FACTORS INFLUENCING UNIVERSITY STUDENTS’ USE OF HIV VOLUNTARY COUNSELLING AND TESTING SERVICES: AN ANALYSIS USING THE HEALTH BELIEF MODEL

By

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DECLARATION:

In accordance with Rule G4.6.3,

I, Shingisai Musemwa (207049042) hereby declare that the treatise for MA Clinical Psychology is my own work and that it has not previously been submitted for assessment to another University or for another qualification.

Signature________________________________________________________
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DEDICATION

This treatise is dedicated to Makoti Edwin, who inspired me to dare to open myself up to new experiences, even those I did not understand.
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ABSTRACT

Human Immune Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) has emerged as the most devastating epidemic that the world has experienced. Voluntary counselling and testing (VCT) has proven to be an effective way of preventing and controlling HIV. South African universities provide free VCT services on their campuses; however, these facilities are underused. The study’s objectives were to use the components of the health belief model (HBM) to explore and describe the factors that influenced the decision made by university students who have gone for VCT.

The sample consisted of five male students. Data was collected through one-on-one in depth interviews, which were recorded. Data was analysed using thematic analysis, and the components of the HBM were used as codes for the data. Themes were generated for each component.

The results indicated that perceived severity, perceived benefits and cues to action played a role in influencing the participants’ decision to go for VCT. In addition, results show that perceived susceptibility had little influence on their decision to go for VCT. Even though participants acknowledged barriers to VCT, they reported that the perceived benefits for VCT outweighed the barriers, and the decision to go for VCT was made. Participants suggested that to increase uptake of VCT on their campus, the university could improve current VCT campaigns, introduce rewards for VCT and introduce couples VCT.

Key Words: Acquired Immune Deficiency Syndrome, health belief model, Human Immune Virus, university students, voluntary counselling and testing.
CHAPTER ONE

Introduction and Problem

1.1 Introduction

The United Nations Development Program (UNDP) reported that the pandemic of HIV/AIDS has been the single greatest reversal in human development (UNDP, 2005). In countries that are most affected, HIV has reduced life expectancy by more than 20 years, slowed down economic growth and deepened household poverty (Joint United Nations Program on HIV/AIDS [UNAIDS], 2008). There is undoubtedly a need to take action. Voluntary counselling and testing (VCT) is one of the cornerstones of HIV prevention and control. When people participate in it, they acknowledge their vulnerability to HIV infection, and they are taking the first step towards taking responsibility to protect themselves and others, (UNAIDS, 2003). This chapter discusses the problem of HIV among university students and the need for VCT in this population. The motivation to investigate this phenomenon is discussed, and the objectives of the study are outlined. The chapter reviews the methodological approach used in the study and highlights the data collection and analysis procedures, as well as important ethical considerations. The chapter concludes with an outline of the study.

1.2 HIV and VCT in Universities

Young people are of concern in the HIV/AIDS epidemic. Young people between the age of 15-24 have been consistently identified as an “at risk” group (Dorrington, Johnson, Bradshaw, & Daniel, 2006; Horizons Project, 2001; Shishana et al. 2009; UNAIDS/World Health Organisation [WHO], 2007). This is because HIV has claimed the lives of many promising skilled young people at an alarming rate (UNAIDS/WHO, 2006). University students are in this at risk group, and despite exposure to tertiary education, they behave in
ways that suggest that they do not fully grasp the threat of HIV. This has been observed in the way they engage in high HIV risk behaviours such as low condom use and multiple sexual partners, among others (World Bank, 2001). It has been reported that initially the universities as a whole were slow to respond (Higher Education HIV/AIDS Programme [HEAIDS], 2010), however recently there have been many efforts to combat the spread of HIV. For example, universities in South Africa have established free VCT facilities on their campuses, in order to promote the prevention and management of HIV among the student population as well as committed to reducing the impact of HIV/AIDS (HEAIDS, 2010). However, these facilities are under utilised by students. This under utilisation of VCT facilities by the students is a cause of concern to anyone involved in the fight against HIV/AIDS. Given this, there is a need to increase the uptake of VCT, and exploring the perceptions of students who do go for VCT is a way to achieve this.

1.3 Motivation for the Present Study

The present study set out to determine the factors influencing university students’ use of VCT facilities. The significance of researching these factors, is to uncover how students experience and perceive the decision making process of deciding to go for VCT or not. In doing so, the personal experience, feelings, behaviour and community life of the university students are under investigation (Foxcroft, Ireland, Lister-Sharp, Lowe, & Breen, 2003). In order to achieve this, a theoretical framework that accounts for different aspects of the decision making process would need to be utilised. The health belief model (HBM) was identified as the theoretical framework for the study. Use of the HBM allowed the researcher to conceptualise that ultimately the use or non-use of VCT facilities rests on the beliefs about HIV testing. Beliefs are important in psychological processes. Rockeach (1981, p. 8) states, “with them [beliefs] we create personal images, change our identity according to our ideas”. The researcher determined that it is essential to know students’ personal experiences and
perceptions with regards to getting tested for HIV, in order to determine what interventions, with regards to increasing the uptake of VCT would be most beneficial.

1.4 Objective of the Study

The objectives of the study are to describe and explore the factors that influence university students use of VCT facilities. In addition to these objectives, it is important to note that the exploration and the description of these factors are embedded in the five factors of the HBM. These are perceived susceptibility, perceived severity, perceived benefits, perceived barriers and cues to action. Even though it is not the primary objective of the study, the researcher sought to find out the students’ views on what they think can be done by their university to improve the uptake of VCT.

1.5 Research Methodology

The present study is exploratory and descriptive, using qualitative research. Exploratory descriptive designs focus on the words, sentences and impressions provided by participants (Mouton & Marais, 1990; Neuman, 2003). This is done in order to elicit the quality and texture of the participants’ perceptions, while simultaneously endeavouring to foster an understanding of the participants’ views about the subject under investigation (Willig, 2001).

1.5.1 Data Collection

The collection of data was done using one-on-one in depth interviews with 5 African male participants all aged 22 from Nelson Mandela Metropolitan University (NMMU). The interviews were guided by a semi structured interview schedule (see Appendix A) and were recorded using an audio recording device. Follow up telephonic interviews were conducted with the participants.
1.5.2. **Data Analysis**

Data analysis was conducted in accordance with the principles and guidelines of thematic analysis (Babbie, 1998; Braun & Clarke, 2006; Willig, 2001). After considering the five components of the HBM, perceived susceptibility, severity, benefits and barriers and cues to action as a basis for analysis, the process involved six phases. To ensure the credibility and validity of the data analysis and the research results, an independent coder was utilised.

1.5.3. **Ethical Considerations**

Before the commencement of the study, the researcher made arrangements to refer the participants to Student Counselling services at NMMU, in case the participants expressed that they needed it, or if the researcher judged that they needed it. To actualise the ethical considerations, the researcher made certain of the following: written and verbal informed consent, through which deception is avoided; accurate data collection; maintaining the confidentiality, anonymity and privacy of participants; and maintaining competence within the researcher's professional role. Informed consent was obtained from all of the participants through a written contractual agreement (see Appendix D).

1.6 **Outline of the Study**

The first chapter has provided an overview of the focus of the study, as well as a brief description of the methodology used to actualize the objective of the study.

Chapter two follows with a literature review of the global and the South African incidence of HIV. The risk of contracting HIV for university students follow, with a specific reference to the university environment, denial and distancing, knowledge about HIV, alcohol use, as well as sexual activity and condom use. The chapter also goes on to discuss VCT in
terms of the benefits and barriers to VCT, as well as the available models of VCT in South Africa.

The third chapter discusses the theoretical basis of the study. It begins by looking at the relationship between health and psychology, briefly looks at the models that are related to psychology and health, and then proceeds to spotlight the HBM, as it is the chosen theoretical framework to analyse the topic. In particular, the HBM’s ability to explain health behaviours is explored as the understanding of the results of the study is within health behaviours. The chapter concludes by briefly exploring the criticisms of the HBM.

Chapter four reviews the methodology implemented for the study. This review highlights the benefits of qualitative research designs and the appropriateness of using one-on-one in-depth interviews for the study. This chapter discusses sampling procedures, as well as data collection and analysis. In addition, observations made during the research process and ethical considerations pertinent to the study are examined.

The fifth chapter reports on and discusses research findings. The themes corresponding with the five components of the HBM are discussed.

Chapter six provides a summary of the study and highlights important outcomes pertaining to the results of the research. The study concludes with the implications of the present study, the shortcoming of the study and offers some suggestions for both more effective use of VCT and further research direction.

1.7 Summary

This chapter introduced the study. The persistent problem of students not engaging in the free VCT services on campus, followed by a motivation for the study were discussed. The chapter went on to outline the objectives of the study and the research methodology. The chapter concluded with an outline of the chapters in the study. The following chapters are devoted to an in depth discussion of the study.
CHAPTER TWO
University Students, HIV and Voluntary Counselling and Testing

2.1 Introduction

This chapter defines HIV and AIDS in order to illustrate the difference between the two concepts. It then puts HIV/AIDS into context in terms of both the world epidemic and the South African epidemic. An exploration of the factors that render university students, and young people in general, more vulnerable to HIV infection shall be discussed. VCT and its core elements will be looked at, and the benefits of and barriers to VCT will be discussed. This study looks at the factors that influence university students’ use of VCT and the purpose of this chapter is to explore the context of university students in order to explain why VCT is important to this subgroup.

2.2 Definition of HIV and AIDS

Before proceeding, it is important to include the definition of HIV and AIDS. Research done by Levy (2008), in Papua New Guinea revealed that even after a comprehensive HIV and AIDS awareness program was implemented over a period of three years, the participants still did not know the difference between HIV and AIDS. In most cases, HIV and AIDS are used simultaneously and this creates misconceptions. By definition, AIDS is a syndrome of opportunistic diseases, infections and certain cancers that occur in clusters resulting from a compromised immune system, and it is caused by HIV (van Dyk, 2001). HIV is a retrovirus that attacks the T-cells of the immune system and interferes with the body’s ability to fight off new infections resulting in a diagnosis of AIDS (UNAIDS, 2009). This therefore means, that being HIV positive does not necessarily mean one has AIDS. The most common type of HIV is HIV-1, which is distributed worldwide, and HIV-2 which is confined to West Africa (WHO, 1998). HIV is predominantly transmitted through
unprotected sexual contact, but can also be transmitted through sharing of needles and from mother to child during pregnancy, child birth or breastfeeding (UNAIDS, 2010).

2.3 Global HIV/AIDS Prevalence and Incidence

According to the UNAIDS report (2010) in 2009 alone, there were 33.3 million people living with HIV worldwide. Although this number is significantly high, there has been evidence of some gains in the epidemic. For example, in 2005, there were 39 million 5 hundred thousand people living with HIV (UNAIDS, 2006), showing a drop by almost 7 million in 2009. In addition, new HIV infections were estimated at 2.6 million in 2009 which is 19% lower than the 3.1 million new infections seen in 1999 (UNAIDS, 2010). These gains have been attributed to an increase in the medical treatment of HIV through anti-retro virals (ARVs) as well as behaviour change among young people (UNAIDS, 2010). However, research has shown that for every two people who are on ARVs worldwide, five newly infected people have to be accommodated on ARVs (UNAIDS, 2008). This has the potential to reverse the gains made in the epidemic. The epidemic of HIV/AIDS has devastated families, as HIV brings unexpected changes and pressure to all aspects of life for both the infected and the affected (Shishana et al., 2009).

2.4 HIV/AIDS in South Africa

Southern Africa remains the epicentre of the global epidemic, as 34% of new HIV infections occurred in this region (UNAIDS, 2010). According to the South African Department of Health (DoH) (2007), the HIV epidemic in South Africa is generalised. This means that it is firmly established in the general population, and sexual networking in the population is sufficient to sustain the epidemic, independent of sub-at-risk populations (DoH, 2007). This has resulted in the prevalence of HIV in South Africa stabilising at a high level (UNAIDS, 2008). The high level of stabilisation has been attributed to the fact that the
number of new HIV infections is equal to the number of people dying from AIDS related complications (DoH, 2007; Dorrington et al., 2006; Shishana et al., 2009). In terms of percentages, South Africa has an HIV prevalence rate of 10.6%, however in terms of numbers it is one of the most affected countries in the world (Shishana et al., 2009; UNAIDS, 2008). By mid 2006, 5 million 4 hundred thousand, out of a total population of 48 million South Africans were infected with HIV (Dorrington, et al., 2006). In addition, it was projected that if there were no effective HIV prevention interventions, an estimated 6 million South Africans will be infected with HIV, 5 million South Africans would have died from AIDS related complications, and a further 7 hundred thousand South Africans will be sick with AIDS by the year 2010 (DoH, 2007; Dorrington et al., 2006). Currently the UNAIDS report (2010) has estimated this number to be 5.6 million in 2009 thus indicating that the South African epidemic has reached its peak. The second HIV/AIDS and Sexually Transmitted Infections Strategic Plan for South Africa, 2007-2011 highlighted the importance of reducing new HIV infections, and keeping healthy those infected with HIV, through increasing access and uptake of VCT and ARVs (DoH, 2007; Shishana et al., 2009; UNAIDS, 2008). In addition to that, there has been leading research in South Africa involving Tenofovir Gel which is a microbicide that can be used by women, various HIV vaccine trials and encouragement of male circumcision which has since been shown to reduce infection in males (UNAIDS, 2010).

2.5 HIV/AIDS and the Youth

As early as 2001, the United Nations Declaration of Commitment on HIV/AIDS outlined the goal of reducing HIV prevalence by 25% in young people in the most affected countries by 2005 (UNAIDS, 2006). However, this goal was not met, suggesting that the dynamics of the HIV/AIDS epidemic are more complex than was initially conceptualized. Globally, the youth aged 15-24 have high HIV infection rates and they accounted for 45% of
new infections globally in the year 2007 (UNAIDS, 2008). In South Africa alone, 15% of the
population aged 15-49 is HIV positive (DoH, 2007). This has prompted the South African
government to identify the 15-49 age groups as a priority group in reducing new HIV
infections (DoH, 2007).

The future course of the HIV/AIDS epidemic, and success or failure in controlling its
spread, hinges on changing HIV risk behaviours adopted and maintained by young people.
The consideration of the contextual factors that have contributed to the development of these
behaviours will better inform HIV prevention programs (Shishana et al., 2009; UNAIDS,
2006). Young people need to be aware that they have the power to alter the course of the
epidemic through personal behaviour change. Research has shown that it is easier to foster
positive behaviour change from young people aged 15-49 than any other age group (DoH,
2007; UNAIDS, 2006). To illustrate this, lowered infection rates observed in Kenya,
Rwanda, Uganda and Zimbabwe among the population, were due to the behaviour change of
the youth (UNAIDS, 2008).

This study focused on young people, as they are an identified risk group. Being tested
for HIV constitutes a positive health behaviour and given that university students fall into the
at risk age group, HIV testing is beneficial to better plan all aspects of their future. Once
university students genuinely accept that HIV poses a threat to their future, they will be in a
better position to make informed decisions concerning HIV.

2.6 University Students and HIV Risk Behaviours

In the year 2000, it was estimated that 22% of university undergraduates, 11% of
postgraduate university students, and 24.5% of technikon undergraduate students in South
Africa were HIV positive, and this number was expected to increase to 33%, 21%, and 36%,
respectively by the year 2005 (Chetty, 2000). A more recent study showed that the mean
average of HIV infection among university students in South Africa was 3.4% (HEAIDS,
This contradicts the initial projections, however the percentage still warrants a massive action by all that are involved in the fight against AIDS to want to push efforts towards fighting against HIV/AIDS. In the year 2008, the South African University Vice Chancellors Association (SAUVCA) adopted a policy framework on HIV/AIDS that included prioritising prevention and intervention programs such as VCT at tertiary institutions, (Higher Education South Africa, 2008).

