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AN INVESTIGATION OF THE PERCEIVED VULNERABILITY TOWARDS HIV/AIDS INFECTION IN A SAMPLE OF HEALTH SCIENCE STUDENTS

Dissertation

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DECLARATION

I declare that this dissertation is my own work. It is being submitted for the partial fulfilment of the degree Master of Social Science (Clinical Psychology) at the University of KwaZulu-Natal. It has not been submitted for any other degree or examination at any other university.

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23/03/2007

Date

DEDICATION

"I can do everything through Him who gives me strength" (Phil 4:13)

This work is dedicated to my heavenly Father who, through His perfect love, has given me the perseverance, strength and ability to complete this work; and to my parents, for allowing me the opportunity to fulfil my dreams…your love, prayers and support have made all this possible.

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ABSTRACT

The socioeconomic and physiological burdens associated with HIV/AIDS have historically been treated through a biomedical focus. This study aims to shift away from this traditional analytical lens and take into consideration the plethora of psychological, social and economic factors that play an influential role in influencing individuals' perceived vulnerability to HIV infection. A purposive sample of six health science students from the University of KwaZulu-Natal were interviewed with the intention of exploring the dynamics that inform their perceived vulnerability towards HIV infection within both their social and occupational settings. Through an inductive approach to analysing the semi-structured in-depth interviews, it was found that certain key variables within their occupational and their social settings informed their perceived vulnerability to contracting HIV. More specifically, themes that emerged in relation to the individual and interpersonal levels (such as universal precautions, sexual behaviour, intrinsic factors and gender differences), and community and societal levels (such as culture, religion and race) were seen to be important determinants of perceived vulnerability towards HIV infection.

CONTENTS

CHAPTER ONE
Introduction

The human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) are social diseases that are engulfed within race, sex and gender, and power relations (Walker, Reid & Cornell, 2004). McLean and Hiles (2005) report that HIV is embedded in more ethical dilemmas than any other viral infection in recent times. They continue in explaining that HIV has also played a destructive role in the breakdown and remodelling of the family structure as well as placing an immense burden on health care, education and other social systems. According to the UNAIDS (2006), between 4 900 000 and 6 100 000 people worldwide are currently living with the HI virus. It has also been reported that between 16.8% and 20.7% of South Africa's adult population between the ages of 15 and 49 years old are currently infected with HIV. South Africa reportedly has one of the highest infection rates in the world in having the greatest number of people already infected with virus (McLean & Hiles, 2005).

HIV also impacts South Africa on a demographic level, namely through an increase in mortality and a predicted decline in fertility due to women demising before the end of their childbearing years (Burger & De Villiers, 2005). This reduction in productive capacity which is attributable to the decline in population growth, illustrates one element of the predicted economic impact that HIV will have on South Africa's economy. Quattek (2000; as cited in Burger & De Villiers) speaks about the channelling of monies into health-related goods and services such as funeral costs which diverts such monies from being placed into personal savings.

HIV is thought to impact businesses through reducing productivity and escalating costs. Whiteside and Sunter (2000; as cited in Burger & De Villiers, 2005) state that the increase in costs in industry can be accounted for by the following, namely: absenteeism due to employees becoming ill as well as their ill family members needing to be cared for due to a reduction in health; a decline in productivity because of worsening health of employees; employers may have to increase the size of their current workforce to make up for the expected absenteeism of employees; and; the morale of the workforce can be negatively affected by the impact of HIV.

Historically, HIV and AIDS have been viewed and treated through the lens of a predominantly biomedical focus (Delany-Maretlwe, Gray, Kagee, Myer, Puren & Ramjee, 2006). Speaking more specifically about prevention strategies, Delany-Maretlwe et al., suggest that such interventions must also take cognisance of the behavioural theories that play an integral role in the make-up of such strategies. Fourie (2003) reports that social theory has historically been silenced in commenting on the social determinants of HIV in South Africa. Fourie purports that the reason for this may be the sexual nature that HIV is entrenched in. He further states that this silence contributes to problematic belief systems. The treatment and management of HIV and AIDS must be understood through models such as the biopsychosocial model where the multiple dimensions of the disease can be taken into account (McLean & Hiles, 2005). Fourie further suggests that a human rights culture needs to be employed to counter the existing myths, lies and silences around the issues of sexuality that ultimately impact ones' understanding of HIV and AIDS. Furthermore, a gender-sensitive analytical lens could contribute towards understanding the HI virus in a more meaningful and holistic manner.

With this in mind, this study will attempt to shift away from the traditional and already well documented medical explanations of the links between individuals' knowledge, attitudes and beliefs towards sexual practices and will attempt to incorporate the wider appraisal of social environments in which sexual activity and risk takes place (Goodwin et al., 2004). This will be made possible through exploring a sample of health science students' perceived vulnerability towards contracting HIV.

The rationale in choosing health science students as the social group in this study was partially based on research documenting that young adults between the ages of 18 to 25 are in the highest risk category of contracting HIV and other sexually transmitted diseases (STDs) (Huszti, Johnson, Dageenakis & Beckman, 2001). The primary reason for this is that many people between these ages, regardless of their cultural background, education or social status, reportedly partake in risk behaviour (Walker et al., 2004). Walker et al., further suggest that "youthful irresponsibility cuts across all sectors in society; rich and poor, black and white. In conjunction with this, a study of university students [in South Africa] found that youth and casual sexual relationships went together" (p. 33). This statement by Walker et al., supports the idea that a

cluster of people that may be representative of such a sector in South Africa are university students (Gilks & Wilkinson, 1998).

The nature of health science students' work is such that they have contact with patients whom have contracted HIV. In partial fulfilment of their degrees, health science students perform practical work within Government run health institutes where they are provided with the opportunity to practise and hone their skills as health professionals. The government hospitals in which the health science students are completing the practical element of their training house a high proportion of HIV infected patients (Sidley, 2004; as cited in McLean & Hiles, 2005). Hence, young health science students' appraisal of HIV/AIDS will be explored during the course of this study because they fall into a high risk category based both on their age and their profession. The purpose of this study is to gain cognisance of the understanding that a sample of health science students have about HIV/AIDS with the hope that this understanding will shed light on their perception towards their own vulnerability in contracting the virus.

The researcher aims to understand how this sample of health science students has come to understand and share their knowledge among themselves about HIV/AIDS and how this subsequently informs their perception of vulnerability towards the virus both in their social and occupational settings. It should be noted at this time that it is not the intention of this study to pass judgement on the behaviour and conduct of health science students, but rather to gain insight into their shared understanding around HIV as an illness and how this informs their behaviour. The objective of this study is also to yield information in the understanding of HIV/AIDS among this sample and to possibly use this information as a way of creating more appropriate prevention and educational programmes. It is the intention of this study to gain a deeper understanding of what members of a sample of health science students' appraisal of HIV/AIDS within their social and occupational setting and how such an understanding guides their attitudes and beliefs in relation to HIV/AIDS.

CHAPTER TWO

Literature Review & Theoretical Frameworks

2.1 Introduction

HIV/AIDS in South Africa offers an example as to how a concept can be socially constructed. The virus has been stigmatised as a disease that affects the poor and Black people of SouthAfrica and those who identify themselves with a demographic other than White, educated and stemming from a middle to upper class segment of society (Davidson, 2001). This has had vast implications for the social segregation and stigmatisation of the disease. When given statistics about HIV/AIDS infections, the public of South Africa generally fixes these statistics to poor, Black rural communities (Walker et al., 2004). This suggests that specific ideas, beliefs and perceptions of HIV and AIDS may have been created by South Africans as a group. Regardless of the truth or reality of the specific social groups' understanding and perceptions of HIV/AIDS, Walker states that the disease is presently affecting heterosexual individuals from low socioeconomic areas in developing countries around the world. It is the purpose of this study to explore and gain cognisance of the perceptions and understanding with regards to the concept of HIV and AIDS that has been formed among an educated sector in South Africa, both within their social and occupational setting. The study will aim to investigate a sample of health science students' understanding of HIV and AIDS with the intention of demonstrating how this has informed their perceived vulnerability towards contracting the virus.

A sample has been chosen consisting of health science students in an attempt to understand the rationale behind individuals' perceptions of vulnerability towards HIV among a segment of people in South Africa other than poor Black rural people. The abovementioned sample makes up a group which can be defined as having a common project or aspiration (Bauer & Gaskell, 1999), namely health science endeavours. For the purpose of this study, health science students comprise of individuals, male or female studying any of the health science programmes; for example speech therapy, audiology, occupational therapy or physiotherapy, and are between the ages of 18 and 29 years of age. The students attend the University of KwaZulu-Natal and are based at the Westville campus. The sample consists of students who are currently completing their fourth and final year of the academic component of their health science degree.

When referring to risk behaviour, this incorporates both social and occupational behaviour that is deemed to enhance the risk of HIV transmission. The basis from which this study will attempt to understand health science students' perceived vulnerability towards contracting HIV will be viewed through the exploration of their understanding and perceptions of HIV/AIDS and how this has been established and maintained. Furthermore, the exploration will endeavour to ascertain as to how these perceptions and beliefs about the virus affect their subsequent behaviour. This study will endeavour to unpack the specific features of the perceptions and understanding of HIV and AIDS that exists among this particular sample group of health science students.

Occupational risk for HIV infection in the health science field is common but it should be noted that social, non-occupational risks are documented as having a greater probability of occurrence (Gilks & Wilkinson, 1998). A sample of health science students was chosen for a three-fold reason. Firstly, in partial fulfilment of their degrees, health science students perform practical work within Government run health institutes where they are provided with the opportunity to practice and hone their skills as health professionals within their respective fields of practice. Secondly, the government hospitals in which the health science students are completing the practical element of their training house a high proportion of HIV infected patients (Sidley, 2004; as cited in McLean & Hiles, 2005). It has been reported that the prevalence of HIV in government hospital settings has reached such endemic proportions that it has changed the face of medical practice in South Africa. A study conducted by Jinabhai and Ramdas in 2003 (as cited in McLean & Hiles) revealed that an estimated 60% of all mortalities in King Edward Hospital, which is situated in Durban, were HIV and AIDS related. Hence, the sample chosen has very little choice in the population of patients with which they work and care for and are thus exposed to working with a high proportion of their patients being infected with HIV. A third reason for choosing this sample is that students at University training to become health science professionals are generally representative of youth at risk. It has been reported that young adults between the ages of 18 to 25 are in the highest risk category of contracting HIV and other STDs (Huszti et al., 2001). This shows that this age group is representative of the highest risk category with regards to age for contracting the virus. In light of the integration of these three risk factors, this study will endeavour to explore the perceptions and understandings that this specific sample

of health science students have with regards to HIV/AIDS and how this may have a direct bearing on their perceived vulnerability towards contracting HIV/AIDS.

2.2 Theoretical Frameworks

2.2.1 Biopsychosocial model

Several theories have been documented in an attempt to understand risk behaviour which ultimately informs strategies of behaviour change. Historically, HIV and AIDS have been viewed and treated through the lens of a predominantly biomedical focus (Delany-Maretlwe et al., 2006). Fourie (2003) reports that social theory has historically been silenced in commenting on the social determinants of HIV in South Africa. As previously mentioned, Fourie suggests that because of the sexual nature of HIV, discourse about the virus has been silenced. Fourie furthers that this contributes towards existing problematic belief systems. The treatment and management of HIV and AIDS must be understood through models such as the biopsychosocial model where the multiple dimensions of the disease can be taken into account (McLean & Hiles, 2005). Sadock and Sadock (2003) suggest that the biopsychosocial model approaches human behaviour and disease from an integrated perspective. "The biological system refers to the anatomical, structural, and molecular substrates of disease and its effects on patient's biological functioning; the psychological system refers to the effects of psychodynamic factors, motivation, and personality on the experience of, and reaction to, illness; and the social system examines culture, environmental, and familial influences on the expression and experience of illness" (Sadock & Sadock, p. 1). This model does not promote one system's supremacy over the next, but rather encourages a comprehensive understanding of disease through all the systems affecting and being affected by one another. Sadock and Sadock go on to recommend that this model be used when attempting to understand or treat chronic conditions, such as HIV and AIDS. Thus, it is the intention of this study to shift away from the previously biologically informed understanding of individuals' perceptions of vulnerability towards HIV and rather integrate all three systems.

2.2.2 Behaviour change theories

Speaking more specifically about theoretical prevention strategies, Delany-Maretlwe et al., (2006) further that such interventions must also take cognisance of the behavioural theories that play an integral role in the make-up of such strategies. The perceived vulnerability towards contracting diseases and how these perceptions subsequently inform behaviour changehas been documented in behaviour change theories. By exploring some of these theories, a frame may be created for further understanding the possible perceptions of the health science students' beliefs and understandings of HIV and AIDS. It has been documented that in order to gain a better understanding of an individual's behaviour, one needs to take a closer look at the attitudes and belief structures of the individual person. This concept makes up what is known as the health belief model (HBM) (Change Theories, 2003). Moliner and Tafani (1997) define the construction of attitudes as being a process that is impossible to directly observe due to it being internal to the subject. The aspect of an attitude that is observable is its evaluative nature which is manifested through cognitions, affect and behaviour. Through exploring the beliefs among the group of health science students, we will attempt to investigate how this sample have appraised HIV infection in relation to their behaviour and how this either increases or decreases their perceived vulnerability towards contracting the virus.

The HBM states that it is essential that an individual must feel personally threatened or susceptible to the disease as well as its consequences in order to bring about a change in their behaviour (Change Theories, 2003). In accordance with the HBM, the perceived threat is made up of two elements, namely the perceived susceptibility and the perceived severity of the illness. Perceived susceptibility recognises the individual's perceived risk of contracting the health condition, while the perceived severity of the illness relates to the feelings about the seriousness of contracting the illness. A further understanding of the possible contrast between health science students' perceived vulnerability or susceptibility in their social risk and occupational risk will be explored. Furthermore, the individual must embrace and acknowledge the benefits of taking preventative precautions as outweighing the perceived hassle or costs of taking such measures. The HBM also acknowledges that there are other variables such as demographic, socioeconomic and cultural issues that indirectly contribute to health-related behaviour. These variables will be explored through the medium of in-depth interviews with the health science students in an

attempt to understand as to how this may inform their perceived vulnerability to contracting the virus.

A second and more recent behaviour change theory that has allowed greater insight into human behaviour and behaviour change strategies is known as the AIDS risk reduction model (ARRM) (Change Theories, 2003). This three-stage model that was introduced in 1990 and incorporates elements from other models such as the previously mentioned HBM, the efficacy theory and other interpersonal process theories. The first stage in this theory towards being able to understand and curb risky sexual behaviour is in acknowledging and labelling one's behaviour as high risk. In accordance with the ARRM, the final two steps are only achievable once the first step has been completed. Stages two and three in the ARRM are to make a commitment to reduce high-risk sexual contacts while increasing low-risk encounters, and then taking action to fulfil this behaviour. This theory may assist the researcher in gaining further insight into the behaviour of the health science students which would ultimately be informed by the already existing beliefs, understanding and perceptions of HIV/AIDS held by the health science students.

2.2.3 Risk theory

In an attempt to gain a deeper understanding of why some of the abovementioned models have or have not succeeded, it is important gain cognisance of the theoretical framework of risk theory. Risk has been a difficult concept to define and experts have disagreed in attempting to gain consensus as to what constitutes risk (Beck, 1992). Some of the contention has arisen from the differences in risk that is structured through inequalities such as class and position. Beck defines risk as "a systematic way of dealing with hazards and insecurities induced and introduced by modernisation" (p. 21). He goes on to say that modern risk such as disease, escapes human perception. Most forms of risk are generally derived from previously sanctioned forms of activity (Giddens, 1991), such contact between health care workers and their patients. Vulnerability to high risk behaviour is thought to be understood and influenced through an ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004). Govender and Petersen go on to state that these systems have been broadly categorised into four levels; namely the individual level, interpersonal level, community level and social level. The

individual level usually incorporates the person's cognitive perspectives around the risk such as information, attitudes and beliefs. The already mentioned health belief model is a well known model used in an attempt to try and understand why individuals engage in risky behaviour that may be harmful to their person. The second level (interpersonal) looks at potential risk behaviour as stemming from an interaction between interpersonal factors and the cognitions of the individual.

The community level looks at the social location of people and how this can potentially increase vulnerability towards risk (Whittake & Hart, 1996; as cited in Govender & Petersen, 2004). People are part of social networks which mediate their ability to respond to risk. Putnam (1995; as cited in Govender & Petersen) goes on to state that *social capital* is made up of protective factors that exist within the community level. Finally, the societal level looks at the potential role that society plays in determining risk. More specifically, risk is judged through the filter of cultural value systems (cultural perspectives) as well as the inequalities and power imbalances that may exist in some societies (structuralist perspectives).

2.3 Sexual Transmission of HIV

The following information about transmission and vulnerability to HIV infection is particularly pertinent to this research topic. As already mentioned, research has shown that health science students are at risk of contracting HIV through both their occupational as well as through their social settings (Gilks & Wilkinson, 1998). Because it is the purpose of this study to gain greater cognisance of the beliefs and understanding about HIV and AIDS that inform this sample's perceived vulnerability towards contracting HIV, it bodes well to investigate the possible schema that may underpin the perceptions involved in informing the social group's manifested behaviour.

Van Dyk (2001) has explicitly outlined the potential threats of HIV transmission and infection. For the purpose of this study it is vital that that we define and describe the ways in which transmission occurs, both within the occupational and social settings. HIV is transmitted in a number of ways, namely through different modes of contaminated blood and mother-to-child transmission. Unprotected vaginal or anal intercourse are viewed as the most prolific ways through which HIV can be transmitted. Transmission occurs when the virus enters an

individual's bloodstream via the body fluids (i.e. semen or vaginal fluid) of an infected person. The linings of the anal-rectal area and, to a lesser degree the vagina are susceptible to abrasions due to friction caused during sexual intercourse. If such lacerations occur, the possibility of HIV infection is higher because the virus has direct contact with the individual's bloodstream. This suggests that women and the recipients of anal sex are both at a higher risk of contracting the virus. Women's risk of acquiring HIV is two to four times higher than that of men (WHO, 2000a; as cited in van Dyk). One reason for this is that semen has a higher concentration of HIV than in vaginal fluids. To add to this, semen remains in a women's body for a longer period of time (a few hours) comparatively to the male who is only exposed to vaginal fluids for a short period of time. The thin lining of women's cervix and vagina offer a larger surface area which is readily exposed to the incoming secretions from their partner, thus offering an even greater chance of infection.

As mentioned, HIV is primarily transmitted through sexual intercourse (van Dyk, 2001). However, the number of sexual encounters an individual has cannot be used as a single correlation figure that leads to an increased chance of contracting HIV. This suggests that it is not necessarily the number of sexual contacts alone but the combination of other contributing variables that make an individual more or less susceptible to contracting the virus. Van Dyk suggests that such variables include the concentration level of the viral load in the semen or vaginal fluids; trauma or menstruation during sexual intercourse; the ability between the sexual partners to negotiate condom use; multiple sex partners and the presence of STDs. UNAIDS (2004) reiterates this statement by claiming that unprotected sex and multiple sexual partners are two of the major contributors in the contracting of HIV.

2.4 Health Science Students and HIV Transmission

2.4.1 Occupational HIV transmission

In an article documenting health care students who complete their elective work in South Africa, it was pointed out that occupationally acquired HIV infection is generally uncommon (Gilks & Wilkinson, 1998). The article also states that, even for health workers who are exposed to HIV infected blood and body fluids, there is a greater chance of contracting HIV through unprotected sexual intercourse. Although this does not eliminate the risk of work-related HIV infection, it

highlights that, when universal precautions are taken, the risk of contracting the virus is very low compared to other, namely social methods of transmission. Some of these universal precautions include using latex gloves when in contact with items soiled with blood or body fluids (Florida University, n.d.). It is also recommended that gowns, masks and eye protection are to be used when dealing with procedures where splashing may occur, such as post-mortems. If hands are in contact with blood or body fluids, they should be washed immediately and thoroughly. When performing emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags or other ventilation devices should always be readily available and used.

With this said, current literature seems to indicate that many health care workers in South Africa seem to be more concerned with their possible occupational exposure to HIV than their personal social exposure (Gilks & Wilkinson, 1998). It is at this point where understanding the perceptions of HIV/AIDS held by the proposed sample of health science students will illustrate how vulnerable they feel in regards to their potential occupational and social exposure to the virus. Occupational exposure to HIV is of particular concern when practicing within the health science field in South Africa because of the devastatingly high rates of HIV/AIDS infections. As previously mentioned and in accordance with the 2006 UNAIDS statistics, between 4 900 000 and 6 100 000 people are currently living with the HI virus. It has also been reported that between 16.8% to 20.7% of South Africa's adult population between the ages of 15 and 49 years old are currently infected with HIV. This segment of the population is in need of chronic medical treatment and therefore the degree of contact between HIV positive patients and health care workers is extensive. Contact with HIV positive individuals can only have a correlation with increased vulnerability to HIV infection if the necessary precautions are not taken. However, with South Africa being a developing country, it is not always possible to carry out universal precautions because of poor or inadequately resourced health facilities (Gilks & Wilkinson). A second reason as to why occupational risk still exists is that students in the health sciences field are not yet technically sound in their field of expertise and may therefore unintentionally expose themselves to infected blood or body fluids due to a lack of expertise.

Occupational exposure to HIV occurs in several ways. Needlestick injuries are viewed as posing the most threat to any students within the medical or health science field of study (Josefson, 1999). However, van Dyk (2001) states that the chances of becoming infected with HIV after one needlestick injury with infected blood from a hollow-bore is 0.37% while the possibility of infection from a suture needle or scalpel is even lower. It has been hypothesised that when the patient is in the acute sero-conversion stage or the final AIDS defining stage of the disease, their blood contains the highest load of the virus, also known as the viral load. The higher the viral load, the more infectious the blood is and the higher the chances are of contractingthe virus through a small amount of contaminated blood from a needlestick injury. However, health science students are not excessively exposed to needles and thus, this method of exposure is less probable than percutaneous (through the skin) infection. Percutaneous infection; such as open lesions, bedsores or wounds, have an even lower chance of infecting an individual. Van Dyk maintains that there is a 0.3% chance of infection via this mode of transmission. If the practitioner has any skin abrasions; only with exposure to vast amounts of blood are they at risk of contracting HIV if the patient is HIV positive. Contaminated blood or bodily fluids that splash into the eyes or mouth of the health practitioner have a possible infection rate of approximately 0.1%.

The foregoing illustrates that health practitioners' vulnerability to contracting HIV through their occupational setting is low relative to their possible vulnerability through contracting the disease socially. This suggests that their perceptions of HIV/AIDS need to address the area of perceived risk. This sample group of health science students may represent a social group that have co-constructed an understanding of HIV and AIDS which subsequently informs their understanding of the virus from a medical and social aspect. It is the intention of this study that, through gaining a deeper understanding of the perception around HIV and AIDS of a sample of health science students, we may gain further insight into their perceived vulnerability in contracting HIV both within their occupational and social setting.

2.5 Social Factors Influencing HIV Transmission

In order to fully understand the conceptualisation and understanding of HIV/AIDS that this sample of health science students has constructed, it is important to look at both their occupational and non-occupation (social) settings. This will allow for relatively better insight into how they, as a social group, have understood HIV/AIDS and how this subsequently feeds into their existing collective identity and behaviour. The following studies and information with regards to some social factors that may influence the transmission of HIV aims to illustrate attitudes which may provide a backdrop against which we can further explore health science students' understanding of HIV/AIDS.

2.5.1 South Africa's current management of HIV and AIDS

South Africa's leadership is demonstrating contentious and inconsistent approaches in their attempt to manage HIV and AIDS. In a published article by Hassan (2006), the author identifies South Africa's barriers to success in their management of HIV/AIDS and ARV roll-out. She suggests that there is a "lack of proper leadership coupled with AIDS *denialism*. Other barriers include an acute shortage of health care workers [and a] lack of proper infrastructure" (p. 33). Achmat and Dubula (2006) go on to state that South Africa's public health system is in crisis. Given the already mentioned increasing numbers of people infected with HIV in South Africa, it seems contradictory in nature that the South African government is managing the epidemic in this manner. Government does not seem to see any urgency or emergency in HIV/AIDS management (Achmat, 2006).

In a letter from international HIV scientists addressed to President Thabo Mbeki, 80 scientists express their deep concern towards the manner in which the South African government is addressing the HIV epidemic (Abdool et al., 2006). More specifically, they suggest that HIV science in South Africa is currently being undermined by South Africa's Minister of Health, Dr. Manto Tshabalala-Msimang. It has been clearly stated that the Minister is promoting pseudoscience which is in direct conflict to the global management of HIV (Abdool et al.; Achmat & Dubula, 2006; Geffen, 2006). This is resulting in misinformation being disseminated to the public of South Africa. They also suggested that the Health Minister is an embarrassment

to South Africa and has generated very little respect from the international community. The recent World AIDS conference in Toronto fuelled public anger at how the Minister is currently conducting HIV and AIDS management in South Africa (Mthathi & Achmat, 2006). The government's nutritional management of HIV that is being promoted as an alternative to scientifically proven anti-retroviral therapy is leading to confusion among people and thus rendering people at risk of not gaining access to treatment (Geffen; Abdool et al.). The HIV scientists condemn the unproven remedies that the Minister of Health supports.

It has been repeatedly stated that in the government's management talks around how they propose to deal with the HIV epidemic, they are not including key stakeholders such as Medical Research Council and the Medicines Control Council in such planning meetings (Geffen, 2006; Hassan, 2006). This suggests that key information is not included into new programmes which consequentially have adverse effects on the public. Hassan goes on to suggest that the Health Minister's prevention strategies have also been deemed as a failure. Geffen furthers this by explicitly stating that prevention of mother-to-child transmission (PMTCT) has been poorly implemented and monitored. Besides faulty planning strategies, it has also been purported that the South African government has failed to put in place adequate monitoring and evaluation (M&E) systems (Hassan; Geffen; Achmat & Dubula, 2006; Achmat, 2006). Hassan and Geffen further that this increases the difficulty to attain accurate statistics on HIV in South Africa.

