



Exploring students' uptake of HIV testing services at the University of KwaZulu-Natal Howard College, as part of the Universal Test and Treat initiative.

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DEDICATION

I dedicate this work to the glory of God Almighty. Oba mi, Eledumare, Oba alasepe. The one who gives grace for completion of task. I am grateful Lord.

To my children, Bethel, Joel and Emmanuel. Greater works than this shall you accomplish in good time in Jesus' name.

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ACRONYMS AND ABBREVIATION

ABC	Abstain, Be Faithful, Condomise
AIDS	Acquired-Immuno-Deficiency-Syndrome
ART	Antiretroviral-Treatment
CCMS	Centre for Culture, Communication and Media Studies
CDC	Centre for Disease Control
CHASU	Campus HIV/AIDS Support Unit
NDOH	National Department of Health
FGD	Focus Group Discussions
HCT	HIV Counselling and Testing
HBM	Health Belief Model
HIV	Human Immuno-Deficiency Virus
MMC	Medical Male Circumcision
MSM	Men who Have Sex with Men
PEP	Post-Exposure-Prophylaxis
PrEP	Pre-Exposure-Prophylaxis
SANAC	South African National Aids Council
STDs	Sexual Transmitted Diseases
STIs	Sexual Transmitted Infections
SBCC	Social Behavioural Change Communication
SEMCHB	Social Ecology Model of Communication and Health Behaviour
HEAIDS	Higher Education Training HIV/AIDS Program
UNAIDS	The Joint United Nations Program on HIV/AIDS
USB	Universal Serial Bus
UTT	Universal Test and Treat
UKZN	University of KwaZulu-Natal
VCT	Voluntary Counselling Testing
WHO	World Health Organization

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ABSTRACT

Adolescents and adults between the ages of 15 – 49 years remain disproportionately vulnerable to HIV infection in South Africa. An estimate of 7.2 million people are living with HIV in South Africa. In KwaZulu-Natal, which is the most severely affected province, studies reveal that 23% of those living with HIV, do not know their HIV positive status. In the light of this, there is an urgent need to bridge the gap in HIV testing as a means of preventing the transmission of the virus.

This research is a case study which explores students' uptake of HIV testing services as part of the Universal Test and Treat (UTT) initiative. By using the Social Ecology Model of Communication and Health Behaviour and the Health Belief Model, this study seeks to achieve a wholistic understanding of students' testing practices, identify key facilitators and barriers to HIV testing and explore students' knowledge of the (UTT) as a prevention and treatment approach to HIV.

The global efforts to achieve a significant reduction in HIV infection by 2020 is a strong focus of the UTT approach which promotes combination prevention, highlighting the importance of getting everyone tested frequently, with those who test negative offered condoms and Pre-Exposure prophylaxis. Similarly, those who test positive are offered immediate treatment. There is a dearth of research on HIV Counselling and Testing (HCT) among students in the urban areas of KwaZulu-Natal.

Using a qualitative approach to research, 4 focus group discussions with 19 male and 18 female students at the University of KwaZulu-Natal between the ages of 18- 35 years were conducted to collect data. Participants were purposively selected according to age, location, those that have tested for HIV at least once in the last 12 months and those that have never tested. Thematic analysis was used to create themes that emerged from data collected.

Key findings in this study revealed that students are at risk of HIV infection because of risky sexual practices. Furthermore, misconceptions about HIV prevention methods were also identified in this study. Barriers to HCT include fear of a positive result, lack of confidentiality and privacy, HIV-related stigma and perceived low risk to HIV infection. Facilitators to HCT include perceived high risk to HIV infection and the use of incentives. Furthermore, there is a lack of knowledge about the UTT approach which contributes to negative perception of HCT.

This study emphasized the need to increase knowledge and awareness of the UTT in order to impact the uptake of HIV testing services among university students.

Key words: HIV testing, Universal Test and Treat initiative, University of KwaZulu-Natal

CHAPTER ONE

INTRODUCTION

Preamble

It is no gain saying that the prevalence rate of HIV and AIDS in Africa is a pertinent issue. Despite efforts to combat the epidemic, prevention remains a global challenge (Govender and Abdool Karim, 2018: 1311). HIV testing is a vital approach to reducing the transmission of the virus in South Africa. However, the awareness of HIV status and uptake of treatment among adolescents and adults aged 15 – 49 considered to be among the key population at risk to HIV and AIDS infection is relatively low particularly among men (Peltzer and Matseke, 2013: 1012). In view of this, this study explores the uptake of HIV testing services among male and female students at the University of KwaZulu-Natal, Howard college campus as part of the Universal Test and Treat (UTT) initiative. This study investigates students' HIV testing practices. This implies that this study is interested in investigating why students test for HIV, when they test, where they test, how they test and the frequency of their testing behaviour. This study further probes into students' knowledge of the UTT approach as a prevention and treatment strategy for HIV.

This chapter provides a background within which the study was conceived and also discusses the problem statement. It further highlights the objectives of the study and the research questions that guide the study. The chapter concludes by providing a summary of the overall structure of the dissertation.

Background to the study

It is now more than three decades after the first case of HIV was diagnosed in 1981, yet the epidemic remains a primary global health concern (Kharsany *et al.*, 2014: 956; Dellar *et al.*, 2015: 65). Approximately 36.9 million people across the world were reported to be infected with HIV in 2017 and about 25% of these people did not know their HIV positive status (UNAIDS, 2018). Low-and middle-income countries have been identified to have the highest number of people living with HIV with approximately 66% residing in Sub-Saharan Africa (UNAIDS, 2017). Furthermore, studies reveal that 19.6 million people from this group live in Eastern and Southern Africa which recorded an estimate of about 800,000 of new HIV profiles in 2017 (SANAC, 2017; UNAIDS, 2018).

From figure 1.1, we see that 25% of people living with HIV globally do not know their HIV positive status. This shows that there is still a gap in HIV testing. In order to bridge this gap, it is important to create more awareness and increase knowledge about the importance of HIV testing as it the only way to know one's HIV status.

Figure 1.1: Knowledge of HIV status across the world



Source: UNAIDS, 2018

Since the beginning of the epidemic, an estimate of about 77.3 million people across the globe have become infected with HIV and an estimated 35.4 million people have died of AIDS-related illnesses (UNAIDS, 2017). In 2018, about 770,000 people were reported to have died of AIDS-related illnesses compared to 1.2 million in 2010(UNAIDS, 2018). These statistics show a decline in HIV-related death incidences. Contrary to this is a growing concern of the annual number of new infections among male and female adults that have remained unbudging in recent years. About 1.8 million new infections were recorded in 2017 which was the same in 2016 (WHO, 2017; UNAIDS, 2018). In the past seven years, new infections globally have decreased by only 18% from 2.2 million in 2010 to 1.8 million in 2017 (UNAIDS, 2018). Reports reveal that the decline is far less than anticipated which indicate that a lot of efforts is required to improve the knowledge of HIV and HIV testing particularly among adolescents and young adults (UNAIDS, 2018).

South Africa has one of the highest numbers of people living with HIV and AIDS, with an estimate of 6.4 million individuals infected with HIV in 2012 (CDC, 2015). Recent findings reveal that an estimate of 7.7 million people are living with HIV and AIDS in South Africa as at 2018 (UNAIDS, 2019). These statistics show that there is an increase in the number of people

living with HIV and AIDS from 2012 to 2018. Adolescents and adults between the age group of 15 – 49 are among the key population who are vulnerable to HIV infection (UNAIDS, 2017; HRSC, 2018; Statistics South Africa, 2018). HIV prevalence rate among individuals within this age group is 20.6%; 26.3% among females and 14.8% among males (HRSC, 2018; STATS SA, 2018). Research further suggests that the HIV annual incidence among individuals aged 15–49 years is estimated at 1.9% (South African HIV Clinicians Society, 2017). This corresponds to an estimate of 199,700 people newly infected with HIV in 2017 (HRSC, 2018). These statistics corroborate the earlier report of the World Health organization (WHO) above which revealed the high rates of adults newly infected with HIV in 2017. Based on this, this study is burdened with the task of exploring the unchanging rates of HIV infection among adults and possibly proffer solutions to decrease HIV transmission among this group.

Evidence reveals that young people become infected with HIV everyday as a result of many factors which include early exposure to sex (Ritcher *et al.*, 2015), lack of knowledge about HIV/AIDS, lack of education and life skills, poor access to health care services and growing up without parents or vulnerability to HIV infection through unprotected sex, and other forms of exploitation and abuse (WHO, 2010). Ritcher *et al.*, (2015) argue that the average age for first time sex among young people is 16 for females and 15 for males. Similarly, a study from sub-Saharan Africa further suggests that young people from the age of 15 years old are already sexually active before the age of 15 (Patton *et al.*, 2016). Early sexual debut is associated with increased risky sex behaviours such as having multiple sex partners, casual partners or sex partners through transactional sex and low rates of condom use which increase their chances of contracting HIV (Stockl *et al.*, 2012: 1; Wand and Kamjee, 2012: 2).

Within the above age group, young women between the ages of 15 – 24 are at the highest vulnerability to HIV infection (Zuma *et al.*, 2016). The rates of HIV infection among this group is six times more than their male counterparts (Dellar *et al.*, 2015; Karim *et al.*, 2017). This disparity is linked to young women's sexual relationship with older men, where these women in turn infect young men that they engage with sexually (de Oliveira *et al.*, 2017; Gouws and Williams, 2017). Entrenched gender inequalities, harmful gender norms and structures of patriarchy that limit women and girls from achieving their full potential are also factors that make women more vulnerable to HIV (UNAIDS, 2015). Thus, one of the major challenges in the prevention of HIV is decreasing the high infection rates among women (Baxter and Abdool Karim, 2016). Although, women bear most of the brunt of HIV and AIDS infection, it is important to note that this study focuses on young men and women. It is equally important to

study men's vulnerability to HIV and AIDS because men play a critical role in the transmission of HIV and AIDS (Dellar *et al.*, 2016). Therefore, when men are engaged in studies on HIV testing and other HIV and AIDS prevention strategies, it in turn improves the health of both men and women (Sidibe, 2015). Reaching men with HIV-related prevention, treatment and support services is vital because men and adolescent boys make up to about 49% of the global population of adults living with HIV and account for 52% of all new infections (UNAIDS, 2015) and an estimate of 60% of the 1.2 million people who died of AIDS related illnesses in 2014 were males (UNAIDS, 2015).

The rate at which the HIV and AIDS pandemic has increased has called for a need to develop more prevention approaches in order to reduce the spread of the virus. Behavioural interventions have played a significant role in reducing the transmission of HIV and bringing awareness of safe sex practices for effective prevention against HIV (Bhana and Peterson, 2009). However, these efforts have been insufficient in bringing an end to HIV infections (Stirratt and Gordon, 2008). As a result, there has been a great need for new HIV prevention methods that can complement existing behavioural interventions (Stirratt and Gordon, 2008). HIV testing services play a significant role in HIV prevention, treatment, care and support services which is the starting point to break the cycle of transmission of the epidemic (Teitelman *et al.*, 2014; Abdool Karim and Dellar, 2016).

In light of the above mentioned, the WHO improved the HIV guidelines on the treatment and prevention of HIV and AIDS in May 2016, which recommends the universal test and treat with Antiretroviral Therapy (ART) to be initiated on anyone infected with HIV, regardless of their CD4 cell count (WHO, 2016). This was translated into the UNAIDS HIV “90-90-90” targets, which aims for “90% of people living with HIV becoming aware of their HIV status, 90% of those with diagnosed HIV infection receiving ART and 90% of those receiving ART having durable viral suppression” by 2020 (UNAIDS, 2014: 1). Increased access and uptake of HIV testing is therefore central in achieving the 90-90-90 targets in order to end the epidemic (WHO, 2016). In view of this, this study is set to explore: the HIV testing practices among male and female students; the facilitators and barriers to HIV testing and also male and female students' knowledge of the UTT approach as a prevention and treatment strategy within a high prevalence setting.

Problem Statement

South Africa has the largest HIV and AIDS rate in the world with 7.7 million people living with HIV in 2018 which represents 19% of the global HIV burden (UNAIDS, 2019). Adults between the age group of 15 – 49 constitute an estimate of 20.6% of the total population of people living with HIV and AIDS in South Africa (HRSC, 2018; Stats SA, 2018). The key affected populations of HIV and AIDS in the nation include men who have sex with men (MSM), people who inject drugs (PWID), sex workers, prisoners, transgender people, young girls and women (UNAIDS, 2017). In 2018, it was reported that approximately 240,000 Adult men and women aged 15 – 49 years were newly infected with HIV (UNAIDS, 2019). These high prevalent rates are due to early exposure to sex, having older sexual partners, incorrect or no condom use and having multiple and concurrent sexual partners (Dellar *et al.*, 2015; Zuma *et al.*, 2016; de Oliveira *et al.*, 2017). Although, there has been an improvement in the decline of HIV and AIDS, reports indicate that much more still has to be done in order to improve knowledge of HIV and HIV testing among young men and women (UNAIDS, 2016).

HIV prevention approaches such as Abstinence, Be faithful and Condomise (ABC), has proved to be insufficient in preventing the transmission of HIV in South Africa (SANAC, 2014). The ABC approach focuses on individual behaviour change in order to reduce the risk of HIV infection but fails to take into consideration the contextual challenges such as poverty and power dynamics in sexual decision making (Madiba and Ngwenga, 2017). These factors will be discussed in detail in chapter two. New innovations such as medical male circumcision (MMC), Pre-exposure prophylaxis (PrEP) and a stronger drive to regular HIV testing have been promising (Hurth *et al.*, 2011). With the limitations of the linear behaviour change efforts (i.e.: ABC) and possibilities of MMC and PrEP, the global focus to achieve a significant reduction in HIV infection by 2020 is a strong focus of the Universal Test and Treat (UTT) approach that promotes combination prevention, highlighting the importance of getting everyone tested frequently, with those who test HIV negative offered condoms and those who test HIV positive offered immediate treatment/ART (UNAIDS, 2016).

Whilst the drive for the UTT approach is critical to achieve the UN 2020 goals, this approach still places the onus of decision making with the individual, with considerations of influence from the intimate partners, community and society (Hargreaves *et al.*, 2016). In addition, young men and women are at high risk of HIV infection, placing students at universities as a viable population for exploring the influence of the UTT approach.

The University of KwaZulu-Natal (UKZN), Howard College campus HIV/AIDS Support Unit (CHASU) reports that within the college, 1651 students got tested in the first quarter of 2017, 327 students in the second quarter and 447 students in the third quarter (UKZN survey report, 2017). These statistics reveal that only 2425 students out of the estimated population of 15,874 in Howard College campus accessed the HIV testing facilities available on campus. This implies that the uptake of HIV testing services on campus is significantly low despite easy access to testing facilities. Bearing this in mind, the researcher seeks to investigate the possible factors responsible for the low uptake of HIV testing among male and female students within the campus.

It is in this view that this study seeks to explore the perceptions of male and female students between the ages of 18 -35 within the UKZN Howard College campus on the uptake of HIV testing. The study will further explore the current HIV testing practices among students within the campus. This study will therefore offer a nuanced understanding to students' HIV testing practices towards gaining insight into the knowledge of the UTT approach among students on campus.

Objectives of the study

This study intends to:

1. Investigate the current HIV testing practices among male and female students at the University of KwaZulu-Natal, Howard College.
2. Explore the facilitators and barriers to HIV testing among male and female students at the University of KwaZulu-Natal, Howard College.
3. Explore male and female students' knowledge of the Universal Test and Treat approach as an HIV prevention and treatment strategy for reducing HIV infection.

Research questions

The following are the questions that guide this study.

1. What are the current HIV testing practices among male and female students at the University of KwaZulu-Natal?
2. What are the facilitators and barriers to HIV testing among male and female students at the University of KwaZulu-Natal?

3. What are male and female students' knowledge of the Universal Test and Treat approach as an HIV prevention and treatment strategy for reducing HIV infection?

Structure of Dissertation

Chapter one provides a brief background to the study by describing HIV/AIDS as a global health burden. It also contextualizes the epidemic within the South African environment and further elucidates the importance and need for HIV testing in relation to the test and treat initiative. This chapter also presents the problem statement, research objectives and the research questions that guide the study.

Chapter two reviews relevant literature relating to the prevalence of HIV globally and nationally that is, in South Africa. It further discusses HIV testing and young people's attitudes towards HIV prevention approaches. It also examines the importance of HIV testing and counselling. The Universal Test and Treat (UTT) approach is later discussed, laying emphasis on students' knowledge and perception of UTT as a prevention and treatment strategy to HIV. This chapter also reviews studies that have been conducted on 'knowledge, attitudes and practices' of South African students towards HIV prevention options particularly on HIV testing. Influencers of sexual risky behaviour among students are also discussed.

Chapter three focuses on the theoretical framework that guides this study. It discusses the constructs of the Social Ecological Model of Communication and Health Behaviour (SEMCHB) in relation to the study and describes the different levels by which individuals interact with their environment and how these multiple levels influence students' current HIV testing practices. The components of the Health Belief Model (HBM) are also examined to understand their relationship with the individual testing behaviour.

Chapter four describes the methodology used for this study. It discusses the research paradigm and methods used for data collection. It further describes the research approach, research design, recruitment strategy and their justification. The ethical considerations involved in this study is also discussed.

Chapter five presents the data that was collected from focus group discussions. The key research questions are addressed along with the findings.

Chapter six presents an in-depth discussion and interpretation of findings from the study according to the themes that were generated.

Chapter seven concludes the study endeavor and proffers recommendations for further research based on the findings from the gathered and analyzed data. The limitation of the study is also explained.

CHAPTER TWO

LITERATURE REVIEW

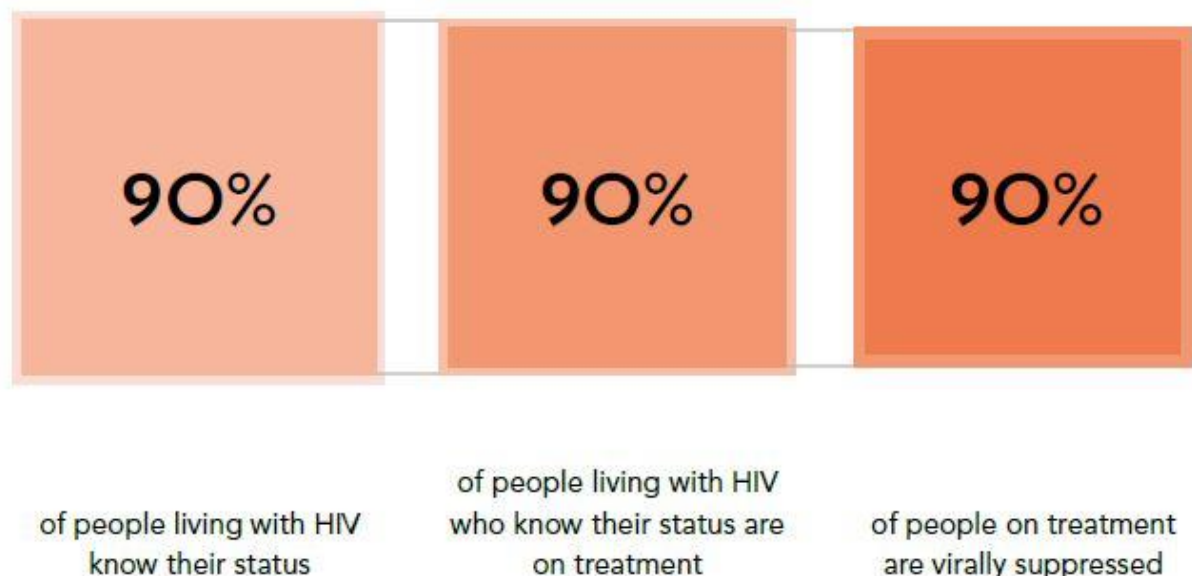
Introduction

The objective of this study is to investigate male and female students' uptake of HIV testing services. Furthermore, this study seeks to explore the facilitators and barriers to HIV testing. This will also lead to exploring students' knowledge of the Universal Test and Treat (UTT) initiative as a prevention and treatment strategy for HIV and AIDS.

Universal test and treat (UTT) as a strategy for reducing HIV

The Universal Test and Treat (UTT) is a prevention and treatment approach that advocates for high levels of HIV testing and immediate commencement of antiretroviral therapy upon diagnosis irrespective of CD4 count (Cambiano *et al.*, 2011; Hargreaves *et al.*, 2016). The approach was launched in Melbourne, Australia during the 20th international AIDS conference in 2014. In line with the UNAIDS fast track strategy to end the AIDS epidemic as a public health threat by 2030, the 90-90-90 goals were set. The aim of the goals suggests that by 2020, 90% of people living with HIV will be diagnosed, 90% of people who are diagnosed will receive antiretroviral treatment (ART) and 90% of those who receive ART will have a suppressed viral load; that is, the amount of virus in an HIV positive person's blood is reduced to an undetectable level (UNAIDS, 2014). This is illustrated in figure 2.1.

Figure 2.1: The UNAIDS 90-90-90 fast-track targets



Source: (UNAIDS, 2017: 8)

In order to achieve these targets by 2020, there is an urgent need to increase HIV testing, develop creative methods to reach populations who are still unaware of their HIV status (Baxter and Abdool Karim, 2016). HIV testing methods including provider-initiated testing (Kennedy *et al.*, 2013), community-based voluntary counselling and testing (Coates *et al.*, 2014) and home-based testing (Sekandi *et al.*, 2011) are some of the strategies that have been put in place to improve the uptake of HIV Counselling and Testing (HCT).

Nonetheless, expanding HIV testing strategies alone are insufficient to bridge HIV testing gaps (Isbell *et al.*, 2016). There is a need to understand people's HIV testing behaviour. That is, their perceptions about HIV testing and factors that propels them to test or not, in order to develop policies that will cater for their needs. This study explores students' current HIV testing practices and also explores the facilitators of and barriers to the uptake of HIV testing using the Social Ecology Model of Communication and Health Behaviour (SEMCHB) and the Health Belief Model (HBM). These frameworks suggest that individual perceptions (Janz *et al.*, 2002), beliefs and environmental factors (Sallis *et al.*, 2008) are key determinants that influence human behaviour. An understanding of these influences could therefore inform the design and implementation of HCT in South Africa.

South Africa implemented the World Health Organization guidelines of 'Universal Test and Treat' (UTT) in September 2016, making it one of the first African countries to formally adopt UTT in the prevention of HIV (National Department of Health, 2016). The 'Universal test and treat' directly supports the UNAIDS 90-90-90 targets that have been aforementioned. Given the limited array of proven prevention methods, UTT was proposed as a new HIV prevention strategy that may be highly effective in high prevalence settings (Hargreaves *et al.*, 2016: 49). This new strategy for HIV prevention has the potential to lead to steep reductions in HIV incidence and may eliminate HIV as a public health problem over a period of 15 – 20 years as well as reducing HIV morbidity and mortality (Goodall and Leen, 2011:84). The use of UTT will contribute to South Africa's target for HIV reduction by 2030 (NDoH, 2017). Though this approach largely depends on the individuals' abilities to take medication regularly which is closely tied to behaviour change that supports adherence, counselling and testing (Cohen *et al.*, 2016: 831). As there are a few studies on UTT among university students in South Africa (Nkosi, 2019), this study is therefore relevant in order to explore students' knowledge and encourage uptake of UTT as a strategy to reduce the transmission of HIV and AIDS.

HIV Counselling and Testing (HCT): benefits and importance

HCT is imperative since it is the beginning of the process towards a comprehensive care for HIV and AIDS (UNAIDS, 2016). HIV testing is the first step in the prevention, treatment, care and support of HIV and AIDS (Peltzer *et al*, 2009:7). The knowledge of one's HIV status is an inevitable aspect of any prevention or treatment strategy. Therefore, HIV testing should be offered to the entire populace in every setting as part of HIV prevention programs (Baxter and Abdool Karim, 2016: 110). It is important for people to know their status in order to have access to necessary treatment and also enable them to choose prevention strategies. HIV testing particularly plays a significant role in the world's response to reducing HIV/AIDS (UNAIDS, 2016). Furthermore, people who test HIV positive can be offered immediate antiretroviral treatment (UNAIDS, 2017) and remain healthy for several years (De Cock, *et al.*, 2002). Early uptake of ART increases the benefits of an individual's health, and effective antiretroviral treatment (when the viral load has been suppressed), can prevent the transmission of HIV to other people (UNAIDS, 2017).

The knowledge of one's HIV status also allows people to make informed decisions on the choice of effective HIV prevention options such as condoms, voluntary medical male circumcision, and Pre-exposure Prophylaxis (UNAIDS, 2017). The sooner people commence treatment after being diagnosed, the more they benefit from antiretroviral treatment. The use of ART in the appropriate way reduces the chance of HIV-related illnesses and lower the risks of transmitting the disease to others (Leclerc-Madlala *et al.* 2009). This impacts on the focus of the UTT approach which aims to get as many people as possible to test for HIV, placing those who test positive on immediate treatment. In this dispensation of increased and effective treatment of HIV, this study is important in laying emphasis on the uptake of UTT in order to reduce the transmission of HIV among young people.

HIV prevalence in South Africa

According to the Human Sciences Research Council, 2012, KwaZulu-Natal has the highest HIV prevalence compared to other provinces. The data was presented as follows: Kwazulu-Natal; 16.9%, Mpumalanga; 14.1%, Free State; 14.0%; North West; 13.3%, Gauteng; 12.4% Eastern Cape; 11.6%, Limpopo; 9.2%, Northern Cape; 7.4% and Western Cape; 5.0% (Shisana *et al.*, 2014). In 2017, HIV prevalence among adults between the age group of 15 -49 which is the most affected population ranged from 12.6% in Western Cape to 27% in KwaZulu-

Natal (HSRC, 2018). This population is inclusive of university students across all study levels usually an average of 18 – 35 years. The difference in provincial prevalence is as a result of various social, economic and contextual influences. Furthermore, out of the 10 districts with the highest HIV prevalence in the country, 8 are located in KwaZulu-Natal making it the epicenter of HIV and AIDS in South Africa. These statistics show the severity of the epidemic in this part of the country. Young people between the age group of 15 - 24 especially women are more vulnerable to HIV infection (Kharsany *et al.*, 2015; Zuma *et al.*, 2016). The rate of the epidemic in KwaZulu-Natal calls for a need to revisit several communication interventions for actively promoting safer health options for those at high risk of HIV infection (Tomaselli and Chasi, 2011; Govender *et al.*, 2013). HIV testing is now recognized as an important element to an effective prevention and care programme and many countries in Africa have introduced it as part of their primary health care package (Day *et al.*, 2010).

South Africa's response to HIV and AIDS

South Africa has made considerable improvement in reducing HIV incidence (Shisana *et al.*, 2014). The country recorded a reduction in HIV incidence among the younger age groups in 2008 (Rehle *et al.*, 2010). Evidence-based interventions centered on HIV prevention, treatment, care and support have been implemented with some level of success. Although, the prevalence rate of HIV has remained high, it has been stable over the last decade (NDoH, 2013).