The WHO defines risk behaviours as specific forms of behaviour that are proven to be associated with increased susceptibility to a specific disease or ill health (WHO, 1998). University students engage in HIV risk behaviours that increase the likelihood of contracting HIV, and yet they do not take the necessary steps required to prevent HIV infection (Johnston-Polacek, Hicks, & Oswalt, 2007; Sunmola, 2005). It is postulated that a vast majority of university students who engage in HIV risk behaviour do not think they are personally at risk of contracting HIV (Cok, Gray, & Ersever, 2001; Raijmaker & Pretorius, 2006).

The HIV/AIDS epidemic is complex and diverse, and though it is not fully understood, it is reported to be driven by behavioural, social, and biological factors that both exacerbate and facilitate the spread of HIV (DoH, 2007). School leaving is a time of insecurity for many young people as they are starting to learn to become responsible for themselves. During this time, young people are moving from a structured school and home environment where consequences for misbehaviours are known, to an unstructured environment characterised by freedom of choice regarding issues on alcohol and drug use, and sexual behaviour among other aspects. These and other factors contribute to the likelihood of university students contracting HIV. The following section looks at these factors in detail.
2.6.1 University Environment

Campus life exposes students to the possibility of a variety of new experiences. Being in university creates the opportunity for freedom from authority, but students may not be willing to be responsible for the newfound freedom. It has been found that the university environment exposes students to peer pressure, offers easy access to sex, alcohol and drugs, and these factors contribute to the development of HIV risk behaviours (American College Health Association, 2006; Brown et al., 2008). A HEAIDS (2010) study reports that first year students have difficulty with initially to manage risks associated with the newly found freedom, most notably with regard to casual sex without condom use in the context of alcohol.

A systematic analysis of the dynamics of HIV transmission in the South African university environment found that inter-related factors operate at different levels within the university environment (Petersen, Bhagwanjee, & Makhaba, 2001). These include sociocultural construction of masculinity/femininity, that is male students need to be hypersexual and have multiple sexual partners and female students can use sex to get and keep a man. Another factor is the need for status at a social level through mechanisms of peer pressure, and the nature of student culture. All these factors found to impact on the likelihood of increased HIV infection in the university environment. In addition, the study indicated that perceived non-supportive environment of the university results in adjustment anxieties that render first year students more vulnerable to HIV infection (Petersen et al., 2001).

A study done among Botswana university students showed that some students blame their HIV risk behaviours on boredom and lack of entertainment (Brown et al., 2008). Some students responded that they have nothing to do, so they excessively consume alcohol, which results in increased casual sex and reduced condom use. This indicates that, even though
university students are viewed as young adults able to think and make decisions rationally, their environment easily influences them. An explanation for this may be found in the fifth stage of Erik Erikson’s developmental crises. University comes at a time when young people are still in the process of establishing an identity among peers, family members, and the community (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2007). For some students, this may result in conforming to what is perceived as socially acceptable behaviour. Conformity is a price one pays for acceptance and social harmony (Meyer, Moore, & Viljoen, 1989). Sometimes that price means engaging in behaviours that contradict perceptions of self and the world. Some students may not see it as conforming, but a way of connecting with fellow students to gain acceptance in campus life. This results in behaviours being adjusted to what is perceived as the norm in the university (Erikson, 1963). Similarly, people conform so that they can be liked, and this enables them to maintain a standing in the group (Meyer et al., 1989). Therefore, even though some students may believe that drinking alcohol in large amounts damages health, they still engage in the behaviour so that they are not excluded from campus life. By doing so, students are trying to improve their social standing, but risk their own health.

2.6.2 Denial and Distancing

Denial is a defence mechanism used to reduce anxiety about a perceived threat (Meyer et al., 1989). If overused, it becomes maladaptive because it prevents anyone who uses it from accurately assessing personal risk to an identified threat. Denial is an HIV risk factor among university students, as they may believe that they are invincible to contracting HIV (Brown, Outlaw, & Simpson, 2000; Groove, Kelly, & Liv, 1997). For university students, there seems to be no correlation between HIV risk behaviour and HIV risk perception, as they are more likely to perceive risk groups rather than risk behaviours (Brown et al., 2000).
Denial of HIV risk by creating an image of “others” who are at risk of contracting HIV, and “us” who are not likely to contract HIV, results in distancing from risk groups rather than risk behaviours (Brown et al., 2000). Distancing from risk groups then leads to downward comparison. Downward comparison is a cognitive process that occurs when a person compares himself/herself to others whose behaviours are perceived to be riskier than their own (Brown et al., 2000; Hagopian, 1993). This helps one to feel less at risk with regard to own behaviour. For example, students may believe that they are not at risk of contracting HIV if they engage in unprotected sex with their primary partner compared to students who have sex in exchange for gifts. However, it appears they deny or ignore the fact that it takes just one encounter with an HIV infected sexual partner to contract HIV, thus putting everyone who is sexually active at risk of contracting HIV. This notion may be attributed to early depictions of at risk groups being homosexual men, intravenous drug users and prostitutes (Emlet, 2007; Parker & Aggleton, 2003). This may result in students not perceiving themselves as being part of these groups.

2.6.3 Knowledge about HIV

Knowledge of various aspects of HIV/AIDS allows appropriate action to be taken in relation to prevention of HIV and reduction in the spread of HIV (Shishana et al., 2009). Early HIV prevention programs were geared at providing basic information about HIV/AIDS to promote awareness of modes of transmission and safer sex. The assumption of this approach was that knowledge of HIV risk behaviours would result in HIV preventative behaviours (Di Clemente, 1994). However, these demonstrated that knowledge is not strongly related to HIV preventative behaviour (Ibe, 2005; Johnston-Polacek et al., 2007; Shishana et al., 2009; Uys, 2006).

A popular prevention program used throughout the 1990s was the ABC model of HIV prevention, where A indicates abstinence from sex, B indicates be faithful to one sexual
partner and C indicates condom use (Brown et al., 2008; DoH, 2007; Soul City/DoH, 2004; UNAIDS, 2006). However, the program received several criticisms. University students in particular, found the program to be unclear and oversimplified. This resulted in great confusion in understanding the nature and implications of the ABCs (Brown et al., 2008; Peltzer, 2000).

In recent years, the DoH has moved away from the ABC model of HIV prevention. The DoH has put forward several more encompassing media campaigns aimed at giving South Africans knowledge about HIV, in an attempt to ensure that individuals can make better informed decisions concerning HIV risk behaviours (DoH, 2007; Shishana et al., 2009). Shishana et al. (2009) outline the five popular media campaigns in South Africa as:

- **Khomanani**: This is a program run by the DoH and has several print, television and radio campaigns aimed at creating general public awareness about HIV and other health issues. The program also runs promotional events during days such as World AIDS Day.

- **Soul City**: This is a youth and adult focused television program that runs weekly on a local South African channel. It provides the viewers with current information about HIV, how HIV can be managed by the infected and the affected, as well as giving a sense of hope for those infected with HIV to continue to live full and productive lives.

- **Soul Buddys**: This programme is targeted at children and consists of interactional activities that are not only fun, but also informative about issues of HIV.

- **Love Life**: This youth focused campaign consists of television, radio, and print advertisements about HIV. It is aimed at motivating the youth to strive for success in their lives, while avoiding contracting HIV.
• 46664: The campaign is derived from former South African president, Nelson Mandela’s prison identification number and it aims to promote HIV prevention through charity concerts.

It is clear from the campaigns that, even if university students are not receiving HIV/AIDS knowledge in the educational context or from families, they are exposed to this knowledge through media campaigns. However, the fast increasing incidence of HIV infection among university students suggests that HIV knowledge is necessary but not sufficient for HIV risk reduction (Winfield & Whaley, 2002). This is because, for knowledge concerning the reduction of HIV risk behaviours to be effective, the knowledge should be appropriate and accurate, and those receiving it must gain an understanding of the knowledge (Shishana et al., 2009). Research has shown that university students know all they need to know about HIV transmission and protecting themselves against HIV infection, but as a result of denial and other factors, they do not believe the information applies to them (Brown et al., 2008; Cok et al., 2001; Cornelissen, 2005; Johnston-Polacek et al., 2007; Sauls, 2004).

2.6.4 Alcohol use

Alcohol functions as a depressant and inhibits brain and motor function (Sadock & Sadock, 2007). Even though other illicit drugs and their effects contribute to increased HIV risk behaviours, special attention is placed on alcohol, as it not only increases sexual risk behaviour, but it is a gateway drug for illicit drugs that may include marijuana and intravenous drugs (Gwede et al., 2001). Alcohol leads to impaired judgement and decision making, resulting in inhibited ability to discern when behaviour is risky at the time of intoxication (Gwede et al., 2001; Sadock & Sadock, 2007; 2001; Shishana et al., 2009). In addition, there are strong researched links between alcohol and risky sexual behaviour such as multiple sexual partners and unprotected sex (American College Health Association, 2006; Fisher, Bang & Kapiga, 2007; Johnston-Polacek et al., 2007; Morojele et al., 2004; Shishana
et al., 2009). In 2008, high-risk drinkers and persons who use drugs for recreational use in South Africa reported the highest prevalence of HIV (Shishana et al., 2009).

Most university campuses, unless they are connected to a religious institution that condemns alcohol intake, have bars on campus to provide students with entertainment. As stated before, university students complain of boredom and lack of entertainment and they frequent these bars to fill their time (Brown et al., 2008). Interestingly, after the administration of a university in Botswana closed a campus bar, the rate of sexual activity increased in the student population (Brown et al., 2008). This indicates that even though alcohol is a contributing factor to HIV risk behaviours, it appears that with or without alcohol, students are still likely to engage in risky sexual behaviours. It must be noted that there is conflicting evidence of the extent of the role of alcohol in HIV infection (HEAIDS, 2010), but it is clear that it is a pathway for some, but not for all.

2.6.5 Sexual Activity and Condom use

According to Desiderato and Crawford (1995), the risk of sexual infection of HIV depends in part on the sexual practices of individuals. Heterosexual transmission is still the predominant mode of transmission in South Africa (DoH, 2007). According to DoH (2007), in 2006, as many as 85% of new HIV infections in South Africa were attributed to heterosexual contact. Students experience sexual activity as part of campus life (Brown et al., 2008; Petersen et al., 2001). Experimenting with alcohol, drugs, sex, pressure from mixing with older age groups that are already sexually active, and peer pressure to fit in, may contribute to university students deciding to enter a sexual relationship (Brown et al., 2008; Shishana et al., 2009). Some students engage in sexual activities without accurate knowledge about own sexuality, prevention of sexually transmitted diseases, pregnancy, and the emotional responsibility of engaging in a sexual relationship (Baumgartner, Geary-Waszack, Tucker, & Wedderburn, 2009).
A vast majority of university students report being sexually active and having multiple sexual partners, but they do not practice safer sex such as consistently using a condom with all sexual partners (Johnston-Polacek et al., 2007; Kaaya, Flisher, Schaalman, Aaro, & Klepp, 2002; Petersen et al., 2001; Sunmola, 2005). When condoms are used consistently and correctly, they can effectively prevent the spread of HIV (DoH, 2007; UNAIDS, 2008). However, the inconsistent use of condoms observed among university students has been attributed to the use of alcohol, unplanned sexual encounters, and the perception that condoms are for contraception rather than for HIV prevention (Cok et al., 2001; Peltzer, 2000). In addition, condom use among students seems to be related to whether a partner is primary or non-primary. In South Africa, consistent condom use among primary partners is 15.4%, while condom use among non-primary partners is 46.5% (Shishana et al., 2009). Interestingly, in South African universities, female students find it difficult to initiate or negotiate condom use because they fear to be labelled as promiscuous (HEAIDS, 2010).

According to Shishana et al. (2009), in 2008, 27.6% of females and 0.7% of males in South Africa were having a sexual relationship with a partner who was five or more years older than they were. This is more common among female university students who have unprotected sex with older men who, in return, give them money for clothes, food, rent and tuition (Dike, 2004). This has come to be known as the sugar daddy phenomenon. It puts the female students at a higher risk of contracting HIV and other sexually transmitted diseases, as they may not be able to effectively negotiate safer sex or ensure that they are the only sexual partner (Dike, 2004; Shishana et al., 2009). In addition, it is presumable that there is also no guarantee that the female students are only having sexual relations with the same older partner as they may also be in a sexual relationship with an age appropriate partner. This leads to multiple sexual partners.
The term multiple sexual partners indicates an individual who has separate sexual relationships with two or more partners. Globally, it is estimated that 27% of females and 33% of males aged 15-49 are in multiple sexual partnerships (UNAIDS, 2008). Multiple sexual partners among university students are common and they result from peer pressure to attain status of being sexually desirable, seeking sexual pleasure and a de-emphasis on long-term relationships (Brown et al., 2008; Shishana et al., 2009). Multiple sexual partners create sexual networks that facilitate the transmission of HIV as new infections can easily spread once any individual in the network is infected (Shishana et al., 2009). Such partnerships are seen as normative and students do not take the steps needed in order to protect against HIV infection (Parker, Makhubele, Ntlabathi, & Connolly, 2007).

From this section, it is apparent that several factors influence the development and the maintenance of HIV risk behaviours among university students. HIV prevention programs designed for university students need to consider all these factors individually and collectively in order to better plan programs that reduce HIV risk behaviours among university students.

2.7 VCT as an Effective Prevention Tool for HIV

VCT in South Africa was introduced in the early 1990s through city based AIDS Training Information and Counselling Centres (ATICCs), non-governmental organisations, private sector services and public clinics and hospitals (Birdsall, Hajiyiannis, Nkosi, & Parker, 2004). The initial purpose of VCT was for diagnosing HIV, rather than preventing and controlling the spread of HIV (Thomas, 2001). In recent years, VCT is being used as a tool to educate, prevent, control and manage HIV/AIDS (DoH, 2007). However, inadequate uptake and access to VCT continues to handicap efforts to expand HIV prevention, and ensure timely access to treatment for HIV infected individuals (Creek et al., 2007).
In 2007, it was established that only 2% of the South African population is tested for HIV every year (Venter, 2007). According to the DoH (2007), 474 public facilities offered VCT in 2007. The available data indicated that in 2006, the Western Cape had the highest uptake of VCT with four out of one hundred people being tested for HIV while, the lowest was Eastern Cape and Mpumalanga with one out of one hundred people being tested for HIV (Dorrington et al., 2006).

VCT has been identified as an effective HIV prevention, control and management program in the fight against HIV/AIDS (DoH, 2007; UNAIDS, 2008). The following section highlights the benefits of VCT and some of the barriers that contribute to the observed low uptake of VCT in South Africa.

2.7.1 Benefits of VCT

According to UNAIDS/WHO (2007), 80% of individuals who are HIV positive are not aware of their status. In most parts of Sub-Sahara Africa, less than one out of ten adults knows their HIV status (Motavu & Makumbi, 2007). This suggests that VCT is at the heart of behavioural prevention, control and management of HIV, as knowing one’s HIV serostatus is the first step in the fight against HIV/AIDS (DoH, 2007; UNAIDS, 2008). VCT has many benefits for individuals and their communities. In terms of primary prevention, the aim of VCT is to help individuals to change sexual behaviours to prevent the spread and infection of HIV (Baggaley, 2001; UNAIDS, 2003). In terms of secondary prevention, VCT equips HIV infected individuals with knowledge on safer sexual practices, as well as ways to prevent other modes of transmission such as mother to child transmission for pregnant women (Solomon et al., 2004). In terms of management of HIV, VCT provides an entry point into the medical system, directing HIV positive individuals to appropriate resources for management of HIV/AIDS, and the associated opportunistic infections, (Hutchinson & Mahlalela, 2006). VCT also provides a platform for individuals and couples to learn specific skills needed in
order to effectively negotiate condom use and communicate about sexual issues (UNAIDS/WHO, 2007).