As a result of the abovementioned problems around South Africa's management of HIV and AIDS, it has been suggested that the government is deliberately stalling ARV implementation and as a result, people in South African are suffering unnecessarily (Hassan, 2006). As a resolve to the South African government's failing attempt to manage HIV and AIDS, it has been suggested by various authors that President Thabo Mbeki must assume his leadership role and take responsibility in implementing a scientifically sound management plan to prevent and treat HIV and AIDS (Geffen, 2006; Abdool et al., 2006; Achmat, 2006). More specifically, the TAC and other local and global organisations have called for a new Health Minister (Mthathi & Achmat, 2006).

In light of the contentious and conflicting nature of South Africa's attempt to understand and control the HIV epidemic, the sample of health science students may be adversely influenced in the way in which they have subsequently perceived their own vulnerability towards contracting the virus. However, as shall be discussed in the following section, information or cognitive understandings around HIV cannot act as isolated variables to predict one's perceived vulnerability towards contracting HIV.

2.5.2 Education and knowledge of HIV and AIDS

The results of a study conducted by Joffe (2003) in Zambia suggested that this specific sample of Zambian adolescents had a *not me* attitude, in terms of viewing themselves at being at risk of contracting HIV. Youth described that being knowledgeable about HIV and AIDS would protect them, thus justifying that they are not at risk of contracting the virus. This idea may feed into the broader conceptualisation that this sample of health science students have about perceived vulnerability towards HIV infection in that they may have rationalised there to be a greater threat in their occupational setting over and above that of their social settings. Health science students receive much training and education on health and wellness during their four years of studying. Consequentially, this depth of knowledge about HIV/AIDS may cause them to consider that knowledge and education offer as a protective barrier to them contracting the virus, rendering them to feel less vulnerable to HIV infection.

As mentioned previously, students must take even greater care given that they are less experienced and are probably more prone to exposing themselves to unnecessary risks due to a lack of experience (Gilks & Wilkinson, 1998). Several authors recommend that health science students, while remaining aware of their occupational risks of HIV infection, need to become more cognisant that they may run even greater risks in the social areas of their lives (Symon & Wilkinson, 1999). One of the purposes of this study, based on the health science students' beliefs and perceptions of HIV/AIDS, is to determine the extent of the proposed sample's perceived vulnerability towards possible HIV infection and how they acknowledge this threat within their occupational and social lives.

2.5.3 Risky sexual behaviour

As already documented, statistics of HIV infection and vulnerability are not only bound to the low socioeconomic or rural Black sector of society (Davidson, 2001). Dobson (2003) reported that several medical health science students in the United Kingdom are increasing their vulnerability to HIV infection. This is occurring as result of students engaging in several new sexual relationships during their university vacations and less than half of the students using condoms as a barrier against HIV and other STDs. More specifically, Dobson found that when students engaged in high risk sex, overall condom use seemed low for a group of people who had attained a high level of education. Of the students that engaged in a new sexual relationship during the holiday, the number of partners ranged from 1 to 10, with an average of 3 partners during that period.

The results of these studies bring into focus a number of issues. One such issue is that not only people from a low socioeconomic background with limited education, or Black people from rural backgrounds are engaging in risky behaviour such as multiple sexual partners and unsafe sex. As can be seen in the abovementioned study, cohorts from educated backgrounds also engage in risky sexual activities. This suggests that education does not necessarily correlate with a change or modification in behaviour to safer practices. Hence, as already mentioned in the health belief model and AIDS risk reduction model, other factors need to addressed when assessing behaviour and potential behaviour change (Change Theories, 2003).

A second subject that is brought to mind in response to the abovementioned study, is that the health science students may have construed certain beliefs around the concept of HIV and vulnerability to infection. More specifically, the sample may link HIV to other groups with which the health science students do not identify. Goodwin et al., (2004) found that social groups may construct HIV to be more of a threat to certain out-groups, probably with which they do not relate to. Consequentially, this allows for the group to feel less vulnerable within their working environment. Through the broader lens of social psychology, one can explain this concept from the theoretical viewpoint of social identity theory (Devine, 1995). This theory explains that people favour in-groups (the group to which the individual belongs) over out-groups (any group other than then the in-group) in order to maintain or enhance their self-esteem. Social

psychology theory also speaks about the out-group homogeneity effect where the perception occurs that out-group members are more similar to each other than in-group members are to each other.

This notion of *othering* allows social groups to ascribe this threat onto an out-group and thus feel a false sense of security in terms of their perceived lack of vulnerability to contracting the virus. If the threat of perceived vulnerability towards contracting the virus is externalised to this extent, this may have implications on the risk behaviours (Páez et al., 1991) of the social group within the context of their non-occupational social arena of threat. Furthermore, Páez et al., describe that as a result of the social group distancing themselves from the threat, they conjure up moral ideals about specific risk behaviours with which they do not identify with but which are seen as increasing other peoples' (but not their own) vulnerability towards contracting HIV.

2.5.4 Youthfulness

Studies conducted over the past years have demonstrated the increasing prevalence of HIV among tertiary education students which is thought to have a direct negative impact on the quantity and quality of higher education in South Africa (Vaas, 2003; as cited in Raijmakers & Pretorius, 2006). Fowler (2000; as cited in Raijmakers & Pretorius) reported a 25% rate in HIV prevalence among South African technicon (university of technology) students and a 20% prevalence among university students. A study conducted by the Reproductive Health Research Unit at the University of Witwatersrand, found that although a sample of South African youths, aged 17 to 25 years had acknowledged HIV/AIDS as being the biggest problem facing them, the vast majority of the sample of youths engaging in risky sexual activity (multiple sex partners and inconsistent condom use) did not think that they were at personal risk of contracting HIV (Raijmakers & Pretorius). As a result of such findings, the Higher Education HIV/AIDS Programme has placed its immediate concern and focus in reducing the threat of HIV/AIDS to higher education students.

Walker et al., (2004) have suggested that it may be as a direct result of being 'young' that individuals do not perceive themselves to be at risk of contracting diseases such as HIV/AIDS. "Youth is seen as a time of play, adventure, and fun, before the responsibilities of adult life

prevail" (Walker et al., p. 33). If this is the case, young South Africans may partake in risky behaviour under the guise of a false sense of security that because they are young, they are not susceptible to infectious diseases such as HIV.

2.5.5 Drug use

It has been thought that there may be a correlation between risk behaviour and drug use (Lindell, 2002). An exploration into this possibility is important if we are intending to understand this sample of health science students' understanding of HIV/AIDS. The Kaiser Family Foundation recently completed a study showing that young adults between the ages of 15 to 24 are more likely to engage in sexual intercourse if they have consumed drugs or alcohol. It has been documented that when alcohol or drugs are consumed, the individual's judgement is impaired resulting in the engagement in risky behaviour such as casual, unprotected sex with multiple partners. The study showed that, on average, after consuming either alcohol or drugs, only 22% of young adults wore condoms during intercourse compared to that of 65% using condoms when having not consumed any substances. It was documented that students often use such substances to loosen up and become more social. Consequently, substance abuse could be a contributing factor towards individuals engaging in risky behaviour which could subsequently play a role in the individual's perceived vulnerability towards contracting HIV.

2.5.6 Sexuality differences in males and females

Joffe's (2003) study among Zambian adolescents documents a widely held belief among the sample that the spread of HIV/AIDS has a strong correlation to the sex or gender of the individual. Different sexes are deemed to be allowed to express their sexuality in different ways. Gaining a deeper understanding among our sample of health science students may provide further insight into their overall conceptualisation of HIV/AIDS and, more specifically, how this possibly informs their perceived vulnerability towards contracting the virus.

Having multiple sex partners has also been referred to as *sexual promiscuity.* Demauriac (n.d.) defines promiscuity as having sexual intercourse with multiple partners outside of an exclusive monogamous relationship within a brief period of time. Walker et al., (2004) states that more

young people in South Africa are having sex at a younger age today than previously noted. South African males are thought, in general to expect sexual intercourse after seven days of a relationship commencing while females remain in relationships for more than a month before they expect to have sexual intercourse. This difference in expectation shows that men and women differ in their views on sexual intercourse and the number of partners one should or can have.

Sexual norms are transforming at a rapid pace as can be seen within the different perceptions of sexually promiscuous behaviour between men and women. It seems that societal views dictate as to what is acceptable from each sex (Demauriac, n.d.). There are culturally induced differing notions of acceptable promiscuous behaviour for men and women. Men are generally given more leeway to dapple in a promiscuous lifestyle while women are chastised for such behaviour. In Southern Africa, stereotypical gender roles have contributed in placing women at greater risk of contracting HIV (Fourie, 2003). Nadiaye (2000; as cited in Fourie), states that in many African cultures, a sign of a man's virility is to have multiple sexual partners. Women are often at risk of contracting HIV and other STDs as a result of their polygamous husbands or partners engaging in high risk sexual behaviour. This division in allowance has lead to social and biological dilemmas within the field of multiple sexual partners.

Studies quote inconsistent results in the differences between women and men's view to sex and sexual practices (Goodwin et al., 2004). However, the societal norms that the specific group places on each sex in allowing or accepting specific behaviour and deeming it as normal seems to show a consistent pattern and may be applicable to the sample of health science students in this study. Joffe (2003) revealed in her study of Zambian adolescents that there is an entrenched inferior position of women which renders them more vulnerable to contracting HIV. This occurs for a number of reasons, one being the existence of *sugar daddies* that remunerate the girls financially for being their sexual partners. Similar, social appraisals of HIV may exist within the health science group of students that may result in one sex being made more vulnerable to HIV infection or feeling incorrectly impervious to the virus. It is the intention of this study to attempt to reveal such information through the medium of the individual interviews.

Although it is beyond the scope of this study to delve too deeply into this topic, it is important to acknowledge and document these possible differences in perceptions between men and women. Such differences may indicate the necessity of focussing on the communication style of HIV/AIDS prevention programmes specifically for men or women, depending on the target group (Bruce & Walker, 2001). A study completed in 2003 documenting perceptions of sexual promiscuity with a sample representative of people from every continent on the globe advocated that men desired to have more sexual relationships than do women (Vedantam, 2003). This probes the question of whether promiscuous behaviour is perhaps hardwired into the genetic make up of men more so than women. Because sexual desire cannot be traced from a tangible fossil, evolutionists and social scientists have had to combine their resources in order to determine if any truth lies in this statement (Demauriac, n.d.). There is little controversy that evolution has played some role in shaping human behaviour (Vedantam). It has been documented that these differences in men and women may have been fashioned within the hunter-gatherer societies. It is thought that men sought sexual variety as a means of enhancing their chances of passing on their genes while women who managed to keep their mate increased their chances of raising their children within a family setting hence, each sex fulfils their innate goal.

Hollway (1989) further explores the possibility of biological or *real* differences between men and women, separate from "*artefactual sex differences*" that are mediated by the social world (p. 103). She looks at the biological differences between the sexes as possibly providing an explanation as to why the stereotyping of men and women is so difficult to change. But, this inherent or biological justification behind promiscuous behaviour is also viewed by some as an excuse for double standards in a male dominated society (Vedantam, 2003). Women's sexuality is thus controlled, dictated and shaped by men, leading to implications of power and status. This argument is far from drawing to any form of a conclusion.

As previously mentioned, the acceptability of sexuality and sex are predominantly dictated by the concurrent societal views (Demauriac, n.d.). Different perceptions about acceptable sexual behaviour among the two genders may play a shaping role in the subsequent perceived vulnerabilities to acquiring the virus among the social group. If this holds true for this sample of

health science students, it will partly inform their perceptions and beliefs around HIV/AIDS. More specifically, the understanding of the spread of HIV/AIDS may become more apparent when looking at the perceived differences that each gender plays in the spread of the virus.

2.5.7 Sexually transmitted diseases (STDs)

Having already documented that many young adults in South Africa practice risky sexual behaviour (Walker et al., 2004), it bodes well to infer that, as a direct result of such behaviour, STDs are rife within the young population in South Africa (Utrecht, 2002; Kmietowicz, 2003). A rise in prevalence of STDs is not only occurring in South Africa but is also endemic throughout European countries (Utrecht, 2002). This has been directly attributed to an increase in unsafe sex practices, namely a decrease in condom usage. Gonorrhoea, syphilis and chlamydia have been reported as the three specific STDs that have increased in prevalence (Utrecht; Kmietowicz; White & Mortensen, 2003). Utrecht also documents that HIV infection rates are increased when there is the presence of syphilis. Authors and researchers have documented the belief that the HIV/AIDS epidemic in Africa could be combated as a result of gaining control over the high prevalence of STDs (van Dyk, 2001). This statement can be made because it is through the manifestation of STDs, namely genital ulcers and sores, that the likelihood of HIV transmission is increased. The sores create openings in the mucous membrane through which the virus easily moves. Thus, STD prevalence intensifies the risks of contracting HIV.

It has been documented that people who engage in heterosexual sexual relationships with a primary partner feel very little threat of contracting HIV or STDs (Huszti et al., 2001). This could be explained through the sense of security that individuals feel when they are supposedly in a mutually exclusive relationship. This sense of security, in some instances can be falsely attributed because individuals fail to recognise the possibility that their partner may be engaging in extra-relational sexual relationships and thus putting themselves and their partners at risk of contracting STDs or HIV from a third party. People may also neglect to consider that if their partner has had previous sexual relationships, the partner runs the risk of having been infected with HIV or other STDs from previous partners and then infecting their current partner (Walker et al., 2004).

A possible rationale behind this could be that STDs have historically been used to divide people into *dirty* and *clean* categories (White & Mortensen, 2003). This hints at the social complexity within which STDs and HIV are embedded. Gilmore and Somerville (1994; as cited in White & Mortensen, 2003) suggest that, when individuals are faced with a disease that is threatening or incurable, people use the coping mechanisms of denial, displacement, stigmatisation, scapegoating and discrimination. This further suggests that in the creation of belief structures and attitudes, there is an evaluative process that results in value being part of the overall understanding of the concept of the virus.

This notion shall be further investigated while investigating the understanding that the sample has around the concept of HIV/AIDS and how this informs their perceived vulnerability towards contracting the virus.

2.6 Social Disparities

Before delving into the specific social disparities that may occur among this sample of health science students, it bodes well to gain further cognisance of the processes involved in the formation of attitudes and their evaluative nature. As previously mentioned, Páez et al., (1991) suggest that the aspect of an attitude that is observable is its evaluative nature which is manifested through cognitions, affect and behaviour. However, attitudes must be seen in their context which then determines their specific function (Bauer & Gaskell, 1999). These functions are not static and can be manipulated depending on the current need of the group. Thus, the attitudes informing the sample of health science students' understanding and beliefs around HIV and AIDS may well play a consequential role in their perceived vulnerability towards contracting the virus. This, in turn may inform their behaviour.

2.6.1 Religion and moral reasoning

The notion of HIV and AIDS being entrenched within an intricate social and political setting needs further elaboration. To add to the already stigmatised realm of HIV/AIDS infection and transmission, some sectors of society believe that *decent* religious people or *good* people will not contract AIDS (Women and HIV, n.d.). Through the medium of her study in Zambia, Joffe (2003) discovered that adolescents had appraised HIV infection as occurring among *other* people

who partake in deviant sexual practices and do not abide by God's rules. HIV infection was seen as a result of God's punishment for this immorality. These associations of who is vulnerable to HIV infection protects the sample of religious people in that it provides comfort for those who abide by their religious beliefs.

Phiri (2004) maintains that the predominant initial theological stand of the Christian Church was that HIV/AIDS was sent as a punishment from God. This was attached to the sexual nature of the manner in which the majority of HIV infections are transmitted. The Church promotes abstinence from sexual relations prior to marriage as well as faithfulness within marriages as its prevention for HIV infection. Hence, the Church previously viewed HIV as resulting directly from sin and thus, being inflicted with the illness was a form of punishment. This promoted the stigma of HIV as well as limiting the Church's involvement in reaching out to those affected or infected with the virus. Fault and blame is attributed to people contracting the virus through this medium. Phiri attributes this rationale to the Church's previously simplistic understanding of HIV and AIDS. He also suggests that for too long, the Church focused on punishment and the wrath of God rather than compassion, forgiveness and mercy, again this adds to the stigmatisation, exclusion and discrimination of people living with HIV/AIDS.

The development of moral reasoning has also been documented in literature and suggests that it has a relationship to religious beliefs (Richards, 1991). More specifically, Richards goes on to state that religious criteria are often used as a basis for moral reasoning. Getz (1984; as cited in Richards) suggests that there is often a negative relationship found between some religious beliefs and moral reasoning. This results in apparent polarised values being placed on those who associate with God and those that do not. Phrased more specifically, those who do not associate with God's authority may be viewed in a negative light and thus this negative attitude is carried onto those people who are vulnerable to HIV infection. This has potential immense implications for peoples' perceived vulnerability towards contracting HIV. Another social disparity that occurs within the arena of HIV is that of the distribution of medicating drugs for specific purposes of different manifestation of HIV (World AIDS Campaign, n.d.).

2.6.2 Drug dispensing

The idea of Black people from a low socioeconomic background being the only population vulnerable to HIV is being amplified through the implementation of the law that stipulates that free distribution of certain HIV related drugs may only occur within South African hospitals where proof can be given to certify that the attending patients cannot afford the medication (World AIDS Campaign, n.d.). This regulation may be enhancing the ideologies of people deeming themselves at a lesser risk of contracting HIV because some of their private clinics and hospitals are not catering for their possible needs in the same accessible way that the government is catering for poor people's HIV needs. Through a process of elimination, the disease may be erroneously placed further away from some people on a personal threatening level than it is in reality. Depending on how drug dispensing has been conceptualised among the sample of health science students will determine as to whether this has informed their collective understanding of HIV/AIDS.

2.7 Communicating Behaviour Change in regards to HIV/AIDS Vulnerability

Rawjee (2002) suggests that when communicating behaviour change in relation to HIV/AIDS to different sectors of society, it is of utmost importance to consider the complex nature of the context within which the particular group comes from. This intricate contextual network is made up of social relationships, power dynamics, cultural interpretations and values. Bauer and Gaskell (1999) suggest that the contents of the communicated behaviour change, the way in which it is transmitted and the consequences of this communication all play a role in the continual development of the given appraisal of HIV and AIDS.

2.7.1 HIV prevention campaigns in South Africa

Within the prevention campaigns that are currently being disseminated around South Africa, two multifaceted behaviour change programs are noteworthy in their attempt to reduce sexual risk behaviours (Delany-Maretlwe et al., 2006). One means of communicating aspects of HIV in South Africa has been through the AIDS awareness programmes and the media focus on HIV/AIDS. Firstly, Soul City is a multimedia programme transmitted through television, radio and magazines and secondly, LoveLife is a media campaign focusing on adolescent-specific health care services. Delany-Maretlwe et al., suggest that because of the nature of such

campaigns, it is difficult to measure their efficacy but, preliminary evaluations suggest that the two campaigns have in fact significantly impacted young people's awareness and knowledge about HIV and AIDS. The interventions have also played a role in shifting misperceptions of the virus in communities affected by HIV.

Hence, from an educational stance, these campaigns may be successful but, as previously mentioned, education alone cannot be used a predictor for behaviour change. Therefore one needs to take a critical view at the make-up of these campaigns. One area of significance that is prominent is that the campaigns necessitate the individual as the primary tool in gaining control over the management of HIV as well as protecting themselves from the risk of infection. Within the field of risk, experts in the form of scientists and technology are no longer able to guarantee control over risk and have thus placed much of the responsibility of risk management in the hands of the individual (Beck, 1992; Giddens, 1991).

2.7.2 Individualisation of risk

Beck (1992) suggests that there is a growing contention between ascribing to the scientific risk discourses versus the pragmatic and personal accounts of risk generated by lay people at a grass-roots level. Beck suggests that the scientists involved in the principle research on risk seldom experience the actual risk. This becomes the basis for the rejection of scientific risk management strategies by some lay people who actually experience the risk. Giddens (1991) states that the layperson has come to realise that even experts have areas of ignorance within their overall fields of knowledge and this undermines the confidence that the layperson places on the experts. An example of such a field is HIV, where experts have acknowledged that there are gaps in their understanding and subsequent control over the virus and the related risks involved. Hence, an increasing amount of responsibility in risk and risk management has been attributed to the lay knowledge of the individual while shifting it away from the previous experts (Duff, 2003).

However, as previously noted in the ecological-systems approach to risk behaviour (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004), one cannot simply look at one level, such as the individual level where education may take place, but rather to incorporate all

four levels, namely the interpersonal, community and societal. Hence, the successful education component in the LoveLife and Soul City campaigns play one part of more fully encompassing campaigns in the future. A negative effect that is generated by placing responsibility of risk management at the individual level is that, with an increased awareness of various risks, people are becoming complacent about risks because risks are becoming such a common feature (Giddens, 1991). As a result of this, Giddens goes on to state that people are subsequently numbed to some of risks.

A second negative effect that may be extracted through critiquing the LoveLife and Soul City campaigns is that they have generally focused on their target groups arising from a specific socioeconomic level as well as from specific communities, namely lower socioeconomic groups. This initiates another arena that has possibly contributed towards some people feeling less vulnerable towards HIV in that they are not necessarily the target of the prevention and behaviour change programmes. Nevertheless, it is imperative that the social, cultural and economic level as well as the needs of the specific target group are recognised in order to facilitate the implementation of an appropriate prevention programme (Rawjee, 2002).

2.8 Conclusion

It has been suggested that in today's multifaceted world of disease, social stigma, ignorance and fear, health can no longer be left in the hands of the medical curative model (Partenheimer, 2002). It has been documented that social scientist perspectives need to be investigated as additional techniques in which researchers can gain a better understanding of the prevalence and spread of HIV and AIDS. This will be applied in this study in order to gain better cognisance of health science students' perceived vulnerability towards HIV infection both within their occupational and social settings.

The stigma of HIV/AIDS in South Africa is generally attached to Black people from lower socioeconomic backgrounds. Hence, an investigation into the make up of perceived HIV infection risk among a specific group, namely health science students, shall be conducted. This will allow for an in-depth understanding of how this group has come to make sense of the disease

within their pre-existing social setting. Their perceptions, understanding and beliefs will hopefully highlight their subsequent perceived vulnerability towards contracting the virus. This will become evident through them as a group, attempting to protect and maintain their current social identity while not feeling threatened by infection of the virus. White and Mortensen (2003) suggest that in order to allow health care workers to acknowledge their true vulnerability to HIV and STD infections, health care workers need to become more self-reflective and aware of their personal lives separate from that of their occupation lives.

It is not been the purpose of this study to negate the fact that people from disadvantaged backgrounds are at a high risk of contracting HIV/AIDS. It has been stated repeatedly through literature that this sector of the population is in fact at the highest risk of contracting HIV (Walker et al., 2004). This fact is acknowledged but this study simultaneously wishes to illustrate current understandings and perceptions of HIV/AIDS among a group of people, namely health science students, who are historically not representative of this group. Subsequently, through gaining deeper insight of this group's conceptualisation of the virus, more appropriate and potentially receptive prevention and education programmes can be constructed and disseminated throughout the country to these groups of people.

CHAPTER THREE

Methodology

3.1 Research Design

3.1.1 Aim of study and research questions

This study aims to explore the perceived vulnerability towards HIV/AIDS infection among a sample of health science students at the University of KwaZulu-Natal, Westville campus. It is the intention of this study to gain a deeper insight into health science students' appraisal of HIV/AIDS and how such an understanding guides their beliefs with regard to personal vulnerability.

The specific research questions related to this issue are:

1. How do students understand the phenomenon of HIV/AIDS?
2. How do students perceive their risk for contracting HIV in their occupational setting?
3. How do students perceive their risk for contracting HIV in their social setting?

3.1.2 Research paradigm

All research should achieve logic and coherence, which is attained through adhering to the design's particular paradigm. Each paradigm offers specific guidelines and practices that will enable the researcher to best carry out their study relative to the area under exploration (Durrheim, 1999). These guidelines specify epistemological, ontological and methodological dimensions that provide a rationale for the specific research and restrict the researcher to a specific method of data collection, observation and interpretation. The paradigm in which this study was conducted is under that of the interpretive framework; reason for this is because it subscribes to the subjective experiences of each member of the sample group. The interpretive framework implies using an empathic approach in gaining an understanding into phenomena that exist within its context. It is suggested that the interpretive perspective "focuses not only on objectively verifiable facts but also on the many subjective meanings that people attach to them" (Ulin, Robinson, Tolley & McNeill, 2002, p. 22). The interpretive framework's methodological assumptions fall under the qualitative banner. Qualitative research is said to study the human

experience from a subjective perspective. Qualitative studies are structured to be naturalistic, holistic and inductive in their nature. This corresponds well with this study's aim of attempting to elicit and explore the sample of health science students' subjective views on HIV/AIDS and how this informs their perceived vulnerability towards HIV/AIDS within their occupational and social lives.

3.2 Sample

3.2.1 Unit of analysis

In any research it is imperative to delineate one's unit of analysis (Durrheim, 1999). The unit of analysis that was used during this study was individual health science students from the University of KwaZulu-Natal. The rationale for selecting health science students to make up the sample is manifold. Firstly, there is research documenting that young adults between the ages of 18 to 25 are in the highest risk category of contracting HIV and other sexually transmitted diseases (STDs) (Huszti et al., 2001). The primary reason for this is that many people between these ages, regardless of their cultural background, education or social status, reportedly partake in risky sexual behaviour (Walker et al., 2004). Secondly, the nature of health science students' work is such that they have contact with patients who have contracted HIV. Thirdly, in partial fulfilment of their degrees, health science students perform practical work within Government run health institutes where they are provided with the opportunity to practice and hone their skills as health professionals within their respective fields of practice. The government hospitals in which the health science students are completing the practical element of their training house a high proportion of HIV infected patients (Sidley, 2004; as cited in McLean & Hiles, 2005). Hence, young health science students' appraisal of HIV/AIDS was explored during the course of the study because they fell into a high risk category based in terms of their age and their profession. The study looked at the processes involved in the appraisal and maintenance of their beliefs regarding HIV/AIDS and how this interfaced with the students' perceived vulnerability towards contracting HIV. The extracted information was then used to elicit themes and categories as to the perceptions around HIV infection.

As an independent researcher, a manageable sample of6 health science students form the University of KwaZulu-Natal, Westville campus was interviewed. This sample group was easily

accessible in that the author of the study was a student at the University of KwaZulu-Natal and thus in close contact with the health science students. Non-probabilistic sampling was been deemed as the best possible method of ensuring that the appropriate participants were included in the interviews.

