UNDERSTANDING THE ATTITUDES, PERCEPTIONS AND PRACTICES TOWARDS CONDOM USE IN PREVENTING HIV AMONG UNIVERSITY STUDENTS: A QUALITATIVE EXPLORATORY STUDY AT A TERTIARY INSTITUTION, CAPE METROPOLE, WESTERN CAPE.

BEAUTY NONTUTHUZELO KOLA

Student number: 3405934

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Faculty of Community and Health Sciences, University of the Western Cape.

Supervisor: Professor Diane Cooper

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KEYWORDS

HIV/AIDS

Attitudes to condom use

Condom use

Perceptions and practices

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ABSTRACT

Background: HIV prevalence in South African youth aged 15–24 years was 7.1% in 2012, and is considered high (Shisana et al., 2014), suggesting that this population is highly vulnerable to HIV infection. Most students at the Higher Education Institutions (HEIs) fall within this age range group, and thus may face similar challenges regarding HIV infection and condom use. HIV prevalence among students in South African HEIs has increased, with Heeren et al. (2013) highlighting an incline from 2.3% in 2010 to 3.4% in 2012. Therefore, students remain at considerable risk of contracting HIV. As part of an HIV prevention initiative of Higher Education South Africa (HESA), the Cape Peninsula University of Technology (CPUT) has an HIV/AIDS prevention programme offering a wide variety of services aimed at preventing, controlling and managing HIV/AIDS among its students. A key component of this programme is condom promotion, intended to reduce unprotected sexual intercourse, and hence the risk of HIV transmission. Despite these programmes, the annual HIV incidence rate among students at the institution appears to have increased, from 0.2% in 2013 to 1.0% in 2015. The increase in HIV incidence suggests issues around the uptake and use of condoms.

Aim: The aim of this study was to explore the attitudes, practices and perceptions of CPUT students towards condom use from students' and student peer educators (PEs)' perspectives.

Methodology: The study employed an exploratory qualitative research approach. Data was collected by semi-structured individual in-depth face-to-face interviews with 16 CPUT students and 4 key informants; both samples were aged between 18 and 24 years. The interview sessions were audio-recorded and transcribed verbatim. Thematic Content Analysis was used in analysing the data. The Social Ecological Model (SEM) was employed as a theoretical framework in discussing the study findings.

Results: The study findings showed multiple factors influencing the attitudes, practices and perceptions of CPUT students towards condoms use. While the students were aware of the modes of HIV transmission and the benefits of using condoms correctly and consistently, some lacked sufficient information. Negative attitudes and perceptions towards condom use

were related to a decrease in sexual pleasure and the belief that condoms did not provide 100% protection. Characteristics and status of relationship were also crucial in determining condom use between partners in intimate relationships. CPUT as an institution did not always ensure that condoms were accessible and available to students. Stigma; alcohol use; and parental and religious values were other important factors that influenced students' condom use behaviour. These factors are interrelated, and collectively impact on the students' attitudes, practices and perceptions towards condom use.

Conclusion and recommendations: Comprehensive student support programmes that address the challenges faced by students and promote the uptake and proper use of condoms are required. These programmes could include motivational counselling, stigma dispelling, education and empowerment components. This could indirectly reduce the incidence of HIV among CPUT students. Further research is required on female condoms to devise supportive strategies for this method to be more acceptable, and consequently increase its uptake and use.

DECLARATION

I declare that: ***Understanding the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape*** is my own work, that it has not been submitted for any degree or examination at any other university, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Full name: Beauty Nontuthuzelo Kola

Signature: 

Date: 13 March 2018

DEDICATION

I dedicate this work to my Heavenly Father - Almighty God; my earthly father, the late Phakamile James Kola, who left us on 14th April 1996; and my late sister, Nokuthula Kola, who passed on the 20th October 2005 – "I will always love and miss you, and cherish the love you have given me"; to everyone who has played a positive role in my life, particularly my mother; and to all people infected and affected by HIV/AIDS.

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ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
CDC	-	Centers for Disease Control and Prevention
CPUT	-	Cape Peninsula University of Technology
HCT	-	HIV Counselling and Testing
HCWs	-	Health Care Workers
HEAIDS	-	Higher Education HIV/AIDS
HEIs	-	Higher Education Institutions
HESA	-	Higher Education South Africa
HIV	-	Human Immunodeficiency Virus
HSRC	-	Human Sciences Research Council
KZN	-	KwaZulu-Natal
MCPs	-	Multiple and Concurrent Partnerships
NDoH	-	National Department of Health
NGOs	-	Nongovernmental Organizations
PEs	-	Peer Educators
PEPFAR	-	President's Emergency Plan for AIDS Relief
PLWH	-	People living with HIV
SA	-	South Africa
SCO	-	Student Christian Organisation
SDASM	-	Seventh-day Adventist Students Movement
SEM	-	Socio-Ecological Model
SOP	-	Standard Operating Procedure
SRC	-	Students Representative Council
SSA	-	Sub-Saharan Africa
Stats SA	-	Statistics South Africa
STIs	-	Sexually Transmitted Infections
TVETs	-	Technical Vocational Education and Training Colleges
UKZN	-	University of KwaZulu-Natal
UNAIDS	-	Joint United Nations Programme on HIV/AIDS
UNFPA	-	United Nations Population Fund
USA	- `	United States of America
USAID	-	United States Agency for International Development

UWC	-	University of the Western Cape
WC	-	Western Cape
WHO	-	World Health Organisation

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CHAPTER 1 - INTRODUCTION

1.1 INTRODUCTION

Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) remain a public health problem globally. In 2014, an estimated 36.9 million people were living with HIV globally (Joint United Nations Programme on HIV/AIDS (UNAIDS), 2015). Sub-Saharan Africa (SSA), the poorest and most underdeveloped area in the world, experiences the heaviest burden of people living with HIV (Heeren et al., 2013; Namisi et al., 2013). SSA accounts for about 70% of the people living with HIV (PLWH) worldwide (Durojaiye, 2011; Heeren et al., 2013; Human Sciences Research Council (HSRC), 2013; Namisi et al., 2013). In spite of the efforts made by the international community, national governments and non-governmental organisations (NGOs) to stem the HIV epidemic, the number of new HIV infections remains concerning (Chandran et al., 2012).

South Africa (SA) is one of the countries most severely affected by the HIV pandemic (Heeren et al., 2013; UNAIDS, 2015). The HIV prevalence has increased over time, with HIV prevalence in 2012 estimated to be at 12.2%, i.e. 6.4 million persons, 1.2 million more than in 2008 (Shisana et al., 2014), and an estimated 6.8 million (12.4%) people living with HIV in 2014 (UNAIDS, 2015). Shisana et al. (2014) note the 2012 provincial variation in HIV-prevalence with the Western Cape (WC) (where the study site is situated) having the lowest HIV prevalence (5%) and KwaZulu-Natal (KZN) having the highest prevalence (17%) in 2012. South Africa has the highest HIV incidence in the world, with 469,000 new HIV infections estimated for 2012 (Shisana et al., 2014: 58). Statistics South Africa (Stats SA) (2015) estimates prevalence among youth aged 15–24 years to be 5.59%. HSRC (2013) further indicates that the 15–24 year age group carries the highest HIV incidence. Although the HIV incidence declined from 2.3% in 2005–2008 to 1.5% in 2008–2012 among youth aged 15–24 years, it has remained static at 1.5% since then (Shisana et al., 2014). Prevalence among students in South African Higher Education Institutions (HEIs) increased from 2.3% in 2010 to 3.4% in 2012 (Heeren et al., 2013). While this may be due to more students getting tested for HIV, it may also be a reflection of a higher prevalence rate, with Heeren et al.

(2013) noting that evidence from several sources suggests that one of the high-risk sub populations is students in HEIs.

Correct and consistent condom (both male and female condom) use is currently the most effective measure to prevent HIV infection and other sexually transmitted infections (STIs) among sexually active people (Hendriksen et al., 2007; Shisana et al., 2014). In response to the HIV and STI epidemic, the South African NDOH (National Department of Health) has implemented a national male condom programme since 1992 and condoms were provided in public health sector services and through a range of NGOs at no cost (Beksinska, Smit & Mantell, 2012). Gray and Vawda (2017) highlight that, South Africa has one of the largest, best-established, government-funded, public-sector male and female condom programmes worldwide. Venter (2012) also notes that the South African government has included the distribution of free condoms in their HIV prevention strategy for many years. The female condom programme was later initiated 1998 and the programme has since expanded (Beksinska, Smit & Mantell, 2012; Gray &Vawda, 2017). In 2004 the NDOH launched the rebranded male condom named "Choice" following a number of concerns about the quality of public sector condoms, and these condoms were repackaged in attractive colours in an effort to increase condom usage, and were promoted in mass media campaigns (Beksinska, Smit & Mantell, 2012). In their review study, Beksinska, Smit and Mantell (2012) also highlight that the challenges to the condom programme was mainly centred on cost as the female condom which was more expensive than the male condom and this was a limiting factor, however, female condom has been redesigned to a cheaper version to increase availability. Condom promotion has received considerable attention, with a sustained effort to make condoms accessible (Shisana et al., 2014) in order to curb HIV infection rates. However, condom use is still among the most difficult issues to address. While condom use increased among youth from 52% in 2002, to 80% in 2008, this declined to 67% in 2012 (Shisana et al., 2014). This is of great public health concern in a country like South Africa. Although students in HEIs fall within an HIV at-risk group, they use condoms infrequently, concomitant with high pregnancy rates of 26%, mostly unintentional, and 15% of students reporting a history of STIs (Heeren et al., 2013). STIs are often asymptomatic and therefore not identified and treated early enough, especially in women, increasing STI spread in HEIs' campuses, which are recognised as closed communities. Moreover, STIs increase susceptibility to HIV (Heeren et al., 2013). Hence, effective behavioural interventions to

reduce HIV incidence and other STIs are a priority among the student population (Namisi et al., 2013).

1.2 BACKGROUND AND STUDY SITE

Since 2000, Higher Education South Africa (HESA), now known as Universities South Africa, an umbrella body for HEIs, has implemented the Higher Education HIV/AIDS (HEAIDS) programme. Given the high HIV risk among students in HEIs, the programme involves developing and strengthening HIV prevention and reduction activities in South African HEIs. This HEAIDS programme is operational at Cape Peninsula University of Technology (CPUT). At the heart of the programmes is a condom promotion programme, aimed at reducing unprotected sexual intercourse.

The CPUT is the only university of technology in the WC, and the largest university in the region, with approximately 33979 students of mixed genders and races (Cape Peninsula University of Technology (CPUT), 2016). It comprises 11 campuses (4 main campuses and 7 satellites), that offer a wide range of academic programmes (CPUT, 2016). The institution's students reflect the broad demographics of South Africa's population, with the largest portion of the students aged between 17 and 24 years.

CPUT has an existing HIV unit with an HIV prevention programme in place. This unit offers a variety of programmes including HIV workshops, HIV Counselling and Testing (HCT), HIV/AIDS awareness campaigns, peer education, condom promotion and distribution programmes, on-going HIV care and support, and community outreach (CPUT, 2014). The unit is in the process of developing a curricular integration programme aimed at enhancing preventing, controlling and managing HIV/AIDS among the CPUT student and staff community.

1.3 PROBLEM STATEMENT

In response to the HIV/AIDS pandemic, HIV prevention programmes have been established at all higher learning institutions in South Africa, and most have implemented specific HIV prevention interventions (Ndabarora & Mchunu, 2014; Blignaut, Jacobs & Vergnani, 2015).

Despite the presence of such an HIV prevention programme at CPUT, comprising different programmes being in place, the annual HIV incidence rate among students at the institution appears to have increased. The percentage of students testing positive for HIV increased from 0.2% in 2012 to 1.0% in 2015, based on the number of students who attended the CPUT's HCT. Of 3800 students who participated in HCT in 2013, 9 students (0.2%) tested positive for HIV, with this number increasing to 66 students out of 6775 (1.0%) in 2015[1]. Even allowing that more students infected with HIV being more likely to come forward to test for HIV in 2015 compared with 2012, this increase within a short period is cause for concern. This could indicate the ineffective use of the positive sexual behaviour strategies, such as condoms use, among the university students. It emphasises the need to acquire a greater understanding of attitudes, perceptions and practices towards condom use in preventing HIV infection among students.

The literature identifies various factors contributing to ineffective HIV prevention strategies. Mantell et al. (2011) explored students' views on topics related to sexual behaviour, vulnerability to HIV and other STIs, as well as condoms and other HIV prevention tools, with the goal of understanding how best to increase use of condoms overall in a large, urban South African HEI campus in 2005. The study identified three possible situations militating against condoms use: (i) when sex happens 'in the heat of the moment' and condoms are unavailable, (ii) when sexual partnerships have matured and (iii) when female partners implicitly accept unprotected sex (Mantell et al., 2011). However, more recent data is needed on condom use among students in South African HEIs to contribute to our knowledge base in this area. These issues have not been studied specifically among CPUT students.

1.4 RESEARCH PURPOSE

In light of HIV infection increasing among students in HEIs, there is therefore a need to explore all avenues that lead to unprotected sex, with the desire to understand how best to increase use of condoms. Thus, the purpose of this study strived to contribute to an improved understanding of the attitudes, perceptions and practices of the CPUT's students towards condom use as an HIV preventive measure. The study additionally sought to provide a better

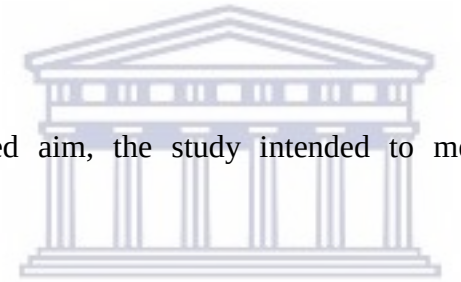
[1]CPUT HIV/AIDS Unit's HCT Registers

understanding of tertiary institution students' safer sex facilitators, which can be employed to develop more effective safer sex interventions on CPUT campuses. This, in turn, could lower the HIV infection rates among students and create a healthier community on campus. Based on insights from the study findings, the investigator could subsequently propose suitable recommendations that contribute to developing improved sexual behaviour modification and educational programmes within the HIV unit and other units dealing with students at CPUT.

1.5 RESEARCH AIM

The aim of this study was to explore the attitudes, practices and perceptions of CPUT's students towards condom use from the perspectives of the students and student peer educators.

1.6 OBJECTIVES



To achieve the above stated aim, the study intended to meet the following research objectives:

- To explore students' attitudes and perceptions towards condom use.
- To describe students' practices towards condom use.
- To explore student peer educators' perspective on attitudes, perceptions and practices of the fellow students towards condom use.

1.7 RESEARCH QUESTION

What are the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students?

1.8 CONCLUSION

In this chapter I have provided a research description and motivation, and documented the study's aim and objectives. The main research problem and the key research question that the research sought to answer were described.

To guide the reader through the rest of the thesis, I describe the focus of the mini-thesis in the chapters that follow. Chapter Two examines the relevant literature to provide background information and knowledge, and establish a context in which to examine condom use. The research gaps are also explained. Chapter Three identifies and motivates the research methodology employed in the study. Chapter Four presents the results of this study, identifying the key themes that emerged during qualitative individual in-depth interviews. Chapter Five presents an analytical discussion of the results and highlights the study limitations. The sixth and final chapter summarises, and provides concluding comments, as well as recommendations arising from the study.

CHAPTER 2 - REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

Presently, condoms are the only available methods that inhibit the transmission of HIV and other STIs, as well as preventing unintended pregnancies. Hence, they are a critical component in a comprehensive and sustainable approach in tackling these three priority public health issues. Globally, an estimated 2.1 million people became newly infected with HIV in 2013, and an estimated 500 million people acquired STIs (UNFPA, WHO & UNAIDS, 2015). Every year, more than 200 million women have unmet needs for contraception, leading to approximately 80 million unintended pregnancies (UNFPA, WHO & UNAIDS, 2015). These three public health priorities signal a need for a significant response employing all available tools, with condoms playing a crucial and dominant role. Thus, this chapter will provide background information to orient the reader. The literature review is comprised of the relevant literature specific to the study investigations, documenting what is commonly known and accepted about the phenomenon under investigation.

This chapter describes HIV sexual transmission and its prevention, known information on efficacy and effectiveness of condoms on HIV transmission, as well as factors affecting condom use. Problems and errors in condom use and associated factors are outlined. The chapter further discusses the prevalence and incidence of HIV infection among youth and South African students in HEIs and condom usage among this population group. In addition, the factors affecting condom use among students in HEIs, and the research gaps are explained. In addition, the theoretical framework adopted in this study investigation and discussion of findings is briefly outlined.

2.2 HIV TRANSMISSION

HIV is transmitted through body fluids. HIV can be passed on by contaminated blood and blood products, an infected mother transmitting the virus to her baby (before, during, or after birth and through breast milk) and through either vaginal or anal sexual intercourse (Cohen et

al., 2008). Currently, there are no identified effective cures for HIV (Cohen et al., 2008; Centers for Disease Control and Prevention (CDC), 2016). Unprotected sex remains the main mode of HIV transmission (United States Agency for International Development (USAID), 2013). Thus, there is a high rate of vulnerability for individuals who engage in high risk sexual behaviours. The 2012 population-based national survey by Shisana et al. (2014) on HIV prevalence and behaviour, conducted among South African youth aged 15–24 years, identified young people between the ages of 15–24 years as the population at highest risk for HIV infection. Reddy and Frantz (2011) explain that, in the context of South Africa, many individuals in this age range attend institutions of higher learning. The university environment tends to be where students may engage in explorative risky sexual behaviours. There is a need for information on students' sexual attitudes, perceptions and practice regarding safer sex to help in preventing HIV infection. Cohen et al. (2008) point out that, in the absence of curative therapy, control of the HIV/AIDS epidemic requires broad implementation of effective and sustainable prevention measures.

2.3 PREVENTION OF SEXUAL TRANSMISSION OF HIV

In countries like South Africa, where the epidemic is driven largely by heterosexual transmission, key behavioural interventions were the first prevention strategies to be broadly implemented (Maharaj & Cleland, 2011). These interventions focused on sexual abstinence, delayed sexual debut, reduced numbers of sexual partners, and correct and consistent use of condoms to prevent or reduce the likelihood of sexual transmission (Maharaj & Cleland, 2011; CDC, 2016). Furthermore, USAID (2013) points out that success in reducing HIV incidence will be achieved by implementing effective HIV prevention strategies.

Abstinence from sexual intercourse has been documented as the most reliable way of preventing and avoiding sexual transmission of HIV (CDC, 2016). However, it has also been revealed that abstinence campaigns may not reduce high-risk sexual behaviours (Lo, Lowe & Bendavid, 2016). A study conducted by researchers at Stanford University School of Medicine, in which they reviewed records for abstinence-fidelity programs, including data from 1998 through 2013, of nearly 500,000 men and women in 14 countries, showed this to be impractical and ineffective in older teenagers (Lo, Lowe & Bendavid, 2016). Additionally, the practicability of consistency in abstinence is questionable (Paik, Sanchagrin & Heimer,

2016). Abstinence programmes are likely to lead to failure and vulnerability to infection (Cohen et al., 2008; California State University, 2012). Fidelity and single sexual relationship is, arguably, very close to abstinence, while having the advantage of being more practicable, although also difficult to maintain.