HIV testing has been related to reduced risk and transmission of HIV and behaviour change (Peltzer, Nzewi, & Mohan, 2004). Research conducted in Kenya, Tanzania and Trinidad, over fourteen months showed that the VCT program was more effective than health information programs in reducing risk behaviours associated with HIV infection (Coates, Kamenga, Sweat, & Zoysa, 2000). In addition, a study in Nigeria showed that there was an increase in condom use after testing for HIV at a VCT clinic (Boswell & Baggaley, 2002). This indicate that individuals who are aware of their HIV status, whether positive or negative, engage in safer sexual behaviours such as increased condom use, compared to those who are unaware of their HIV status (Boswell & Baggaley, 2002; Shishana et al., 2009).

2.7.2 Barriers to VCT

Despite the important benefits of VCT, many individuals opt not to go for HIV testing. A major barrier to VCT is the stigma associated with HIV/AIDS (Njagi & Maharaj, 2006). As early as 1987, the director of the WHO Global Programme on AIDS identified three phases of the HIV/AIDS epidemic (Parker & Aggleton, 2003). The first phase is the epidemic of HIV, the next phase is the epidemic of AIDS, and the third phase is the epidemic of stigma, discrimination and denial. The third phase is central to the HIV/AIDS epidemic, but almost 30 years later, it is still the most poorly understood aspect of the epidemic (UNAIDS, 2006). Stigma is perpetuated by the perception that HIV is an outcome of low moral character, and anyone who has HIV, or who tests for HIV has engaged in some low moral behaviour (Emlet, 2007; Hutchinson & Mahlalela, 2006; National AIDS Control Program, 2001). This then contributes to individuals avoiding HIV testing due to fear of premature death, fear of losing employment and not acknowledging the threat of the disease (Makwakwa, 2003; Van Dyk & Van Dyk, 2003).
In addition to stigma, research has shown that confidentiality and trustworthiness are other barriers to VCT (Diedericks & Elkonin, 2003; Hutchinson & Mahlalela, 2006; Van Dyk & Van Dyk, 2003). Individuals who are prepared to visit a VCT centre would rather be tested by someone they do not know, in an area where no one recognizes them, as they fear that their results will be disclosed to community members, family, friends or employers (Kalichman & Simbayi, 2003; National AIDS Control Program, 2001). This suggests that being tested by an unfamiliar health professional is perceived to protect confidentiality and it is easier to trust that HIV results will not be revealed to anyone close to the client. However, there are not enough testing centres for this to be achieved (DoH, 2007).

2.7.3 Models of VCT

There are two main models of HIV testing. These are the traditional and the practitioner initiated counselling and testing models. The traditional model involves an individual actively seeking HIV testing and counselling, and it differs from the medical model which is primarily for diagnosing HIV and does not necessarily provide HIV counselling (UNAIDS/WHO, 2007). Attention will be focused on the traditional model, as it is the most commonly used model in South Africa (DoH, 2004). There are several modes of HIV testing delivery under the traditional model of HIV testing. It needs to be kept in mind that HIV testing is situated within the context of social, cultural and political factors that surround the HIV pandemic (Worthington & Myers, 2003). Therefore, the mode of delivery would depend on the prevalence of HIV in a particular community, the commitment to VCT in the community, and the availability of funds (Peltzer, Matseke & Metcalf, 2009). There are five modes of HIV testing available to South Africans. These are the stand alone, private sector, mobile, home based and integrated HIV testing modes. Table 1 is a brief outline of each mode of HIV testing including a summary of the advantages and disadvantages of each model (Family Health International [FHI], 2005; Peltzer et al., 2009).
<table>
<thead>
<tr>
<th>Mode of Delivery</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td><strong>Stand alone</strong></td>
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<td></td>
</tr>
<tr>
<td>Also known as the freestanding model. Generally operated by non governmental organisations. Clients are normally self referred.</td>
<td>Easier to maintain quality control according to national and international HIV testing standards. Focus on prevention and risk reduction. Can target specific groups. Flexible hours of operation.</td>
<td>High start up costs involved. It is difficult to ensure medical and psychological support as clients are referred to another facility based on their needs. There is high levels of stigma as the services are only associated with HIV.</td>
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<tr>
<td><strong>Private sector</strong></td>
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<tr>
<td>Medical practitioners use offices to offer HIV counselling and testing. Reach individuals in high income brackets with medical aid insurance cover and are less likely to use public health facilities.</td>
<td>Practitioners are committed to a higher quality health care due to higher fees being paid by clients. It is perceived as being more private and confidential.</td>
<td>It does not always adhere to national and international quality standards of HIV testing. Health care providers may have limited or no training in HIV specific counselling.</td>
</tr>
<tr>
<td><strong>Mobile</strong></td>
<td></td>
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<tr>
<td>Service is taken to the community. Counselling and testing offered from a private van or designated area(s) in community.</td>
<td>Improves HIV testing access to hard-to-reach and rural populations. Brings service to the beneficiaries.</td>
<td>Can be expensive and not cost effective. Requires many resources in terms of equipment and man power. Difficult to ensure follow up after post-test counselling as follow up health and social services may not be accessible to community. Difficult to ensure national and international quality standards of HIV testing. Difficult to prioritise HIV testing where communities have other pressing health needs.</td>
</tr>
<tr>
<td><strong>Home based</strong></td>
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| Similar to mobile mode. HIV Counselling and testing happens within the home to all available family members. | Addresses needs of entire family at once. Discussion on HIV prevention and behaviour change may be more effective as discussion is opened up to whole family. | Expensive and time consuming as the health care provider can only cater to the needs of one home at a time. Family disclosure of HIV status may be difficult as there is more pressure on individual to share results. Testing everyone at the same time may lead to premature HIV negative disclosure as the family member may still be in the
Integrated
HIV counselling and testing services are offered in a medical setting and initiated by health care professionals. HIV counselling and testing services happens alongside services such as general in/out patient, tuberculosis, antenatal and sexually transmitted infections (STI) care. Can be provided as diagnostic counselling and testing in that it can be offered to patients who present with HIV symptoms as part of regular health care.

Promoted as part of general health services. Direct referral to other relevant management and care services as they are part of the medical system in the facility. Low costs as it is part of general medical system.

Can lower quality of HIV counselling and testing as the health care professionals may be assigned primarily to other departments. There is a higher likelihood of increased client loads which leads to difficulty in maintaining quality of services. It may lead to shortage and burn out of staff as a result of competing demands for services providers and time. Only allows using trained health care professionals such as doctors and nurses to initiate and administer the counselling and testing. Can create long waiting times for clients and inconvenient operating hours for health care professionals.

The stand-alone mode forms the basis of VCT services and facilities, and is more accessible to the public (Peltzer et al., 2009). The other modes are available, but by definition, it appears one is most likely to utilise the HIV testing service when one seeks medical attention for an ailment that is not likely related to HIV/AIDS (DoH, 2007). Therefore, government and non-governmental organisations tend to encourage the stand-alone mode as it caters for people, including those who are asymptomatic (FHI, 2005). Considering the literature the researcher went through, it is understandable why governments spend a lot of money on this mode (Glick, 2005; UNAIDS/WHO, 2004).

2.7.4 Process of VCT

It is clear that, for VCT to take place, an individual needs to make a conscious decision to make an appointment, to turn up for the appointment and to follow through with any recommendations made from the experience (Matovu & Makumbi, 2007).
VCT is ultimately voluntary, hence the V in VCT. Therefore, there is a sense of free will to test for HIV and the client is under no coercion. Generally the national and international standards of VCT involve a client giving informed consent for the test, a guarantee of confidentiality with regards to the results, and HIV pre-post test counselling (UNAIDS/WHO, 2007; Van Dyk, 2005). This study focused on students who made the decision to go for VCT, and it is important to understand the process they went through in order to illustrate how they were active participants in the process. Figure 1 is a depiction of the process of VCT.

Figure 1. Process of Voluntary Counselling and Testing (FHI, 2005)
From the above information, it is clear that the individual is an active participant throughout the whole process. Reasons for deciding to test for HIV vary from individual to individual, and this study aims to uncover these reasons among university students.

2.8 Summary

This chapter has focused on the global impact of HIV/AIDS. In addition, the South African HIV epidemic was discussed and explored. Special attention was placed on young people aged 15-24 and university students as an at risk population in terms of HIV infection. In addition, investigation in terms of university students and the unique factors that place them at risk of HIV infection were explored. The literature review concluded that university students are exposed to knowledge of HIV but denial and distancing in terms of HIV risk, excessive alcohol use related to a reduction in decision making ability and inhibitions, sexual activity and inconsistent condom use contribute to HIV infection.

The solution to reducing HIV infection among young people, in particular university students, cannot be found in solely knowing one’s status, as the literature review showed that knowledge does not always correlate to behaviour change. The student must also be ready to engage in the steps they have been taught during VCT in order to make the program more effective in the fight against new HIV infections and the spread of HIV/AIDS.
CHAPTER THREE

Theoretical Framework: The Health Belief Model

3.1 Introduction

Advances in the treatment of HIV/AIDS in recent years bring concerns that individuals may regard HIV/AIDS as a less serious threat, and this may result in less commitment to health behaviours that prevent HIV infection (Demmer, 2003). According to the WHO (1998), a health behaviour is any activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting or maintaining health, whether or not such a behaviour is objectively effective towards that end. In the absence of an effective vaccine or cure for HIV/AIDS, there is a need to examine the psychosocial factors related to HIV risk behaviours and HIV preventative behaviours (Becker & Joseph, 1988). Being tested for HIV is a health behaviour and the likelihood of going to be tested for HIV is influenced by the beliefs and attributions that people hold (Broome, 1989). This chapter looks at the relationship between psychology and health, with a brief look at the models available in health psychology. The HBM is of particular interest as it forms the theoretical basis of this study.

3.2 Psychology and Health

For a long time, health has been looked at as an absence of illness (Brannon & Feist, 2004; Sarafino, 2002). However, due to the reduction of infectious diseases, researchers are beginning to recognize the relationship between health and behaviour, as many ailments are related to personal health risk behaviours and lifestyle choices (Pitts & Phillips, 1991). This undisputed realization means that there is a need for a new definition of health that encompassed all the different aspects of health and wellness. According to Sarafino (2002), health is “a positive state of physical, mental and social wellbeing, not simply the absence of
injury or disease, that varies over time on a continuum” (p. 5). If we consider that a vast number of diseases and illnesses stem from the health compromising actions of individuals, then behavioural interventions should be seen at the heart of promoting health thus, making psychology an important part in health promotion.

Early attempts at combining psychological principles and health were seen with the birth of behavioural medicine. Behavioural medicine grew out of the perspective that people’s negative health behaviours are learnt through the processes of conditioning, and that these behaviours can be unlearned in order to bring about positive health behaviours (Sarafino, 2002). However, the behavioural concepts did not account for all the psychological aspects that combine to form health behaviours and health psychology was introduced (Sarafino, 2002). The field of health psychology is a fairly new discipline in psychology, which grew out of behavioural medicine. It goes a step further than behavioural medicine, in that it looks at both cognitions and behaviours as they are related to health (Bennett, 2000).

The ultimate goal of health psychology is to change specific health damaging lifestyles, particularly in areas such as health promotion, health protection and preventative health science (Schmidt, Schwenkmezger & Dlugosch, 1990). The aims of health psychology, according to Ogden (2004) are to:

- Evaluate the role of behaviour in the aetiology of illness such as smoking, related to coronary heart disease or sexual behaviours related to HIV infection.
- Predict unhealthy behaviours by looking at beliefs about health and illness in order to predict behaviours such as self-examination of breast cancer or testing for HIV.
- Understand the role of psychology in the experience of illness, for example assessing psychological factors that may alleviate or exacerbate illness such as diabetes or heart disease.
• Evaluate the role of psychology in the treatment of illness, for example, how psychological and personality factors can influence treatment and improve life span even if it is a life threatening illness such as cancer.

• Promote health behaviours through researching reasons for some unhealthy lifestyles and using this information to design campaigns to encourage healthier lifestyles and behaviours.

• Analyse and improve healthcare systems and health policy. This is done by doing research into the characteristics of health personnel, health institutions, and cost of medical expenses. This information is then used to make recommendations to make the healthcare system more accessible to all individuals who seek medical treatment.

The advantage of bringing psychology into health matters is that individuals are seen as active participants in achieving and maintaining health. Individual behaviour change, change in health beliefs, coping strategies, and compliance with medical recommendations is under the control of the individual rather than health practitioners (Lewis, Sperry, & Carlson, 1993). This control gives a sense of responsibility for one’s own health. Collectivist cultures, such as the African culture, teach that someone else, such as the family or the community at large, know what is best (Adams & Salter, 2007). Individuals in such cultures give up personal power in many aspects of their lives including health matters (Lewis et al., 1993). In essence, the culture suggests that it is easier to blame being sick on other people rather than taking responsibility by acknowledging own unhealthy lifestyle choices (Adams & Salter, 2007). This is not to say that medical experts are not necessary, but the problem arises when total responsibility of one’s own health is shifted to people outside oneself (Schmidt et al., 1990).

Taking responsibility for our own health highlights the fact that we have choices and we should be willing to live with the choices we make (Bennett, 2000; Ogden, 2004). This means that for example, the responsibility of remaining HIV negative lies with individuals
changing HIV risk behaviours, rather than reliance on a cure or vaccine. Thus, behaviour change among university students can improve their health and extend the life span through the elimination of HIV risk behaviours previously discussed. It is important to note that taking responsibility for choices does not mean taking the blame for becoming ill. This is because blame berates the self for not learning, burdens one with guilt and creates more stress and feelings of helplessness during treatment (Lewis et al., 1993). Rather, accepting responsibility means acknowledging the part one had in becoming unhealthy and fostering a desire to change behaviours that lead to becoming unhealthy, in order to have a healthier lifestyle.

The concept of self-responsibility ties in with the concept of self-regulation as it makes possible the kinds of meaningful behavioural changes that are likely to persist over time. There is a common assumption that people will act in personally responsible ways if they have the knowledge about a specific disease and they are encouraged to behave in healthy ways (Bennett, 2000). However, as the previous chapter highlighted, this is not the case. In addition to the vast information university students have about HIV infection, they need to be taught ways of regulating their own behaviours in order to remain HIV negative, especially because they are in an environment that promotes HIV risk behaviours such as multiple sexual partners.

Self-regulation involves information knowledge, decision-making, commitment, goals, maintenance of commitment, will power, self-knowledge and skills acquisition (Lewis et al., 1993). Information is necessary in order to begin the process of adopting healthier lifestyles, but the actual change in lifestyle depends on the decisions that are made from this information (Lewis et al., 1993). This is possibly why students have not changed their HIV risk behaviours despite having more than enough knowledge about HIV/AIDS. It is apparent that they have not yet made the decision to start changing those behaviours that they know
put them at risk of contracting HIV. Once a student has made a decision in the direction of staying HIV negative, such as consistently using a condom with all sexual partners, they need to make a commitment to changing their HIV risk behaviours. Willpower plays a role in self-regulation because it makes one persevere despite internal and external conflicts such being made fun of for being tested for HIV (Sarafino, 2002). Self-knowledge is important as it helps students to become more aware of their own value system and compare these values to the way they are behaving. Finally, acquisition of behavioural, psychological and cognitive skills is an essential part of self-regulation because it arms an individual with the necessary skills to work towards and maintain a healthy lifestyle over a long period of time (Ogden, 2004).

It is clear that bringing psychology and health together creates more healthy individuals in terms of their physical, mental, social, and psychological wellbeing. Concerning HIV, psychological interventions for prevention of HIV could greatly reduce costs of HIV to the individual, the community and the country.