As part of the national efforts to contain the spread of HIV, national surveys have been conducted which have helped the country to comprehend the degree and heterogeneity of the HIV pandemic and other related socio-behavioural and contextual factors that elucidate the drivers of the epidemic (Shisana, *et al.*, 2014). The country has also revised its policy on treatment to enable HIV positive individuals to gain access to treatment regardless of their CD4 count (SANAC, 2016). In a bid to increase the use of antiretroviral treatment (ART) among mothers and infants, there has been great emphasis on the availability of treatment to maternal HIV cases, pregnant females and HIV-positive mothers now being provided with ART regardless of their CD4 count. This approach has helped to increase the number of people receiving treatment and also reduce AIDS mortality across the country (NDoH, 2016).

Furthermore, the launch of the national HIV testing and counselling campaign in April 2010 resulted in a significant increase in the number of people accessing HIV testing. Between 2010

and 2015; annual HIV testing increased from an estimated 19.9% to 37.5% among men and from 28.7% to 52.6% among women (SANAC, 2016). This contributed significantly to the country's efforts to implement effective HIV-prevention interventions such as the expansion in the availability of HIV Counselling and Testing (HCT) as well as considerable increase in the number of people who know their HIV status (SANAC, 2015). For example, in 2016, 86% of South Africans were aware of their status. These statistics revealed an increase from 66.2% in 2014 (SANAC, 2015). This progress follows the launch of two nation-wide HIV testing initiatives: first, the national HIV testing and counselling (HCT) campaign of April 2010 and the HCT revitalization strategy in 2013 which was centered on getting people from the private sector, farms, and higher institutions of learning to test (NDoH, 2017).

HIV prevalence among students at the University of KwaZulu-Natal

In 2008 – 2009, a national survey commissioned by the Higher Education South Africa (HESA) was carried out to measure HIV prevalence among students and staff of universities across the country. A total number of 1,593 students participated in the survey. The prevalence of HIV positive students was 2.4%. It was estimated that female students had a higher rate of HIV which amounted to 2.8% compared to male students, 1.8% (UKZN HIV survey, 2009). These are statistics from the data obtained from the University of KwaZulu-Natal in particular.

About two thirds of all students reported that they had engaged in sexual intercourse. An estimated 29% of students aged 18 reported that they had been engaged in sexual intercourse, while 59% aged 20 reported that they had engaged in sexual intercourse. Lastly, 75% of students who admitted that they had engaged in sexual intercourse were older than 20. This indicated that younger students are likely to have their first sex experience during the period when they are at the university. However, HIV prevalence was higher among male and female students who reported having more than one sexual partner compared to those who did not; 2.9% vs. 1.0% for male students; 14.9% vs. 7.6% for female students (UKZN HIV report, 2009). Based on these findings, it becomes pertinent to carry out a study like this among university students in order to explore their current HIV testing practices.

Responses to HIV testing and other prevention approaches among students across universities in KwaZulu-Natal

The anthology of a 10-year research project put together by Durden and Govender (2012) contains several masters and doctorate dissertations of graduate students at the Centre for Communication, Media and Society (CCMS), University of KwaZulu-Natal. It focuses on communication, health and development issues. This section analyzes a number of previous researches relating to HIV testing and other HIV prevention methods among students across universities in KwaZulu-Natal. These will be discussed in subsequent paragraphs.

The study of Tesfu (2003) evaluated communication strategies used in the voluntary counselling and testing (VCT) campaign at the University of Durban-Westville (now University of KwaZulu-Natal). He identified the Vinci's five steps of behaviour change: pre-contemplation, contemplation, preparation, action and maintenance (Tesfu, 2003: 65). He argued that different ways of thinking and interpreting communication can be revealed through behavioural investigations where the influence of opinions coming from peers and leaders are taken into consideration (Tesfu, 2003: 66).

The VCT campaign used entertainment based on drama and music to appeal to the target audience. Students' responses on their knowledge of VCT related matters indicated a high level of VCT initiative awareness, and knowledge of the campus' VCT initiative. His study revealed that most of the participants had their first knowledge about VCT through the campus campaign, while some students had previous knowledge of VCT (Tesfu, 2003). This proved its efficiency in creating awareness about VCT which further encouraged students to shift their approach to VCT from pre-contemplation and contemplation stages to action. The majority (59%) of students interviewed, indicated that they would consider the uptake of VCT; 50% of males and 67% of females. However, only 3 of the participants eventually went for a test as a result of the campaign (Tesfu, 2003: 72). These findings showed a low demand for VCT among university students in South Africa.

The study of Moodley (2007) assessed students' perceptions of the 'Abstain, Be faithful and Condomise' (ABC) prevention strategy at the University of KwaZulu-Natal. Findings showed that majority of the participants, perceived condoms as a more realistic approach and preferred to use condoms rather than to 'be faithful' (Moodley, 2007: 100). In some situations, condoms

were used at the initial stages of relationships, but as these relationships developed, students found it unnecessary to continue with the use of condoms. Further findings from her study revealed that students engaged in casual sex and had multiple partners which made them vulnerable to HIV infection (Moodley, 2007). In addition, messages on HIV testing were not well received by students as it implied unfaithfulness by one of the partners (Moodley, 2007: 102). These findings indicate that the ABC prevention method does not reflect young people's pattern of behaviour.

Mulwo (2009) investigated the impact of the ABC campaign and VCT on students at the University of KwaZulu-Natal, University of Zululand and the Durban University of Technology. Findings of his study showed that regardless of information, young South African students continued to engage in sexual risk behaviour by having early sexual debut, multiple, concurrent partners and not using condom (Mulwo 2009: 86). This was similar to the findings of Moodley, (2007). Sexual activity can also be viewed from a communicative social-constructionist perspective as in a signifying system where it is used as a tool to express feelings, power and control (Mulwo 2009: 89). Further findings revealed that the life view of the students was an important factor with regard to their apprehension of HIV as a threat. Mulwo stated a fatalist world view was predominant among those who simply did not care about the epidemic. Some students even perceived HIV as a myth and denied its existence, while others saw it as a disease that only poor people could contract (Mulwo, 2009: 93).

Socially constructed meaning about sex influenced how students perceived their sexual behaviour. To be sexually active was desirable and a means to be accepted by peers, and also a form of rebellion against strict domestic and cultural rules particularly among black males; to have multiple sexual partners was a social achievement. Virginity on the other hand was seen as socially deviant and thereby stigmatized (Mulwo 2009: 95). Fear of the uptake of VCT due to risk of being stigmatized in the event of a positive HIV test result was also noticed to be prevalent among the students (Mulwo 2009: 97). These findings indicate that membership in different interpretative communities influenced students' attitudes and behaviour towards their sexual habits and HIV prevention strategies.

In Given Mutinta's (2011) study, he investigated students' sexual risk behaviour, risk and protective factors and their responses to scrutinize campus campaign at universities in KwaZulu-Natal. Findings from all three campuses showed that students engaged in risky sexual

behaviour in the form of one-night stand also known as ‘towing’ where students engage in spontaneous sexual interaction despite not being in romantic relationships (Mutinta, 2011: 137). Having multiple and concurrent sexual partners were perceived as a norm among students and were in fact seen as a competition for superiority (Mutinta, 2011: 140). These findings were consistent with findings of studies conducted by Moodley (2007) and Mulwo (2009).

Further findings from Mutinta’s study revealed that a high frequency of 76% of the students had engaged in sex at the universities without the use of condoms. Influence from friends motivated decisions regarding risky sexual behaviour. This is consistent with Mulwo’s finding which showed that belonging to an environmental or social group could influence students’ sexual behaviour (Mulwo, 2009). Although the messages of the scrutinize campaign which were well received by students advocated for the use and effectiveness of condoms and informed them of the risks associated with having multiple and concurrent sexual partners, in reality, students did not adhere to these messages.

In a comparative study of students’ attitudes, preference and acceptance levels towards microbicide products; (the dapivirine ring and tenofovir gel) , findings revealed that most students believed that abstinence is the most reliable method of HIV prevention, followed by the use of condoms, but interestingly, their behaviour did not translate to abstinence or condom use (Nota, 2015: 108). Further findings revealed that female students expressed the need for more HIV prevention methods specifically for women as they felt female condoms were the least trusted HIV prevention measure. As for perception and attitudes towards microbicides, female students indicated that they wanted microbicides to be available in other forms such as injections, pills or cream in order to meet a variety of women’s needs and desire for an HIV prevention method (Nota, 2015: 109).

From the findings of the above studies, it can be deduced that students in universities across KwaZulu-Natal are risk takers with sex as one of the avenues of risky behaviours that they engage in. The sexual activities students engage in are associated with a host of dangerous consequences including sexually transmitted diseases such as HIV and AIDS that severely compromises their health, education and general wellbeing (HEAIDS, 2010). Thus, it becomes of utmost importance to understand students’ sexual risk behaviours.

Factors influencing sexual risks behaviour among South African University students

Many South African students are at risk of contracting HIV due to the high rate of risky sexual behaviour among students (Mutinta *et al.*, 2012). University students represent a population of young adults putting them at a higher risk of contracting HIV more than the population of the general population. This is due to a higher rate of sexual practices and experimentation among students which make them more susceptible to HIV (Mutinta and Govender, 2012). Studies reveal that about 300,000 students in universities across South Africa are infected with HIV and about 15% will be victims of unwanted pregnancies during the course of their studies (WHO, 2007). Remarkably, unplanned pregnancies globally are estimated at 60% among university students (UNAIDS, 2008). Despite HIV/AIDS interventions targeted at university students, sexual behaviour that puts this group at risk of HIV infection, other sexually transmitted infections (STIs), and unintended pregnancy continue to increase and constitute a major health concern (Moodley, 2007; Mulwo, 2009).

Although, there is a paucity of studies on the reasons for students' engagement in risky sexual behaviour, Brier (2010) argued that students that live with parents who are conservative about sexual behaviour matters may be influenced to practice risky sexual behaviour once they leave home and attain freedom in the university environment. Mulwo (2009) observed that university students practiced transactional sex in order to provide for their needs of food, clothing, and shelter where funding is insufficient. Research has shown that HIV risk behaviour for some students was as a result of their choice to experiment with sex and drugs (Lengwe, 2009). Some of the sexual risk behaviours discovered include having multiple and concurrent sexual partners, incorrect or no use of contraceptive methods, and casual sex. A study on the determinants of students' sexual risk behaviour at the University of KwaZulu-Natal revealed factors such as personal beliefs on relationships, the quest for sexual satisfaction, students' pursuit for long-term goals of marriage, drive for material possessions, absence of attention and lack of trust in relationships (Mutinta *et al.*, 2012: 354). In light of the aforementioned, it is necessary to examine students' knowledge and attitudes towards HIV and AIDS.

Knowledge, perceptions and attitudes of South African University students towards HIV and AIDS

A study carried out among South African university students reported that the rate of HIV infection among undergraduate students was estimated at 22% increasing to 33% in 2005 (Shisana *et al.*, 2009). As a response to the pandemic, universities developed an initiative known as the Higher Education AIDS and HIV programme (HEAIDS) in 2000/2001. In spite of the HIV epidemic, Cain, (2005), Shisana *et al.*, (2009) and Kalichman *et al.*, (2005) argue that risky sexual conduct remains on the increase among young people in South Africa. It poses a problem that young people in universities are reported to exhibit nonchalant attitudes about the discussion of HIV, stating that they are bored and tired of the subject (HEAIDS, 2015). They assume they have adequate information and knowledge on the transmission and prevention of HIV. Notwithstanding this claim, the rate of new infections continues to be on the increase among youths in South Africa (The South African Department of Basic Education Report, 2016).

In another study among students in selected South African universities, Redy and Frantz (2012) found that although students had general knowledge on HIV/AIDS, they had very low knowledge of the transmission modes of HIV. It was reported that the media was the primary source of information about HIV/AIDS for students and university health care facilities need to be more proactive in informing students about the transmission of HIV/AIDS (Redy and Frantz, 2012). This can be derived through HIV testing and counselling and behavioural change (Redy and Frantz, 2012). In order to achieve success with the UTT as a prevention strategy, it is important to understand how knowledge impacts students' beliefs and behaviour towards the perception of testing.

South Africa's response to HIV and AIDS through HIV testing

In order to break the cycle of HIV infection, it is pertinent to get more people tested. Delayed testing and treatment will continue to result in increased HIV related deaths (UNAIDS, 2016). Men with HIV who are unaware of their status are more likely to transmit it to women and girls. The impact of delayed testing therefore causes the cycle of new infections to continue among young men and women (UNAIDS, 2016). In view of this, this study is important as it seeks to investigate students' HIV testing practices in relation to the UTT approach in order to reduce the transmission of HIV infection.

South Africa has made immense progress in recent years in getting more people to test for HIV (SANAC, 2015). However, there has been uneven progress in gender equality relating to HIV testing. Women in South Africa are more likely to test than men. This is partly because Prevention of Mother to Child Transmission Programs (PMTCP) enable women to access HIV testing services during routine antenatal appointments (Human Science Research Council, 2014). Given that HIV Counselling and Testing (HCT) is the first step in the prevention, treatment, care and support of HIV (Peltzer *et al.*, 2009), it is important for people to know their HIV status in order to seek necessary treatment and also enable them to choose prevention strategies (Shisana *et al.*, 2014). The process of discovering one's HIV status irrespective of the result is an opportunity for education and motivation to modify behaviour aimed at reducing the risk of the infection (WHO, 2015). By investigating the current HIV testing practices of students, this study hopes to build on the knowledge of why students' test for HIV, when they test, where they test and the frequency of testing.

The advantages of early testing for HIV include the opportunity for education and facilitation of behaviour change to reduce the risk of acquiring onward transmission (Kall, Smith and Delpech, 2012). The effectiveness of much of the current HIV prevention efforts is contingent on high coverage, and routine testing (Gray *et al.*, 2013). For people who have been infected, testing is the first step to proceed to clinical care (Gray *et al.*, 2013). Early testing has been associated with lower-short term mortality (Fisher and Delpech, 2009; Kall *et al.*, 2012) and morbidity (Goodall and Leen, 2011). Furthermore, associated medical cost and improved HCT has been promoted as essential in working towards universal access to prevention, treatment, care and support (UNAIDS, 2005). HCT services need to be available and accessible to the entire public to enable easy access and utilization. In a survey carried out in South Africa, it was reported that over 30% of women and men in the South African national HIV household indicated that they had previously been tested for HIV of which 90% were aware of their test results (Airhihenbuwa *et al.*, 2012). This study is therefore relevant as it seeks to identify and address the facilitators and barriers to HIV testing while conceptualizing them within a wider cultural context.

Facilitators to HIV testing

An increase in HIV testing presents an opportunity to offer HIV prevention options to diverse groups of people with the potential to increase the number of individuals who are aware of their HIV status, link those who test positive to treatment and care and equally reduce the transmission of the infection and HIV risk behaviour (Kiene *et al.*, 2010). In line with this notion, the study investigates facilitators to HIV testing as follows:

The use of incentives

The principle underlying use of incentives is the psychological theory of contingency management, whereby stimulus, control and positive reinforcement are used to change behaviour (O'Donoghue and Rabin, 1999: 104). Monetary incentives have been used to encourage testing for sexually transmitted infections including HIV (Lee *et al.*, 2014). The use of monetary incentives was shown to increase HIV testing among adults in Malawi (Thornton, 2008) and unemployed men in South Africa (Ngalazi, 2012).

A study among automobile workers in Eastern Cape, made use of lottery incentives in order to increase workplace uptake of HIV testing. The incentives included gift cards valued at R2, 000 (first prize), R500 (second prize) and a prize of R100 each for 10 other people. In addition, they were all given t-shirts (Weihs *et al.*, 2017: 12). Outcomes of this action resulted in an estimate of 90% of total employees accessing HCT (Weihs *et al.*, 2017: 12). Studies suggest that the use of lottery incentives improved HIV testing behaviour significantly among employees in the workplace (Baird *et al.*, 2012; Cluver *et al.*, 2013; Hander *et al.*, 2015). This suggests that there is a likelihood that some employees would not take part in workplace HIV testing in the absence of lottery incentives. Therefore, the use of lotteries enabled organizations to have more reliable rates due to employees' willingness to test (Weihs *et al.*, 2017). But from employees' standpoint, a positive HIV result may lead to emotional trauma, stigma and discrimination. Therefore, lotteries might have indirectly led them into a situation for which they were not prepared for. However, without the use of incentives, there might be a decrease in the likelihood of getting all employees to know their status which will in turn prevent employers from having a reliable measure of their workforce HIV prevalence.

Further findings from the study suggest that the announcement of lotteries increased intention to HIV testing through anticipation of stronger social support and encouragement from partners, friends, colleagues and the organization rather than attracting them to HIV testing

solely to win prizes (Weihs and Meyer-Weitz, 2016). These findings revealed the relationship between incentives and targeted behaviour, which went beyond the limit of the economic effects provided by the lottery (Boates, 2003; Kane *et al.*, 2004). The excitement created by the lottery incentives facilitated social interactions and seemed to mitigate the burden of HIV stigma in the workplace. These findings also correlate with Cameron and Van der Merwe's, (2012) findings, which indicated that there were no detrimental issues with the use of lottery incentives to encourage HIV testing among students. The vast majority of students surveyed were in support of the lotteries. The thought of winning a prize motivated them to undergo HIV testing. Similarly, studies of incentivized HIV testing programs in Malawi and Cape Town, South Africa, have identified improved uptake among young people and people testing for the first time (Nglazi *et al.*, 2012). Other studies among young people in South Africa indicated that young males were more attracted to HCT as a result of monetary incentives compared to their female counterparts (Pettifor *et al.*, 2012; Black *et al.*, 2014).

A pilot study to test the use of incentives to foster the uptake of HCT among adolescents in Zimbabwe, made use of two different strategies – 2 US dollars or a lottery with one in eight chance to receive 5 or 10 US dollars. Findings showed that the uptake of HCT was higher in households randomized to fixed incentives than in households with no incentives (Kranzer *et al.*, 2017). Based on all these findings, it can be deduced that financial incentives have the potential of improving uptake of HCT particularly among high risk groups.

Physical health deterioration/death

From studies with key populations across Sub-Saharan counties that set out to understand the factors that motivated the uptake of HIV testing services, it was discovered that people were willing to test for HIV as a result of physical health deterioration and /or death of a sexual partner or child (Musheke *et al.*, 2013; Namakhoma *et al.*, 2010; Skoval *et al.*, 2011; Jürgensen *et al.*, 2012). Similarly, further research revealed that knowing someone who died from an AIDS-related illness and how HIV affected a member of the family encouraged young people to take an HIV test as part of a healthy lifestyle (Jones *et al.*, 2018).

Knowledge of HIV and HIV testing

Research revealed that the knowledge of HIV and HIV testing played a significant role in encouraging youths to test for HIV (Kabiru *et al.*, 2011). Young people who perceived themselves to be at risk of HIV infection and who had greater knowledge of HIV and HIV

testing as a prevention and treatment strategy were more likely to uptake HCT (Kabiru, *et al.*, 2011). Findings of another study indicated that young people perceived HIV testing as a way to help prevent the spread of HIV to other people and saw HIV testing as a protection measure especially after having sex with a new partner of unknown status (Jones, *et al.*, 2018).

Availability of antiretroviral treatment

While HIV was previously perceived as a ‘death sentence’, the increased availability of life-saving medication in many countries of Sub-Saharan Africa has brought about a change on this notion. In some countries in Sub-Saharan Africa, this was found to be a motivation to test (Musheke *et al.*, 2013; Ngalazi *et al.*, 2013). Therefore, testing and knowing one’s HIV status was no longer associated with death as it used to be, but as a path to start treatment and prolong one’s life. For pregnant women, and despite the reported existence of gender inequality in health seeking decision making, testing was often undertaken as maternal obligation to protect the unborn child from HIV infection (Melberg *et al.*, 2008; Mbonye *et al.*, 2010; Simpson *et al.*, 2009).

Support and influence from social network

Decision making about HIV testing were inextricably linked to social network influence (Melberg *et al.*, 2008; Izugbara *et al.*, 2009; Grant *et al.*, 2009; Mbonye *et al.*, 2010; skoval *et al.*, 2011). A study in Zambia, describes how individuals sought the views and support of their peers and family members during the decision-making process about seeking HIV testing. In part, this was because friends and family members were crucial sources of psychosocial support and for family members, a critical source of economic support (Denisonet *et al.*, 2008). Similarly, Jones *et al.* (2018) found that motivation to test included social support and getting tested with their friends or having friends accompany them to get tested for HIV.

Barriers to HIV testing

With the current global focus on strengthening HIV prevention and treatment through greater testing and treatment uptake (UNAIDS, 2016), it is increasingly important to identify and address barriers to HIV testing (Alphonso *et al.*, 2006). A body of literature identifies that barriers to HIV testing cut across personal, behavioural, (Schwarcz *et al.*, 2014; Strauss *et al.*, 2015), structural and psychosocial factors which include: fear of breaches of confidentiality,

discrimination, as well as the inability to cope with the psychological trauma (Van Dyk, 2003).

A lack of knowledge on the ability to live a long and normal life upon immediate treatment initiation in the event of a positive HIV test result has been revealed to hinder the uptake of HCT (Kiene *et al.*, 2015; Ikechebulu *et al.*, 2006; MacPhail, *et al.*, 2008). Individuals who perceive themselves to be at high risk to HIV infection as a result of unsafe sexual engagements are less likely to test as they are suspicious of a HIV positive result (Fako, 2006). On the contrary, other scholars have argued that young people who are not sexually active are also less likely to test for HIV (Kabiru, 2011; Njagi and Maharaj, 2006).

The interaction between personal factors and the structure, that is, the location in which young people find themselves could also serve as an obstacle to undergo HCT (Strauss, *et al.*, 2015). The location for the uptake of HCT could pose a barrier to young people who feel that privacy and confidentiality could be undermined (Strauss, *et al.*, 2015: 7). In a study among youths in rural KwaZulu-Natal, Strauss *et al.* (2015) found out that travel time, long queues, and limited opening times constituted as barriers to HIV counselling and testing. Furthermore, he revealed that fear of testing was a dominant barrier to the uptake of HCT. The fear of testing or the self-confidence to test is realized through the interaction between the self, and the environment with behaviour relating to sexual risk. While risky behaviour can influence testing decisions, people who perceive themselves to be at risk are less likely to test for HIV due to fear of the result (Strauss, *et al.*, 2015: 5). Findings from this study also showed that a perceived lack of support from family and friends and the society at large also played significant roles in the decision to test or not (Strauss, *et al.*, 2015: 8).

Fear of HIV related stigma and discrimination

Fear of HIV-related stigma and discrimination irrespective of the HCT outcome has been found to be a significant barrier to HIV testing (Pettifor, *et al.*, 2013; Baxter and Abdool Karim, 2016; Kabiru, 2011; Young, *et al.*, 2010). Duncan and Sathia (2012) argue that HIV stigma and discrimination have also appeared to influence testing indirectly through barriers related to confidentiality and privacy concerns. Similarly, further studies reiterate that concerns about confidentiality are often associated with fear of stigmatization and issues of trust among health care workers who administer HCT as a barrier to the uptake of HCT (MacPhail, *et al.*, 2008; Matthews, *et al.*, 2008; Matthews, *et al.*, 2009; MacPhail, *et al.*, 2013).

In addition, gender-specific barriers among women are linked in part, directly or indirectly to stigma (Duncan and Sathia, 2012). In some areas where access to antiretroviral treatment (ART) has been scaled up, reduced stigma and increased test rates have been demonstrated (Duncan and Sathia, 2012). However, in other areas, the emergence of new sources of stigma has counteracted this development, and in high-income countries stigma persists despite universal access to treatment (Hutchinson and Mahlalela, 2006). This study therefore places HIV-related stigma at the core of attempting to understand the low-test rates in HCT programs among university students while suggesting that these barriers could ensure the possible uptake of HIV testing.

The concept of stigma associated with HIV testing

HIV stigma is one of the major hindrances to HIV testing in the global fight against HIV/AIDS and South Africa is not left out (Shisana, *et al.*, 2014). Stigma has been a component of the HIV and AIDS since the onset of the epidemic, and a large body of research exists concerning diverse aspects of the phenomenon (Kalichman and Simbayi, 2003; Abdool Karim, 2011; Jürgensen, *et al.*, 2012; Haffeejee, *et al.*, 2018). The first associations between stigma and health in social science literature dates back to the 1880s, but the concept of stigma was first fully introduced in the classical sociological works of Goffman (1963), who defined stigma as an attribute that is significantly discrediting. The stigmatized person possesses an undesirable difference, and he saw the conceptualization of what constitutes this ‘difference’ or ‘deviance’ as a social process (Goffman 1963: 147). Goffman’s idea of stigma as an attribute has strongly influenced later authors, leading to highly individualized analyses of stigma, particularly within social psychology (Duncan and Sathia, 2012). Although they have developed substantial knowledge, social psychological works have been criticized for having too strong a focus on the individual and for placing little emphasis on the social and structural aspects of stigma (Duncan and Sathia, 2012).

Link and Phelan (2001) introduced a more sociologically oriented approach to understanding stigma and aimed to link individual and social stigma components and to emphasize stigma as a constantly changing social process. In their conceptualization, “stigma exists when five inter-related components converge; namely *labelling, stereotyping, separation, status loss and discrimination*, and the playing-out of *social and political power*” (Link and Phelan, 2001:

363). Discrimination can be individual, structural or self-imposed (Deblond, *et al.*, 2010: 429). Stigma and stigmatization occur not merely as a reaction to differences, but in relation to social and structural inequalities, and that “stigma plays a key role in producing and reproducing relations of power and control” (Parker and Aggleton, 2011: 48). Duncan and Sathia, (2012) further argue that structural violence, the large-scale social forces that shape every society, including social inequalities and poverty, to a great extent, shape stigma and discrimination and determine who suffers from it.

However, research on stigma has been criticized for neglecting the lived experience of those affected by it (Babalola, 2007: 759). Anthropologists have launched meaning centered approaches, arguing that the stigma concept remains empty and decontextualized if not filled with meaning from people’s lived experiences (Gray, *et al.*, 2013). They suggest seeing stigma as a fundamental moral experience, as stigmatized conditions threaten what is most at stake for sufferers. The relationship between HIV testing and the concept of stigma is significant to this study because the fear of stigmatization and other related fears of being discriminated against can influence decisions towards HIV counselling and seeking HIV treatment services. Furthermore, because HIV like other sexually transmitted diseases (STDs) is usually perceived widely as a result of sexual excess and low moral character (Leclerc-Madlala, Simbayi and Cloete, 2009), infected individuals become silent and refuse to disclose their positive status to both family members and the society at large as they are being subjected to victimization (Johnston, 2001). Consequently, people that are unaware of their status become reluctant to test for HIV (Guy, *et al.*, 2013).