Multiple sexual partners, particularly if concurrent, may be contributing to the spread of STIs including HIV (Maharaj & Cleland, 2011; USAID, 2013). It is important to build confidence in the youth such that they are conscious of their sexual rights, responsible for their sexual health, and understand the consequences of unprotected sex. However, youth are influenced by their peers or environment to practise premarital sexual behaviour at an earlier stage of their development (Eriksson et al., 2013; Stern & Cooper, 2014). Consequently, the best and most effective alternative method of HIV prevention among sexually active people is condom use (Duerr et al., 2011; Shisana et al., 2014). Increased condom use can substantially decrease sexually related infections among sexually active individuals (CDC, 2010). There is incontrovertible evidence that condoms are highly effective in reducing sexual transmission of HIV when used correctly and consistently (Chandran et al., 2012; Exavery et al., 2012; Shisana et al., 2014; Crosby, Graham, Milhausen, Sanders, Yarber & Shrier, 2015. Hence, condom promotion is an important cornerstone to HIV prevention (Duerr et al., 2011; Shisana et al., 2014; USAID, 2013).

2.4 EFFICACY AND EFFECTIVENESS OF CONDOMS IN TRANSMISSION OF HIV

Theoretically, male condoms cover the penis and prevent its exposure and partners' exposure to urethral and vaginal secretions, hindering the pathway of sexual transmission of HIV infection. Both male and female condoms provide a physical barrier to infectious microorganisms, and thereby inhibit the spread of STIs including HIV by preventing contact between the condom wearer's penis and a sex partner's skin, mucosa, and genital secretions (Akpan, Ekott & Udo, 2013; Wilton, 2013; Kahari & Takavarasha, 2014). They have been reported to be highly successful in preventing transmission of many common STIs inclusive of HIV (CDC, 2013; Kahari & Takavarasha, 2014). The efficacy of condoms has been scientifically established in laboratory studies in providing an impermeable barrier to particles, the size of sperm and STI pathogens, including HIV (Akpan, Ekott & Udo, 2013;

Wilton, 2013; UNFPA, WHO & UNAIDS, 2015), and thereby blocking and preventing the exchange of body fluids that can cause STIs and pregnancy (Wilton, 2013; Kahari & Takavarasha, 2014).

Use of condoms among sero-discordant couples (where one partner is HIV positive and the other is HIV negative) is highly effective in preventing transmission of sexually acquired HIV in both heterosexual and homosexual partners, provided that condoms are used consistently (CDC, 2010; 2013; Crosby et al., 2012; Wilton, 2013; UNFPA, WHO & UNAIDS, 2015). Wilton (2013) notes that in some observational studies investigating the effectiveness of male condoms in reducing the risk of HIV transmission, transmission was 80% lower among couples who said they ***always*** used condoms compared to those who said they ***never*** used condoms. Hence, consistent use of condoms results in 80% reduction in HIV incidence when compared to non-condom use (Warner, Gallo & Macaluso, 2012; Lasry et al., 2014), and remains the most effective method for decreasing the transmission risk of HIV. Consequently, it results in a significant reduction in HIV incidence (Warner, Gallo & Macaluso, 2012). In a study in China that reviewed 11 published articles based on studies on 45615 Chinese, investigating the effectiveness of condoms in an HIV sero-discordant couples' cohort, established that consistent use of condoms is highly effective (Liu et al., 2014).

However, inconsistent condom use is much less protective than consistent use (CDC, 2011; Crosby et al., 2012; Wilton, 2013). Shisana et al. (2014) argue that consistent condom users are 20 times less likely to be infected after exposure to HIV than inconsistent users. In a household survey of HIV prevalence and sexual behaviour conducted among young South Africans aged 15–24 years old examining correlates of consistent condom use, where all the young people provided an anonymous oral fluid specimen to test for HIV, males and females who tested positive for HIV were more likely to report using condoms inconsistently (Moyo et al., 2008). The study by Liu et al. (2014) concluded that the HIV infection seroconversion incidence rates in an uninfected partner were lowest in the sero-discordant couples with consistent condom use versus the inconsistent condom use group. Hence, the effectiveness of condoms depends on how consistently they are used (Chandran et al., 2012; Exavery et al., 2012; Wilton, 2013; Shisana et al., 2014; Crosby et al., 2015; UNFPA, WHO & UNAIDS, 2015).

2.4.1 GENERAL FACTORS AFFECTING CONDOM USE AMONG YOUTH

In the South African public health sector, male and female condoms are available at no cost. Numerous studies have indicated that most South African youth are aware that the condoms are an effective method for preventing HIV, STIs and unwanted pregnancies (Sayles et al., 2006; Hendriksen et al., 2007). However, a review paper by Beksinska, Smit and Mantell (2012), on the South African condom program, related guidelines and policies, and on existing data on male and female condom use among men and women of all ages, revealed that consistent condom use was low. Also, in a mixed-method study examining the attitudes of youth (with age range between 16–28 years old) towards the use of condoms in Nigeria, revealed that condom use amongst the youth was poor (Agweda, Dibua & Eromonsele, 2010). In short, condom use in general, and consistency of use in particular, have been found by different studies to be low. Correct condom use is important. A secondary analysis by Beksinska, Smit, Joanis and Hart (2012) on a study that assessed failure rate of the female condom among young women attending an urban family planning clinic in central Durban (KwaZulu-Natal Province), determining whether practice improves failure in female condom use, concluded that the condoms had to be used correctly and consistently to ensure greatest effectiveness. Additionally, condom use is found to be influenced by the factors described below.

2.4.1.1 Individual factors

2.4.1.1 (a) Knowledge, misconceptions and beliefs

Knowledge of how HIV is transmitted and prevented, as well as safer sexual behaviours, are vital, and have a critical impact on combating and curbing the spread of HIV. The same review paper by Beksinska, Smit and Mantell (2012) shows that most young people have heard of HIV and AIDS, with participants' awareness levels accounting for 95% in men and 93% in women. This suggests a high level of HIV awareness. However, even though HIV awareness levels are high, it appears that the youth's knowledge about how to prevent HIV infection is inadequate. The 2010 UNAIDS Global Report reveals that young people lack knowledge (UNAIDS, 2010). Shisana et al.'s (2014) results show that only 28.6% of both young women and young men, and (29%) of young women and (28.2%) of young men aged

15–24 were knowledgeable about sexual transmission and prevention of HIV. Furthermore, Shisana et al. (2014:95) found that among youth aged 15–24 years, basic knowledge on how HIV is transmitted and can be prevented had slightly decreased from the South African 2008 survey (29.4%) to that conducted in 2012 (28.6%). This indicates that the level of knowledge has not improved over the years. While it is evident that there are efforts to educate South African youth about prevention of HIV, there remain important deficits in prevention relevant HIV/AIDS knowledge. Deterioration in accurate HIV prevention knowledge may lead to unprotected sexual intercourse and have repercussions that have a negative impact on the prevention of HIV incidence. The serious gaps in HIV knowledge in this regard suggest that the core focus should be on improving HIV related knowledge among young people. Even though the awareness level on HIV is high, there are some misconceptions about HIV/AIDS that persist, mostly related to condom use and HIV transmission.

A qualitative study conducted by Lucea et al. (2013) among young heterosexual participants in the Philippines, examining perceptions and constraints surrounding condom use, found misconceptions including a belief that condoms can disappear or get stuck inside the woman's vagina. It is assumed that this may lead to serious injury to the woman. At the same time, some young people were found to believe that condom rupturing occurs frequently (Lucea et al., 2013). A cross-sectional study by Masoda and Govender (2013) examining knowledge, attitudes and practices of condom use among university students (18–33 years old) in Congo also reports that the participants reported tearing of condoms during use as a disadvantage in using condoms. Consequently, young people feared using condoms (Lucea et al., 2013). The study by Lucea et al. (2013) revealed that men do not like to use condoms as they prefer sexual intercourse to be skin-to-skin, believing that condoms get in the way during sex and inhibit the "heat of sex", and that this leads to lack of pleasure.

It also appears that some young men had negative perceptions about young women proposing condom use as they saw this as an indication that women were promiscuous. In Lucea et al.'s (2013) findings, some young people feared asking for the use of condom, assuming that this would raise suspicions about promiscuity in the other partner. Young women feared that their request for condom use might be interpreted as an admission of infidelity signifying the existence of a secondary sexual partner (Lucea et al., 2013). In line with Hendriksen et al.'s (2007) quantitative study that examined correlates of condom use among sexually

experienced young South Africans aged 15–24 years, using a condom was believed to encourage promiscuity and infidelity. Consequently, these beliefs and misconceptions may affect a relationship between partners. Young women's sense of 'morality' may be affected by these negative misconceptions as they would be seen as promiscuous or dirty (Higher Education HIV and AIDS Programme (HEAIDS), 2010; Lucea et al., 2013; Stern & Cooper, 2014). These beliefs paint a concerning picture as the condom is still the most effective and economically affordable method for prevention of sexual transmission of HIV. Furthermore, these beliefs are likely to influence and limit condom use. However, it is unknown whether these negative attitudes towards condom use might be related to a broader decline in condom use among youth in recent years. In this regard, Shisana et al. (2014) suggest that the key populations at higher risk of HIV exposure, which included youth aged 15–24 years, individuals with multiple sexual partners, alcohol drinkers, recreational drug users and those aged 15–49 years old that are cohabitating with their partners, should ideally be targets of mass education campaigns to reduce their chances of becoming infected with HIV. Campaigns targeting these key populations, particularly youth, should focus on behaviour change aimed at raising awareness about the impact and risk of HIV, correct knowledge of sexual transmission of HIV, promoting condom use, and promoting monogamous relationships (Shisana et al., 2014).

2.4.1.2 Relationship factors

2.4.1.2 (a) Duration and characteristics of a relationship

Findings show that condom use among youth varies with the type of relationship (Chimbindi et al., 2010; Chamratrithirong & Kaizer, 2012). Studies on condom use among youth have found that when a relationship transitions from a casual to a serious and longer lasting one, there is a likelihood that condom use will be discontinued, as the partners trust each other and feel it is therefore no longer necessary to use condoms (Chimbindi et al., 2010; Chamratrithirong & Kaizer, 2012). This suggests that when sexual relationships progress over time, there is enhanced trust and loyalty, and a related perception that they are no longer at risk of infection. This may also suggest that younger people in casual relationships tend to use condoms more, as compared to those in exclusive relationships (Mazibuko & Nkune, 2014). Consequently, condom use is more likely to be perceived by steady partners as unnecessary for STI prevention. Hence, steady and long-term sexual relationships may pose a

higher risk for HIV infection, particularly when partners in sexual relationships are not mutually faithful. For example, Moyo et al.'s (2008) household survey among young South Africans aged 15–24 years old revealed that one of the factors likely to contribute to less condom use included the relationship type. Likewise, a study by Chimbindi et al. (2010) investigating patterns and determinants of condom use and consistency of use among youth aged 15–24 years in KwaZulu-Natal found that young people were more likely to use condoms with partners with whom they were not cohabiting. This illustrates that relationship characteristics are vital determinants of consistent condom use, and that longer-term commitment within a relationship is likely to be associated with decreased condom use.

2.4.1.3 Socio-cultural factors and gender inequality

A pattern of having multiple and concurrent sexual partnerships (MCPs) is a socio-behavioural factor that is leading to risky sexual behaviour. Shisana et al.'s (2014) survey confirms that many sexually active young people have multiple partners, as 23% of participants (aged 15–24 years) were reported to have MCPs. The authors note higher rates of MCPs particularly among the 15–24 years old group compared to the population above 24 years old (Shisana et al., 2014). This indicates that youth are more likely to be involved in multiple relationships, making them a vulnerable group for contracting HIV. Moreover, it is a concern that risky behaviour has been increasing over the years. In the four surveys conducted from 2002 to 2012, there was a steady increase in young people aged 15–24 years who have had more than one sexual partner, from 16% in 2002 to 23% in 2012 (Shisana et al., 2014).

It is also apparent that young males are more likely to have MCPs than females. A 2010 Health Survey in Malawi, which examined the associated risk factors of STIs and MCPs among youths aged 15–24 years, revealed that MCPs occurred more among young males (16%) than females (2%) (Chialepeh & Sathiyasusuman, 2015). Similarly, Shisana et al. (2014) highlight a significantly high percentage of young males (20.1%) who reported having had more concurrent sexual partners, compared to their female counterparts (4.6%). There was a significant increase in MCPs among males aged 15–24 years, from 23% in 2002 to 37.5% in 2012 (Shisana et al., 2014).

MCPs being more common among males may be due to cultural gender norms in some regions. Socio-cultural factors such as traditional cultural beliefs have been suggested as influencing more males in having MCPs. Such norms may promote HIV risk, particularly in those societies where male promiscuity is accepted as a norm and condoned. Chialepeh and Sathiyasusuman (2015) argue that these cultural norms tend to permit MCPs among males and condone male promiscuity. Therefore, it is argued that many sexually active young men have more than one sexual partner in contexts, especially in South Africa and other African countries, where there are traditional cultural beliefs in which the definition of manhood is associated with the acceptability of men having MCPs (Chialepeh & Sathiyasusuman, 2015).

Furthermore, Ramsoomar-Hariparsaad's report (2016), analysing and reviewing literature from a variety of South African studies on the impact of HIV/AIDS among women aged 15–24 years, reveals that the prevailing patriarchal society in South Africa further heightens women's vulnerability to power imbalances within sexual relationships. Also, USAID (2013) highlights that widespread cultural acceptance of polygamy and multiple sexual partnerships for men create more power imbalances, which fuel MCPs. This might imply that cultural beliefs may be responsible for the acceptance of MCPs, which contribute to the spread of STIs including HIV. In this regard, Ramsoomar-Hariparsaad (2016) concludes that South African women face stark gender disparities including unequal power relations and, consequently, this places females at increased risk of HIV infection. Hence, gender power imbalances created through some cultural beliefs lead to young women not having a voice in decision making around condom use in a relationship, putting them at risk of unsafe sexual practices. Gender power imbalance as well as traditional gender norms may have a significant influence on a woman's capability to negotiate use of condoms. Some of the factors discussed above, and their interrelationships with sexual risk-taking, highlight that both behavioural determinants and socio-cultural factors expose young women to risk of contracting HIV infection, resulting from females having lesser power in gender relations. Nevertheless, this has been increasing among this gender (Shisana et al. 2014). The observed upward trend in MCPs among young males is of great concern as this increased STI and HIV infection risk (Shisana et al., 2014).

In summary, the practice of MCPs is recognised as risky sexual behaviour and a key contributor to the spread of HIV in Southern African populations (USAID, 2013), and youth

is included in the population at risk (USAID, 2013). Shisana et al. (2014) highlight that the observed increase in MCPs and decrease in condom use indicate that a coordinated and improved HIV-prevention programme including these factors is urgently needed.

2.4.1.4 Socio-behavioural factors

Another behavioural factor found to be a cause of sexual risk and HIV infection for young people is alcohol use, which heightens the risk of unprotected sex (Shisana et al., 2014; Fladseth et al., 2015; Ramsoomar-Hariparsaad, 2016). Sensible decision making under the influence of alcohol tends to be undermined, thus alcohol may disrupt the practice of safer sexual behaviours. The Ramsoomar-Hariparsaad (2016) review reveals that alcohol consumption is associated with MCPs. Correspondingly, Shisana et al. (2014) state that in the case of excessive alcohol drinkers aged 15 years and older, 33% of subjects reported that they had more than one sexual partner.

2.5 ERRORS AND PROBLEMS IN USING CONDOMS

Reviews of studies in a variety of different settings showed condom use errors to be a problem in effective use of condoms (Sanders et al., 2012; Crosby et al., 2015). Sanders et al. (2012) conducted a systematic literature search of 50 peer-reviewed articles between 1995 and 2011, representing 14 countries, searching for findings on condom use errors. Based on these reviews, it was concluded that the common errors in application include: not leaving space at the tip of the condom, not squeezing air from the receptacle tip before use, not using a water-based lubricant, incorrect withdrawal, late application of condoms after intercourse began and early removal of condom followed by unprotected intercourse (Sanders et al., 2012). According to Sanders et al. (2012), more attention had been given to consistency of condom use, with far fewer investigations on the details of user errors and problems. A study conducted in 2010-2012 on young men aged 15–23 years attending STI clinics in three southern United States of America (USA) cities revealed that condom use errors and problems were common (Crosby & Salazar, 2015). Another descriptive survey conducted to assess level of awareness, knowledge and utilisation of male condom among the undergraduate students of a tertiary institution in Nigeria (majority age between 21–25 years old) revealed that, among those who participated in the study, only 26% of the condom users

reported no error in use in the previous 3 months (Akpan, Ekott & Udo, 2013). This indicates that most of the students in this study experienced condom user-errors (Akpan, Ekott & Udo, 2013). This suggests that, although condom use reduces the risk of HIV transmission, it does not completely eliminate risk. If condoms are used incorrectly, they will be less reliable in preventing HIV prevention. Crosby and Salazar (2015) argue that user-errors may be a prominent source of condom breakage/slippage among youth. This is consistent with several studies that showed evidence of youth reporting having experienced multiple errors and problems such as breakage, slippage and incomplete condom use (Crosby et al., 2008; Sanders et al., 2008; D'Anna et al., 2012). Consequently, both condom user-errors and problems may be linked to increased risk of STIs acquisition including HIV infection.

2.5.1 FACTORS ASSOCIATED WITH CONDOM ERRORS, PROBLEMS AND FAILURE AMONG YOUTH AND STUDENTS IN HEIs

Factors associated with condom use problems and failures have primarily focused on individual risk factors as described above (D'Anna et al., 2012; Sanders et al., 2012; Crosby et al., 2015). These factors are discussed in more detail below.

2.5.1.1 Condom breakage and slippage

Studies have reported a wide range of clinical condom failures consisting of condom breakage and slippage (Crosby et al., 2007; Duerr et al., 2011). A study conducted among young American men attending an urban, mid-western public STI clinic in the USA revealed that 31.3% of men reported condom breakage during one of the three previous occasions of sexual intercourse, and the breakage rate was found to be 15% (Crosby et al., 2007). A survey conducted by Maharaj and Cleland (2011) at three tertiary institutions among 3000 college students aged 17–24 years old in Durban revealed that about 13% of participants who were students reported experiencing condom breakage/slippage. This highlights the point that condom breakage/slippage were the reason for male condom failure (Maharaj & Cleland, 2011).

It appears that inexperience in condom use tends to lead to condom failure through breakage. Common results from other studies revealed that the rate of breakage/slippage was

significantly higher among first-time users than among those experienced in using condoms (Yarber et al., 2007). An observational study conducted among young women attending two STI clinics in the southern United States of America, studying failure rates of female and male condoms, revealed that 3% of male condoms reportedly broke during use, and that 7% of these reported breakages occurred among first-time users (Hollander, 2005). This is as compared to those who had used male condoms 15 times or more (Hollander, 2005). In the same secondary analysis study by Beksinska, Smit, Joanis and Hart (2012), the failure rate was found to be 7% among first-time users, decreasing to 2.6% on the second attempt, and finally to 2.1% in the last condom use period. This suggests that condom failure decreases as the individual's experience increases in condom use. Crosby et al. (2008) argue that condom failure typically stems from user-error. Likewise, Akpan, Ekott and Udo (2013) highlight that most condom failure is due to errors in technique. These studies suggest that lack of knowledge on correct condom use and condom breakage is often reported. Evidence from several studies suggests the user-errors related to breakage/slippage include: lubrication issues, incorrect withdrawal, difficulties with condom application, removing condoms after ejaculation, and reuse of a condom (during same sexual encounter) (D'Anna et al., 2012; Sanders et al., 2012). The review paper of Benksinska, Smit & Mantell (2012) revealed that some individuals reports of using oil-based lubricants, can also be a factor that leads to male condoms breaking. Even a low rate of condom breakage/slippage can increase the risk of contracting HIV infection. Therefore, this is a concern, as condom breakage/slippage may compromise the condoms' effectiveness in preventing HIV transmission among sexually active individuals. However, rectifying the user-error issues may substantially reduce breakage/slippage, and the need to have effective and efficient remedial interventions is crucial.

