at Stellenbosch University?)
 - 1) 1st year
 - 2) 2nd year
 - 3) 3rd year
 - 4) 4th year
 - 5) 5th year
 - 6) 6th year and above

6. What is your nationality?
 - 1) South African
 - 2) Other African Nationality
 - 3) Other International Nationality

Questions 7 -10 : *Please read the questions carefully. Circle the option that applies to you.*

7. How would you rate your knowledge on HIV transmission (i.e. you know how you can contract the virus and how to protect yourself):
 - 1) I know very little
 - 2) I don't know enough to protect myself
 - 3) I know enough to protect myself
 - 4) I know all the facts

8. How would you rate your personal level of risk of contracting the HIV-virus:
 - 1) No risk
 - 2) Mild risk (chances are most unlikely that I could get infected)
 - 3) Risk (there is a chance that I could get infected)
 - 4) Severe Risk (there is a strong possibility that I could get infected)

9. How often do you protect yourself from contracting the HIV-virus?
- 1) Never
 - 2) At the beginning of a new relationship
 - 3) The day after I have had unprotected sex
 - 4) Most of the time
 - 5) Always

11. Please tick off the reasons that make you think you are or are not at risk. Please tick off **all the items** that are applicable to you.

I only have one partner	
I always use condoms	
I trust my partner	
HIV does not affect people of my socio-economic status group	
HIV does not affect people of my racial group	
HIV does not affect people of my sexual orientation	
My sexual partner/s does not look like he/she is HIV-positive	
I know someone who is infected/affected by HIV, so I am conscious that it could happen to anyone	
Partner's HIV status known	
My partner and I have been tested together	
I have multiple sexual partners	
I do not use condoms each time I have sex	
I do not know what my partner does behind my back (sexually)	
I do not trust my partner	
I have sex under the influence of substance (alcohol and/or drugs)	
I am an intravenous drug user	
I have sex on the spur of a moment (impulsively)	

Thank you, once again, for taking the time to complete the attached questionnaire.

Your contribution is appreciated.

Addendum B – Survey of Student’s HIV Risk Perception – Final Questionnaire

**EXPLORING HIV RISK PERCEPTIONS AMONGST
STUDENTS AT A SOUTH AFRICAN UNIVERSITY**

Survey of Student HIV Risk Perception

Dear participant

The attached questionnaire forms part of an MPhil (HIV/AIDS) project on student HIV risk perception being researched by Angelique McConney. The aim of the study is to identify the HIV risk perceptions of students at Stellenbosch University (and the reasons for their perceptions), in order to improve on HIV prevention programmes / management.

Your confidentiality and anonymity is assured. Your names are not required. No individual answers will be reported. Instead trends will be explored and reported on.

You are encouraged to answer truthfully.

**WHEN ANSWERING THE QUESTIONNAIRE PLEASE CIRCLE
THE APPLICABLE OPTION.**

Thank you for taking the time to complete the attached questionnaire.
Please feel free to contact me should you have any questions.

Yours sincerely
Angelique McConney

Demographic Questions: *Please circle the applicable option*

1. What is your age?
 - 5) 18 and younger
 - 6) 19-24
 - 7) 25-29
 - 8) 30 and above

2. Are you male or female?
 - 3) Male
 - 4) Female

3. Which racial category do you belong to?
 - 6) Asian
 - 7) Black
 - 8) Coloured
 - 9) White
 - 10) Other

4. What is your social year of study (i.e. how long have you been at Stellenbosch University?)
 - 7) 1st year
 - 8) 2nd year
 - 9) 3rd year
 - 10) 4th year
 - 11) 5th year
 - 12) 6th year and above

6. What is your nationality?
 - 4) South African
 - 5) Other African Nationality
 - 6) Other International Nationality

Questions 7 -10 : *Please read the questions carefully. Circle the option that applies to you.*

7. How would you rate your knowledge on HIV transmission (i.e. you know how you can contract the virus and how to protect yourself):
 - 5) I know very little
 - 6) I don't know enough to protect myself
 - 7) I know enough to protect myself
 - 8) I know all the facts