3.3 Models in Health Psychology

A model is used as an example to guide a user (Bennettt, 2000). Therefore, the models of health psychology are used as a guide for health practitioners and researchers to answer many different questions pertaining to a patient’s health and overall wellbeing (Sarafino, 2000). It must be noted that the models discussed below are used by all health professionals including nurses and doctors. The utility of the model differs amongst professionals because of the different areas of focus. Concerning health psychology, one of the key questions is why individuals do, or do not engage in of variety of health related behaviours, even when they are known to reduce the likelihood of infection (Bennett, 2000). The following section briefly looks at the two main models that have been proposed to answer this question in order to illustrate how psychology can be applied to health matters.
3.3.1 Attitudinal Models

These models state that a person’s attitude towards an action is related to moral beliefs and perceptions of relevant social norms that determine his/her intention to engage in that particular action (Schmidt et al., 1990). They also examine why some people fail to maintain behaviours that they have previously committed to (Lewis et al., 1993). In this model, one would assume that health behaviours such as getting tested for HIV, is largely dependent on how one thinks about the health behaviour as well as on what others may think of the health behaviour.

3.3.2 Expectancy Value Models

These models have their roots in the principles of behavioural learning and social learning theory, and they are the most widely used among health professionals. It assumes that individuals work to examine their gains and minimize their losses from the environment (Bennett, 2000; Ogden, 2004). They focus on predicting health behaviours and using them as the target of intervention.

Both models were considered, and the HBM was chosen as its original inception, that is TB vaccination, to explain individual’s lack of participation in health behaviours is similar to people not willing to engage in VCT.

3.4 The Health Belief Model

The HBM is part of the expectancy value model and it suggests that health related behaviours are largely attributed to cognitive decision-making processes (Bennett 2000; Ogden, 2004). It was developed in the 1950s to explain the public’s failure to participate in screening programs to detect tuberculosis (Rosenstock, 1974). The HBM identifies sets of attitudes that are thought to influence people’s behaviours and then combines those attitudes to predict the likelihood that a person will engage in a given behaviour (Sanderson, 2004). It has been proposed as a framework to assess if the individual components are related to
university students’ decision to be tested for HIV. The HBM postulates that behaviour is based on steps, which are mediated by cognition (Rosenstock, 1974). The HBM is one of the most widely used and influential theories to explain health conditions and health related behaviours (Roden, 2004). The HBM was initially hypothesised to predict preventative health behaviours as well as behavioural responses to treatment in both acutely and chronically ill patients (Ogden, 2004). At a later stage, it was revised to include people’s responses to symptoms. Thus, the revised model now includes screening behaviours, all preventative health actions and illness behaviours (Roden, 2004). It has been successfully used to predict the adoption of several health behaviours such as screening for breast cancer and going for vaccinations (Pitts & Phillips, 1991).

Beliefs are enduring individual ideas, which shape behaviour, that are acquired through primary socialisation (Rokeach, 1981). A health belief is expressed in attitudes and behaviours towards health issues. Our health behaviours are therefore an outcome of decision-making based on our health beliefs. In general, a belief is difficult to change because it governs the way we make sense of our human existence. However, the HBM proposes that health beliefs can be changed through the interaction of our environment and others (Rosenstock, 1974).

It can be said that most people in the world value an HIV negative serostatus and they would want to avoid contracting HIV. However, research has consistently shown that people do not always act in ways that help to minimize HIV infection (Bennett, 2000; Rice, 1998; Sanderson, 2004). According to the HBM, the likelihood that a person will go for regular HIV testing rests on a person’s attitudes towards the threat of a contracting HIV and the costs and benefits of being regularly tested for HIV (Sarafino, 2002). Original conceptualisation of the HBM included attitudes towards susceptibility, severity, benefits, and barriers. A revised version of the HBM has included the constructs of cues to action, health motivation and
perceived control (Brannon & Feist, 2004). The original components of the HBM and the revised component of cues to action will be adopted for this study. This is because the study aims to explain why the student decided to be tested for HIV, rather than predicting the student’s likelihood of testing for HIV. It is conceptualised that the chosen components better explain this decision. Figure 2 is a depiction of the selected components of the HBM and a discussion of the constructs in detail.

Figure 2. The Health Belief Model

3.4.1 Perceived Susceptibility

This refers to the subjective way an individual evaluates the possibility of developing a specific health problem. The more vulnerable they perceive themselves to be, the more likely they are to perceive that the health problem is a threat and take action (Sarafino, 2002). Susceptibility can include beliefs about the general risks of engaging in certain behaviours, as well as beliefs about how likely one is to acquire a specific disease (Sanderson, 2004). This suggests that a university student’s decision to be tested for HIV depends to some extent on how vulnerable they think they are to HIV. The student would need to examine their own HIV risk behaviours and decide that these behaviours have put them at risk for HIV, therefore, they need to test for HIV. However, it is interesting to note that the opposite may
happen as perceptions range from total denial of risk to hyper-vigilance. Given the concept of denial and distancing, some students are not likely to perceive themselves as susceptible to HIV. Rather, they will put themselves in the group that is not at risk and the perceived susceptibility will be low, thus they decide not to test for HIV.

3.4.2 Perceived Severity

This refers to the way an individual evaluates the organic and social consequences that are likely to occur if they develop a disease or if it is left untreated (Rice, 1998). The evaluation of perceived threat can include the consequences an individual would directly face, as well as the consequence that others in one’s social network would face if one were to experience a disease (Sanderson, 2004). The assumption here is that the more serious the student believes the effects of HIV/AIDS to be; the more likely they are to perceive HIV and AIDS as a threat and go for testing.

3.4.3 Perceived Benefits

Given that an individual perceives a threat to an illness, action is not likely to occur unless engaging in the health related behaviour is viewed as beneficial. This component states that the individual considers and evaluates the advantages of engaging in health related behaviour, as well as the likely success of the action (Rice, 1998). The advantage may include the prevention of a disease or the decrease of the severity of a disease (Pitts & Phillips, 1991). If a student believes that going for HIV testing and knowing their status will prevent them from contracting HIV or that they will detect it early enough and take the necessary steps needed to keep themselves healthy after testing positive, they are more likely to decide to go for HIV testing.
3.4.4 Perceived Barriers

This refers to the way an individual evaluates the possible obstacles or barriers that they will face if a decision to engage in a health related behaviour is taken (Pitts & Phillips, 1991). The barriers may be financial, psychosocial, demographic or geographical (Rice, 1998). Perceived barriers are closely linked to the perceived benefits discussed above. This is because in order for one to engage in a health related behaviour, the benefits have to outweigh the barriers or costs of engaging in the health enhancing behaviour (Sanderson, 2004). In other words, it involves a type of cost benefit analysis that weighs the cost of an action against the likely returns (Rice, 1998). This suggests that a university student will either go for testing or decide not to, depending on which of the two (barriers/benefits) has more weight. It must be noted that the perceived severity of a barrier is not universal and is dependent on an individual and the individual context they are in. Some barriers to HIV testing were discussed, such as HIV stigma, and thus far, this barrier seems to have more weight that any benefit HIV testing presents.

3.4.5 Cues to Action

The component, cues to action, is one of the most under-researched components of the HBM. A cue to action refers to a reminder or alert about a potential health problem (Pitts & Phillip, 1991). It is the stimulus necessary to trigger the process of engaging in healthy actions (Winfield & Whaley, 2002). Cues to action may be internal or external and they determine whether a behaviour is performed (Broome, 1989). Cues could involve people, events or things, illness of someone close, or media campaigns. This is where the education part of HIV prevention comes in, and it will only be an effective cue to action given that the information is perceived to be personally relevant. This means that a student may watch an educational program about HIV/AIDS among the youth, perceive that they could also be at risk and decide to go for HIV testing.
Research has provided support for the constructs of the model individually rather than collectively. The results vary depending on the focus of the study. In general perceived barriers, perceived benefits and perceived severity have been found to be the most significant factors in predicting the adoption of a health behaviour (Nexoe, Kragstup, & Sogaard, 1998; Ogden, 2004). Concerning studies focusing on HIV/AIDS, perceived susceptibility, barriers and benefits were generally consistent predictors of general behaviour change and willingness to go for HIV testing (Becker & Joseph, 1988; Boyd, Simpson, Hart, Johnstone, & Goldberg, 1999; De Paoli, Manongi, & Klepp, 2004; Maguen, Armistead & Kalichman, 2000).

3.5 Criticism of Health Belief Model

The health belief model is undoubtedly the most widely used model about health matters such as smoking, diabetes, cancer and HIV/AIDS. All its components are independent as well as interdependent, which is an aspect that is often overlooked (Rice, 1998). However, even though it has been viewed as an asset to the health community, some critics have stated that it does not fully account for the reasons why some people act against their own belief system (Bennett, 2000). Critics state that the model downplays the influence of environmental or social factors (Roden, 2004). For example, a person may believe that drinking alcohol in large amounts is not good for health, but continues to do so. Critics also state that the HBM grew out of the need to participate in onetime preventative health care programmes, and therefore does not present behaviour change as a long-term process (Schwarzer, 1992). However, these critics merely point out areas of further research, rather than cancel the value of the model.
3.6 Summary

This chapter highlighted the importance of psychology in health concerning matters of prevention and management of illness. The field of health psychology was discussed and the different models used to guide practice and research, were introduced. The HBM was of particular interest as it forms the theoretical basis of the study. The HBM is more often than not used to predict health behaviours rather than to explain them. This study is different in that it does not aim to predict students going for VCT, but to explain the reasons why the decision to go for VCT was made using the specified HBM components, and possibly finding out which of the components is the strongest influence in the decision to test for HIV.
CHAPTER FOUR
Research Methodology

4.1 Introduction

In the previous chapters, the background of the study and the theoretical basis of the study were discussed.

The objective of the study was to explore and describe the factors that influence university students’ use of VCT services using the components of the HBM. This chapter outlines the process that was followed in the study. It defines qualitative research, and discusses the sampling method, data collection, data analysis and the ethical considerations.

4.2 Research Design: Qualitative

A research design is a framework for action that serves as a bridge between research questions and the execution or implementation of the research (Terre-Blanche & Durrheim, 2004). A qualitative exploratory descriptive design was used for the study. Struwig and Stead (2001) state that the exploratory descriptive design allows one to study an area that is fairly unknown, so as to develop new ideas and yet still seek to give an accurate description of the situation. Qualitative research attempts to describe and understand human behaviour (Babbie, 1998; Willig, 2001) and it further provides more in-depth data compared to qualitative approaches to research (De Vos, 2000). Through qualitative research, a wide array of dimensions of the social world including the texture and weave of everyday life, understandings, experiences and images of the research participants can be explored. Qualitative research tends to be more flexible as it permits for spontaneity and adaptation of the interaction between the researcher and the research participants (Terre-Blanche & Durrheim, 2004). Qualitative research seeks to acquire a rich understanding of populations but does not result in sweeping generalizations. The contextual findings of this process of
discovery are basic to the philosophic underpinning of the qualitative approach (Creswell, 1998).

Qualitative research is concerned with collecting and analyzing non-numerical information and it tends to focus on exploring phenomena in as much detail as possible using smaller numbers of participants, in order to achieve depth rather than breath (Blaxter, Hughes & Tight, 2006). Mason (2002) describes qualitative research as being:

- Systematically and rigorously conducted;
- Accountable for its quality, claims and uses. In other words, it should not attempt to position itself beyond judgment, and should provide material that can be judged by others;
- Strategically conducted, yet flexible and contextual. This essentially means that qualitative research should make decisions on the basis not only of a sound strategy, and also be sensitive to the changing contexts and situations in which research takes place;
- Involved in critical self-scrutiny or active reflexivity by the researcher. In other words, the researcher should constantly take stock of actions and the role played in the research process, and subjects these to the same scrutiny as the rest of their data collection. This is based on the notion that in qualitative research, the researcher cannot be neutral, or objective, or detached from the knowledge and evidence being generated;
- Able to produce explanations and arguments, rather than claim to offer mere descriptions, and these should demonstrate some form or wider resonance.

Qualitative research requires a strong commitment to study a problem and it demands time and resources. It is not an opposition to quantitative research, as both strategies have a
lot to offer in the field on social sciences and are complementary (Creswell, 1998; Holliday, 2002).

4.2.1 Advantages and Disadvantages of Qualitative Research

Qualitative research provides complex contextual descriptions of how people experience their world and there are many advantages of doing qualitative research. These are;

- It produces more in-depth and comprehensive information of the sample (De Vos, 2000);
- It uses the subjective information to describe the experience of the sample as well as the interactions of different variables (Creswell, 1998);
- It seeks a wider understanding of the entire situation (Creswell, 1998).

The decision to select a qualitative strategy for this study was guided by the above benefits, as the objective of the study was to explain and describe the experience of the participants.

However, there were also some disadvantages to consider. These were;

- Qualitative research is subjective and may lead to difficulties in the reliability and validity of the data collected (Descombe, 2003);
- It is difficult to detect researcher induced bias (Holliday, 2002)
- The scope is limited due to the in depth comprehensive data collection approaches required (Creswell, 1998).

An account of overcoming the disadvantages will be discussed later in this chapter.

With all this stated, one must note that ultimately, qualitative research highlights people’s own perceptions of events that occur within their entire context (Terre-Blanche & Durrheim, 2004).
4.3 Objectives of the Study

Qualitative research generally requires the researcher to explore, describe and interpret the experiences of participants (Smith, 2003). The objective of the study was to explore and describe factors influencing university students’ use of VCT using the HBM as a theoretical basis. The study was exploratory because it sought to investigate a phenomenon that is “under researched” among university students and descriptive because it aimed at describing how the participants experienced and perceived the decision to go for HIV testing.

4.4 Data Collection

The specific phenomenon studied is under researched, therefore the most appropriate data collection method was semi-structured one-on-one in-depth interviews. Qualitative interviewing does not involve extraordinary skills, but rather relies on interacting and trying to understand the experience of the participant (Silverman, 2006). Therefore, this means that the participant is actively involved as he or she possesses a wealth of knowledge of information concerning the topic. O’Leary (2004) states that interviewing is a method of data collection that involves open-ended questions on a topic. Interviews are most commonly recognised in qualitative studies (Silverman, 2006). In particular, a semi-structured interview is the most effective tool for data gathering within the qualitative research realm (De Vos, Strydom, Fouche, & Delport, 2005). The semi-structured interview is flexible as an instrument and it allows the researcher to understand the subjective world of the participants (Willig, 2001). An interview schedule is a guideline that contains questions designed to elicit the main themes under investigation (Henning, Van Rensburg, & Smit, 2004). The interview schedule was developed based on the literature reviewed thus far, and this can be found in Appendix A of the treatise. All participants were asked the basic questions on the interview schedule in the same order. In addition, it was necessary to employ probing, clarifying statements and questions as well as paraphrasing statements specific to the participant in
order to acquire accurate information. Smith (2003) argues that questions do not have to be asked in a particular order, but the researcher must ensure that all the relevant topics are covered during the interview. Semi structured one-on-one in depth interviews allow participants to state their responses, as well as elaborate and draw connections between their responses (Silverman, 2006). It is a joint product of how participants and interviewers talk together (Kvale, 1996). The researcher assumes that the participant’s perspective is important and part of the fabric of society and of joint knowledge of social processes of the human condition (Mason, 2002). In order to get rich data, the researcher has to actively listen and ascribe meaning, while keeping in mind the aims of the study (Kvale, 1996; Silverman, 2006).

The principles of respect, confidentiality, and integrity were upheld during the interviews as the researcher realised that the information the participants had to share was sensitive and personal (De Vos, 2000).

4.5 Participants and Sampling

Following the identification of the research strategy and data collection method, the next step was to select the participants. Qualitative research attempts to obtain data rich in description rather than data that is statistically representative (Creswell, 1998; Sarantakos, 2005). Therefore, non-probability purposive sampling was employed because of its focus on how relevant the sample is rather than on how representative the sample is (Terre-Blanche & Durrheim, 2004). The population of this study consisted of all male and female university students between the ages of 21 and 25 studying at NMMU, who had previously gone for HIV testing in 2010.