2.5.1.2 Discomfort with respect to condom use

In a qualitative study conducted among students attending the USA's public Midwestern University, examining their experiences with male condoms, discomfort problems during condom use arose as an issue (Yarber et al., 2007). Several studies assessing discomfort with respect to condom use among youth and students indicate that experiencing discomfort problems was frequently related to the way a condom fit or felt (Yarber et al., 2007; D'Anna et al., 2012). Yarber et al. (2007) reveal vaginal irritation to be another discomfort problem.

Some participants reported that they frequently experienced condoms "drying out" during sexual activity and causing vaginal irritation. This may suggest that condoms are not sufficiently lubricated, and consequently cause friction that can contribute to vaginal irritation.

With regards to the two factors discussed above, condom breakage or discomfort could undermine a person's motivation to use condoms. In addition, a lack of motivation to use condoms might lead to behaviours that could increase the likelihood of inconsistent or non-use of condoms, which may put sexually active individuals at risk of exposure to HIV.

2.5.1.3 Incomplete condom use

Incomplete condom use is described as a delayed application of condom or its early removal, either during sex, or before sex is over (Yarber et al., 2007). A quantitative study conducted among young American men attending an urban public STI clinic, examining association between incomplete condom use and sexual arousal, found problems with the fit and feel of condoms to be often linked to the removal of condoms before sex was finished (Graham et al., 2009). Yarber et al. (2007) reported incomplete use of condoms, particularly among students in HEIs, and that this was related mostly to delayed application of the condom rather than early removal. Various studies highlight that the most common reason given for delayed use of condom was getting caught up 'in the heat of the moment'. On the other hand, in some studies, early removal of the condom has been attributed to discomfort due to a too tight fit, dryness, irritation, reduced sensation or erection loss (Yarber et al., 2007; Graham et al., 2009). This suggests that problems experienced with ill-fitting condoms may lead to incomplete condom use. Experiencing erection problems may result in reluctance to use condoms and ultimately affect decisions that couples make about whether to use condoms or not. Sanders et al. (2008) highlight that the HEIs' students not using condoms from start to finish of sex may be unknowingly placing themselves at risk of pregnancy or STIs. Incomplete condom use compromises condoms' protection value against STIs, HIV and unplanned pregnancy. Thus, it is a problem requiring targeted prevention education which may benefit youth, including students in HEIs.

2.6 PREVALENCE AND INCIDENCE OF HIV AMONG YOUTH AND UNIVERSITY STUDENTS IN SOUTH AFRICA

Youth in the age range of 18–24 years are considered to be highly vulnerable to HIV infection due to potentially risky lifestyles and sexual behaviour. Most students at the HEIs fall within this age range group. Heeren et al.'s (2014) quantitative study examining sexual risk behaviours among first-year students aged 18–24 years at a university located in the Eastern Cape Province, South Africa, emphasises that young people, including students in HEIs, are at risk. Although HIV prevalence among young South Africans aged 15–24 years has declined from 10.3% to 7.1% between 2005 and 2012 (Shisana et al., 2014), it is still considered high, compared to the national adult estimate for HIV prevalence (12.2%) in 2012 (Shisana et al., 2014) and it comprises more than 50% of the national prevalence. Therefore, HIV prevalence among young people in South Africa remains high, despite its overall decline (Heeren et al., 2014; Shisana et al., 2014).

Research has shown gender differences in South African youth infected with HIV, with the epidemic disproportionally distributed by gender (Protogerou et al., 2013; Shisana et al., 2014). Shisana et al. (2014) highlight that the epidemiological curve continues to show that females have a significantly higher HIV prevalence compared to males, with young women aged 15–24 years disproportionately affected by HIV. For example, in 2012, the HIV prevalence rate among young South African women aged 15–24 years was 11.4%, which was 4 times higher than the rate (2.9%) in their male peers (Shisana et al., 2014). Similarly, Heeren et al. (2014) found HIV prevalence to be 17% among young South African females, 20–24 years, compared to 8% among their male peers. doctrate

Young people account for a significant proportion of new HIV infections (Akpan, Ekott & Udo, 2013). Shisana et al. (2014) highlight that the HIV incidence rate among the youth within the age range of 15–24 years has decreased steadily over the three successive survey periods, from 2.8% in 2002 and then 2.3% in 2008. Shisana et al. (2014) also note a further decline in the incidence rate to 1.5% in 2012 (i.e.139 000 new infections). However, this remains high, and Ramsoomar-Hariparsaad (2016) highlights that a high incidence among young women aged 15–24 years is disquieting. It is still alarming to have a higher incidence among youth of this age group, and more especially among young females.

Shisana et al. (2014) emphasise that nearly a quarter (24.1%) of all new HIV infections occurred in young females aged 15–24 years, and the HIV incidence rate among young females in this age group was found to be over 4 times higher than in male counterparts (2.5% vs. 0.6%). The high incidence among young females of this age group is of concern. Shisana et al. (2014) further note a significant reduction of 60% in HIV incidence in this population of young females aged 15–24 years, where there is a noticeable decline in incidence rate from 5.3% in 2005 to 2.1% in 2012. This was a positive and an encouraging outcome; however, in spite of this encouraging improvement, there is no reason to be content and satisfied about the high incidence rate of over 2% among female youth aged 15-24 years. The incidence rates among young females remain concerning.

Many younger students are likely to have their first sex when they are at a tertiary institution. In an HEAIDS' (2008) mixed-method study which explored HIV prevalence in conjunction with knowledge, attitudes, behaviours and practices and contextual factors underpinning risk of HIV infection among students and staff between ages 18–34 years old at the University of KwaZulu-Natal (UKZN), 29% of students aged 18 years reported having ever had sex. Sexual experience among students increased to 59% among those aged 20 years, and to 75% among those older than 20 years (HEAIDS, 2008). This may reflect an increased freedom among students to have new experiences in the transition from the home to the tertiary institution's environment, and this may include sexual experiences, thus placing them at increasing risk of HIV infection if unprotected sex occurred.

There was a reported HIV prevalence of 2.4% (HEAIDS, 2008) within the tertiary institution's environment. There is some evidence that the HIV prevalence among South African students in HEIs may be rising, with Heeren et al.'s study (2013) showing an increase from 2.3% in 2010 to 3.4% in 2012. The 2008-2009 national survey which investigated HIV prevalence and related factors among students at tertiary institutions aged 18–25 years old at 21 HEIs in South Africa also revealed that HIV prevalence was estimated at 3.4% among all students, and it was 3.8% among the 65% who were sexually active (HEAIDS, 2010). It is unclear whether this is a real increase or greater reporting. Although HIV prevalence in the South African higher education sector appears to be lower than in the general population of youth, students remain at considerable risk of contracting HIV. It also appears that female students are more affected than males. Hoffman et al. (2017) highlight

gender differences where HIV prevalence of 3.4% among all students comprised of 4.7% of women and 2.0% of men.

2.7 CONDOM USAGE AMONGST YOUTH AND STUDENTS in HEIs

Young South Africans were previously found to use condoms at a rate higher than many comparable groups of young adults elsewhere in the world (Hendriksen et al., 2007). However, more recently condom use appears to have declined among youth and students in HEIs. This is a concern for the prevention of HIV among students at tertiary institutions. A quantitative study by Blignaut, Jacobs and Vergnani (2015), conducted over a six-year period (between 2007 and 2012) on first-year students aged 16–24 years at the University of the Western Cape (UWC) revealed a significant decrease in condom use (from 60% in 2007 to 51% in 2012). Shisana et al. (2014) note that condom use at last sex among all age groups in 2012 had decreased to the levels found in 2005, negating an increase in 2008. The declining levels occurred despite condom use being highly promoted in South Africa. Shisana et al. (2014) further elaborate that condom use increased significantly in all provinces from 2005 (35.4%) until 2008 (45.1%), but nevertheless decreased in 2012 (36.2%) across all age groups. Only 58.4% of youth aged 15–24 years have been reported to have used a condom at last sex, indicating low levels of condom use. A decline in condom use has also been reported in other African countries such as Senegal and Uganda (UNAIDS 2013). Shisana et al. (2014) highlight a possible explanation for the decline of condom use in South Africa, which is that prevention efforts targeting condom use are no longer receiving as much attention as they did a decade ago. Another possible explanation is that a drop in the condom use reflects the impact of risk compensation related to HIV treatment that is widely available (also known as behavioural disinhibition or treatment optimism) (Shisana et al., 2014). However, risk compensation may lead to increased sexual risk behaviour such as decreased condom usage, backed by the hope inspired by the wide availability of and access to antiretroviral treatment (Shisana et al. 2014).

In a qualitative study on University of Zimbabwe's students aged between 18–29 years by Kahari and Takavarasha in 2014, investigating the discourse on condom use and non-condom use, most students were found to be not using condoms. A cross-sectional study conducted by Durojaiye (2011) examining knowledge of HIV/AIDS, attitudes and sexual practices among

tertiary institution students aged 16–35 years (with a mean age of 23 years) in Nigeria, found that most students at tertiary institutions continued to choose unprotected sex. Kahari and Takavarasha (2014) point out that condoms use remains low among students in HEIs. A study among South African sexually active students in 2008 reported that 62% reported using condoms (HEAIDS, 2008). This is in line with a 2014 survey assessing HIV related knowledge, attitudes and behaviours of first-year college students (under the age of 25 years) and staff members at 50 South African Technical and Vocational Education and Training colleges (TVETs) (Mbelle et al., 2014). In this study, only 55% of students reported using condoms (Mbelle et al., 2014). These percentages are lower than what would be required to curb the HIV/AIDS epidemic among young students.

In Shisana et al.'s (2014) study, there were relatively low percentages of consistent condom use by both males and females among all age groups, in which among those reported using condoms, only 27% admitted consistent use of condoms. Among young people, only 46% reported using a condom consistently. Mazibuko and Nkune (2014) conclude, in their literature review study on research conducted among South African HEIs' students and exploring the students' knowledge and attitudes towards HIV infection, that consistent condom use among youth is poor, as more than half of them were engaging in unsafe sex. This is a concern as it implies that there are factors that inhibit condom use. In this regard, there is a need to augment and emphasise the efforts that promote consistent condom use, as these efforts may result in a drastic reduction in the HIV infection rate.

The literature reveals that inconsistent condom use is common among students in HEIs (Durojaiye, 2011; Protogerou et al., 2013). In Mantell et al.'s (2011) study on use of the female condom among tertiary institution's students aged 18–34 years in a South African HEI campus in the KwaZulu-Natal (KZN) Province, students reported using condoms inconsistently, despite their reported beliefs that condom use can offer protection against HIV and STIs, and despite condom availability free of charge at campus health centres. Heeren et al.'s (2009) study at a tertiary institution in the Eastern Cape Province in South Africa reveals that consistent condom use was reported by only 51.3% of students who reported sexual intercourse in the previous three months. Likewise, the study findings of Maharaj and Cleland (2011) revealed that consistent condom use was reported by only 36% of students (49% males and 23% females). Mbelle et al.'s (2014) study findings reveal that, among those who used condoms, only 57.5% (with both regular and non-regular partners) used condoms

consistently. Hoffman et al.'s (2017) study also found that consistent condom use was reported by only 63% of students (53% of women and 73% of men). Hoffman et al. (2017) further argue that these levels are well below what is needed to provide protection against HIV infection among students in HEIs. In addition, these findings suggest that consistent condom use among students in HEIs remains low (Heeren et al., 2009; Maharaj & Cleland, 2011; Mbelle et al., 2014; Hoffman et al., 2017). A cross-sectional survey conducted on Ugandan university undergraduate students (with mean age of 23 years old) found females to be at a higher risk of inconsistent condom use compared to their male counterparts (Mehra et al., 2014). More females (49%) reported inconsistent condom use with a new sex partner compared to male participants (37%) (Mehra et al., 2014). Mantell et al.'s (2011) qualitative study, which explored attitudes, practices, perceptions and misconceptions about female condoms among tertiary institution students aged 18–34 years old in an urban South African HEI campus in KZN Province, concludes that 'consistent' condom use has yet to be achieved, in either casual or longer-term relationships among students in HEIs. Mbelle et al.'s (2014) study reported high levels of unplanned pregnancies among college students, indicating that female students continued to carry an additional burden. There is a demonstrable need to understand the factors associated with consistent condom use among students in South African HEIs, so that HIV and pregnancy prevention programs targeting this population can be tailored to be more effective in order to address this problem effectively.

2.8. FACTORS AFFECTING CONDOM USE AMONGSTUDENTS IN HEIs

Mehra et al. (2014) note that condom use among students is influenced by numerous individual and social factors. These factors are discussed in more detail below.

2.8.1 INDIVIDUAL FACTORS

2.8.1.1 Awareness and knowledge of HIV and sexual behaviour

2.8.1.1 (a) General Awareness of HIV/AIDS

In general, students in HEIs have high levels of HIV/AIDS awareness. Mbelle et al. (2014) showed that awareness of HIV/AIDS among tertiary institution students was high, with 87% of students having reported that they had heard of HIV/AIDS. These findings find support in Durojaiye's (2011) study among students at a Nigerian university, which similarly revealed high awareness of HIV. Virtually all participants (99%) had heard about HIV/AIDS (Durojaiye, 2011). Mbelle et al. (2014) note that HIV awareness levels are essential as a first step, as they provide the foundation for implementing effective interventions to build knowledge that can reduce the risk of HIV infection.

2.8.1.1 (b) Awareness and knowledge of how HIV is transmitted and prevented

Mazibuko and Nkune (2014) note that good knowledge about the way HIV is transmitted and about safer sexual practice has a critical impact on the prevention of HIV/AIDS. Studies have identified that good knowledge about HIV transmission and means of prevention was high among students (Durojaiye, 2011; Mbelle et al., 2014). In both these studies, the majority of the participants, approximately 96%, knew that the HIV could be passed through unprotected sexual intercourse with infected persons (Durojaiye, 2011; Mbelle et al., 2014). Most of the participants (90%) had knowledge that people could reduce their risk of acquiring HIV by using condoms each time they had sex (Mbelle et al., 2014). Akpan, Ekott and Udo (2013) also note that students in HEIs have high levels of awareness on how to prevent HIV infection. Their study findings revealed that all participants reported knowing about the male condom, and that it was used for prevention of STIs inclusive of HIV (Akpan, Ekott & Udo, 2013). This suggests that the majority of students in HEIs have substantial knowledge that HIV infection can be prevented by using condoms.

Although studies have shown high awareness and seemingly good knowledge levels regarding HIV transmission among students in HEIs, it appears that their knowledge was not sufficient with regards to how to prevent HIV infection. It also appeared that students did not always have fully accurate knowledge. Even though the knowledge was reasonably good, it

could be better given the heightened HIV epidemic in South Africa. Mbelle et al. (2014) noted that a high proportion of students (84%) knew that STIs put people at greater risk of HIV infection; however, only 48% of students acknowledged that having anal sex increased the risk of HIV infection. Noteworthy is that there was also a lack of knowledge among students with regards to cure for HIV. Approximately 26% of students did not know that there was no cure for AIDS (Durojaiye, 2011). Correspondingly, in Mbelle et al.'s (2014) study, about 30% of students were not aware that AIDS cannot be cured. In line with this finding, Akpan, Ekott and Udo (2013) also highlight that, even though students had high levels of HIV awareness and some knowledge, they had little in-depth knowledge about HIV prevention. This suggests that there is less extensive understanding and knowledge of the exact risks with regards to unprotected sex and HIV risk and prevention. There may be a significant knowledge gap between perceived knowledge (what they think they know) and actual (ideal) knowledge among students in HEIs (Akpan, Ekott & Udo, 2013). The study findings of Akpan, Ekott and Udo (2013), in assessing for correct use of the male condom among the students, revealed that most condom users reported errors related to incorrect use of condoms in the previous three months and only 26% of them reported no error. In the study, only 29% of the participants strongly agreed that a male condom was most effective in preventing STIs/HIV, while 44% agreed, 14% did not agree and 9% had no knowledge in this regard (Akpan, Ekott & Udo, 2013). In addition, only 65% agreed that the main reason for using condom was for prevention of STIs/HIV (Akpan, Ekott & Udo, 2013). In Hoffman et al.'s (2017) study, knowledge of prevention for HIV and pregnancy was sub-optimal. Among those who used a condom, 68% reported use for both pregnancy and STI/HIV prevention, 29% for pregnancy prevention only, and 3% for disease prevention only (Hoffman et al. 2017). The reason for a low percentage of condom use for pregnancy prevention could be that, South Africa has highly effective methods of contraception available, and this may reduce participants' views on the need for condoms to prevent pregnancy.

2.8.1.1 (c) Awareness and knowledge of HIV transmission do not necessarily lead to safer sexual behaviour

One would expect that those judged to have good knowledge on HIV transmission and prevention would be more likely to utilize condoms. However, it appears that high levels of awareness of HIV and knowledge of how the disease is transmitted do not translate into safer sexual practices. Ndabarora and Mchunu (2014) highlighted in their study that high levels of

knowledge on HIV/AIDS did not correlate with utilisation of any of the HIV prevention methods. Although the overall mean knowledge of HIV/AIDS score among students was high, at 82%, only 43.9% of participants reported that they had utilised condoms (Ndabarora & Mchunu, 2014). These findings correspond with Akpan, Ekott and Udo's (2013) study, which reported high levels of awareness and knowledge, where all participants reported knowing about HIV transmission and prevention, but consistent use of condom was low. Among the sexually active participants, only 36.5% and 44.2% were using condoms consistently with a steady partner and casual partner respectively, and 19.3% of them had not used condom consistently at all (Akpan, Ekott & Udo, 2013). This showed significant disparity between condom awareness and utilization (Akpan, Ekott & Udo, 2013). Blignaut, Jacobs and Vergnani (2015) identified the point that most intervention programmes among adolescents for example, increased knowledge but were not really effective in changing behaviour. Therefore, better knowledge of condoms does not correlate positively with their utilization. Ndabarora and Mchunu (2014) conclude that, even though various studies on students in HEIs have shown that they have heightened awareness and knowledge about HIV/AIDS, as well as HIV modes of transmission, this does not correspond with safer sexual behaviour. Therefore, although awareness of condom use has increased, there is a wide gap between its knowledge and practice (Akpan, Ekott & Udo, 2013). Mazibuko and Nkune (2014) point out that knowledge about HIV and sexual issues does not strictly predict safer sexual behaviour.

2.8.1.2 Beliefs and misconceptions

Some students may not engage in safer sexual practices due to misconceptions or myths and beliefs about how HIV is contracted, and some misconceptions are related to condom use. Mehra et al. (2014) highlight that empirical evidence from studies of students in South African HEIs found that some students' intentions to use a condom were influenced by various normative beliefs. Mbelle et al.'s (2014) study that also revealed high levels of HIV knowledge, reported that only 62% of students knew that people could protect themselves from acquiring HIV by not having sexual intercourse. A quantitative study by Fiaveh (2012) investigating condom myths and misconceptions among 600 male students aged 19-24 years in a West African University in Ghana revealed that a number of students still did not practise safer sexual activities because of certain myths and misconceptions. A cross-sectional study

by Masoda and Govender (2013) examining knowledge, attitudes and practices of condom use among students in HEIs (18–33 years old) in the Congo revealed similar misconceptions, in which 33% of participants reported fearing condoms tearing inside the vagina, and 24% said that condoms can be retained within the vagina. This indicates that, although there are overall high levels of knowledge on HIV/AIDS among students, misconceptions about condom use still persist.