8. How would you rate your personal level of risk of contracting the HIV-virus:
 - 5) No risk
 - 6) Mild risk (chances are most unlikely that I could get infected)
 - 7) Risk (there is a chance that I could get infected)
 - 8) Severe Risk (there is a strong possibility that I could get infected)

9. How often do you protect yourself from contracting the HIV-virus?
 - 6) Never
 - 7) At the beginning of a new relationship

- 8) The day after I have had unprotected sex
- 9) Most of the time
- 10) Always
- 11) Not applicable

10. When last did you test for HIV?

- 1) I've never been tested
- 2) The past 2 to 5 years
- 3) The past year
- 4) The past 6 months
- 5) The past month

11. Please tick off the reasons that make you think you are or are not at risk. Please tick off **all the items** that are applicable to you.

I only have one partner	
I always use condoms	
I trust my partner	
HIV does not affect people of my socio-economic status group	
HIV does not affect people of my racial group	
HIV does not affect people of my sexual orientation	
I've tested negatively for HIV over the past year	
My sexual partner/s does not look like he/she is HIV-positive	
I know someone who is infected/affected by HIV, so I am conscious that it could happen to anyone	
Partner's HIV status known	
My partner and I have been tested together	
I have multiple sexual partners	
I do not use condoms each time I have sex	
I do not know what my partner does behind my back (sexually)	
I do not trust my partner	
I have sex under the influence of substance (alcohol and/or drugs)	
I am an intravenous drug user	
I have sex on the spur of a moment (impulsively)	

Thank you, once again, for taking the time to complete the attached questionnaire.

Addendum C – Focus group schedule

**EXPLORING HIV RISK PERCEPTIONS AMONGST STUDENTS AT
A SOUTH AFRICAN UNIVERSITY**

Focus group schedule for selected participants

1 Opening

The focus groups would have been advertised. Two groups will be constructed based on the level and nature of interest. The focus groups will consist of six to ten participants. The duration of a focus group will be approximately one and a half hours.

2 Discussion of themes

The following themes will be explored:

2.1 Knowledge on HIV transmission

- How much do you know about HIV transmission?
- Do you know enough to protect yourself?

2.2 HIV risk perception

- Do you think you are personally at risk of contracting the HIV-virus?
- If yes, why do think you are at risk?
- If no, why do you think you are not at risk?
- How often do you think of protecting yourself against HIV infection?

3 Closing

Addendum D – Interview schedule

EXPLORING HIV RISK PERCEPTIONS AMONGST STUDENTS AT A SOUTH AFRICAN UNIVERSITY

Interview schedule for selected professionals

1 Opening

Semi-structured interviews will be conducted with professionals working with students. Professionals from the following divisions would have been approached:

- Campus Health
- Office for Institutional HIV Coordination
- Centre for Student Counselling and Development
- Student Affairs

Interviews will be scheduled with the ones who have volunteered to participate in the study. The interviews should take approximately 30 to 40 minutes.

2 Themes

The following questions will guide the interview:

2.1 Knowledge on HIV transmission

- In your opinion how much do students know about HIV transmission?
- Do you think they know enough to protect themselves?

2.2 HIV risk perception

- Do you think students are of the opinion that they are at risk of contracting the HIV-virus?
- What do you think are the factors contributing to their risk perception?
- Based on your experience with the students, are students conscious about protecting themselves against HIV infection?

3 Closing

Addendum E – Consent form: Survey Questionnaire



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**STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH**

**EXPLORING HIV RISK PERCEPTIONS
AMONGST STUDENTS AT A SOUTH AFRICAN UNIVERSITY**

This research project forms part of a Mphil in HIV/AIDS management programme. You are asked to participate in this study which is being conducted by Angelique McConney, a student enrolled for the Mphil (HIV/AIDS Management). The programme is offered by the Africa Centre for HIV and AIDS Management, a department within the Management Sciences Faculty at Stellenbosch University. Mrs McConney is also a registered psychologist (MA Clinical Psychology and Community Counselling (US), BA Hons (Rhodes), Postgraduate Diploma in HIV/Aids Management in the workplace (US). You were selected as a possible participant in this study as a result of you being a student on Stellenbosch University main campus. The results of this study will be anonymously reported and discussed in the study report: Exploring HIV Risk Perceptions Amongst Students at a South African University.