The health science students were sub-divided into four categories, namely physiotherapists, occupational therapists, audiologists and speech therapists. The sample was conveniently selected from students within each faculty for the individual interviews, thus ensuring a fair representative depiction of health science students from each department. The author approached the respective heads of departments and requested, in writing, for access to their students for research purposes (see Appendix 2). It was requested that all the students should fall within the age bracket of between 18 and 29 years of age. The author thought it fitting to request that each participant be in the final year of their degree. The rationale behind this was that they will have had the most practical experience which would bode well for them demonstrating informed opinions about their perceived vulnerability to contracting HIV within their occupational setting. Although sex and ethnic differences were not one of the main focuses of this study, the author appealed for both males and females to take part and for a fair representation of racial groups.

Table 1 Demographic details of participants

Participant Number	**Health Science Category/Field**	**Gender**	**Age**	**Ethnicity**
Participant 1	Occupational Therapist	Female	25	White
Participant 2	Physiotherapist	Female	23	Indian
Participant 3	Occupational Therapist	Female	22	Indian
Participant 4	Audiologist	Male	23	Indian
Participant 5	Audiologist	Male	22	Indian
Participant 6	Speech Therapist	Female	21	Indian

It has been acknowledged that because of the relatively small number of participantsin the sample, the results or opinions elicited cannot be generalised into the population(Durrheim & Wassenaar, 1999). This constraint suggests that the information gathered from the participants is representative only of the individual participants while only possibly being shared by the broader population. Generalisation would only be made should a further probability sampling study be conducted where the sample was increased with more participants. With this in mind, Ulin etal., (2002) suggest that within qualitative research, more importance is placed on insight rather than generalisation where the purpose is to gain more depth into the meaning of human behaviour. Ulin continues in stating that the challenge in achieving this lies in the selectionof participants that will be able to generate the most meaningful data in regards to the research matter.

3.3 Method of Data Collection

Interpretive research aims at extracting and attempting to make sense of emotions, experiences, thoughts and social situations (Durrheim, 1999). Thus, an inductive approach towards data collection was seen as most the appropriate technique because it allows for subjective views to emerge. The study attempted to achieve this through the medium of conducting in-depth, semi-structured individual interviews.

As already mentioned, each of the individual interviews was conducted with health science students from the Westville campus of the University of KwaZulu-Natal. Permission was accessed to utilise the students from the relevant authorities from their specific departments with written documentation (see Appendix 2) as well as meeting with the authorities to explain the value of this research. Once permission was granted for the use of the students, access was gained to the students through attending their classes and requesting for volunteers while explaining the nature of the study. This method proved successful in that students volunteered their time to participate in the interviews. Once the author met with the volunteers and ensured that they were representative of the sample which was intended to be interviewed, a convenient time for the individual students to meet for their interviews was discussed and agreed upon. Such a strategy is recommended by Henning, van Rensburg and Smit (2004).

3.3.1 Individual interviews

Due to this study attempting to extract a better understanding of what informs health science students' perceived vulnerability towards HIV infection, one-on-one in-depth interviews served as a useful tool in gathering such information. The very definition of an individual interview outlines the intention of collecting perceptions of individuals within a specified area of focus (Strydom, Fouché & Delport, 2002). In-depth interviews are aimed at the interviewee and interviewer working together to attain a shared understanding of the topic under review (Ulin et al., 2002). When conducting such interviews, the interviewer requires sensitivity and mental agility. The six interviews that were conducted provided the study with a rich primary source of data that was subsequently analysed. It was the intention of this study to use the information gathered during the interviews to add to the compounding evidence that has been cited in the literature review about other studies focusing on similar elements of research. During the interviews the participants contributed viewpoints through in-depth conversation around specific topics. Through the processes of the interviews, an attempt was made to encourage participants to disclose their real and honest feelings about the issues at hand (Krueger & Casey, 2000; as cited in Strydom, Fouché & Delport).

The interview followed a semi-structured plan (Appendix 3) based on the information gathered from the literature review. The nature of the structure depended on the level of what the participants voluntarily contribute towards the dialogue. It was stipulated by the interviewer that the interview session would maximally last 1 hour but may be shorter depending on their contributions. The interviews were based on the following plan:

1. Introduction and welcome

The students were welcomed to the session and it was stipulated that the interview would last for approximately 45 minutes to an hour. The interviewer thanked the participant for offering their time and told them that their input during the session would be most valuable to the outcome of the study. The interviewer introduced herself and explained that conducting this interview as part of the research is a partial requirement for the fulfilment of qualifying as a clinical psychologist.

2. Explanation

The interviews were aimed at being in depth and semi-structured, therefore there was no intention to guide the participants' thoughts, but rather to give them only a very brief definition of the topic and allow them, to the greatest extent possible, to explore the issues at their own will. It was explained that through the method of these interviews and in conjunction with the research already documented, the study will attempt to elicit the participants' individual perceived vulnerability towards contracting HIV/AIDS. The interview began with asking them about their professions and if they have direct physical contact with their patients. As conversation developed, the interviewer encouraged the participants to think about their daily social and occupational risks in relation to their perceived vulnerability towards contracting HIV. Ulin et al., (2002) suggest that this encourages conversational competence in that the interviewer gives the participants the sense that their opinions and thoughts are valuable and appreciated. As the conversation developed through the session, the interviewer reflected back and probed around pertinent points to encourage further exploration. These are some of the following topics that have been extracted from current literature as possibly being pertinent contributing factors in influencing health science students' perceived vulnerability to contracting HIV:

- Differing perceptions towards the threat of you contracting HIV based on underlying beliefs, attitudes and assumptions
- Differing perceptions of risk in contracting HIV in occupational or social settings
- Attitudes towards needlestick injuries
- Attitudes toward percutaneous infection
- Attitudes and beliefs around multiple sexual partners/risky sexual behaviour and the possible correlation to contracting HIV
- Attitudes or beliefs informing condom usage
- Possible differences between men and women and their sexual practice/sexuality
- Availability of birth control and legalisation of abortion possibly playing a role in sexual practice choices
- Differing attitudes and evaluations towards unwanted pregnancies and contracting HIV or STDs
- Substance abuse possibly playing a role in the transmission of HIV

- Personality type possibly playing a role in vulnerability towards contracting HIV
- Appraisals of the methods used when communicating about HIV/AIDS

The interviewer probed, where appropriate, around the interviewees' thoughts and feelings on the origin, the spread and their personal risk of contracting HIV/AIDS. The interviewer explored these areas with the intention of gaining a broader understanding with regards to the sample of health science students' construction of HIV/AIDS within both their social and occupational settings. The above list was in no way exhaustive and reference was only made to it in an attempt to stimulate conversation with participants. Ideally, the participants suggested their own perceptions and the interviewer did very little guiding of the dialogue.

3. Instructions

Once the participants had a general idea as to the topic that was going to be discussed, the process of what constitutes an in-depth and semi-structured interview was briefly explained as well as what they could expect to happen during the session. This was done with the intention of putting the participant at ease. It was explained that ultimately, the aim of the interview was for the participant to talk openly and freely about their different feelings and thoughts on the abovementioned topic (Strydom, Fouché & Delport, 2002). It was explained that there were no right or wrong answers and that there was no intention to find an answer or conclusion about this topic; a rich conversation of opinions and ideas would be much more beneficial for the nature of this study. Individuals were encouraged to relax and offer any opinions, ideas or thoughts that they deemed as pertinent to the topic. The role of the interviewer was described to the participants, explaining that the interviewer ensures the conversation remains under the umbrella of the relevant research topic and hence, the interviewer guides the conversationaccordingly. The participants were informed that the interview would be tape-recorded for the purpose of transcribing and then eliciting themes that emerged as a result of coding specific points covered during the interview.

Strydom, Fouché & Delport (2002) suggest that the intention of the individual interviews is to collect perceptions of individuals with a specified area of focus. The author allowed the participants to guide the conversation to an extent, keeping in mind the information that has been

offered from the literature review. An exploratory approach was therefore used as a means of understanding the participants' experiences with regards to the topic at hand.

4. Informed consent

Once the essence of the study was explained to the participants, it was ensured that the students gave their written informed consent (see Appendix 1) to take part as a research participant (Henning, van Rensburg & Smit, 2004). The participants receiving informed consent were guaranteed anonymity through the information that was given to them about the study and the nature of the interview prior to the session commencing (as explained above). They were informed that they may withdraw from the process at any time should they feel the need to do so. The students were also notified that the interviews were going to be audio tape-recorded for the purpose of transcribing and analysing the information mentioned during the session. It was explained that the collected information will not be attached to any of the names of the participants and thus, their anonymity will remain intact at all times.

3.4 Method of Data Analysis

In order to ensure design coherence, the analysis of the data must fit within the already mentioned paradigm and research design, namely the interpretive paradigm (Durrheim, 1999). The qualitative technique that was used to analyse the data was in the form of transcribing and coding the recorded dialogue from the six individual interviews. Thematic content analysis was used to explore the themes that commonly emerged from the individual interviews (Patton, 2002; as cited in Odendaal, Malcolm, Savahl & September, 2006). Holsti (1969) and Rist (1994; as cited in Brandt, Dawes, Africa & Swartz, 2004), suggest that thematic content analysis entails the examination of a text for the emergence of specific themes. Although several other themes may emerge, through the implementation of thematic content analysis, the author of the study endeavoured to extract themes relevant to the aim of the study. The remainder of the text acts as a contextual backdrop against which the themes will be understood. Durrheim suggests that within the field of interpretive studies, the researcher should remain as a close as possible to the data, thus ensuring an empathetic understanding of the text. The author attempted to achieve this through ensuring that transcriptions of the texts were done within a short time frame after having conducted the interviews (Henning, van Rensburg & Smit, 2004).

The following delineated steps illustrate the stages of data analysis that were performed by the researcher as recommended by the following authors (Ulin et al., 2002; Terre Blanche & Kelly, 1999):

1. Transcribing

Before any of the actual analysing took place, the dialogue which was recorded during the interviews was transcribed verbatim. This allowed the author to perform thematic content analysis. During the transcription process, notes made during the interviews were inserted into the transcriptions, thus enhancing the qualitative nature of the research. These notes documented additional non-linguistic expressions such as body language, facial expression, silences and laughs. Because this study is attempting to extract the personal perspectives of the individual's perceived vulnerability to HIV/AIDS, it was important to analyse the data as soon as possible after the individual interview sessions were completed. This was done to ensure that the richness of the received information was not lost.

2. Data immersion

Once transcription of the interviews was complete, the second step was to become thoroughly familiar with the information gathered through the transcription (Ulin et al., 2002). The transcriptions and field notes were read over several times with the intention of becoming accustomed to what they entail. Ulin et al., further suggest that one should first read the transcriptions for their content and ascertain whether the interviews have generated the intended information for the study. The researcher attempted to achieve this by maintaining a critical stance while reading through the transcriptions.

3. Theme inducing

Once the reading of the content was complete and there was a thorough understanding of the respective data, an attempt was made to induce themes from the data (Ulin et al., 2002). This was done by looking for the organising principles that seemed to occur throughout the research data. An attempt was made to try and categorise the separate themes from each interview in order to gain the deepest insight achievable. This enabled the author to elicit the pertinent and

specific themes and sub-themes that arose during the analysis. Throughout this process, the aim was to keep the themes and categories as directly related to the study as possible.

4. Code the themes

After the categorising and theme-inducing phase, an attempt was made to code the data (Terre Blanche & Kelly, 1999). This entailed marking off specific sections that aptly fit under the already created themes and categories. All the relevant information about specific topics was coded in the same way as to make for the easy listing of the codes. These sections were then further broken down into more specific themes. The major themes were then clustered back together to give a more holistic impression of this sample of health students' perceived vulnerability towards contracting HIV/AIDS. Once the coding was complete, an attempt was made to interpret the coded themes into a chronological account on the phenomenon that is being researched. A correlation of matching the themes from the separate interviews was then completed.

5. Previously documented research

The themes that were induced from the interviews were then contrasted against the previously documented research recorded in the literature review. A narrative approach (Ulin et al., 2002) was used in that the results and discussion section demonstrates a chronological narrative about the processes involved in informing health science students' appraisal of their perception of risk in contracting HIV. This was done with the hope of adding further insight against existing theory around factors influencing perceived vulnerability towards contracting HIV/AIDS.

3.5 Research Validity

Qualitative research cannot be defined and validated solely in technical terms(Durrheim, 1999). This form of research is more flexible, changeable and fluid in terms of its structure. This can threaten the study's validity. When inquiring about the validity of a qualitative study, the question actually being asked is whether the study is investigating what it originally set out to study (Henning, van Rensburg & Smit, 2004). Validity, in terms of qualitative research is constructed through the researcher producing observations that are believable not only to the researcher but also to the sample subjects and to the eventual audience who will read the study.

3.5.1 Design validity

Durrheim (1999) suggests that research can attain validity if the design of the study is coherent in terms of the purpose of the research, its theoretical paradigm which informs the research, the context within which the research is carried out and the techniques used to collect and analyse the data. If these dimensions of the design have all been incorporated and they fit together with precision and logic, then it is said that the design is valid. The author of this study has endeavoured to achieve this through the above stipulated methodological specifications and thus increasing the validity of the study.

3.5.2 Competency and craftsmanship

Expanding from the above notion of design coherence is the idea of competence and craftsmanship as a researcher (Henning et al, 2004). This suggests that that the researcher must maintain precision throughout the research process through constantly checking for biases or lack of accuracy; critically questioning the procedures carried out, and to converse and disclose actions and results with peers as a review process. This develops the overall validity of the research. The author has attempted to comply with this in as many practical ways as possible.

3.6 Ethics

3.6.1 General ethical principles

The essence of conducting an ethically sound study lies within the attainment of protecting the welfare and rights of the research participants at all times (Durrheim & Wassenaar, 1999). Ethical clearance was attained from the university's ethics committee. The ethical considerations that were taken into account covered the three vital ethical principals that must be maintained throughout the research process. These principles include autonomy, nonmaleficence and beneficence.

To ensure the participants' autonomy, participation in the interviews was based on a voluntary level. Once the participants agreed to volunteer, it was ensured that the students gave their written informed consent (see Appendix 1) to take part as a research participant (Henning, van Rensburg & Smit, 2004). The nature of participants receiving informed consent was guaranteed through the information that was given to them about the study and the nature of the interview

prior to the session commencing. The details of this have already been stipulated in the above sections.

The second principle of nonmaleficence suggests that throughout the process of the study, the subjects will not come to any harm (Durrheim & Wassenaar, 1999). To ensure that the participants did not incur any physical, emotional or social harm, at the end of the interview sessions an inquiry was made as to whether the participant felt any form of violation on their personal part or if there was some additional element they wish to discuss to avoid an injustice taking place. It was reiterated that should they feel at any time during in the interview that they wish to leave because of its content, or for any other reason, they were free to do so. To the best of the author's abilities as a single researcher, an attempt was made to avoid any possible harm coming to the participants.

The final ethical principle that is recommended is that of beneficence (Durrheim & Wassenaar, 1999). An attempt in ensuring that this occurred was made by explaining to participants the broader benefit that this study will have for students like themselves as well as for other people from similar sectors in societies. It was explained that as a result of their participation in the study, the information gathered may contribute to other research regarding perceptions of HIV/AIDS and may subsequently inform future education and prevention programmes. Therefore, they were making a direct contribution towards South Africa's fight against HIV and AIDS. In addition to this dimension of beneficence, the researcher will ensure that a final draft of the research project will be made available to the health science department for their perusal. This will allow for the participants to gain cognisance of their valuable input as part of the final outcome of the study.

3.6.2 Researching sensitive topics

HIV/AIDS is a very pertinent topic within the medical and social realm of South Africa. The subject is embedded within social, cultural and power relations which necessitates sensitivity when dealing with such a topic (Walker et al., 2004). Because people may feel inhibited to talk about their own risk factors such as sexual practices, it is vitally important that participants be reassured as to their anonymity and respect being awarded to them throughout the process. Kelly

(1999) warns that personal experience or opinions expressed when covering sensitive topics need to be handled with the utmost care. In order to ensure that no ethical principles are violated during such disclosure, the facilitator must ensure that the participants are comfortable at all times with the level of exploration and dialogue that is being shared. The interviewer attempted to adhere to this principle throughout the study.

CHAPTER FOUR

Results & Discussion

The aim of this study is to gain cognisance into the sample's understanding of HIV and AIDS through the method of in-depth interviews. The interviews explored individuals' appraisals of HIV and attempted to understand how this has informed their understanding of the spread of the virus and subsequently how this informs their perceived vulnerability to contracting HIV. Interpretive research aims at extracting and attempting to make sense of emotions, experiences, thoughts and social situations (Ulin et al., 2002). In order to understand the fundamental dynamics underpinning this sample of health science students' understanding and perceived vulnerability towards contracting HIV and AIDS, it is important to unpack the thematic content analysis extracted from the participants' transcripts. Four main themes emerged. Firstly, the origins of HIV/AIDS were broadly understood through various psychological and religious ideologies. The participants then discussed their perceived vulnerability towards contracting the virus in terms of their occupational and social settings.

4.1 Psychological Understanding in relation to the Origin of HIV

The way in which the sample of health science students conceptualise the origin of HIV/AIDS plays an informing role in their subsequent appraisal of HIV. This ultimately informs the way in which the participants make sense of their respective feelings of vulnerability towards contracting HIV. Their psychological understanding of HIV in terms of its origin was manifest in three specific sub-themes; namely ambivalence and incomprehensibility, personalisation and denial.

4.1.1 Ambivalence and incomprehensibility

The participants' views as to where HIV originates from were varied. Some participants had no fixed ideas and seemed comfortable with adopting fluctuating theories. This ambivalence in the understanding of where HIV came from manifested in participant 1 who spoke very frankly about the virus.

Participant 1: *"[T]hey haven't actually been able to pinpoint what it looks like...I don't know...I am just very open minded about what is kind of going on and I don't stick to one thing and say ok that is it."*

Giddens (1991) suggests that the layperson has come to realise that even experts have areas of ignorance within their overall fields of knowledge and this undermines the confidence that the layperson places on the experts. Consequently, the health science students generate their own understanding around the concept at hand, in this case, the origin of HIV. The lack of clarity regarding perceptions about the origin of the virus is echoed by another participant who stated that he regarded HIV in its entirety as being too complex an issue to fully understand and that much time is needed to start grasping an understanding of it.

Participant 4: *"I think that on the whole...it is going to take a while to clear up before we can put [HIV] into a bow, and even then it is not going to fit. It is just too complex."*

Interestingly, only participant 1 stated that she believed that the most valid theory of HIV's origin was in the transmission from the simian virus.

Participant 1: *"The theory that I believe is the most likely is the monkey...the transmission from the monkey virus."*

Based on the varied responses from the health science students with regards to their understanding of the origin of HIV, it seems that there are differing opinions shaping their fundamental understandings of the virus. In an attempt to contextualise the abovementioned diverse understandings of HIV against a South African backdrop, these ambivalent responses may be correlated to the contentious and inconsistent approach that South Africa's leadership is demonstrating in their attempt to manage HIV and AIDS. Hassan (2006) suggests that there is an air of AIDS denialism coupled with lack of proper leadership within the South African Government. The author goes on to state that there is a shortage of health care workers in South Africa amidst a lack of proper infrastructure in which to perform health services to the public.

Exacerbating this is South Africa's Minister of Health, Dr. Manto Tshabalala-Msimang, promoting pseudoscience which is in direct conflict to the already sanctioned global management strategies in HIV/AIDS (Abdool et al., 2006; Achmat & Dubula, 2006; Geffen, 2006). Achmat and Dubula go as far as stating that South Africa's health system is in a state of crisis. This unclear, bleak and at times contradictory picture of HIV/AIDS management and leadership in South Africa may have contributed to this sample of health science students' ambivalence towards their understandings of the origin of the virus.

4.1.2 Personalisation

The understanding of HIV not being an issue of significance seemed to also be fed by the distance some participants felt between themselves and the virus. Participant 5 stated that unless something happens to him directly, he does not feel that it affects him. As a result the participant stated that he does not pay much attention to HIV because it is a virus that simply exists and subsequently does not give the concept much thought.

Participant 5: *"So it is like as soon as something happens to you or is affecting you very closely...then like, otherwise you wouldn't really worry about it...so people close to you are not affected, and you think that the only way you will understand the enormity of HIV is probably if you are close to that person and that person has HIV."*

This suggests that personalisation plays a predictive role in the perceived vulnerability that this health science student feels towards HIV infection. The health belief model suggests that for an individual to change their behaviour, they must feel personally threatened or susceptible to the disease and its consequences (Change Theories, 2003). This suggests the views held by participant 5 are congruent with that of the health belief model. However, in accordance to the health belief model, if one does not feel personally threatened and there is no personalisation of the virus, behaviour change is limited.

4.1.3 Denial

Participant 5 spoke about some people in the general population being scared of the virus and, as result, deny any possibility that they may be at risk of contracting the virus. The participant went on to speak about how it may be because of human nature that when one is afraid of something, people choose to ignore it.

Participant 5: *"Maybe somewhere, like deep down inside, they know that maybe they could have [HIV] too, but if I forget about it, then see...I think it is all brought down to denial...I think that it is human nature that if you are scared of anything that you will run away."*

Participant 4 went on to state the following in regards to people denying their risk of possible HIV infection:

Participant 4: *"Denial...it is like someone saying you know what, I hate maths and I can't do this, it is like a bad thing and if I stay away from it you know, maybe it will go away... just thinking that you are just immune to it and that it is not your problem...it is somebody else that you know..."*

The health science students may in fact be employing the process of *disidentification.* White and Mortensen (2003) have documented that through disidentification, health science students may feel more able to cope with other people who have such diseases because they feel they are not at risk of contracting similar illnesses because they are so different or separate from the people they treat clinically. Goodwin et al., (2004) suggest that the process of distancing oneself from something threatening is often done with the intention of distancing the social group (health science students) away from a threatening event or object, such as HIV/AIDS. This would result in the social group enabling themselves to protect their social identity and feel less threatened by the virus, regardless of their possible risk behaviour. Perhaps the health science students are protecting their collective identity by externalising the risks of HIV onto their patients in an attempt to maintain a lower perceived risk of contracting the virus. This may subsequently fulfil White and Mortensen's theory of being able to cope in treating their patients' illnesses because

they themselves do not personally feel at risk to the illness (HIV/AIDS) which they are treating their patients' for.

However, according to the AIDS risk reduction model, the ability to change risky sexual behaviour is only possible if the individual acknowledges and labels their behaviour as high risk (Change Theories, 2003). If the participants are engaging in risky sexual behaviour but not acknowledging it because of denial, they may increase their vulnerability towards contracting HIV while maintaining a perceived lowered sense of vulnerability.

4.2 Religious vulnerability in relation to Origins of HIV/AIDS

Two of the participants went on to root their understanding of the origin of HIV in religious ideologies.

Participant 2: *"I don't actually believe in the monkey thing or the sin, I believe that, well, God has His way of showing us certain things and it's like there are so much of people sleeping with one hundred and one people and they are getting all these STDs and all that so, this is like a way of getting a little bit of order in the world...so now it, it is reinforced with education...my religious background with my education"*

Participant 6 also made reference to the role that religion has played in her understanding on the origin of HIV.

Participant 6: *"Ok, um...it is sort of God's punishment for illicit relationships. And I know it doesn't explain for those innocent children who get it but um, I'm talking around mainly adults"*

Participant 6: *"There is different prophets, I am not sure of the name or uh, at the time of which prophet but...you'll are aware about the prophet Eron and...homosexuality was at its greatest and um...and um, because of that, God had sent a huge um, calamity on ah, like a natural disaster."*

Participant 6: *"[B]asically, in this day and age there is everything. There is everything that we shouldn't be doing we are doing. Having relations outside of marriage, having sex before marriage...everything is here...homosexuality and um...my view point is that it is God's punishment."*

Participant 6: *"And also that any sickness that befalls us it is one oh uh, like a cleansing that God is very merciful at that time so, generally, if there is somebody that is very sick at the time and you tell them to pray for you, generally God answers their prayers, or even for themselves, it is sort of like a cleansing of all their sins, so to speak."*

4.2.1 Punishment

Two themes are beginning to surface in terms of how the health science students have appraised the origins of HIV. Firstly, the religious basis for understanding why HIV exists and, secondly, an evaluative element is beginning to emerge around the concept of HIV. The religious basis seems to suggest that HIV was sent from God in an attempt to bring order into a world where immorality has seeped into people's behaviour, especially sexual behaviour. The religious order spoken about takes on a cleansing and restorative nature.

Participant 6 then made reference to a punitive God that punishes his people for this immoral behaviour. This possibly informs the participants' understanding of HIV through the lens of attitude formation with an evaluative nature around concepts such as sexual relationships, sex before marriage, and gay relationships. Moliner and Tafani (1997) define the construction of attitudes as being a process that is impossible to directly observe due to it being internal to the subject. The aspect of an attitude that is observable is its evaluative nature which is manifested through cognitions, affect and behaviour. The observable evaluative nature of the participants' attitudes around HIV is beginning to emerge. More specifically, this seems to reveal an attitude towards HIV that is coloured by negative connotations towards the virus.

Some of the research participants further reported on how they have come to understand the specific role that religion plays in their understanding of the origin of HIV and AIDS. Participant 6 spoke candidly about how she had rationalised her understanding of HIV as being a test from God. The interviewee spoke of a Muslim female doctor who received a needlestick injury and, due to the uptake of medication, did not contract HIV. She furthered commented on this topic by stating the following:

Participant 6: *"But when you look at somebody like that and you sort of, almost in like a situation like that it would be more uh, God's test...she is so decent and why would, why would something like that happen to her...I think that you have to just accept everything that happens to you and that it is uh, a test from God."*

This statement again makes reference to the evaluative nature of the understanding that may have been constructed within the participant's religious frame of reference. Páez et al., (1991) have found that as a result of the social group distancing themselves from the threat, they conjure up moral ideals about specific risk behaviours with which they do not identify with but which are seen as increasing other peoples' (but not their own) vulnerability towards contracting HIV. This may shed light on why the above quoted interviewee may be unable to understand why some people, especially like herself, a female health professional, would be put at risk of contracting HIV. This supports that the perception held by participant 6 contributes to her lower sense of vulnerability to contracting HIV.