Advantages of non-probability sampling include allowing the researcher to use own judgment in the selection of participants it is less costly and time consuming as the population is easily accessible (Sudman, 1976). Furthermore, the researcher is better able to narrow down participants. It is less costly and allows the researcher to find participants who...
have characteristics similar to the target population (De Vos, 2000). The disadvantage of this technique is that the data collected cannot be accurately generalized to the population as analysis of results depends on the subjective reflection of the researcher rather than objective criteria (Bless & Higson-Smith, 1995).

The sample size of a qualitative study is based on identifying significant issues and themes rather than on numbers (Mertens, 1998) and is generally smaller because qualitative studies do not concern themselves with sample errors and generalizations (Burns & Groove, 1993). Smith (2003) suggests a sample size of five or six individuals as this provides the researcher with enough cases to examine without being overwhelmed with data.

A sample size of 3 males and 3 females was initially proposed for the study, and data would be gathered until saturation point was reached. Saturation point is reached when no additional data are being found (De Vos, 2000). It is important to note that saturation point is not always theoretically reached as the conclusion of a study is sometimes determined by external factors such as the availability of funds and target dates (Henning et al., 2004). The researcher obtained a sample size of 5 male students, who were all 22 years old and were of African descent. Attempts to gain female students were made, but the researcher did not get responses from female students.

All participants were made aware that participation in the study was voluntary and that they could withdraw from the study at any stage of the data collection. It was also stressed to all participants that revealing their serostatus was not required. However, all participants were willing to state their serostatus.

4.6 Research Procedure

The study was commenced after approval from the Research Ethics Committee (Human) at NMMU. According to Denzin and Lincoln (1994), conducting a pilot study allows the researcher to focus on particular areas that may have been previously unclear. A
pilot study was conducted with two individuals who did not form part of the study, in order to assess the sensitivity and validity of the questions. The pilot study was facilitated by the researcher. The results of the pilot study are not included in the final results of the study.

Thereafter, the researcher sent a letter to Campus Health Services to ask for permission to do the study. This letter is in Appendix B of the document. Part of the letter was requesting that the VCT counsellors to provide a letter summarizing the details of the study to students who went for HIV testing (Appendix C). Interested participants provided the Campus Health Services with an email address where the researcher contacted them. The researcher maintained contact with the Campus Health Services, South Campus, and contacted interested students via email with information about the study and possible dates for a meeting that would be one-on-one to further explain and discuss the value and purpose of the study. The interested students then responded via email to confirm the date they would be able to come for the meeting. On the day of the meeting, the content of the letter provided to the students during VCT was discussed in detail, and participants were made aware that the interviews would be recorded. The researcher also informed the participants that there was an optional debriefing session right after the interview, which would not be recorded. In addition, the participants were informed that a referral to Student Counselling would be made if they felt that needed to do so after the interview. The meeting also gave the students an opportunity to ask any questions they had surrounding the study. All participants were informed that participation was voluntary and willing participants were requested to complete a consent form (Appendix D). All were willing to conduct the interview on the same day of the meeting. The consent forms were secured by the researcher and no one except the researcher and the research supervisor had access to them.

A private room in the NMMU Community Psychology Clinic for the interviews was secured. The venue was free from outside distractions and easily accessible for the
participants. The interviews were run by the researcher with an audio recording device set up in plain sight of the participants. Before the recording, the researcher reminded the participants that they were not required to reveal their serostatus and requested the participants speak audibly so that the recording device can capture their statements, as well as reassure the participants that confidentiality and anonymity in reporting the research would be maintained throughout every stage of the study. The participant and researcher were seated opposite one another with a small table in the middle to place the recording device. All interviews were conducted in an average of 25 minutes.

The data was recorded with the use of an audio recording device and the data was transcribed in verbatim by the researcher in order to increase the participants’ anonymity. Process notes were compiled throughout the data collection process to verify the data before analysis. The notes contained an account of each session with reflective notes on the fieldwork experience. Research states that reflective notes increase the researcher’s own awareness of subjective contribution to the construction of meaning outside the research process and it is an acknowledgment of the impossibility of remaining objective when carrying out research (Nightingale & Cromby, 1999; O’Leary 2004).

A follow up interview was done telephonically with four of the five participants. The fifth participant could not be contacted as the cell phone number he provided was disconnected, and he was not responding to the emails the researcher sent. The telephonic interviews were conducted at the convenience of the participant in an average time of 15 minutes. The researcher used field notes to note down the participants’ repossesses.

At the end of the interview, the researcher informed the participants that they would receive an email when the study is complete, informing them that the study is available in the library and they would be able to examine the study.
4.7 Data Analysis

In qualitative studies, there is no clear point when data collection stops and analysis begins. The main purpose of analysing qualitative data is to provide a rich thorough description of the characteristics, processes, transactions and contexts that constitute the phenomenon being studied, as well as an account of the researcher’s role in constructing this description (Terre-Blanche & Durrheim, 2002). After consideration of all the available qualitative data analysis tools available, it was decided that thematic analysis was the best suited. Thematic analysis makes use of categories that are defined according to some conceptual framework (Babbie, 1998; Braun & Clarke, 2006; Willig, 2003). The best advantage of thematic analysis is its flexibility as it allows the researcher to determine the themes in a number of ways.

4.7.1 Defining Themes for the Study

According to Braun and Clarke (2006), a theme captures an important aspect of data in relation to the objectives of the study. As the crux of the study is using the components of the HBM, the themes were more about how information relates to the objectives on the study. It was important for the researcher to continue to refer to the components of the HBM as it served as a guide in determining what kind of claims the study aimed to achieve thus making the thematic analysis theoretical in nature. According to Patton (1990), theoretical thematic analysis occurs where one attempts to theorise the significance of patterns and their broader meanings and implications as they relate to previous literature. Tuckett (2005) reports that engagement with literature beforehand enhances analysis by sensitising the researcher to more the subtle features of the data.
4.7.2 Phases of Thematic Analysis

Thematic analysis starts when the researcher begins to notice and look for patterns of meaning and issues of potential interest in the data, and this may start during data collection. The end point is the reporting of the content and the themes (Ryan & Bernard, 2000).

Thematic analysis has six phases. The following section explains this;

- Phase one: familiarise with data

  This phase involves reading and re-reading the data. Data was transcribed verbatim and the notes from the telephonic follow up interview were put together. Reissman (1993) stated that the process of transcription is time consuming, but is an excellent way to gain and understanding of the data. The researcher found value in doing the transcriptions as it created a far more thorough understanding of the data. Lapadat and Linsay (1999) reiterate this and state that the close attention needed to transcribe data may facilitate the close reading and interpretative skills needed to analyse data.

- Phase two: generating codes

  After having a general idea of the data, the researcher seeks to generate codes. Codes identify a feature of the data and it is the most basic segment or element of the raw data or information that can be assessed in a meaningful way regarding the phenomenon (Boyatzis, 1998; Miles & Huberman, 1994). Coding is an inherent part of qualitative analysis. It involves searching the data for recurring themes, assigning themes into the broader categories, and then coming up with an integrated picture of the phenomenon that is being studied (Descombe, 2003). Because the study was theory driven, the individual components of the HBM serve as predetermined codes for analysing the data obtained from the transcripts. Therefore, themes relating to the components of the HBM were sought in order to assess if and how they were related in the students’ decision to be tested for HIV.
• Phase three: searching for themes

This phase involves focusing on the broader themes, rather than the codes. The researcher starts to consider the relationship between the codes and the themes. As previously stated, the components of the HBM served as the codes, and the researcher searched for the themes related to the components of the HBM.

• Phase four: reviewing themes

In this phase, the researcher checks the themes in order to assess if the identified themes have sufficient data to support them. The goal of the researcher is to consider the validity of the individual themes in relation to the data set (Braun & Clarke, 2006). The researcher used the literature provided about the HBM in order to assess data that was an accurate representation about to the components. Once again, the theoretical nature of the study was more evident in this phase.

• Phase five: defining and naming themes

This phase involves an ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, as well as generating clear definitions and names for each theme (Braun & Clarke, 2006). The researcher sought to establish possible sub themes and this assisted in identifying the hierarchy of the ideas in the theme. The end of the phase occurred when researcher collated all the information gathered, the codes, the themes and all the data extracts that were related to them.

• Phase six: producing the report

In this phase, the researcher puts all the information together. In this research, the researcher selected best fitting extracts, related all themes and codes to previous literature, and put the final product of the study in the form of a treatise.
4.8 Validity and Reliability

In qualitative studies, the validity and reliability of the study is important because of the possible researcher bias element related to the approach. Reliability is the degree to which measures are free from error and therefore yield consistent results. Reliability is synonymous with consistency (Struwig & Stead, 2001; Zikmund, 2000). Validity refers to the extent to which a study is appropriately conducted. Collins and Hussey (2003) state that validity is the degree to which a study reflects what is happening in the context.

The first step in establishing the validity and reliability of the study was to do a pilot study in order to assess the effectiveness of the questions. Some questions were revised and those not pertaining to the study were discarded. After the pilot study, it was discovered that of the original seven questions, three questions seemed to be asking the same thing. However, these questions elicited different responses and these could be crosschecked. Afterwards, one question was discarded and the order of the questions was changed. That is, questions pertaining to the decision to be tested were asked first, questions related to barriers to testing were asked next and questions about the university environment were asked last. It was important to ask questions about the university environment last as these would allow the person to focus attention away from their own reasons to get tested, thereby ending the session without a sense of feeling emotionally exposed. In addition, all data was collected by the researcher in order to eliminate the possibility of error. By doing this, the researcher who knew the objectives of the study and the motivation for the study was the only one who could collect the data.

Next, Guba’s model of trustworthiness (Creswell, 1998) was used to enhance the validity and reliability of the study. The model describes credibility, transferability, dependability, and confirmability as principles that need to be upheld in qualitative studies. Credibility refers to the researcher’s confidence in the authenticity of the findings and it is
increased when individuals with similar experiences to the respondents of the study can easily identify with the findings (Willig, 2001). This study attempted to attain credibility by having a follow up session with the respondents in order to verify the findings. Unfortunately, four out of five of the participants were able to take part in the follow up interview sessions which were conducted telephonically. In addition, the themes from the data analysis were checked by an independent coder.

Transferability refers to the degree to which the findings apply to other similar groups of people outside the study (Creswell, 1998). In order to ensure this, a detailed description of the research methodology was included in the chapter under the “research procedure” section in order to uphold this principle. When a study is repeated by another researcher, and findings are consistent, the study is said to be dependable. De Vos (2000) argues that dependability in qualitative research can be increased when the researcher includes any changes in the conditions of the research in the field notes.

Lastly, confirmability refers to the neutrality of data and it was achieved using an independent coder in order to confirm the researcher’s findings. In this case, an independent coder serves two purposes.

4.9 Ethical and Legal Considerations

The nature of the information that was obtained required that the researcher had to ensure that the rights of the participants were not violated. In order to do this, the researcher had to have the approval of the ethical governing body of the institution. The first was to get permission from the Faculty Research Technology Innovations (FRTI) committee of the Faculty of Health Sciences of the NMMU. The FRTI deemed it necessary for the proposed study to go under the scrutiny of the Ethics Research Committee (Human) of NMMU as the study required university students to share sensitive information. Following this, the study was approved.
De Vos (2000) and Flick (2006) suggest that the following issues be raised before a study is conducted; informed consent, deception of participants including violation of privacy/anonymity/confidentiality; competence of the researcher; release of findings; and debriefing of participants. With this in mind, the researcher took steps that are well documented to ensure the above. As previously mentioned all participants completed and signed a consent form that was kept under lock and key. All participants were made aware of the objectives of the study verbally and in written form. The consent form included information on the research topic and all interviews were transcribed by the researcher in order to ensure privacy, anonymity and confidentiality. In addition, the debriefing session that had been voluntary was taken up by all participants in order to ensure that the participants were not emotionally vulnerable in any way as information shared was personal and sensitive.

In addition to the ethical considerations outlined above, the researcher was very aware that the topic of HIV/AIDS is a sensitive issue because of the stigma attached to the disease and some participants may have experienced emotional distress during the interview. Therefore, all participants were informed about the potential emotional impact of participating in the study prior to their participation in the study. In addition, an empathetic environment and appropriate referrals were provided if the need arose. Furthermore, there was an optional 30 minute debriefing session for the participants.

4.10 Summary

This chapter has highlighted the research methodology used in the study. The qualitative design was discussed, and the reasons for choosing the design were outlined. The chapter has also provided a detailed account of the research procedure, and indicated the ethical issues considered in the study.
CHAPTER FIVE
Results and Discussion

5.1 Introduction

This chapter will present the results and the discussion of the study, but first there is a
need to revisit the objective of the study, which was to explore and describe the factors that
influence university students going for VCT. In addition, the study is embedded in the HBM;
therefore this chapter will be discussing the participants’ responses in relation to the
components of the HBM, as well as linking them to the literature provided in previous
chapters. As noted in the previous chapter, the researcher was unable to obtain female
participants therefore the results reflect the opinions of young male university students.

5.2 One-on-one Interviews

The interviews were conducted with five African male students all of whom were 22
years old. As previously mentioned, the interviews were recorded using an audio recording
device. Follow up telephonic interviews were conducted with four of the five participants.
The researcher was unable to get a hold of the fifth participant because the number he
provided was disconnected. The results were analysed using thematic analysis. An
independent coder was utilised in order to ensure the trustworthiness of the study. All
participants were asked the same basic questions in the same order. The questions were
generated from literature about university students and HIV and the HBM that formed the
theoretical basis of the study. The identified components of the HBM for the study were
perceived susceptibility, perceived severity, perceived barriers, perceived benefits and cues to
action. Clarifying questions were also utilised in order ensure that the researcher had clearly
understood what the participants were communicating.
5.3 Results and Discussion

The results will be discussed according to the identified components of the HBM, which serve as the codes for the data. Under each component, themes were generated by the researcher and the independent coder. The themes will be linked to the already existing literature as well as how the responses relate to the HBM.

5.3.1 Perceived Susceptibility

The first component of the HBM is perceived susceptibility. This refers to the way an individual subjectively evaluates personal risk to contracting an illness (Sarafino, 2002). Generally, this component proposes that the more vulnerable one perceives one’s self to be at risk to contracting an illness, the more likely one is to take action to prevent the illness (Sanderson, 2004). This evaluation can include beliefs about how certain behaviours put one at risk to contracting an illness and how likely one is to acquire a specific illness by engaging in these behaviours (Rice, 1998). In other words, susceptibility is an evaluation of risk. The basic question asked was “What made you go for VCT?” and “How important was it for you to go for VCT?” These two questions generated responses related to an evaluation of risk.

The themes that emerged were alcohol use, low condom use, and multiple sexual partners. These are represented in Table 2.

Table 2. Themes of Perceived Susceptibility

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<th>Perceived susceptibility</th>
<th>Alcohol use</th>
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<td></td>
<td>Low condom use</td>
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<td></td>
<td>Multiple sexual partners</td>
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5.3.1.1 Alcohol use

Participants stated that as young adults they use alcohol for several reasons, such as to pass time, to socialise, to gain confidence and to fit in to campus life. The participants also
stated that at times, “things go wrong” when under the influence of alcohol, and they engage in behaviours that put them at risk to contract HIV and other sexually transmitted infections (STIs). One participant stated;

- “You know I will be honest, at times we use alcohol in order to become more confident to approach the ladies. Sometimes it is too much, but then it is just for fun”

There is a significant amount of literature that confirms that increased alcohol consumptions, increases the risk of contracting HIV and other sexually transmitted diseases (American College Health Association, 2006; Fisher et al., 2007; Shishana et al., 2009). Alcohol is easily available to university students and excessive alcohol consumption results in impaired judgement and decision-making ability (Gwede et al., 2001). Impaired judgement in turn may result in diminished inhibition and cause an individual to engage in HIV risk behaviours such as unprotected sex (Morojele et al., 2004). Therefore, the sample perceived alcohol use, in particular excessive alcohol intake by students, and at times by them personally, as a risk factor to contracting HIV.