Fiaveh (2012) reveals that condom use was reported as implying sexual promiscuity. In his study, condom use was believed by 11% of participants to encourage sexual promiscuity and lead to mistrust (Fiaveh, 2012). Akpan, Ekott and Udo (2013) note that young people tend to use condoms more likely inconsistently and they often engage in unprotected sex, due to friends, family or partners regarding condom use as a sign of sexual promiscuity. These beliefs lead to the mistrust of a partner if using condoms, which does not augur well for a good relationship (Fiaveh, 2012). In addition, Fiaveh (2012) notes that some participants had misconceptions that condom use is for prostitutes only (0.3%) and encourages multiple sexual partnerships (6%), while others believed that condom protection against HIV depended on the brand of the condom. These views might have a negative impact on condom use among students in HEIs; however, further investigation is needed to confirm whether they do contribute to the low utilisation of condoms.

2.8.1.3 Characteristics and status of relationship

In keeping with the results of some of the youth studies discussed earlier, the type of intimate partner relationship status and its duration seem to influence the use and non-use of condoms, with students in HEIs reporting that they did not use condoms as much with main sexual partners as they did in casual relationships. This suggests that condom use with steady partners tends to be lower than condom use with casual partners. For example, the study conducted by Mbelle et al. (2014) reported patterns of condom use in relationships to be lower with a main partner (55%) compared with those with non-regular partner (75%). Forty percent of male participants felt that condoms should only be used if having sex with a person who is not the main partner, supported by 27% female students holding this view (Mbelle et al., 2014). A study by Mazibuko and Nkune (2014) on South African HEIs' students revealed that condom use within stable relationships decreased over time and eventually ceased

altogether. Mazibuko and Nkune (2014) note that young people in casual relationships tend to use condoms more, as compared to those in exclusive relationships. This has been linked to the enhanced trust in an exclusive relationship and the related perception that they were no longer at risk of infection (Mazibuko & Nkune, 2014).

Mantell et al.'s (2011) study found that, generally, once a sexual relationship had been in existence for a while and trust had been secured, then it was common for a couple to discontinue condom use, as male students reported that condom use stopped later on when the relationship was stable. Research in South Africa and other countries also suggested that long-term relationships are a barrier to condom use, as with the development of trust between the partners, they tended to discontinue using condoms. In the same study by Mantell et al. (2011), most male students reported that when they were in a stable relationship, and the female suddenly wanted to introduce a condom, they would conclude that this meant that she had slept with another man, which would result in a loss of trust in that relationship. This implies that an initial non-use of condom followed by a woman's introduction of a condom may connote infidelity or unfaithfulness on her part to her partner (Mantell et al., 2011). This also suggests that, once trust has been established, fidelity is expected and, as a result, condom use declines among sexual partners (Mantell et al., 2011). Consistently, Durojaiye (2011) also notes that trust in partners was the main reason given by students who did not use condoms in her study. Hence, people in stable relationships may be at highest risk for HIV infection, especially when sexual relationships are failing on mutual faithfulness.

2.8.2 SOCIAL FACTORS

2.8.2.1 Socio-behavioural factors

A number of socio-behavioural factors influence condom use among students in HEIs.

2.8.2.1 (a) Use of alcohol among tertiary institutions' students

Alcohol consumption among students in tertiary institutions appears to be very common. In the HEAIDS 2010 study of 21 HEIs in 2008-2009, alcohol use was reported by 35% of the participants, while Mbelle et al. (2014) demonstrate an increase in 2014 to approximately 59.5% of students admitting to alcohol consumption. Studies have revealed that excessive

alcohol use is widely recognised as a risk factor for sexual risk-taking which may potentially lead to HIV transmission among students in HEIs (HEAIDS, 2008; Choudhry et al., 2014; Mbelle et al., 2014). HEAIDS (2008) note that alcohol drinking often leads to unplanned, casual and unprotected sex. In their study, most students admitted that they engaged in unplanned and unsafe sexual activities when they were drunk (HEAIDS, 2008). Clinic staff members also described that the students' STI incidents and requests for pregnancy tests and emergency contraception were higher following the university's entertainment "bashes" during which they consumed alcohol (HEAIDS, 2008:44). This suggests that alcohol use increases the likelihood of risky sexual behaviour as it may contribute to unplanned (sleeping with a new partner) and unprotected sex. This implies a significant correlation between alcohol drinking habits and unsafe sexual activity (Blignaut, Jacobs & Vergnani, 2015). Also, in the 2010 study on Ugandan university students, alcohol consumption in relation to sex was found to mediate the association between low condom efficacy and inconsistent condom use with a new sex partner (Mehra et al., 2014). This suggests that students in HEIs using alcohol in sexual situations are more likely to engage in unsafe sex. This correlation appears to be a result of one's cognitive capacity being restricted, decision-making power and judgement being impaired due to alcohol consumption (Blignaut, Jacobs & Vergnani, 2015). Consequently, when one's judgement is impaired, it is less likely to identify potential dangers such as the risk of contracting HIV including other STIs (Mehra et al., 2014; Blignaut, Jacobs & Vergnani, 2015). Furthermore, Ramsoomar-Hariparsaad (2016) concludes that alcohol drinking patterns affect sexual decision-making, including condom negotiation, and resulting in unsafe sexual practices. Thus, the contribution of alcohol to risky sexual behaviour has been implicated in the spread of HIV and other STIs (Choudhry et al., 2014; Mbelle et al., 2014).

Alcohol is often easily available to students in HEIs, and its use is significant, especially during university events, in which students may encounter new sexual partners, and be exposed to unprotected sex. The study findings of HEAIDS (2008) highlight that newer students are more likely to socialise on campus initially than older students, who prefer socialising off-campus at places such as night clubs and bars. HEAIDS (2008:44) further point out that their qualitative results suggest that there is a campus culture of excessive drinking at campus "bashes". In their study, most students admitted attending entertainment events (bashes) hosted at HEIs and reported that at these events is where they used alcohol

(HEAIDS, 2008:44). In Mbelle et al.'s (2014) study it is reported that about 60% of students reported that they consumed alcohol, while HEAIDS (2008) revealed that 6% reported being drunk more than once a week. Choudhry et al.'s (2014) cross-sectional study conducted among undergraduate students at Mbarara University in Uganda, exploring patterns of alcohol consumption and risky sexual behaviours, revealed frequent alcohol consumption to be common, reported by 13% of respondents.

Alcohol consumption during or before sexual activity appears to be common in the tertiary institution's environment and may contribute to unprotected sex and risk of contracting STIs and HIV infection, as decision making is compromised by the alcohol intake. Choudhry et al. (2014) note that 20% of their participants who reported drinking also reported using alcohol in conjunction with sexual activity. In Mehra et al.'s (2014) study, 21% of participants reported frequent consumption of alcohol on the occasion of sexual intercourse. Blignaut, Jacobs and Vergnani (2015) further highlighted a significant increase occurring over time in students reporting engaging in sexual activities when under the influence of alcohol, from 20% in 2007 to 35% in 2011. In addition, Hoffman et al. (2017) highlighted gender differences, with men more likely than women to report sex while drunk than women (47% vs. 25%). It is difficult to know whether this difference is a real or reported difference as a result of expected gender normative behaviour.

In this regard, it is possible that excessive consumption of alcohol may be influenced by exposure to a more liberal environment, such as that of being in a relaxed environment of HEIs, affording freedom from parental control, and which may encourage students to behave in ways that they would not, had they been in a different environment such as their homes. This is a concern as the alcohol use is mostly associated with risky sexual practices among young people and students in HEIs are a sub-section of this population group.

2.8.2.1 (b) Multiple sexual partners among students in HEIs

It appears that the tertiary institution's environment may be a space of sexual exploration, as some students engage in HIV risk associated sexual behaviours such as multiple, and particularly, concurrent, sexual partner relationships. Various studies conducted in several HEIs in a variety of African country settings have shown that a significant proportion of students at tertiary institutions report engaging in MCPs (Durojaiye, 2011; Akpan, Ekott &

Udo, 2013; Heeren et al., 2014; Hoffman et al., 2017). In a study by Akpan, Ekott and Udo (2013) among students in a Nigerian HEI, of the 72.4% of students who reported that they were sexually active, 43.6% reported having MCPs. This is consistent with the findings of Heeren et al. (2014), who reported that of the 65.6% of students who were sexually active, 44.1% reported having MCPs. Also, in Durojaiye's (2011) study, results show that about 52.7% participants had MCPs. This is a concern, as this can place them at risk of contracting HIV and other STIs. Thus, Maharaj and Cleland (2011) suggest that reducing the number of sexual partners and respectively being in a mutually monogamous relationship with an uninfected partner is one of the reliable methods to avoid HIV, which can significantly slow the spread of HIV.

In Heeren et al.'s (2014) study, findings reveal differences in gender, in which a greater percentage of males (61.5%) reported having MCPs than females (17.1%). This was similar to Hereen et al.'s (2009) study that also found gender to be related to having MCPs, in which more men (28%) reported multiple partners than women (12.4%). Correspondingly, Hoffman et al. (2017) revealed that a concurrent partnership in their study was reported by 43% of men and 7% of women. This is in line with another qualitative study by Batidzirai et al. (2014) on tertiary institutions' students aged 18–28 years old coming from different parts of South Africa and from other African countries like Zimbabwe, Lesotho, Botswana, Swaziland, Nigeria, Kenya, Malawi and Congo, revealed the practice of having MCPs to be more commonly found among male students, as most male participants in the study reported having multiple sexual partners.

Some studies show that MCPs are associated with non-condom use (Durojaiye, 2011; Akpan, Ekott & Udo, 2013; Heeren et al., 2014). For example, Heeren et al. (2014) reveal that of those students who have MCPs, 55.9% reported having unprotected coitus more frequently. Durojaiye (2011) also notes that in the 52.7% of participants that reported having MCPs, only about 52.3% of them refused sex without a condom, indicating approximately 48% who gave in to unsafe sex with multiple partners. This suggests that having MCPs may contribute to non-condom use. This is a concern, as failure to use condoms is a key factor contributing to an increased risk of contracting and transmitting HIV infection.

Studies also show that MCPs are associated with inconsistent condom use (Heeren et al., 2014). The study by Heeren et al. (2014) found that students who reported having multiple partners also reported using condoms less frequently than did their counterparts who reported having only one partner. Mehra et al. (2014) also found that multiple sexual partners had a significant association with inconsistent condom among students. Hence, USAID (2013) highlights it as a concern that MCPs undermine the progress of many HIV prevention interventions.

2.8.2.1 (c) Socio-cultural factors and gendered relations

Findings of studies from a variety of African countries including South Africa, have found unequal gender relations, in which men dominate decision-making in sexual relations, to have a negative impact on safer sexual practices. The gender power imbalance issue is revealed in a quantitative case study that explored the effects of gender attitudes on sexuality, and behaviour regarding HIV prevention, conducted on students in a Zimbabwean tertiary institution, in which male (62.5%) and female (47.5%) students reported that men had the right to control and dominate their sexual partners (Chinangure & Mutekwe, 2014). This lack of control in the conduct of a sexual relationship may expose women to a greater risk of unwanted pregnancies and STIs, including HIV (Mehra et al., 2014). Correspondingly, Chinangure and Mutekwe (2014) emphasise that gender inequality contributes to rates of HIV infection in institutions of higher education. Mantell et al. (2011) note that traditional gender norms and power imbalances between women and men have long been recognized as key drivers of the HIV epidemic in South Africa. Consequently, this has a negative impact on the female students' power to negotiate for safer sex. This context of inequitable gender power is further highlighted in the study by Mantell et al. (2011), which found that open discussion of condom use between sexual partners was not the norm. In the male only study, participants viewed it as men's responsibility to carry condoms and have them available when sex occurred (Mantell et al., 2011).

Another issue that strongly emerges is that various studies in this context suggest that women have less control in sexual relationships with regards to condom use due to gendered cultural norms and inequitable power relations. In Protogerou et al.'s (2013) mixed-method study examining predictors of condom use among a tertiary institution's undergraduates in the Western Cape Province of South Africa, gender has been identified as an important influence

in condom use. Protogerou et al. (2013) attributed higher rates of HIV infection in females, inconsistent condom use, and non-condom use, to gender-based power differences. Mehra et al. (2014) note that a possible explanation for the gender differences regarding inconsistent condom use in their study might be women's fears that condom use may lead to rejection. Young female students have difficulty demanding condom use for fear of losing a partner. This is again supportive of the HIV epidemic being driven by sociocultural factors which foster gender inequalities (Mehra et al., 2014).

Societal expectations play a role in influencing and encouraging young males to be dominant and controlling in sexual relationships with women, and to have MCPs. Chinangure and Mutekwe (2014) highlight that in their study in a Zimbabwean tertiary institution , one of the findings was a substantial proportion of both female and male students surveyed (55%) who held the view that, generally, men are not satisfied or contented by one woman sexually. Furthermore, Chinangure and Mutekwe (2014) argue that the greater vulnerability of female students to HIV in part stems from socio-cultural norms around gender that have promoted male superiority and control over women. Chinangure and Mutekwe (2014) found in their study that about 50% of female students believed that their role was to satisfy their male partners' sexual desires. This suggests that female students assent to and are influenced by the societal expectations (structural factors) driving gender inequality favouring males. It also indicates that female students tolerate male promiscuity, turning a blind eye to this because of gender norms, which places them at risk for contracting STIs. Gender stereotypes regarding masculinity give men, including young male students, pride and encouragement to use tradition or culture as a vehicle for power and promiscuity. Within this context of unequal gender power relations, female students' ability to protect themselves against HIV infection is constrained. Consequently, the gender inequality undermines efforts to prevent HIV.

Being seen to carry condoms tends to be more stigmatised among women. In HEAIDS' (2010) mixed-method study, some female participants reported getting worried at what other people's thoughts of them would be if they were known to carry condoms or initiate condom use. They feared that particularly men would view women who initiated condom use as having many sexual relationships. These gendered views may lead to female students finding it difficult to protect themselves from unsafe sexual behaviours.

2.9 THEORETICAL FRAMEWORK

The study adopts the Social Ecological Model (SEM) as a theoretical framework as a basis of inquiry and it will also be applied to organise and discuss the investigation and the key findings of this research. The figure of the model is contained in Chapter Five.

2.9.1 SOCIAL ECOLOGICAL MODEL

The Socio-Ecological Model (SEM) that is being applied, was originally developed by Bronfenbrenner (1979) as cited in Corcoran (1999) and adapted by Larios et al. (2009). The purpose of the SEM is to describe the multiple levels of influence on behaviour (Larios et al., 2009). This framework is normally used to better understand sexual violence and the effect of potential prevention strategies (CDC, 2015). However, in this study the framework is employed to investigate and discuss contextual influences on condom use and STI risk behaviours (Larios et al., 2009). Larios et al. (2009) argue for this framework's value for examining the multiple levels of influence on attitudes and behavior, providing researchers with a broad basis on which to understand personal and contextual influences on attitudes and use of condoms and STI risk behaviours. The subject of condom use could also be assessed based on the theoretical framework of SEM applied in the Wisconsin's Strategic Plan for the Prevention of Sexual Violence 2010-2015 by the Wisconsin Prevention of Sexual Violence Plan Committee in 2009, which consists of five levels. The model considers the multifaceted interplay between the levels of influence, which are: individual (personal), relationship interpersonal), community, institutional and broad societal factors (United States of America, Wisconsin Prevention of Sexual Violence Plan Committee, 2009; Larios et al., 2009; CDC, 2015) (see Figure 5.1 in Chapter 5). In the present study, these levels of influence are applied to identify factors that place students in HEIs at risk of unprotected sex.

The first level, which is the individual factors, identifies biological and personal factors such as education or substance use (CDC, 2015). The second level examines close relationships, such as a person's closest social circle-peers, partners and family members that influence their behavior (CDC, 2015). Community is the third level exploring the settings in which social relationships occur (CDC, 2015). Institutional structure is the fourth factor that includes the environment (such as the university's health services) which can influence health behaviours by making condoms available (Larios et al., 2009). The final level looks at the broad societal

factors (inclusive of social and cultural norms) that help create a climate in which the phenomenon is encouraged or inhibited (CDC, 2015). In using SEM as a framework, the present study took a multilevel approach to examine how individual, interpersonal, community, institutional and broad societal factors influence condom use among students in HEIs, who are at high risk for contracting HIV infection. In addition, the significance of the SEM to this study is displayed in the discussion and recommendation chapters.

2.10 CONCLUSION

In this chapter, appropriate literature and evidence from other studies have been reviewed. Most results from the literature search and reviews indicate that, although HIV/AIDS prevention strategies are in place, there is still a crucial need to focus on problems concerning HIV/AIDS modes of transmission as they are a potential concern for young people, including students in HEIs. Various research studies indicated quite a number of factors that affect condom use, as well as the perceived and experienced obstacles and challenges in this regard. However, gaps were identified. For example, most of the literature reviewed in this chapter is based on findings from quantitative research. There is limited literature available specifically on studies conducted in HEIs in the Cape Town area on the issues under investigation in the study I conducted, particularly using qualitative methods of research. While some of the studies reviewed conducted elsewhere in South Africa and in other countries included quantitative and some qualitative data on knowledge about HIV and its prevention and attitudes and perceptions towards condom use, there is a paucity of qualitative studies that include an exploration of condom use practices. Thus, there is also little research that has explored the perceptions of male students pertaining to convenience in using condoms, including the length of time it takes to open and put on the condom; this relates to complaints that have been reported regarding the difficulty of putting on a condom during ‘the heat of the moment’. There is also a noticeable dearth of qualitative studies that focus on female condoms. This is particularly the case at the HEIs, with studies by Mantell et al. (2011) being exceptions. Most research in this context has made use of quantitative methods, and very few studies have chosen qualitative methods. The next chapter will identify and substantiate the methodology of the study.

CHAPTER THREE - RESEARCH METHODOLOGY

3.1 INTRODUCTION

The preceding chapters introduced the study and reviewed literature relevant to the phenomenon under investigation. This chapter presents, substantiates and discusses the methods used to conduct the study. It focuses on the research design employed and provides details of the study sampling technique, sample size, data collection and management. It describes the analysis process and the conceptual framework that informed analysis. It concludes with techniques utilised to ensure study rigour, and also documents ethical considerations.

3.2 RESEARCH DESIGN AND METHODS

Welman, Kruger and Mitchell. (2005) describe a research design as the overall plan for collection of research information. It incorporates the investigation strategy used to best answer the research question and meet the study aim and objectives.

Qualitative research enables us to provide a description of phenomena in detail, from the perspectives of the people involved (Brink, 2006). It is concerned with how the social world is interpreted by those involved in it, emphasizing the world of experience as it is lived, felt and experienced by people acting in social situations (Brink, 2006; Robson, 2011).

A qualitative research approach covers an array of interpretive techniques which seek to describe and come to terms with the meaning of naturally occurring phenomena in the social world (Welman, Kruger & Mitchell, 2005). These help the researcher to understand social phenomena in natural surroundings. Welman, Kruger and Mitchell (2005) note that qualitative research is based on a flexible design with exploratory methods enabling the researcher to change the data collection progressively, where appropriate. The researcher can constantly evaluate the quality of data emerging (Robson, 2011) and adopt different strategies should the need arise. This ensures that comprehensive data is attained, and an extensive

understanding of the phenomenon gained in context. Since this study aimed at gaining rich in-depth knowledge and a deeper understanding of factors hindering and facilitating condom use among students, a flexible qualitative research design and methods were considered most appropriate. Qualitative study methods were considered most helpful in understanding students' underlying attitudes, perceptions and behaviour with respect to condom use, and in probing the *how* and *why* of the phenomena under investigation occur.