4.2.2 Moral reasoning

A second interviewee also made mention of evaluating HIV in the following statement:

Participant 5: *"[I]t is like saying you have something, you have this bad thing..."*

The response from participant 5 suggests that a form of moral reasoning is taking place. The development of moral reasoning has also been documented in literature and suggests thatit has a relationship to religious beliefs (Richards, 1991). More specifically, Richards goes on to state

that religious criteria are often used as a basis for moral reasoning. Getz (1984; as cited in Richards) suggests that there is often a negative relationship found between some religious beliefs and moral reasoning. Perhaps this sheds more light on the rationale behind some methods employed by the sample of health science students based on their religious beliefs in gaining an understanding on HIV/AIDS. However, it becomes problematic when, as a result, evaluative morals and judgements are created and attached to people living with HIV or AIDS in that discrimination and stigma are perpetuated. Participant 6 spoke about her prejudice towards people with HIV as stemming directly from her religious affiliations:

Participant 6: *"...from a very religious point of view, uh...my initial reaction would be to look down at somebody...but obviously not children because there are a lot of ways of transmission, but I mean like older people, like maybe illicit relationships that they would have...but it is not like I condemn them or anything, it is just that, I mean, there are a lot of ways they could have got it...it is not entirely their fault, especially children."*

The same participant went on to say that:

Participant 6: *"...we look at like babies are born and they are innocent and if they were to die with AIDS, because of their innocence, God doesn't really punish them...so basically they go straight to heaven."*

Participant 6: *"[W]e were always told that it is because [HIV transmission] happened to those people it is their punishment for what they have been...the lives they have lived."*

Several themes begin to emerge from the above statement made by participant 6. Firstly, one can again notice the evaluative nature placed on HIV as a concept in that some people should be blamed or looked down on for having the virus whilst others, such as children, are not at fault for having HIV in that they are still innocent. One can note a prejudice developing which manifests through the means of contracting the virus. Phiri (2004) maintains that the predominant initial

theological stand of the Christian Church was that HIV/AIDS was in fact sent as a punishment from God. This was attached to the sexual nature of the manner in which the majority of HIV infections are transmitted. Because of the Church's emphatic focus on abstinence from sexual relations prior to marriage as well as faithfulness within marriages as its prevention for HIV infection, non-adherence to these laws was viewed as sin. And, since HIV is mainly a sexually acquired disease, it was previously viewed by some as punishment for that sin. Through attributing punishment to HIV, one can see how the stigma around the virus was maintained and promoted.

4.2.3 Blame and the sexual nature of HIV transmission

Some of the participants from this study suggested that the reason why HIV is *looked down* on is because of the sexual nature in which the virus is transmitted. Fault and blame is attributed to people contracting the virus through this medium. Phiri (2004) attributes this rationale to the Church's previously simplistic understanding of HIV and AIDS. He also suggests that for too long, the Church focused on punishment and the wrath of God rather than compassion, forgiveness and mercy. Although this no longer makes up the Church's mandate, as we can see, some of the participants still hold on to it as justification for their understanding and rationale of HIV. This only perpetuates discrimination and stigma around HIV and AIDS.

In understanding this theoretical background, the evaluative nature manifest in the participants' dialogues seems to suggest that people living with HIV are viewed in a negative light and blame is attributed to them. This blame seems to be justified to several of the participants through their religious beliefs about sexual practice and thus allows them to attribute blame to others who do not abide by similar practices. This is manifest in the following extract:

Participant 2: *"I mean, we always...within our religion, we always say be faithful to your partner. Your husband is your God, your wife is your God. That you wouldn't go behind your back and lie to your partner because that is not right. God said you should not lie to your partner. You should be faithful within your relationship; you should abstain from sex until the day you get married when that is the time you should be having sex. I am*

Tamil, Hindu religion. So that is what our religion, even Muslims they say they will not have sex before marriage. Even Christianity says that."

Here, religion seems to be viewed as a form of social capital in that the participant's religion serves as a protective factor in her perceived vulnerability towards HIV infection (Putnam, 1995; as cited in Govender & Petersen, 2004). The practical manifestation of this protective factor is demonstrated by her abiding to the religious norms of sanctioned sexual practice. However, those who do not abide by the same norms and rules are deemed as increasing their vulnerability to contracting the virus. This continuously contributes to the participant attributing blame to others who do not abide by such rules. From the point of view of practising as a health science professional and with the above mentioned processes in mind, one needs to question if this participant, and others with similar viewpoints, have subsequently adopted negative attitudes towards the HIV infected patients and people living with AIDS.

Another participant also had similar views about sexual practices that were informed by her religious beliefs and spoke about the reality for her of staying within those boundaries.

Participant 3: *"...obviously I have had relationships and I have been involved with the opposite sex but...there is a limit that I set myself and in terms of that, then I wouldn't cross those boundaries. I have had the opportunity to make that choice and it is not like that for everyone, like in terms of my religion and culture, like a lot of people don't have choice you know...it's this way or the highway."*

This participant expressed that she still felt a sense of control around her level of vulnerability towards contracting HIV in that, because of the cognitively appraised boundaries that she placed within the existing frame of her religious affiliations, she felt less vulnerable towards contracting the virus. This suggests that she has adopted the principles of the AIDS risk reduction model where she has appraised her lowered sense of vulnerability as being attributed to her individual sense of control over HIV infection. The model states that one must first acknowledge and name one's behaviour as high risk when attempting to curb risky sexual behaviour (Change Theories,

2003). The participant has acknowledged that there is risk involved but she has cognitively set herself limits in an attempt to curb the potential risks involved. Here, she is subscribing to the second and third stages of the AIDS risk reduction model; namely, to make a commitment to reduce high-risk sexual contacts while increasing low-risk encounters and then taking action to fulfil this behaviour. However, curbing vulnerability or risk cannot occur on one level alone and must be assessed at a biological, psychological and social level (Govender & Petersen, 2004). The health belief model also acknowledges that other variables such as demographic, socioeconomic and cultural issues also indirectly contribute to health-related behaviour (Change Theories). This will be further unpacked at a later stage.

4.3 Occupational Vulnerability to HIV Infection

The most prolific rationale given by the participants for the spread of HIV were within the realm of occupational hazards, risky sexual relations and social and economic arenas.

> *Participant 1:* *"[T]he spread of HIV...I just know what I have been told and...like needlestick injuries, sexual relations and drug abuse and things like that."*

These different methods for the transmission of HIV as well as others and how they affect the participants' perceived vulnerability to contracting HIV will be discussed in following section.

4.3.1 Occupational descriptions

Before embarking on the detailing of the participants' opinions in regards to what they suggest would predispose them in feeling vulnerable to contracting HIV, it is important to describe their social and occupational settings. As mentioned previously, this study is attempting to explore the social and occupational arenas that the health science students are exposed to and how their understanding and beliefs about the virus within both these setting have shaped their perceived vulnerability towards contracting HIV. The participants' social arena will be unpacked within the biopsychosocial model where the multiple dimensions of the disease can be taken into account (McLean & Hiles, 2005). The occupational settings will be understood through summarising the information elicited from the participants about their actual occupational setting

and how these settings contribute towards their perceived vulnerability of contracting HIV. This section will document some of the descriptions given by the participants in regards to their occupational setting. Participants were interviewed from four different health science fields, namely occupational therapy, audiology, speech therapy and physiotherapy. Each of the participants was asked to describe their professions from a theoretical and practical application. Below illustrates a summary documenting the prominent points within each discipline.

Occupational therapy was broadly described as employing psychosocial and physical rehabilitation for any individual who cannot function independently in social activities, work, recreation, personal hygiene and self care. It was reported that there is a massive drive to incorporate occupational therapy to be even more involved in the global impact of HIV. This discipline is seen to be very hands-on and involves physical contact with patients. Occupational therapy is also used in the development of income generation projects with communities in an attempt to curb the increased level of unemployment.

The physiotherapy participants were also asked to describe their profession. They defined physiotherapy as rehabilitative in that they have hands-on contact with the entire body and attend to any part of the body that is not functioning well.

The participants studying audiology were interviewed and described their profession as being the study of hearing and sound, practically demonstrated through the testing of individuals' hearing. Their patients' ages reportedly range from neonatal to geriatric. Patient's present with disabilities and diseases and the audiologist cannot escape from having hands-on contact with their patients. Audiologists are also trained in basic speech and language therapy.

The speech therapy students described their major patient load consisting of stroke patients and patients with head injuries who have associated communication disorders. The participants spoke about having to perform oral peripheral examinations which involve hands-on contact where glove usage is optimised.

By listing the above descriptors of the various health science professions, one notes the ascribed to and induced curative medical model. The medical model focuses primarily on the physiological side of healing and places the individual in a sick role. It is important to place the sample within this contextual backdrop and investigate how this may inform their conceptualisation of HIV which ultimately informs their perceived vulnerability towards HIV infection. The information gathered by the participants about their working environment sets the frame for understanding how the health science students appraise their perceivedrisk of contracting HIV within their occupational setting.

4.3.2 Occupational risk

From the abovementioned descriptions of the various disciplines within the field of health science, there are certain commonalities between these different fields of study. All of the health science students are working within the medical field, treating patient's with some form of illness or disability. Their patients range in age and, depending on the health science field, the students work on various areas of the human body. All the health science disciplines seem to access rehabilitative treatment of some form for their patients. Some of the health science students explicitly mentioned their involvement in working with HIV positive patients but it seems plausible to generalise this involvement across the different disciplines in that, according to Sidley (2004; as cited in McLean & Hiles, 2005), the South African government hospitals in which the health science students are completing the practical element of their training house a high proportion of HIV infected patients. All the participants commented on the hands-on nature of their work where they have direct physical contact with the patient. Based on these commonalities and in keeping in accordance with the focus of this study investigating health science students as a group, it seems fair to comment on their perceived vulnerabilities within their occupational setting as health science students, rather than within their separate disciplines.

Firstly, it is important to document that some of the participants have stated that it is in the hospital setting where they are mostly exposed to HIV:

Participant 3: *"Most of my um, contact with HIV is in the media and with my patients..."*

Van Dyk (2001) asserts that health science students are confronted with occupational exposure to HIV infection through contact with their patients. This in itself could lend to the participants feeling vulnerable to contracting the virus. Interestingly, the participants do not seem to directly attribute a heightened sense of risk with working in the hospital environment. In an article documenting health care students who complete their elective work in South Africa, Gilks and Wilkinson (1998) point out that occupationally acquired HIV infection is generally uncommon. Several other factors which will be delineated seem to contribute to their perceived vulnerability towards contracting the virus.

4.3.2.1 Universal precautions

As we shall note through the following quotes from some of the participants, there seems to be a strong link between the levels of risk that the sample of health science students are exposed to and their subsequent feelings of perceived vulnerability to contracting HIV.

Participant 2: *"The thing is when we dealing with HIV patients, is that first of all you think God, and I might get it and then you think gloves! So with us, it is like a major thing where we have to use our gloves because we...and bodies are always in contact all the time and in the hospital setting and we go to a lot of hospital and the settings are not very clean and you know...you can have needlestick injuries anytime because you don't always get the friendly nurses that keep the bed clean and there's no like... urine bags will be left open and fractures are bleeding and you, theses things are...so you know we have to...and it is always being cautious...we have to be cautious in our settings but basically we come to a patient and you cannot take for granted that this patient is not HIV/AIDS positive..."*

The above quote from a participant illustrates the link that is made between the exposure to risk and the role of precautions that the participants say they use to lower their perceived vulnerability towards contracting HIV. When speaking about treating patients who are HIV positive, participant 2 stated the following:

Participant 2: *"Um...it is just our gloves; we make sure we have our lab coats. If it is like TB patients then we use our masks...we are always in contact with the TB patients. Ya...so it is just those things...those precautions. I mean at the end of the day we want to help our patients but we also want to look after our own health at the same time."*

Participant 1 also commented on the precautions she uses when attempting to lower her risk of contracting the virus and states that she feels less threatened by the virus as a result of these precautions:

Participant 1: *"No...no. Not at all. I don't feel vulnerable of contracting AIDS even at my work because of the precautions. I take the full precautions when I go into patients I am aware of it the whole time. And I make sure with my gloves...even if I might have any like wounds I'll make sure...I'm covered. I'll ya, I'm just very careful about cross-contamination as well and like...I'm very, very careful about that. Um...for myself I just...I am just careful of where I place myself like with the patient. Like if there is oozing and blood...I want to be as therapeutic as possible..."*

These above mentioned precautions spoken about by the participants are knownas *universal precautions*. Gilks and Wilkinson (1998) state that although universal precautions do not eliminate the risk of work-related HIV infection in its entirety, when these precautions are used, the risk of contracting the virus is very low compared to other, namely sexually related mechanisms of transmission. Some of these universal precautions include using latex gloves when in contact with items soiled with blood or body fluids (Florida University, n.d.). It is also recommended that gowns, masks and eye protection are to be used when dealing with procedures such as post-mortems where splashing may occur. It is further suggested that if hands are in contact with blood or body fluids, they should be washed immediately and thoroughly. As can be noted by the above quotes from some of the participants, many of these universal precautions are in fact being employed.

This suggests that health science students focus much of their practice on instrumentality which manifests in relying on standardised occupational safety measures to instil a perceived level of control over their risk to HIV infection within their occupational setting. Their work informs the participants to be highly body orientated. These characteristics should be kept in mind as potentially informing their appraisal of HIV and how vulnerable they perceive themselves towards HIV infection.

As previously mentioned, risk has been a difficult concept to define and experts have not found consensus in any one definition (Beck, 1992). Beck purports one definition which suggests that risk emerges when people attempt to deal with hazards and insecurities that have been introduced into their lives through the process of modernisation. Many of these risks stem from previously sanctioned behaviours (Giddens, 1991). One can see that the risk involved in treating patients in a hospital setting (as described above) has been generated from the increased prevalence of HIV infected patients. When understanding risk through an ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Peterson, 2004), one can see that on an individual level, these participants are employing occupational safety procedures in order to manage risk to self in the hospital setting. They subsequently utilise risk reducing behaviour (universal precautions) which allow them to perceive themselves as less vulnerable to contracting the virus in their occupational setting. The many participants that spoke about universal precautions as a perceived protective factor may be referencing universal precautions as another form of social capital. Hence, one can understand the management of risk behaviour at an individual level.

4.3.2.2 Resource shortages and inexperience

Health science students from this sample seem to perceive themselves as less vulnerable to contracting HIV through their occupational setting if they are able to employ the necessary universal precautions. However, Gilks and Wilkinson (1998) state that in developing countries (such as South Africa) it is not always possible to carry out universal precautions because of poor or inadequately resourced health facilities. This, in turn, would potentially increase one's risk of contracting the virus. Interestingly, none of the participants made reference to how they would feel should these universal precautions not be available.

Another area of risk that none of the participants made mention of and which has been documented in literature is that, students in the health science field are not yet technically sound in their area of expertise and may therefore unintentionally expose themselves to infected blood or bodily fluids due to a lack of experience and proficiency (Gilks & Wilkinson, 1998). This also suggests that people are increasingly taking on individual responsibility for risk management while simultaneously shifting the responsibility away from the experts.

4.3.2.3 Individualisation of risk

Some of the participants broadened their appraisal of risk into a conversation including an evaluation of the result of risk taking as well as introducing the notion of limits that one has in controlling the working environment:

Participant 2: *"The fact is we are at risk. Nothing is 100%. I could be wearing two pairs of gloves and treating my patient and then I have a needlestick injury and then what? That is not going to...a needlestick injury is not...can pierce through four glove pairs on your hand and the end of it is I, I must be able to know exactly what am I going to do. I am...need to go for my counseling, I need to take my antiretrovirals...that is the first thing. The thing is that you are at risk everyday. You could walk out into the street and get knocked so I, I look at it in this way...I am helping a patient."*

Participant 3: *"But I don't, I don't focus on my vulnerability towards HIV because, in terms of what I can do to not contract it then I feel that I have done what I can do, you know, in terms of that so...I take what precautions I can take in terms of as far as I can go..."*

This stance suggests that these participants have cognitively thought through their level of occupational risk, what they can do as a health practitioner to minimise this risk, and the steps that need to be taken should they be exposed to HIV. It seems that these participants have acknowledged and accepted the risk within their occupation setting. One can also note from the

above mentioned quotes that the participants themselves are placing the responsibility of risk management on themselves. The personalisation of risk seems to have played a role in their acceptance of a certain level of individual risk involved in the health profession. This illustrates another element of risk known as the individualisation of risk (Beck, 1992). Experts in the form of scientists and technology are no longer able to guarantee control over risk and have thus placed much of the responsibility of risk management in the hands of the individual (Beck; Giddens, 1991), resulting in individuals taking on the responsibility of managing their risk behaviour.

4.3.2.4 White coat stigma

Another arena within the occupational setting that is linked with the previously spoken about universal precautions is the stigma around the utilisation of such precautions. More specifically, several of the participants suggested that when a health care practitioner uses universal precautions, the messages conveyed to the patient are, from the patients' point of view, negative in many regards. The following quotes from various participants explain this concept further:

Participant 1: *"I try not to use gloves if I don't have to and I don't want to like create a barrier and stigmatise more than need to be. But, I am also aware, very aware of um...I am going to be working with this patient and the hospitals are very strict about it and like if they see on the ward and you are not wearing gloves she'll be very like, 'where are your gloves' kind of thing..."*

Participant 3: *"...there is a distinct impression when you wear gloves and you go near a patient and they immediately have an impression of you. You know...so that is what I feel like...it is a lot of patients with the white coat syndrome, you know like the...seeing a white coat gives them the idea that this is a doctor, someone higher than me and so I feel that the gloves makes them go about it in terms of their interaction with and their relations with you. They see you more clinically than they would if they were talking to just another person, you know, someone to share with."*

From this, one can see the social elements that play such a pivotal role in the treatment and management of illnesses, especially HIV and AIDS. The barriers and impressions that the participants quoted seem to be an issue in the utilisation of precautions such as gloves. Some of the participants say that as a result of this, they sometimes take the chance and do not use gloves, thus rendering themselves at higher risk of contracting HIV. Participant 3 gives an illustration of how, in an attempt to reduce stigma around glove usage specifically, health science students can predispose themselves as being more vulnerable to contracting HIV:

Participant 3: *"...there was a guy that came in and we were working with him and his stitches started bleeding and we didn't have gloves on because when we saw him he had no open wounds...yeah...it opened then, so I quickly took the cotton wool and dabbed it up and then after that put my glove on..."*

As a direct result of not wearing her gloves, this health science student increased her vulnerability towards contracting HIV. In concluding comments around this topic of perceived occupational vulnerability among the health science student participants, there seems to be an overall reduction in the perceived threat when certain occupational safety precautions are accessible. This suggests that when a certain amount of control is perceived to be in the hands of the health science student, then their perceived vulnerability to contracting HIV is lowered. This is a clear illustration of how the health science students focus much of their practice on instrumentality as well as relying on objective measures to instil a perceived level of control over their risk to HIV infection. One of the participants summarised this by suggesting the following:

Participant 4: *"Mmm...I think that within like, my studies and occupation like I can control, you can control it more, a lot of things... like as I said, my job, it is controlled, the outside is controlled..."*

This perception of control through universal precautions seems to make some of the participants feel less vulnerable towards contracting the virus. But, as mentioned previously, some of the participants comment in relation to the limitations that some of the precautions have. Some participants seem to have come to a place where they have accepted that some degree of risk to

contracting HIV is inevitable, while others have displaced their complacency on the normalisation of their exposure to HIV:

> *Participant 4:* *"There is a risk but I...I have never really thought about you know what God, I am sacred, you know that I will catch something...no. I think that maybe I have become immune to it. It is so routine for us, it is probably that."*

The numbing effect alluded to by participant 4 occurs as a response to an awareness of a plethora of risks (Giddens, 1991). The above quoted participant seems to be experiencing this effect. It is impossible to attribute one single rationale to all the participants and hence, it is important to take into account all their perceptions involved in shaping their perceived vulnerability towards contracting HIV within their occupational settings. Because of the aims of this study, one needs to gain an understanding into how these participants not only appraise their occupational risk but also their risk within the social arenas of their lives. Gilks and Wilkinson (1998) state that although there is a measurable chance of contracting the virus via occupational hazards, the risk of contracting the virus in this setting is low compared to social modes of transmission. The next section thus moves away from the occupational setting to incorporate the reported social variables that contribute towards the participants' perceived vulnerability to HIV infection.

4.4 Sexual Behaviour

It should be noted that the most prolific social arena through which HIV may be contracted is that of sexual intercourse (Gilks & Wilkinson, 1998; Symon & Wilkinson, 1999; van Dyk, 2001). Despite the ever increasing warnings of HIV and AIDS, multiple sexual partners seem to be an increasing phenomenon among young people in South Africa (Walker et al., 2004). Unprotected sex and multiple sex partners are seen as two of the major contributors to the transmission of HIV (UNAIDS, 2004). For the sake of clarity, Demauriac (n.d.) states that if an individual has sexual intercourse with multiple different partners outside an exclusive and monogamous relationship within a brief period of time, this can be defined as promiscuity or promiscuous behaviour. Several of the participants suggested that they also felt that the most profuse mode of transmission of the virus was in fact via risky sexual behaviour:

Participant 3: *"Mostly I feel that it is the unprotected sex and lots of sexual partners...that is the most strong relationship [for transmission of HIV]."*

Participant 4: *"Well, I think that most people get it by sleeping around, that's what I think. But there is a small percentage that probably like, you know, accidents happen with needles and stuff like that."*

A study conducted by Delany-Maretlwe et al., (2006) in Zimbabwe, documented that as a direct result of a proportional decline in sexual risk behaviour, Zimbabwe has achieved a 23% reduction in HIV prevalence among 17-29 year old males and a 49% reduction among women aged 15-24 years of age. More specifically, there has been a delay in sexual debut, an increase in condom use among females and a decrease in the number of casual sexual partners. Participants 3 and 4 seem to agree with the theory of risky sexual behaviour contributing towards increasing one's vulnerability towards HIV infection.

4.4.1 Immediate gratification

Participant 3 accounted for risky sexual practice through the specific notion of immediate gratification. She spoke about how having sexual intercourse with one's partner when dating is being normalised because of the fast paced nature of current lifestyles. These lifestyles would not allow the time to stop and consider possible consequences of actions. She furthered this by equating early sexual debut with that of fast-food production being immediate, expected and fast.

Participant 3: *"Like nowadays for people to sleep around with their first girlfriend or anyone that they just meet is becoming like the norm and you know it is just, 'I want this or I want it now and you know I am not going to think about whether I have a condom or I am not going to think about the consequences', if I am serious about this person, so the attitude towards all of these issues you know, is like fast forwarded like, oh we want the burger and so I'm just going to go down he road and buy one. So it, it is in everything I think like the lifestyle now like we are fast paced and high stressed."*

As previously mentioned in the study conducted by Delany-Maretlwe et al., (2006), the researchers documented a correlation between delaying sexual debut and other risky sexual behaviours, and a subsequent reduction in Zimbabwe's national HIV infection rates. Participant 3 similarly attributes the immediate gratification demonstrated through early sexual debutas a risk factor that would increase his perceived level of vulnerability in contracting HIV.

4.4.2 Monogamy and trust

In terms of another way in which sexual behaviour informed the participants' perceived vulnerability towards contracting the virus, several of the participants stated that they felt safest when in a monogamous relationship where trust between the respective partners was evident.

Participant 2: *"[I]t is being monogamous in a marriage that is so important...because so many people are maybe not faithful in marriage at the end of the day...and you need to follow through on that because if you trust your partner and uh, and you know that he has been the only person you have been sleeping with and there wouldn't be any uh, thought or doubt in the back of your mind...you know, he could be giving me AIDS or I need to go get an AIDS test because I am feeling insecure about my partner..."*

Participant 2 then reiterates these sentiments on monogamy and trust being protective factors in one's perception of your vulnerability towards contracting HIV:

Participant 2: *"It all depends on the kind of relationship you have with your husband or wife or girlfriend or boyfriend that would determine whether you have a doubt or how far you can trust them, but if you are entering marriage, I think the first thing on your mind should be I'm trusting my partner that we are entering this marriage and that is the way it should be. And I think that nowadays relationships are too flimsical and, you...although we are going out we might be girlfriend and boyfriend but I might see you on Monday and we might have sex or whatever and then on Tuesday I am seeing my other girlfriend and we are having sex on that day."*

One can note from this text that the cognitions around trust and accepting what one's partner says as being true are important factors that influence this participant's perceived vulnerability. Participant 2 goes on to state that when trust is established, there is no need to feel at risk of contracting the virus:

> *Participant 2:* *"[B]ut if I trust him and say you know, I trust you to be honest to me and tell me that I am the only girl that you have been sleeping with or whatever, then there should be no problem with that. It is either abstinence or be faithful...and be cautious when it comes to the hospitals."*

Giddens (1991) speaks about trust and personal relationships. He suggests that "faith in the integrity of another is a prime source of a feeling of integrity and authenticity of the self." (p. 114). Giddens furthers that finding trust in others is a strong psychological need. Personal trust in one another is deemed as indispensable to our social existence and is the only provision for intimacy. Trust is seen as a project that has to be continuously worked on by both individuals and involves the process of mutual self-disclosure to one another. This is deemed as the only way that real intimacy can be achieved.

Hence, the above quoted participant has expressed her psychological and personal need and choice to trust her future husband because that is the only way she views the marriage as potentially being successful. Perhaps she is also alluding to trust providing the basis to their future intimacy together. This interpersonal level of the ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004) suggests that the participant is appraising her risk in relation to the integrity of the relationship between herself and her future behaviour. Integrity in a relationship is validated within marriage which is a public act of mutual commitment. The act of marriage is viewed as a moral act that legitimates sexual relations between both partners. Sexual relations outside this institution is viewed within the religious framework as being immoral and therefore worthy of punishment from God. As a result of this process, she seems to have a lowered perceived vulnerability towards contracting HIV.