In a study carried out on HIV testing attitudes, AIDS stigma and HCT in a black township in Cape Town, it was reported that AIDS related stigma is a major factor that influences HCT in South Africa (Kalichman and Simbayi, 2003). Beliefs of stigmatization about HIV and AIDS play a major role in influencing decisions on HCT (Kalichman and Simbayi, 2003). In the light of the aforementioned, HIV-related stigma can be a considerable barrier to efforts in achieving the UNAIDS “90-90-90” targets. This study is therefore pertinent in investigating the barriers to HCT among university students with the aim of offering recommendations based on findings of this research and providing recommendations on how these barriers can be resolved in order to encourage early uptake of HCT.

Other HIV prevention approaches

Various biomedical methods have been explored by several researchers in efforts to prevent the transmission of HIV. These include the development of condoms as a primary method for HIV prevention (AMD, 2010). Early implementation of this prevention method was complimented by strategies that placed much emphasis on individual behaviour change, bringing forth the ABC approach, and Medical Male Circumcision (Auvert, 2015). These will be discussed further below.

Abstinence, Be faithful, Condomise (ABC) approach

The Abstinence, Be faithful and use Condoms (ABC) approach is one of the major behavioural change interventions for the prevention of HIV which advocates that in order for people to protect themselves from contracting HIV, they must abstain from sex, and in case they cannot abstain, they must be faithful to their sexual partners and if they cannot be faithful, they must always use condoms for every sexual encounter (Shelton, *et al.*, 2004). The ABC approach centers on the individual behaviour issues in order to reduce the risks of HIV infection.

The ABC strategy attained popularity, following the success of Uganda in reducing the national HIV prevalence rates from 15% in 1991 to less than 5% in 2001 (Green, *et al.*, 2006). Several scholars linked Uganda's success story to the ABC strategy, some even alluded that the ABC strategy originated from Uganda (Green, *et al.*, 2006; Hallett, *et al.*, 2006; Kirungi, *et al.*, 2006; Mosley, 2005; Stoneburner and Low-Beer, 2004; Putzel, 2003; Low-Beer and Stoneburner, 2003). Using Uganda's success as a model, the United States Agency for International Development (USAID) adopted the ABC strategy in 2002 "as a model of HIV prevention for generalized epidemics" (Green, 2006: iii). In the following year, the United States government pledged a total of 15 billion US dollars through the President's Emergency Fund for AIDS Relief (PEFAR) (Green, 2006). This amount was approved by the Congress, on condition that 30% of this fund was dedicated to programs that exclusively advocated abstinence-only.

Following this, a huge debate ensued between scholars and activists involved in health communication, some in support of the ABC approach, while others questioned its applicability, especially in the African context. Supporters of the ABC strategy cited examples such as Uganda, Kenya, Zambia, Zimbabwe and Jamaica where, they argued that the strategy had been successful in reversing the HIV epidemic (Cheluget, *et al.*, 2006; Green, *et al.*, 2006;

Gregson, *et al.*, 2006; Hallett, *et al.*, 2006; Kirungi, *et al.*, 2006; Michelo, 2006; Population Services International, 2007; Sandoy, *et al.*, 2007). However, critics of the ABC approach argued that the strategy fails to take into consideration the contextual challenges, such as poverty, power dynamics in sexual decision-making and rape that often render the ABC approach ineffective. Wawer, Grey and Serwadda (2005) published research findings in 2005, in which they pointed out that Uganda's success in reversing the HIV epidemic was more than just ABC.

South Africa has also implemented HIV prevention methods that primarily focused on the individual (Bhana and Peterson, 2009). Although, HIV prevention interventions on the individual level have yielded good outcomes (Durlark, *et al.*, 2008), findings revealed that there are limitations in influencing people's sexual behaviour (Bhana and Peterson, 2009). A considerable number of young people still engage in risky behaviour regardless of informative and educative programs addressing the dangers of sexual behaviour.

The ABC approach is therefore not an accurate reflection of the sexual behaviour of youths in South Africa; as a previous study among UKZN students at Howard college indicated that the youths of South Africa do not practice abstinence from sex, nor faithfulness to one's partner nor consistent use of condoms during sexual encounters hence, promotion of the ABC strategy is complex (Moodley, 2007). Similarly, Mulwo, (2009) investigated the impact of the ABC campaign and the VCT on students. He came to the conclusion that regardless of information and warnings, young South African students continued to engage in risky sexual behaviour by having early sexual debut, multiple, concurrent partners and not using condoms (Mulwo, 2009) which places them at the risk of HIV infection. Hence the limitations of the ABC approach become obvious.

The ABC strategy has received several critiques from different scholars and health practitioners, especially in sub-Saharan Africa (Cohen, 2004; Okware, *et al.*, 2005; Reddy, 2005; Thornton, 2006; Wawer, Gray and Serwadda, 2005). The common argument in all the criticisms levelled against the ABC strategy is that it focuses on the individual as an agent for sexual behaviour change. Many scholars agree that individual-centered approaches are effective in changing individuals' knowledge, attitudes and beliefs regarding HIV/AIDS (Swanepoel, 2005; Viswanath and Finnegan, 2002; Yzer, 1999). However, others argue that individual-centered approaches fail to critically address the social, cultural and economic

conditions that may inhibit individuals' ability to carry out certain decisions at the individual level (Airhihenbuwa and Obregon, 2000; National Cancer Institute, 2005).

In a cultural context such as South Africa where the ABC strategy has been ineffective primarily as a result of risky sexual behaviour, especially among young people, it is therefore pertinent to promote HIV testing. This study then becomes significant as it seeks to understand students' uptake of HIV testing services.

Medical Male Circumcision (MMC)

In order to strengthen HIV prevention, Medical Male Circumcision was proposed by the WHO and UNAIDS in 2007 as an HIV prevention procedure (WHO, 2010). This recommendation was facilitated by results of three randomized controlled trials carried out in Kenya, Uganda, and South Africa (Sakarombe, 2014). Findings of these trials showed that men who were circumcised were about 60% less likely to contract HIV compared to uncircumcised men (Sakarombe, 2014).

Medical Male Circumcision (MMC) is a high-impact, one-time procedure that is capable of reducing the female-to-male sexual transmission of HIV by 60% (Auvert, *et al.*, 2005). In 2007, MMC was made part of a comprehensive HIV prevention strategy in countries with high risks HIV prevalence and low rates of male circumcision (UNAIDS, 2007). Studies carried out between 2009 and 2011 reported that about 3.4 million HIV infections could be averted within 15 years by circumcising 80% of adult males in 14 priority countries in Eastern and Southern Africa within 15 years. These countries include Botswana, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe (WHO, 2012).

In the mid-2000s, male circumcision was found to reduce the female-to-male sexual transmission of HIV by 60% (WHO, 2015). In response to these findings, WHO/UNAIDS launched the Joint Strategic Action Framework for increasing the rise of MMC for HIV prevention in Southern and Eastern Africa advocating for 80% coverage of adult male by 2016 (Sgaier, *et al.*, 2014). While MMC programmes have increased dramatically since inception, they seem unlikely to reach the set goals and objectives. By the end of 2014, over 9 million medical male circumcision procedures had been performed in high prevalence countries. Ethiopia and Kenya exceeded their national targets by the end of 2015, while Mozambique,

South Africa, Uganda and Zambia has achieved 50% to 70% of their targets. However, coverage in Botswana and Swaziland was 45% and in Lesotho, Malawi, Namibia Rwanda and Zimbabwe, coverage was under 35% (UNAIDS 2016).

MMC is thought to have limited public health benefit if introduced among key affected populations such as sex workers, people who inject drugs and men who have sex with men (WHO 2007) because there is insufficient evidence to suggest that circumcision reduces HIV transmission among sex workers (WHO, 2010). In some places, it has been reported that circumcision is mistakenly viewed as providing complete protection from HIV and a viable alternative form of protection instead of condoms (Irin Africa, 2008). Previous studies among students at the University of KwaZulu-Natal revealed that participants believed one could not contract HIV after being circumcised (Naidoo, 2011; Ndzinisa, 2017). While male circumcision has been found to reduce female-male sexual transmission of HIV, circumcised men can still become infected with HIV, and if HIV positive, can infect others (WHO 2015). The male circumcision only partially protects men from HIV transmission. Therefore, it is recommended that MMC is included as part of a comprehensive HIV prevention strategy which includes HIV testing and counselling; treatment for sexually transmitted infections (STIs), the promotion of safer sex practices and the distribution of condoms as well as their correct and consistent use (UNAIDS 2015).

In light of the aforementioned, the use of communication campaign strategies to provide one-on-one messaging to potential MMC clients has been one of the most effective strategies among male students at the University of KwaZulu-Natal, Howard College campus (AIDS report UKZN, 2014). This approach has shown to motivate young men who are considering the procedure to ask questions in private. On the contrary, a study on the perceptions of MMC as a HIV preventive approach by students at the University of KwaZulu-Natal, Howard College shows that MMC increased risky behaviours as they have the impression that circumcision protects them from contracting HIV (Naidoo, *et al.*, 2011; Sakarombe, 2014).

In view of this, this study is relevant to emphasize the importance of HIV testing to know one's status and seek appropriate treatment if tested positive and if tested negative, other prevention approaches are offered to encourage the practice of safe sex.

Pre-Exposure Prophylaxis (PrEP)

In order to have a wider range of HIV preventive approaches, Pre-Exposure Prophylaxis (PrEP) was adopted in 2015 in accordance with the WHO guidelines to reduce the spread of HIV (UNAIDS, 2015). PrEP is a daily course of antiretroviral drugs (ARVs) that have the ability to protect HIV-negative people from HIV infection before potential exposure to the virus (UNAIDS 2015). Trials have shown that when taken consistently and correctly, PrEP is very effective and reduces the chances of HIV infection to near zero (McCormack *et al*, 2014, Baeten, *et al.*, 2012). While PrEP can provide very effective protection against HIV, it does not provide protection against other sexually transmitted infections (STIs) and blood-borne illnesses such as Hepatitis C, syphilis and gonorrhea (Auerbach, *et al.*, 2015).

The effectiveness of PrEP is strongly linked to adherence – if an individual taking PrEP regularly misses daily doses, it exposes them to the risks of HIV infection which will increase substantially (UNAIDS, 2015). PrEP was previously recommended only for key populations such as sex workers, men who have sex with men and people who inject drugs (HIV Epidemiology Annual report, 2014). PrEP has been shown to reduce the risk of HIV infection from unprotected sex by over 90%, and injecting drugs by more than 70% (Center for Disease Control and Prevention, 2016). It is therefore important that PrEP is offered as part of a combination package of prevention initiative based on an individual's circumstances – with support and advice on the importance of PrEP (WHO 2015).

In 2015, studies revealed that PrEP has potential population-wide benefits, the World Health Organization (WHO) therefore released guidelines and a policy brief which recommends that PrEP should be provided as a choice to people who are at substantial risk of HIV infection as part of a combination HIV prevention program (WHO 2015). Although, PrEP offers significant contributions towards the reduction of HIV and AIDS pandemic, these biomedical methods have severe ethical implications. PrEP has the potential of being misinterpreted by people; this means that people may interpret the introduction of PrEP as a means of condoning risky sexual behaviour (Rowniak and Portillo, 2013). Advocating PrEP may result in people engaging in more risky sexual behaviour as they would be presented with an option of being protected against HIV infection when engaging in unprotected sex (Nota, 2015; Rowniak and Portillo, 2013). Furthermore, PrEP could result in an increase of sexually transmitted disease as people misinterpret PrEP and still engage in risky sexual behaviour (Rowniak and Portillo, 2013).

The WHO recommends that PrEP, should be offered as an additional prevention choice for people at substantial risk of HIV infection as part of a combination of prevention approaches that include: HCT, male and female condoms, lubricants, ART for HIV-positive partners in serodiscordant couples, and voluntary medical male circumcision (VMMC) (WHO, 2016). Populations who would benefit most from PrEP are often underserved and likely to also have low levels of HIV testing and high levels of undiagnosed HIV and may need to be linked to other services (SANAC, 2016).

Adherence is important in the use of PrEP and HIV treatment and forms an integral part of the combination prevention and Universal Test and Treat program. Effective PrEP use differs from HIV treatment in that PrEP can be started and stopped as a person moves through “season of risk” whereas ART is a lifelong treatment (Baeten, *et al.*, 2014). However, since PrEP is limited to sex workers, this means that students at the risk of contracting HIV do not have access to PrEP (Ndzinisa, 2017). Combination methods are therefore important as they form part of the UTT approach to HIV prevention.

Conclusion

This chapter introduced and explained the UTT as an approach that has the potential to end HIV and AIDS epidemic by 2030. It also discussed the benefits and importance of HIV testing and provided a brief overview of HIV prevalence in South Africa. In addition, this chapter assessed South Africa’s response to HIV/AIDS and presented HIV prevalence among students at the University of KwaZulu-Natal. Subsequently, the chapter analyzed the responses of South African University students to HIV testing and other prevention approaches. This chapter also presented the factors influencing sexual risk behaviour among students in South African universities. The knowledge, perception and attitudes of students towards HIV/AIDS were examined. Finally, this chapter discussed the facilitators and barriers to HIV testing and examined other HIV prevention options.

CHAPTER THREE

THEORETICAL FRAMEWORK

Introduction

This chapter presents the theoretical framework employed in this study. This research is primarily guided by the Social Ecology Model of Communication and Health Behaviour (SEMCHB) (Kinkaid *et al.*, 2007; Sallis *et al.*, 2008; Storey and Figueroa, 2008) and the Health Belief Model (HBM) (Rosenstock *et al.*, 1974). The chapter examines the origin, attributes and applications of the SEMCHB. The SEMCHB is used in this research as a comprehensive approach, appropriate for studying the interrelated factors that influence health behaviour which should be taken into consideration when exploring HIV testing uptake of young men and women, and specifically within the context of University students. SEMCHB is employed in this study for its usefulness in placing students' testing behaviour within a broader framework of a multi-level approach in addressing the factors that facilitate and hinder the uptake of HIV testing. Although the focus of this study is to explore male and female students' uptake of HIV testing in relation to the Universal Test and Treat (UTT) initiative, the relevance of this model is in its applicability as a multi health communication approach that should not be viewed in isolation, rather, as part of a broader approach towards increasing the uptake of HIV testing and also reducing the transmission of HIV which is part of the focus of the UTT approach.

Similarly, the origin, attributes and applicability of the Health Belief Model (HBM) to this study are also discussed in this chapter. The Health Belief Model provides a useful framework for studying HIV testing among students in the university environment. Since the model is centered on individual perceptions towards health behaviours, it is therefore relevant to this study as it helps to explore and understand the components that are negotiated within the individual which influence decisions on health behaviour such as HIV testing. The HBM is embedded in the individual level of the SEMCHB, which makes it an appropriate framework for this study as it acknowledges that while there are multiple levels of health behaviours, it is still important to understand the factors of the individual level. Thus, the HBM is applied at this level to enable the researcher to understand why an individual's perceptions are either in support or not in support of behaviour change (McKee *et al.*, 2014).

Origin of the Social Ecology Model for Communication and Health Behaviour (SEMCHB)

The word *ecology* is often used in the biological sciences to refer to the interconnectivity between organisms and their environment (Storey and Figueroa 2012: 72). Hence social ecology is “the study of the influence of social context on behaviour, including institutional and cultural variables” (Sallis and Owen, 2002: 462). Social ecology approaches take into consideration the interrelated influences of family, peers, community and society on behaviour (Sallis and Owen, 2002; Jamison *et al.*; 2006; Powell *et al.*, 2006).

The SEMCHB was developed in the 1960s and 1970s and was initially employed in campaigns that promoted the decrease in the use of tobacco in the United States in the 1960s (Sallis *et al.*, 2008; Stokols, 1996: 283). The SEMCHB was developed in response to the inadequacy of early communication theories which laid so much emphasis on individual level of health behaviour (Storey and Figueroa, 2002: 72). This was further criticized by scholars (Beltram, 1974; Diaz Boedenave, 1976), who argued that individual levels did not take into consideration structural factors that are able to influence behaviour change. Similarly, other scholars argued that behaviour change does not occur in isolation, but within a framework of various factors such as the individual, the community and society (Ford *et al.*, 2003; Airhihenbuwa and Obregon, 2000; Singhal, 2001).

As a result, theories that are more structurally oriented emerged which took into consideration other determinants of health behaviour change (Rogers, 1994). The SEMCHB “describes the complexity, interrelatedness and wholeness of the components of a complex adaptive system, rather than just particular components in isolation from the system” (Storey and Figueroa, 2012: 76). It emphasises the dynamic interplay between situational and personal factors rather than focusing exclusively on environmental, biological, or behavioural determinants of well-being (Stokols, 1996: 283).

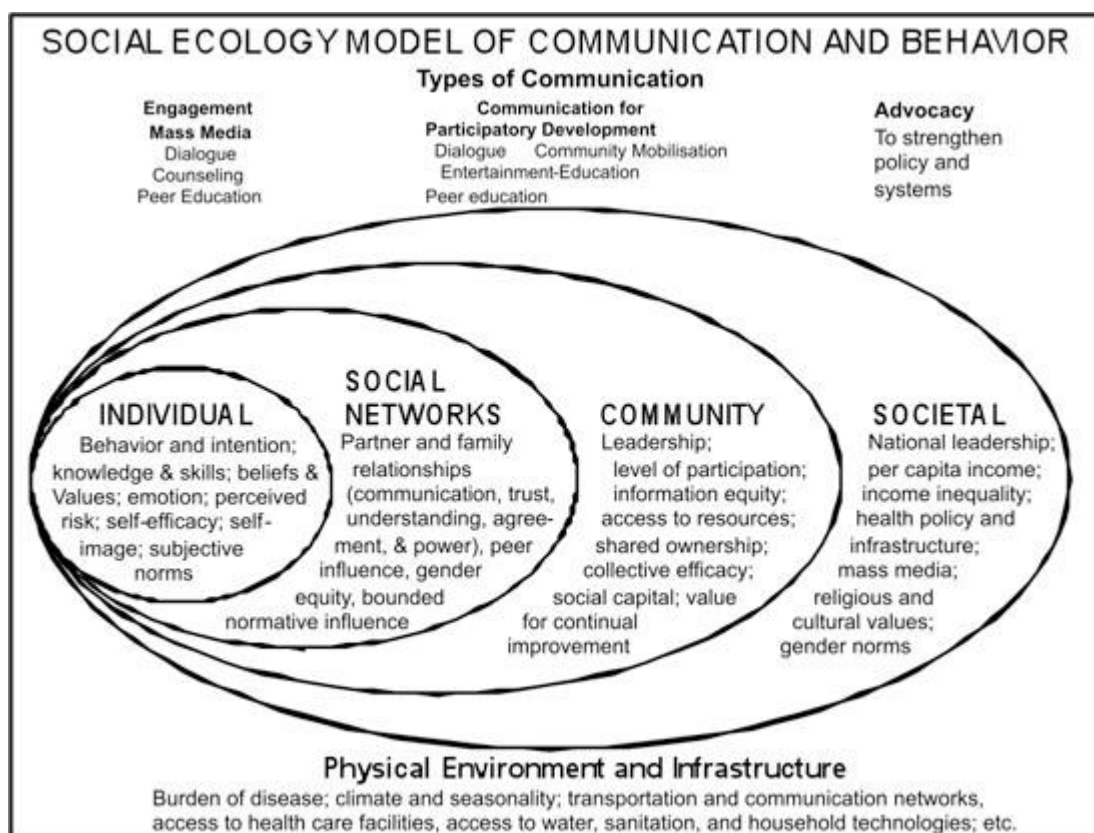
Attributes of the SEMCHB

The primary concept of an ecology model is that behaviour has multiple levels of influences which include intrapersonal; (biological, psychological), interpersonal (social, cultural), organizational, community, physical environment and policy (Sallis *et al.*, 2008: 466). The SEMCHB “describes the complexity, interrelatedness and wholeness of the components of a complex adaptive system, rather than just particular components in isolation

from the system” (Storey and Figueroa, 2012: 76). It is a meta-theory in which each level takes into account other relevant health behaviour theories applicable to that level (McKee *et al.*, 2014; Storey and Figueroa, 2012). Ecology models are believed to provide a comprehensive framework for understanding the multiple and interacting determinants of health behaviour (Sallis *et al.*, 2008: 466).

A primary function of ecological models is to develop comprehensive intervention approaches that systematically target mechanisms of change at each of the levels of influence (Sallis *et al.*, 2008). Behaviour change is expected to be maximized when environments and policies support healthful choices (Sallis *et al.*, 2008: 466), when social norms, social support for healthful choices are strong and when individuals are motivated and educated to make those choices (Ottawa Charter for Health Promotion, 1986). The different levels of the SEMCHB are illustrated in figure 3.1. This study therefore seeks to explore the relationship between the different components of the individual and social network levels of the SEMCHB taking into consideration the influence of these components on individual health behaviour.

Figure 3.1: The Social Ecology Model of Communication and Health Behaviour



Source: Storey and Figueroa (2012: 75).

As illustrated in the figure 3.1, the SEMCHB comprises of four interrelated levels of the social system, which are: the individual, social networks, community and the societal level. These levels are interconnected and embedded within a broader discourse of understanding behaviour change (Storey and Figueroa, 2012). However, for the purpose of this study, only the individual and social network levels will be employed as the objectives of this study are to explore students' uptake of HIV testing as part of the UTT initiative; to identify the facilitators and barriers to HIV testing and also to explore students' knowledge of the UTT approach to HIV prevention. In the context of this study, these levels inform the understanding of the interrelated factors that influence the uptake of HIV testing services among male and female students at the University of KwaZulu-Natal.

The individual level

The individual level of SEMCHB consists of emotions and perceptions of individuals which motivate the norms they adhere to in the course of their daily activities; the knowledge and understanding of health matters, their beliefs and attitudes towards these health matters and their self-efficacy (McKee *et al.*, 2014). The individual level of the SEMCHB is primarily centered on individual behaviour change. At this level, theories such as the Health Belief Model is employed. For instance, the development of the Abstinence, Be faithful and Condomise approach (ABC), encouraged the individual to abstain from sex, stay faithful to one partner and use condoms. The ABC approach depended on an individual to adopt and practice these recommended behaviours. However, the decision to abstain from intercourse, have one sexual partner, or to use condoms occurs within a broader context and not only on an individual's choice to adopt a new or existing behaviour. Furthermore, this approach does not take into consideration cases where women are unable to negotiate the use of condoms in relationships due to gender inequality common in African culture (Moodley, 2007). Condom use tends to be challenging particularly for young women in the South African context (Harrison *et al.*, 2015). Condoms are stigmatized in intimate relationships, and female partners who suggest condom use may be accused of unfaithfulness in relationships (Shisana *et al.*, 2016). This buttresses the point that the ABC strategy does not take into consideration the other factors such as social networks (one's partners) that influence health behaviour regarding the use of condoms for HIV prevention.

Similarly, the voluntary medical male circumcision and HIV counselling and testing prevention approaches are also overly centered on the individuals and do not take into consideration factors of a broader context that influence behaviour. Individual level interventions therefore

are often short-lived, due to lack of sustainability from larger structures of the social system such as social networks, family and the community (Storey and Figueroa, 2012; Sallis *et al*, 2008). The failure of such intervention programs is a result of barriers that emanate from higher levels and structures of the social system (WHO, 1964).

The core concept of the SEMCHB, however, informs that individuals may be responsible for initiating a positive health behaviour but maintenance of a particular health behaviour is determined to a large extent by social environments in which they belong to (Storey and Figueroa, 2012; McKee *et al*, 2014). In cases where an individual attempts to adopt a health enhancing behaviour, their behavioural efficacy may be undermined by larger influential structures (Stokols, 1996; Storey and Figueroa, 2012). In the context of this study, the individual level informs the understanding of how factors within the individual such as “behaviour and intention; knowledge and skill; beliefs and values; emotions; perceived risk; self-efficacy; self-imaging; subjective norms” (Storey and Figueroa, 2012: 75) influence HIV testing behaviour among students.

Sustainability of new behaviour relies greatly on support and encouragement of the family, peers, community and society, hence, introducing individual change in isolation from other levels therefore may not achieve sustainable results. Effective individual behaviour change is best achieved when it is introduced within the overall context from which an individual emanates (Storey and Figueroa, 2012). Based on this, this study is also interested in social networks that influence human behaviour.

Social networks level

At the social network level, emphasis is placed on the ways in which individuals interact with people around them such as members of the family, peer groups and their partners (McKee *et al*, 2014). Most Behaviour Change Communication (BCC) approaches such as the theory of Reasoned Action were previously based on cognitive models of action. The theory of Reasoned Action argues that a person’s intention to or not to perform an action is an outcome of his/her attitude toward a particular behaviour and the evaluation of the behaviour by other people he/she considers to be important such as friends, family and intimate partners (Ajzen and Fishbein, 1980). Behaviour change models for HIV and AIDS communication commenced with ascertaining the knowledge, attitudes and behaviours among a target audience and then communication interventions are targeted to address these deficiencies at the individual level (Ajzen and Fishbein, 1980). A major assumption of the BCC at the individual level is that every

individual has the ability to monitor their context (Singhal, 2003). Against this assumption, Sallis *et al.* (2015) argue that efforts to influence behaviour must be based on an understanding that health communication interventions need to be implemented across multiple levels since a single level of intervention is less likely to yield desired results.

One of the challenges of BCC is the use of linear and rational models to promote change in sex behaviour for the prevention of HIV/AIDS, which is mostly a non-rational, multi-factor process (Govender 2011). In the same vein, Kunda and Tomaselli (2009) posit that the knowledge, attitudes and cultural practices of people must be taken into account in order to achieve effective health communication interventions. These shortcomings led to the shift towards a Social Change Communication (SCC) strategy which advocates that the context in which the epidemic is embedded must be taken into consideration (Cardey, 2006). There has been an extensive focus on individual behavioural HIV prevention interventions with individuals (Trickett, 2005), however, behavioural HIV prevention interventions have little effect on behaviour change with individuals when protective sexual behaviours are not supported by their social networks (Latkin and Knowlton, 2005). Social relationships are important aspects of individual behaviour. Thus, this study takes into account components of the social level such as: intimate partners, family, and friends, and seeks to understand how these interpersonal relationships influence HIV testing behaviour among students.

Application of SEMCHB to the study

This study employs the SEMCHB as a lens to explore students' uptake of HIV testing services at the University of KwaZulu-Natal as part of the Universal Test and Treat (UTT) initiative. The SEMCHB holds that individual decisions and behaviours result from reciprocal interactions within and between the individual's social and physical surroundings (Bronfenbrenner, 1979; Storey and Figueroa, 2012). The SEMCHB enabled the researcher in understanding that human beings are part of a larger complex social ecology (Sallis *et al.*, 2008). Thus, this study applies the SEMCHB as advanced by Kincaid *et al.*, (2007) to propose that similarly, HIV testing behaviour among young people is influenced by various factors. In relation to this study, at the individual level, individuals make decisions to test or not, based on their knowledge, beliefs and values, perceived risk, self-efficacy and other variables within the individual. The application of SEMCHB is significant to this study as the researcher seeks to explore the facilitators and barriers to HIV testing among male and female students at the University of KwaZulu-Natal.