3.3 POPULATION AND SAMPLING

3.3.1 THE STUDY POPULATION

A study population is the larger group (Robson (2011) from which a sample of participants is drawn (Robson, 2011) or the entire group of individuals that is of interest to the researcher (Brink, 2006). The overall study population that this study is concerned with was sexually active students, aged 18–24 years, studying full-time at the CPUT, Cape Town campus. Key informants (KIs) comprised a group of students within the same age range, who are also experienced Peer-Educators (PEs), working in the peer-education program within the HIV unit at CPUT for more than a year. PEs are trained and equipped with skills and knowledge that allow them to become agents of change amongst their peers in the context of HIV/AIDS, STI and TB, by spreading the word about HIV/AIDS prevention and control. In this way, they recruit and encourage their fellow students to live a more responsible and healthy sexual lifestyle. In this regard, their roles involve assisting during awareness activities by providing education to their peers and they are also key helpers in the condom promotion programme in terms of demonstration and distribution of condoms. The study site has been discussed in Chapter One.

3.3.2 SAMPLE SELECTION AND METHODS

In qualitative research, the appropriate identification of a sample of suitable participants is one that can yield a comprehensive and broad understanding of all facets of the phenomenon in question (Brink, 2006). The researcher employed purposive sampling for this study, most common in qualitative research, which selects either a spread of those who are most typical or from whom one can learn the most, (Brink, 2006).

Two samples were purposively drawn from the study populations. One sample was purposively selected from full-time students considered typical of the student population at CPUT, based on eligibility criteria relevant to the study focus. The other sample consisted of KIs who were selected on the basis that I, as the researcher considered I could learn much from them on the study topic. The study sample size was 20 participants comprising of 16 students and 4 KIs. The first sample size was sixteen students. The second sample size was four KIs. A pilot study was conducted with two students and one KI. The eligibility criteria below were used.

3.3.2.1 Inclusion criteria

- CPUT university students:
  a) Being within the age range of 18–24 years. The starting point of 18 years was chosen as it is rare to find students younger than 18 years at HEIs. In addition, it would have been practically difficult to include minors in the study as they are not able to give consent without parental or a guardian's permission. 24 years was used as the upper age limit cut-off point because the majority of students studying at CPUT fall within this upper age limit range. Evidence from the literature also suggests that young people aged 18–24 years are likely to be a particularly vulnerable risk group for HIV infection. In addition, from a practical perspective, older students would have been difficult to approach for study participation as most of them are part-time students attending evening classes.

  b) Heterogeneity was taken into consideration so that the sample would include a spread of male and female students. As condom use was being explored as part of the study, only students who were sexually active at the time of the study were included. This was irrespective of whether they were condom users or condom non-users. Screening for being sexual active was determined during the recruiting period and confirmed during individual briefing sessions after recruiting potential participants, described in further detail below. If a potential participant was identified as not sexually active, she or he was excluded.

c) Only full-time students were included, as full-time students have the benefit of having full access to the HIV prevention strategies of CPUT and were most accessible for research purposes.

❖ Key Informants:

Criteria for KIs' selection included:

a) Being an experienced PE identified as working within the HIV unit at CPUT for more than a year, studying at CPUT and being within the same age range as students. They were selected as they could provide insights into students' views and challenges in condom use through their work as PEs.

3.3.2.2 Exclusion criteria

Students with conditions that made them unable to give informed consent and be interviewed were not included in the study.

3.3.3 PARTICIPANT RECRUITMENT

Potential student participants were recruited from a student population that participated in a HIV Counselling and Testing (HCT) campaign that took place during March 2016 on CPUT's Cape Town campus. Students participating in this campaign were approached regarding whether they would be interested in participating in a research project on exploring attitudes, practices and perceptions of CPUT students towards condom use from the perspectives of students and student peer educators. During the period of recruitment, the researcher met privately with students expressing an interest in study participation in a private space created during the campaign for students seeking individual information on HIV or requesting HIV counselling and testing. This was so as to determine their eligibility for study participation in terms of age, sexual activity and student status. The researcher requested contact details from twenty students who appeared eligible and had expressed interest in study participation so that she could make appointments to meet them individually at a later point to provide them with further information on study participation. There was potential bias, as the students volunteered to take part in the study. Nevertheless, they were likely to have similar views as the rest of the students at CPUT.

During the last week of April 2016, all the twenty students recruited and expressing initial interest were contacted and kept an appointment with the researcher in which she provided them with a study information sheet, answered questions they had about study participation and reconfirmed their eligibility and continued willingness to participate. During this second meeting they were still all willing to participate. They were also informed that a signed consent would be acquired on the day of the interview prior to the session of data collection being conducted (See ethics procedure described below). Interview appointments were then scheduled for a pilot study and for formal data collection. Interview sessions were scheduled to accommodate participants' availability, with most participants preferring to be interviewed during their lunch breaks, owing to their academic timetabling.

KIs were recruited through their visits to the HIV unit as peer educators. They were informed of the study purpose and were all willing and selected for study participation. After providing their initial verbal consent, further appointments were scheduled for further explanation of the study, to reconfirm their eligibility and provide them with a study information sheet. The signed informed consent form would be acquired on the day of the interview before the session. Thereafter, interview appointments were scheduled for a pilot study and for formal data collection.

3.4 DATA COLLECTION

On the first week of May 2016, drafts of the data collection tools were piloted: The students' Interview Guide with two students (who were from the initial list of twenty students) to verify clarity and understanding, leaving a remainder of eighteen students to continue with formal data collection. A draft of the data collection tool, Interview Guide for Peer Educators, was also piloted with one KI. The formal data collection took place for a month in May 2016 starting in the second week. The researcher collected data using semi-structured interview guides (see Appendices 4 and 5) in individual in-depth face-to-face interviews. Individual in-depth interviews were chosen as more appropriate than focus group discussions due to the personally sensitive information being discussed with participants. I initially planned to interview eighteen particpants (who kept the interview appointments), but stopped at the

sixteenth one as data saturation occurred. Four KIs were also interviewed. The researcher conducted five interviews per week over three days of each week for the duration of data collection. During the remaining two days of the week the researcher transcribed interviews so as to determine whether the interview guides needed further modification, clarification or editing for upcoming interviews. A reimbursement of R60 was provided to participants for time spent in interviews and to cover transport costs because some participants returned to campus for interviews on the days that they were not attending classes. All the interviews took place in the CPUT's library board room to allow privacy and quiet.

The researcher collected a brief socio-demographic profile using a demographic form (see Appendices 6 and 7) from each participant prior to the interview sessions commencing. Student and KI interviews were conducted using a semi-structured interview guide, including probes to elicit further information and clarity (See Appendices 4 and 5). Interviews were audio-taped, with participants' consent. The researcher also took hand-written notes to capture facial expressions or mannerisms relevant to the study. The researcher transcribed each interview soon after it had been held. Data collection continued until saturation occurred. English was used in participant information sheets, consent forms and as the language of the interviews, as English is the medium language of instruction at CPUT. However, if a student expressed a preference to be interviewed in a language other than English, the investigator made arrangements for the interview to be conducted in their language of preference. However, no one was elected to do interviews in any other language, as all participants were comfortable being interviewed in English.

3.5 DATA MANAGEMENT AND ANALYSIS

The data was managed and analysed manually. After developing transcripts of the data recordings, the investigator printed the transcripts with wide margins on the right-hand side, for the identification of codes. After careful reading through the transcriptions several times, the researcher made notes in the margins on each transcript using words and short phrases to sum up what was described in the text to develop first-level codes. This was done by marking section of the text using different colours of highlighters and grouping descriptions that were relevant to the emerging themes. Codes developed from summaries were further developed into categories. Thematic content analysis was used to eliciting meaningful trends or themes

emerging from the data in each interview and across interviews (Robson, 2011). These themes are demonstrated in the results chapter. An independent coder (the researcher's thesis supervisor) was requested to independently code a selection of the interviews. A discursive meeting was held between the researcher and her supervisor for coding agreement and reconciling data interpretation into themes. See Appendix 8 on how the categories, themes and codes salient in the data were represented (classification of themes) and Appendix 9 for the framework used in coding the data.

3.6 RIGOUR

Study rigour was addressed by ensuring credibility and trustworthiness through triangulation, member checking and researcher reflexivity. Triangulation of data occurred by interviewing two different samples, i.e. students, as well as peer educators as KIs. Immediately after each interview, the researcher performed member checking by summarising the information obtained and asking participants to review, validate and verify the researcher's understanding of the information gathered.

The researcher applied continuous reflexivity to ensure an open mind, and carefully noted her personal conceptions, attitudes and known information about the study population and the subject under investigation. Reflexivity was also ensured by the researcher, developing and keeping a research journal to record her own feelings and experiences during data collection. This helped her to reflect on, recognize and describe any beliefs and biases that may have impacted on the research process, and the outcomes thereafter. At times, the researcher felt overwhelmed by the information that she collected and used her Unit manager for debriefing.

Rigour was also ensured through the researcher asking her mini-thesis supervisor to independently code selections of the data and extract themes for analysis. This was done to limit own biases, as the researcher works in the study setting where the research took place. Additionally, to enhance the data credibility, the study findings were compared with literature on other similar studies to compare results and reflect on similarities, differences and new information emerging.

3.7 ETHICS CONSIDERATIONS

Prior to data collection, permission to conduct this study was approved by the researcher's department (the HIV Unit at CPUT) which is the study site, as well as by CPUT's Senate Ethics Committee. Approval for the methodology and ethics was also granted by the UWC's Senate Research Committee, the institution where the researcher is studying.

Potential participants were provided with a participant information sheets that explained the purpose of the study and requested their participation (see participant information sheets, Appendix 1 and Appendix 2). Participation in the study was voluntary, with potential participants informed of their right to refuse participation or discontinue participation at any stage during the interview or to refuse to answer particular questions. They were assured that neither participation nor non-participation would in any way affect their position at CPUT. An explanation was provided to participants that there would be no direct benefits to them individually, but that the findings of this study might benefit others within the population through better understanding of issues that support or hinder students in condom use in trying to prevent risks of infection with HIV. I also explained that I hoped that the insights gained in the study would contribute to CPUT providing the HIV prevention programs that take better account of the issues that facilitate or hinder students in using condoms to protect themselves against the possibility of HIV infection. Written informed consent was obtained from all participants (see consent form, Appendix 3). I assured participants of the confidentiality of their personal information and anonymity. To protect the identity of participants, the names of those interviewed were replaced with study identification numbers. Consent forms and transcripts were kept separately to ensure that the participants' names on the consent forms were not traceable to their interview transcripts. The participants were also assured that they did not have to divulge any information if they felt uncomfortable doing so. I tried to create an atmosphere in which participants felt relaxed and comfortable during the interview sessions.

Brink (2006) notes that during interviews, the researcher must carefully monitor the participants for any signs of distress, and should this occur, the researcher needs to facilitate debriefing by giving participants the opportunity to ask questions, and if necessary, refer them for counselling or support. Participants were informed that if they felt distressed in any

way they could be referred to the student counselling unit. During one interview, a participant became very emotional and cried at the end of the interview session. This was not due directly to the interview questions but to personal problems that she said she was experiencing in her intimate relationship. In this case, I arranged for counselling and support for the participant and provided her with a written referral letter to the campus student counselling unit, as well as accompanying her, to provide her with support, going to the unit.

3.8 CONCLUSION

In this chapter, the study design and methods were described in detail**.** In the next chapter, the fourth chapter, the research findings will be presented.

CHAPTER 4 – RESULTS

4.1 INTRODUCTION

This chapter presents the findings from the interviews of the study's student participants and key informants (KIs). I first deal with themes that emerged regarding participants holding positive or negative attitudes towards condoms. I then deal with factors promoting or hindering students in their condom use practices. I also present the combined results from both student and KIs interviews, highlighting themes that were common.

4.2. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

A total of 20 participants (comprising 16 students and 4 KIs) meeting the inclusion criteria were interviewed. **Tables 1 and 2** describe the characteristics of the students and the student peer-educators respectively.

Table 1. Socio- demographic profile of student participants

Characteristics	Number
Sex	
Male	6
Female	10
Age categories	
18 – 21	11
22 – 24	5
Race	
Black	10
Coloured	5
White	1
Relationship status	
Having one partner	10 females

Having multiple concurrent partners	6 males
Province of origin	
Eastern Cape	9
Western Cape	6
Gauteng	1
Current year of study at University	
1st year	3
2nd year	9
3rd year	4
4th year	0

Table 2. Summary of demographic profile of student peer educators (KIs)

Characteristics	**Number**
Sex	
Male	2
Female	2
Age categories	
21 – 24	4
Race	
Black	4
Province of origin	
Eastern Cape	3
Mpumalanga	1
Current year of study at University	
3rd Year	3
4th Year	1
Years of counselling experience	
2 years	3
3 years	1

4.3 ATTITUDES TOWARDS CONDOM USE

4.3.1 POSITIVE ATTITUDES

4.3.1.1 Protection against sexually transmitted infections and pregnancy

The health benefits of condoms dominated participants' positive perceptions of and attitudes towards condom use. Participants viewed the method as offering them the best personal protection against sexually transmitted infections. The following comments are typical of participants' attitudes:

> *There is no other protection from all the sicknesses…so it's protecting us mainly* – (Participant 4, female).

> *It gives like 99% protection rate against diseases, so I think it's very important to using condoms* – (Participant 15, male).

> *They protect us from being infected with HIV and AIDS and diseases such as STIs* – (Participant 9, male).

Avoiding unintended pregnancy was another reason mentioned for being in favour of using condoms:

> *The fact that I don't wanna* [want to] *fall pregnant* – (Participant 7, female).

> *It prevents unwanted pregnancies…*– (Participant 14, male).

4.3.1.2 Effective protection entails correct and consistent condom use

Participants showed awareness that effective protection was dependent on correct and consistent use. The following is illustrative of the views expressed:

> *I think it offers best protection if it is used in the correct way* – (Participant 2, female).

They are not 100% if you don't use them properly – (Participant 12, male).

Every time someone engages in sex they should use condoms…there isn't a time someone shouldn't use a condom because they are putting their lives at risk by not using a condom – (Participant 10, female).

I think a person should use condoms every time they are having intercourse….it prevents unwanted pregnancies, and it prevents being infected with HIV/AIDS – (Participant 14, male).

4.3.2 NEGATIVE PERCEPTIONS AND ATTITUDES

Negative perceptions and attitudes to condoms related primarily to issues of sexual pleasure and uncertainty about their protection value.

4.3.2.1 Condoms decrease sexual pleasure

Negative attitudes to condom use were primarily related to decreased sexual pleasure or disrupting the sexual experience. Condoms were perceived to reduce sexual sensation, whether this was based on personal experience or influenced by popular opinion:

You feel more pleasure when you not using it [condom] *than when you are using it* – (Participant 4, female).

The affection and intimacy is [are] *better without condom* – (Participant 14, male).

You can't eat a candy on its wrap….it is much better when you have the candy like when you take off the wrap – (Participant 10, female).

4.3.2.2 Condom safety is not always certain

Some participants had reservations about the protection offered by condoms due their potential failure:

> *There are cases where condoms breaking, and you don't feel it….so you can't say it gives the best protection* – (Participant 16, male).

> *It offers protection but there are some instances where the condom can break if it was not put right* – (Participant 14, male).

4.3.3 JUDGMENTAL PERCEPTIONS AND ATTITUDES HELD BY THE KI'S

4.3.3.1 Reasons for not using condoms are perceived as excuses

The KIs tended to show judgmental attitudes towards those not using condoms consistently, or not using them at all. Some of the KIs' views and the opinions that emerged were:

> …. *but most of them* [students] *have given excuses for the fact that most of the time they are getting involved in any sexual activity, then they do not have protection* – (KI 1, female).

> …. *because some people will come with excuses that it was far, but then they* [condoms] *are close by, in the toilets on campus you can get them…. they come up with all sorts of reasons why they don't like it* – (KI 3, female).

4.3.3.2 Assumptive attitudes of the KIs that students' condom collection or uptake is low

Most of the KIs had defensive and assumptive attitudes in that they believed that even though some fellow students did collect condoms, most students did not collect condoms as efficiently as they should, irrespective of the availability; this was explained by the view that

they (KIs) frequently found dispensers full when they did the rounds, refilling condom dispensers.

> … *they do collect them* [condoms] *but not as much as they should because a dispenser can be full for over two weeks…when we come back to refill then you find it's still full…. I don't think they frequently go to those dispensers and take out the condoms* – (KI 1, female).

4.3.3.3 Perceived knowledge of students on condom use

Some KIs presented assumptive attitudes about students not having correct condom use knowledge. They expressed the view that some of students did not know how to use condoms properly.

> *They* [students] *keep themselves as if they know… some they think they know how to use it* [condom] *but in actual fact they don't, for the mere fact they use them in a wrong way…even though they are being told or they hear about how to use condom, they still tend to use it their ways* – (KI 2, male).

4.4 CONDOM USE INITIATION AND SEXUAL DECISION-MAKING

4.4.1 MUTUAL DECISION-MAKING

Some participants engaged in partner communication and mutual decision-making on condom use. As some participants and KIs stated:

> *We usually talk about it and future plans…and how the consequences of not practicing safer sex could lead to destroying our future* – (Participant 9, male).

> *Both partners should decide together...not the one of them to decide alone…. the best decision they should take together* – (Participant 13, female).

I think both partners should make that decision because in the end it is going to affect both of us – (Participant 12, male).

…so, there must be mutual agreement between the two – (KI 2, male).

Some males however, believed that they should leave the final choice to their female partners, arguing that women needed to use condoms to prevent pregnancy:

I think it should be the woman's choice…. if they not using condoms, she is the one that can get pregnant... that is totally up to her to decide – (Participant 15, male).

It is mainly the females who will be initiating the discussion… because she is trying not to get pregnant – (Participant 16, male).

4.4.2 MEN DOMINATE IN SEXUAL DECISION-MAKING

However, there were participants who saw it as men's role to make sexual decisions:

It should be the male [who initiates condom use] *...because he is the one who supposed to take control of the relationship* – (Participant 14, male).

I am just thinking that the man should have it [the condom] *and not the woman* – (Participant 11, female).

Female participants felt that, while mutual decision-making would be best, gender-related perceptions and expectations, as well as male condoms being the predominant method used, led to decisions on condom use favouring males taking control in the sexual decision-making process in relationships. This is reflected in the following female participants' views:

The guy in a relationship is always in control…if it is the guy that says he doesn't want to use the condom, then that will always be done, whatever the guys says – (Participant 4, female).

It is the men, they are the ones who decide it's going to be used or not – (KI 3, female).

This led to women frequently feeling disempowered in successfully negotiating condom use.

If the guys don't initiate putting on the condom, we sometimes become afraid of saying "let's use condoms" – (Participant 5, female).

Female students say they feel like they don't have a say in the relationship regarding condom use…. they don't feel enough power – (KI 1, female).

Women tended to fear initiating condom use as it might lead to accusations that they had been unfaithful to the partner:

If you as a female saying "…let's use condoms" …then the other partner may say "…you don't trust me…. or you are the one that is unfaithful…is it because you've been sleeping around, or you think I'm sleeping around?" – (Participant 5, female).

Some of the KIs also were of the opinion that female students felt they needed to acquiesce to their partners' demands and please them in order to maintain the relationship:

They are doing anything to make sure the man stays… don't want to force him to use condom and then maybe he will run away – (KI 3, female).

One female participant stated that avoiding pregnancy was a reason some women used to persuade a male partner to use condoms:

The only way that I can make him use a condom is to tell him that I'm not on the pill [contraceptives]*…. because that's the only thing they* [males] *are worried about* – (Participant 5, female).