4.4.3 Condom usage

Condom use emerged as a theme that contributed towards the sample's understanding of the spread of HIV and which ultimately informs their own understanding of their perceived vulnerability to HIV infection. To paint a contextual background to this theme, a South African based study conducted in August 2004 by Raijmakers and Pretorius (2006), using a sample of students from the Vaal University of Technology found that 64.7% of the student sample reported always using a condom while 28.4% sometimes used condoms and 6.9% reported never using condoms. This suggests that a large number of South Africa's tertiary education students are not using condoms when engaging in sexual intercourse. Participant 2 commented on the following:

Participant 2: *"[Y]ou have to look at the ways of unprotected sex and having too many partners, not using condoms, uh...or just being unsafe or I mean...me as a health professional, I know how you can get AIDS and so what is the point not practicing that when you know you could get it."*

Participant 2 is linking two very specific points in the above text. She is suggesting that as health practitioners they are educated on the risks of transmission of HIV and hence, as a group, all the health science students should subsequently be practicing the prevention techniques that they have been taught. Although this specific participant is cognisant of this, studies conducted in South Africa by Pettifor et al., (2004) and Sarafian (2001), (as cited in Raijmakers & Pretorius, 2006), found that several students still maintained that in using a condom, it demonstrated that one did not trust your partner. The study conducted by Pettifor et al., showed that youth had high knowledge about condom usage but it did not result in the application of this knowledge into the practical behaviour of condom usage. Participants in the aforementioned study defended this by stating that they felt anxious, suspicious, afraid and uncomfortable in regards to condom use. One can begin to see the emergence of how attitudes, belief and social structures around condom use could play a role in the health science student's perceived vulnerability towards contracting HIV. This adheres to the health belief model in acknowledging that behaviour cannot be solely attributed to the results of cognition but rather that demographic, socioeconomic and cultural factors all play a role in shaping behaviour (Change Theories, 2003). The subject of education

playing a role in vulnerability to contracting the virus shall be discussed at greater length during the remainder on the study.

4.4.4 Abstinence

Broadening the dialogue around condom use as a prophylactic, two participants very clearly stated that their perceived vulnerability towards contracting HIV was greatly reduced through practising the only prevention method that they deemed as fail-safe , namely abstinence. One of the participants went on to state that she acknowledges that abstinence is not the easiest method to use. Participant 1 suggests that abstinence can be made possible by again reverting back to one's religion (in her case, Christianity) and enforcing the values that are demonstrated in that religion. In doing this, she suggests that abstinence is attainable. This participant seemed to feel less vulnerable to the possibility of contracting HIV because her choices in sexual behaviour are validated through her religious beliefs.

Participant 1: *"...because I am from a Christian community and I know...a lot of the Christians are very firm about abstinence and AIDS and seem to be more there with the abstaining and the AIDS and also like, at the valley there are a lot of the Christian workers are like you know, I need to enforce Christian value...well, not enforce but just try and um, you know, encourage Christian values and like of abstaining and then you see others who have no values or no beliefs and are just stuck in a bit of a cycle type thing..."*

Still commenting on sexual practices as a means of reducing one's feelings of perceived vulnerability towards contracting HIV, participant 5 spoke about how sexual behaviour is a choice that each individual must make and these choices will differ depending on who it is that is making the choices. He maintains that the choices he makes around his sexual practices are purely informed by the type of person he is, not because of the fear of contracting HIV.

Participant 5: *"I mean just not being infallible like...we have all been brought up with certain morals and values and you believe in that and like, ok...I have*

friends who have tons of girlfriends and they do stuff with their girlfriends, but I know that this is as far as I am prepared to go and nothing else. It is like you don't take any risk or anything. Not because of AIDS but because of yourself as a person. It is like I wouldn't sleep with my girlfriend, not just because I don't want to, but just because of the person that you are."

This statement suggests that the participant feels less threatened by contracting HIV because of intrinsic elements of himself. It seems that in knowing one's boundaries that serve as a function of the person you understand yourself to be, this offers a sense of safety and protection against contracting the virus. Again one can see the internal locus of control that gives this participant a lower perceived vulnerability towards contracting the virus.

4.5 Intrinsic Factors

Schmidt (2002) offers another rationale behind the spread of HIV via sexual transmission. Schmidt purports that a possible reason as to why some people engage in more risky sexual behaviour than others is dependent on their personality type. As previously mentioned, Brofenbrenner (1986; as cited in Govender & Petersen, 2004) speaks about how risk behaviour is understood and influenced through an ecological-systems approach incorporating four broadly defined levels. When looking at personality, one can see how this structure fits into the individual level where the person's cognitions such as beliefs, attitudes and knowledge are assessed. Personality could form one such construct. As mentioned previously, one participant perceived his vulnerability towards contracting HIV as less threatening because of certain intrinsic factors within the person that he is. Participant 4 spoke about his sexual behaviour and the choices he has made. He then went on to state the following:

Participant 4: *"...I am scared but I try to say, you know what, it could happen to me and I need to be aware of it. But somebody else with another personality and another character may not have um, done that. It just depends on the person also."*

Participant 3 also suggested a direct link between personality and the effect this would have on choices made in sexual behaviour:

Participant 3: *"...there are certain personalities more who would lend themselves to being more overly precautious..."*

Here the participants are defining the possible differences in appraisal of risk based on differences in the personality and character of individuals. Participant 1 explicitly stated what type of characteristics she felt would predispose someone to being more vulnerable to contracting HIV:

Participant 1: *"Maybe the more impulsive...the more driven kind of...instant gratification...you know...party hard now and think about it, deal with it tomorrow kind of attitude...and also sort of people with like...I don't know, I mean it's sort of come up a lot...is the arrogance. Sort of the very prideful you know, 'this is not going to affect me, it's just a big ploy, it's not really out there'. Sort of that whole um...you know that sort of almost narcissistic personality that is out there as well. Ya, I think that they would be more vulnerable as well."*

These characteristics were attributed to someone who would be more at risk. Interestingly, participant 3 also agreed that a major determinant of choices made in risk behaviour was intrinsic factors, namely that personality overrides one's cultural, religious or social background that may inform certain choices made in one's sexual behaviour:

Participant 3: *"Um...like I feel in some cases it is a personality thing. Like you either are going to conform in terms of that religion and culture or you are going to like, you know, break the rules. So I feel like it is much more of a personality thing because of the people I have known that have not conformed, it was more a personality thing than in culture because I have known the family, I've known like, the influence and all of those have*

been the same as mine but it is just the person themselves who's not conformed to that cultural norms or set up or religion..."

The employing of this strategy may be an attempt to distance one's own perceived vulnerability in contracting the virus onto a group of people with which one does not identify with, namely people depicted with the above mentioned risky personality traits. Social identity theory (Tesser, 1995) explains that people favour in-groups (the group to which the individual belongs) over out-groups (any group other than then the in-group) in order to maintain or enhance their self-esteem. Out-group homogeneity also occurs when the in-group members generalise the members of the out-group as being more similar to each other than are the members of the in-group. Intrinsic factors of health science students such as being achievement orientated, highly educated, and health orientated do not seem to correlate with the qualities ascribed to people who they perceive as having an increased vulnerability towards HIV, namely, immediate gratification and denialism.

Participant 4 also reiterated his ideas around personality and character playing a role in one's perceived vulnerability towards contracting HIV. This participant was more specific in that he spoke directly about his understanding of extrovert and introvert personality types and the role they play in yielding people as more or less vulnerable to contracting the virus:

Participant 4: *"Um...if you a very, um an extrovert um, but if you are open minded and that is your character, then you will perceive things in an open minded way, but if you are not, if you are a very quiet person, if you are very narrow minded or orthodox person then, very old fashioned in a way. Well, I would think that the open mind would lead to ok, awareness, saying that [HIV] is out there, it can happen to me, this is what, how it can be transmitted...ya, you would understand all of that and you would accept it and like you wouldn't like shy away from it because you are accepting it. And then maybe the introverted and maybe the old school person will think, oh she has got AIDS and she must be a very bad person*

and you know, things like that..."

The participant seems to understand extroverted personality types as being more consciously critical about risk taking behaviour and the reality of HIV transmission whereas the participant's understanding of introverted seems to be steeped in a conservative, non-critically engaging thought processes around HIV transmission.

According to literature, these two personality traits have been viewed differently in relation to how this participant has conceptualised them. More specifically, Schmidt (2002) documented results of a study that was conducted with the intention of ascertaining the possible link between the personality trait of extroversion and the engagement in risky sexual behaviour. After analysing samples from 58 cultures within 52 countries, Schmitt concluded that this theoretical link may be true for people from South America, Western and Eastern Europe, the Middle East and Oceania. But, in African and East Asian countries, extraversion was unrelated to sexually promiscuous behaviour. The idea of personality type playing a relational role in promiscuous behaviour was thus not proven to have a direct link to risky sexual behaviour in South Africa. However, what is pertinent to this study is the already mentioned sample of health science students' perceptions around the possible links between these two variables and how it may inform their own perceived vulnerability towards contracting the virus.

4.6 Race and Culture

When analysing the impact that race and culture have on risk behaviour and ultimate perceived vulnerability towards HIV infection, one is focussing on the community and societal level within the ecological-systems approach towards risk (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004). In terms of the community level, we shall look at the social location of specific cultures and how this facilitates vulnerability to risk. The societal level will look at cultural value systems as well as the possible inequalities and power imbalances that may exist in society and subsequently predispose some groups to feeling more or less vulnerable to the risk of contracting HIV.

4.6.1 Differing perceptions in vulnerability towards HIV infection between races

As mentioned in the previous section, social psychology theory provides rationale to attributing risk to other groups with which one does not identify with (Tesser, 1995). These are important constructs to use when critically analysing the participants' responses to risk and their subsequent perceived vulnerability towards feeling at risk of contracting HIV. One participant explicitly stated that she felt that the White population is not acknowledging their risk or vulnerability towards HIV:

> *Participant 1:* *"With the White to White grouping, I think that a lot of them don't think that they are at risk [of contracting HIV]. I think they think that they are living in this bubble and that they are not going to be affected...that they can't be affected...that it's kind of like, this Black thing...you know..."*

Theory does tell us that HIV has historically been documented as a poor, Black disease mostly affecting those who identify themselves with an ethnicity other than White (Davidson, 2001). The health belief model also suggests that health-related behaviour is deeply embedded in culture (Change Theories, 2003). Participant 1 seems to agree with this statement and furthers the theory in suggesting that, if people dissociate themselves from a group of people they deem as being at risk, such people may inadvertently feel less vulnerable to contracting the virus. Through the broader lens of social psychology, one can explain this concept from the previously mentioned theoretical viewpoint of social identity theory (Tesser, 1995). This theory explains that people favour in-groups over out-groups in an attempt to maintain or enhance their self-esteem. The comment mentioned above by participant 1 may in fact be a practical example of how this occurs. However, it is important to remember the already documented statement by Davidson about HIV being viewed historically as having it's highest prevalence rates among Black communities and this may in fact be the informing process involved in the maintenance of the participants' viewpoints of the role that culture and race have in the spread of HIV and how this ultimately affects their own perceived vulnerability towards contracting the virus. These two possible theoretical explanations are unpacked further throughout the remainder of the following section.

4.6.2 African men

Keeping social identity theory in mind (Tesser, 1995), it is interesting to note that several participants felt that the role of African men played a significant function in the perpetuation of the spread of HIV and AIDS. Various participants were recorded stating similar opinions to the following:

Participant 4: *"...not to generalise but generally, um, in some cultures like the African culture they, it's ok for them to have more than one partner and things like that so I think that in a situation like that... it is their culture."*

When commenting on African men, participant 1 reported the following:

Participant 1: *"...knowing that the men, it is quite an important thing to be virile and to have many partners... and it is the thing of pride, that it is a thing to be proud of..."*

Nadiaye (2000; as cited in Fourie, 2003), states that in many African cultures, a sign of a man's virility is to have multiple sexual partners. This may justify the above participants' comments. But, one can also see that from a societal level within the ecological-systems approach to risk (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004), that there are inequalities and power imbalances that are beginning to emerge between different societal acceptances of expressions of sexuality between the genders. But, this could alternatively be an attribution of a threatening event (namely vulnerability to HIV transmission) onto an out-group with the intention of enhancing the in-group's (health science students) self-esteem and thus rendering the participants feeling less threatened to contracting HIV. Páez et al., (1991) have found that as a result of a social group distancing themselves from the threat, they conjure up moral ideals about specific risk behaviours with which they do not identify with but which are seen as increasing other peoples' (but not their own) vulnerability towards contracting HIV. Interestingly, none of the individual's who made up the sample were African men. Social psychology theory also speaks about the out-group homogeneity effect where the perception occurs that out-group members are more similar to each other than in-group members are to each other (Tesser, 1995).

To counter these above mentioned theories, participant 6 states that one cannot ascribe blame to one specific culture but that all cultures are flawed to some extent.

Participant 6: *"So it is not specific to the African culture, there are other uh, I mean in Indians, no one is perfect. There is no group that is doing things the right way."*

Any of the above mentioned factors could play a role in how the group of health science students are possibly attempting to protect their self-esteem. But, one cannot solely attribute this rationale to their cognitions, beliefs and attitudes around perceived vulnerability to HIV infection because of documented research in the above mentioned literature concerning these issues. Social issues such as gender dynamics influencing the perceived vulnerability to contracting HIV will be documented in more detail at a later stage (see section).

4.6.3 Culture and contraception

Shifting focus back to the role that the participants attributed to culture as a determinant in their perceived vulnerability towards contracting HIV, the notion of contraception and the responsibilities around it seems to be highly correlated to specific cultural nuances. When interviewing one of the female Indian participants and talking around the issue of contraception, she reported on the following:

Participant 3: *"That's also a cultural issue...like we could never ask a person to wear a condom...contraception would be my responsibility...I would naturally, just assume that I would be the one taking the responsibility like in a married situation...it's ok, there are some things I feel like I can't change the system, yeah...I don't feel like even trying to be quite honest. But accept it that much..."*

The acceptance of this behaviour comes across very strongly from this participant. One can see how deeply embedded some cultural practices are and as a result, individuals accept them. This participant went on to state that as a married woman, one would never question your husband's

fidelity and that the woman would accept that there is a high probability that one's husband would enter into extra marital relationships. The participant also said that because of cultural norms, the woman would not accuse her husband of an affair if she suspected his infidelity unless she had factual evidence. This resulted in the participant saying that she would try and shut out the thoughts about her being at risk of contracting the virus as a result of this acceptance of her cultural norms. Gilmore and Somerville (1994; as cited in White & Mortensen, 2003) suggest that when faced with illnesses that are threatening or fatal, or for which there is no cure, individuals and society use the coping mechanism of denial and displacement. Even though this participant is from an educated background in health and has been faced with a barrage of information on HIV/AIDS due to her chosen profession, she still succumbs to the cultural nuances with which she abides by. Consequentially, this participant is then able to perceive her risk of HIV infection as low.

4.6.4 Protective parenting style

Participant 4 spoke around Indian families sheltering their children and how this negatively impacts the child's ability to cope with threatening environments when they are outside of the protection of their family.

Participant 4: *"Yeah, we are too, we are too protected...especially Indian families. If you are more sheltered, I feel, like if your parents protect you more, then, you are not exposed so much to the outside world and, and then number one, you lack that certain understanding because you are not exposed to it, you are unaware of the things that are happening around you. And two, when you are finally thrown into it, you don't want to face it or you think maybe agh, you know, somebody will always be there to bail me out or there is something."*

Participant 4 gave a personal account of how his life has been very sheltered and as a result, it took his professional capacity as health science students to make him realise that he was at risk of becoming infected with HIV within both his social and occupational settings, and he was the only person who could be responsible for his safe keeping:

Participant 4: *"...when you are little, you are living with your parents and you are sheltered. And when you are little everything...I mean you know, you think that nothing can get you but as you grow older you are exposed to more...you begin to realise, you know what...big bad world out there...because you know what, there is this big bad thing called HIV and it is, I mean, you know, it is there. So...you just have to get with it..."*

Participant 4: *"I always used to think, agh, my parents are going to protect me, my father will, you know...and then it just hits you, well it hit me bang, you know what, I am at risk here and that is it. It could be me one day. So I think that that is why it is just the way that people think...if you think it is not going to be me, that's how you think..."*

This participant suggests that it is through his acknowledging and subsequently breaking free from a sheltered lifestyle that he is truly able to realise and acknowledge his vulnerability to contracting HIV.

Participant 4 suggests that there a two implications in relation to over protecting and sheltering one's children from the realities of the world. Firstly, the child will have less resources and knowledge about the happenings in the world because of a lack of exposure and secondly, when faced with a potentially threatening situation, the individual will assume that the responsibility will be taken up by another person. The theory of self-efficacy entails an individual's belief or expectation that they can master a situation and bring about the desired change (Bandura, 1982; as cited in Corey, 2001). This participant thus attributes an increase in perceived vulnerability to young people who have possibly been too sheltered and subsequently have a lowered sense of self-efficacy, in that they will feel disempowered to take responsibility for their own actions and gain a sense of control in the direction their life takes. Perhaps self-efficacy has a direct relational impact on one's perceived vulnerability in contracting HIV. And it is thanks to his professional training in health science that he has come to take responsible for himself. This concept shall be discussed further in the next section that addresses youth as a possible contributing factor in playing a role in one's perceptions of vulnerability to contracting HIV.

4.7 Youthfulness

The abovementioned suggestion of individuals having a sense of control and responsibility over the outcomes in their lives was spoken about in several of the interviews conducted with the health science students. Before unpacking this concept, it is important to look at existing theory documenting risk of contracting HIV. Research suggests that young adults between the ages of 18 to 25 are in the highest risk category of contracting HIV and other sexually transmitted diseases (STDs) (Huszti et al., 2001). The primary reason for this is that many people between these ages, regardless of their cultural background, education or social status, reportedly partake in risk behaviour (Walker et al, 2004). The sample of health science students used for this study fall into this risk category. Participant 1 was not far off the aforementioned theory when talking about who she viewed as being at highest risk of contracting HIV, she stated the following:

Participant 1: *"...I wouldn't include all the old Gogos and the Baba Mkhulus unless something...happens like rape or something like that where it does happen and, um...actually below that I'd say everyone, but more significantly your 20's to 30's, your working class."*

The same participant went on to give reason for why this occurs and includes younger teenagers into the risk category:

Participant 1: *"Because of the lifestyle...the...having a lot of partners and um...sort of late teenagers, I'd even make it younger now because it seems that a lot of younger teenagers ah...children are having like, sexual relationships and so like extending from like teenagers through."*

Despite the ever increasing warnings of HIV and AIDS, multiple sexual partners seem to be an increasing phenomenon among young people in South Africa (Walker et al., 2004). Unprotected sex and multiple sex partners are seen as two of the major contributors to the transmission of HIV (UNAIDS, 2004). Some of the participants entered into lengthy explanations as to why they think that young people are entering into risky sexual behaviour. What was also demonstrated by some of the participants was that they no longer identified themselves as youths and thus felt less

threatened by contracting HIV because of their comparative maturity. This may be due to their respective degrees that they are about to attain and that they deem this as excluding them from the category of youth.

4.7.1 Peer pressure and a lack of adult guidance

Participant 2 spoke about peer pressure being a push factor in the increasing number of young people entering into sexual relationships earlier on in their lives. More specifically, this participant spoke about boyfriends or girlfriends pressuring their partners to engage in sexual relationships at a young age. The participant went on to state that she identifies herself as being older and more mature and that she values good advice and warnings around sex and personally feels less vulnerable to HIV infection due to the fact that she would not engage in risky sexual behaviour. However, the same participant suggests that younger people do not seem to heed the same advice as she has, thus rendering them at risk of contracting HIV.

Participant 2: *"I think that at my age, I'm 23 now, you are more mature, you are more likely to believe exactly what has been said, that you should do exactly as they say, as in the precautions, the warning signs and everything. But when it comes to the younger generation, they are like oh...sex is everything now and you know we should just try this and they say we should try everything once and..."*

The role of guidance that participant 2 spoke about was a theme picked up by other participants in that they advocated that children need to be given guidance while growing up and as a result, a protective factor is generated against them falling prey to risky sexual behaviour and ultimately contracting HIV. This is also known as *modeling*. Social-learning theorists believe that children will model both negative and positive behaviour that is displayed to them, such as from their parents, and will duplicate this behaviour (Bandura, 1982; as cited in Cole & Cole, 2001). Participant 1 goes on to suggest that positive influences need to be displayed to youth in an attempt for them to model adaptive and safer behaviour.

Participant 1: *"I think that a lot people are not given the guidance from their parents that they should at this kind of age, you know when they are going out of school...coming into varsity and um being susceptible to the varsity culture um and going into relationships and not being advised or guided through the process of this relationship... 'cos like everything inside of you wants to go with the whole like, let's get to bed [giggle] and that's the great part of it...I've got freedom, I've got you know...we can do this...I am away from home and um...or I am at varsity so there are plenty of places at varsity so um, I think that a lot of it is that even that they may be lacking the wisdom, it is also the guidance from the parents..."*

Participant 1 demonstrated personal identification to the enticing freedom of university life that also comes with risks. These risks would ultimately increase her perceived vulnerability towards HIV infection hence she reinforced the vital importance of adult guidance or modeling. The participant went on to say that a possible reason as to why parents were not available or no longer able to guide their children in such a manner was because of the breakdown in family structures when parents get divorced or when parents are too busy with their own careers. Participant 6 spoke about how there has been a shift in the importance of the family or parents as having a shaping role in the decisions that their children make, implicating a breakdown in the previous protective factors that existed within the family structures.

Participant 6: *"...it is like also your social group and your peers and 'cos, I guess the youth today don't really consider their family and that much or anything when they take decisions and so they spend most of their times at campus and at schools and the most influential people in their lives should be their parents but it isn't, it is their friends."*

4.7.2 Perceived invincibility

A final explanation given by some of the participants as to the role that being young could play in increasing one's vulnerability towards contracting HIV was that of perceived invincibility.

"Youth is seen as a time of play, adventure, and fun, before the responsibilities of adult life prevail...youthful irresponsibility cuts across all sectors in society; rich and poor, Black and White" (Walker et al., 2004, p. 33). If this is the case, young South Africans may partake in risky behaviour under the guise of a false sense of security that because they are young, they are not susceptible to infectious diseases such as HIV. HIV transmission due to risky sexual behaviour is viewed within a frame of multiple contributing factors. One such contributing factor that has been cited by Walker et al., is that it may be as a direct result of being young that individuals do not perceive themselves at risk of contracting HIV/AIDS. Young people are increasingly known for believing to be impervious to harm and thus partake in risky behaviour such as a sexually promiscuous lifestyle. Some of the participants reiterate this theory when they were quoted as saying the following:

Participant 4: *"...I think it was a fight between wanting to be completely independent and I think it was also the age that we are at, the age that I am at, and that time was when I felt I could do anything and you know...kind of invincible..."*

Participant 5 went into more detail about his personal sense of feeling invincible in that he could be exposed to anything and recover from it:

Participant 5: *"...I don't know, it is like ok...I do have this uh, invincible feeling about me and I can go through almost anything and come out alright again...I mean like, I don't know...um...I don't know, it is just the way I feel. Like, like um, there is something greater in me saying that I am going to be fine, I can walk though anything and I know I am going to be fine. I, I mean why do I have to fear about anything..."*

Participant 5: *"I don't know, it is like, like they say, I feel invincible. And, I don't worry about what you are saying or if I believe that this is how something should be, then it is like either I am going to change it or to hell with it."*

These statements made by participant 5 give a practical example of how young health science students from this sample can feel that they are invincible and not at risk of harm. Rationale for this invincibility may be partly accounted for by the fact that this participant perceives himself as educated, particularly within the field of health. Being achievement orientated and on the brink of attaining a four year degree may also contribute towards this feeling of invincibility. A study conducted by the Reproductive Health Research Unit at the University of Witwatersrand, found that although a sample of South African youths, aged 17 to 25 years, had acknowledged HIV/AIDS as being the biggest problem facing them, the vast majority of the sample of youths that were engaging in risky sexual activity (multiple sex partners and inconsistent condom use) did not think that they were at personal risk of contracting HIV (Raijmakers & Pretorius, 2006). This study, although not giving rationale as to why the students did not feel at risk, suggests that there are many people with a similar appraisal of their perceived vulnerability to contracting HIV as being lessened as a result of having a sense of invincibility when they are young.

Some of the participants from this study seem to have adopted similar thoughts around their perceived vulnerability towards contracting the virus. But, one cannot solely attribute and appraise risk from only an individual level within the ecological-systems approach but rather include the interpersonal, community and societal levels as well (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004). However, the health belief model reiterates that on an individual level, one needs to feel personally threatened or susceptible to the disease for any behaviour change to occur (Change Theories, 2003).