1. PURPOSE OF THE STUDY

The purpose of the study is to explore whether Stellenbosch University students think that they are at risk of contracting the HIV virus. The study further aims to explore some of the underlying reasons for students' risk perceptions in order to assist in the effective management of HIV prevention on campus.

2. PROCEDURES

If you are a student and you were randomly selected from the sample of residence students, you will be asked to complete a questionnaire exploring your HIV risk perceptions. The questionnaire will take approximately five minutes to complete.

3. POTENTIAL RISKS AND DISCOMFORTS

No risks are anticipated. However, the nature of the questions might be sensitive to some participants. You are not obliged to answer all of the questions or disclose any information that makes you uncomfortable. Any participant can refrain from answering any question/s that evokes discomfort. If completion of this study evokes distress you are encouraged to discuss this with the researcher or schedule an appointment at the Centre for Student Counselling and Development at 021 808 4994.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Participants might not directly benefit from the study. It is envisioned that the research can assist Stellenbosch University in the implementation of HIV prevention programmes on campus.

5. PAYMENT FOR PARTICIPATION

No payment is required for your participation. This is a voluntary exercise that is contingent on your participation.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. The information might be inspected by the University of Stellenbosch, Human Research Ethics Committee. The records will only be utilized by them in carrying out their obligations relating to this study. Confidentiality will be maintained at all times. Measures will be taken to safe-guard the information as a way of ensuring confidentiality. You are not required to disclose any personal information and you will remain anonymous. The results might also be used for other academic purposes such as presentations and/or publications within the higher education institutions. In the event of this happening, only trends will be explored.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Angelique McConney at Work Telephone: 021 808 4994 or via email on angelique@sun.ac.za. Alternatively you can also contact the study leader, Prof Johan Augustyn at jcda@sun.ac.za

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

Iunderstand the above-mentioned and Iam in command of this language or it was satisfactorily translated to me. *I was* given the opportunity to ask questions and these questions were answered to my satisfaction (where applicable).

I.....hereby consent voluntarily to participate in this study. I have been given a copy of this form.

Name of Subject/Participant

Signature of Subject

Date

Signature of Researcher

Date

Addendum F – Consent form: Focus groups



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**STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH**

**EXPLORING HIV RISK PERCEPTIONS
AMONGST STUDENTS AT A SOUTH AFRICAN UNIVERSITY**

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1. PURPOSE OF THE STUDY

The purpose of the study is to explore whether Stellenbosch University students think that they are at risk of contracting the HIV virus. The study further aims to explore some of the underlying reasons for students' risk perceptions in order to assist in the effective management of HIV prevention on campus.

2. PROCEDURES

If you are a student and chose to volunteer for this study you will be required to take part in a focus group session with other students. The focus group will take 60 to 90 minutes.

3. POTENTIAL RISKS AND DISCOMFORTS

No risks are anticipated. However, the nature of the questions might be sensitive to some participants. You are not obliged to answer all of the questions or disclose any information that makes you uncomfortable. Any participant can refrain from answering any question/s that evokes discomfort. If completion of this study evokes distress you are encouraged to discuss this with the researcher or schedule an appointment at the Centre for Student Counselling and Development at 021 808 4994. Alternatively you can discuss this with the researcher.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Participants might not directly benefit from the study. It is envisioned that the research can assist Stellenbosch University in the implementation of HIV prevention programmes on campus.