5.3.1.2 Low condom use

The next theme was low condom use. The participants reported despite knowledge that the use of condoms protects against HIV and other STIs, they do not always use condoms and if they do, it is not consistent. One participant stated;

- “I mean like with condoms everybody knows...come on we are at varsity level, everybody knows that they should use condoms every time they have sex...first thing that comes to mind should be that I have just met this “chick” and I do not know her so I should use a condom. But you know ignorance takes over and we become
reckless then you do not use it, but what is important is you knew that you had to use a condom”.

Another stated;

- “I have a girlfriend, and we have been together for 5 years, so there is no need to use a condom”.

Literature has shown that sex is part of campus life, and the pressure to fit into the campus life leads to some students not using condoms (Brown et al., 2008; Petersen et al., 2002). In addition, these two responses suggest that students are not likely to use a condom with either a primary partner or a non-primary partner. During the follow up telephonic interview, the researcher enquired why there is such low condom use, and the participants responded that low use with a primary partner is attributed to trust in the relationship, while low use with a non-primary partner is attributed to being reckless and unprepared. Such sentiments were found in the literature where less that 16% of people in relationships consistently use condoms while less that 50% of people use a condom consistently with non-primary partners (Shishana et al., 2009). These results suggest that participants know that low condom use puts them at risk of contracting HIV, yet there does not seem to be a move towards using condoms more regularly. This may be due to denial and downward comparison where they may believe that “others” will get infected with HIV, but not “us”. This is an assumption on part of the researcher, and there is definitely a need to research this further.

5.3.1.3 Multiple sexual partners

The participants also noted that many students engage in multiple sexual relationships. The frequency of multiple sexual relationships among university students appears to be a normal occurrence according to the participants. The literature on this subject also states that students see multiple sexual relationships as the norm, and not a risky behaviour (Brown et
Research has suggested that the reason for this is peer pressure to attain status of being sexually desirable, seeking sexual pleasure and a de-emphasis on long-term relationships (Brown et al., 2008; Shishana et al. 2009). One participant stated:

- “Come on, it’s the 21st century and everybody is doing it [multi sexual partners]. Some say they are too young to be tied down”.

All participants were asked to rate the number one reason they decided to go for VCT, and they all stated that they are concerned about the risk of HIV infection, but they did not see it as a factor that influenced their decision to go for VCT. During data analysis, the researcher observed that little mention was made concerning personal susceptibility to HIV by any of the participants, despite some mention of behaviours that have exposed them to HIV. This observation is similar to studies that found that students generally rate other student’s risk to contracting HIV as higher than their own (Brown et al., 2000; Johnstone-Polacek et al., 2007). Such sentiments are found in literature that states that university students engage in HIV risk behaviours, despite knowledge of those behaviours being risky, because they do not believe that they will contract the virus (Cok et al., 2001; Cornelissen, 2005). Literature has suggested that a possible explanation for this is the concept of downward comparison where one perceives other people’s behaviour as riskier than their own, thus making one feel less at risk (Hagopian, 1993). This therefore results in students perceiving the group “university students” being at high risk to contracting HIV, but perceiving personal risk to contracting HIV as low. Such results were also found in a study conducted 8 years ago by Diedericks and Elkonin (2003), on the same campus. This suggests that perceived susceptibility continues to have little influence on students’ decision to go for VCT. The HBM proposes that perceived personal risk, results in one making a decision to engage in preventative behaviours (Rosenstok, 1974). When applied to the likely hood of
attending VCT among students this applies, as students perceive their risk to contracting HIV as low, thus making perceived susceptibility a minor influence in going for VCT. One may assume that if students perceived their risk as high, this component would be more influential in the decision to go for VCT.

5.3.2 Perceived Severity

The second component of the HBM is perceived severity. It refers to an individual’s evaluation of organic and social consequences that are likely to arise if a specific illness in contracted, or if the specific illness is left untreated (Sanderson, 2004). Therefore, it is an evaluation of the threat of a specific illness and how the illness will affect an individual and the social network (Rosenstock, 1974). The basic question asked was “Does HIV pose a threat to you as a student? If so, how?” The responses that were considered were those that reflected an evaluation of the potential threat of contracting HIV to the participants and those around them, and how this evaluation influenced the decision to go for VCT.

The themes that emerged were personal burden of being HIV positive, family response and hindrance to future plans. The themes are depicted in Table 3.

Table 3. Themes for Perceived Severity

<table>
<thead>
<tr>
<th>Perceived severity</th>
<th>Personal burden of being HIV positive</th>
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<tr>
<td></td>
<td>Family response</td>
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<tr>
<td></td>
<td>Hindrance to future plans</td>
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5.3.2.1 Personal burden of being HIV positive

Shishana et al. (2009) describe that the diagnosis of HIV and the actual infection of HIV is devastating as it brings unexpected changes and all sorts of pressure to stay healthy for individuals. The participants all concurred that if they become HIV positive, they would not know what to do at the time of receiving the news. In addition to that, there was a sense that
even though they have knowledge about the treatment and management of HIV, they would not be able to cope with the diagnosis. One participant stated;

- “I can be infected with HIV, though I have the knowledge and understanding, I think it will be difficult for me to cope with the fact...that you know that I have this thing and it lives within me and this is how you know....you living a life as if prescribed that you should do ABC and D and that is a limiting factor that would cause me to be frustrated”.

Another stated;

- “I mean we are young, we drink, we club, we have fun, but then you have to stop drinking, and stop clubbing, we have to basically live a healthy lifestyle”.

These responses are related to the physical burden of becoming HIV positive. The participants also spoke of negative psychological reactions of being HIV positive. All participants cited depression and stress and two cited suicide. Similar results were obtained in Diedericks and Elkonin’s (2003) study where students reported the same negative psychological reaction as a consequence of contracting HIV. Participants felt that the psychological impact of contracting HIV was so severe that death could result from the psychological reactions rather than from the physical symptoms of HIV/AIDS. One participant stated;

- “..find out that you are positive [HIV positive] you gonna have a lot of stress, you are not even gonna die from the virus, you will die from thinking too much”.

The responses obtained from the sample reflected that the decision to go for VCT was influenced by the expectation that the physical and the psychological implications of contracting HIV are a personal burden and an inconvenience. Therefore, according to the
HBM, participants perceived the personal burden of being HIV positive, as severe enough to influence their decision to go for VCT.

5.3.2.2 Family response

All participants were 22 years old, and they still relied on their families for support in all aspects. One of the major concerns was the impact on their families in response to an HIV positive diagnosis. They all reflected that contracting HIV would disappoint their families and that was something they would want to avoid. One participant stated;

• “Yeah, yeah, a lot of people are counting on me to finish my degree so you know...I don’t even know..I mean telling my mum that you know I’m infected with HIV, what is that going to do to her?”

Another stated;

• “You know, what everybody is going to be disappointed in me because even the people around you are not going to want to socialise with you the way they used to you know, maybe your best friend is not gonna treat you the same and then you start living a lonely life”.

These responses reflect the strong sense of community and family in the African setting that applies to all aspects, including health matters (Adams & Salter, 2007). Such a strong sense of community and family makes one feel that the experience of illness is much worse for family members, than for the individual. Therefore, it is assumed that the participants decided to go for VCT in order to protect their families. This reflects the notion that responsibility for one’s own health is found outside one’s self (Lewis et al., 1993; Schmidt et al., 1990). Participants felt that disappointing their families would result in rejection and discrimination. They believed that they would be seen in a different light and their family
members would start to act differently which would result in loss of a primary support system and eventually isolation.

In summary, the thought of disappointing their families would result in feelings of guilt and helplessness during treatment, thus worsening the personal burden of becoming HIV positive. In addition, this would result in rejection, discrimination, loss of primary support and isolation. According to the HBM, the participants perceived that going through this experience would be devastating, and it made them consider going for VCT.

5.3.2.3 Hindrance to future plans

The participants all agreed that HIV posed a threat to their future plans. These plans included academic success, career and family. In terms of academic success, the participants felt that contracting HIV would hinder them from completing their tertiary education. One participant stated;

- “For me personally if I find out that I am HIV positive, I’m gonna think what is the use of studying? There is no reason for me studying and becoming an economist yet I’m going to die soon. You see you might not even know whether I will reach my goal, will I finish my degree? Will I finish my Honours? You get discouraged...I will get discouraged.”

In terms of career plans, the participants felt that contracting HIV would hinder them from being in a career they would want or even be motivated to pursue their chosen career. One participant stated;

- “Yeah...I mean listen..we still young, we still have to go into the world and earn a salary and have a career...some of us may perceive that [HIV positive status] as a road block and you cannot go out there into the working industry because you have this...”
disease and there is so much stigma around this disease so you have to end up living and working with people of your kind”.

In terms of future family plans, all participants spoke of wanting their own children and to get married. The prospect of being HIV positive was seen as a hindrance to that. One participant stated;

• “It is very important to have your own offspring as opposed to adopting, and it could be a cultural thing, it could be a religious thing it could be any other kind of reason and I myself would like to have my own offspring and if I am infected with this virus, for me I cannot achieve this”.

This participant’s sentiments were echoed by all participants and they stem from vertical transmission of HIV, that is mother to child, which is a well-documented mode of transmission for HIV (UNAIDS, 2010). However, these responses reflect a grim picture for people living with HIV. During data analysis, the researcher noted that further investigate on this point should be made during the telephonic follow up interviews. The researcher discovered that the participants’ opinions on this matter were related to myths about HIV/AIDS. In particular they were related to the myth that HIV is a death sentence, and yet the participants stressed they do not believe that myth. Therefore, it appears that the myth is still perpetuated among the participants and it has influenced their perception of the severity of HIV.

Nevertheless, when participants were asked what the most influential factor to their decision to go for VCT was, they all cited responses related to perceived severity to their lives and future. Therefore, even though the participants did not experience the severity of being HIV positive, the possibility of going through such an experience was perceived as severe enough to influence them to want to go for VCT.
5.3.3 Perceived Benefits

The third component of the HBM is perceived benefits. According to the HBM, perceived benefits result from an individual considering and evaluating the advantages of engaging in a health related behaviour (Rice, 1998). This advantage is related to the prevention or reduction of the impact of a specific illness (Pitts & Phillips, 1991). The HBM proposes that this component is related to perceived severity in that, if an individual perceived the consequence of a disease to be severe enough, the individual would begin to evaluate the benefits of engaging in a health behaviour in order to eliminate or reduce this severity (Roden, 2004). The basic question that was asked was “What were the advantages and disadvantages of going for VCT for you?” Responses that were included were those that reflected a positive outcome to going for VCT.

The themes that emerged were confirmation of a negative status, maintain HIV preventative behaviours and assistance if HIV positive. These are depicted in Table 4.

Table 4. Themes for Perceived Benefits

<table>
<thead>
<tr>
<th>Perceived Benefits</th>
<th>Confirmation of an HIV negative status</th>
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<tr>
<td></td>
<td>Get assistance if HIV positive</td>
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<td></td>
<td>Maintain HIV preventative behaviours</td>
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5.3.3.1 Confirmation of an HIV negative status

Knowing one’s HIV status is the first step in the fight against HIV/AIDS (DoH, 2007; UNAIDS, 2008) and initially all participants were commended for that. However, the results obtained from the participants showed that not only did the participants want to know their HIV serostatus, the participants were only comfortable with making the decision to go for VCT if they felt that they were HIV negative. One participant stated;
• “...so I just went to check my status whether I’m positive or negative, but then I knew that I was negative because I didn’t do anything since the time I went to get tested until this time I was tested. So I was just making sure that I was still negative”.

Another stated;

• “The thing is I don’t wanna go testing [for HIV] not having that feeling of knowing that I’m...I’m negative. At least if someone I’m dating says that they are negative, it will be easy for me to go get tested”.

Considering that up to 80% of individuals with HIV are not aware of their status (UNAIDS/WHO, 2007), and that less than one out of ten adults know their status (Motavu & Makumbi, 2007) it was interesting to note that the participants were more willing to go for VCT, only if they strongly believed that they were HIV negative. This could be seen as a barrier, however in the case of the participants it was perceived as a benefit. According to the HBM, a health behaviour is perceived to be beneficial when an individual believes that it will reduce or eliminate a threat (Sanderson, 2004). Therefore, confirming an HIV negative status is seen as a benefit because it reduces the threat or the impact of HIV to the individual and those in the individual’s social network. Therefore, the more the participants perceived themselves to be HIV negative, the more they were likely to go for VCT.

5.3.3.2 Get assistance if HIV positive

Even though the participants agreed that they decided to be tested to confirm an HIV negative status, they also suggested that, if the result turned out to be HIV positive, going for VCT would help them to get the help they need in order to live a life with HIV. They all expressed that accepting an HIV positive result would not be easy, but they would use the process of VCT, particularly the post test counselling to gain knowledge of resources of how to manage and live with HIV. VCT has been identified as an effective program in the
management of HIV, as it directs newly infected individuals to medical and social resources in order to provide more holistic management of HIV (Hutchinson & Mahlalela, 2006). One participant stated;

- “If I’m diagnosed with HIV, I want to live longer like those other people who have been diagnosed with HIV and are living longer. Some people live long up to 10 years....so I wanna be like them and live longer”.

This suggests that the participants perceived going for VCT as beneficial as it would reduce the medical impact of HIV on them as they could be directed to medical resources as an outcome of VCT.

5.3.3.3 Maintain and strengthen current HIV preventative behaviours

The participants reflected that going for VCT assisted in maintaining already learnt HIV preventative behaviours, as well as implementing known HIV prevention strategies. The responses suggested that they received encouragement and affirmation for doing the right thing by going through the program, as well as information on how to implement other strategies they were not confident in implementing. One participant stated;

- “I went for my HIV test for about twice this year I think...and it has informed me that I should live a healthier lifestyle, not that I did not know. But now I’m abstaining, which plays a very good role [in prevention of HIV]”.

Another stated;

- “So it is an advantage for me [to go to VCT] because I know that I have to continue being healthy and if I engage in sexual activities I must make sure that it is safe and protected”.

Literature has shown that VCT helps to change sexual behaviours to prevent the spread and infection of HIV (Baggaley, 2001; UNAIDS, 2003). In addition, literature has identified
VCT as a more effective tool in reducing HIV risk behaviours (Coates et al., 2001). The participants reflected that they felt that the VCT catered to their individual needs concerning HIV preventative behaviours, as opposed to an advert on television, or a poster that is more generalised. One participant stated;

- “I just go by myself because it is something that I wanna do, I get so much more out of it”.

5.3.4 Perceived Barriers

The fourth component of the HBM is perceived barriers. Perceived barriers refer to the way an individual perceives obstacles to the decision to engage in a health behaviour (Sanderson, 2004). Barriers vary from individual to individual and may include finances, psychosocial, demographic or geographical barriers (Branon & Fiest, 2004). It involves a cost benefit analysis and the barriers only become influential when the costs outweigh the benefits (Sanderson, 2004). The question asked in order to elicit the barriers was the same one asked about the benefits of HIV, as well as “Did you have any reservations before you went for VCT? If so what were they”? Therefore, the responses included in this component were those that showed what could be possible decisions against VCT. All of the participants tended to respond to questions about barriers to VCT by talking about “other people” and “my friends” and they provided limited information about own opinions and experiences.

The themes that emerged were, HIV/AIDS myths: death sentence, denial of personal risk, one time VCT and VCT stigma. These are depicted in Table 5.