According to Storey and Figueroa, (2012), the SEMCHB implies that if individual change is facilitated and supported by social change at higher levels, it is likely to be more self-sustaining. This study recognizes the need for interventions targeting young people's HIV testing behaviour to be holistically designed in a manner that takes into account the multiple factors that influence HIV testing. This study also acknowledges that HIV testing behaviour among university students is not seen as an isolated strategy which can independently bring about improved uptake of HIV Counselling and Testing (HCT) and expected health outcomes. Rather, it is viewed as an HIV prevention strategy that should constitute part of a multi-level approach. Hence, the SEMCHB is used in this study to investigate whether the relationship among the levels of influence has an effect on the way individuals respond to health issues such as HIV testing. This could reveal that the interrelatedness of the different levels of influence have an effect on the way individuals behave and make health decisions (Govender, 2011). In order to achieve increased HIV testing behaviour among students, and permanent behaviour change in individuals, there must be an understanding of people and the environment around them. At the individual level, interventions to promote health interventions focus on modifying a person's health-related attitudes, beliefs, and behaviour. This requires voluntary and sustained effort by the individual (Stokols, 1996). The HBM is applied at this level because it helps to find out why an individual's perceptions are either in favor or not in favor of change (McKee *et al.*, 2014). In view of this, the HBM is embedded in the SEMCHB, allowing the researcher to acknowledge that while there are multiple influences (including social networks, community, and society) of specific health behaviour, it is still necessary to understand individual level factors.

Limitations of the SEMCHB

Social ecology models have played significant roles for several health promotion and communication campaigns over the years, nonetheless, they are not without limitations. Sallis *et al.*, (2015: 478) identified some of the limitations below:

One of the limitations of the social ecology model is the lack of information about how the broader levels of influence operate or how variables interact across levels. Due to the broad perspectives of social ecology models, there is no specific guidance on how they can be used to improve research or interventions. In addition, the social ecology models are unable to specify the most important influence among the multi-levels of influence. This makes it difficult for researchers working with the models to develop more operational models that can be helpful in providing guidance for interventions. Another critique of social ecology models

is that they provide complex interactions of individual, social, community and societal characteristics which are difficult to design and implement in controlled experiments. However, this can be reduced through analytical strategies for evaluation of interventions.

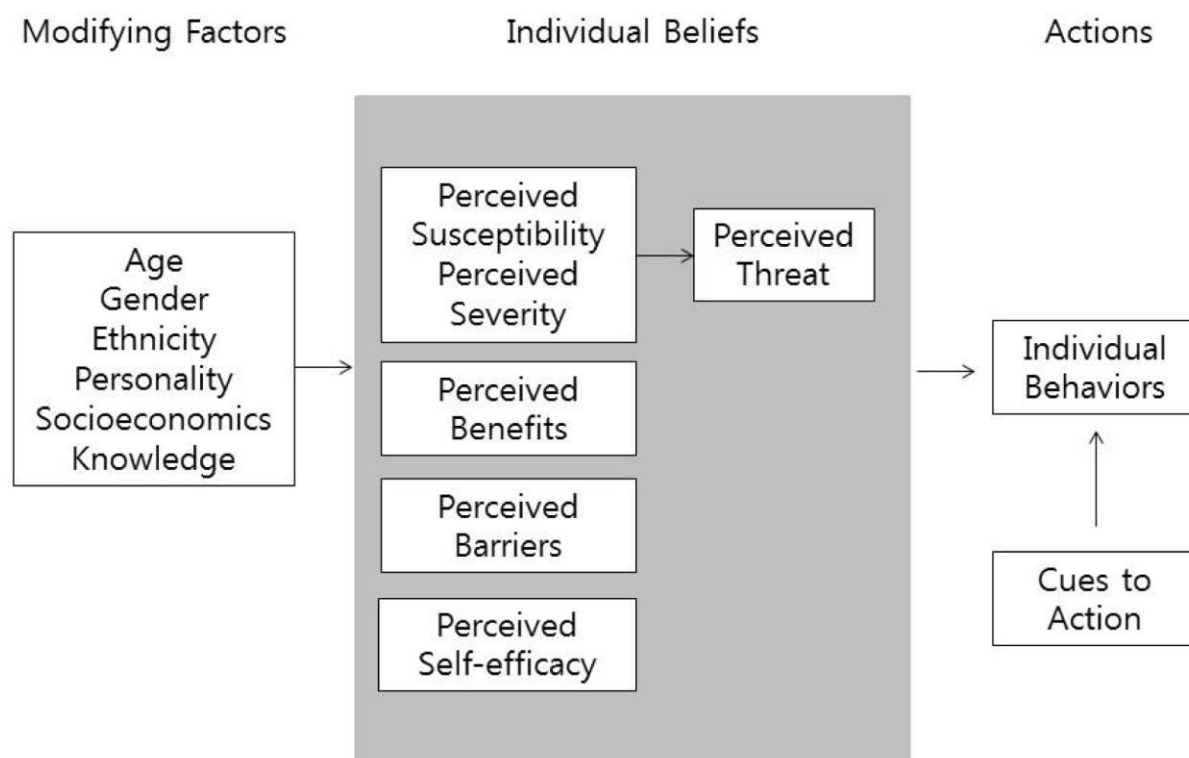
Furthermore, Stokols (1996: 284 - 286), sheds light on more limitations of social ecology models which are highlighted below:

The social ecology models are over-inclusive which does not help researchers in identifying specific variables to study. Conversely, there are too many levels and variables to consider which make it difficult to evaluate the effectiveness of the program. Knowledge integration from several disciplines is required in the social ecology model and this can be difficult.

The Health Belief Model (HBM)

The Health Belief Model is a psychological model that attempts to explain and predict health behaviour by focusing on the attitudes and beliefs of the individual (Janz and Becker, 1984). The model was developed by Godfrey Hochbaum and other social psychologists in the early 1950s in response to the failure of a free tuberculosis health screening program (Neil *et al.*, 2008). The concept of the HBM is that an individual's health behaviour is determined by one's personal beliefs or perceptions about a disease and the strategies available to decrease its occurrence (Hochbaum, 1958). There are six primary perceptions that serve as constructs of the HBM. They are; perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy (Glanz *et al.*, 2008: 46). According to the model, these constructs determine why an individual will take action to prevent, to test for or to control illness conditions (Glanz *et al.*, 2008: 46). The six constructs of the HBM are summarized in the model in Figure 3.2.

Figure 3.2: The Health Belief Model, components and linkages



Source: Champion and Skinner (2008: 49).

Perceived susceptibility: this refers to an individual’s subjective perception of the chances of contracting an illness (Janz and Becker, 1984: 2). In keeping with this study, individuals refer to young male and female students at the University of KwaZulu-Natal. Therefore, perceived susceptibility refers to male and female students’ perception of their vulnerability to HIV infection. For this to occur, there would be actions that increase a person’s perception of his/her susceptibility to an illness (Tarkang and Zotor, 2015: 5). In relation to this study, students who engage in sex without the use of condoms are vulnerable to contracting HIV. This therefore informs their decision to test for HIV. As it has been stated in the previous chapter, KwaZulu-Natal is the epicenter of HIV pandemic in South Africa with a prevalence of 27% among people between the age group of 15 – 49 (HSRC, 2016). Thus, it is necessary to investigate HIV testing practices of male and female students who belong to the key population of HIV infection in KwaZulu-Natal. Consequently, it was imperative to engage male and female students from UKZN in order to explore the facilitators and barriers to HIV testing among them.

Perceived severity: this refers to feelings with regards to the seriousness of contracting an illness or leaving it untreated (Glanz *et al.*, 2008: 46). This includes evaluations of both medical and social consequences. When an individual realizes his/her chances of contracting an illness, it might not necessarily prompt him/her to take preventive actions unless he/she recognizes that contracting the illness would result in severe physical and social implications (Tarkang and Zotor, 2015: 5). For instance, death, disability and pain are possible social consequences that would determine the individual's behaviour to adopt an intervention (Glanz *et al.*, 2008: 46). Perceived susceptibility and severity can be referred to as perceived threat (Champion and Skinner, 2008: 47). In the context of this study, perceived severity refers to an individual's feelings in respect to the medical and social consequences of being infected with HIV. According to the HBM, this will prompt one to take preventive actions such as HIV testing.

Perceived benefits: regardless of a person's perceived susceptibility to a sickness, behaviour change is influenced by the individual's beliefs about the benefits and advantages of the actions for reducing the disease threat (Glanz 2008; 87). In keeping with the theme of this study, perceived benefits refer to an individual's beliefs that using a condom or undergoing an HIV test increases his/her likelihood of preventing HIV infection. To this effect, the HBM suggests that if an individual's perceived chances of acquiring HIV is high and if he/she also views the consequences of contracting HIV as severe, then such individual is likely to take health actions only if he/she believes that the benefits of the action can reduce the perceived threat (Champion and Skinner, 2008: 47).

Perceived barriers: since change is not something that happens so easily, this construct of the HBM addresses the issue of perceived barriers to change. This refers to an individual's own evaluation of the obstacles to adopting a new behaviour (Janz and Becker, 1984). Perceived barriers are described as perceived negative aspects of a particular health action which may act as hindrances to undertaking recommended health behaviour (Glanz *et al.*, 2008: 47). Perceived barriers to actions on health behaviour could be physical or psychological barriers, factors of accessibility to services, or personal traits that hinder an individual from engaging in preventive behaviour (Tarkang and Zotor, 2015: 5). In relation to this study, understanding the perceived barriers to HIV testing enables the researcher to understand the underlying reasons that influence the uptake or non-uptake of HIV testing as an approach to HIV prevention and treatment among male and female students at the UKZN.

Cues to Action: The HBM also includes the concept of cues that can prompt actions. Hochbaum (1958) argued that change in individual behaviour (perceived susceptibility and perceived benefits) can also be influenced by certain cues. These could be events or things that move people to change their behaviour. For example, sickness of a family member, media reports, media campaigns, advice from other people, reminder postcards from healthcare providers, health, or warning labels on a product (Glanz *et al.*, 2008: 48; Graham, 2002) that encourage the uptake of HIV testing.

Self-Efficacy: this refers to the confidence in one's ability to perform an action successfully and obtain required output (Bandura, 1997). For a change in behaviour to occur, an individual must think he/she is at high risk of contracting an illness by his/her present behaviour. For instance, engaging in unprotected sex (perceived susceptibility and severity) and believe strongly that a change in behaviour will yield the desired result (perceived benefit) (Glanz, 2008). Therefore, taking a particular health action such as testing for HIV will result in mitigating against the infection.

Application of the HBM to the study

The HBM suggests that decisions on HIV/AIDS preventive behaviour such as HIV testing are a function of perceived risk of contracting the disease, perceived severity of the disease, and perceptions of benefits and barriers to HIV testing (Champion and Skinner, 2008). The model argues that for individuals with high-risk behaviours, perceived susceptibility is important before commitment to changing these risky behaviours can occur. Whereas, for persons who believe they are not at risk of contracting HIV, the benefits or barriers to HIV testing are insignificant (Champion and Skinner, 2008). Self-efficacy has been studied in relation to HIV-protective behaviours and defines an individual's perceived ability to carry out a behaviour believed to be necessary to prevent infection with HIV (Janz and Becker, 1984).

The aim of this study is to explore student's uptake of HIV testing services at the University of KwaZulu-Natal as part of the universal test and treat initiative. The constructs of the HBM are used to investigate the underlying factors that influence HIV testing behaviour among male and female students. The model places its primary focus on individual perception, that is, one's assessment of beliefs and attitudes to one's vulnerability to a sickness or disease. Without perceived susceptibility, the benefits and consequences of behaviour change may be viewed as

an insurmountable task. This model allowed the researcher to understand students' perceived vulnerability to HIV infection which in turn may contribute to their decision to undergo an HIV test or not. The HBM also enabled the researcher to understand how individuals (students) weigh the cost and benefits of the process of behaviour change and the outcomes that will emanate from such behaviour change, and also to determine if it is feasible and/or beneficial to change behaviour. In the event that the benefits supersede the cost, these benefits act as motivation to behaviour change (HIV testing uptake). Thus, this model was useful in describing students' perceived benefits of and barriers to HIV testing as well as factors that encourage self-efficacy.

In addition, the constructs of the HBM were used in relation to the research questions that guided this study. Perceived susceptibility was employed in the research question: 'What are the current HIV testing practices among male and female students at the University of KwaZulu-Natal?' Perceived benefits were employed by the research question: 'What are the facilitators to HIV testing among male and female students at the University of KwaZulu-Natal?' Perceived barriers were employed in the research question: 'What are the barriers to HIV testing among male and female students at the University of KwaZulu-Natal?' and finally, self-efficacy was employed in the research question: 'What are student's knowledge of the universal test and treat as a prevention and treatment approach to HIV?' This model therefore suggests that a study of young people's behaviour should take into consideration the overall factors within the individual that influence their behaviour.

Limitations of the HBM

Like other theoretical models, the HBM is not devoid of limitations. The model is criticized because of its individualistic approach, separating the individual from their environment. It is built on the notion that a person's feelings and thoughts controls his/her actions (Rosenstock *et al.*, 1988: 177). It ignores the importance of cultural values and instead, promotes a dominant approach to change in health behaviour solely at the individual level (Dutta-Bergman and Doyle, 2005). Similarly, the model fails to take into consideration social networks which are capable of influencing behaviour change (Dutta-Bergman, 2005: 106). As a result of its assumption that individual beliefs and perception alone explain health behaviour, the HBM ignores the limitations that might occur in the individual's environment especially in developing countries (Marmot and Wilkinson, 1999) where structural resources and access to

them might be a key factor to the development of an understanding of health communication in areas with inadequate resources (Dutta-Bergman, 2003; Marmot and Wilkinson, 1999; McClelland, 1991).

Furthermore, the HBM does not cater for key structural elements of barriers that constrain behaviour change particularly in deprived areas of the world where individuals lack basic amenities such as food, clothing and shelter (Narayan, Chambers, Shah and Petesch, 2000; Narayan *et al.*, 2000; The Synergy Project, 2002). However, it is worthy to note that many of the structural impediments experienced in deprived societies that are typical targets of health interventions may not present themselves directly to the scrutiny of the external observer (Sarkar, *et al.*, 1997). Decisions about health behaviour may lie within community members to have access to the basic resources of life (Dutta, 2005: 109). For example, individuals living in rural areas of Pakistan might consume unclean water, not as a matter of choice, but because they do not have access to safe and clean water (Dutta, 2008: 24). In the light of the unavailability of these basic amenities, taking decisions on higher health behaviour such as having sex safe, getting tested for HIV, not smoking cigarette might be seen as irrelevant (Dutta, 2003). The HBM is also criticized for being cognitively biased (Dutta-Bergman, 2005: 113). It posits that individuals go through a cost-benefit process to determine severity, susceptibility, barriers and benefits in relation to health behaviour before behaviour change can occur (Mattson, 1999).

Conclusion

In this chapter, the individual and social network levels of the SEMCHB were examined in order to identify the impact these larger structures may have on young men and women's decision towards the uptake of HIV testing. The social networks level served to explore specifically the trends that emanate from various social relationships or group settings, in order to determine how much these spaces may impact on students' HIV testing decisions. A multi-level approach therefore is the most probable as it allows for identifying possible barriers and facilitators to HIV testing within and across all the levels of the community (Storey and Figueroa, 2012). Furthermore, multiple level interventions broaden the scope of options for health interventions (Sallis *et al.*, 2008). Therefore, using an ecological approach to promote HIV testing will allow for multiple strategies to facilitating the uptake of HIV testing among students. The HBM was also used to have an in-depth understanding of an individual's perceptions that have the ability to influence HIV testing behaviour among students.

CHAPTER FOUR

METHODOLOGY

Introduction

This chapter describes the research methodology used in this study. Methodology serves as a blueprint for data collection and analysis in a research work (Creswell, 2012). Research methodology is explained by Creswell, (2012) as an action plan which guides a researcher's choice in the adoption of research design, research instrument, study population and data analysis.

This chapter critically explains the research design and research paradigm employed in this study. It also discusses the sampling technique, recruitment strategy, sample size and data collection methods as well as the justification for the choice and use of these methods. It further explains systematically the criteria for sample selection, the data analysis process, and the ethical considerations. Finally, this chapter outlines the relevance and applicability of the methodology in exploring male and female students' uptake of HIV testing services at the University of KwaZulu-Natal, Howard College campus. A summary of the methodological approach for this study is presented in table 4.1.

Table 4.1: Summary of methodological approach

Research Design	Qualitative Approach
Research Paradigm	Interpretivism
Method of Data Collection	Focus Group Discussion
Sampling Technique	Purposive Sampling
Data Analysis	Thematic Analysis

Research Design

This study employed a descriptive case study within a qualitative approach. A case study is a design of inquiry applicable in many research areas, in which the researcher develops a detailed analysis of a case, which could be a process, program, event, and activity of one or more people (Creswell, 2003). This study is descriptive in the sense that it answers the questions: “what are the current HIV testing practices among male and female students at UKZN”, “what are the

facilitators and barriers to HIV testing among male and female students at UKZN”, and “what are male and female students’ knowledge of UTT as a prevention and treatment approach to HIV infection?” This study focused on a single case which is the University of KwaZulu-Natal, Howard College campus. The reason for this case is because KwaZulu-Natal records the highest prevalence rate of HIV in South Africa (SANAC, 2016), and there are a few studies on the knowledge of Universal Test and Treat approach among students in this area. Recent studies on HCT uptake in relation to UTT have mostly been conducted in the rural areas of KZN (Iwuji *et al.*, 2017; Plazy *et al.*, 2016; Wademan and Reynolds 2016).

Qualitative research is an approach that explores the importance which individuals or groups ascribe to human or social problems (Creswell, 2013). Qualitative research provides descriptive data; that is, written or spoken words and observable behaviour of individuals (Taylor *et al.*, 2015). Qualitative research aims to gain a deeper understanding about processes, behaviours and perceptions of people (Newman, 2011). The interest of the researcher is to ascribe meanings that students ascribe to the concept of HIV counselling and testing. Thus, qualitative approach was employed in this study to have a clear understanding of the phenomena being studied from the perspective of the study participants. The qualitative approach enabled the researcher to listen to the perceptions of male and female students regarding their HIV testing behaviour and the reasons for their decisions to test or not.

Research Paradigm

The aim of this study is to investigate the phenomena of students’ current HIV testing practices, explore the facilitators and barriers to uptake of HIV counselling and testing services, and students’ knowledge of the universal test and treat approach for HIV prevention and treatment. This aim suits the philosophy of the interpretivist research paradigm. The interpretivist paradigm was developed from the philosophy of Edmund Husserl’s phenomenology and Wilhelm Dilthey’s and several other German philosophers’ study of interpretive understanding called hermeneutics (Mertens, 2005: 12 citing Eicheberger, 1989). The interpretivist approach to research has the intention to understand “the world of human experience” (Cohen and Manion 1994: 36) which suggests that reality is socially constructed (Mertens 2005). The interpretivist relies on the views of participants regarding the phenomena being studied (Cresswell, 2008). Crotty (1998) argues that as it relates to the interpretive paradigm, meanings are constructed by human beings in different ways, depending on their context and personal

beliefs as they relate to the world they are interpreting. The interpretivist paradigm is appropriate in the study of students' current HIV testing practices, facilitators and barriers to HCT uptake and their knowledge of UTT approach because interpretivists lay emphasis on how the people being studied make sense of and talk about their world and experiences (Cresswell, 2007). Practical knowledge was sought, which is embedded in the world of meanings and of students' interactions. The interpretivist paradigm allowed the researcher to understand how the system of meanings of students' HIV testing behaviour are understood and reasons for their decisions to test or not. Most importantly, the interpretivist paradigm allowed the researcher to walk a mile in the shoes of participants by acknowledging their subjective worldview of the phenomena being studied.

Sampling

Sampling refers to the method of selecting a portion of a population to represent the entire population under investigation (Oliver, 2014). In keeping with the objective of sampling in qualitative research, this study adopts a purposive sampling technique. Purposive sampling technique is the "deliberate choice of participants as a result of the qualities they possess" (Etikan, *et al.*, 2016: 2). "Purposive sampling is typically used in qualitative research; in the identification and selection of information-rich cases in order to gain in-depth insight and understanding" (Patton, 2015: 264). Purposive sampling technique was employed in this study to gain in-depth insight and understanding of students' HIV testing practices. The researcher purposively selected male and female students for this study. Male and female students had to be between the ages of 18-35 and could be from all levels of study (first year, second year, third year, masters and PhD students) but must be enrolled as full time students at the University of KwaZulu-Natal, Howard College campus at the time of participation in this study. (In order to ensure this, the researcher requested to see their student identity card before recruitment). They must also be those who have tested for HIV at least once in the last 12 months and those who have never tested.

This sample is significant to the study because it consists of women between the age group of 15-24 years who fall within the high-risk population of HIV infection (Shisana *et al.*, 2014; Kharsany *et al.*, 2016) and their male counterparts. Secondly, it is very crucial to study men's vulnerability to HIV and AIDS because of the role they play in the transmission of HIV and AIDS (Dellar, 2016). Research reveals that men between the ages of 25-40 who are infected

with HIV transmit the infection to younger women between the age group of 15-25, but these men are infected by women between the age brackets of 25-40 years (Naicker *et al.*, 2015). Students who have tested for HIV at least once in the past 12 months were included in the sample criteria because the first objective outlined in the South African National Strategic plan on HIV, STIs and TB 2012 – 2016 calls for everyone in the country to test for HIV at least once a year (SANAC, 2012). The researcher selected this category of participants in order to understand their testing practices, the factors that encourage them to test, factors that discourage them from testing, and also to explore their knowledge of UTT. In addition, those who have never tested for HIV were recruited for this study because research reveal that 25% of those living in South Africa do not know their HIV status because they have never accessed HCT services (UNAIDS, 2019). The researcher was interested in this group of people as well in order to understand the underlying reasons for their decisions not to test and likewise to explore their knowledge of UTT. Participants were selected based on these sampling criteria, as they best aligned with the ability to answer the research questions guiding this study (Teddlie and Yu, 2007).

The researcher recruited 40 participants for data collection, however, only 37 participants took part in the study. All participants were divided into four groups according to age and gender: two groups for males and two groups for females, respectively. Each of these groups was further categorized into two age groups of (18 – 24), and (25 – 35) respectively. As stated earlier, the reason for the age categorization was to cater for young women aged (15-24) who fall into high risk population of HIV infection (Shisana *et al.*, 2014) and their male counterparts and also to cater for older adults who are also vulnerable to HIV infection.

Recruitment Strategy

The researcher selected 40 participants who met the above criteria. These participants were recruited from the three most common sitting areas for students in UKZN, Howard College. These sitting areas are; Shepstone building (20 out of the 40 participants were recruited from here because it is the most populous sitting area for students on Howard College campus), Howard College Theatre (10 participants) and in the front of E.G Malherbe Library (10 participants). These three sitting areas were selected because they are central locations within Howard College which are also in proximity to the library and to students' lecture halls.

Participants constituted of 20 males and 20 females to allow for an equal representation of gender composition.

Recruitment of participants was done by the researcher and an assistant who assisted with recruitment of participants only. This research study was presented to all potential participants, ensuring that all participants had the opportunity to decide about their involvement in the study. The information was presented thoroughly, explaining the procedures, benefits and requirements of the research. This ensured that all participants were well informed. Recruitment took place at the three locations stated above, where recruitment information letters were given to all students who agreed to participate in the study.

Data collection method

In keeping with the qualitative research design, focus group discussion (FGD) was used as the data collection method in this study. The focus group discussion elicits information from a group of people to gain multiple perspectives on the phenomenon being studied (Fusch and Ness, 2015). It is a flexible, semi-structured flow of ideas between members of a group coordinated by a moderator (Brockman, *et al.*, 2010). Focus groups differ from individual interviews in that the group interaction enriches the information generated (Wengraf, 2001). The idea behind the focus group methodology is that processes can help people explore and clarify their views in ways that would be less easily accessible in a one-to-one interview (Kitzinger, 1995). It is commonly believed that focus groups reveal more ideas and that more information is collected than in individual interviews (Morgan, 1998). In keeping with the theoretical frameworks guiding this study (the SEMCHB and the HBM), a definition that is applicable for this study describes focus groups as informal discussions that are planned in order to elicit participant's perceptions towards a specific issue (Krueger, 1998). Based on these arguments, focus group discussion is therefore an appropriate method of data collection for this study as it is concerned with exploring HIV testing practices of UKZN students. Focus groups, however, take more time and effort, are more costly in resources, and cause more logistic problems (Thomas, *et al.*, 1995: 206).

For the purpose of this study, the researcher conducted 4 focus group discussions with a total of 37 participants as against the 40 students that were recruited for the study. (Details of focus group composition is provided in the later part of this chapter). Each group consisted of an

average of 8 members per focus group. This is supported by Onwuegbuzie *et al.* (2010) and Lasch *et al.* (2010) who argue that the size of a focus group should be small enough to allow all members present to express their views, yet large enough to create diversity in the group. According to Struwig and Stead (2013), focus group sessions usually consist of 4 to 12 participants who voluntarily discuss issues that relate to the subject matter of the research. The focus group discussions were semi-structured and open-ended. This means that the researcher had a set of questions intended to be answered by participants which were asked and answered orally. A major advantage of qualitative research is that it gives room for participants to bring up other important issues that may not be contained in the researcher's preset question guide which may be helpful to the study (Fontana and Frey 2000) in order to provide a wide range of answers. Semi-structured questions enabled the group members to expatiate and discuss around the posed questions on HIV testing by using follow up questions to gain more relevant information on the subject matter where necessary. Another advantage of a focus group over a series of one-on-one interviews is that in the group setting, the comments and statements of each participant are available to all other participants and can serve to stimulate memories, alternative interpretations and more information that is likely to come from participants interacting and engaging with one another (Powell and Single, 1996). The focus groups were set in place to allow participants share their views on HIV testing uptake, factors that encourage them to test, factors that discourage them from testing and their knowledge about the UTT prevention approach.

Participation in the groups' composition is as follows: male FGD group 1 (18 - 24) consisted of 10 participants; female FGD group 1 (18 - 24) also consisted of 10 participants; male FGD group 2 (25 - 35) initially consisted of 10 participants but a participant walked out shortly after the discussion began thereby decreasing the number of the group to 9 participants. Female FGD group 2 (25 - 35) consisted of 8 participants and these give a total of 37 participants in the study. With the consent of participants which was obtained in the informed consent form, an audio recorder was used to record the group discussion while the researcher also took notes of participants' conversation. Each FGD lasted between 40 and 45 minutes. To ensure that the discussion was not dominated by few individuals during the discussion, the researcher ensured that participants all gave their opinion on the subject matter. The researcher also ensured that those who were relatively silent were actively engaged to allow for cross cutting ideas and opinions on each question raised.