4.5 CONDOM USE AND PRACTICES

Some participants reported ***current and consistent condom use***:

> *Ever since we started dating we've been using condoms* – (Participant 5, female).

> *I use condom every time I'm having sex* – (Participant 2, female).

However, ***inconsistent condom use*** was most commonly reported:

> *Condoms are not something I use a lot… I can't say that it should be used as often as possible* – (Participant 16, male).

> *Most students have admitted of not using condoms frequently as they should* – (KI 1, female).

It also emerged that some students did not use condoms at all:

> *I don't use condoms…we have never used condoms* – (Participant 11, female).

> *I had some students who said that they do not use condoms* – (KI 1, female).

> *Quite a large number of students don't use condoms* – (KI 4, male).

Understanding on basic steps of condom use

Even though most participants revealed poor personal knowledge on how to use condoms correctly, some showed a better understanding on the basic steps of condom use prior to and after its use, in relation to identifying and following the correct steps of using a condom, from the initial stage of inspection before opening the condom package.

> *You must inspect the condom to see if there's damage, check expiry date* – (Participant 6, female).

Not opening a condom using your teeth because you can tear it and then it won't be effective – (Participant 12, male).

Some participants showed insight in being to explain the logic into the use of condoms as protection against infections.

The fluid [semen] *won't be distributed inside your partner…. because the condom is there, everything will be in the condom, so it won't get exposed* [spilt] *to your partner* – (Participant 3, female).

It gives a protective barrier between the fluid of the male and the female – (Participant 15, male).

4.5.1 FACTORS INFLUENCING CONDOM USE

Personal, interpersonal and socio-economic factors influenced condom use, including consistent use.

4.5.1.1 Personal knowledge on correct condom use

Insufficient personal knowledge on how to use condoms correctly arose as a problem hindering effective and consistent condom use.

Lots of us can't use condoms, which shows in the results of them breaking a lot coz [because] *mainly a lot of us don't know…and I really don't think its sensible to use a condom while you are having oral sex, I don't think it makes any sense* – (Participant 16, male).

I've noticed that they don't know how to put it on…sometimes there is air inside the condom of which that will make it burst – (Participant 5, female).

Xa uvulayo [meaning, when you are opening it] *it doesn't have a direction telling you on which side to pull it up…then* ***iyasokolisa*** [meaning, it makes you struggle] – (Participant 12, male).

A lot of students don't know how to use condom correctly…for many reasons you will find out that the condom burst, or condom got lost inside the woman's vagina…hence you find that even though some students used a condom, but a girl would still become pregnant or someone between them would still catch HIV – (KI 4, male).

4.5.1.2 Factors affecting acceptability of female condoms

Female condoms were not easily acceptable due to fear, discomfort and lack of knowledge on how to use them. Male condoms were favoured over female condom. As some of students explained:

There's a bit of tricks in putting the female condom in yourself, so it [a male condom] *will be more easier…it is easier make sense for the guy to use a male condom because it's not difficult* – (Participant 3, female).

Male condom is even way more easier than a female condom hence more students prefer the male condom – (KI 4, male).

I found out that they [students] *don't* [have] *enough information regarding the female condom so once they see it they just have doubts, and due to its appearance, they become very sceptical with trying it on…and then the guy would object it afterwards…. they have complaints of it not being comfortable, so they would rather not introduce it at all* – (KI 1, female).

They are scared of putting that female condom inside their vaginas…that's the thing most females don't use female condoms and chose the male condom partner – (Participant 13, female).

4.5.1.3 Alcohol consumption

Some participants saw alcohol use as a factor that hindered consistent use among students.

> *When there is alcohol involved then the moment is right, but they don't have condoms…but they still want to continue doing it any case* – (Participant 14, male).

> *When you are drunk you are not thinking properly, and it can break sometimes* – (Participant 1, female).

Some KIs also viewed alcohol use as a hindering factor in consistent condom use among students.

> *Sometimes they fail using condoms when they are under the influence of alcohol they didn't expect it could happen, and at that time there are no condoms* – (KI 2, male).

> *…and the times they don't tend to use is also the behaviour of someone…. if someone maybe was drunk, they not thinking rationally…so to them it is just having sex* – (KI 4, male).

4.5.1.4 Disruption of sexual experience

Some participants stated that they either had not obtained condoms in advance before potential spontaneous sexual encounters or did not want to interrupt their sexual activity to fetch a condom. This led to not using condoms on those occasions:

> *I was at a bash…I didn't have a condom in my pocket…I thought if I went to fetch one I would come back, and the lady wouldn't be with me any more…so I just thought I could do it same time without it* – (Participant 8, male).

> *When you are at the party, and there's this girl you start getting off with…. you know that moment when you are in that mood…if you don't have a condom then I don't think you gonna* [going to] *worry about not having one…. going to a private place*

and then you decide you just do it, there's no real talk about condoms – (Participant 15, male).

They are in the moment of getting hot maybe they don't want to really look for condom, so they just do it – (Participant 15, male).

Others stated that the process of putting on a condom was time consuming and disrupted the atmosphere during sex, hindering use.

That is a mission, you have to stop everything you are doing and focus on it, of which it takes off the moment…. the challenge is you have to maintain the motion and then at the same time you have to put it on – (Participant 8, male).

Sometimes it takes time to put a condom in…if it takes time, they no longer interested anymore in having sex – (Participant 13, female).

…others prefer not to use condoms because they say it's time consuming when they want to use it – (KI 4, male).

Some male participants feared losing their erections, or that their female partners would lose sexual interest in the time it took time to put on a condom.

We think that ladies are easily turned off so if you take too much time trying to putting on your condom it's going to turn her off and she's not going to be in that same mood – (Participant 16, male).

…when you are teaching them [students] *they complain that "it's taking too long, by the time I'm doing all these things you are showing me, my erection would have fallen long time ago"* – (KI 4, male).

4.5.1.5 Intimate partner relationship status

Most participants reported using condoms in new relationships but discontinuing use once relationships became more established and there was a feeling of stability, mutual faithfulness and trust in the relationship. Participants reported as follows:

> *Once we get used to each other we stop using condoms…. because we've dated for so much time and now we think we trust each other….in a committed relationship, and then we don't use condoms* – (Participant 5, female).

> *If you trust your partner you shouldn't use a condom…. I use them with the ones that I don't trust, I don't use it with my closest girlfriend* – (Participant 8, male).

> *When they start to get comfortable with each other, they stop using condom completely* – (KI 2, male).

If an individual's partners tested negative for HIV, this also could lead to discontinuing condom use:

> *We should use it all times unless both partners getting tested regularly and know that they are negative* – (Participant 7, female).

> *If you not sure of your partner's status, it is very advisable to use a condom, but you can then not use one…. based on knowing your partner's status* – (Participant 16, male).

> *You should use a condom when you are having sex with someone you don't know her status…if I know her status then I shouldn't use a condom* – (Participant 12, male**).**

4.5.1.6 Parental and religious values

Some participants felt that the religious and parental values, as well as family expectations about sex tended to lead to negative feelings about condom use altogether, or difficulties with consistent use:

> *It is the whole stereotypical thought around condom, for example, when you go to church you are being told not to use condom, you being told that condom is for certain people…so when students are from religious background they feel that guilty conscious of taking condoms and do without the use of condom* – (KI 4, male).

If students live at home, family attitudes may hinder condom use.

> *If your family views sex out of marriage as a bad thing, especially if your family is very religious…so I can't exactly have condom… you have to hide the condoms or keep them away* – (Participant 7, female).

4.5.1.7 Free versus purchased condoms

Discomfort was related regarding use of free government issued condoms, including condoms' size and tightness for males, and vaginal irritation in females. These factors contributed to incomplete use of condoms.

> …. *sometimes I felt like they* [condoms] *were very irritating* – (Participant 10, female).

> *Lots of guys have been complaining that the Choice condoms becomes painful to them… say it's too tight… it's not big enough* – (KI 4, male).

Free condoms were also frequently perceived to be of inferior quality in the sexual sensation they offered in comparison with bought, branded condoms. Participants singled out lack of lubrication and texture as features they disliked:

Government condom is not lubricated enough…the material is quite thick compared to the one you buy….it is supposed to be thin to give you more pleasure…with Durex and Pleasure Max you get more pleasure than government condom…sex would last longer – (Participant 7, female).

The one you buy has more quality…and it's made thinner – (Participant 15, male).

I don't think they were lubricated enough… – (Participant 10, female).

Even the feel of it, like the texture of the condoms is different, it's less rubbery – (Participant 4, female).

Branded condoms were perceived as more exciting, relating to factors such as being fragrant, having a variety of flavours, some being studded or ribbed and being available in a variety of sizes:

The one we bought was more exciting…have different kinds and flavours – (Participant 4, female).

At least the flavoured ones, they smell like strawberry – (Participant 8, male).

They buy them…. they provide the variety…different flavours that will bring a smell and they say the flavoured ones spice up their sex life – (KI 1, female).

In contrast, the free condoms did not have these qualities that created sexual excitement:

One from the clinic it's just the plain and too simple condom, no excitement – (Participant 4, female).

Government condoms only comes in one style….in Lovers-Plus and Durex you have different types…so it's ribbed, and you get more pleasure, hence I prefer to go to the shop for condoms … – (Participant 7, female).

Peer views seem additionally to play a role in a preference for purchased rather free condoms. Purchased condoms were equated with men being of higher social status.

> *The difficulty is the friends, if you take free condoms they kind of laugh at you…. they expect you to maintain the standard* – (Participant 8, male).

Buying, rather than accessing free condoms, was associated with valuing and respecting female partners.

> *You don't want to be cheap…ladies will normally look at you funny if you use that* [free condoms] *…if you use Choice condom basically you don't respect your partner* – (Participant 16, male).

> *If you use the ones from the market, you kind of value them* [female partners] – (Participant 8, male).

> *Some guys don't prefer using the blue Choice condom because it makes them look cheap to the girlfriends because it's something sponsored by government…the way they see it, is that ones from retailers are more superior to Choice condom… and it's about showing off when they use the bought condoms* – (KI 4, male).

Participants believed that a preference for using purchased condoms, combined with financial constraints in doing so, inhibited condom use and led to unprotected sex.

> *Moneywise it is expensive buying condoms every time, so people will just not use at all, especially if government ones are not suitable for your partner* – (Participant 7, female).

> *Most students prefer buying those expensive ones, but they won't be able to always afford those expensive condoms* – (KI 1, female).

4.6. CONDOM ACCESSIBILITY AND AVAILABILITY

The study revealed some information on the participants' views on how readily available condoms were, and how easy or difficult it was to access them.

4.6.1 INSTITUTIONAL CONDOM AVAILABILITY AND SUPPLY

Condoms access points on the CPUT campus are bathrooms, the campus clinic and the HIV Unit.

Some participants expressed satisfaction with accessibility and availability of condoms on the CPUT campus, citing convenience and privacy in the condom access facilities:

> *They are available everywhere so it's more accessible…you get them at toilets and you don't have to go to the clinic to get them* – (Participant 2, female).

> *In the bathroom it's more private, it's not the type of place that you are scared that someone is watching you…if it's in a private area it's easier to obtain* – (Participant 6, female).

> *It is accessible and easy to take them because you will be the only person in the bathroom and no one will actually see you taking it* – (Participant 14, male).

> *Some prefer to take them where there is no one* – (KI 2, male).

In contrast, others did not find accessing condoms from these venues convenient.

> *I found that they are only at bathrooms…and not everyone uses bathrooms here* – (Participant 16, male).

> *Obtaining them maybe difficult in the areas where there's not much availability* – (Participant 3, female).

Some participants found that there were adequate supplies on the campus:

> *I've never had any difficulties because there are always condoms* – (Participant 5, female).

On the other hand, others experienced problems obtaining condom supplies.

> *Sometimes it's not there in the bathrooms* – (Participant 7, female).

> *I have not seen them… they are not in all toilets* – (Participant 12, male).

> *We only see them in certain bathrooms* – (Participant 11, female).

One KI admitted that at times they failed to distribute condoms in sufficient quantities.

> …. *we don't do it* [condom distribution] *as often as we should in my opinion* – (KI 1, female).

4.6.2 ATTITUDES AND PERCEPTIONS OF THE KIS REGARDING STUDENTS' CONDOM USE - COLLECTING CONDOMS FOR OTHER PURPOSES

One KI observed that some students did collect condoms, although not necessarily for using them during sexual engagement, but for other purposes, as he expressed:

> *Sometimes they use condoms for other purposes…. they want to tighten their socks, some they use them as basin stoppers in the campus residences…so they don't really use the condoms they collect from the dispensers mostly* – (KI 2, male).

4.6.3 PEER AND SOCIAL ATTITUDES

Some students found that peer attitudes hindered them from accessing condoms on campus, despite accessible access points and available supplies. They feared being judged, particularly by their peers for being sexually active, if they were seen to be accessing condoms.

> *If maybe you are walking with your friends it may be difficult to take condoms if you don't want them to know that you are having sex* – (Participant 13, female).

> *If I go to the clinic and there are people there* [fellow students in clinic's waiting area] …*I might be ashamed and shy of getting condoms* – (Participant 12, male).

> *If you are a female, they are afraid they will be called with all sorts of degrading names in the campus residences and society as a whole* – (KI 4, male).

> *…there's sort of a stigma against that, because you are judged as though maybe you are a whore, you sleep around if you have condoms* – (KI 3, female).

A KI also revealed that a stigma associated with being seen to be sexually active inhibited some students from accessing condoms:

> *It is an interpersonal thing where students are afraid and ashamed of being seen taking a condom…it's making lot of students shy away from taking condoms…. The biggest problem is the fact that they are too ashamed* – (KI 4, male).

4.7. STUDENTS' PROPOSALS TOWARDS IMPROVING ATTITUDES, PRACTICES AND ACCESS TO CONDOMS

Most participants felt that the current strategies of promoting condom use at CPUT needed to be scaled up and provided suggestions for other methods of improving condom use among students.

4.7.1 EMPOWERMENT

4.7.1.1 Increasing awareness, information and understanding on condom use

Being empowered on how to use a condom had a positive effect in facilitating condom use and being using condoms correctly. As participants stated:

> *Getting more information on how to use condoms could make it easy to use condoms…education in order to eliminate the doubts and wrong perceptions students have about condoms* – (Participant 12, male).

> *If I can maybe be exposed to a demonstration on how to put it on, it would be easier* – (Participant 11, female).

> *We still need to educate students on how to use condoms and its importance…. being aware of how to use a condom…. makes it easier for the two people* [partners] *to use condom* – (KI 2, male).

> *Having clear instructions on the condom container itself will make it easier for them to use it and put it on* – (KI 1, female).

Some participants and KIs expressed the view that the current strategy with respect to empowering students through workshops and discussions did not cause students to feel fear about HIV infection. They expressed the view that the strategy needed to change in order to get students to feel greater fear. Most participants felt that during educational workshops, transparency regarding the consequences of HIV infection, the consequences of not using condoms, and about the number of affected students, could encourage the use of condoms among students. As one participant stated:

> *…I feel like the information we are given is sugar coated, we are not told the extreme truth about what's happening about the consequences of not using it* [condom]*…. but tell us the hard-core truth, maybe use statistics saying the number of students being*

diagnosed are increasing, tell us the numbers then we will get that shock – (Participant 4, female).

Some participants suggested that HIV as a compulsory subject or topic in the curriculum would foster greater understanding of the disease in the students.

…. they should have a subject in every course so that we can be aware of those things…if you learn about them on daily basis that would help – (Participant 8, male).

…teachers can also elaborate more about safe sex practice to students – (Participant 9, male).

4.7.1.2 Frequent awareness activities

Participants felt strongly that creating frequent awareness campaigns could positively influence condom collection. The reasons cited for this view were that during these activities, condoms were more efficiently available and accessible. Additionally, it was believed that students gained more knowledge through the activities taking place during these campaigns.

I notice when there are gazebos (meaning during HCT Campaigns) people are not ashamed to carry around condoms…. they take it [condom]*…they grab them and put them in their bags* – (Participant 5, female).

It is very easy to use condom because I have a little bit more knowledge on condoms because I attended campaign….and they taught us how to use condom – (Participant 1, female).

When we are doing some activities towards awareness of condom use, we do condom demonstration and we go around handing out condoms…there are students who come and actually listen and ask questions and learn more…that's when students get a chance to get condoms without feeling embarrassed as everybody else around is taking – (KI 1, female).

One KI felt that it would be valuable to have frequent condom awareness activities as there was a strong possibility that more students would learn, and that those who learned might empower others through passing on what knowledge they had gained, thus improving the awareness of other fellow students:

> *…. they learn more and they get educated…then they go out and tell their friends, they educate other students* – (KI 1, female).

4.7.1.3 Positive mind-set and self-confidence

Positive attitudes and confidence regarding condom use tended to facilitate their use through removing perceptions about the inconvenience of using them, and disassociating from others' negative attitudes regarding condom use. Some students and KIs expressed this as follows:

> *I think the first thing, everybody should be exposed to positive thinking about condoms….so they should discharge that "without using a condom* [HIV] *is more efficient* [at being passed on] *than* [when] *using a condom"* – (Participant 3, female)

> *I don't consider other people's opinions…so I'm not a shy person, when I do things I consider myself not other people* – (Participant 9, male).

> *You need to be confident enough first and acknowledge the fact that you are sexually active* – (KI 1, female).

4.7.2 FAVOURABLE ENVIRONMENTAL FACTORS

4.7.2.1 Increasing condom availability and accessibility

Although condom availability was rated as good at CPUT, scaling up is required as the availability was limited to certain areas. Some participants and KIs expressed this:

…. put them outside the clinic where it's more accessible for those who are shy to collect inside the clinic [in front of others in the clinic's waiting area] – (Participant 4, female).

It's about time we don't place condoms only in bathrooms because they must be everywhere…so they must be available in classes – (KI 2, male).

4.7.2.2 Convenient packaging, lubrication and texture of condoms

The convenient packaging and lubrication of condoms play a positive role in condom use by making it easier and faster to open and put on the condom without struggling. As some participants expressed this:

The packaging is easy because at the corner there's something [guiding how to tear] *….it doesn't take long for you to open it, so it has been made easier for us to just tear it out…and put it on* – (Participant 5, female).

The fact that it's rolled coz [because] you just roll it out…that's one thing that makes it easier…but the reason students don't use it, is because mainly of the pleasure, so you can decrease the condom's thickness so that you can't feel it – (Participant 16, male).

The lubricant makes it easier to slip out and to slip on – (Participant 14, male).

4.7.2.3 Personal mood and foreplay

Good penile erection, fostered by the correct mood, facilitates condom use and continuation of use. Foreplay was seen as the mood enhancer that could assist with regards to keeping the penis erect.

I would ask the girl to put it on then it will be easy – (Participant 15, male).

…you have to be in the mood for it…otherwise he would not be hard enough or won't stay hard longer…so foreplay like wearing seductive clothes makes it easier – (Participant 7, female).

4.8 CONCLUSION

The chapter has presented the results from the analysis of the collected data. Participants appeared to have awareness about HIV transmission, understanding of the benefits of condom use, and awareness of the significance of correct and consistent use. However, consistent and correct condom usage was still very low because of various reasons, and there were also still knowledge gaps among students. The findings revealed that institutional condom availability and supply were satisfactory according to some participants, while others felt that availability was not adequate.

Stigma had a negative impact on condom use, owing to peer and social attitudes. The interviews also revealed strong gendered relations, and societal factors that have an influence in this context. Various factors hindering condom use emerged, such as: insufficient personal knowledge of correct condom use; female condoms not being easily acceptable; alcohol use; disruption of sexual experience; intimate partner relationship status; parental and religious values; free versus purchased condoms.