Table 5. Themes for Perceived Barriers

<table>
<thead>
<tr>
<th>Perceived Barriers</th>
<th>HIV/AIDS myths: death sentence</th>
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<tr>
<td></td>
<td>Denial of personal risk</td>
</tr>
<tr>
<td></td>
<td>Inconsistent HIV testing</td>
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</table>
5.3.4.1 HIV/AIDS myths: death sentence

Participants agreed that one of the strongest barriers to HIV testing is the myths surrounding HIV that are still present among university students. One such myth identified by all participants is that HIV is a death sentence. All participants used the phrase “when you have HIV, you know you are going to die soon”. When asked if they believed this myth the participants strongly stated that they do not subscribe to this myth. However, during data analysis and the follow up telephonic interview this was not the case. The participants found some truth in the myth, but it was not openly expressed. Such opinions were observed in Diedericks and Elkonin’s (2003) study where students still believed that HIV means death. It is interesting to note that this myth is still present among university students from the same campus, even after 8 years and several interventions later. This myth has resulted in some students not going for VCT. In particular, one participant stated;

- “...you know with some of us, we think that if we test positive it is the end of our life, there is nothing more to do. What is the use of studying when you are positive? Is it not better to just stay at home and do nothing because you are going to die soon?”

Another stated;

- “Actually people do talk about HIV and they say so many wrong things such as if you go for testing for HIV you are digging your own grave and stuff, but those things are untrue”.

In the early days of HIV prevention programs, being HIV positive was related to being a homosexual, intravenous drug user or a prostitute (Emlet, 2007; Parker & Aggleton, 2003). In the early 1990s, there were images of a skull containing cross bones with the slogan
“AIDS is a killer” (Parker & Aggleton, 2003). This failed to make an impact in the prevention of HIV as these campaigns instilled fear. Campaigns shifted to knowledge giving, and has now shifted to behaviour change (DoH, 2008; Soul City/DoH, 2004). However, even though the initial images and notions are no longer advertised, the myth about AIDS being a death sentence continues among the population, and it prevents individuals from going for VCT (Shishana et al., 2009).

5.3.4.2 Denial of personal risk

Denial is a defence mechanism used in order to reduce anxiety when one is faced with a threat (Meyer et al., 1989). The participants cited denial of being at risk to contract HIV as a barrier to HIV testing. They stated that this happens despite knowledge about HIV issues, and this is much stronger in cases were one has put oneself at risk of HIV. One participant stated;

- “I know my friends and they have instances where they have been reckless and probably exposed themselves [to HIV], and I just think that they are scared”.

The same participant went on to say;

- “Yes it gives them strength, I don’t know....I look fine, I feel fine so let’s not go looking for trouble”

Another stated;

- “They say it’s better to just live life. But one of my friends was a playerboy [had multiple partners] and he is thinking if he goes to test and he is positive it will be an issue, so he is thinking why doesn’t he just live like that and if he is positive he will just die or whatever, but he does not want to know whether he is positive or negative because he thinks that it will have a bad influence on him”.
The denial also ties in with not wanting to let go of the current life style. Denial would assist one to justify refusal to give up certain past time social activities. One participant stated;

- “One of my friends actually said that you know....if he goes and drinks beer, he will know that he is killing his immune system and stuff like that, so he does not want to get tested and know his status”.

It is said that at times denial serves as an adaptive function, but when overused it prevents accurate assessment of risk to an identified threat (Meyer et al. 1989). In the case of university students, the overuse of denial has resulted in them believing that they are invincible to contracting HIV (Brown et al., 2000; Groove et al., 1997). In a way, they are eliminating their risk of contracting HIV by turning a blind eye, thus explaining why students perceive their susceptibility of contracting HIV as low. Therefore, since the risk to contracting HIV is minimised, the need to go for VCT is eliminated, thereby making denial a barrier to VCT.

5.3.4.3 Inconsistent HIV testing

The participants reported that some students are of the opinion that, once they have received an HIV negative result, there is no need to be tested again. This opinion becomes a barrier because it prevents students from going for VCT, which is important because they are part of an at risk-population. They also reported that at times, students will not be tested for years and when asked why they are not tested, they respond that they have been tested before. This was clearly illustrated by a participant who said;

- “It’s like I’ve got it [VCT] done once and for all and never again. They have gone for it once and they are not willing to do it again”.

Another stated;
• “...so even when they have done something reckless, they say things like you know, I went to get tested and I was negative...so it’s like they are in denial or something like that”

A participant also stated;

• “.....people are afraid to make that choice of going and sticking to it because VCT is not a once off thing that is why I go every three months. It’s not once off, you cannot get tested in 2006 and say thank you I’m healthy till 2010. You have to do it every 3 months. So maybe they are scared to make that sort of commitment and sticking to it”.

The DoH highlighted VCT as a way to reduce new infections (DoH, 2007; Shishana et al., 2009). In order to optimise the benefits of VCT, individuals would need to follow through with recommendations from the VCT process. One of those recommendations is to return for testing in 3 months. This means that once an individual has decided to go for VCT, they need to make a commitment to going regularly. The participants stated that this seems to be a challenge for some individuals and the fact that they have gone for VCT previously begins to serve as a barrier as this is used to justify refusal to go for further VCT.

5.3.4.4 VCT stigma

Stigma related to going for VCT was also identified as a barrier. Several programs have been put forward to fight HIV/AIDS and their successes hindered by stigma (UNAIDS, 2008). In general, stigma prevents individuals from making the decision to get tested, to disclose HIV positive status, and to go for treatment for HIV/AIDS (Parker & Aggleton, 2003). One participant stated;

• “…I think another thing that makes students not to do that [test for HIV] is because of stigma, and even though there are initiatives by other different organizations and
everything, but then when one goes there you are perceived to be sexually active, you are perceived to be not living a good life or you are all out there, so when you go there and you come out, whether the results were positive or not, you already stigmatised and put into a box so I think students are afraid of being stereotyped and being discriminated against”.

Another stated;

- “Yeah...yeah it did happen [thought of stigma], because in everything you do and everything you say, you will always think of that, in whatever decision you take, at some point you will say I’m going to feel good but at the end you are living within a system of people that are going to judge and say whatever they are going to say”

This is in line with the literature that states that stigma is perpetuated by the perception that HIV is an outcome of low moral behaviour, and going for VCT means, that one has engaged in some low moral behaviour (Emlet, 2007; Hutchinson & Mahlalela, 2006; National AIDS Control Program, 2001). Studies have shown that university students attempt to achieve a social standing by engaging in some activities that they may not be comfortable with (Petersen et al., 2001). Therefore, students would opt not to go for VCT because they may be put into a box, and this means that their social standing drops among their peers.

It is interesting to note that even though the participants identified these as barriers, it did not deter them from being tested for HIV. One participant stated very strongly that;

- “Yeah because it’s my life. At the end I have to live it whether I am affected or infected, either way it will affect me not others”.

According to the HBM, a barrier is only strong and influential if one perceives that not engaging in a health behaviour is more beneficial and less detrimental psychologically and socially (Sanderson, 2004).
5.3.5 Cues to Action

Cues to action refer to reminders or alerts about a potential health problem and are necessary to trigger the process of engaging in a health behaviour (Pitts & Phillip, 1991; Winfield & Whaley, 2002). Cues can be internal or external, and may involve people, events or things and the researcher asked more than one question in investigating this component for that reason. The participants were asked “Was there anything in particular that made you want to go for VCT?”, “How did the university environment influence your decision to go for VCT” and “What do you think the university can do in order to increase VCT among university students?”. The researcher asked these questions in order to explore cues that were in and outside the university environment. Responses that qualified to explain this component of the HBM included responses that a participant identified as a trigger that started the whole process of deciding to go for VCT.

The themes that emerged were media, friends, family, and the university environment. These are depicted in Table 6.

Table 6. Themes for Cues to Action

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<thead>
<tr>
<th>Cue to Action</th>
<th>Media</th>
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<tr>
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<td>University environment</td>
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<td></td>
<td>-improve current VCT campaigns</td>
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<tr>
<td></td>
<td>-introduce rewards</td>
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<tr>
<td></td>
<td>-introduce couples-VCT</td>
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<td></td>
<td>Friends and family</td>
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5.3.5.1 Media

The media played a role in all the participants’ decisions to be tested. Some participants heard adverts on the radio while others saw them on television. In one instance a participant stated;

- “Ummmmm I would say it is media, you know when there is those adverts and stuff on television and when they show those adverts and you see them, I am thinking eiiisshhh I do not know my status you know and every time those ads come through the TV it gets you thinking that I must go get tested, you know.”

The South African government has come a long way from the traditional ABC model of HIV prevention (DoH, 2007). There are a several more encompassing media campaigns that target different age groups and aspects of HIV (DoH, 2007), and these served as an external cue for the participants.

5.3.5.2 The university environment

Some participants felt that being in the university environment was a cue to go for VCT. In particular, the cues were posters, health awareness week, blood donation talks, and workshops.

One participant stated;

- “Yeah....the media has played its specific role, but I stay on campus, I stay in res....and I have gone for workshops and those sex talks for men and all that stuff and I think it might have been instilled in me during those workshops, listen you know that you have to do it regularly just to be safe”

Another stated that;

- “...because there was this other time, I think it was a health care day here in campus and I went there. So they were checking people’s blood types and stuff and then I
went there to get my type checked and they found out that I am O negative and they kinda begged me to donate blood so I had a class and could not donate. So I thought lemme go and test so that some other time when they come I will have tested and so I can donate blood”.

Literature states that the university environment exposes students to peer pressure, access to sex, drugs and alcohol (American College Health Association, 2006; Brown et al., 2008), however it also offers an opportunity to learn ways of avoiding such situations. The talks and workshops and other activities geared at optimising students’ health has been beneficial to the participants who were in the study. It was interesting to note that the students were concerned about the HIV statistics that the university published, and hearing the statistics made them seriously think about going for VCT. One participant strongly stated;

- “Yeah basically from the stats that I heard, that a number of students get infected more and more on the weekends because they go out and such things, so for me..yeah man it was more of the stats, and I did not want to be part of the stats”.

In 2000, it was estimated that by the year 2005, 33% of undergraduates, 21% of postgraduates and 36% of technikon undergraduate students would be infected with HIV (Chetty, 2000). These statistics were a cue to action for policy makers in higher education institutions as a document outlining intervention programs to be implemented, such as VCT, in all tertiary institutions (Higher Education South Africa, 2008). The NMMU, which is the campus where the study was conducted, incorporated VCT into their campus health program in 2003. In addition to that, the campus health clinic does several talks related to VCT and they provide pamphlets for students. The participants’ comments show that they think the programs the campus health clinic runs are effective. However, the participants noted that more could be done to enhance the university’s ability to provide cues to the student population.
5.3.5.2.1 Improve on current VCT campaigns

The participants felt that the current VCT campaigns available were good, but they felt that the university health clinic’s presence was limited to the Kraal, which is an area where students meet for social events. This is in line with the HEAIDS (2010) report that stated that students wanted more presence from the university administrators, student leaders and the campus health department with regards to information about the presence of VCT facilities on campus as well as support available for students who test HIV positive on campus.

However, one participant reported:

- “You know they do those workshops at the Kraal, but I do not go there, so I do not get to go for the workshops”.

Therefore, this participant was suggesting that the programs do not cater to the portion of the student population that does not socialise at the Kraal. In addition, the participants also felt that the poster campaigns are limited to the health clinic and there are limited posters in other parts of the university.

5.3.5.2.2 Introduce a reward system

The participants also felt that introducing a reward system for going for VCT would be beneficial in increasing VCT among students. One participant stated:

- “....if the is an HIV university day like say if there is prizes for the first hundred that go to get tested by that way...that way students will go there. Small things with students...such rewards will play a good role”.

The participants recognise that by offering rewards, it removes some sense of personal responsibility, but at least it will get some students to go for VCT.
5.3.5.2.3 Encourage couples VCT

One participant suggested that the university introduce VCT that is focused on couples, as many students are involved in relationships. By encouraging couples VCT, he proposed that it would demystify the process of VCT and give an individual a sense that they are not going through it alone. He stated;

- “I will speak about the male perspective because I sort of kind of know why the males are not willing to go..but I want to lean more towards thinking that the ladies are more willing to go for VCT so perhaps if they take that kind of approach to get the ladies to get their partners to go for VCT either on a couple basis and an individual basis then a couple basis afterwards, I think even if...it’s like you will starting a veldt fire one couple does it and then another does it”.

Interestingly, the participant was echoing a sentiment that promotes the burden of being HIV negative, as with contraception, on the females rather than the males and this is well-documented in literature (UNAIDS, 2006; UNAIDS, 2008; UNAIDS 2010)

5.3.5.3 Friends and family

The participants also concurred that friends and family members have also pushed them to be tested. One participant stated;

- “....the government sent some nurses so that they could provide an opportunity for the people around the community I live to get tested and that was also an opportunity for me to get tested. So everyone was going, almost everyone was going there and they would come back and try to sort of influence the other people to get tested so I also went and did the test”.

Another stated;
"...my other friend, yeah he went to get tested before me, I think he went last month and he came back and said that yeah I am negative and stuff. So I started feeling the pressure because I also had to go man...so we do talk about stuff like that”.

Another stated;

"...as well as my sister, she was diagnosed in 2004 and then, from that she lost her child and that was a motivating factor for me to know my status so as to know whether I am infected or not, what do I do?”

All participants identified external cues as their triggers and there was limited information on internal cues to action. This suggests external cues maybe more effective in encouraging VCT among the participants.

5.4 Summary

This chapter looked at the results obtained from the one on one interviews. The themes generated for the five components of the HBM were a) perceived susceptibility with the themes of alcohol use, low condom use and multiple sexual partners, b) perceived severity with the themes of personal burden of being HIV positive, family response and hindrance to future plans, c) perceived benefits with the themes of confirmation of a negative status, maintain HIV preventative behaviours, assistance if HIV positive diagnosis, d) perceived barriers with the themes of HIV/AIDS myths: death sentence, denial of personal risk, one time VCT and VCT stigma e) cues to action with the themes media, university environment and family and friends. From these results, one can hypothesise that the factors that influenced the participants’ use of VCT were the consideration of the severity of being HIV positive, assessing that going for VCT would be beneficial, and that there were several external cues in the university environment and in their social environment that set the process to decide to go for VCT in motion. The participants recognised the external cues
provided by the university in terms of influencing their decision to go for VCT, but expressed that these cues could be improved and strengthened. The barriers to VCT and the perceived susceptibility were factors that were acknowledged, but played a minor role in their decision to go for VCT.
CHAPTER SIX
Conclusions, Limitations and Recommendations

6.1 Introduction

This chapter will summarize the conclusions from the findings of study. The chapter will also discuss the value of the study, as well as the limitations encountered during the study. The chapter will conclude with recommendations for future research areas.

6.2 Summary and Conclusions of the Study

The present study utilized five one-on-one interviews in order to gain insight into the participants’ experience and perception concerning the decision making process to go for VCT, using the components of the HBM to gain this understanding. Research into these experiences and perceptions is necessary in helping the university administrators, student leaders and campus health personnel to find ways to increase the uptake of VCT among the student populations. Before discussing the conclusions of the study, one needs to return to the objectives of the study. The objective of the present study was to explore and describe factors that influence university student’s use of VCT services using the components of the HBM. The conclusions will be drawn from the results obtained from the participants and will be described according to their relation to the components of the HBM.

In terms of perceived susceptibility, the participants all agreed that university students are at risk of contracting HIV due to several activities they engage in. However, this perceived risk did not translate to personal risk. This is because personal risk rests on an individual subjective evaluation rather than an evaluation of actual risk (Rice, 1998). Responses suggested that, in general the participants downplay and at times deny their risk of contracting HIV as a way to protect themselves from the possibility and anxiety of being HIV positive. Responses also further suggested that the students who are actually at a higher risk
of contracting HIV are not likely to go for VCT (Fako, 2006). Conclusions from previous studies have shown that when individuals perceive themselves as a high risk to contract HIV, they are more likely to go for VCT (Boyd et al., 1999; De Paoli et al., 2004; Maguen et al., 2000). Among the participants in the study, perceived susceptibility was a minor factor in influencing their decision to go for VCT. One can assume that this is the same for other students as similar results were obtained in a study conducted on the same campus by Diedericks and Elkonin (2003).