4.8 Substance Abuse

The community and societal levels in the ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004) can play a predictive role in the potential for risk exposure. Such a risk has been identified in drug taking and further associated risk taking behaviour. Furthermore, it has been suggested that there may be a correlation between risky sexual behaviour and drug use (Lindell, 2002). The Kaiser Family Foundation recently completed a study showing that young adults between the ages of 15 to 24 are more likely to engage in sexual intercourse if they have consumed drugs or alcohol. It has been documented that when alcohol or drugs are ingested, the individual's judgement is impaired resulting in the engagement of risky

behaviour such as casual, unprotected sex with multiple partners. The study showed that, on average, after consuming either alcohol or drugs, only 22% of young adults wore condoms during intercourse compared to that of 65% using condoms when having not consumed any substances. According to some of the participants, many youths do fall prey to substance abuse. Participant 6 was recorded in saying that:

Participant 6: *"...I think that our youth today are very tempted by a lot because there is a lot out there that is tempting and ya, 'cos I think that uh...and also I think a lot of drugs and uh, needles and you know, sharing things like that..."*

4.8.1 A drug-taking university culture

The previously quoted participant is asserting that youths are faced with an increasing availability and access to illicit drugs. Participant 1 also acknowledged that young people are exposed to drug purchasing opportunities and that this is very prevalent in the University setting. She goes on to say that there seems to be an expectant culture that has emerged where drug experimentation is normalised. Participant 1 also suggests that there is a strong link between drug intake and subsequent risky sexual behaviour:

Participant 1: *"...the 'varsity culture and um...like when you go to 'varsity it is almost expected that you'll drink, that you'll try drugs, that you'll party hard and that you will sleep around. It almost ties in to, under...like an unwritten thing of the expectation of a 'varsity student, of a 'varsity culture. And so maybe that is also part of, maybe they feel also like they...there is safety in that clause...that unwritten little thing in their culture that this is time to experiment...this is what, you come to 'varsity and you try these things out, it's ok. Um...and not really thinking about the consequences afterwards..."*

From the abovementioned quotes, one can see how risk is often derived from previously sanctioned behaviours (Giddens, 1991), such as attending university where previously there was

no intention of exposing individuals to the risk of drugs. Participant 1 speaks about the normalisation of drug experimentation at university and hence increasing risk. One can also see the links between the comments quoted by this participant and how it ties in with the theory in the above section on how being young is seen as a risk factor for some of the participants in heightening their perceived vulnerability towards contracting HIV. The same participant went on to clearly reference the cyclical nature that risky behaviour can potentially take on

Participant 1: *"With like at varsity, a lot of the um...the...guys drank, and girls drank a lot and um...well huge amounts [giggle] and um...and then you would end up somewhere and then you would end up in bed and um...like your logic doesn't kick in like oh, 'we need a condom' and it's just like instincts are like oh, 'it's just one time' and then ya...it happens and there is no condom and there is no protection or anything so they are not prepared and um...and then the next time they think ah, 'but next time I'll be prepared' and then the next time comes and they'll be like oh, 'it won't happen again'. And then there doesn't seem to be learning from their mistakes or a pattern of prevention."*

4.8.2 Drugs altering individuals' inhibitions

Participant 2 specifically made reference to how an individual's state of mind is altered when under the influence of a substance and the consequences that may occur as a result of this:

Participant 2: *"You know your, your whole personality changes in a couple of minutes after you taking drugs and alcohol and all of that...and then you are so willing to do other things because you are in a different state of mind in the end."*

The influence of substance abuse as an un-inhibiter has also been cited as a possible reason for the participation in risky sexual behaviour (Lindell, 2002), which subsequently leads to an increased risk of contracting HIV. Lindell documented that students often use such substances to loosen up and become more social. Participant 2 creates the link between substance abuse and

having disrespect for oneself and disregard for one's health. As a result a result of this, the participant suggests that others will adopt a similar view of such an individual and subsequently treat them in that manner:

Participant 2: *"I mean, you have to if you don't respect yourself, how can you expect anybody to respect you. Because you are telling people these stories and people are looking at you so low, do you not worry about you know, what people are saying behind your back and...it is kinda like you know, you don't care about yourself so why should we care about you? It is basically that kind of mentality.*

One can note that the participants attribute more vulnerability towards contracting HIV to individuals who partake in substance abuse because it is deemed to lead to the engagement in a cyclical form of risky sexual behaviour, such as entering into sexual relationships when in an altered state of mind and a reduction in condom usage. The participants attributed less risk towards themselves when acknowledging that they do not identify with this perceived high risk group. One should remember that these participants are coming from a medical background because of their respective training in health science. They may subsequentlyhave a clearer conceptual understanding of the impact that both medicating and illicit drugs can have on an individual.

4.9 Gender Differences

When interviewing the participants about what other factors played a role in informing their perceived vulnerability towards contracting HIV, a strong link was made with gender playing a determining role. Although participants had some differing views, many of them agreed that the difference in accepted or condoned sexual practices between men and women predisposed some people, namely women as being more at risk of contracting the virus. The societal level of the ecological-systems approach to risk (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004) explains these gender differences well. From a cultural perspective, there may be existing value systems in place that perpetuate inequalities and power imbalances within the specific society.

4.9.1 Men perceived as highly sexualised

Participant 1: *"...and as for the spread, I believe that it is, it is a hugely social thing and um like it is almost like showing our social like the, the parts of society like where there are men like going off into areas where they are sleeping with many woman and they are bringing [HIV] back and as if the spread just doesn't seem to be controlled. [Women] are not assertive enough to know that you know, their husbands are not going to listen or there are consequences to that."*

It is clear that this participant attributes much of the blame in the spread of HIV to men and, as a consequence, renders women as more vulnerable to contracting HIV. Literature informs us that sexual relationships are enmeshed in the unequal distribution of power between the two genders (Fourie, 2003). In Southern Africa, stereotypical gender roles have contributed in placing women at greater risk of contracting HIV. As previously mentioned, Nadiaye (2000; as cited in Fourie), states that in many African cultures, a sign of a man's virility is to have multiple sexual partners. Women are subsequently often at risk of contracting HIV and other STDs as a result of their polygamous husbands or partners engaging in high risk sexual behaviour. Hence, it is understandable for the above quoted participant to make such a link between the differences in accepted sexual practices as contributing towards the increased vulnerability of women.

In accordance to a global study that was conducted, it does seem that men desire to have more sexual relationships than do women (Vedantam, 2003). Research suggests that a possible reason behind this generalisation about men is that perhaps these sexual urges are hardwired into the genetic make up of men more so than women. Because sexual desire cannot be traced from a tangible fossil, evolutionists and social scientists have had to combine their resources in order to determine if any truth lies in this statement (Demauriac, n.d.). However, Vedantam states that there is little controversy that evolution has played some role in shaping human behaviour. It has been documented that these differences in men and women may have been fashioned within the hunter-gatherer societies. It is thought that men sought sexual variety as a means of enhancing their chances of passing on their genes while women who managed to keep their mate increased

their chances of raising their children within a family setting, thus each sex fulfils this suggested innate goal.

Hollway (1989) further explores the possibility of biological or *real* differences between men and women, separate from "*artefactual* sex differences" that are mediated by the social world (p. 103). She looks at the biological differences between the sexes as possibly providing an explanation as to why the stereotyping of men and women is so difficult to change. But, this inherent or biological justification behind promiscuous behaviour is also viewed by some as an excuse for the setting and normalising of double standards in a male dominated society. Women's sexuality is thus controlled, dictated and shaped by men, leading to implications of power and status. This argument is far from drawing to any form of a conclusion.

4.9.2 Society sanctions sexual norms

Demauriac (n.d.) suggests that it seems that societal views dictate as to what sexual behaviour is acceptable from men and from women. There are culturally induced differing notions of acceptable sexual behaviour for men and women. Demauriac furthers that men are generally given greater permission to dapple in a promiscuous lifestyle while women are chastised for such behaviour.

Participant 3: *"...in terms of the gender there are a lot of factors that come into play there in the different cultures like the role of the man and the role of women, being able to say no to a man who is offering sex...there is a lot of those dynamics in relationships you know, even pertaining to sexual relationships that I feel there are gender differences there that would obviously predispose a woman more in terms of that."*

This participant is suggesting, much like Demauriac (n.d.), that there are differing standards set out for the sexual practices and expectations of men and women, resulting in women being potentially more vulnerable to HIV infection than men. Participant 3 goes to talk about the different ways young men and women would be perceived for having multiple sex partners:

Participant 3: *"...even among young boys, they would see me as slutty or...even if I had more than three boyfriends then now I am considered, you know... [for] guys it is not an issue...it is just a big gender thing for us. Even in the family, there is much more emphasis, much more importance is given to men."*

One notes how participant 3 personally identifies with the potential stigma attached to certain sexual behaviour. She alludes to the inequality of greater importance bestowed to men. From the cultural and structuralist perspectives within the societal level of the ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004), one can see the cultural value systems as well as the power and equality imbalances that this participant feels ultimately impact her perceived vulnerability towards contracting HIV.

To substantiate this, Walker et al., (2004) states that South African males are thought, in general to expect sexual intercourse after seven days of a relationship commencing while females remain in relationships for more than a month before they expect to have sexual intercourse. The above quoted participant reveals that she would personally be looked on in a negative light should she be in relationship with several partners. Perhaps this suggests that because of the potential of this happening and her acquiring a tarnished name, she would shy away from such sexual behaviour and this would result in her feeling less threatened by possible HIV infection as a result of potential increased risky sexual behaviour.

Participant 3 then begins to give reasons as to why the equality and power imbalances exist and allow male more leeway in terms of having more sexual partners than women.

Participant 3: *"...a man is perceived as higher, more stronger and a woman is more docile. Like for example, in our culture as well, men is seen as more, although we are equal in our religion...men are more culturally more higher than women. Like, I could never ask my future partner to take an HIV test, my future marriage partner. Because that would be like an insult to his character because I assume that, I should assume that he has*

not had a sexual partner before..."

From this statement, one can see how pervading the previously discussed cultural and religious influences manifest in the lives of these participants, and that these truths supersede gender inequalities. Hence, some of the participants may render themselves having a heightened risk of contracting HIV as a result of such strong cultural and religious truths.

4.9.3 Negotiation of sexual practices

When commenting on the negotiating of sexual practices between men and women, Mboi (1996; as cited in Fourie, 2003) suggests that in general; knowledge, pleasure, rights and initiative belong to men while innocence, acceptance and duty are seen to be normal for women. This finding seems to ring true for the above quoted participant 3. In extrapolating her perceived vulnerability to contracting HIV, it seems that because of the hierarchical structure between men and women and the implication of such a structure, women again would deem themselves at higher risk of contracting the virus by virtue of their sex.

Another arena in which women are disempowered and rendered more vulnerable towards becoming infected with HIV is within the negotiating of contraception use within a sexual relationship. Beck (1992) states that any form of risk is structured through inequalities such as class and position. In this case, women are often viewed as unequal to men in terms of sexual practices and thus the burden of contraception falls upon them.

Participant 1: *"...I know from chatting to some African ladies, um...the African men are very suspicious of the condom and they don't want to use it because it is a, like a White man's invention. It is there to stop them from having children and children are what they want...there are a lot of reasons why people won't use condoms..."*

When interviewing one of the female Indian participants and talking around the issue of contraception, she reported on the following:

Participant 3: *"That's also a cultural issue...like we could never ask a person to wear a condom...contraception would be my responsibility...I would naturally, just assume that I would be the one taking the responsibility like in a married situation...it's ok, there are some things I feel like I can't change the system, yeah...I don't feel like even trying to be quite honest. But accept it that much..."*

"Women are culturally disempowered to negotiate sexual intercourse with their male partners" (Fourie, 2003, p. 116). Sarafian (2000; as cited in Raijmakers & Pretorius, 2006) conducted a study in Zambia which attributed the inconsistent condom usage between sexual partners to the lack of negotiating power held by women in these setting. Ultimately, this rendered women as more vulnerable to contracting HIV while preventing them from compelling men to use condoms during sexual intercourse. It is often cited in literature that "women are socially subordinate – they have very little, if any say in whether protection can or should be used during intercourse" (O'Sullivan, 2000; as cited in Fourie, 2003, p. 116). This seems to shape some of the participants' understanding as to what informs their perceived vulnerability towards possibly contracting HIV. More specifically, the female participants identified with an increased perceived vulnerability to HIV infection, attributing this vulnerability to them being women.

Conversely, some participants suggested that in the acting out of promiscuous sexual behaviour, there are no differences between men and women and thus do not take cognisance of the above documented perceived differences in social allowances and expectations placed on men and women's sexual behaviours. Participant 2 stated the following:

Participant 2: *"I think that both men and women are equally uh...uh...uh...responsible because nowadays, it is not so much of men going and having affairs but it is also the same. Now in, in...recent times it is also the fact that women are having a lot of affairs."*

Through the modernisation of relationship practices, this participant attributes equal blame to men and women in having multiple sex partners which would suggest that both are equally susceptible to the risk of contracting the virus without rendering either sex at more risk than the other. A study conducted in England among 1571 university students between the years 1986 and 2000 showed that students' perceived vulnerability towards HIV/AIDS has decreased over the years (Bruce & Walker, 2001). The study also illustrated that females are becoming less concerned and fearful of HIV infection through casual sexual contact with males. Perhaps this suggests that the traditional role of the man being blamed for infidelity is becoming evenly matched with women. However, it is important to remember that this study was conducted in England, thus measuring people's perceptions from a different cultural background to that of South Africans.

4.9.4 Rape

Another sphere in which women are deemed to be more vulnerable to contracting HIV is through rape. Risk Environments exist where certain groups, such as women in this case, are rendered more vulnerable to some risks (Giddens, 1991).

Participant 4: *"...and for a woman if she was to get raped or anything...there is also that aspect as well...the whole rape aspect ties in as well with the spread."*

Two other female participants also commented on their fear of getting raped by men who had HIV and would transmit the virus to them. Rape can be defined as an act of sexual aggression, used as a medium of violence by men against women (Fourie, 2003). Fourie furthers that rape has, in some instances, been used in South Africa for the pro-active spread of HIV/AIDS. This has been described as being a social sickness. Shell (2000; as cited in Fourie) describes the concept of *Jack Rollers* known as township youth who, upon knowing their own HIV positive status, purposefully attempt to infect women with the HI virus by raping them. Shell adds that generally, these men claim that they want to die with other people. One of the participants was quoted saying the following in regards to people who purposefully spread HIV through sex:

Participant 3: *"...like if somebody knew they had AIDS and they [are] going and spreading it to everybody who doesn't have, then I feel a sense of wanting to affect some revenge on them, something on them."*

A study conducted prior to this labelling of Jack Rollers, found that some youths acknowledged that on diagnosis of an HIV positive status, they would actively spread HIV among as many people as possible (Leclerc-Madlala, 1996; cited in Fourie, 2003). This was know as the *infect one, infect all* philosophy. Men said that even if they thought they were infected with HIV, they took this status on as a death sentence as well as authorisation to a sexual licence where they would actively spread the virus. Women responded to this by stating that, should men find out their own HIV status was positive, they themselves feared being raped. This evokes an interesting debate about the possible gender dynamics that that could play a role in the men attending and women encouraging men to have HIV tests. Perhaps this is grounds for a future study.

Rape is also seen to be perpetuated by the myth that one will be cured from HIV by having sex with a virgin. LoveLife conducted a study in 2000 (as cited in Fourie, 2003) and found that 25% of young South Africans did not know that this was a myth. Giddens (1991) purports that some people develop superstitious rituals or beliefs which enable themselves to feel that they play a role in influencing the outcome of what is happening to them. Perhaps this is why some people still subscribe to these beliefs about HIV. On the other hand, and in correlation with what was previously mentioned, South Africa has, at times, appealed to pseudoscience, thus rendering South Africans victim to misinformation about HIV (Abdool et al., 2006; Achmat & Dubula, 2006; Geffen, 2006). In line with Giddens' theory, perhaps these beliefs also stem from the realisation that there is no pure expert knowledge on HIV and thus, the layperson becomes the master of creating risk assessment and management tasks based on faulty logic from experts.

Rape as a form of sexual violence has been directly attributed to increasing the likelihood of more crime and, subsequently higher levels of risk. Suggestions around an increased need for more education to curb these risks are often called for but, as we shall see in the next section,

some of the participants state that education programmes are possibly not being conducted in the correct manner for their target audiences.

4.10 Education

The participants involved in this study had varying opinions in regards to the role that education plays in predisposing people as being more or less vulnerable to contracting HIV. Participant 2 clearly stated that as a result of knowing about HIV, she felt increasingly safe when exposed to the virus because she knew how to protect herself, thus, decreasing her perceived vulnerability towards contracting the virus:

> *Participant 2:* *"...and then you come to your patients and you worry about their...how you are going to catch [HIV] from them...so that is very important, you need to know the basics of...from the first time that you deal with the whole thing and understanding the concept of AIDS and HIV, you need to understand how will I contract it and the ways...and how to prevent it."*

The same participant furthered that, she acknowledges that although some people are educated about the risks of HIV infection and told how to protect themselves, this knowledge does not always result in adjusted behaviour and hence, some people still put themselves at risk.

> *Participant 2:* *"Girls that are educated, that are so, you know, so intelligent, are doing silly things like this. And then what do you say at the end of the day...why are doing it? And they just say it is for pleasure and enjoyment and all that."*

A study conducted by Raijmakers and Pretorius (2006) in August 2004 using a sample of students from the Vaal University of Technology, South Africa, found that the students' level of knowledge about HIV/AIDS was high. More specifically, 82.2% of the students reported that they felt that they had enough information about HIV/AIDS to protect themselves from contracting the virus. With that said, the same students also reported high-risk behaviour (multiple sex partners and inconsistent condom usage) but still did not perceive themselves as

being at risk of contracting the virus. A study that was conducted in Zambia by Joffe (2003) found similar results. It suggested that this specific sample of Zambian adolescents had a *not me* attitude, in terms of viewing themselves as being at risk of contracting HIV. Youth described that being knowledgeable about HIV and AIDS would protect them, thus justifying that they are not at risk of contracting the virus.

It has already been noted that knowledge can play a protective role but only if this knowledge is carried over into behaviour change and that subsequently, this change in behaviour is continually practiced. Perhaps this difficulty in initiating behaviour change can be more easily understood when looking at the already documented behaviour change theories, namely the health belief model and AIDS risk reduction model (Change Theories, 2003). Both models suggest that a certain amount of education is necessary to inform one as to what constitutes risk before one is able to label this behaviour as high risk. This insinuates that education about risk behaviour does, to some extent, play a role in reducing one's vulnerability towards HIV transmission but cannot be preventative as an isolated strategy. But, as stated by participant 3, perhaps it is because the education about risk and HIV/AIDS may include unsuitable content for the given population and is perhaps being disseminated in the incorrect manner:

Participant 3: *"...even though we are educating people, it is not enough or it is not the right type of information. Or it is not given to the right people for them to be able to actively make informed choices in terms of that..."*

Participant 4 then goes on to state the following:

Participant 4: *"Denial...it is like someone saying you know what, I hate maths and I can't do this, it is like a bad thing and if I stay away from it you know, maybe it will go away...you know so, that could...I think it is just all back to lack of knowledge and just thinking that you are just immune to it and that it is not your problem...it is somebody else that you know..."*

This participant acknowledges the importance of education but also suggests that there is a broader social frame in which the education needs to be constructed and disseminated due to the multi-layered personal and social impact of HIV. It seems that education alone cannot account for a reduction in this samples' perceived vulnerability towards HIV transmission. Rather, there are multiple factors that play a perpetuating role in the ultimate risk behaviour of the individual and their subsequent perceived vulnerability towards contracting the virus. The following suggestion was made in an attempt for behaviour change to occur:

Participant 2: *"And as much as you can emphasis the education part of it, it is left on the individual themselves to understand, you know what this is not frightening me, I am going to have, even if I am sleeping with 60 different women or whatever, I am still going to use a condom because I am worried about my health. If I get a disease, what is going to happen to my family, myself. You know your whole entire life is so affected by just having this AIDS..."*

The protective impact that the theory of self-efficacy (Bandura, 1982; as cited in Corey, 2001) has on one's sense of control over one's perceived risk is again displayed through what participant 2 states. This participant is also subscribing to the second step in the AIDS risk reduction model where one needs to commit to reducing high-risk sexual contacts while increasing low-risk encounters (Change Theories, 2003). But, as previously documented, fulfilling only one step in such a behaviour change model will not necessarily result in healthier sexual behaviour.

4.11 Communicating Behaviour Change

Rawjee (2002) suggests that when communicating behaviour change in relation to HIV/AIDS and to different sectors of society, it is of utmost importance to consider the complex nature of the context within which the particular group comes from. This intricate contextual network is made up of social relationships, power dynamics, cultural interpretations and values. Bauer and Gaskell (1999) suggest that the contents of the communicated behaviour change, the way in which it is transmitted and the consequences of this communication, all play a role in the

continual development of the given appraisal of HIV and AIDS. Without key stake-holders involved in the communication around HIV and AIDS, this will not be possible.

4.11.1 HIV/AIDS campaigns in South Africa

Many of the participants asserted these abovementioned theories when sharing their opinions around the role that behaviour change campaigns play in shaping perceptions around vulnerability towards HIV. Firstly, participants agreed that there was a plethora of campaigns attempting to target education and behaviour change in regards to the HIV epidemic that South Africa is currently facing:

Participant 4: *"The thing is that, if you look around you, there is so much of campaigns going around, there is a lot of information and awareness campaigns...a lot of prevention campaigns, there is so much in the media and still, South Africa has one of the highest, like [HIV] is still growing and uh, people dying of AIDS."*

Participant 4 suggests that in the midst of several campaigns around HIV related issues, we still do not seem to be halting the spread of the virus. Westville students are faced with a barrage of HIV awareness and prevention campaigns and modules during the course of their degrees completed at the university. Hence, the health science students are eligible to comment on the state of current programmes being disseminated around South Africa. Participant 3, when referencing the current campaigns that are being disseminated within South Africa was quoted as stating the following:

Participant 3: *"I think that in some ways and to some extent, to some it does work, but not the majority I don't feel. Because if it was, there would be some change but we are still seeing escalation instead of like you know, decrease, and you know, there is something wrong there. You know, years of dissemination of information should actually bring the numbers down, not have the opposite effect..."*

Within the communicated prevention campaigns that are currently being disseminated around South Africa, two multifaceted behaviour change programs are noteworthy in their attempt to reduce sexual risk behaviours (Delany-Maretlwe et al., 2006). Soul City is a multimedia programme disseminated through television, radio and magazines; and LoveLife is a media campaign focusing on adolescent-specific health care issues and services. Because of the nature of such campaigns, it is difficult to measure the success of their efficacy. However, Delany-Maretlwe et al., suggests that preliminary evaluations show that the two campaigns have in fact significantly impacted young people's awareness and knowledge about HIV and AIDS. The interventions have also played a role in shifting misperceptions of the virus in communities affected by HIV. Hence, from an education point of view, the campaigns have been successful. However, as previously noted, behaviour change cannot occur solely through education.

Such campaigns have generally focused on their target groups arising from a specific socioeconomic level as well as from specific communities. However, one can see from the outset that these campaigns again displace the responsibility of risk management and behaviour away from the experts and into the individual's hands (Beck, 1992). The ABC (abstain, be faithful or condomise) campaign is another example of the individualisation of risk management that the DOH has promoted. In Achmat's (2006) speech at the University of Cape Town, he directly criticised the ABC campaign stating that is focuses solely on the individual and not on the social inequalities and power imbalances that inform an individual's ability to choose. He called for more comprehensive prevention and management strategies to be implemented.

This begs the question of what makes a communicated behaviour change or educational campaign viable. Some of the participants gave descriptions as to why they thought that some campaigns were flawed and how this could be improved:

Participant 1: *"Like a lot of the focus of the campaigns... and I think I also tend to do it myself...is also focusing on a specific group which is the Black, sort of underprivileged...because they seem to be more vulnerable. So I think that a lot of our people and our training as well...a lot of mention is made and, on not looking at other population groups."*

Participant 1 is suggesting that the target group for the campaigns has been focused predominantly on Black people from underprivileged communities and this leads to an absence in focus on other population groups. She explicitly states that she also tends to stereotype the focus of prevention programmes on people from the same social group. Perhaps the way in which the abovementioned prevention programmes are targeting this socioeconomic group, it adds to this participant's already existing schema that HIV and AIDS affects people from a low socioeconomic background or Black people and hence, because she is White, she feels less vulnerable to contracting the virus. This target range may also be informed by the cultural and racial make-up of her patient load.

Participant 3 furthers this exploration of prevention programme target groups by suggesting that the practical nature of access to such campaigns must be taken into consideration when putting together such programmes:

Participant 3: *"You know having a supplement in the newspaper is not going to reach everybody that it should reach and I mean, the poor...like we buy newspapers but not everyone does. So the method of giving out information also like using high tech media like television you know, like is not always the appropriate way and I think there is a lot of work to be done in terms of finding out how we can give out the information because the information is being given out but we just need to find the right way I feel..."*

These statements fall in line with Rajwee's (2003) suggestion to ensure that one must always consider the complex nature of the context within which the particular target group comes from. But, this may affect some peoples' perceived vulnerability towards contracting HIV depending of whether they identify as being part of that target group. A possible rationale as to why the participants feel that the campaigns are not corresponding to the content of the campaigns to the different social groups in South Africa is because the DOH, as part of its prevention and management plan for HIV/AIDS, has undertaken the responsibility of constructing these

campaigns. However, Hassan (2006) has documented that when entering into talks about constructing such management plans and campaigns in combating HIV/AIDS, the DOH has repeatedly excluded and marginalised key stake-holders. This has resulted in the construction and implementation of several HIV/AIDS campaigns that are not informed by the broad spectrum of stakeholders in South Africa that are attempting to manage and curb the spread of HIV. Hence, key information which may make the campaigns more suitable to their target audiences is being excluded.

Two of the participants illustrated how they felt the content of the campaigns being disseminated around South Africa were generating mixed messages. Participant 3 spoke specifically about the LoveLife campaign and that she agrees with part of its message about healthy lifestyles. However, she disagrees with how the campaign is seemingly attempting to prevent the spread of HIV while at the same time seems to advocate sex with multiple partners as long as it is constitutes what is termed safe sex. She furthered that she tears up the LoveLife pamphlets before her young brother has a chance to read them because she maintains that she does not want him to read some of the information that the campaigns promote:

Participant 3: *"So in the media there is mixed messages coming across; on the one hand you are promoting safe sex and like on the other hand you want prevention of HIV...ya...the two can go together, I mean obviously safe sex can prevent HIV but then if safe sex with anybody, are you just saying you must have safe sex with anybody that you want to have sex with, you know...regardless of who they are..."*

Participant 6 also has similar views on this issue:

Participant 6 *"It is like promoting like, you know, wear a condom but condoms aren't 100% protective so um, I think it is um, there are some media that promote um abstinence, uh abstaining from sexual contact until you are married or having one sexual partner...there are some media that just do promote the right things and then there are others that are just looking*

for something temporary, not 100%."

As previously stated by Bauer and Gaskell (1999), the contents of the communicated behaviour change, the way in which it is transmitted and the consequences of this communication, all play a role in the continual development of the targeted public's appraisal of HIV and AIDS. Perhaps this is another variable that contributes towards the differing ways in which the participants appraise their vulnerability towards contracting HIV. This again demonstrates how important it is for the leadership of South Africa to consolidate and give clear descriptors and information and leadership in regards to HIV management.

4.12 Socioeconomic Inequalities

This section looks at what Brofenbrenner (1986; as cited in Govender & Petersen, 2004) has called the societal level within the ecological-systems approach in understanding risk behaviour. More specifically, Brofenbrenner suggests that risk can be judged through the filter of cultural values as well as inequalities and power imbalances that may exist within the society. The attitudes that form around attribution of risk to different populations also need to be unpacked in order to gain understanding as to why this process occurs. As previously mentioned, Páez et al., (1991) suggest that the aspect of an attitude that is observable is its evaluative nature which is manifested through cognitions, affect and behaviour. Attitudes must be seen in their context which then determines their specific function (Bauer & Gaskell, 1999). These functions are not static and can be manipulated depending on the current need of the group. With this in mind, it is important to recognise that HIV has historically been contextualised as a poor, Black disease mostly affecting those who identify themselves with an ethnicity other than White (Davidson, 2001). Some of the participants have shifted their own personal appraisals of risk from this historical view to acknowledging HIV risk cutting across race, cultures and socioeconomic lines:

Participant 1: *"...I think that there are some people that are really wealthy across all the races that are HIV positive and I think that it affects absolutely everyone economic wise and um...although...um...I think that the poorer groups may not be as educated and...but I think that it is pretty prevalent over all the economic...I don't think it is distinguishable."*

Another participant went on to state that, in speaking for herself, she has appraised vulnerability towards contracting HIV as a risk that all people are exposed to.