Table 4.2 provides a clear representation of focus group categorization and number of participants in each group.

Table 4.2: Focus groups categorization and number of participants

Male FGD 1 (18-24)	Female FGD 1 (18-24)	Male FGD 2 (25-35)	Female FGD 2 (25-35)	Total number of participants
10	10	9	8	37

Data Analysis

In keeping with the qualitative research design of this study, data analysis was conducted using thematic analysis. Thematic analysis is a “process of segmentation, categorisation and relinking of aspects of the data prior to final interpretation” (Grbich, 2007: 16). A theme captures something significant as it relates to the research question and represents some level of similar responses or meaning within data set (Braun and Clarke, 2006: 10). Braun and Clarke (2006) developed a six-step process of thematic analysis to guide researchers in the analysis of data. This process is illustrated in table 4.3. The aim of this study is to investigate students’ HIV testing practices, explore the facilitators and barriers to HIV testing among students and also explore students’ knowledge of the UTT as prevention and treatment approach for reducing HIV infection. Thus, the data generated from the focus groups was analyzed manually using thematic analysis.

Adopting Braun and Clarke’s (2006) process of thematic analysis, firstly, the researcher actively engaged with the data generated from the focus group discussions. The focus group discussions from the audio recordings were transcribed in the exact same words as were used originally by the participants. The researcher printed out the transcripts and familiarized herself with the data to identify items (themes) of interests. Through this process, the researcher classified data into themes to form collective experiences and comments in relation to the research questions, and the theoretical frameworks guiding this study. Thus, by categorising data into similar themes and patterns, the researcher obtained a greater level of understanding of the viewpoints of male and students.

Table 4.3: Phases of thematic analysis

Phase	Description of Phase
Familiarize yourself with data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
Generating of initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing the themes	Checking if the themes work in relation to the coded extracts (level 1) and the entire data set (level 2).
Naming themes	On-going analysis to refine the specifics of each theme, and the overall story the analysis tells, and clear definitions and names for each theme and its sub-themes were generated.
Producing the themes	Selection of vivid and compelling extracts from the transcripts were selected and analyzed, with a focus on the research questions and theoretical frameworks for the study.

Table 4.3: The process of thematic analysis - Adapted from Braun and Clarke, (2006: 87).

The second phase involved coding the transcribed data by writing codes on the axis of the transcriptions and taking note of important points that emerged from the data. Codes were in relation to the key constructs of the theoretical frameworks employed in the study. The researcher was interested in first identifying codes that were related to personal beliefs, attitudes, knowledge, perceived risks and self-efficacy which are the components of the individual level of the SEMCHB. Similarly, codes relating to perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy which are the constructs of the HBM were also of interest to the researcher. The third phase involved the collation of codes from the volume of codes that was gathered. Thereafter, the researcher developed themes according to their importance to the research interest.

The fourth phase involved reviewing the themes that were developed to determine their relevance. A total of five themes emerged, which were then reviewed to ensure that they could be categorized into sections relating to the theoretical frameworks and the review of literature

adopted in the study. The fifth phase involved refining the themes with the aim of establishing appropriate definitions and names for each theme. Furthermore, Sub-themes were developed for each of the themes to ensure that significant parts of the data were captured. The sixth step involved reviewing the data to selected extracts which constituted the storytelling of the data analysis. Thereafter, the data was then presented, explained and analyzed in relation to the research questions and the theoretical frameworks that guided this study.

Trustworthiness of the study

It is important to ascertain the truthfulness and meaningfulness of a study and know how well an idea fits with reality (Newman, 2011). The purpose of validity is concerned with exploring the truthfulness of “an inquiry, its applicability, reliability, and objectivity” (Lincoln and Guba, 1986: 15). In qualitative research, trustworthiness is concerned with exploring the “dependability, credibility, transferability, and confirmability of a research inquiry (Lincoln and Guba, 2007).

Dependability

Dependability is described as “the stability of findings over time” (Bitsch, 2005: 86). In this study, dependability was ensured by evaluating the findings of the study in relation to the interpretation of data and the recommendations of the study to make sure that they are all supported by the data received from the participants of the study.

Credibility

Credibility is referred to as the confidence placed in the truthfulness of research inquiries (Holloway and Wheeler, 2002). Credibility determines whether or not research findings represent probable information drawn from the original views and perspectives of participants and is an accurate interpretation of their views and perspectives (Graneheim and Lundman, 2004). Because this is a qualitative study which seeks to investigate the current HIV testing practices of male and female students at UKZN, it was important for the researcher to conduct FGDs for the collection of data. Furthermore, the views, perspectives and experiences of participants were crucial to enable the researcher to identify the facilitators and barriers to HCT among students and equally understand how these facilitators and barriers influence their decisions to test for HIV or not. Thus, FGD was a suitable method of data collection to explore

the perceptions of participants on the objectives of the study. This enabled the researcher to elicit a wide range of views, perspectives and experiences which generated richer data.

Credibility was ensured in the data analysis. The researcher ensured credibility by presenting the views, perceptions, and experiences of the participants as they were originally stated, substantiating analysis with direct quotes from participants. Data was also recorded to decrease bias and ensure credibility.

Transferability

Transferability can be described as the extent to which the findings of qualitative research can be transferred to other settings, or group of participants (Bitsch, 2005). The researcher ensured transferability by carefully elucidating all the processes of research from collection of data, study context, sampling, to the final report to provide a rich description of the context within which the study took place.

Confirmability

Confirmability refers to the extent to which the findings of the research can be corroborated by other researchers (Baxter and Eyles, 1997). Confirmability is concerned with ensuring that data and interpretation of findings are a true representation of the data and fabrications of the researcher (Tobin and Begley, 2004). In this study, the researcher ensured confirmability by constantly referring to the notes, audio recordings and transcripts of the focus group discussions during the analysis of data to make sure that findings reported corroborates the views and perspectives of participants.

Ethical Considerations

In order to justify the research questions and objectives of the study, this research required that participants were willing to partake in the study and provide information pertaining to their uptake of HIV testing services, as well as their testing practices, facilitators and barriers to testing and also about their knowledge on the Universal Test and Treat (UTT) approach as a prevention and treatment method in reducing the spread of HIV. Ethical consideration was a significant part of this research. This study ensured ethics by obtaining gate keeper permission letter from the office of the Registrar of UKZN at its commencement in order to prove credibility of the field report. Furthermore, the researcher was also required to present the research proposal for review before members of staff and postgraduate students of the Centre

for Communication, Media and Society (CCMS). Based on various comments that arose during the colloquium from the reviewers of the proposal and other individuals, the researcher amended the research proposal until it was suitable to be submitted to the School of Applied Human Sciences Research and Higher Degree Committee for final approval.

The ethical clearance approval was obtained from the UKZN Humanities and Social Sciences Research Ethics Committee with protocol reference number HSS/0343/018M. All participants involved in this study were provided with an informed consent form before the commencement of the focus group discussions and were required to sign the forms which clearly stated the details of the research in order to obtain their consent and active participation. Participants were also made to understand that if at any point they decide to discontinue from participating in the research, it would not in any way have any indictment on their personality or cause any havoc. The research consent form also obtained participant's permission to record the focus group discussion with a tape recorder. Maintaining participants' confidentiality is usually a major ethical concern of interpretive research because of the personal nature of the research and the type of questions the participants are asked (Kaiser, 2009). Confidentiality was maintained in the research reporting by protecting the identity of participants using pseudonyms.

Conclusion

This chapter positioned the study within the interpretivist paradigm and provided a detailed explanation on the research design and approach adopted for this study. It also discussed the sampling technique, recruitment strategy and the process of data collection and analysis. The limitations of the study and ethical considerations were also addressed.

CHAPTER FIVE

DATA PRESENTATION

Introduction

This study aims to explore the uptake of HIV testing services at the University of KwaZulu-Natal as part of the Universal Test and Treat (UTT) initiative. In this research, the background on HIV prevalence rates among young adults in South Africa has been established, literature on UTT, benefits of HIV testing and the facilitators of and barriers to HIV testing have been reviewed. The Social Ecology Model for Communication and Health Behaviour (SEMCHB) as well as the Health Belief Model (HBM) have been explained as the theoretical frameworks underpinning this study. The methodology employed in this research has also been discussed.

The aim of this chapter is to present data collected in this study. Four focus group discussions (FGDs) were conducted with male and female students. These focus groups were divided as follows: Two FGDs were conducted with male students; one with male students between the ages of 18-24 and the other with male students between the ages of 25-35 years old. Similarly, two FGDs were conducted with female students; one group for female students within the age group of 18-24 and the other group for female students between 25-35 years old. For the purpose of clarity and in order to facilitate easy understanding of the group categorization in this chapter, each of the groups will be represented as follows: male FGD1, 18 -24 years will be represented as (male FGD younger group); male FGD2, 25 -35 years will be represented as (male FGD older group); female FGD1, 18 – 24 years will be represented as (female FGD younger group); and lastly, female FGD2, 25 – 35 years will be represented as (female FGD older group).

Thematic analysis was employed to identify themes that were generated from the data collected in order to provide a rich interpretation of the meanings embedded in the data.

The key questions that guided this study are:

1. What are the current HIV testing practices among male and female students at the University of KwaZulu-Natal?
2. What are the facilitators and barriers to HIV testing among students at the University of KwaZulu-Natal, Howard College campus?
3. What are male and female students' knowledge of the Universal Test and Treat approach as an HIV prevention and treatment strategy for reducing HIV infection?

In order to give structure and meaning to the mass of data collected, this chapter is organized according to the following corresponding themes which were generated from the findings in relation to the above research questions:

Table 5.1: Themes generated from the data collected

Theme	Aspect
1. Current testing practices among students	<ul style="list-style-type: none"> • Reasons for HIV testing • Preferred location for HIV testing • Frequency of HIV testing • How students ensured they stay HIV negative
2. Facilitators of HIV testing	<ul style="list-style-type: none"> • Understanding factors that facilitate the willingness to test for HIV • Accessibility of HIV testing services • Actions taken after risky sex behaviour
3. Barriers to HIV testing	<ul style="list-style-type: none"> • Exploring barriers that hinder the uptake of HIV testing
4. Knowledge about the UTT approach	<ul style="list-style-type: none"> • Understanding students' awareness and knowledge of UTT
5. Perceptions of the UTT approach	<ul style="list-style-type: none"> • Exploring students' consideration for or against the adoption of UTT

Presentation of findings

In keeping with the theoretical frameworks underpinning this study, findings are presented through the lens of the individual and societal network levels of the SEMCHB and the Health Belief Model. These models are used to understand to understand the current HIV testing practices among students, to assess the perceived facilitators to and perceived barriers to HIV testing, and to explore students' knowledge of the UTT approach.

Testing practices among students

In a study that explores students' uptake of HIV testing services, it is important to understand students' HIV testing practices. This section explores the reasons why students test for HIV. It further examines the frequency of HIV testing among students and their preferred testing location. In this section, the researcher also enquired from participants how they maintained a HIV negative status. During the focus group discussions, participants reported that they would undergo HIV testing for the following reasons:

- 1 For knowledge of their HIV status
- 2 After risky sex behaviour (unprotected sex or having multiple sexual partners)

Knowledge of HIV status

This study found that knowledge of one's HIV status was a common reason for HIV testing among participants. Male and female participants across the four focus groups reported that the reason they would uptake HCT services was in order to know their HIV status. A female participant in the female FGD older group stated that her reason for testing would be to know her status and to protect her intimate partner.

I will test to know my status and protect my significant other, the person who I am in a relationship with (Participant 2; Female FGD, younger group, Sept. 2018).

Corroborating the need to know one's HIV status, 2 male participants across the male FGD younger and older groups and 5 female participants across the female FGD, younger and older groups asserted that:

I will test to know whether I have it or not. They say prevention is better than cure. So, you have to test so that you know your status before anything bad happens to you (Participant 5; Male FGD, older group, Sept. 2018).

Where I just feel it in myself that I need to get tested and know my status. I have to know my status, just for safety reasons (Participant 3; Male FGD, younger group, Sept. 2018).

I just think that knowing my status in general is a good idea, you can't just live in the dark (Participant 4; Female FGD, younger group, Sept. 2018).

I will test to know my status and incase I am HIV positive, to start medication immediately (Participant 2; Female FGD, older group, Sept. 2018).

Umh, if there's someone in the family who has, if there's someone in the family who is HIV, I think I should test too. Just so I could know my status (Participant 3; Female FGD, younger group, Sept. 2018).

My decision was based because umh I had like a step-sister who was HIV positive so I was injured and she was the one who helped me so I had to test to know my status, yeah (Participant 3; Female FGD, older group, Sept. 2018).

It's because on my side, I cannot just make assumptions that my younger siblings are not HIV positive. Cause I know I might get infected because I touch their blood, yeah. And another thing, you know when you test for HIV, you are able to actually know your status, where you stand so that in case you have HIV and AIDS, you will be able to take proper medication (Participant 2; Female FGD older group, Sept. 2018).

However, in the case of two male participants in both male FGDs, they reported that they would test to know their status when their health begins to deteriorate:

I test because I want to know my status when I am not feeling right. Maybe when I detect symptoms of perhaps HIV. For example, a big man like myself, all of a sudden, I start getting thin (group laughs). No, it's the truth, you understand. When my immune system does not function well, I have to test to know my HIV status (Participant 1; Male FGD, younger group, Sept. 2018).

Sometimes, when you have a persistent cough which maybe takes two or three weeks. Or maybe sometimes when you notice changes on the structure of your penis. Or sometimes, when you are having headache which may take a while. If I have these symptoms, then I will test (Participant 4; Male FGD, older group, Sept. 2018).

As for these two male participants in male FGD younger group, they revealed that their reasons for testing would be to have a knowledge of their status for safety before sexual intercourse with a new partner and in the event of an accident.

I decide to test in order to know my HIV status. Because of the things we do as guys mostly at our age. So, I think it is the correct decision to know your HIV status before you partake in anything like sexual intercourse. Maybe with like a girl that you just met, for those reasons (Participant 8; Male FGD, younger group, Sept. 2018).

I think I will also test just to know my status. maybe let's say I am with my friends and we are drinking and maybe I have an accident, maybe I get stabbed and stuff. So if I know my status, I will be able to tell my friends not to touch me just to make sure they are safe too and maybe when I meet a girl, even if I get careless, just to know that I am fine and maybe she is also fine (Participant 9; Male FGD, younger group, Sept. 2018).

The above responses indicate that participants across all 4 FGDs understand that knowledge of one's HIV status is very important. These responses are evidence that participants are aware of the severity of HIV infection as some participants acknowledged that knowledge of their status will lead to treatment and care while two male participants noted that prevention is better than cure. Surprisingly, 2 male participants from the 2 male FGDs stated that they will undergo HIV testing only when they perceive they might be infected as a result of poor health condition. This suggest that some university students at risk to HIV infection will remain unaware of their status until their health begins to deteriorate.

After risky sex behaviour

This was the second reason many participants mentioned during the focus group sessions. Under this aspect, some participants stated that the reason they would test for HIV is because they have engaged in risky sex behaviour. A female participant in the younger group stated that she would test for HIV after unprotected sex. Similarly, participants from the two male focus groups added that their reasons for testing will be after unprotected sex and after having sexual intercourse with someone other than their partners.

Umh, my reason will be if I'm like, not feeling well like psychologically after I've done risky things, like you know, not using protection, then I feel like, symptoms you know, something like that. (Participant 2; Female FGD, younger group, Sept. 2018).

Umh, maybe when I believe that I might be infected. Maybe If I did something, maybe I engaged myself in sexual intercourse, unprotected sex. Or maybe after cleaning my younger siblings' room (Participant 2; Female FGD, older group, Sept. 2018).

I will test when I engage in unprotected sex with someone I don't trust, maybe another girl who is not my partner. Then, the following day I can get tested just to be sure. (Participant 2, Male FGD, younger group, Sept. 2018).

I will test for HIV if I notice some changes on my body while I was involved in sexual intercourse. Or when I think I have been in contact with someone who is HIV positive, yeah. (Participant 1; Male FGD, older group, Sept. 2018).

To support this brother's point, we often feel the need for HIV test when we engage in unprotected sexual intercourse then we realize that we have made a mistake. So, we have to check it out but the truth is even though you know you have made a mistake, you are still scared of testing. (Participant 2; Male FGD, older group, Sept. 2018).

Yeah, yeah, I think I'm agreeing with both gentlemen here. I would go for testing when I realize some symptoms that shows that a person might have HIV. Maybe before then I do what I'm not supposed to do, you know? Not using condom when I have sex with a random girl from the club or so. That will be my reason for going to test. (Participant 3, Male FGD, older group, Sept. 2018).

From the comments above, the researcher observed that male participants engaged in risky sex behaviour more than their female counterparts. These findings also indicate that students are aware that risky sex practices make them susceptible to contracting HIV. Despite their awareness, they still engaged in unprotected sex and sex with multiple partners. Hence, their

perceived susceptibility to HIV infection as a result of these risky sex behaviours influence students to test for HIV. The researcher also observed that risky sexual behaviour was mentioned as a reason to test in the older and younger male FGDs.

Preferred location for HIV testing

When participants were asked about their preferred location for testing, many of them expressed concerns about maintaining confidentiality and privacy. This influenced their responses on their preferred location for HIV testing. A total number of 18 participants stated that they preferred to test in private hospitals by their personal General Practitioners (GP), 10 participants mentioned that they preferred mobile clinics, and 6 participants stated that they preferred public clinics. In addition, 2 participants preferred the pop-up tents at UKZN, Howard College campus while only 1 participant stated that she preferred self-testing. The data on participants' preferred location for HIV testing is illustrated in the table 5.1.

Table 5.2: Data illustrating participants' preferred location for HIV testing

Preferred testing location	Public Clinic	Private Hospital/Personal General Practitioner (GP)	Mobile clinic	Pop up tents at Howard college	Self-test	Total number of participants
Number of participants	6	18	10	2	1	37

Among the participants who chose the public clinics as their preferred HIV testing location, the common reason for their choice was because health services at public clinics are free. They gave the following reasons:

I will prefer to go to clinic because hospitals could be expensive (Participant 8, Male FGD older group, Sept. 2018).

If I were to test, I would prefer a nearby clinic, that's the only way, cause hospitals are far (Participant 5, Female FGD, older group, Sept. 2018).

Yeah, I prefer clinic cos they are free of charge (Participant 8; Male FGD younger group, Sept. 2018).

I think I prefer clinic because you don't pay anything. (Participant 7; Female FGD older group, Sept. 2018).

Among the 18 participants who stated that they preferred to test at a personal General Practitioner's clinics, 4 of them revealed that the primary reason for their preference is to ensure the confidentiality of their HIV test results. They added that they did not trust that their HIV status would be treated with confidentiality in public clinics.

I will go to my GP for more privacy, for instance in my case, my GP has been my GP for like 10 years. So, you know, we have a close relationship and other stuff. (Participant 3; Male FGD, younger group, Sept. 12, 2018)

I'll also prefer a personal GP because most of the public clinics where I come from, (laughs) I think most of the black people will agree with me when I say that most of the nurses in our public clinics, they are not very good in having to keep a secret. Let us say for example you turn out to be positive, they will go around telling the whole neighborhood uyibonile ingane yakaDlamini (did you see the child from Dlamini household?). They will expose you, so next time when you keep on coming for treatment it will be a problem. Which then leads to most of the people committing suicide. (Participant 1; Male FGD younger group, Sept. 2018).

Yeah, I would also go to a private medical institution, just for some privacy and confidentiality. (Participant 4; Male FGD older group, Sept. 2018).

I would go to a private doctor for confidentiality. The last time, ok, let me just be specific. The last time I wanted to test in my local clinic, there was a guy who told me a lot of scary, scary, scary things. He was like, also I wore my uniform. I was doing grade twelve at that time. I wore my uniform so that I can be the first one to be tested, yeah, that's how they worked. So the guy was like, Yoh! Yoh!! Yoh!!! girls from your school, I know them, you sleep with them, yeah. You don't use protection, and then you sleep with them and then we see you all there at the stop. And I was like dude!, give me my result, you just tested me. Chill! Chill!! Chill!!! So, all these things of they will be telling you scary stuff, now you be thinking, now, it's given, I have the shit (referring to HIV). He was telling me all this after

actually after testing. So, you can imagine that it was actually scary. And he was telling me that we know these kids, some of them even come here and do abortion and I'm like why are telling me all these? (Participant 10; Male FGD 1, Sept. 12, 2018).

Overall, participants in this category had concerns for the confidentiality of their HIV test results. A few of these concerns were based on personal experiences and negative feedback from such experiences. Such experiences stemmed from negative attitudes and behaviour of health care providers who did not treat HIV testing and other health matters with confidentiality. This study found that such behaviour was seen to affect the uptake of HIV testing in public clinics. Similarly, participants who stated that they preferred to test at mobile clinics said so based on the need for confidentiality and because their identities were unknown to those conducting the HIV test. Their responses are as follows:

I prefer to test at a mobile clinic because they are more confidential. Those people are just going around, they don't really know me, so. (Participant 4; Male FGD younger group, Sept. 2018).

I personally prefer to go to a mobile clinic, because those people don't know me. They are not going to debouch my status to anyone. It's those people those people who go around with ambulance testing people, they don't know you. They are not going to debouch your status to anyone. (Participant 3; Male FGD, older group, Sept. 2018).

I would prefer to go to a mobile clinic to avoid interacting with a lot of people in the community. (Participant 5; Male FGD, older group, Sept. 13, 2018).

Two female participants reported that they would prefer to go for HIV testing at the pop-up tents on Howard College Campus, University of KwaZulu-Natal. One of them said she did not view HIV as “that deadly disease” anymore. While the other female participant stated that her preference was based on her confidence in her HIV negative status. Nonetheless, she admitted that if her status was to change, it will consequently affect her testing location. Their comments are provided below.

For me I think I would test even here on campus cause now I don't think HIV is that deadly disease anymore. So even if they know, I don't care anymore. (Participant 6; Female FGD younger group, Sept. 2018).

I would prefer to test here on campus at the pop-up tent usually placed at Shepstone (A name of a building in Howard College Campus, UKZN) because I still have confidence in my negative status. But if that were to change, I don't think Shepstone would be my to go area cause I feel I will really need counselling. I think a private area would do then. But for now, Shepstone is fine. (Participant 4; Female FGD, older group, Sept. 2018).

This study sought to identify students' preferred testing locations in order to understand how these locations affect the uptake of HCT among students. The Social Ecology Model for Communication and Health Behaviour suggests that an individual's environment contributes to influencing health behaviour (Sallis, *et al.*, 2008). Consequently, these findings indicate that locations for HIV testing play a significant role in influencing decisions on the uptake of HIV testing among students at the University of KwaZulu-Natal. The implication of these findings makes it important to understand students' preferences of HCT locations to develop related policies that will enhance the uptake of HCT. This study is particularly important in the light of the commitments of the South African government to provide youth friendly health services and to increase the uptake of HCT among young people in the country (NDoH, 2012; SANAC, 2012).

Frequency of HIV testing

As part of students' HIV testing practices, this study also found it important to explore the frequency of their testing behaviour. Under this aspect, many of the male participants across the younger and older FGDs revealed that they tested for HIV when the need arose, particularly after risky sexual behaviours. Some other male participants were more specific; 3 male participants stated that they tested once a year and 5 male participants stated they tested twice a year respectively, while 1 male participant stated that he had tested only once.

The male participants who admitted that they tested when the need arose had this to say:

I test about probably like once every six months, depending on like the need. When I feel there is a real need to test like when I don't use condom with a girl who is not my partner then I will go ahead and test (Participant 2; Male FGD, younger group, Sept. 2018).

Same, whenever I feel the need. There are no specific times like once a month or twice a month or so. It's only when there is a need basically after unprotected sex (Participant 4; Male FGD, younger group, Sept. 2018).

Umh, when I have engaged myself in unprotected sex obviously, I would immediately go for a test. Maybe after one or two months (Participant 2; Male FGD older group, Sept. 2018).

Other male participants who were more specific about how often they tested said the following:

I have only tested once this year (Participant 1; Male FGD, older group, 2018).

The last time I tested was in my grade 12. That was about nine months ago and that was the only time (Participant 10; Male FGD, younger group, Sept. 2018).

I have also tested once this year (Participant 3; Male FGD, older group, Sept. 2018).

I have tested once this year, and twice last year (Participant 6; Male FGD, older group, Sept. 2018).

I often test twice a year (Participant 4; Male FGD, older group, Sept. 2018).

Well, I have checked two times this year and it doesn't necessarily mean because I have engaged in unprotected sex but since it happens that they check sometimes but they don't find the virus but after a while, they do find it so I check again so that I am sure that I'm okay. (Participant 5, Male FGD, older group, Sept. 2018).

The researcher observed that there was a slight variation among female participants. A few participants in the younger and older female FGDs revealed that they had never tested for HIV because they are not sexually active and 1 female participant stated that she had never tested because she had no time for testing. In addition, 3 participants in the older female FGD stated that they had only tested once in their lifetime while only one female participant stated that she had tested several times but could not recall the exact number of times. Below are their responses.

I have only tested once (Participant 3; Female FGD, older group, Sept. 2018).

I have also tested only once because they were giving free USB. I think it was in January or so (Participant 8; Female FGD, older group, Sept. 2018).

Most of the participants who revealed they had never tested for HIV were female students across the older and younger female groups; just 2 male participants in the younger male FGD one stated that they had never tested for HIV. The reason for this decision among females under this category was because they felt they were not susceptible to HIV since they practiced ‘abstinence’ and are not sexually active while the 2 male participants just felt he was not infected because he was not sick.

I have never tested for HIV. I know that HIV testing is a good thing and all that but I just don’t think I have it (referring to HIV). I have never been so sick that I will suspect maybe I have HIV or so even after unprotected sex. I just wait to see if I will fall sick and I don’t. Maybe when I am really very sick, I may think I have HIV and then I will go for testing. But for now, I just don’t think I have the disease (Participant 9; Male FGD, younger group, Sept. 2018).

I have never tested as well. I know that I don’t use protection. Like I don’t use condoms. I can’t use that shit (referring to condom) cause it’s not sweet (referring to sex with condom), you know what I am saying. But I just pray and believe that I don’t get infected. Even though I know there is a chance of getting it (referring to HIV), the thought of testing is scary. What if I have it? Hmmm! So, like the other guy said, when I see that I’m not sick, I just believe my prayer worked and I continue with my life (Participant 4; Male FGD, younger group, Sept. 2018).

I have never tested. When you don't have sex, you don't really think you can catch it. Especially if you don't like do anything where you come into contact with blood. I've never really come to a situation where I need to get tested (Participant 7; Female FGD, younger group, Sept. 2018).

I don't test, cause I abstain. I don't play sport, I don't do needles, I don't do drugs and I have never been in a car accident. So, it's not that I don't understand the importance of testing, I just feel like I'm not at risk. (Participant 4; Female FGD, younger group, Sept. 2018).