5. PAYMENT FOR PARTICIPATION

No payment is required for your participation. This is a voluntary exercise that is contingent on your participation.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. The information might be inspected by the University of Stellenbosch, Human Research Ethics Committee. The records will only be utilized by them in carrying out their obligations relating to this study. Confidentiality will be maintained at all times. For the focus groups, voice recordings of the sessions will be made. These recordings will be kept locked while being transcribed and will be destroyed once transcriptions are done. The tapes will therefore be destroyed two months after the focus groups have been convened. Only the researcher will have access to the audiotapes. You are not required to disclose any personal information and you will remain anonymous. The results might also be used for other academic purposes such as presentations and/or publications within the higher education institutions. In the event of this happening, only trends will be explored.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Angelique McConney at Work Telephone: 021 808 4994 or via email on angelique@sun.ac.za. Alternatively you can also contact the study leader, Prof Johan Augustyn at jcda@sun.ac.za

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SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

Iunderstand the above-mentioned and Iam in command of this language or it was satisfactorily translated to me. *I was* given the opportunity to ask questions and these questions were answered to my satisfaction (where applicable).

I.....hereby consent voluntarily to participate in this study. I have been given a copy of this form.

Name of Subject/Participant

Signature of Subject

Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____
and/or [his/her] representative _____. [*He/she*] was encouraged and given
ample time to ask me any questions. This conversation was conducted in
[*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated
into _____ by _____*].

Addendum G – Consent form: Interviews



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CONSENT TO PARTICIPATE IN RESEARCH**

**EXPLORING HIV RISK PERCEPTIONS
AMONGST STUDENTS AT A SOUTH AFRICAN UNIVERSITY**

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1. PURPOSE OF THE STUDY

The purpose of the study is to explore whether Stellenbosch University students think that they are at risk of contracting the HIV virus. The study further aims to explore some of the underlying reasons for students' risk perceptions in order to assist in the effective management of HIV prevention on campus.

2. PROCEDURES

If you volunteer to participate in this study, you will be asked to avail yourself for an interview. The interview will take approximately 30 minutes and it will explore your opinion (based on your experience with students) on how students perceive their risk for HIV infection.

3. POTENTIAL RISKS AND DISCOMFORTS

No risks are anticipated. However, the nature of the questions might be sensitive to some participants. However, any participant can refrain from answering any question/s that evokes discomfort.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Not all participants will directly benefit from the study. It is envisioned that the research can assist Stellenbosch University in the implementation of HIV prevention programmes within the university. Through understanding students' own perceptions, HIV prevention programmes can be altered to be more sensitive and inclusive of factors that contribute to students' HIV risk perception. The results can also be useful to other tertiary institutions or other organizations dealing with HIV prevention and treatment.

5. PAYMENT FOR PARTICIPATION

No payment is required for your participation. This is a voluntary exercise that is contingent on your participation.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. The information might be inspected by the University of Stellenbosch, Human Research Ethics Committee. The records will only be utilized by them in carrying out their obligations relating to this study.

Confidentiality will be maintained at all times. Measures will be taken to safe-guard the information as a way of ensuring confidentiality. This will include the data being kept in a closed location that is not accessible to the public as well as storage on password-protected documents. You are not required to disclose any personal information and you will remain anonymous.

The results might also be used for other academic purposes such as presentations and/or publications within the higher education institution sector. In the event of this happening, only trends will be explored. Participants will remain anonymous and no individual responses will be reported on.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Angelique McConney at Work Telephone: 021 808 4994 or via email on angelique@sun.ac.za Alternatively you can also contact the study leader, Prof Johan Augustyn at jcda@sun.ac.za

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SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to me..... by in [Afrikaans/English/Xhosa/other] and Iam in command of this language or it was satisfactorily translated to me. Iwas given the opportunity to ask questions and these questions were answered to my satisfaction.

I.....hereby consent voluntarily to participate in this study. I have been given a copy of this form.

Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative

Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ and/or [his/her] representative _____ [name of the representative]. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [Afrikaans/*English/*Xhosa/*Other] and [no translator was used/this conversation was translated into _____ by _____].

Signature of Investigator

Date