Participant 2: *"Um...I think that well, now we have all become so used to HIV, I mean those days it was like a taboo to have like HIV or cancer or that matter, but know it is like in part of everyday living. Like if someone has HIV, they have HIV. You know, you have been so used to taking it for granted that you think oh no, I don't, maybe this person doesn't have it or you couldn't have it. I mean like anybody could have it, you have to get used to it."*

Participant 2 seems to think that HIV infection has been normalised and that anyone can be at risk of contracting the virus. A possible suggestion as to what is promoting this personal opinion from participant 2 is that with an increased awareness of various risks, people are becoming complacent about risks because risks are becoming such a common feature in everyday life (Giddens, 1991). As a result of this, Giddens goes on to state that people are subsequently numbed to some of risks. However, one must remember that the participants form this sample are health science students and that they work daily with a patient load that partly consists of people living with HIV. Consequentially, this may have also contributed to the normalising of HIV. However, some of the other participants do not agree with this statement.

Participant 1: *"...a lot of the wealthier people go to the strip clubs and they don't think they are going to catch AIDS or anything like that and you know...there is an arrogance about that again. Ya...and like you know, they've got medical aid and they have got this, and they have got all these other supports so you know...if AIDS came, so they've AIDS but something will happen, they'll work a plan..."*

Participant 5 also agreed with the above statement:

Participant 5: *"But, also, if you know you, look at the other end of the spectrum and the upper echelons. You have got a lot of people who are ok, and they know they are educated, they have all the resources they need and everything, yet they will still put themselves at risk, for I don't know what reason...they are just being irresponsible. I don't know, I think they, they also think, you know what, this is not going to affect me. But they think of it from a different perspective like no, I can't catch that..."*

A possible explanation as to why this occurs may be seen through what Páez etal., (1991) speaks about in that distortions or specific selection of information may occur by group members with the intention of maintaining existing beliefs or attitudes. Some socioeconomic classes may, even in the light of substantial amounts of education, select the risk information they want to take in with the intention of maintaining possible beliefs and attitudes which manifest in their behaviour and that this serves a specific function for the group at the time. As previously mentioned, Gilmore and Somerville (1994; as cited in White & Mortensen, 2003) suggest that, when individuals are faced with a disease that is threatening or incurable, peopleuse the coping mechanisms of denial, displacement, stigmatisation, scapegoating and discrimination. Social identity theory purports that people favour the in-group over out-groups in order to maintain or enhance their self-esteem (Tesser, 1995). These theories may shed further light on why some groups place risk on others and thus perceive themselves at less risk of contracting HIV, whereas in reality, they may in fact be at risk. Perhaps the participants from this sample again do not identify with the abovementioned descriptors of people and thus deem themselves as being at less risk of contracting HIV.

CHAPTER FIVE

Conclusion, Recommendations & Limitations of the Study

5.1 Conclusion

The results of this study have generated several themes that interlace to produce a conceptual understanding of the informants that play a role in the formation of the perceived vulnerability towards HIV infection of this sample of health science students.

The participants demonstrated a range of psychological ideologies with regards to their understanding of the origins of HIV. More specifically; ambivalence, incomprehensibility, personalization and denial were the sub-themes that emerged through the interviews that were conducted with the participants. Ambivalence and incomprehensibility were attributed to South Africa's mismanagement of HIV, often acting in direct contrast to international, scientifically proven and sanctioned HIV management strategies (Hassan, 2006). As a result of this, the health science students' confidence in HIV/AIDS experts may be undermined and hence, they generate their own rationale into the understandings of HIV's origin (Giddens, 1991).

Through the rationale given as to the origin of HIV, the responses generated by several of the participants suggest that personalisation plays a role in their perceived levels of vulnerability towards HIV infection. This falls in line with the suggested health belief model in that an individual must feel personally vulnerable or susceptible to the threat (such as HIV) in order for there to be any subsequent behaviour change (Change Theories, 2003).

Several of the participants seemed to employ the process of denial by distancing personally themselves from HIV. This may ultimately enhance their ability to cope with their patients infected with HIV due to their disidentification with the virus (White & Mortensen, 2003). Consequently, the health science students would personally have a lowered perceived risk of contracting the virus.

The religious sub-theme illustrated the evaluative nature that some of the health science students have adopted towards HIV infection. This became a theme that emerged throughout the study.

Due to the sexual nature of HIV transmission, the religious basis for understanding the origins of HIV/AIDS gave way for blame and immorality to be attached to those infected by the virus. Again, some of the health science students could not identify with this type of unreligious sexual behaviour, thus lowering their perceived vulnerability towards contracting HIV. Furthermore, religion was seen by some as a protective factor in them not contracting the virus. The implications of adhering to such viewpoints as health professionals is concerning in that this may perpetuate discrimination and stigma around HIV, something that the health and social systems in South Africa are fervently trying to halt.

Overall, the participants seemed to have a low perceived vulnerability towards contracting HIV within their occupational setting. This is congruent to the suggestion made by Gilks and Wilkinson (1998), suggesting that occupationally acquired HIV infection is generally uncommon. The participants suggested that the main attributed reason for this is a perceived sense of personal control that is generated from the implementation of universal precautions. This highlights the reliance that the participants have on instrumentality in that the universal precautions act as objective measures that are put into place to lower their perceived vulnerability towards HIV infection. However, the participants suggested that there is stigma attached to some of these occupational safety measures. In an attempt to reduce this white coat stigma, some of the health science students attempt to reduce their use of universal precautions, consequently increasing their risk of HIV infection.

As a result of the abovementioned factors that come into play in determining perceived risk of contracting the virus within the participants' occupational setting, the management of the risk of HIV infection has been individualised to such an extent that the sample of health science students mainly spoke about their own ability to control the virus, while shifting responsibility away from the experts. This makes up what is know as the individualisation of risk (Beck, 1992).

However, the utilisation of universal precautions only demonstrated a risk appraisal on the individual level of ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004). The participants then went on to include the interpersonal, community and societal levels through critiquing social forms of HIV transmission and, more specifically, the

factors which play a role in sexual behaviour either heightening or lowering their perceived vulnerability towards contracting the virus.

Several authors have repeatedly stated that the most prolific social arena through which HIV may be contracted is that of sexual intercourse (Gilks & Wilkinson, 1998; Symon & Wilkinson, 1999; van Dyk, 2001). Overall, the participants shared similar views in relation to this theory and subsequently had a higher sense of perceived vulnerability towards contracting HIV through risky sexual behaviour. Some of the participants, through analysing the interpersonal level of the ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004) suggested that a culture of sexual immediate gratification in purposely seeking out sexual activity with another individual would heighten their perceived vulnerability in contracting the virus.

A variable suggested by a participant that lowered her perceived vulnerability towards HIV infection was maintaining trust within a monogamous marriage or relationship. This was deemed as a protective factor within the realm of sexual behaviour in that, through the process of choosing and adhering to trusting one another within the relationship, the psychological need for intimacy was achievable (Giddens, 1991). Another factor that lowered several of the participants' perceived vulnerability towards HIV infection was the active use of prophylactics such as condoms. An interesting debate arose as to the expected link between education and subsequent increased condom use but, as demonstrated in current literature (Raijmakers & Pretorius, 2006), there is no clear link between these two phenomena. The final behaviour that was suggested by the participants that lowered their perceived risks of HIV infection was that of abstinence. Participants acknowledged that this was a difficult protective factor to adhere to but that it can be made possible through holding fast to one's religious beliefs, should it promote such behaviour.

Some of the participants went on state another way of understanding one's potential risky sexual behaviour in contracting HIV is through looking at factors that are intrinsic to oneself. Again focussing on the individual level of the ecological-systems approach (Brofenbrenner, 1986; as cited in Govender & Petersen, 2004), several of the participants suggested that one's personality has a strong influence over one's ultimate risk behaviour. Several different character traits were

suggested to influence cognitions of the individual which were ultimately attributed to certain potential risk behaviours. Some participants viewed these character or personality traits as superseding the influence that race and culture have on potential risk behaviour. However, these intimations do not align with existing theory (Schmidt, 2002).

Shifting the focus away from the individual level of the ecological-systems approach, racial and cultural implications in the participants perceived vulnerability towards contracting HIV incorporated power imbalances between individuals which ultimately resulted in inequalities, thus rendering some people at risk of contracting the virus.

In a possible attempt to preserve self-esteem as health science students, and lower their perceived vulnerability towards contracting HIV, some participants made reference to the externalisation of the risk of HIV infection onto Black people, thus theoretically disqualifying White or Indian populations as being at risk. Other participants attributed the initiates of the risk onto African men or men in general. They suggested that cultural nuances allowed for differing expressions of sexuality between men and women. Inevitably, this lead to some of the female participants feeling more at risk of infection. Social identity theory (Tesser, 1995) purports a possible explanation to this through the out-group homogeneity effect. Gilmore and Somerville (1994; as cited in White & Mortensen, 2003) suggest that when faced with illnesses, such as HIV, that are threatening or fatal or for which there is no cure, individuals and society use the coping mechanism of denial and displacement. Subsequently, this allows for a lowered perceived vulnerability towards contracting the virus.

A personal account from a participant stated that Indian culture was specifically targeted as over-protecting their children and thus rendering them with a lowered sense of self-efficacy. Subsequently, this resulted in the participant feeling less able to master situations because he has less resources and knowledge about threatening events (such as HIV) and assumed that someone else would continue to take responsibility for him. This resulted in the participant having a heightened sense of vulnerability towards contracting HIV. The theme of youthfulness acting as a risk factor was further unpacked and correlated with the theory of Huszti et al., (2001) in that the age range with the highest risk of contracting HIV falls between 18 to 25 years of age.

Peer pressure, resulting in early sexual debut, coupled with a breakdown in the previous protective factors manifest within the family structure, was attributed as increasing some of the participants' perceived vulnerability towards contracting HIV. These protective factors are social capital in the form of adults modelling (Bandura, 1982; as cited in Cole & Cole, 2001) positive behaviour to youth. The enticing temptations that become evident in the freedom of entrance into University were personally accounted for by some of the participants as heightening their perceived vulnerability towards contracting HIV; again suggesting the necessity of parental guidance through this new phase in their lives. However, some participants identified themselves as having overcome this youthful stage in their lives and see their maturity and wisdom as new protective factors ensuring a lowered perceived vulnerability to HIV infection. Converse to this, perceived invincibility among youths ultimately increased their vulnerability towards HIV infection in that some of the participants still identified with being young and impervious to harmful risks such as HIV infection.

Adhering to Brofenbrenner's ecological-systems approach (1986; as cited in Govender & Petersen, 2004), one cannot simply look at the individual level where youthfulness may play an informing role but rather, one needs to again conceptualise risk behaviour while incorporating all four levels. Substance abuse was identified by the participants as playing an integral role in subjecting individuals to being more or less vulnerable to possible HIV infection. Here we will look more closely at the community and societal levels of the ecological-systems approach.

The participants substantiated the theory extracted from Lindell (2002) in attributing several risks to drug taking. University culture was recognised as normalising and promoting drug experimentation, resulting in a cycle of risk taking behaviour. More specifically, drugs were viewed as lowering inhibitions and altering one's state of mind, resulting in unsafe sexual practices which ultimately predispose people to being more vulnerable to HIV infection. None of the participants personally identified with such drug taking behaviours and subsequently perceived themselves as less vulnerable to HIV infection due to their non-participation in drug taking behaviour.

However, a factor that did increase some of the participants' perceived vulnerability towards HIV infection was that of differing sanctioned sexual norms between men and women. These norms are created and maintained through the cultural and structuralist conditions in society. Participants identified with power and equality imbalances between men and women, resulting in cultural value systems adorning men with relative sexual freedom while limiting women of the same sexual freedom. Coupled with this, the power inequality between men and women render women with less negotiating power within the practice of their sexual relationships, thus resulting in women more susceptible to contracting HIV. Consequentially, much of the blame of the spread of HIV was placed on males. However, over and above the gender dynamics that emerged, many participants attributed women's increased vulnerability to certain cultural value systems and religious ideologies that ultimately dictated these differences in sexual behaviour.

Rape was branded as predisposing women to being more vulnerable to contracting HIV. Several of the female participants personally accounted for a fear of being raped which heightened their perceived vulnerability towards HIV infection. The purposeful spread of HIV by men who know their status was also seen as a cause for the women in the study feeling more vulnerable. Several of the participants made suggestions as to educating people more about HIV in an attempt to reduce violent crimes such as rape.

In educating people about HIV/AIDS, the participants substantiated Rawjee's (2002) suggestions in that, although there are a number of prevention and awareness campaigns in South Africa, they felt that they were not reaching their full potential in ultimately reducing HIV prevalence. The participants spoke about the success of generating more information and education through the campaigns although again, this placed risk management back in the hands of the individual and away from the experts (Beck, 1992). However, it became evident that the health science students, although heavily relying on education within their professional fields, believed that education alone could not ultimately lower one's perceived vulnerability towards HIV infection.

Looking through the lens of the health belief model and the AIDS risk reduction model (Change Theories, 2003), it became more evident that behaviour change cannot solely be attributed to an increase in education. However, when accurate HIV/AIDS information and education is

appropriately disseminated, it does play a role in the overall lowering of the perceived vulnerability of the sample of health science students.

Access to such campaigns as well as campaigns generating mixed messages impacted the health science students' perceived vulnerability to contracting HIV. This again demonstrates how important it is for the leadership of South Africa to consolidate and give clear descriptors and information as well as leadership in regards to HIV management. Another negative consequence acknowledged by the participants as having added to their stigma around groups perceived to be vulnerable to HIV was that the DOH has limited the content of their campaigns to specific target groups, subsequently not including people like themselves into those campaign targets. This ultimately leaves one with the perception of feeling less vulnerable towards HIV infection.

Socioeconomic inequalities in relation to HIV and subsequent perceived vulnerability towards HIV infection have emerged throughout this study. Perhaps it is the most prevalent yet least understood rationale as to why people still engage in risky sexual behaviour which leads to an increased probability in contracting HIV. The participants attempted to explain their understanding of this matter. This took on the form of the societal level of Brofenbrenner's ecological-systems approach (1986; as cited in Govender & Petersen, 2004), again highlighting the pervading power of cultural values, inequalities and power imbalances that exist and are maintained in South Africa today. As a result, people have generated attitudes evaluating who is at risk of contracting HIV and who is not, due to ones ascribed cultural and socioeconomic affiliation. Participants suggested that often one perceives oneself as having a lower vulnerability because firstly, one does not associate to the traditional group subscribed to being at risk of HIV infection, namely being Black or from a low socioeconomic group; and secondly, wealth and education are deemed as safe guards against such ailments. As a result, distortions or specific selection of information about HIV occur in attempt to maintain this perceived low possibility of HIV infection.

Finally, from the plethora of abovementioned factors that have been attributed towards influencing this sample of health science students' perceived vulnerability towards HIV infection, it demonstrates that HIV/AIDS and risk behaviour can only be understood through models such

as the biopsychosocial model (McLean & Hiles, 2005) and the ecological-systems approach (1986; as cited in Govender & Petersen, 2004) where the multiple dimensions of this socially embedded disease can be taken into account. Fourie (2003) further suggests that a human rights culture needs to be employed to counter the existing myths, lies and silences around the issues of sexuality that ultimately impact ones' understanding of HIV and AIDS and subsequent perceived vulnerability towards contracting the virus. Furthermore, a gender, culture and race-sensitive analytical lens must be used to contribute towards understanding the HI virus in a more meaningful and holistic manner among specific social groups of people, thus informing more accurate and meaningful ways in understanding what informs their perceived vulnerability towards contracting HIV.

5.2 Recommendations

1. If a similar study was to be conducted with another sample, it may be beneficial to also generate information from the given sample via the method of focus groups rather than individual interviews. This would generate specific nuances within their occupational and various social settings resulting in a deeper understanding as to what constitutes towards the group's perceptions in vulnerability towards HIV infection.

2. Based on the findings of this study, new HIV prevention programmes could be generated with specific groups in mind. These programmes would take cognisance of the specific targeted group and make the programme or campaign more relevant to that specific social group. As previously mentioned, this may have a two-fold benefit of reducing stigma as well as allowing for more relevant education to take place.

3. As revealed in the study, gender differences emerged in several different ways in relation to sexual behaviour, often resulting in different perceptions between men and women in terms of their vulnerability towards HIV infection. This may indicate the necessity of focussing on the communication style of HIV/AIDS prevention campaigns or programmes aimed specifically for men or women, depending on the target group (Bruce & Walker, 2001).

4. White and Mortensen (2003) suggest that in order to allow health care workers to acknowledge their true vulnerability to HIV and STD infections, health care workers need to become more self-reflective and aware of their personal lives separate from that of their occupation lives. Hence, as part of health science students' training, and in an attempt to allow them greater insight into their perception around HIV as a concept within both their occupational and social settings, it is recommended that *problem-based learning* be incorporated into their curricula (McLean & Hiles, 2005). This approach to learning is currently being implemented at a South African medical school and involves experiential learning. More specifically, direct contact between the health science students and their HIV infected patients is further encouraged and, through the students becoming part of small group sessions, community educators facilitate the student's explorations of their personal conceptualisation of HIV. It is hoped that through honest and transparent group discussions, the students will adopt a more integrated conceptualisation of HIV.

5.3 Limitations of the Study

While conducting this research, some of the anticipated problems that were thought to possibly occur as a result of methodological, practical and ethical limitations have been noted.

1. Interpretive studies emphasise the importance of the researcher being the primary tool for both collecting and interpreting data (Durrheim, 1999). It is important to remember this when dealing with the data as biases may occur as a result of the impossibility of remaining objective at all times. However, due to a limitation in resources, the author was the sole investigator and could not have another researcher employed in an attempt to negate any possible bias seeping into the research. To counter this possible limitation the interviewer, to the best of her ability, attempted to refrain from projecting any biases into the research. More specifically, during the interviews, the researcher refrained from giving clues as to how the participants should or should not respond. The dialogue was guided within the frame of the research question while allowing the participants to induce their own themes as well as comment independently on specific issues that the facilitator rose separately from what they contributed to the discussion. However, some degree of bias is inevitable as this is the nature of qualitative research.

2. A second limitation that may have occurred is that of demand characteristics(Durrheim, 1999). This suggests that certain features of the research setting may demand certain responses from the participants. In regards to the topic that was discussed during the interviews and the setting of the interviews being the university campus, participants may have felt a need to respond in the capacity of their occupation over and above a response on a personal social level. This may have biased the study to the degree of the participants marginalising their social capacity of risk behaviour. In an attempt to counteract this, it was made clear that the exploratory question used at the onset of dialogue emphasised the idea of their perceived vulnerability as an individual, thus allowing them the greatest amount of freedom to decide whether they converse in a professional or personal capacity. In a future study of the same nature, it may be beneficial to conduct the interviews in a more neutral setting.

3. Due to the small sample number, the results, discussion and conclusions that have been elicited from the study are not generalisable into the broader population of health science students. This suggests that the results will be representative of only this sample of health science students from the University of KwaZulu-Natal. Should a similar study be conducted, it would be recommended that a larger sample be used with the intention of generalising the results into the given population.

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Appendix 1

INFORMED CONSENT

The current research project will focus on health science students' individual perception of vulnerability towards contracting HIV/AIDS. The results of this study will possibly provide for further information or rationale into the understanding of different people's perceived level of vulnerability to contracting HIV/AIDS. The study shall be conducted by a student completing her master's degree in clinical psychology at the University of KwaZulu-Natal under the supervision of Kay Govender.

In order to gain a better understanding of health science student's perceived vulnerability towards HIV/AIDS, in-depth, semi-structured individual interviews lasting approximately one hour will be conducted. This will be done with the intention of eliciting the above information.

NAME:

AGE:

DATE:

With the above in mind, I understand that I am taking part in research that invdves the following:

1. Partaking in an interview regarding my perceived vulnerability towards contracting HIV/AIDS.
2. The interviews will be tape recorded during and this will be used for later analysis.
3. Any findings from this study may be published at a later stage.
4. Any information elicited by me, the participant, will be treated with absolute anonymity while being used during analysis and the writing up of the study's results. Such information shall be destroyed after use.
5. Should I feel at any stage that I want to withdraw from the study for any reason, I am free to do so.

SIGNED: _____

Contact Details of Researcher:
Lindsay Spencer
082 375 7793

Research Supervisor: Kay Govender
UKZN Psychologist
(031) 260 2616

Appendix 2

Psychology Department
Howard College Campus
University of KwaZulu-Natal
Tel: 082 375 7793

Sir/Madam
Health Science Department
Howard College Campus
University of KwazuluNatal

Attention: Head of Department

Subject: To request the use of 6 health science students to form part of a research sample for a short dissertation

To whom it may concern

I am currently completing my Masters' degree in Clinical Psychology and as part of the academic requirements, I have to administer a research project. My research project aims to investigate the perceived vulnerability of a sample of health science students towards possible HIV/AIDS infection. This area of research is supported by already existing literature and is an exciting research arena within the broader HIV/AIDS field in South Africa.

Due to the stipulated sample constituting of health science students, I am appealing to you for access to six forth year health science students consisting of physiotherapists, occupational therapists, audiologists and/or speech therapists. There are no specific requirements as to what race, sex or department the health science students should be from but it would be appreciated if the students could be between the ages of 18 and 29 years of age. I will be conducting6 individual interviews. The interview will last approximately 1 hour each through which we shall engage in a semi-structured conversation about their perceived vulnerability towards HIV/AIDS.

With the assistance of my supervisor, I shall take on the responsibility of organising convenient meeting times for the students as well as adhering to the appropriate ethical legislation in terms of confidentiality, informed consent and ensuring no damage is incurred in any form to the students. It would be greatly appreciated if you would consider this letter in the capacity of acknowledging whether the students will be allowed to take part in the study. I myself am a student on the Howard College Campus and am thus available to answer any queries about the research. Please do not hesitate to contact me at any time.

Yours Kindly

Lindsay Spencer
Student Clinical Psychologist

Appendix 3

INTERVIEW SCHEDULE

1. **INFORMED CONSENT:**
   - Signing

2. **EXPLANATION:**
   - Anonymity ⇒ Recording
     ⇒ Note taking – ignore author

   - Trying to extract peoples' perceived vulnerability towards HIV/AIDS
     ⇒ PLEASE be HONEST
     ⇒ Not forced to answer
     ⇒ Interview = +/- 45mins
     ⇒ Author will guide but its about you and your HIV related opinions

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Content

- Differing perceptions towards the threat of you contracting HIV based on underlying beliefs, attitudes and assumptions
- Differing perceptions of risk in contracting HIV in occupational or social settings
- Attitudes towards needlestick injuries
- Attitudes toward percutaneous infection
- Attitudes and beliefs around multiple sexual partners/risky sexual behaviour and the possible correlation to contracting HIV
- Attitudes or beliefs informing condom usage
- Possible differences between men and women and their sexual practice/sexuality
- Availability of birth control and legalisation of abortion possibly playing a role in sexual practice choices
- Differing attitudes and evaluations towards unwanted pregnancies and contracting HIV or STDs
- Substance abuse possibly playing a role in the transmission of HIV
- Personality type possibly playing a role in vulnerability towards contracting HIV
- Appraisals of the methods used when communicating about HIV/AIDS

Appendix 4

EXAMPLE OF TRANSCRIBED INTERVIEW
Participant 3

Interviewer: Ok, maybe just first of all, do you want to explain a little bit about OT, what it entails, the job, work, profession of OT.

Participant: Ok, the profession of OT entails, psychosocial and physical rehabilitation for any person at risk or who has a disorder or that doesn't able to function independently, their daily like activities such as social activities, work, play and your personal activities like personal hygiene and self care and things like that yeah…

Interviewer: Ok, it sounds like sort of like a lot of um…remediating kind of work…

Participant: Yes…yeah…

Interviewer: …like more rehabilitation.

Participant: …Ya…more rehabilitation but incorporating remediating yeah.

Interviewer: Ok, and um…in terms of hands on contact with, with patients or clients…I'm not sure what you guys call them…

Participant: [laugh] I think I prefer the term patients because we are health professionals and providing a service. Um…there is hands on contact, especially in the physical wards when you have got to do um…for example when you have got to do rehab with paraplegics you have got to do transfers and we are doing hand rehab…and you are in direct contact with their hands…splinting. It is very physical and there is no escaping the hands on. If you are in psych, like you can, you know it is very superficial type of contact but there definitely is contact.

Interviewer: Ok, alright. And in terms of the elements of HIV, um coming in…do you see a lot

of HIV clients or patients at least? And how do you sort of deal with that?

Participant: Um...we do see HIV clients, I think that the first indication is um looking in the file and um, seeing RVD and if you...

Interviewer: What's RVD? Oh that's the retrovirus...yeah...

Participant: Yeah...or if you see some kind of, if you pick up symptoms and maybe if it is a confusing case and there are a lot of leading symptoms that will get I think that the person will have HIV, although it is not definitive but the first meeting you wouldn't know. If I just get a hands patient now and they have got a bleeding sore and he is...I need to work with him immediately, I wouldn't know if he was HIV or not.

Interviewer: And how do you deal with your HIV patients...the ones that you know are HIV positive?

Participant: Um...the same way as I do any other patient. But obviously taking universal precautions where I need to. Like if I know that I am going to be involved in bodily fluids or if there is blood or anything then I would wear gloves and wash my hands before and after. But if I am not going to touch the patient directly or be involved in any kind of you know...where there is exchange, like if I know they have got a sore or bandages or open wound, then I, if it is still an HIV patient then I wouldn't um, like use gloves if I don't need to.

Interviewer: So when there is a barrier between you...

Participant: Yes, yeah...yes I am very relaxed because I feel that if there is a need for me to wear gloves then I will because it creates...there is a distinct impression when you wear gloves and you go near a patient and they immediately have an impression of you. You know...so that is what I feel like...

Interviewer: Can you talk a little more about that impression and sort of like, when you say they have got an impression of you when you wear gloves...