I don't test because I am not sexually active. (Participant 1; Female FGD, younger group, Sept. 2018).

I have never tested also. Because like she said (referring to participant one), I am not sexually active. If I become sexually active, I think it is required that I test every three or six months. Depending on how you are sexually active. (Participant 5; Female FGD, younger group, Sept. 2018).

I have never tested for HIV. No need to when you are not having sex. (Participant 7; Female FGD, older group, Sept. 2018).

The findings on the frequency of HIV testing reveal that a good number of participants have tested for HIV at least once in the last 12 months. Participants who reported their engagement in risky sexual behaviour were mostly males and were motivated to test as a result of their behaviour. In other words, engagement in sexual risky behaviour increased the frequency of HIV testing. On the other hand, some participants revealed they had never tested due to perceived low susceptibility. For the female participants, their reason for not testing was due to abstinence and not being sexually active. Their perceived low susceptibility to HIV influenced the frequency of HIV testing. Similarly, the male participants that reported that they had never tested revealed a low perceived susceptibility to HIV infection. One of them reported he does not use condom during sexual intercourse, which in reality, increases the likelihood of contracting the infection. He insisted that he would prefer to enjoy sexual intercourse, instead of using condom. In the same vein, another male participant stated that he was healthy. His

health condition influenced his perceived susceptibility to contracting HIV and consequently, influenced the frequency of testing as he also reported never to have tested.

How participants ensured they maintain HIV negative status

The last section under students' testing practices reviewed what students did to ensure they do not contract HIV. Interestingly, at this point, the researcher observed students were aware of HIV prevention methods such as abstinence, faithfulness to one's partner and the use of condoms. However, majority of the participants in this study did not practice these prevention methods. More interestingly, the researcher also observed that it was only under this section that most participants who responded used the "second person singular pronoun" that is, "you...". This suggests that participants did not take responsibility for their actions.

Their responses are as follows:

Abstain, use protection, and test with your partner regularly. Yeah. (Participant 6; Female FGD, younger group Sept. 2018).

You go with your partner to the clinic or to the General Practitioner (GP), both of you guys get tested and hopefully she is not going to do anything or you are not going to do anything to endanger each other. (Participant 3; Male FGD, younger group, Sept. 2018).

I think self-discipline and to manage your own lifestyle. So that you don't be sexually active with just anyone. For example, people usually get sexually active maybe in clubs with people they do not know. So if you manage your lifestyle, it may be better. (Participant 7; Male FGD, younger group, Sept. 2018).

I think it's not having multiple sex partners. You know, having one and ensuring that you know about their status if they comfortable with it. (Participant 9; Male FGD, younger group, Sept. 2018).

The usual way is using contraceptives like condoms all the time. (Participant 8; Male FGD, older group, Sept. 2018).

Umh as for me, it's abstinence. I have abstained from sex. I haven't had instances where I touched somebody's blood, so I know I'm kind of safe. (Participant 1; Female FGD, older group, Sept. 2018).

You like abstain from risky sex behaviour, sexual intercourse, unprotected sex and touching someone's blood. I know it's like, it's okay to help people but you must make sure you are protected. Wear gloves, don't share needles, all the works. (Participant 4; Female FGD, older group, Sept. 2018).

From the aforementioned discussion on students' current HIV testing practices, it can be deduced that students have a good knowledge of HIV testing. Furthermore, students are aware of HIV prevention methods. However, their knowledge of HIV testing and HIV prevention methods did not influence majority of them to practice safe sex. The next section presents the findings on facilitators to HIV testing.

Facilitators to HIV testing

This study also explored the facilitators to HCT among UKZN students. From the data collected, it was observed that students' perceived susceptibility to HIV facilitated the uptake of HCT. Participants stated that they tested for HIV mostly when they perceived themselves to be at risk of contracting HIV particularly after engaging in unprotected sex. This was similar to the data provided under the section that addressed their reasons for testing. Hence, the researcher classified their reasons to test also as facilitators to the uptake of HCT. In addition, a few participants reported that incentives were huge facilitators to the uptake of HCT.

Perceived susceptibility to HIV infection

Findings on facilitators to HIV testing in this study revealed that some participants who perceived themselves to be susceptible to HIV infection were motivated to test as a result of their perceived susceptibility. This was mostly as a result of engaging in risky sex behaviour or influenced by an intimate partner due to engagement in risky sex behaviour.

A female participant in the younger female group stated that:

I am willing to test and test alone because my partner told me about the danger he faced. Maybe engaging in a risky behaviour with someone else so I have to test to be sure that he has not infected me" (Participant 5; Female FGD, younger group, Sept. 2018).

Corroborating the statement above, another female participant reported that:

I will be willing to test if I had unprotected sex. Yeah, that's it. (Participant 10; Female FGD, younger group, Sept. 2018).

In relation to perceived susceptibility due to risky sexual behaviour, 2 females in the older female groups also buttressed this point stating that:

Umh maybe when I believe that I might be infected. Maybe if I did something, maybe if I engaged myself in sexual intercourse, unprotected sexual intercourse. (Participant 2; Female FGD, older group, Sept. 2018).

I go and test when I have engaged myself in unprotected sex. (Participant 2; Male FGD, older group, Sept. 2018).

Deducing from the point of view of participant five in the female focus group one, it can be established that the actions and behaviour of an individual's intimate partner influence decisions on individual health behaviour. This means that susceptibility to HIV is not solely determined by individuals themselves but there are also external factors and engagements that increase the risk of contracting the infection.

Incentives as facilitators to HCT

Findings in this study revealed the use of incentives as a facilitator to undergo HIV testing. Participants reported that they will be willing to test when there are incentives put in place to encourage the uptake of HIV testing. A female participant in the female older group stated that:

As for me, I am willing to test for HIV and AIDS when they are giving free stuff (All laugh). (Participant 1; Female FGD, older group, Sept. 2018).

In agreement to the above statement, participant 3 in the same group added that:

I only test for HIV if they are gonna give me something, like a USB (universal serial bus), like a T-shirt. Those are the only reasons which will make me to test for HIV (Participant 3; Female FGD, older group, Sept. 2018).

In the same vein, participant 8 supported the previous statements, adding that:

The only time I have tested was because there was a reward for testing. I haven't got that time to test, but when there is a gift attached, I will make time for testing. Yeah, so, that's it. (Participant 8; Female FGD, older group, Sept. 2018).

Findings in this study indicate that offering incentives was a factor that facilitated the uptake of HCT. Incentives in form of T-shirts, USB and other items were found to influence the uptake of HIV testing among students, although this was found only among female students. Interestingly, the use of incentives to motivate HIV testing was found only among this group, that is, the older female group. The reason for this is unclear. However, drawing inference from earlier responses of these participants, one may suggest that participant 1, being confident in her HIV negative status may decide to test not necessarily to know her status but because of the need for the incentive attached to HIV testing uptake.

Accessibility to HIV testing facilities

This study also sought to understand how accessible testing facilities were to students. Under this section, all participants in this study revealed that HIV testing services were easily accessible to them. They did not record any challenge accessing HIV testing centers. This is reflected in the comments made by some participants as follows:

They are everywhere, even here at school (Participant 2; Female FGD, younger group Sept. 2018).

Even in Town, there is a pop-up tent everywhere. There is a pop-up tent at the rank. I was so surprised. I was amazed. Yeah. At the taxi rank, there was a pop-up tent for HIV testing, and I could see a few people going in there to get tested. (Participant 5; Female FGD, younger group, Sept. 2018).

For me, HIV testing center is very accessible. We have one at Shepstone here in varsity. Where I live in my neighborhood, the mobile clinics are situated right at the hearts of the community and the center. So, they are quite accessible in that sense. (Participant 6; Male FGD, younger group, Sept. 2018).

They are very accessible as well. Probably there are about four or five testing centers where I can do a test within a ten-kilometer radius. So, it's very accessible. (Participant 3; Male FGD, younger group, Sept. 2018).

Well, in my area, it's like maybe 15 minutes' walk, so it's very near. (Participant 1; Female FGD, older group, Sept. 2018).

Yeah. Same with me. It's very near to my place. (Participant 2; Female FGD, older group, Sept. 2018).

I can say that they are widely accessible because they also come to school. Like those mobile facilities and there is like also health institutions all over Durban so it's easier to get there and get tested. (Participant 1; Male FGD, older group, Sept. 2018).

From all the responses above, this study found that HIV testing facilities were very accessible to participants. Participants revealed that these facilities were within walking distances and did not involve any cost for transportation. However, the researcher noted that accessibility to HIV testing facilities did not influence participants' decisions to test for HIV.

Actions taken after risky sex behaviour

This study also questioned the actions students would take after risky sex behaviour. Two major actions were stated by participants as follows:

- i. "Shower after sex"
- ii. undergo HCT after risky behaviour

"Shower after sex"

Two male participants in the younger male group were of the notion that a shower after sex was the appropriate action to take after risky sexual behaviour. They expressed their opinions stating that:

Scientifically proven, without joking, after sex it has been said that you must immediately take a shower. Immediately. When you are circumcised of course, you have to also be circumcised because I think after sex the virus or the disease stays around the parameters of your private part before it sinks in. So immediately after sexual intercourse you run to the shower or the bath. You wash so you won't be infected. (Participant 1; Male FGD, younger group, Sept. 2018).

Reiterating this point, participant 2 stated that:

This is for someone circumcised only. Someone not circumcised should not bother washing. It won't work (Participant 2; Male FGD, younger group, Sept. 2018).

Surprisingly, this study found that male students believed that contracting HIV could be prevented among men if they are circumcised and took a shower immediately after sex. From the finding above, it can be deduced that there are still misconceptions on medical male circumcision and HIV infection despite enormous literature on these issues.

Undergo HCT after risky sex behaviour

A significant number of students indicated that they would undergo HCT after engaging in risky sex behaviour. A female participant in the female participant in the younger female FGD stated that herself and her partner would go for HCT after unprotected sex and in the event of a positive test outcome, she would seek preventive measures. A male participant in the older male FGD said he would not partake in any sexual intercourse until he had undergone HCT in order not to transmit the virus in case he had contracted it. The other two participants mentioned that they would go for testing after risky sex behaviour.

I guess the first step is that we both go test the very next day. That same day, if possible and if like there is an imbalance in our status, like I see that the results say they are positive then there are measures that clinic can help us with. The post-exposure prophylaxis or so. I think it's a three-month treatment or something, to help prevent HIV. It's not guaranteed I know but then at least I will know my chances, that I am still in-between rather than me just praying and hoping that I have not contracted HIV. It's like getting pregnant and praying that the fetus goes away. That never happens, unless you seek proper help or whatever else you decide to do with it cause praying just never helps. This is the only one point where I feel praying never works. But don't judge. (Participant 6; Female FGD, younger group, Sept. 2018).

Well after that, I don't have sex with another person because if I have that virus, I'm gonna transfer it to the other person. And I should also go for a test immediately after that. (Participant 3, Male FGD, older group, Sept. 2018).

I think I will rush to the clinic immediately and get tested so that I start treatment right away if they find anything, yeah. (Participant 1; Female FGD, older group, Sept. 2018).

Yeah, I will also go for testing after unprotected sex (Participant 5; Male FGD, younger group, Sept. 2018).

These findings indicate that students still engage in risky sex behaviour despite available protective measures such as the use of male and female condoms. Furthermore, there is evidence of low knowledge about HIV and available prevention options among participants which could also influence the kind of health decisions they make after exposure to health risk. This is seen in their notions of Medical Male Circumcision (MMC) with regards to “shower after sex”, and the vagueness about Post Exposure Prophylaxis (PEP).

Barriers to HIV testing

This study equally examined the barriers to HIV testing. Among the key barriers to HIV testing stated by participants were fear of a positive result, lack of privacy during HCT and low risk perception.

Fear of a positive HIV result

Participants in this category stated that fear of a positive result would pose a hindrance to HIV testing. The researcher observed that this was a common barrier to testing only among male participants in the two focus groups for male students. Participants had these to say:

After a one-night stand with a girl from the club, I will be afraid to test because I don't want to see the result, you know, you are just scared (Participant 4: Male FGD, younger group, Sept. 2018).

I will be afraid of testing after having sex without condom with a girl who is not my partner. You know, just a casual fling or something like that. The thought of a positive result scares me. Though I know that testing is the right thing to do after that. But hum, it's not easy to do. (Participant 2; Male FGD, younger group, Sept. 2018).

I will avoid going for HIV test when I realize that someone I have been involved in sexual intercourse with might be infected because there's that fear of thinking

that I'm already infected by that person. (Participant 5; Male FGD, older group, Sept. 2018).

I will not test when I am not sure of myself. We all go in there with the hope that the result is going to come out negative. The thought of waiting for the result kills me already. As in, what if it is positive? Eish! no man! I cannot handle it. I would rather not test. (Participant 3; Male FGD, older group, Sept. 2018).

Overall, findings in this section reveal that fear of a positive HIV test result is a major barrier to the uptake of HCT among participants. This factor stems primary from activities of sexual risky behaviour. This buttresses the points that have been stated in the chapter that students engage in sexual risky behaviour. Furthermore, from the point of view of participant 3, Male FGD, older group, one can deduce that fear of a positive result can also arise from the mental trauma an individual may have to deal with, while anticipating the result of the test.

Lack of privacy

Another identified barrier to the uptake of HCT in this study is the lack of privacy with regards to HIV testing environments. Participants expressed concerns about privacy when considering HIV testing uptake. They also expressed concerns about fear of having a positive HIV result, the testing facility or space itself and the emotions on their faces that is, (facial expressions) after testing which could be seen by others. This factor was found to be a common factor among participants across the four focus groups. In addition, one female participant stated that people especially ladies that go to test are viewed as “being promiscuous”. She said they think when a lady goes to test for HIV, it is because she engages in immoral behaviour. Their comments were expressed as follows

I will not test when tests are conducted in a public area, like how that do it here at school at Shepstone. I have the right to human dignity. I need to be respected. (Participant 7; Male FGD, younger group, Sept. 2018).

I will not be willing to test if I feel like the environment to test is not safe, that the results will not be private, my facial expression would not be private so I would not be willing to test at my local clinic cause I know the sister there knows my mother. I will not be willing to test in an unsafe environment. Or if I feel I don't

have proper knowledge as to why I am testing, so I would not be willing to test if I am just being told “now go test”. Unless my partner says like he’s done something risky and he is advising me to test like that’s a private thing. (Participant 5; Female FGD, younger group, Sept. 2018).

Umh, testing is a very good thing because everyone needs to know their status. But I think testing is a private thing, I will not test in a public space because there is no privacy there. For example, campus has the pop-up tent, so it’s more of a public space. It’s like everyone knows everyone, I can see when you are not well, I can see if you come out of the tent and you not looking well, something might be wrong. So for me personally, I will only test where nobody knows me. For example, in Durban nobody knows me, I am from far away in Newcastle so I can test outside campus in Durban but I can’t test in Newcastle. No! No! No!!! (Participant 7; Female FGD, older group, Sept. 2018).

I will not test in a place that everybody can see me either they know me or not. The truth is when people see you going to test for HIV, they immediately think you are testing because you are a bad person as in that you are promiscuous especially when it is a lady. They just judge you immediately and say all sorts of stuffs about you like you are immoral. So, it must be an enclosed environment. If it’s not a private place, I would rather not test (Participant 8; Female FGD, older group, Sept. 13, 2018).

Findings under this section reveal that lack of privacy during HIV testing is a significant barrier to the uptake of HCT among participants in this study. From participants’ responses, it can be deduced that lack of privacy, visibility of facial expressions after HCT, and inadequate knowledge regarding HIV testing contribute to the barriers to HCT. Although, a participant acknowledged that HCT is a good approach to know one’s status, participants insisted that they would not test in places where they are known. This indicates the influence of testing environment on participants’ decision to test or not to test.

Low risk perception

A further barrier to the uptake of HCT identified in this study is low risk perception. Interestingly, this arose only among female participants in the two female focus groups. Six female participants reported that they had never tested because they believed they were not at risk of contracting HIV.

I have never tested. I don't have sex, so I don't really think I can catch it. Especially as I don't like do anything where I come into contact with blood. I don't do sports where people usually get wounded. I've never really come to a situation where I need to get tested. (Participant 1; Female FGD younger group, Sept. 2018).

I don't test because I abstain. I don't play sport, I don't do needles, I don't do drugs, and I have never been in a car accident. So, it's not like I don't understand the importance of testing, I just feel like I am not at risk of contracting HIV. (Participant 2; Female FGD, younger group, Sept. 2018).

I have never tested because I am not sexually active, so I don't think I can get HIV or AIDS. (Participant 5, Female, Sept. 13, 2018).

These responses highlight how low risk perception could act as a barrier to the uptake of HCT. While their reasons for not testing can be justified, this may be an influence on discrimination and stigma around HIV testing because of the perception that only individuals who engage in unprotected sex need to uptake HCT (Strauss, *et al.*, 2015).

Knowledge about the UTT approach for HIV prevention

A significant number of participants revealed that they did not have any knowledge of UTT prior to this study. It was discovered that there were some misconceptions among the few participants who had previous knowledge of UTT. However, only 2 participants had the basic knowledge of UTT. One of them said he knew about the approach through his uncle who works as a health care provider. He had this to say concerning his knowledge of UTT:

“I think my knowledge on the approach is that it fights the virus immediately and helps the person gain more immune system before it weakens”. (Participant 7, Male FGD, older group, Sept. 2018).

While a female participant stated that she learnt about it through her sister who got infected and commenced treatment immediately after discovering her HIV positive status.

Well, I heard it from my sister, my third sister. Yeah, I heard it from her cause she went to do her testing. So and then she came back positive. So and then, she had to tell the family. She told us that they also explained how she had to take the antiretroviral therapy (Participant 2; Female FGD, older group, Sept. 2018).

No previous knowledge

Among the participants who did not have prior knowledge of UTT until the researcher explained the meaning, one of them added that UTT is a step forward to reducing the transmission of HIV. Their comments are provided below.

Well, I didn't know but I think it because of the undetectable thing. Where they inform people that if your viral load is like undetectable, you can't pass the virus. So I think it's a step forward into reducing HIV infections so if they treat you that you can't infect the other person then it's a step towards a HIV free generation. So I didn't know that's how it happens now. I only knew that you have to wait for your CD4 count to get low before they treat you. (Participant five, Female FGD 1, Sept. 12, 2018).

I didn't know, I didn't know anything about it, I just knew that in the movies they show that until you are sick they give you the medication. But I didn't know that you can get immediate treatment. I had no knowledge about it (Participant 5; Female FGD, older group, Sept. 13, 2018).

I didn't know anything, I just found out now (Participant 6; Male FGD, younger group, Sept. 2018).

I have never heard about it. (Participant 3; Female FGD, older group, Sept. 2018).

Before today, before you mentioned it, I did not know it. It's the first time
(Participant 1; Male FGD, younger group, Sept. 2018).

This finding revealed that a significant number of participants did not have knowledge about the UTT as a prevention and treatment approach to HIV/AIDS prevention.

Misconceptions about UTT

Two participants stated that they had previously heard about UTT but they did not understand the meaning of this prevention strategy. The researcher observed that there were misconceptions about the UTT approach. One male participant in older male focus group said that he thought UTT helped human body to adapt to treatment because of possible allergies as a result of the treatment. Another male participant in the younger male focus group stated that he thought UTT was an approach whereby a person undertakes treatment only during the window period or the acute phase of the infection in order to prevent HIV and AIDS.

My knowledge is that it helps a little bit because it helps the body adapt to treatment because some other people may have allergies to the treatment and after a while even if when they are sick it's the time. But if you can adjust to the medicine earlier before you get sick you can be able to hide some symptoms to that (Participant 1; Male FGD, older group, Sept. 13, 2018).

I think it's like, it's an approach where you would go for testing. I think only within the first thirty days after your sexual intercourse that you suspect there could have been transmission of HIV and Aids and then it basically works on the window period so like there's a certain amount of time between the time you had sex and the time it's going to build up to a point where it's now fully in control of your immune system. So I think it's just that approach where you go between your window period and then you get the necessary medication to prevent it from building up into a full on virus. (Participant 10, Male FGD, younger group, Sept. 2018).

The comments above indicate that participants in this category did not have the right knowledge of UTT.

Perception towards UTT

While discussing perceptions towards UTT, all participants in this study agreed that the approach was a good initiative in controlling the transmission of HIV and AIDS. Two participants stated that the UTT approach is beneficial in controlling HIV-related sicknesses and deaths. Their statements are captured as follows:

I think it is beneficial if you are positive because then it's sort of like starting to control it now instead of waiting of like when you are too sick and then it's terminal and you are waiting for death (Participant 1; Female FGD, younger group, Sept. 2018).

Similarly, a female participant in the older female FGD stated that UTT is beneficial in getting immediate treatment upon diagnosis.

I think that it is very important for us people to actually go test because there is a way for you to get help immediately. So rather than waiting for a long period of time to go test, just go there immediately. Get tested and receive your proper medication (Participant 2; Female FGD, older group, Sept. 2018).

In the view of a male participant in the older male FGD, he stated his opinion that UTT would help to reduce HIV-related stigma in the absence of physical symptoms of HIV/AIDS.

Yeah, I also think it's a good thing because it helps sometimes. Cause some people don't wanna be friends with others who have HIV/AIDS so sometimes, if you already know you have HIV, immediately after you find out, you can go and take medication which may help your body to adapt, so it will not be clear to others people that you have HIV. And those symptoms will be not seen around (Participant 1; Male FGD 2, older group, Sept. 2018).

Similarly, a male participant in the younger male group reiterated the importance of immediate treatment upon diagnosis adding that UTT would reduce the rate of HIV-related deaths.

I think it is great, because it going to reduce the number of people dying because of HIV. If you are going to have to wait before you get assisted, you are going to die while waiting whereas if you are getting help at the same time where you

discovered that you are getting ill. There are no chances of getting ill (Participant 3; Male FGD 1, older group, Sept. 2018).

As for participant 5 in the younger female FGD, she expressed that she is not scared of HIV because she is aware that she can take treatment that will help prevent the transmission of the infection. She added that she has family members that are HIV positive and are doing fine health-wise and because of this, she is neutral about HIV-related stigma.

For me, I feel like now with the personal knowledge I have gained with HIV and AIDS, it's more of a societal thing. I have like STIs that scare me way more than like HIV and AIDS. So now the thing about me getting infected with HIV is also a thing of how the society will react. Do they know as much as I know? so like I think it will be okay for me to take treatment immediately cause I know I am scared of syphilis and gonorrhea but HIV, I can just treat it. If I'm on medication the right way, I cannot pass it (that is, transmit the infection) I even grew up in a household where HIV is a neutral thing. I am so proud to say that cause like I have aunts and uncles with HIV and they live with it freely. So I try to be as neutral as possible to the stigma (Participant 5; Female FGD, younger group, Sept. 2018).

The above findings suggest that participants had good perceptions towards UTT based on the knowledge they received during the focus group discussions. It can be deduced that knowledge of the UTT approach and the perceived benefits of the approach influenced their perceptions.

Considerations for the uptake of UTT

When participants were asked if they would consider the adoption of UTT, the researcher observed that all participants responded in support of the adoption of UTT except for only two female students who reported that they would not consider the adoption of UTT for fear of stigmatization. The researcher also observed that this was the first time HIV-related stigma was mentioned during the focus groups discussions.

In support of UTT

Participants gave several reasons in support of the adoption of UTT. A male participant in younger male group stated that UTT would be of benefit to him to then gain access to immediate treatment if he becomes infected with HIV. His comment is as follows:

Yes, I would. It will also benefit me in a way because if I am HIV positive as soon as I get the treatment I will be able to help get my CD4 count stay in the right place. If I am HIV negative it will also counsel to say you should continue using condoms or abstaining in a better way. (Participant 5; Male FGD, younger group, Sept. 2018).

Another male participant stated that he would adopt UTT, knowing he could live a normal and happy life if he gets infected with HIV.

Yeah, I would go for the UTT because I think if I knew that if I would live a normal life with HIV I will be as happy as I am when I am negative. So I think it's a good thing and it wouldn't really affect me psychologically, yeah (Participant 2; Male FGD, older group, Sept. 2018).

For participant 1, Male FGD, older group, he expressed that UTT is good and will be of benefit in helping him to cope psychologically and biologically should he contract the virus.

Yeah, I think it's a good thing, I will test. Because with the knowledge I have gained today I think it will help, it will help to be aware of the HIV virus and to also know as it may affect me in many ways. Psychologically and biologically I will be affected I think it's a good thing to take it to overcome these problems (Participant 1; Male FGD, older group, Sept. 2018).

Similarly, participant 2, in the Female FGD, older group stated that she would consider the adoption of UTT because immediate treatment will increase her confidence and help to overcome the challenge of stigmatization.

Umh I will take it, I will go for it. Because you know the moment you enter a clinic, to me I feel like it's a way of showing self-love, self-care, because that means that you actually concerned about your life. So, I would go for it because I went there

in the first place that means that prevention doesn't, like it something that I did so maybe it something that couldn't happen at that particular moment. For example, maybe I was in an accident, but if I go there and then they give me medication immediately after being tested and the results coming out to be positive. That would be actually, that would raise my confidence in a way and hope that I can survive this and also it reduces like being discriminated by people. Cause if you don't see that I am HIV positive, you won't actually criticize me cause you won't even know that I am and that will mean that I will focus on what I want to focus on, because I won't have this stigma surrounding me, "okay you HIV positive and what". So I would definitely go for it, because I wouldn't rather let people look at me a certain way or myself. Looking at myself in a certain way because I failed to something that will assist me to actually work somewhere where I want to be (Participant 2; Female FGD, older group, Sept. 2018).

Yes, definitely. Because it does a great deal for African mortality rate. If this is practiced, then the mortality rate will decrease. That's a good thing I guess (Participant 1; Female FGD, older group, Sept. 2018).

Not in support of UTT

The two female participants who stated that they would not consider the adoption of UTT mentioned the psychological inability to deal with a positive HIV result and fear of being stigmatized as the reasons for their decisions.

I wouldn't go because the truth is, we walk into testing hoping to walk out negative. Psychologically, I will not be able to accept it when I come out positive. As much as they say there is hope at the end of the tunnel and they tell you, you can live and everything. Society still shows us that you are "not normal" when you have HIV. It's like you are gone. So it's gonna be hard for me to accept it immediately and sometimes it is the accepting part that kills the people rather than the knowing. So I wouldn't go (Participant 6; Female FGD, younger group, Sept. 2018).

Similarly, participant 7 of the same FGD group admitted that she was not scared of the infection itself compared to many years ago when people living with HIV looked very sick but she was

bothered about being stigmatized against and the thought of being rejected by family, friends and the society.

I wouldn't go as well because, it is a thing of now you are scared of how society is going to take you. I don't want to walk out and think that everyone knows that I am taking my ARVs or whatever. So now it's just a mental stigma of how society is going to act towards me. I don't want my family and friends knowing that I am HIV positive and when I touch a spoon and eat with it, they look at it funny. Or they end up saying now everyone has their own plate and stuff like that. So, it's scary, it's the rejection that scares people now more than like hoping that you don't come out positive or negative.