The next chapter presents interpretations and discussion of the study findings, comparing the study findings to findings from other literature.

CHAPTER 5 - DISCUSSION

5.1 INTRODUCTION

In this chapter, I discuss the main research findings that emerged in the previous chapter thematically as factors influencing CPUT students' attitudes and perceptions towards condom use, and condom use practices, and situate these within findings from comparative literature.

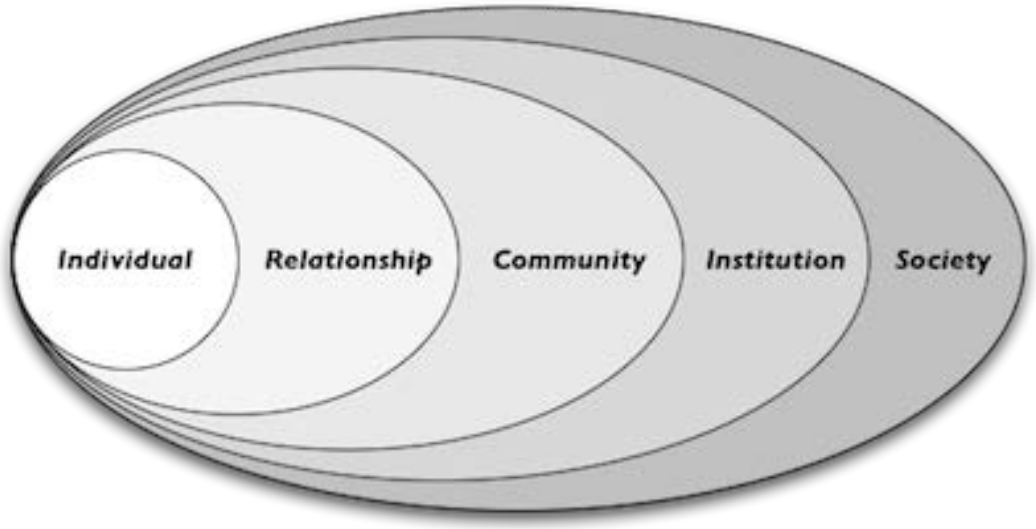
In the current study, the demographic profile of the student and peer-educator (KIs) participants shows that they were all within the age group 18–24 years. Heeren et al. (2013) identify students in HEIs as one of the high-risk sub-populations for contracting HIV infection, and the HSRC (2013) shows that South Africans in the 15–24 year age group have the highest HIV incidence rate. Thus, despite the relatively high level of education of participants in this study, they fall within a high-risk group for contracting HIV infection.

5.1.1 THE SOCIO-ECOLOGICAL MODEL (SEM) FOR HEALTH: A FRAMEWORK FOR THE DISCUSSION

I will use a Socio-Ecological Model (SEM), as originally developed by Bronfenbrenner (1979) as cited in Corcoran (1999), and adapted by Larios et al. (2009), as a framework to also organize and discuss the key findings in this study. As mentioned, the SEM, adapted from its original conceptual framework, has been used to examine personal and contextual factors that affect a range of health attitudes and behaviors in many different settings. These comprise factors influencing attitudes and behaviour at five levels (see Figure 5.1 below). These include individual (personal); relationship (interpersonal); community; institutional; and broad societal levels (United States of America, Wisconsin Prevention of Sexual Violence Plan Committee, 2009; Larios et al., 2009; CDC, 2015).

Larios et al. (2009) argue for this framework's value in examining the multiple levels of influence on attitudes and behavior, providing researchers with a broad basis on which to understand personal and contextual influences on attitudes and use of condoms and STI risk behaviours. This was useful in both framing the investigation and discussing the findings.

Figure 5.1. Socio-Ecological Model/Framework



(**Source**: United States of America, Wisconsin Prevention of Sexual Violence Plan Committee, 2009)

The discussion that follows is organised according to this model of factors that operate at these multiple levels of influence (Larios et al., 2009), which is used as a framework within which to examine their potential effects on student participants' attitudes and perceptions towards condoms and the use of condoms. The factors operating at different levels of this model may sometimes interact and overlap with one another. However, using this as a framework for interpreting the study findings is intended to provide insights that make a contribution to guiding further development of condom-related interventions at CPUT.

5.2 INDIVIDUAL FACTORS INFLUENCING CONDOM ATTITUDES AND USE

This first level identifies personal or individual factors in attitudes, perceptions and knowledge that may influence behavior (CDC, 2015). In this study, a number of individual factors influenced attitudes and perceptions towards condom use, as well as condom use practices.

5.2.1 ATTITUDES TOWARDS CONDOM USE

5.2.1.1 Positive attitudes

Two important themes emerged related to positive attitudes towards condom use: belief that condoms offer protection against sexually transmitted infections and pregnancy, and awareness that it is important to use condoms correctly and consistently in order for them to provide effective protection.

5.2.1.1 (a) Condoms offer protection against sexually transmitted infections and pregnancy

The study findings revealed that positive personal feelings among some participants towards condom use were based on acceptance of the necessity to use condoms in order to avoid potential negative health consequences. Participants reported that condoms were the best method of preventing HIV, STIs and unplanned pregnancies. A study exploring condom beliefs, attitudes, and practices among students at tertiary institutions in KZN province found similar results, with students believing that condom use offered protection against HIV and STIs (Mantell et al., 2011). This is also similar to the study findings of Hendriksen et al. (2007), in which most South African youth interviewed viewed condoms as an effective method for preventing HIV infection and other STIs. This indicates that some participants had internalised positive personal attitudes towards condom use based on belief in their protective properties – that they offered reliable protection against STIs and unwanted pregnancies.

5.2.1.1 (b) Importance of consistent condom use

Students with positive attitudes to condom use identified consistent condom usage as improving the protection capabilities of condoms. This is similar to the study results of Mbelle et al. (2014), in which most of the study participants (90%) linked the reduction of their risk of acquiring HIV infection to consistent condom usage. This suggests that a positive and supportive attitude towards condom use is linked to consistent use being viewed as important in ensuring effective personal protection against HIV infection. However, even though several students had positive attitudes towards condom use and specifically acknowledged consistent use as very important, there was contradiction between being aware of the importance of consistency and its actual practice. Most of the participants who were in

this group admitted of inconsistency in condom use, owing to the issues that are already discussed as challenging.

5.2.1.1 (c) Importance of correct usage of condoms

In this study, participants' positive attitudes to the effectiveness of condom use were linked to an awareness of the need for correct use. Students believed that condoms offered the best protection against HIV infection if they were utilised in the correct way. This is in line with the findings of the review paper by Beksinska, Smit, Joanis and Hart (2012), which revealed that condoms need to be used correctly to ensure their greatest effectiveness in preventing HIV infection.

5.2.1.2 Negative perceptions and attitudes

The results also reveal that some participants held negative attitudes towards using condoms. Two themes linked to negative perceptions and attitudes towards condom use were related to feelings of decreased sexual pleasure and to beliefs that condoms did not provide 100% protection.

5.2.1.2 (a) Decreased sexual pleasure with condoms use

Negative attitudes towards condom use were linked to reports of decreased sexual pleasure. Condom use was felt to adversely affect their experience of orgasm, and that feelings of the "heat of sex" were inhibited because a "skin-on-skin" feeling was diminished. This finding is consistent with that of Mbelle et al. (2014), who found that 30% of students in HEIs viewed condoms as changing their experience of orgasm. Osonwa et al.'s (2013) study findings also revealed that most participants (74.1%) reported not enjoying having sex with a condom, as condoms majorly reduced their feelings of sexual satisfaction. This suggests that participants' negative perception of condoms was influenced by their personal feelings that their use reduced the quality of their sexual experiences, in terms of pleasure and sensation.

There were gender differences in attitudes towards condom use related to feelings of decreased pleasure and sensation in this study. Mostly male, rather than female participants felt negatively about condom use in this regard. Predominantly, male participants against using condoms reported that this was because they wanted flesh-to-flesh sex. These findings

find support in a quantitative study conducted by Mehra et al. (2014), in which a larger majority of male students reported experiencing less sexual pleasure when using condoms (70%) than did the female students (61.8%). This issue may cross cut with the relationship and community level of analysis as this may coincide with intimate partner views or feelings and community perceptions.

There were indications that perceptions of decreased pleasure with condom use could lead to incomplete or inconsistent use of condoms and, ultimately, to unprotected sex. This is in keeping with findings from other studies on condom use conducted among university students (Fiaveh, 2012; Mbelle et al., 2014; Mehra et al., 2014). This suggests that inconsistent or non-use of condoms may be related to perceived decreased pleasure when a condom is used. Hence, these negative perceptions may be contributing to low condom utilization among students.

5.2.1.2 (b) Concern for female partners' sexual experience

Implicit in men's negative attitudes to condom use was a concern that their female partners should enjoy sex and that condom use may reduce their enjoyment. Some observed that female partners needed to be 'prepared well' and their sexual mood maintained, and maintained in tune with their partners' moods, to make the process of using condoms easier. Male participants felt that in the process of preparing for condom use, female partners may easily be 'turned off' when it took too long to put on a condom. This indicates the need for more research on condom use and women partners' sense of sexual pleasure, since no information was collected on female partners' opinions in this regard.

5.2.1.2 (c) Lack of confidence in the protective role of condoms

Participants reporting negative attitudes to condom use had reservations about the protection value of condoms, because of their potential to break while in use. Some participants observed that condoms could break and, if they were not aware that the condom had broken, they would continue with sexual activity, thus putting themselves at risk of contracting the HIV infection. Other studies amongst students in HEIs have found that tearing of condoms during use is reported as a disadvantage in using condoms (Masoda & Govender, 2013). In summary, some participants felt that condoms offered limited protection when condoms

broke, and this led to their having a lack of confidence in their protective role. These negative views may deter some students from using condoms.

5.2.1.2 (d) Judgmental, defensive and assumptive attitudes of the KIs towards students' condom collection and usage

The findings showed that the student peer educators tended to have judgemental, defensive and assumptive attitudes about fellow students not collecting and using condoms. Some KIs reported that *most* students had a range of excuses for not using condoms. The KIs were also defensive regarding the refilling of condom dispensers, arguing that students sometimes did not collect condoms from distribution points. Some of them justified their assumptions with the observation that the condom dispensers were frequently full when they did their rounds of refilling them.

The findings also revealed that the KIs assumed that some of their fellow students did not have the correct knowledge of condom use. They suggested that a knowledge/practice disparity existed with respect to condoms, where the students were unable to practice what they claim to have knowledge of. The KIs suggested that although students thought they knew how to use condoms correctly, practically they were doing so incorrectly. The researcher's opinion is that if the peer educators persist with judgmental attitudes, there is a possibility that fellow students would find them unapproachable for the purpose of gaining condom use knowledge.

5.2.2 CONDOM USE PRACTICES

The findings show that while some participants were using condoms, others were not. It also emerged that consistency was a challenge among those that used condoms. The themes relating to condom use practices included whether participants ever used condoms, as well as consistency of condom use among those reportedly using condoms.

5.2.2.1 Use of condoms

In this study, some participants reported using condoms including consistent condom usage. Other participants reported not using them at all. These condom utilization results are

consistent with a descriptive cross-sectional survey conducted among students in a Nigerian HEI by Osonwa et al. (2013), which found that 50.8% of participants reported condom usage, while some participants clearly stated that they never used condoms in their sexual encounters. This is also in keeping with findings of a quantitative study conducted in South African Technical Vocational Education and Training (TVET) colleges, which reported that only 55% of students confirmed ever using condoms (Mbelle et al., 2014). This indicates that the rest of the students were not using condoms. This variable usage, with some students not using protective measures when engaging in sexual activity, is a concern for the prevention of HIV among students at tertiary institutions and indicates that some may be at high risk of contracting STIs, including HIV infection.

5.2.2.2 Variability in consistency of condom use

Consistent use of condoms is one of the most effective methods for preventing HIV infection. In the study, most participants acknowledged that they did not engage in consistent condom use during sexual engagement. This finding is similar to other studies that have shown variability in consistent condom use among students in HEIs (Mbelle et al., 2014; Protogerou et al., 2013). In Mbelle et al.'s (2014) study, 58% of tertiary institution students reported using condoms consistently. A quantitative study conducted in a Nigerian tertiary institution by Durojaiye (2011), showed a lower proportion of consistency in use, with only 30% of the sexually active students reportedly always using condoms. It is of concern that in a study among students at the UWC in South Africa, a decrease in students' consistent condom use was reported over a five-year period, from 60% in 2007 to 51% in 2012 (Blignaut, Jacobs & Vergnani, 2015). All these findings illustrate that a significant proportion of students in HEIs engage in completely unprotected sex, exposing themselves to a high risk of contracting HIV and other STIs.

Furthermore, consistent condom use in sexual encounters may pose a challenge for HIV and STI prevention in HEIs, including CPUT. The continuation of sexually risky behaviour among some CPUT students in the form of inconsistent condom use, despite condoms being available, may be contributing to an increasing HIV infection rate, and indicates a notable challenge to HIV infection reduction at this institution.

5.2.3 INDIVIDUAL FACTORS ASSOCIATED WITH LOW CONDOM USE

As in Mehra et al.'s (2014) study, which noted numerous individual and social factors influencing condom use among students, this study also illuminated various factors that influenced condom use by university students at CPUT. A range of complex issues that might have contributed to the less than ideal condom use in this institution emerged from the individual interviews, and are discussed below.

5.2.3.1 Personal knowledge

5.2.3.1 (a) Broad awareness and knowledge on HIV, STIs and pregnancy prevention

As mentioned earlier in this study, most participants exhibited heightened awareness and knowledge that condoms can prevent HIV, STIs and pregnancy. This finding was similar to other studies carried out among students in HEIs, where high HIV/AIDS awareness and knowledge was equally recorded (Durojaiye, 2011; Akpan, Ekott & Udo, 2013; Osonwa et al., 2013). In addition, Akpan, Ekott and Udo (2013) further report that in their study, about 80% of participants showed that they had adequate knowledge about condom use for the purpose of HIV prevention. In Osonwa et al.'s (2013) study, most participants (87%) were found to be knowledgeable about the fact that HIV could be passed from one person to another, and 69.8% of participants believed that HIV could be contracted via semen. The CPUT students' high awareness of and knowledge about HIV/AIDS infection may be related to the efforts of the HIV Unit at this institution, which educates students about HIV through HIV prevention programmes such as the peer-education programme, HCT and awareness campaigns, and educational workshops that have been instituted over the years. This phenomenon was also revealed in a study conducted by HEAIDS (2010) on students in HEIs, which showed that HIV prevention activities such as the peer-education programme and HCT implemented at eight South African HEIs led to increased awareness and knowledge on HIV. This, therefore, cross cuts with institutional level factors.

5.2.3.1 (b) More detailed knowledge on HIV, STIs and unplanned pregnancy

Some participants displayed knowledge that effective protection was dependent on consistent use of condoms. This finding is similar to Mbelle et al.'s (2014) study findings, which revealed that most students had knowledge that the risk of acquiring HIV could be reduced

by using condoms each time they had sex. Correspondingly, Masoda and Govender (2013) revealed similarly that, in their study, most participants (76%) were aware that condoms prevented HIV, STIs and unwanted pregnancies. More detailed knowledge on HIV prevention was also shown in Osonwa et al.'s (2013) study, in which most students (80.7%) believed that HIV infection could be avoided by using condoms correctly and consistently, and agreed that this was one of the ways to avoid being infected with HIV and other STIs. In Masoda and Govender's study (2013), participants were also knowledgeable about the importance of using a condom consistently during sexual intercourse engagement. Nevertheless, despite substantial awareness and knowledge of HIV among participants in this study, some students still engaged in unprotected sex, suggesting that high awareness in this regard at this institution did not necessarily translate into behaviour change to less risky sexual behaviour. However, this paradoxical finding regarding sufficient knowledge on HIV and inconsistent use of condoms contrasts with a quantitative study carried out by Akpan Ekott and Udo (2013), which found a positive association between knowledge and utilization of the male condom. In their study, those judged to have a detailed knowledge on HIV prevention, were found to be more likely to use condoms (Akpan, Ekott & Udo, 2013). Nevertheless, other studies have also found a disjuncture between knowledge and practice (Mazibuko & Nkune, 2014; Ndabarora & Mchunu, 2014; Blignaut, Jacobs & Vergnani, 2015), in which high levels of knowledge on HIV/AIDS did not correlate with utilisation of condoms.

5.2.3.2 Lack of practical knowledge on correct condom application

The participants saw students' understanding on correct condoms use as relatively inadequate in terms of preventing HIV transmission effectively. Consequently, some students engaged in risky sexual practices that made them vulnerable to HIV contraction. Some participants indicated that they did not know how to correctly apply a condom. This is in line with the study findings of Durojaiye (2011), in which some students also reported that they believed they did not know how to use condoms correctly. This suggests that the current level of knowledge of CPUT students is poor concerning correct condom use and may consequently lead to ineffective condom use.

The findings also revealed that lack of practical knowledge on correct condom use may be a source of condom breakage among students at this institution. Some participants stated and acknowledged that their lack of knowledge on how to use condoms correctly had resulted in their experiencing condom breakage. Akpan, Ekott and Udo (2013) similarly found that most condom failure was the result of errors in technique. These findings illustrate that condom failure in the form of breakage may be linked to an inadequate understanding and knowledge of the correct use of condoms. This is of concern, as condom failure in this context may compromise condoms' protection value against STIs, HIV and unplanned pregnancy. These consequences could undermine tertiary institution students' motivation to use condoms, and result in their being exposed to a higher risk, making them vulnerable to preventable infections.

In this regard, if poor knowledge of correct condom use is a contributory factor, as has been shown in the studies cited above, then the information gap on correct condom use necessitates more attention to practical condom education and demonstration. Akpan, Ekott and Udo (2013) suggest that attention must be given to specific skills that people need to use condoms correctly and consistently. Similarly, Masoda and Govender's (2013) study findings showed that exposure to more condom demonstrations resulted in better knowledge of correct condom use for both male and female students. In support of this suggestion, Osonwa et al. (2013) highlight that although only a small proportion of their study participants (42%) reported attendance at a health education program where procedures for condom use were demonstrated, better results on correct condom use were evident.

This study suggests that condom use education may influence correct condom use, and that condom use programmes should be intensified at CPUT in the process of up-scaling this institution's HIV prevention interventions. This issue cross cuts with institutional factors, in that more institutional efforts to draw in sufficient students to participate in on-going demonstrations of correct condom application are needed.

5.3 RELATIONSHIP FACTORS INFLUENCING CONDOM USE ATTITUDES AND PRACTICES

The second level of the SEM model examines the effect of close relationships such as a person's closest social circle – peers, partners and family members in influencing attitudes and behavior (CDC, 2015). In this study, relationship level factors influenced attitudes to sexual decision-making between partners in intimate relationships, including condom use initiation, as well as general condom use.

5.3.1 VIEWS ON CONDOM USE INITIATION AND SEXUAL DECISION-MAKING

Important themes relating to condom use initiation that emerged included attitudes to joint or mutual decision-making on sexual matters and the impact of gender power relations on adoption of safer sex practices in sexual relationships. The other themes that emerged as relating to condom use in the relationship level included: characteristics and status of intimate relationship, misconceptions about condom protection, misconceptions about condom use encouraging promiscuity, as well as women's persuasive strategy to use condoms.