Participant: Yeah um...it is a lot of patients with the white coat syndrome you know like the...seeing a white coat gives them the idea that this a doctor, someone higher than me and so I feel that the gloves makes them go about it in terms of their interaction with, and their relations with you. They see you more clinically than they would if they were talking to just another person, you know, someone to share with.

Interviewer: Probably makes it more formal...

Participant: Much more formal...and I also do it by explaining to the patient exactly why I am wearing the gloves yeah...just as a precaution and I do it very by the way, informally just like after I chat to them.

Interviewer: So it sounds from an OT side of it that when you are dealing with people with HIV you don't want to be seen as discriminating or putting up a barrier between you and your patients...

Participant: Yes...

Interviewer: Ok...and now just to shift a little bit to the other side, I mean you are obviously an OT, almost a fully fledged OT and um, besides that you are also a social being and you have got...there is a whole nother part of your life that doesn't involve OT and HIV...well I can't presume that it comes into your world but how have you come to understand or how do you deal with HIV aside from your occupation?

Participant: Meaning dealing with people and uh...

Interviewer: Ya…like more, how do you perceive it as a philosophical concept so...ya maybe not so…ya you might be in contact with people with HIV or you might have friends that are HIV positive or how do you understand it as a concept? Sort of away from your medical understanding…

Participant: …away from my medical understanding…mmm…I feel that HIV is…I haven't, I don't have um, with friends that I know for sure are HIV or family members that I know for sure. Most of my um, contact with HIV is in the media and with my patients and things like that so yeah…it s a lot. But I feel that there is a lot of education out there although I don't, like I do understand the ration, like I do understand how the disease comes about. Like I don't have this approach were I feel like people do things irresponsibly and then they get HIV…

Interviewer: You don't feel like that…

Participant: I feel that in some cases that applies but um…like in other cases there is a lot of ignorance and a lot of um…even though we are educating people, it is not enough or it is not the right type of information. Or it is not given to the right people for them to be able to actively make informed choices in terms of that…ya…

Interviewer: Can you talk a bit more about that…sort of the education of people and what do you think is going wrong, why do you think maybe people are not being educated or like there is a gap…something's not right.

Participant: Um…I think that it is like very urbanised and I feel like the very rural, and this is not a discrimination towards rural people but…

Interviewer: …no, no, no…this is your opinion…

Participant: …ya…it's my opinion, but I feel like there is a need to go more deeper into the

country into the really far out places and to do more um...there needs to be more rapport with people that you educating. You know, having a supplement in the newspaper is not going to reach everybody that it should reach and I mean, the poor...like we buy newspapers but not everyone does. So the method of giving out information also like using high tech media like television you know like is not always the appropriate way and I think there is a lot of work to be done in terms of finding out how we can give out the information because the information is being given out but we just need to find the right way I feel.

Interviewer: ...and make it more appropriate for those groups...

Participant: Yes, make it much more appropriate for those groups and breaking it down, just breaking it down into the simplest way we can.

Interviewer: And in terms of the groups, as you say the more urban groups that are being targeted at the moment, do you think that the campaigns and the education, do you think that it is having an effect? Do you think that it is working?

Participant: I think that in some ways and to some extent, to some it does work, but not the majority I don't feel. Because if it was, there would be some change but we are still seeing escalation instead of like you know decrease, and you know, there is something wrong there. You know years of dissemination of information should actually bring the numbers down, not have the opposite effect...

Interviewer: ...mmm...not have the opposite effect...

Participant: ...ya...that's what I think.

Interviewer: Do you have any, do you have any theory or thoughts about why it is like that?

Participant: [Sigh] I think you know, it is like apartheid, it is like a whole era that you can't just

like in 10 years eradicate. So I think that with HIV, it is going to take a long time to, you know, get the message out there and for it to be heard by the right types of people. But I feel that, where I do feel that the positive impact is in schools and in terms of educating the youth and the ya...like we have got lots of...like the LoveLife campaign, and so there is a lot of like positive energy in terms of like the youth. So I think that is like...that is positive.

Interviewer: Yeah...ok, and do you think that the youth, just now that you are speaking about that, do you think they are a generation, like speaking about the teenagers, do you think that they will become a generation that will be free from the virus because of all this impact on them?

Participant: I think definitely they would be less, they would be less. But I think for the youth to be able to go into their next generation is going to take a while like for them to go to middle age to adulthood, there is still a lot of...it is a difficult period for them to cross and they have got to make some choices on their own now with this information that they have got. We have got to wait and how much of an impact it is having on them and that although we can project, like I feel that it will have a decrease, but we can't say for sure how much or you know...

Interviewer: As you say, it is like a wait and see...

Participant: Yeah...definitely, it is wait and see.

Interviewer: And um...sort of if you take it away from youth very generally, um, more urban people that are being educated about AIDS, do you think that there is also going to be an impact there? That people won't be...how can I put it...people won't be, be, be positive or the rates of HIV will come down sort of among the educated people.

Participant: Amongst the educated people...there is a potential for the rates to come down I feel,

ok...because like um...if you take the urban and look at an urban setting with an educated person and they understand the information that is coming to them and it is coming to him through the means that he can access, so then I feel that, that is quite like a...a...an influence on how he makes decisions on his life. So yeah, I do feel urban would be...but I also feel like with the lifestyle of urban people now...it is instant gratification, it is quick, every need must be satisfied right now and with a lifestyle impacting on us the way it is, you know there are some areas where like I'm, I can't say for definite 100% it will go down because you will still find people who have unhealthy lifestyles.

Interviewer: So it is like education is not the only variable...

Participant: ...no...

Interviewer: ...it's unhealthy lifestyle, instant gratification...

Participant: Yes...exactly ya...that's what I think.

Interviewer: Can I ask you to explain, just unpack that when you say that you need gratification, because that does come up in the literature quite a lot so...it would just be interesting to see what your perspective of that is...what do you, sort of more specifically, what do you mean by that?

Participant: Um...I will take an example like um, the sex issue. Like nowadays for people to sleep around with their first girlfriend or anyone that they just meet is becoming like the norm and you know it is just, I want this or I want it now and you know I am not going to think about whether I have a condom or I am not going to think about the consequences, if I am serious about this person, so the attitude towards all of these issues you know, is like fast forwarded like, oh we want the burger and so I'm just going to go down he road and buy one. So it, it is in everything I think like the lifestyle now like we are fast paced and high stressed.

Interviewer: Do you think that is specifically with young people or across the board?

Participant: Mmm...I think more like there are a lot of like ingrained patterns in like older people. Like entrenched ideas so in terms of their ways of thinking, not all like, the middle aged and above would feel that way about instant gratification but definitely the youth would and there are a lot of influences out there like impacting on them. Like television, the lifestyle like...yeah, there is a lot of influences and pressure on the youth as well to like fit in.

Interviewer: Ok, so like peer pressure really.

Participant: Ya...

Interviewer: And maybe not just maybe coming from their friends but maybe also coming from like the media and...

Participant: Yes...indirectly. Because they expose you a lot because I mean, even if you don't have any friends, you watch TV, you listen to the radio, you go out with your parents, you see things...ya, any youth I think.

Interviewer: And I think that in our society now, more so than ever, it is a very sexual society...

Participant: ...very...

Interviewer: ...and they use sex to sell things...

Participant: ...ya...

Interviewer: So yeah, you are faced with it a lot, you are right. And how, maybe if you are

happy to talk about it personally, how do you feel...or maybe just to start, how vulnerable do you feel to contracting HIV? With all that in mind, sort of how we have spoken about people and in your occupation.

Participant: Mmm...I don't feel that vulnerable. And I know there is a chance, everyone has a chance, no one is exempt form the virus, it crosses all races like you know, all classes, creeds. But I don't, I don't focus on my vulnerability towards HIV because, in terms of what I can do to not contract it then I feel that I have done what I can do, you know in terms of that so...I take what precautions I can take in terms of as far as I can go...so...

Interviewer: Can you talk about those precautions...what you have done in your life that makes you fell less vulnerable to contracting it?

Participant: Um...you mean for me personally?

Interviewer: For you personally...if you are happy to talk about it...

Participant: Yeah sure...like personally um...I am quite cultural, religious person and although I have had...you...the normal...I have gone through the normal things that any youth will go through...boyfriends and even though I am religious and cultural and I do feel that I wouldn't have a relationship now that would have a sexual relationship outside of marriage and I wouldn't engage in ya, those kind of...promiscuous activities. I wouldn't put myself at risk of that, so in terms of that then I know but in terms of like at the hospitals then and things like that with needlestick injuries and things like that, then I take, like as I said, when I know that there is going to be a risk then I still take it ya...so, in terms of that then yeah...I feel like I have covered what ground I can cover but after that then, I don't.

Interviewer: So there is like a certain limit that you can go to and after that...there is only so

much you can do…

Participant: Yes, exactly. Realistically, in terms of my life I feel, there is only so much I can do not to contract it.

Interviewer: And the preventions you are taking, you feel that these are going to put a barrier between you and HIV.

Participant: Yes, I feel personally that they would.

Interviewer: Ok. It is just that you said you are quite a cultural and religious person, can you just share a little bit of that with me and then sort of if, maybe we can then tie that up with to how that has also helped you to prevent yourself from contracting HIV.

Participant: Ok, in terms of culture and religious, relationships for us are not allowed before marriage, even non-sexual relationships, anything with the opposite sex.

Interviewer: When you say for us can you just say…

Participant: Um, sorry for us for um, my religion um, Muslim [laugh], for any Muslim girl and I am not even supposed to look at a person from the opposite sex. So in terms, obviously I have had relationships and I have been involved with the opposite sex but there is so much, there is a limit that I set myself and in terms of that, then I wouldn't then cross those boundaries yeah…so that is like, there has been a lot of family influence and in the way I was brought up and in all the generations' influence but that is me personally and I'm not like saying this is for all Muslims because I know for sure of people who don't like you know, adopt that same attitude to me…ya…

Interviewer: Mmm…don't you find it quite hard to for um you, but you have made decisions for

yourself and you can justify it by saying that it is your family's influence and people you have respected that brought you up like that and what you believe, your faith. But there are also other people that also call themselves Muslim and then they don't practice that...

Participant: ...they don't...

Interviewer: ...and how do you understand that for yourself?

Participant: How do I perceive their ways?

Interviewer: Ya, because they are adopting the same principles but not following out on it...

Participant: Um...like I feel in some cases it is a personality thing. Like you either are going to conform in terms of that religion and culture or you are going to like, you know, break the rules. So I feel like it is much more of a personality thing because of the people I have known that have not conformed, it was more a personality thing than in culture because I have known the family, I've known like, the influence and all of those have been the same as mine but it is just the person themselves who's not confirmed to that cultural norms or set-up or religion, yeah.

Interviewer: Like the individual character of the person?

Participant: Yes, you have got to have ya...there is some part of a character who's got to want to adopt to like all those influences I was telling you about...

Interviewer: So it is like...cause I don't want to stereotype and say it's an extravert or introvert, what would you say is the kind or person who...maybe almost like a more submissive person to say ok, I am going to take this...would that be right or did I not...

Participant: Um...I wouldn't say submissive, I would say more um, you have got to separate that part of yourself and like if I, I go out with my friends, I am assertive, I feel like I am...I am an independent person and in terms of, there is a limit to what I do and what I don't do, and that limit is guided by religion and cultural norms...

Interviewer: ...ok...

Participant: ...yeah, and then you do get the submissive types that would confirm to any, to whatever their parents say or whatever without thinking about but, but I feel that I have thought about it now. No that we have made this decisions...like my parents never pushed me in terms of you know...

Interviewer: So you have almost come into it as a self-realisation...

Participant: And it wasn't an easy thing because I went through um, a lot of turbulent times with myself because uh...the society we are in, the friends that I have, there is a lot of influence and you want to fit in and I also felt that as well...

Interviewer: ...yeah...

Participant: But I came to it now, not even that long ago, like I feel like I have grown into it...how I see things now and it has been through experience as well, yeah.

Interviewer: So, experience and to a certain extent choice in to who you are now...

Participant: Yeah, and I have had that choice I feel. I have had that opportunity to make that choice and it is not like that for everyone like in terms of my religion and culture like, a lot of people don't have the choice you know...yeah...it's this way or the highway [giggle].

Interviewer: Exactly, yeah...ok. Do you think that um, your choice that you have made, what is

it that you think is it about in other people that they don't, they are not able to make that choice? Um...I don't know if you understand...you say that you have been able to have the space to say; do I want to go this route or do I want to follow what has been instilled in me from family. And then there are other people that you said um, even though they have had that instilled in them from their families; what is it that is different about them do you think...that they sort of live half lives...sort of half in their religion and then half in this worldly sort of...and maybe you could speak from, not that I am saying you were worldly, but um, when you were kind of leaning towards that or when you were in between and you were going through that journey when you were trying to decide. How did...ya...how did you...

Participant: Mmm...I think it was a fight between wanting to be completely independent and I think it was also the age that we are at, the age that I am at, and that time was when I felt I could do anything and you know...kind of invincible...like I feel that you need to grow up to get out of that ya...that phase. And those that don't grow up have, I feel, obviously made that choice that this is what I want to do with my life and they have made that choice and you like, if you ask them they can't say that just has just like happened to me...they made that choice to live that lifestyle and they ya...so I think that in everyone you go through mental processes when you decide ok, right or wrong or this or that, and I have made wrong choices in the past that have lead me to now living the way that I do 'cos ya, so...so there was, it wasn't like there was this thing where it was what I felt all along like, very religious and very cultural ya...'cos I did go through the phase and...

Interviewer: And would you say that HIV has played quite a role or any role in how you have chosen to live your life?

Participant: [sigh]

Interviewer: ...or has that been subsequent maybe...

Participant: I don't like to say that I am detached form it but I don't maybe think about it consciously. Like when I hear about it or am involved with people who have HIV the...but when I am just on my own or making choices or things like that then it doesn't really factor in, yeah...

Interviewer: Ok, so that was almost more secondary...and as a result it was like of well good, at least I'm not at risk from HIV...

Participant: ...yeah...

Interviewer: ...it didn't play a causal factor in your choice.

Participant: No, it didn't play a causal factor. Ya, but it is also one of those things not spoken about. Like everyone has this perception that Muslim people don't have HIV so that all of us are exempt from it and I think that it wrong, it is a very wrong attitude and like I wasn't given information about like HIV, sex and all of those things were off the topic to talk about so that is why I feel that the influence that the media have on the youth is so important because the youth out there like in terms of my religion need to know these things and the only way I would know about it is from outside sources but like we would never speak about it in my family like you know like these are the risk factors or do you know about you know. It wouldn't be brought up as such.

Interviewer: So that in itself is a risk factor, to say that if you are maybe not taught it or maybe not spoken about in the family then because you are unaware of it then you get educated by the media and what they are telling you to do is quite scary in terms of HIV.

Participant: Yeah...it is very scary and like, I'll tell you the one thing that I have done is like the

LoveLife campaign. I'm for it in terms of the HIV messages and all of that but there is a lot of things that I am not part of like you know, what I would consider part of a healthy lifestyle like giving out the free condoms and you know...so like, I take it like when I see it and tear it up before my brother can even see it and before my brother can even get hold of it and I mean he is young, he's like 13 and I don't want him to be reading all of those things. So in the media there is mixed messages coming across; on one hand you are promoting safe sex and like on the other hand you want prevention of HIV and ya...

Interviewer: ...ya like the two going together really...

Participant: ...ya...the two can go together I mean obviously safe sex can prevent HIV but then if safe sex with anybody, are you just saying you must have safe sex with anybody that you want to have sex with you know...regardless of who they are, ya...

Interviewer: So do you feel that the spread of HIV would probably be stopped if people probably erred towards abstinence rather than safe sex?

Participant: Ya, I do feel ya...

Interviewer: Do you think it is viable?

Participant: No, it is not practical in our lifestyles saying with the instant gratification thing. It is very difficult because there are so many different types of youth out there you know. There are those who are abstinent, there are those who are engaging in free casual sex and there has to be a target for each that kind of type, the type of youth. Like my brother, he is standard 8 and he doesn't know for sure all of the ways that HIV could be transmitted even though he is in Standard 8. Like he would say something and I would say no, you are wrong you know. You can't actually contract HIV from eating off someone's spoon you know...

Interviewer: ...or going to the loo...

Participant: ...or going to the loo...so there needs to be more, like in terms of family, families need to play more in putting to educating their children and even in terms of general lifestyle factors and ya...

Interviewer: How do you think we are going to be able to do that in some cultures or religions, where as you said like, with Muslims it is taboo to talk about it. What do you, like how, what are we going to do about it? If you feel that it should stem from the families...

Participant: Ya...I think the Muslim families are now becoming a bit more open minded in terms of...it is like the newer generation Muslim families and Muslim parents like, we can see the change in the way they would approach things with their children and there has been a shift. But my parents are not those younger generation types so I think in the future, I feel there would be a bit of a change but it's not going to be immediate and not everyone is going to adopt to it because a lot of Muslim people are rigid thinkers and they won't you know...

Interviewer: Really?

Participant: Yeah.

Interviewer: Do you think that people in our generation?

Participant: Even people in our generation are quite rigid some of them...

Interviewer: Ok. And I suppose it is like linking back to what you said earlier, it is almost like a wait and see attitude, to see that when you have children and um...I am just presuming that you don't, sorry. Um...that when we have children that we will be the ones who will make the changes in the future...

Participant: Yes, ya, ya. I think that the responsibility does lie with us and as health professional as well, education, the way that we can, we have that leeway to um...that opportunity where we can disseminate information and we should use that opportunity...

Interviewer: It is a nice platform to use...

Participant: Just by being in that profession...

Interviewer: And just chatting a bit more about the spread of HIV, do you have any sort of theories about how it is spread mostly um, maybe some groups of people are more to blame than others? I don't know what your feelings are on that.

Participant: Mostly I feel it is the unprotected sex and lots of sexual partners and that is the most strong relationships.

Interviewer: And I think, if I remember well enough, you said it is over young and older people. That you feel that everyone plays a role.

Participant: Ya...

Interviewer: And do you think there is a gender difference in the understanding of HIV and how it spread between men and women?

Participant: I know that females are more vulnerable, in terms of the sexual issue with the whole, they are more, what can I say...

Interviewer: ...predisposing them...

Participant: ...yeah...exactly, but there is no emphasis placed on the gender and in terms of the

gender there are a lot of factors that come into play there in the different cultures like the role of the man and the role of women, being able to say no to a man who is offering sex...there is a lot of those dynamics in relationships you know, even pertaining to sexual relationships that I feel there are gender differences there that would obviously predispose a woman more in terms of that.

Interviewer: So you feel that biologically and socially women are um, vulnerable to contracting the virus.

Participant: Ya.

Interviewer: And men, what role do you think men play in the spread of HIV?

Participant: In terms of?

Interviewer: Just like you said in different cultures like maybe the African culture, some people say that the um, men, that they are supposed to be very virile and have lots of sexual partners and I don't know if you agree with that or...

Participant: I don't know much about African culture to comment but I do know that in the ways a man is perceived as higher, more stronger and a woman is more docile. Like for example, in our culture as well, men is seen as more, although we are equal in our religion, a lot of people don't know that we have equal status in the eyes of God, men are more culturally more higher than women. Like I could never ask my future partner to take an HIV test, my future marriage partner. Because that would be like an insult to his character because I assume that, I should assume that he has not had a sexual partner before...

Interviewer: ...that he has not put himself at risk...

Participant: ...that he hasn't put himself at risk, exactly. So, ya I would have to ya [giggle]...

Interviewer: That is quite hard hey.

Participant: Ya, it is very difficult.

Interviewer: Especially for you because you are so educated in the field.

Participant: Ya, and so that is like, I don't know if it answers your question but I feel that is an example that...the role and...that and knowing that if a man knows that ok, she is not going to ask me for an HIV test, some men might use that to you know, go and use that to go an like, if they know women are never going to say no to them or challenge them then they would go around being promiscuous if that is what they really want. Ya...we also can play a role in how they live their lives.

Interviewer: And for you personally, when you do get married, um...and you felt that you wanted to go do that, I mean how do you understand that for yourself that if you don't because you are being, you are playing the woman role but then in the same breathe, you are putting yourself at risk...

Participant: Ya, I might be...I think I would approach him in a very by-the-way off-hand manner in like conversation and just say like oh, I had an HIV test the other day, have you ever had one? Or like I would never say oh, we have to talk about something or demand...I would never like directly confront it.

Interviewer: So maybe it is the manner in which do it...

Participant: ...yeah...the manner.

Interviewer: yeah, sho. So it seems like just from what you were bringing up, that a lot of the people getting vulnerable to HIV can stem a lot from your social background...

Participant: Ya...definitely.

Interviewer: So it is quite interesting because coming from a medical background and I mean you still have a big perception that it is a very social disease, which is refreshing...

Participant: yeah...I don't really focus on it in a medical terms like, me being out there next year if I am going to be out on physical block and it wouldn't be in the back of my mind and oh like, I might contract HIV or go for like tests every month or...I wouldn't...

Interviewer: So you have a very practical understanding in terms of your personal theory. It is like this is how I am vulnerable and this is how I am not vulnerable.

Participant: Mmm...I chose this profession so like, I have had a choice about what I want to do and what I don't want to do so...I can't say now like ok, I don't want to work with anybody who has got an open wound because I don't have that choice ethically and because now, if you want, if you...you know, I knew enough about HIV when I entered this course to be able to say you know, this is not for me...yeah.

Interviewer: So it is almost like you have to have this idea to say, I am working here; this is how I feel about HIV...

Participant: ...and then don't complain about it if you, you know, at risk. You don't complain if you are at risk because you put yourself there in terms of that, ya.

Interviewer: Do you think that other OT's do complain?

Participant: Yes. Like from my class. Yeah...there is like a lot of fear and overly precautions people in my class, yeah...just being on prac with other people in my class made me aware of how other people perceive HIV. Like, an example was once someone had a, there was a guy that came in and we were working with him and

his stitches started bleeding and we didn't have gloves on because when we saw him he had no open wounds...

Interviewer: Oh...it opened while...

Participant: ...yeah...it opened then, so I quickly took the cotton wool and dabbed it up and then after that put my glove on and a friend of mine reprimanded me and said when you saw the patient with stitches, you should have put your gloves on and I would never work with a patient with no gloves and you know...that I was like taken aback by that and seeing her, the way she put gloves on with almost every patient in the clinic and seeing the way she...and I do respect her own feelings about HIV and she has her reasons and that, and that is why I am saying that there is a lot of differences in how you, like in my specific class, how different OT's see HIV and like, some people in my class go for regular tests, and have been for tests and ya, so...

Interviewer: It sounds like they maybe err on the side of being a little too particular about it.

Participant: Yeah...and then there are some who don't like follow at all and I feel like I am slightly, not that I don't bother at all but I am not in that category where I am overly cautious...I am aware, that's all.

Interviewer: Is it any specific groups of people in the class that are more precautious than others or is it just, are they just random people? So we can't sort of classify it is sort of those people maybe it is the guys that are more careful about it or...so there is no sort of common entity among the people that are sort of very cautious.

Participant: Mmm...there are certain personalities more who would lend themselves to being more overly precautious...perfectionist kind of people...focus on cleanliness, those sort of people who would naturally be like that, it just exacerbates that more now, you know, ya.

Interviewer: Yeah...so it is probably something that is innate, something that is inside of you...

Participant: Ya, it is.

Interviewer: Ok, I just want to see what we have spoken about...we have kind of touched on most of it...and condom use...

Participant: That's also a cultural issue...like we could never ask a person to wear a condom...

Interviewer: ...really...so that would go under the same sort of category of asking him to go for an HIV test...

Participant: ...contraception would be my responsibility...

Interviewer: ...and would he be able to ask you...to go on contraceptives...

Participant: ...yeah...he would. I would naturally, just assume that I would be the one taking the responsibility like in a married situation.

Interviewer: But if you didn't want to go on let's say oral contraceptive, would you ask him to use condoms?

Participant: No, I could never do that...

Interviewer: And are you ok with that? Like have you accepted that?

Participant: Ya [sigh]. It's ok, there are some things I feel like I can't change the system yeah...I don't feel like even trying to be quite honest. But accept it that much...

Interviewer: And even in the marriage, you know if he was possibly unfaithful, then...obviously

as much as you…you are at risk. Have you thought about that?

Participant: Mmm…yes, it is stressful, it is very difficult like, as I say, when you get to a marriage then you are like, it is based on so many assumptions like you assume your husband will not be faithful, unfaithful to you ever, and like I have to live with that assumption like my mother would never question whether she is HIV positive or not, family member of mine would never question it unless has exposed his being unfaithful…[giggle]…

Interviewer: Wow, it is just, it is really hard because any relationship, across the board,are you going to go in presuming they are going to be unfaithful so you start using condoms from the beginning or do you go in trusting…like which is the lesser of two evils…you know…

Participant: Mmm…it is actually very difficult.

Interviewer: So do you think that could be a possibility of being at risk, in that situation?

Participant: Yeah…definitely. And I don't know but everyone is human and I wouldn't say that my husband would never, never be unfaithful and um, yeah, so…so in terms of that…

Interviewer: And how do you feel about that…are you ok?

Participant: Ya…I think I just try to shut it out and…

Interviewer: …you don't let it come in….

Participant: With us there is also this second marriage thing, having multiple wives, it is quite

common for a man to have two, three, four wives so...it plays a fact that if the man is unfaithful then with his three wives, all of them are going to get infected you know, it's the spread can go further as well so...

Interviewer: So in some areas, religion and culture can protect you and in some areas it can make you more at risk...

Participant: Yeah...and culturally there is more emphasis on the man being um, you know, you would assume him to be completely clear, you wouldn't assume anything negative of a man really, so ya [giggle]. Sometimes I feel, men, in terms of our religion, you find promiscuous behaviour among men than among females so like if I was promiscuous everyone would know. Like I am fast...it would be spoken about, even about yeah, even among young boys...

Interviewer: ...because you are not allowed to...

Participant: ...ya...even among young boys, they would see me as slutty or...even if I had more than three boyfriends then now I am considered, you know...

Interviewer: And for guys, if they have got more than three girlfriends...

Participant: No, guys it is not an issue...it is just a big gender thing for us. Even in the family, there is much more emphasis, much more importance is given to men.

Interviewer: Ok, thank you so much...is there anything else you want to bring up?