At least, every time you feel sick you go to the clinic, you want to find out why your eyes hurt, why your nose is bleeding, why your ears are hurting. So, it's just the stigma about how they gonna act so the mental issue is just knowing how people are going to act towards you. When we were growing up, the person we knew with HIV, Nkosi Johnson, that image of him is traumatizing, he was not looking like a normal kid, and he didn't look healthy. But now, people who are HIV positive don't even show signs of sickness which is a good thing but the stigma still exist. I don't want to be stigmatized or discriminated against by society. The sickness will not even kill me but the stigma will destroy me.
(Participant 7; Female FGD, younger group, Sept. 2018).

Although, only 2 participants across the four focus groups mentioned stigma as a barrier to the uptake of UTT, from their responses above, they had a strong unyielding perception of HIV-related stigma which influenced their decisions not to test for HIV. From the point of view of these 2 female participants, we see that the participants were aware of the severity of HIV infection, nonetheless, they were more concerned about the psychological burden of a positive HIV result, HIV-related stigma and the perceived behaviour of family, friends and the society at large towards them in the event of a positive HIV result. This further reiterates the notion of the Social Ecology Model of Communication and Health Behaviour at the social network level which posits that individual health behaviour can be influenced by friends, family, community and the society. From the comments above, it can be established that the two participants were struggling with the thoughts of HIV-related stigma despite the perceived benefit of the UTT approach.

Conclusion

This chapter has presented selected findings according to recurring themes collected through the four focus group discussions. The next chapter will present an analysis of the data in relation to the reviewed literature and the theoretical frameworks underpinning this study in order to provide answers to the research questions that inspired this study.

CHAPTER SIX

DISCUSSION AND INTERPRETATION OF DATA

Introduction

The aim of this study is to explore students' uptake of HIV testing services at the University of KwaZulu-Natal, Howard College, as part of the Universal Test and Treat (UTT) initiative. This chapter discusses and interprets the data collected in this study through the theoretical frameworks that guided the study; the Social Ecology Model of Communication and Health Behaviour (SEMCHB) and the Health Belief Model (HBM). This chapter also examines data collected in relation to reviewed literature on previous research on HIV testing uptake among young adults. In addition, findings of this study in relation to the research objectives and questions of the study are also discussed in this chapter.

Objective 1: To investigate the current HIV testing practices among male and female students at the University of KwaZulu-Natal, Howard College.

The first objective of this study was to investigate the current HIV testing practices among male and female students at the University of KwaZulu-Natal. While addressing this objective, this study unpacked the reasons why students test for HIV, their preferred testing locations, frequency of their testing behaviour and actions taken to maintain an HIV negative status. This study found that the core reasons why students tested for HIV was premised on the need to have knowledge of their status and after engagement in risky sexual behaviour.

1. Reasons for HIV testing uptake among students

i. Knowledge of HIV status

Knowledge of one's status was a common reason for testing among participants in this study. Participants further revealed the need for the knowledge of their status were for safety reasons; to protect their intimate partners, and to protect other people around them in the event of accidents. This finding is similar to a study among young black men which found that the knowledge of their status, for the sake of their own health and wellbeing, was one of the most common reasons why participants tested for HIV (Jones *et al.*, 2018: 6). This finding is also in agreement with Meehan *et al.*'s (2015: 6) study which found that some adults (19 -60) years in Cape Town tested for HIV to know their HIV status.

The knowledge of one's HIV status provides a gateway to HIV prevention, treatment and care (Musheke *et al.*, 2013:2). Some participants in this study indicated that HIV testing is important

to them and they reported a high level of self-efficacy. Thus, this finding suggests that equating HCT as part of a healthy lifestyle could encourage more youth to get tested.

ii. After risky sexual behaviour

Findings in this study revealed that the reason many of the participants particularly the males across the two male focus groups tested for HIV was due to their engagement in risky sexual behaviour such as no condom use and having casual sex. Although a few female students also reported testing for HIV after risky sexual behaviour, this was not common among female participants compared to the male participants. This finding corroborates Meehan *et al.*, (2015) who found that one of the reasons participants in their study tested was HIV was because they believed they were susceptible to HIV as a result of their engagement in unsafe sex. This further reiterates Moodley's (2007), Mulwo's (2009) and Mutinta's (2012) studies that university students particularly males engaged in sexual risky behaviours consequently, making them vulnerable to HIV infection.

2. Preferred HIV testing location

This study sought to identify preferred HIV testing locations among students and found that almost half (18 of 37 participants) preferred to undergo an HIV test with a private doctor or a personal general practitioner due to concerns of privacy and lack of trust in health care providers to maintain the confidentiality of their test results. A particular male participant shared his experience of a health care provider in a public clinic who revealed other people's HIV tests result to him. This study found that lack of confidentiality influenced students' preferred HIV testing location.

However, while there is a preference for private facilities, a few participants (6) stated that they preferred to undergo HIV testing at public clinics. The core reasons for their preference was that public clinics are free of charge while private hospitals are far and expensive. Some participants (10) preferred to take their HIV tests at mobile clinics. Their reasons were similar to participants who preferred to test with private doctors or personal general practitioners. Participants in this group believed that their HIV test result would be confidential particularly because their identities are unknown to those conducting the test. A minimal number of participants (2) stated that they preferred to have an HIV test at the pop-up tents on Howard College campus; with one of the them indicating that she did not perceive HIV to be 'that deadly disease' it was some years ago, and did not care if other students knew about her status. The second participant reported that she preferred to test at Howard College campus because

she was confident about her HIV negative status. She added that if her status changed from negative to positive then her preferred testing location would also change to a private area. Lastly, only 1 participant reported to prefer self-testing because she had access to the testing kits and could test on her own.

Overall, this study found that private hospitals were the most preferred location for HIV testing among participants. This finding contradicts those from a study among truck drivers in Kenya which found that participants preferred free provider-administered HIV testing in public clinics over self-testing (Strauss *et al.*, 2017: 6). This was attributed to the support they received from healthcare workers in public clinics (Strauss *et al.*, 2017: 6). The researcher found that there was a paucity of studies on preference of HIV testing location among heterosexual individuals but several literatures (Lippman *et al.*, 2008; Han *et al.*, 2017) on preference of HIV testing locations men who have sex with men (MSM). However, there is just a little known about preference of HIV testing location among university students in South Africa. In a study among South African University students, Haffejee *et al.*, (2018) found that 40% of their participants expressed a preference for HIV testing at university clinics compared to their home community clinics. It was further indicated that the reason for their preference was because there was a lower level of stigma in the university clinics as opposed to students' home community clinics (Haffejee *et al.*, 2018: 7). Their result slightly differs from findings in this study. While this study had several options for preference of HIV testing location, Haffejee *et al.*'s (2018) study only analysed preference between university clinics and students' home community clinics.

Evidence from a study among MSM in Mpumalanga, South Africa showed that over 80% of participants preferred self-testing over testing at clinics because of confidentiality concerns surrounding HIV and MSM (Lippman *et al.*, 2018: 2). This is similar to a study among MSM in China which revealed that the most preferred HIV testing location was testing at home. The study found that participants' affinity for undergoing HIV test in public hospitals and clinics was for fear of lack of confidentiality of test outcome and MSM status (Han *et al.*, 2017: 31).

This study is therefore important as it adds to literature heralding preferences of HIV testing locations among university students in South Africa. It further elucidates how students weigh the attributes of HIV testing locations in HIV testing decisions. In order to maximise the effectiveness of the UTT strategy for ending the HIV epidemic by 2030, there is a need to understand preferences of HCT locations among diverse populations. Thus, it is expedient to

provide a better focus on the optimization of attributes of HCT locations for policy makers to increase HIV testing uptake.

3. Accessibility to HIV testing facilities

This study revealed that HCT facilities were accessible to all participants. Participants reported that testing facilities were very close to them without the need to incur any transport costs. This finding is inconsistent with previous studies in South Africa (Lufson *et al.*, 2013; De Wet and Kagee, 2016). Their studies found that HIV testing facilities were located too far from the homes of their participants and consequently, affected the uptake of HIV testing. Findings from this study indicate that the South African government has made tremendous efforts at increasing HCT facilities in the country. While it might be expected that increasing accessibility to HCT facilities would increase HIV testing uptake, this study found that accessibility to HCT facilities did not influence participants' decisions to undergo HIV testing. Instead, participants indicated that confidentiality of HIV test result and privacy of HCT facilities were more important considerations. Thus, improving accessibility of HCT facilities requires consideration around the manner in which HCT services are organised to meet the needs of confidentiality of clients.

4. Frequency of HIV testing

This study also examined the frequency of HIV testing among students at UKZN. Findings from this study revealed that a vast majority of participants have tested for HIV at least once in the past 12 months. Although, there are no studies that examined the frequency of HIV testing, however, this finding is in accordance with the first objective of the South African National Strategic plan on HIV, STIs and TB 2012 – 2016 which requires all individuals in the country to test for HIV at least once in a year (SANAC, 2012). This study is therefore significant as it unveils the frequency of HIV testing among university students. Furthermore, this study found that male participants tested for HIV more in comparison to their female counterparts. The frequency of HIV testing among participants in this study was influenced by their engagement in sexual risky behaviour. As for the participants who had never tested for HIV, the frequency of HIV testing could not be determined.

5. Measures taken by students to maintain HIV negative status

Although, it has been argued that HCT is of immense benefit in reducing sexual risky behaviour in young people, very little has been established about what happens to them after the uptake of HCT (MacPhail, 2008: 88). In light of this, this study sought to identify the measures taken

by students to ensure they maintained an HIV negative status. Participants reported abstinence, having protected sex, refraining from having multiple sexual partners and undergoing HIV testing regularly with intimate partners as measures to maintain an HIV negative status. This study found that participants had knowledge about the ‘Abstinence’, ‘Be faithful’, and ‘Condomise’ (ABC) prevention approach, paradoxically, their knowledge did not conform with their sexual behaviour patterns. This finding corroborates previous studies which found that students at the University of KwaZulu-Natal did not practice abstinence, were not faithful, and did not use condoms (Moodley, 2007: 100; Mulwo, 2009: 86; Mutinta, 2012: 137). Interestingly, a study in Zimbabwe, revealed a similar finding that there were no changes in high-risk behaviour among HIV participants after HIV testing (Coerbett, *et al.*, 2007: 484).

This finding indicates that the risky sexual behaviour of university students will continue to place them at risk of contracting HIV and consequently, increase the rates of new HIV infections posing a challenge to reaching the UNAIDS 90-90-90 goals. Hence, university students need a reorientation of the severity of the effects of their risky sexual behaviours to guard against the transmission of HIV infection.

Objective 2: To explore the facilitators and barriers to HIV testing among male and female students at the University of KwaZulu-Natal, Howard College.

Over the past years, the South African government has relentlessly supported HIV prevention campaigns, increased provision of HIV testing services and expanded availability of treatment in order to reduce the burden of the epidemic in the nation (De Koker, *et al.*, 2010: 364; SANAC 2010: 5). HIV counselling and testing is important as it offers HIV prevention options to people who test negative and provide treatment and care for people who test positive (Meehan, *et al.*, 2015: 2; Musheke *et al.*, 2013: 2; Keine *et al.*, 2010: 137). Despite these advantages and increased HCT facilities, many adults in South Africa still struggle with the decision to test or not (De Koker *et al.*, 2010: 364) resulting in relatively low rates of uptake of HCT among this population. In view of this, it was important for this study to understand the facilitators and barriers to the uptake of HCT among male and female students at the University of KwaZulu-Natal.

Facilitators to HIV testing

i. Perceived susceptibility to HIV infection

Findings in this study revealed that perceived susceptibility to HIV infection facilitated the uptake of HCT among students. Participants who had engaged in risky sexual behaviour, particularly sex without the use of condoms and those who engaged in casual sex (that is, sexual intercourse with people other than their partners) and also, participants whose partners had revealed their engagement in sexual intercourse with other people, perceived themselves to be at high risk to HIV infection. Their perceived susceptibility served as a motivating factor for them to test for HIV. This finding is in agreement with Mulwo's (2009: 86) study which found that South African university students engaged heavily in risky sexual behaviours by having multiple and concurrent sexual partners and poor condom usage which placed them at a substantial risk of HIV infection. Consequently, this risk exposure informed their decision to test for HIV. Furthermore, finding in this study is also consistent with the study of De Wet and Kagee (2016: 4) who found that a substantial number of youths in Western Cape were motivated to test for HIV because of sexual contact which increased their perception of personal risk, particularly with regards to having casual sex and not using condoms. This is also similar to findings in De Koker's (2010: 364) and Meehan *et al.*'s (2015: 6) studies which found that perceived high risk to HIV infection resulting from casual sex and sex without condom were significant motivators for HCT uptake among young people in Vulindlela, KwaZulu-Natal and adults in Cape Town, Western Cape respectively.

However, this finding contradicts that of Strauss *et al.* (2015: 8) which indicated that youths who perceived themselves to be at risk of HIV infection as a result of their risky sexual behaviours were found to be unwilling to test for HIV because of the fear of possibly receiving a positive HIV test result, and beliefs about the side effects of ART on the shape of their bodies. Although, participants in this study reported fear of a positive HIV test result, a significant number of female participants still indicated that undergoing an HIV test was the right thing to do after their engagement in risky sexual behaviours. In addition, contrary to Strauss *et al.* (2015: 8), no participant in this study mentioned beliefs about the side effects of the medication. This suggests that they are probably unaware of any side effects of ART.

As opposed to the finding of Musheke, *et al.* (2013) which revealed that young people were motivated to test as a result of the death of a sexual partner, this study did not find any correlation between the death of a sexual partner and uptake of HCT.

ii. The use of incentives

There is a growing body of literature which argue that offering incentives during HIV testing is promising and has the potential to motivate people to take an HIV test (Thorton, 2008; Kohler and Thorton, 2012; Ngalazi, *et al.*, 2012; Black, *et al.*, 2014). This was a significant facilitator to HIV testing in this study. Participants reported that incentives in the form of T-shirts, USB and other items played a major role in influencing their decision to test for HIV – although this was recorded only among female participants. This finding slightly differs from findings of scholars in the literature (Black, *et al.*, 2014: 5; Ngalazi, *et al.*, 2012: e32) in the sense that they observed in their studies that young males were more attracted to HIV testing as a result of monetary incentives as opposed to their female counterparts. In the same vein, evidence from a study in Malawi revealed that the use of incentives elicited high responses to the uptake of HCT (Thornton, 2008: 1841).

Furthermore, Thornton's study suggested that monetary incentives were a compensation to participants for the time and travel expenses incurred, and also reduced social stigma as accessing HCT is interpreted to be a result of risky sexual behaviour or a sign of self-perceived risk of infection (Thornton, 2008: 1839). To this effect, monetary incentives could be regarded as an excuse to test for HIV, thus limiting the negative inferences made by others (Thornton, 2008: 1839; Black, *et al.*, 2014: 5). However, this study established that only female participants across the two female focus groups were motivated by incentives to test even though there was no specific mention of monetary rewards but just incentives in general. Thus, the researcher agrees with Strauss *et al.* (2016: 9), who argued that the use of incentives to motivate health behaviour needs to be further explored when targeting HCT among university students in South Africa in order to promote HIV testing among students.

Although, there have been positive results in the use of incentives to encourage HIV testing uptake, there is controversy on the ability of incentives to yield sustained change in behaviour, cost effectiveness of incentives and ethical considerations, such as incentives undermining intrinsic motivation, being coercive and altering the relationship between health workers and patients (Black 2014: 6). Similarly, Kohler and Thornton, (2014) revealed that the use of monetary incentives motivated individuals to test for HIV but was insufficient in reducing

sexual behaviour after testing (Kohler and Thornton, 2014: 183). They found that seven individuals who had tested negative at the beginning of their study had become infected with HIV towards the end (Kohler and Thornton, 2014: 183).

Barriers to HIV testing among male and female students at the University of KwaZulu-Natal

i. Lack of privacy

Exploring the barriers to the uptake of HIV counselling and testing, this study found that a key barrier that discouraged participants from accessing HIV testing services was the lack of privacy with regards to HIV testing locations. This factor was iterative among male and female participants across the four focus groups. The lack of privacy was viewed from the perspective of the location of HIV testing facilities in public places with particular reference to the way HIV testing was conducted in pop-up tents at Shepstone, UKZN, Howard college campus. Participants reported that HIV testing centers located in such public spaces were a huge hindrance for accessing HCT because of their perceived beliefs that other students could see their emotions after testing and conclude that they had a positive test result. In view of this, participants showed preference for private testing locations where their identities were unknown or would rather avoid testing if their privacy is not guaranteed.

This finding is consistent with Strauss *et al.*'s (2015) study which found lack of privacy of HCT settings hindered adolescents from undergoing HIV testing. Participants in their study expressed concerns that their facial expressions after testing may compromise the confidentiality of their HIV result as they may be seen by members of their communities in HCT settings that lack privacy (Strauss *et al.*, 2015: 8).

This finding indicates the importance of privacy during HIV testing among students at UKZN, Howard College campus. In view of this, there is a need for policy makers and healthcare workers to take this into consideration in order to meet the HIV testing needs of youths.

ii. Lack of confidentiality of HIV test result

This study found that lack of confidentiality was a significant barrier to the HCT uptake among participants. Participants expressed lack of trust in health care workers particularly in public clinics to keep their HIV test result confidential. They feared that these workers would inform their parents/or other members of the community about their HIV status in the event of a positive HIV test result. This finding is consistent with findings from Strauss *et al.*'s (2015) study among high school students in rural Vulindlela, KwaZulu-Natal, which found that lack

of confidentiality was a barrier to HIV testing among their participants because they (participants) were afraid that health care providers conducting HIV tests would reveal result to their parents and/or teachers particularly if they tested positive, consequently, this hindered students from accessing HIV testing services (Strauss *et al.*, 2015: 8).

This finding also corroborates findings in Matthew *et al.*'s (2009) study which found that confidentiality breaches was a barrier to HIV testing among adolescents (16 – 19) years in Cape Town. Adolescents were concerned that health care providers conducting HIV test would reveal their status to other members of the community and were scared of testing in order to avoid being stigmatized in the event of a positive HIV test result (Matthews *et al.*, 2009: 189). Interestingly, evidence from a study in Zambia among married partners also reiterates lack of confidentiality to be a significant barrier to HCT uptake (Musheke *et al.*, 2016). The perceived inability of health care providers to maintain confidentiality of HIV test result discouraged couples from testing (Musheke *et al.*, 2016: 5).

iii. Fear of a positive test result

Another principal barrier to the uptake of HIV counselling and testing found in this study was the fear of a positive test result. This factor was commonly cited particularly among male participants across the two male focus groups. This study found that the fear of a positive HIV test result was directly linked to students' engagement in risky sexual practices particularly sexual intercourse with multiple partners and poor condom usage. This finding corroborates findings in a study on barriers to HIV testing among young people in rural Limpopo, by De Koker, *et al.* (2010). Their study indicated that fear of a positive HIV test result stemming from unsafe sex and having multiple partners was the greatest barrier to HIV testing (De Koker, *et al.*, 2010: 364). Findings in this study indicate that male students at the University of KwaZulu-Natal engage more in risky sexual behaviour compared to female students.

iv. Perceived low risk of HIV infection

This study also found that non-uptake of HCT among some female participants across the two female focus groups who had never tested was directly linked to perceived low risk of contracting HIV. This was a result of preventive measures taken by participants who reported never to have tested. These preventive measures were specifically abstinence from sex, not being sexually active, not sharing sharp objects such as needles, and non-engagement in sports which could result in accidents and consequently, contact with blood. It is important to note that this study established that abstinence meant a conscious decision to abstain from sex

regardless of being in a relationship or not, while not being sexually active meant lack of sexual practices as a result of not being in a sexual relationship in recent times. These preventative measures reported were the basis for the perceptions of low risk to HIV infections particularly among the female participants who had never tested. This finding on perceived low risk to the infection is consistent with the findings of Musheke, *et al.* (2015) and Strauss *et al.* (2015). However, while their reasons for not testing may be justified, this study supports Strauss *et al.* (2015: 5) who argued that low perceived risk may influence discrimination and HIV-related stigma because of the perception that only individuals who engaged in unprotected sex or had multiple sex partners need to undergo HIV testing.

v. Personal beliefs that good health meant absence of HIV

Furthermore, this study found that a barrier to HIV testing among male participants who had never tested, was the personal belief that HIV testing was insignificant due to their current good health condition. This belief was associated with a lack of understanding of HIV transmission methods. The participants that expressed this, felt they were not infected with HIV because they looked healthy despite being at risk to the infection by engaging in risky sexual behaviour. This finding is similar to MacPhail, *et al.* (2009: 464) whose study found that South African males were more likely to test only when they begin to develop signs and symptoms of HIV infection. This finding also corresponds with Musheke *et al.*'s (2016) study which found that the state of physical health of participants in their study hindered them from accessing HCT services. Participants in their study, perceived good physical health to be a sign of wellness and absence of HIV study (Musheke *et al.*, 2016: 10). This finding indicates that HCT is perceived as an approach for treatment and not for prevention of HIV.

Overall, this study found that barriers to HIV testing outweighed the facilitators of HIV testing. This calls for more research to examine facilitators of HCT in order to increase HCT uptake.

Objective 3: To explore students' knowledge of the universal test and treat approach as an HIV prevention and treatment strategy for reducing HIV infection.

1. Knowledge of UTT among male and female students at UKZN

There is a paucity of studies on the knowledge of UTT among South African university students. To the researcher's best knowledge, there were no studies which explored students' knowledge on UTT during the time of this research. Therefore, there is limited information with which to interpret this data. It is possible that some university students understand the

meaning of UTT (immediate commencement on ARV regardless of CD4 count after a positive HIV test result) but are unaware of the terminology it is called. This is merely a speculation as a result of findings from two participants in this study who reported they were aware that immediate treatment was now available for individuals infected with HIV regardless of their CD4 count. However, they did not know this was referred to as universal test and treat. However, this study found that only a few students had a basic knowledge of UTT.

2. Perceptions and adoption of UTT among male and female students at UKZN

This study also examined the perceptions and adoption of UTT among participants. All participants reported that UTT was a good prevention and treatment initiative which has the potential to keep them healthy, decrease HIV-related deaths and reduce the transmission of HIV thereby protecting their intimate partners from contracting the infection. On the adoption of UTT, although most participants stated that they would consider its adoption, this study found that internal stigma, [that is, perceived stigma due to fear of ‘othering’, social seclusion, gossip, labelling and public shaming (Musheke *et al.*, 2016: 8), external stigma, [that is, prejudice, negative attitudes and abuse directed at individuals infected with HIV and AIDS (UNAIDS, 2015: 26), and the psychological burden of coping with HIV [in the event of a positive HIV result] were the principal barriers to the adoption of UTT reported by few participants. The few participants that opposed the adoption of UTT expressed fear of being unable to cope psychologically with the thought of being infected with HIV should they test positive. They preferred to be unaware of their status than to become aware and be affected psychologically.

These findings support Musheke *et al.*’s (2016) findings that couples in Vulindlela and Soweto, South Africa, preferred living with HIV without knowing their status. They revealed that the knowledge of their HIV status would have deleterious mental effect on their health. Therefore, this influenced their decision not to seek HIV testing (Musheke, Merten and Bond 2016: 6). This is also in agreement with De Wet and Kagee (2016: 2) who found that a positive HIV test result was highly distressing for participants in their study.

This study also found that HIV-related stigma (internal and external) had a profound effect on participants’ adoption of UTT. This finding is in agreement with previous studies (Kalichman and Simbayi, 2003: 443; MacPhail, 2008: 97; Young, *et al.*, 2010: 620; Musheke, Merten and Bond, 2016: 9; Nkosi, 2018: 47) that reaffirmed that stigma is a major barrier to the uptake of HCT. Instead of undergoing HCT as part of prevention and treatment of HIV infection, some

individuals would rather refuse to test because of the stigma associated with HCT. The threat of HIV-related stigma from friends, family and the community increased the fear of receiving a positive HIV test result. The fear of stigma, which stems from individuals' perceptions about the lack of support structures from families, society and the healthcare system, creates a number of other barriers to testing, which may not exist if perceived stigma and discrimination were diminished.

Theoretical implications

Findings in this study are in relation to the SEMCHB and HBM, which are the theoretical frameworks guiding this study.

Perception of low risk

The Health Belief Model (HBM) emphasises the significance of perceptions about the severity of a health condition, perceived susceptibility about the likelihood of contracting a health condition, and the perceived ability to reduce one's risk as key factors that influence health behaviour (Rimer, 2008: 41). Low self-perceived susceptibility is a risk factor because it decreases the motivation to take the necessary precautions. In this study, perceptions of HIV risk were high particularly among male participants and perceived susceptibility was found to be equally high as a result of risky sexual behaviour among these participants.

According to the HBM, when perceived susceptibility and perceived severity are high, individuals are likely to consider adopting measures to prevent HIV infection (Champion and Skinner, 2008). This is significant to this study because participants with high risk perception considered uptake of HCT as prevention to HIV infection.

Perceived susceptibility, perceived severity, and perceived self-efficacy

The HBM posits that an individual's likelihood to adopt a health behaviour is in perception. This study found that, perceived susceptibility represents students' perceptions of their own vulnerability to HIV infection, while perceived severity means their assessment of their likelihood of exposure to HIV infection. Studies have identified perception of risk as an important factor that can influence decision to test for HIV (Mulwo, 2009; De Koker, 2010). However, an individual must have confidence in his or her ability to adopt preventive behaviour (Bandura, 1997). This is referred to as perceived self-efficacy.

The findings in this study showed that relations between perceived susceptibility and perceived self-efficacy were subjective among participants. Male participants in this study had a high

perception of HIV risk due to unprotected sex and having multiple sexual partners; and their perceived susceptibility and perceived severity was high. However, this did not translate to self-efficacy, which proved to be very low among some of the male participants. This presents a challenge for the implementation of UTT as it shows that most male students engaged in high risk behaviour even though they were aware of the severity. Furthermore, this finding shows that male participants did not use existing HIV prevention methods that have been proven to be effective, despite having knowledge about them. On the contrary, this study revealed that female participants engaged less in risky sexual behaviour which translated to low risk perception and low perceived severity among female participants.

A reason for these findings could be associated with the belief that condoms reduce sexual pleasure in heterosexual relationship. This was reiterated by a significant number of male participants in the focus group discussions. This finding corroborates Mutinta's (2012: 173) finding that male students at the University of KwaZulu-Natal were not interested in condom use because it reduced sexual pleasure. HBM posits that the adoption of preventive behaviour can only occur if perceived risk and perceived susceptibility are high. Additionally, perceived severity and perceived self-efficacy must be high. Further, benefits to taking up the preventative behaviour must outweigh the barriers (Bandura, 1997). Thus, while perceived severity is generally high among participants, there is a need to increase perceived risk, perceived susceptibility, perceived self-efficacy and perceived benefits of HIV testing to encourage uptake among university students who are vulnerable to HIV infection.