In terms of perceived severity, the participants agreed that HIV does pose a threat to their current and future lives. Just like perceived susceptibility, perceived severity rests on a subjective evaluation. However, unlike perceived susceptibility, the participants strongly identified with the threat of HIV to themselves and their families. All participants acknowledged that HIV would have a major impact on them, but greater importance was placed on the impact that being HIV positive would have on their families. This suggests that they view being HIV positive as a group or family burden, rather than just a personal burden. All participants cited perceived severity as one of the most influential factors in strongly considering going for VCT.

In terms of perceived benefits, the participants viewed VCT as a beneficial health behaviour. The results suggested that once the participant had considered the impact of HIV, the possibility of actually going for testing rested on the consideration that VCT would be beneficial in reducing the perceived personal and family impact of HIV. The participants viewed VCT as personally beneficial as they would know their status, and if they become HIV positive, HIV testing would help with early detection. In addition, the participants felt that early detection would help with timely interventions concerning medication and changes in lifestyle.
In terms of perceived barriers, the participants reported that several barriers prevent students from going for VCT. Their responses suggested that, in some instances students may perceive HIV as a major threat, and possibly consider VCT as beneficial, but due to the barriers to VCT, they do not go. In HBM terms, if one perceives these barriers as greater than the benefits, a decision against VCT will result. The participants reported that barriers to VCT were also present for them, but they evaluated the benefits of VCT to be greater than the barriers.

In terms of the cues to action, the participants suggested that external cues to action were influential in determining whether they decide to go for VCT or not. These external cues varied among all participants, but one common element among the participants’ responses was that the cue had to be personally relevant. This suggests that a cue’s determining power is not based on how true or relevant it is concerning the health behaviour, but on how personally relevant it is to the student. The participants’ suggestions to improve the uptake of VCT were related to the university providing external cues that are relevant to the students. These were improve current VCT campaigns, introduce rewards for attending VCT and to introduce couples VCT as many students are in relationships and are sexually active. In the early as 1990s, studies by Allen et al., (1992), Kamenga et al., (1991) and Van der Straten et al. (1995) reported that couples who attend VCT together are more likely to reduce HIV risk behaviour than couples who do not go through the process together. A follow up study done by Painter (2001), supports that couples VCT would be effective in Sub Saharan Africa. However, from literature review, it became apparent that, little has done to promote couples VCT.

In summary, according to the HBM, perceived severity of HIV, particularly the impact HIV would have on the families, perceived benefits of VCT concerning reducing this impact and the cues to action that the participants evaluated as personally relevant were the
factors that influenced the participants’ decision to go for VCT. On the other hand, perceived susceptibility to HIV had little influence in their decision to go for VCT, as they perceived their risk as low. Even though the participants acknowledged barriers such as VCT stigma, inconsistent HIV testing, myths about HIV and denial of personal risk to HIV, the benefits of going for VCT outweighed the barriers for this sample.

6.3 Value of the Study

During the literature review, the researcher discovered that there is a wealth of studies on HIV/AIDS and its related issues stretching over decades. However, there is limited research on reasons why specific populations decide to be tested for HIV, in particular university students in South Africa. This realisation made it both important and necessary to conduct this study with university students in order to explore the factors that influenced the sample’s decision to go for VCT. Therefore, the value of this research is that it contributes towards knowledge about the variables that influence the engagement in VCT among university students, particularly those in South Africa. This knowledge can be further used to create interventions to increase VCT that are more specific and relevant to university students.

By considering the participants’ experience of the process they went through when deciding to go for VCT, some interventions that are available thus far can be modified, and new interventions can be put forward. Such suggestions were given by the participants and they were all related to the external cues to action that the university can implement or adjust. The current study has some value research, but there are limitations that the researcher observed. Despite the value of the study, there are some limitations of the study which are discussed in the next section.
6.4 Limitations of the Study

As previously mentioned in chapter four, the sample consisted of 5 young male African students and the data collected only reflected the opinions of males. Therefore, the researcher cannot assume that female students would hold the same perceptions as the male participants.

The follow up interviews were conducted telephonically. This proved to be a limitation as the participants had limited time to speak to the researcher, the researcher did not manage to contact one of the participants and the interview lacked the privacy that was present when the initial interviews were conducted. In addition, the researcher used field notes rather than audio recorded information. The researcher also believes that there would have been much value in collecting biographical data of the participants as this would have given a much richer description of the participants.

Based on the various limitations of the study that have been discussed, recommendations for future research can be made and this is the focus of the following section.

6.5 Recommendations for Further Research

Understanding the factors that influence university students’ use of VCT services during their time in university is important, especially when designing effective approaches for increasing the uptake of these services. Being in university involves a level of responsibility and maturity that some students are not prepared for. Common developmental tasks include making a career choice, sex role identity, dating, forming significant relationships and separation from parents (NIAAA, 2007). Interaction of the limited maturity and other factors found in the university environment make some individuals more vulnerable to contracting HIV than others (American College Health Association, 2006; Brown et al. 2008; Petersen et al., 2001). The findings of this study contributed to the existing knowledge
of HIV/AIDS issues and more significantly to the under researched area of factors influencing the use of VCT services by students in South African universities. However, specific aspects emerged from the study and these need further exploration. These are a) an exploration of the factors that influence female university students’ decision to going for VCT, b) reasons why university students do not perceive themselves at personal risk to contracting HIV, even though they perceive the group “university students” at risk, c) an exploration of the three different groups of students who should be the target of VCT, that is those who have never gone for VCT, those that get tested once but do not commit to regularly going for VCT and those who regularly go for VCT. By exploring the reasons why there are three groups, more group specific interventions can be designed and implemented d) an exploration of the effectiveness of interventions that have been generated concerning encouraging students to go for VCT

It is recommended that the current study should be replicated using a larger sample, consisting of students at different stages of their degree (first, second, third or Honours year). This will allow an exploration on how time spent in university changes or alters views and perceptions about HIV as one would assume the more years spent in university, the more mature a student will be. The inclusion of a psychometric measure is recommended in such a study, as there are different measures that have been designed with the HBM as the theoretical basis, to explore university students’ perceptions concerning HIV/AIDS issues such as the AIDS Belief Scale (Zagumny & Brady, 1998) and the AIDS Health Belief Scale (Boshamer & Bruce, 1999). By using a psychometric measure, a larger population can be used. However, these measures should be used with caution as many of the measures available were designed for a population different from the South African one. Such a study would allow for a better understanding of the factors influencing university students’ decision to go for VCT and better inform university administrators. In addition, the study can be
carried out at different campuses in order to compare any differences and display any
similarities between the students in different campuses.

6.6 Summary

The study attempted to highlight the relevance and necessity of conducting research
into exploring the factors influencing university students’ use of VCT. The HBM proved to
be applicable in discovering these factors. The study has proven to be beneficial in
developing insightful knowledge that can be used to understand the decision making process
that university students go through when deciding to go for VCT. According to the HBM, the
factors that influenced the decision to get tested for HIV were perceived benefits, perceived
severity and cues to action because they all felt that the perceived barriers were not enough to
stop their decision to get tested. In addition, it appears that even though the participants
perceived that they were susceptible to HIV, there seems to be no action to show this. This
chapter addressed the conclusions of this study, the value and limitations of the study and
provided recommendations for further research. The findings of the study can provide
valuable guidelines for interventions related to increasing the uptake of VCT services,
particularly in the South African university setting.
References


International Conference on AIDS.


Cape Town: Centre for Actuarial Research, South African Medical Research Council and Actuarial Society of South Africa.


Lapadat, J.C., & Lindsay, A.C. (1999). Transcription in research and practice; from standardization of technique to interpretive positioning. *Qualitative Inquiry 5*, 64-86.


APPENDIXES

APPENDIX A: Interview Schedule

1. What made you go for VCT?
2. How important was it for you to go for VCT?
3. Was there anything in particular that made you want to go for VCT?
4. What were the advantages and disadvantages of HIV testing for you?
5. How did the university environment influence you to go for VCT?
6. Does HIV pose a threat to you as a student? If so how?
7. How do you think the university can increase VCT among university students?
APPENDIX B: Letter to Campus Health NMMU

Faculty of Health Sciences
Department of Psychology
NMMU (South Campus)
Tel: + 27 (0) 41 504-2330
Email: shingisaim@yahoo.com

Campus Health Services

Dear Sister Goosen,

RE: Permission to conduct investigation of the factors that influence university students’ use of VCT services: An analysis using the Health Belief Model.

I am a master’s student studying an MA in Clinical Psychology degree and wish to conduct a study with the South Campus Health clinic. The aim of the study is to explore and describe the factors that influence university student’s use of VCT services. This study is supervised by Dr D. Elkonin. Findings of this study, which may assist in designing more effective HIV testing awareness campaigns, will be made available the Campus Health Services of NMMU.

The study requires male and female undergraduate/postgraduate university students between the ages of 21 and 24 who have undergone HIV testing at South Campus health clinic in 2010. The study will involve one-on-one in-depth interviews and will be recorded by an audio device. Willing participants will not be required or requested to reveal their serostatus at any point of the study.

The relevant permission will also be obtained from the Research Ethics Committee (Human) of the NMMU for official endorsement. In the event of additional support services being required, students will be referred to the Student Counselling, Career and Development Centre. Permission is requested for cooperation of the Campus Health Services, South Campus, to provide students who come for HIV testing with a letter providing them with information about the study and request their voluntary participation. Interested participants
will leave their email address with the health clinic so that I can contact them with regards to a date of a meeting to further discuss and explain the study.

If you require more information about the study, you may contact me on the email address that has been provided above. Thank you for your valued time and cooperation.

Sincerely,

Shingisai Musemwa
Researcher

Dr D. S. Elkonin
Research Supervisor
APPENDIX C: Letter to Prospective Participants

Faculty of Health Sciences
Department of Psychology
NMMU South Campus
Tel: +27 (0) 41 504-2330
Email: shingisaim@yahoo.com

RE: Participation in study investigating factors that influence university students’ use of VCT services: An analysis using the health belief model

Contact person: Ms. Shingisai Musemwa

Dear prospective participant,

You are being requested to participate in a study that is aimed at investigating the factors that influence university students’ use of voluntary counselling and testing (VCT) services. If you agree to participate, you will be provided with verbal information to assist you to understand the study and explain what would be expected of you. The explanation will include any risk or benefits involved in participating in the study, and your rights as a participant in the study. Please feel free to ask the researcher to clarify anything that is not clear to you. The data collection will be in the form of one-on-one interviews and will be recorded by an audio device in order to capture all your comments. Please note that the results of your HIV test will not be requested or revealed to the researcher or any other participant(s).

In order to participate in the study, you will be required to provide written consent that will include your signature, date and initials to verify that you understand and agree to the conditions of the study. This information will be kept confidential and will in no way be linked to any identification particulars.

Participation in this study is completely voluntary and you are not obliged to take part. If you agree to take part, please leave your email address with the health clinic and I will contact
you with further information. Please note that you have the right to withdraw at any given time, during the study without penalty.

Although your identity will, at all times remain confidential, the results of the study may be presented at a scientific conference or in a specialist publication, but your name or any other identifying information will not be released.

Sincerely,

Shingisai Musemwa          Dr D. S. Elkonin
Researcher                Research Supervisor
### APPENDIX D: Consent Form

<table>
<thead>
<tr>
<th>Title of the research project</th>
<th>Factors influencing university students’ use of HIV voluntary counselling and testing (VCT) services: An analysis using the Health Belief Model (HBM).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference number (for official use)</td>
<td></td>
</tr>
<tr>
<td>3.1.1.1 Principal investigator</td>
<td>Shingisai Musemwa</td>
</tr>
<tr>
<td>Address</td>
<td>NMMU Department of Psychology P O Box 77000 6031</td>
</tr>
<tr>
<td>Postal Code</td>
<td></td>
</tr>
<tr>
<td>Contact telephone number</td>
<td>041 504 2330</td>
</tr>
</tbody>
</table>

### A. DECLARATION BY OR ON BEHALF OF PARTICIPANT
(Person legally competent to give consent on behalf of the participant)

<table>
<thead>
<tr>
<th>3.1.2</th>
<th>3.1.3 Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>I, the participant and the undersigned I.D. number</td>
<td>(full names)</td>
</tr>
<tr>
<td>3.1.3.1.1 OR</td>
<td>I, in my capacity as of the participant I.D. number</td>
</tr>
<tr>
<td>Address (of participant)</td>
<td></td>
</tr>
</tbody>
</table>
### A.1 I HEREBY CONFIRM AS FOLLOWS:

1. I, the participant, was invited to participate in the above-mentioned research project that is being undertaken by Shingisai Musemwa of the Department of Psychology in the Faculty of Health Sciences of the Nelson Mandela Metropolitan University.

2. The following aspects have been explained to me, the participant:

   2.1 **Aim:** To explore and describe factors that influence university students’ use of VCT services.

   **Procedures:** I understand that I will be contacted via telephone concerning the date of the interview and that my comments will be recorded with an audio recording device.

   2.3 **Risks:** I understand that the topic of HIV/AIDS is sensitive and participating in the study may result in me experiencing emotional distress.

   2.4 **Possible benefits:** Participation in this study may result in improved understanding of VCT. It may also assist in improving HIV testing by students.

   2.5 **Confidentiality:** My identity will not be revealed in any discussion, description or scientific publications by the investigators.

   2.6 **Access to findings:** The researcher will provide information in the form of a research report to the participants.

   2.7 **Voluntary participation/refusal/discontinuation:**

   My participation is voluntary [ ] YES [ ] NO

   My decision whether or not to participate will in no way affect my present or future care/employment/lifestyle [ ] TRUE [ ] FALSE

3. The information above was explained to me/the participant by
I was given the opportunity to ask questions and all these questions were answered satisfactorily.

| A.2 I HEREBY VOLUNTARILY CONSENT TO PARTICIPATE IN THE ABOVE-MENTIONED PROJECT |
|---|---|
| Signed/confirmed at | on | 20 |
| Signature or right thumb print of participant | Signature of witness |
| Full name of witness | |

4. No pressure was exerted on me to consent to participation and I understand that I may withdraw at any stage without penalization.

5. Participation in this study will not result in any additional cost to myself.
I, …………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………
declare that

- I have explained the information given in this document to

| (name of patient/participant): | [ ] Afrikaans | [ ] English | [ ] Xhosa | [ ] Other |

and/or his/her representative

| (name of representative): |

- he/she was encouraged and given ample time to ask me any questions;

- this conversation was conducted in

| (language) | by |

and no translator was used / this conversation was translated into

- I have detached Section C and handed it to the participant

| YES | NO |

Signed/confirmed at

| [ ] Signature of witness |

| [ ] Signature of interviewer |

Full name of witness

on 20
C. IMPORTANT MESSAGE TO PARTICIPANT/REPRESENTATIVE OF PARTICIPANT

<table>
<thead>
<tr>
<th>Dear participant/representative of the participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thank you for your/the participant’s participation in this study. Should, at any time during the study:</td>
</tr>
<tr>
<td>- an emergency arise as a result of the research, or</td>
</tr>
<tr>
<td>- you require any further information with regard to the study, or</td>
</tr>
<tr>
<td>- the following occur</td>
</tr>
<tr>
<td>• You experience psychological discomfort as a result of information you share.</td>
</tr>
<tr>
<td>• You no longer wish to participate in the study</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kindly contact</th>
<th>Miss Shingisai Musemwa</th>
</tr>
</thead>
<tbody>
<tr>
<td>at telephone number</td>
<td>041 504 2330</td>
</tr>
</tbody>
</table>