Perceived enablers and benefits

The HBM further posits that people consider positive and negative features of preventive behaviours and the balance of the two will influence their behaviour (Rimer, 2008). In the context of this study, barriers to HCT uptake seem to outweigh the facilitators. While there are positive perceptions of UTT and its adoption, knowledge of UTT remains significantly low among students. Furthermore, impeding factors such as stigma and the perceived inability to cope with a positive HIV test result are significant barriers to the adoption of UTT found among participants. In order to achieve the ambitious UNAIDS 90-90-90 goals, more efforts must be made by researchers and healthcare workers to increase awareness and knowledge of the UTT initiative.

Social Ecology Model of Communication and Health Behaviour (SEMCHB)

The SEMCHB posits that behaviour is influenced by multiple levels of individual, social networks, community, and policy environments (Kincaid, *et al.*, 2007). While this study focused only on the individual and social networks levels of SEMCHB, it established that HIV testing uptake cannot be successful in isolation from the broader context that individuals are part of. Consistent with other studies (Musheke, Merten and Bond, 2016; Ostermann, *et al.*, 2015; Strauss, *et al.*, 2015; Young, *et al.*, 2010), this study found that the decision to test or not is influenced by several individual factors such as; fear of a positive HIV test result, perceived low/high risk, knowledge of one's HIV status, and social network factors such as the influence of intimate partners, testing locations, concerns of lack of confidentiality with HIV test result from healthcare workers, HIV-related stigma from family, friends and the community. These are some of the factors that influence the uptake of HCT among male and female students at the University of KwaZulu-Natal.

These findings suggest that health communication will be imperative in ensuring positive perceptions and possible adoption of UTT. The implementation on UTT at UKZN, Howard College campus needs to be supported to create more awareness campaigns at strategic locations on the campus and through various social media platforms.

Conclusion

This chapter discussed and interpreted data collected through focus group discussions. The discussion and interpretation sought to explore students' uptake of HIV testing services at the University of KwaZulu-Natal as part of the Universal Test and Treat initiative. This chapter investigated the current HIV testing practices among male and female students at UKZN and also examined the facilitators and barriers to HIV testing among students. In addition, the chapter also explored students' knowledge, perception and adoption of the universal test and treat approach as an HIV prevention and treatment approach. The next chapter will present the conclusion of this study.

CHAPTER SEVEN

CONCLUSION

Introduction

This chapter provides an overview of this study and a summary of findings in the study. Furthermore, this chapter concludes this study and proffers recommendations for future research based on the findings of this study.

Overview of the study

The aim of this study was to investigate students' uptake of HIV testing services at the University of KwaZulu-Natal, Howard College as part of the Universal Test and Treat (UTT) initiative. Furthermore, this study sought to explore the facilitators and barriers to HIV testing among male and female students. In addition, this study also aimed to explore students' knowledge of the Universal Test and Treat initiative. The individual and social network levels of the Social Ecology Model of Communication and Health Behaviour (SEMCHB) as well as the Health Belief Model (HBM) were used as the theoretical frameworks that guided this study.

This study adopted the SEMCHB to understand students' uptake of HCT services within a broader, multilevel framework of factors which influence their testing behaviour. This was on the background of understanding that health communication interventions that are directed only at the individual level are often unlikely to yield expected outcomes because individual behaviour is influenced by several factors such as friends, family, community, society and policy (Kincaid, *et al.*, 2007). Thus, in the context of this study, the SEMCHB was useful in understanding how social relationships influence perceptions and uptake of HCT among male and female students at the University of KwaZulu-Natal (UKZN).

Similarly, the constructs of HBM were useful in understanding how male and female students at UKZN perceive HCT. The HBM provided an understanding of students' perceived susceptibility to HIV infection, the perceived severity of HIV infection, the perceived benefits of HCT, the perceived barriers to HCT and how these perceptions influenced their decisions to test or not. Hence, these two models were appropriate in the study because they provided a lens through which the researcher could explore the HIV testing behaviour of male and female students.

Summary of chapters

The first chapter of this study presented the focus of the study and established the background to the study. It provided evidence of prevalence rates of HIV in South Africa and the need to increase HCT particularly among populations at risk of HIV infection. The second chapter explained the Universal Test and Treat initiative (UTT) and provided a review of literature on the benefits of HCT, the responses of South African students to HCT and the responses of South African government to HIV and AIDS through HCT. The chapter also examined the facilitators and barriers to HCT and discussed other available HIV prevention approaches. The third chapter explained the SEMCHB and the HBM as the theoretical frameworks that guided this study and how these models were applied to answer the research questions that informed this study. The fourth chapter discussed the methodological approach adopted in this study that guided the collection and analysis of data. The fifth chapter presented the data collected in this study through focus group discussion. Thereafter, the sixth chapter discussed and analysed collected data in relation to reviewed literature and the theoretical frameworks that underpinned the study.

Summary of findings

This section summarizes the findings of this study in relation to the research questions and the objectives of the study.

Students' current HIV testing practices

This study aimed to investigate the current HIV testing practices of male and female students at the University of KwaZulu-Natal. This objective was measured by exploring the reasons why students test for HIV, students' preferred HIV testing location, the frequency of their testing behaviour and how students ensured they maintained a negative HIV status. This study found that students test for HIV for knowledge of their status and after sexual risky behaviour. This indicates that university students engage in sexual risky behaviour including multiple and concurrent sexual relationships and unprotected sex. Furthermore, this study found that the most preferred testing location among students is a private hospital or with a private general practitioner (GP). The principal reason for this preference was because they perceived that their HIV test result would be treated with confidentiality.

Investigating the frequency of students' testing behaviour, this study found that a substantial number of students undergo HIV testing at least once in 12 months, while other participants revealed that they had never tested. Lastly, this aspect sought to explore how students ensured

they maintained an HIV negative status. Under this aspect, this study found that students had knowledge of HIV prevention methods such as Abstinence, Be faithful, Condomise (ABC), HCT, but they did not practice these methods. Furthermore, this study also found that there are several misconceptions of HIV transmission and prevention methods among university students.

Facilitators of HIV testing among male and female students

This study explored the facilitators and barriers of HCT among male and female students at the University of KwaZulu-Natal. Exploring the facilitators to HCT among male and female students, this study found that perceived high risk to HIV infection and the use of incentives are key factors that facilitate the uptake of HCT among students at the University of KwaZulu-Natal. Furthermore, under this section, this study also sought to examine students' accessibility of HCT services. Findings of this study indicate that HCT services were in proximity to students, but this did not influence participants to undergo HIV test. Participants were more concerned about privacy and confidentiality of their HIV test result and not the accessibility to HCT facilities.

The researcher also sought to know the actions taken by students after sexual risky behaviour. Many participants revealed they would undergo HCT to know if they have been infected or not while some stated that they would adopt prevention methods such as condom use for subsequent sexual engagements. Interestingly, this study found that a few students believed that a shower after sex was the most appropriate action for a man to take, provided that he has been circumcised. This finding indicates low knowledge and understanding of HIV prevention options such as the Medical Male Circumcision (MMC) and Post Exposure Prophylaxis (PEP).

Barriers to HIV testing among male and female students

This study equally explored the barriers to HCT among male and female students at the University of KwaZulu-Natal. The findings on barriers to HCT in this study have important implications for the uptake of HCT. A significant number of participants raised concerns about lack of confidentiality of HIV test result among health care workers in public testing facilities. This indicates that participants have no trust in healthcare workers and fear that they will reveal their status to other people in the event of a positive HIV test result. Thus, it is important to restore trust among workers in the public healthcare system. Furthermore, this study found that HIV-related stigma still exists in South Africa and participants were concerned about being stigmatized or discriminated against should they be infected with HIV. Thus, it is imperative

to educate people about HIV-related stigma and to develop theory and practical interventions to reduce stigma associated with HIV (Meiberg, *et al.*, 2008). As participants expressed fears of being stigmatized by their own family and friends and then, by the community and society, this illustrates the importance of support from family and friends in South African communities. Therefore, interventions to reduce HIV-related stigma should not be limited to the individual level but should also include the community and organizational levels in order to yield positive and effective outcomes (Parker and Aggleton, 2003) bearing in mind that change in behaviour does not occur in isolation but within an interactive social context (Durden and Govender 2012).

Another significant barrier to HCT found in this study is fear of a positive HIV test result. Many participants stated that they were afraid of testing because they were aware of the risky sexual behaviours, they had engaged in. Hence, a positive test result would confront them with a life-threatening disease. Therefore, they were afraid of the perceived psychological burden of coping with an HIV positive test result. This indicates low self-efficacy that is, lack of confidence in one's action to successfully carry out a health behaviour that will yield beneficial change to the individual. In the context of this study, low self-efficacy refers to lack of confidence to undergo HCT and change one's lifestyle with HIV preventive HIV methods in the event of a negative HIV result and immediate commencement of treatment in the event of a positive test result.

This study also found that lack of privacy of HIV testing facilities was a barrier to HCT. Therefore, HCT facilities should be designed in a more private manner in order to encourage the uptake of HIV testing in South Africa. Furthermore, perceived low risk to HIV infection and the belief that HCT is unnecessary when one is in a good health condition were also identified as barriers to HCT in this study.

Students' knowledge of the Universal Test and Treat (UTT) initiative

This study explored students' knowledge of the UTT initiative. Findings of this study showed that a significant number of students did not have knowledge of the UTT initiative prior to their participation in this study. This finding is significant in the light of the UNAIDS fast-track 90-90-90 strategy aimed at getting 90% of the population aware of their HIV status, 90% of those diagnosed with HIV placed on antiretroviral treatment and 90% of those receiving antiretroviral treatment have their viral load suppressed by 2020 (UNAIDS, 2014). Thus, this

finding indicates that there is need to create more awareness of the UTT approach to the entire population and particularly among the population that has been identified to be vulnerable to the infection, in which university students belong.

Recommendations for further research

In view of the findings of this study, the following recommendations are proffered for consideration in future research.

Firstly, this study found that barriers to the uptake of HIV counselling and testing among students at the University of KwaZulu-Natal outweighed the facilitators of HCT. In order to make significant impact on the uptake of HCT, there is a need for further research to explore the facilitators of HCT among university students in KwaZulu-Natal.

Secondly, this study recommends the need for further research to increase the knowledge of the UTT strategy for HIV prevention and treatment across the country to achieve the UNAIDS 90-90-90 fast-track goals. Further research is also needed to create awareness and knowledge of UTT particularly targeting university students through the most preferred television programs which students are exposed to and through the most widely used social media platforms available to students such as Facebook, YouTube, WhatsApp, Instagram, Twitter and Snapchat (Social Media Statistics South Africa, 2018).

Thirdly, this study recommends further research on HIV ‘destigmatization’ campaigns to inform and educate people of the importance of support for people living with HIV and dissuade them for stigmatization and discrimination practices. Furthermore, the issue of stigma should be taken into consideration in the development of new approaches to HCT.

Fourthly, the issue of confidentiality was frequently raised as a barrier to HIV testing in this study, hence further research is needed to investigate the measures put in place by policy makers in the health sector to improve the ethics of confidentiality among health care workers providing HCT services. This study also suggests the need for future research to investigate adherence to these policies.

Finally, this study recommends the need to develop more educative, informative and entertainment programs targeted specifically at university students in order to educate and inform them about the available HIV prevention methods and address knowledge gaps in order to eliminate popular misconceptions about HIV transmission and prevention methods among university students.

Limitations of the study

The researcher encountered a few constraints during data collection. These limitations are discussed below.

Recruiting of participants

The researcher initially found it difficult to recruit participants for the study because of the sensitivity of the research subject. When students were approached and heard the word HIV, many of them initially declined because they thought it had to do with disclosing their HIV status publicly. However, when they were informed that the study did not require revealing their HIV status, some agreed to participate in the study while some declined. Secondly, recruiting participants also posed a challenge due to the time of the semester when the study was carried out because it was close to the period of examination and assessment test. Some of the students that were approached declined because they had assessment test and needed to prepare. Hence, the researcher had to seek help by getting someone to assist in the recruitment process. The researcher and the assistant both divided the workload among themselves across the three recruitment areas in order to save time.

Reduced number of participants

As stated in the early part of this chapter, each focus group was supposed to consist of 10 participants each and a total of 40 (having 20 male participants and 20 female participants respectively) in order to ensure an equal representation of male and female gender. However, only the younger group, that is, the first male group (18-24) and the first female group (18-24) consisted of 10 participants each. The second group of males (25-35) consisted of 10 participants initially, but one member stood up and walked away during the group interaction, which reduced the number of the group to 9 participants. Similarly, the second female group (25-35) consisted of 8 participants because 2 among those that were recruited did not attend the FGD. This gave a total of 37 participants who eventually participated in the study as opposed to 40 participants recruited for the study.

Conclusion

The process of awareness about one's HIV status irrespective of the outcome gives an opportunity for education and motivation for behaviour change targeted at reducing the risk of the infection. The development of the UTT approach which has the potential to lead to significant reductions in HIV incidence may be highly effective among university students in high prevalence setting in South Africa. However, the success of this approach still depends on the decision making of the individual and influence from intimate partners, community and society. It is therefore important to increase knowledge and awareness of UTT among university students in South Africa.

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Primary Sources

Focus Group Discussion 1, younger Male group. Moderated by Oluwabunmi Okelola, at UKZN, Howard College, Durban, South Africa. September 2018.

Focus Group Discussion 2, younger Female group. Moderated by Oluwabunmi Okelola at UKZN, Howard College, Durban, South Africa. September 2018.

Focus Group Discussion 3, older Male group. Moderated by Oluwabunmi Okelola at UKZN Howard College, Durban, South Africa. September 2018.

Focus Group Discussion 4, older Female group. Moderated by Oluwabunmi Okelola at UKZN, Howard College, Durban, South Africa. September 2018.

Appendix

Appendix 1: Ethical Clearance Letter



26 July 2018

Mrs Oluwabunmi Okefola 217079823
School of Applied Human Sciences
Howard College Campus

Dear Mrs Okefola

Reference number: HSS/0340/018M

Project title: Exploring students' uptake of HIV testing services at the University of KwaZulu-Natal, Howard College as part of the Universal Test and Treat initiative.

Full Approval – Full Committee Reviewed Application

With regards to your response received on 24 July 2018 to our letter of 19 June 2018, the Humanities and Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its Implementation. In case you have further queries, please quote the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully







Dr S Naidoo (Deputy Chair)

/px

cc Supervisor: Dr Eliza Govender
cc Academic Leader Research: Dr Maud Mithembu
cc School Administrator: Ms Ayanda Ntuli

Humanities & Social Sciences Research Ethics Committee
Professor Shonuka Singh (Chair)/Dr Shanyile Naidoo (Deputy Chair)
Westville Campus, Owen Mtshali Building
Postal Address: Private Bag 95400, Durban 4000
Telephone: +27 (0) 31 23 350/23304567 Facsimile: +27 (0) 31 260 4600 Email: shonuka.singh@ukzn.ac.za / shanyile.naidoo@ukzn.ac.za / mthembu@ukzn.ac.za
Website: www.ukzn.ac.za



Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

Appendix 2: Gate Keepers Letter



5 April 2018

Oluwabunmi Okelola (SN 217079823)
School of Applied Human Sciences
College of Humanities
Howard College Campus
UKZN

Email: 217079823@stu.ukzn.ac.za govendere1@ukzn.ac.za

Dear Oluwabunmi

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate degree, provided Ethical clearance has been obtained. We note the title of your research project is:

"Exploring students' uptake of HIV testing at the University of KwaZulu-Natal, Howard College Campus as part of the Universal Test and Treat initiatives to reduce HIV infection by 2020".

It is noted that you will be constituting your sample by conducting focus groups with male and female students on the Howard College campus.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

MR SS MOKOENA
REGISTRAR

Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (3) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: registrar@ukzn.ac.za

Website: www.ukzn.ac.za



1910 - 2018
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: ■ Egersund ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

Appendix 3: Title reword Form

CHANGE OF TITLE OF THESIS FOR POSTGRADUATE RESEARCH PROGRAM

Full name:	Oluwabunmi Ajoke Okelola
Student number:	217079823
Postgraduate degree currently enrolled for:	Master of Social Science
Department	Center for Communication, Culture and Media Studies (CCMS)
School	College of Humanities, School of Applied Human Science
Institution	University of KwaZulu-Natal
Previous title of thesis:	Exploring students' uptake of HIV testing at the University of KwaZulu-Natal, Howard College campus as part of the universal test and treat initiative to reduce HIV infection by 2020
Current title of thesis:	Exploring students' uptake of HIV testing services at the University of KwaZulu-Natal, Howard College as part of the universal test and treat initiative
Reason for change:	<p>The gatekeeper's permission was granted with the previous title before submitting my proposal and gatekeeper's letter to the ethics committee for approval. After review with the ethics committee, the title was changed.</p> <p>We have sent the updated ethics approval to the gatekeeper but the initial gatekeeper letter with the previous title still stands.</p>

Appendix 4: Inform Consent (English Version)

Information Sheet and Consent to Participate in Research

Date:

Dear Student,

My name is Oluwabunmi Okelola with student number 217079823. I am studying for a Master's degree at the Centre of Culture, Communication and Media and Society (CCMS) in the School of Applied Human Science, College of Humanities, University of KwaZulu-Natal, Howard College.

You are being invited to consider participating in a study titled **“Exploring students’ uptake of HIV testing services at the University of KwaZulu-Natal as part of the Universal Test and Treat initiatives.”** The aim and purpose of this study is to investigate the current HIV testing practices among male and female students on Howard College campus and to explore their understanding of the Universal Test and Treat approach and how it can assist in reducing HIV infection. The study is expected to enroll a total number of 40 participants who will be divided into 4 groups. Each group will have a total number of 10 participants.

This study will involve a focused group discussion which will be conducted at the media room, MTB building. The duration of your participation if you choose to enroll and remain in the study is expected to be between 45 minutes to 1 hour.

The study does not involve any risk of whatsoever kind on participant(s). We hope that the study will create the following benefits:

1. Provide knowledge on the importance of early HIV testing and immediate treatment if diagnosed HIV positive.
2. Identify the key influencers for/against HIV testing among students and how it can be encouraged or resolved.
3. Create an awareness and understanding of the Universal Test and Treat approach among students aimed at reducing the transmission of HIV.

Please note that:

1. The information you provide will be used for scholarly research only.
2. Your participation is voluntary. You have a choice to participate, not to participate or to stop participating in the research.
3. Your views in the focused group discussion will be presented anonymously. Neither your name nor identity will be disclosed in any form during the course of the study.
4. The Focused group discussion will take about 45 minutes to 1 hour.
5. Light refreshments will be provided at the end of the Focused group discussion in appreciation for your time.
6. The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisor. After a period of 5 years, in line with the University rules, it will be disposed by shredding or burning.
7. If you agree to participate, please sign the declaration attached to this statement

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSS 0343 018M).

In the event of any problems or concerns/questions you may contact the researcher on:

Cell: +27747399836

Email: 217079823@stu.ukzn.ac.za or the UKZN Humanities and Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Thank you in anticipation of your favourable consideration.

Yours sincerely,

Bunmi Okelola

CONSENT

I (Full names of participant) have been informed about the study by (Provide name of researcher/fieldworker).

I understand the purpose and procedures of the study and I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher on (Cell: +27747399836; Email: 217079823@stu.ukzn.ac.za).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

I hereby provide consent to:

Audio-record my interview / focus group discussion YES / NO

Signature of Participant

Date

Appendix 5: Inform consent (Zulu Version)

Mfundi Othandekayo,

Igama lami ngingu-Oluwabunmi Okelola enenombolo yabafundi 217079823. Ngingumfundi we-Master's Center e-Center of Culture, Communication and Media and Society (CCMS) e-School of Applied Human Science, College of Humanities, University of KwaZulu-Natal, eHoward College.

Umenyelwa ukuthi ucubungule ukubamba iqhaza ocwaningweni olunesihloko esithi “Ukuhlola ukuthathwa kwabafundi kwezinsizakalo zokuhlola i-HIV eNyuvesi yaKwaZulu-Natali njengengxenye yezinhlelo ze-Universal Test and Theratives.” Inhloso kanye nalolu cwaningo lolu cwaningo ukuphenya ngezinhlelo zamanje Izindlela zokuhlola i-HIV phakathi kwabafundi besilisa nabesifazane ekolishi laseHoward College nokuhlola ukuqonda kwabo kwendlela yokuhlola kwe-Universal ne-Therapy nokuthi kungasiza kanjani ekwehliseni ukutheleleka nge-HIV. Lolu cwaningo kulindeleke ukuthi lubhalise inani lababambe iqhaza abangama-40 abazohlukaniswa ngamaqembu ama-4. Iqembu ngalinye lizoba nenani eliphelele labahlanganyeli abayi-10.

Lolu cwaningo luzobandakanya izingxoxo zeqembu elizogxila ezizokwenzelwa esikhungweni sezindaba, esakhiweni seMTB. Isikhathi sokubamba kwakho iqhaza uma ukhetha ukubhalisa nokuhlala ocwaningweni kulindeleke ukuthi sibe phakathi kwemizuzu engama-45 kuya kwali-1.

Ucwaningo aluhlanganisi noma iyiphi ingozi yanoma iluphi uhlobo kubahlanganyeli (abahlanganyeli). Siyethemba ukuthi lolu cwaningo luzokwakha lezi zinzuzo ezilandelayo:

1. Nikeza ulwazi ngokubaluleka kokuhlola kwe-HIV kokuqala nokwelashwa ngokushesha uma kutholakala ukuthi une-HIV.
2. Thola izithasiselo ezibalulekile zokulwa nokulwa nokuhlolwa i-HIV phakathi kwabafundi nokuthi ingakhuthaza noma ixazululwe kanjani.
3. Dala ukuqwashisa kanye nokuqonda kohlelo lwe-Universal Test and Therapy phakathi kwabafundi okuhloswe ngalo ukwehlisa ukudluliswa kwe-HIV.

Sicela wazi ukuthi:

1. Imininingwane oyinikezayo izosetshenziselwa ucwaningo lwezezazi kuphela.

2. Ukubamba iqhaza kwakho kungokuzithandela. Unokhetha ukubamba iqhaza, hhayi ukuhlanganyela noma ukuyeka ukubamba iqhaza ocwaningweni.
3. Imibono yakho engxoxweni yeqembu egxile kakhulu izokwethulwa ngokungaziwa. Alikho igama lakho noma ubunikazi bakho elizodalulwa nganoma yiluphi uhlobo ngesikhathi sokufunda.
4. Ingxoxo yeqembu egxile kakhulu izothatha imizuzu eyi-45 iye ehoreni eli-1.
5. Ukudla okukhanyayo kuzonikezwa ekugcineni kwengxoxo yeqembu eliqonde ngqo ukwazisa isikhathi sakho.
6. Amarekhodi nezinye izinto ezihambisana nodliwanondlebe zizobanjwa kwifayela elivikelwe ngephasiwedi litholwe kuphela mina nomphathi wami. Ngemuva kwesikhashana seminyaka lesi-5, kuhambisana nemitsetfo yaseNyuvesi, itawususwa ngekwehlukana noma ngekusha.
7. Uma uvuma ukubamba iqhaza, sicela usayine isimemezelo esifakwe kulesi sitatimende

Lolu cwaningo lubukeziwe futhi lwavunywa yiKomiti Yezokuziphatha Yezenhlalo Yezenhlalo Yezizwe Zase-UKZN (nenombolo yokuvunyelwa_____).

Uma kwenzeka kunezinkinga noma ukukhathazeka / imibuzo ungaxhumana nomcwaningi ku-:

Iseli: +27747399836

I-imeyili: 217079823@stu.ukzn.ac.za noma ikomidi le-Ethics Research Ethics Committee yase-UKZN, imininingwane yokuxhumana ilandelayo:

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

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Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Ngiyabonga ngokulindela ukucubungula kwakho okuhle.

Ozithobayo,

Bunmi Okelola

Ngi (amagama
aphelele ohlanganyeli) saziwe ngalolu cwaningo ngo
..... (Nikeza igama lomcwaningi / owenza
umsebenzi wezolimo).

Ngiyayiqonda inhloso nezinqubo zocwaningo futhi ngiyavuma ukuthi ukubamba iqhaza
kwami kulolu cwaningo kungokuzithandela ngokuphelele futhi ngingahoxisa nganoma yisiphi
isikhathi ngaphandle kokuthinta noma yiziphi izinzuzo engivame ukuba nazo.

Ngatshelwa nganoma yisiphi isinxephezelo noma ukwelashwa okutholakalayo uma kwenzeka
ngilimala ngenxa yezinqubo ezihlobene nokufunda.

Uma ngineminye imibuzo / ukukhathazeka noma imibuzo ephathelene nalolu cwaningo
ngiyaqonda ukuthi ngingaxhumana nomcwaningi ku- (Cell: +27747399836; Email:
217079823@stu.ukzn.ac.za).

Uma nginemibuzo noma ukukhathazeka ngamalungelo ami njengomhlanganyeli
ocwaningweni, noma uma ngikhathazekile ngesici socwaningo noma abacwaningi
ngingaxhumana:

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Ngaleyo ndlela nginikeza imvume:

Rekhoda izingxoxo zami / ingxoxo yeqembu engigxile kulo Yebo / Cha

Isiginesha Yomhlanganyeli

Usuku

Isiginesha Yofakazi

Usuku

(Lapho kufanele khona)

Appendix 6: Research instrument

Research Title: Exploring students' uptake of HIV testing services at the University of KwaZulu-Natal, Howard College as part of the Universal Test and Treat initiative.

Research Questions:

1. What are the current HIV testing practices of male and female students at the University of KwaZulu-Natal?
2. What are the facilitators and barriers to HIV testing among male and female students at the University of KwaZulu-Natal?
3. What are students' knowledge of the Universal Test and Treat approach as an HIV prevention and treatment strategy for reducing HIV infection?

Questions for Focus Group Discussion

Research question 1. What are the current HIV testing practices of male and female students at the University of KwaZulu-Natal?

1. What are your reasons for testing for HIV?
2. Where will you prefer to test for HIV?
3. How often do you test for HIV?
4. How do you ensure you maintain an HIV negative status?

Research question 2. What are the facilitators and barriers to HIV testing among male and female students at the University of KwaZulu-Natal, Howard College?

1. When will you be willing to test for HIV? Why?
2. When will you not be willing to test for HIV? Why?
3. How accessible are HIV testing facilities to you?
4. In order for you to prevent the transmission of HIV, what would you do after a risky sex behaviour? That is, after having unprotected sex.

Research question 3. What are students' knowledge of the Universal Test and Treat approach as an HIV prevention and treatment strategy for reducing HIV transmission?

1. What is your knowledge about the Universal Test and Treat approach?
2. How did you first hear about the UTT approach?
3. What is your perception towards the UTT approach?
4. Will you consider the uptake of the UTT approach? If yes, provide reasons/ if no, provide reasons