5.3.2 CHARACTERISTICS AND STATUS OF INTIMATE RELATIONSHIP

The study findings show that consistent condom use is less likely to occur with a regular partner in a stable relationship, compared with a casual one. Participants reported that continuing condom use with regular partners, where stability in terms of mutual faithfulness and trust was established, was particularly difficult. This suggests that trusting one another in a stable relationship was related to condom use cessation with a main partner. This is in line with the findings of Durojaiye (2011), where trust in partners was among the main reasons given by those who did not use condoms. It also corresponds with Mbelle et al.'s (2014) findings, which showed that most students viewed condom use as only being necessary when having sex with a person who was not their main partner. Once a sexual relationship was established and trust had been secured, it became common for couples to discontinue condom use. This also suggests that sex without a condom might be used as a way of indicating commitment within an intimate partner relationship, with condoms being seen as necessary only for sex with others, for example casual partners. In this regard, stable relationships may

offer the highest risk for HIV infection, particularly if there is no mutual faithfulness in the sexual relationships.

Furthermore, in stable relationships, female participants tended to be most fearful of suddenly suggesting initiating condom use, as this may be seen as an indication of infidelity and may result in being accused of unfaithfulness. Mantell et al. (2011) also found that an initial non-use of condoms, followed by its introduction, may lead to connotations of infidelity or lack of trust. As a result, this makes initiating condom use appear even more difficult in long term and stable relationships, implying that trust issues in the relationship may play a negative role in condom use.

5.3.3 MUTUAL DECISION-MAKING AND GENDERED RELATIONS

Gender differences emerged in participants' views in relation to mutual sexual decision making within intimate relationships. Some participants favoured mutual decision-making with regard to condom use with their partners. However, the dominant view, including among the female students, was that it was men's responsibility to take a lead in sexual decision-making. 'Control' was thus shifted to male partners giving approval to their playing the lead role in this regard. This corresponds with the findings in Mantell et al.'s study (2011), in which female participants saw it as a male partner's responsibility to carry condoms and have them available when they engaged in sex. Durojaiye's (2011) study also reported that female participants felt it was their male partners' responsibility to take the lead on condom use. It was also the dominant view among male student participants in the study that it should be a man's responsibility to 'take charge' in decision making on condom use in intimate relationships. This illustrates the strength of male power in relationships regarding the use of condoms. This finding is in line with Masoda and Govender's (2013) results from research among tertiary institution students in the Democratic Republic of Congo, in which 60% of students stated that men should initiate condom use. This ultimately places men in the position of key sexual decision makers (Mantell et al., 2009), the overriding gender-related expectations favouring male partners taking control in intimate relationships. This is similar to Chinangure and Mutekwe's (2014) findings in a study conducted among undergraduate students in a Zimbabwean tertiary institution, which showed that male students wanted to exercise control over their female counterparts in sexual decision-making on condom use.

This study's findings revealed some female students reporting feeling highly constrained in successfully negotiating condom use with male partners, even if they viewed mutual agreement about condom use as desirable in relationships. This suggests that gender power disparities between women and men decreased women participants' capacity to successfully negotiate condom use. A gendered power imbalance in favour of men in this setting leaves women with little space to assume agency within sexual relationships. This may have the effect of 'silencing' their attempts to express themselves in sexual contexts. This has potentially negative implications for condom use and risk of HIV infection. Mehra et al.'s (2014) study among Ugandan university students found that unequal gender power relations impacted negatively on female participants' ability to negotiate condom use with male partners, potentially leading to unsafe sex and risk of HIV infection. Mantell et al. (2011) highlight the point that dominant gender norms, which underpin unequal intimate power relations between women and men, act as key drivers of the HIV epidemic. Hence, overall, the study findings indicated that male students dominated in sexual decision-making in this setting. These factors cross cut with community and societal levels that impact on views about relationships.

5.3.4 MISCONCEPTIONS ABOUT CONDOM PROTECTION

In this study, pregnancy prevention reflected as a more immediate concern to some participants than HIV. Some students expressed their rationale for using condoms as being to prevent unplanned pregnancy. This suggested that there was greater concern about not becoming pregnant than about the risk of HIV and STIs. Mantell et al. (2009) also found that participants in their study reported it may be more acceptable for condoms to be used to prevent pregnancy (contraception) than HIV (disease prevention). This indicates that at both personal and relationship levels the most pressing concern was avoiding an unintended pregnancy. In contrast to an earlier Mantell et al. 2009 finding, Mantel et al. (2011) in a 2011 study found most participants expressing greater concern about avoiding HIV than pregnancy (Mantell et al., 2009; Mantell et al., 2011). In some contexts, the personal and relationship risks of HIV infection weigh strongest.

5.3.5 MISCONCEPTIONS ABOUT CONDOM USE BEING LINKED TO PROMISCUITY

Another view that emerged in this study about the use of condoms is that condom use, or an attempt to initiate it, might be misunderstood as an admission of unfaithfulness in the sexual relationship. This may suggest that condom use is believed to encourage promiscuity. Similarly, study findings of Fiaveh (2012) revealed condom use as amounting to and implying sexual promiscuity. These misconceptions are likely to influence condom use negatively. This may cross cut with community and societal views reflecting views on faithfulness within intimate relationships.

5.3.6 WOMEN'S USE OF PERSUASIVE STRATEGIES IN CONDOM USE

Some male students in the study expressed a view contrary to the dominant one that emerged about men taking the lead in decision-making on condom use. In this case, it emerged strongly that most of these male participants viewed the initiative on condom use as being on women because of the women's fear of unplanned pregnancies. This relates to an earlier theme in 5.3.4 above – about condom use as a pregnancy prevention mechanism.

It was also noteworthy that a few female participants reported being able to negotiate condom use, thus showing agency in sexual relationships, despite the limitations imposed on them by gender power disparities. However, these female participants appeared to be the minority in the sample. As shown in the previous chapter, some of the female students reported being able to insist on the use of condoms within relationships. For some of them, this meant persuading men to use condoms by using men's fear of pregnancy rather than infection as a means to achieve this. These female students reported using condoms because they were not on any contraceptives, as the reason they gave their partners for their use. This encouraged male partners to use condoms for fear of impregnating them. Likewise, the study by Mantell et al. (2009) found that female students were telling their partners that they were not using contraceptives, arguing that not using a condom could result in an unintentional pregnancy, which concerned the male partners. It has therefore been revealed in this study that the fear of pregnancy was used strategically by some female participants in negotiating and persuading a partner of the need to use condoms.

5.4 INSTITUTIONAL FACTORS

Institutional factors in the SEM include the environment (such as the university's healthcare services), which can, amongst other things, influence health behaviors by making condoms available (Larios et al., 2009).

ENVIRONMENTAL/INSTITUTIONAL FACTORS IN THIS STUDY

The important themes relating to environmental (healthcare service) factors that emerged were inadequacies in institutional condom availability and poor access, inadequacies in institutional female condom promotion, as well as institutional social events exposing students to risky behaviors.

5.4.1 INADEQUACIES IN INSTITUTIONAL CONDOM AVAILABILITY AND POOR ACCESS AFFECTED CONDOM USE

The findings reveal that some participants experienced problems with respect to the availability and accessibility of condoms within the institution. Participants reported that condom availability was limited to certain areas, and that, at times, there were no supplies in the institutional condom supply outlets. This was confirmed by some KIs, who acknowledged that condoms were not distributed as frequently as required. These findings correspond with those of Durojaiye (2011), who found that non-availability of condoms was one of the main reasons for non-use. As in this study, as shown in the Results chapter, Akpan, Ekott and Udo (2013) similarly found the non-availability of condoms at the time of sexual intercourse to be the commonest reason for inconsistent and non-condom use, especially among the younger age groups. The findings also corroborated a study carried out by Osonwa et al. (2013) in which some participants (37%) agreed that there were times they wanted to use condoms but could not, mainly because condoms were not available. For this reason, insufficient supplies or inefficiency in condom distribution tended to be hindering factors in the use of condoms. This results in students continuing with unprotected sex and placing themselves at greater risk of engaging in unsafe sex practices, thereby increasing vulnerability to contracting HIV infection and unplanned pregnancies. Hence, Akpan, Ekott and Udo (2013) suggest that condoms should be provided and made readily available at strategic places where they can be

easily accessed by youth. In this regard, the students in the study suggested various ways to increase condom availability, and these are discussed further on in this chapter.

5.4.2 INADEQUACIES IN INSTITUTIONAL FEMALE CONDOM PROMOTION AFFECTED USE OF THE METHOD

It was noticeable that there was more emphasis on use of the male condom than on the female condom. It was also noteworthy that there was a lack of familiarity with the female condom, and fear of its retention inside the female. This phenomenon was also confirmed by some of the KIs. The findings arising from the interviews showed that the appearance of a female condom also hindered its use. Once they saw this form of prevention, female students became scared of putting it inside their vaginas, fearing its retention, and so becoming hesitant to try it. This provides grounds for misunderstanding the value of the female condom. This finding corresponds with the results of Mantell et al. (2011), in which most participants admitted to being unfamiliar with the female condom, which hampered their ability to attempt using it. Similarly, in Mugadza et al.'s (2016) study, the reasons cited by participants for their reluctance to use female condoms included difficulty in inserting it, discomfort at its appearance, and fear that the condom could be retained inside the vagina. In the context discussed above, factors contributing to low usage of the female condom included poor knowledge on its use, and lack of familiarity with this method. In the same study by Mugadza et al. (2016), findings revealed that most participants (96%) reported that they did not know how to use the female condom.

These aspects may indicate that there were healthcare service factors affecting the use of female condoms, including that the focus was more on male condoms than this method, regardless of its availability at the institution. This might suggest that CPUT focuses more on promoting and distributing male condoms than female ones and is remiss in the promotion of this method, consequently affecting the specific use of the female condom. This may also be related specifically to the type of counselling and condom provision at CPUT. This inadequacy is also likely to occur within the broader context of public sector health service provision, that there is not much focus on providing information and counselling on female condoms, and on the promotion of this type of condom as a prevention method. In this regard, vigorous female condom use promotion in terms of intense health education and

counselling is needed in order to change perceptions about its use, as well as changing attitudes towards this method.

5.4.3 INSTITUTIONAL SOCIAL EVENTS EXPOSING STUDENTS TO RISKY BEHAVIOURS

The study results showed that unavailability of condoms was a particular problem at this institution when there were social events. Participants reported that during these social events, students were exposed to freely available alcohol, which led them to be more likely to engage in casual and unplanned sex. Participants also reported that at these events, they engaged in unprotected sexual activities as there were no condoms available at the venues where these events took place. This is in line with the HEAIDS (2008:44) study findings, in which participants expressed the view that condoms were not available at "bashes". This is consistent with the findings of other studies in which alcohol use has been linked to riskier sexual behaviours such as inconsistent or non-condom use (Mehra et al., 2014; Blignaut, Jacobs & Vergnani, 2015; Ramsoomar-Hariparsaad, 2016). This suggests that hosting social events at the institution where alcohol is freely available for students may hinder students' condom use and addressing issues of greater risk in these contexts is required.

5.5 COMMUNITY AND SOCIETAL FACTORS

At the community level of the framework, the settings in which social relationships occur are explored (CDC, 2015). The final level looks at the broad societal factors (inclusive of social and cultural norms) that help create a climate in which the phenomenon is encouraged or inhibited (CDC, 2015). In this study, important themes relating the social risk factors that emerged included the stigma of being seen with condoms by peers, as well as parental and religious values. Another theme that emerged strongly was the societal association between the preference for purchased condoms over freely available ones, the use of purchased condoms being associated with the man being of a higher societal status. These factors negatively influenced the condom use among students by inhibiting condom uptake and use, and may consequently increase risk for contracting HIV infection.

5.5.1 STIGMA OF BEING SEEN WITH CONDOMS BY PEERS

The study findings showed that stigma towards carrying condoms is a concern, as some of the participants reported finding condom collection embarrassing. This is consistent with HEAIDS' (2010) mixed-method study findings in which some of female participants reported being worried about what others would think of them for carrying condoms. Female participants in this study seemed more likely to express fear of their peers' reactions, than males. They reported that they would feel shame from being judged and labelled with degrading names. Most of the KIs concurred with these views about potential stigma. They stated that students tended to feel embarrassed to be seen taking and carrying condoms. This hampered condom uptake and had a negative impact on condom use, as it led to some students shying away from collecting condoms, resulting in condom non-use. This highlights that social influences, in terms of stigma in particular, are an inhibiting factor for condom collection and use.

5.5.2 SOCIETAL ASSOCIATION BETWEEN PURCHASED CONDOMS AND MEN BEING OF A HIGHER SOCIETAL STATUS

The findings show that perceived societal expectations negatively influenced condom use, in that purchased condoms were preferred over freely available ones. Branded purchased condoms were viewed as better in terms of quality and sexual sensation. Participants mentioned experiencing discomfort when using the freely available condoms, which included tightness for males and vaginal irritation for females. Participants reported that the purchased condoms were of good quality and exciting in terms of having a variety of flavours, texture, lubrication, more suitable sizes, and being fragrant as well as having add-ons such as being studded or ribbed. The findings also revealed that some male participants experienced discomfort related to free government issued condoms' size. D'Anna et al. (2012) note that numerous studies assessing comfort of condom use among students in HEIs indicated similar experiences with respect to the condom fit, size and sensation. This corresponds with Yarber et al.'s (2007) findings, in which discomfort problems resulting from the fit and feel of condoms on males, and vaginal irritation in females during condom use, deterred participants from using them.

Another finding that emerged about purchased condoms was that they were associated with male students maintaining a higher social status at the university. Most male participants reported that their peers expected them to show that they were of a higher social status by buying branded condoms, as they tended to be ridiculed if they were seen with free condoms. Some KIs also thought that male students preferred using branded purchased condoms as they viewed them as superior to the free ones; this was because the free ones made them look cheap to their peers and partners. This social influence was a key factor among most participants, and it was rare to find participants reporting not conforming to these social norms. This indicates that the societal expectations, in terms of peer views and attitudes, also play an important role in the preference for purchased rather than free condoms.

The findings also highlight a view that bought condoms are associated with valuing and respecting female partners. Most male participants reported that they preferred using the bought condoms, as their female partners felt valued by this. Consequently, the social influences in condom use tended to be a hindering factor on condom use, which may result in poor condom uptake and low condom use. This may increase HIV acquisition among students at this institution.

5.5.3 PARENTAL AND RELIGIOUS VALUES

The findings indicate that parental and religious values about sex may inhibit condom use among students. Some participants and KIs reported that families' negative attitudes towards having sex outside marriage, and their churches' opposition towards condom use, hindered condom use. This led to challenges in carrying condoms. These results are similar to those reported by Masoda and Govender (2013), where parental and religious objections were also a barrier to condom use. In addition, the same findings concurred with a study carried out by Osonwa et al. (2013), in which parents' disapproval (21%) and religious beliefs opposing condom use (25%) were among the reasons reported by participants for not using condoms. This highlights religion's influence on sexual activities, as some churches' opposition to condom use may deter their use (Masoda & Govender, 2013). In this regard, Osonwa et al. (2013) suggest that religious organisations need to be incorporated in HIV prevention campaigns, for them to learn more about the need for non-stigmatised use of condoms. Masoda and Govender (2013) note that participants in their study assumed that the parental

objection was the result of there being no open discussion with their parents about condom use. This illustrates that poor communication between parents and their children can act as a barrier to condom use. This also suggests a need for sex education to be encouraged at family and community level.

All the factors discussed above serve as additional social factors from the students' communities that they need to negotiate if they are to become consistent condom users.

5.6 STUDENTS' PROPOSALS FOR IMPROVING ATTITUDES, PRACTICES AND ACCESS TO CONDOMS

The study findings revealed that the current strategies used in promoting condom use in this institution need improvement. Most participants expressed the view that, although the strategy currently pursued was working well, more needed to be done. Their suggestions included improved education on condom use, more favourable environmental factors, and the improvement of individual attitudes towards condoms. These suggestions for improvements are described below according to the different levels of the SEM; however, not all the levels of the model were applicable.

5.6.1 INTERVENTIONS AIMED AT THE INDIVIDUAL LEVEL BY MEANS OF THE INSTITUTIONAL LEVEL

5.6.1.1 Improved education on condom use

5.6.1.1 (a) Increasing awareness, information and understanding on condom use

The study findings strongly suggest that students' ability to use condoms needs to be promoted through increased knowledge in condom use. Most participants reported that obtaining more information on how to use condoms correctly could make it easier for them to use them correctly and consistently. The study by Masoda and Govender (2013) showed that condom promotion and demonstration campaigns in sub-Saharan Africa had resulted in increased condom use. This finding was also in line with Durojaiye's (2011) study, that showed that students who had more accurate knowledge about HIV/AIDS were more likely to view its potential negative health impact as undesirable, and to use condoms consistently

as a precaution. This indicates that informing students in more effective education programmes on these subjects has an important role to play, and can positively change their attitudes towards using condoms during sexual intercourse. This is confirmed by Masoda and Govender (2013), who report that HIV/AIDS knowledge is instrumental in increasing condom use.

The study findings reveal that the students did not seem to internalise individual risk for themselves. It also appears that students have insufficient detailed knowledge, and there were numerous barriers to effective prevention. In this regard, it became apparent that a new strategy is required for transferring information to students, to enable them to internalise in a way that promotes easy understanding, such as the use of drama and theatre art. In this way, students can internalise the information and be made conscious of the risk. Most participants and KIs proposed that HIV-positive people needed to be involved in the education process, and that transparency regarding HIV, inclusive of statistics of HIV positive students, was required. Another suggestion for improving the effectiveness of the HIV prevention programme was that the HIV curriculum integration should be strongly considered, whereby there is a compulsory inclusion of HIV related subjects into the institution's curriculum. This suggests that more knowledge on HIV, and consciousness of the risk of contracting the infection might promote condom usage among students in HEIs.

5.6.1.1 (b) Instilling positive individual attitudes and self-confidence towards condom use

The findings of this study indicated that there were negative attitudes and a lack of confidence among some students about condom use. Most female participants lacked confidence in collecting condoms, and this made it difficult to practice safer sex. Some participants, mostly males, showed negative attitudes towards condom use, and this led to unsafe sexual practices. The findings also show that those with positive attitudes and self-confidence tended to be more likely to practice safe sex.

In this regard, participants suggested development of interventions that would instill positive attitudes, and boost self-confidence regarding condom use among students, as they thought these two aspects might facilitate condom collection and use. This proposal is in keeping with Osonwa et al. (2013), who suggested that a positive attitude towards condoms, and a greater confidence in one's ability to use them, corresponds to higher levels of condom use. Other

participants noted that these two aspects would serve to counter the feelings of shame, which tended to inhibit condom collection and usage. This indicates that more interventions are required to build self-confidence, particularly in the female students, who were the most affected by feelings of shame, as well as to change mindsets to counteract negative attitudes towards condom use.

5.6.2 INTERVENTIONS AIMED AT THE INSTITUTIONAL LEVEL

5.6.2.1 Favourable environmental factors

5.6.2.1 (a) Increasing condom availability and accessibility

The study findings show that there is insufficient condom availability at the institution. Most participants suggested that condom availability might be increased by hosting frequent awareness campaigns. Some participants reported that during such campaigns, students could more easily collect condoms, without challenges, as everyone around them would be collecting condoms at the same time, and condoms were always sufficiently available during these activities. This suggests that awareness activities could influence condom collection in a positive way.

Participants also felt that condom availability and accessibility could be increased through condoms being broadly available in a wide range of areas in the institution, instead of being available only at limited collection points. This proposal is in line with Akpan, Ekott and Udo's (2013) recommendations suggesting that condoms should be provided freely, and made readily available at strategic places, such as sexual health clinics, within the tertiary institution's environs. This also corresponds with Osonwa et al.'s (2013) recommendation that condom availability may enhance accessibility of condoms, which could further progressively motivate their utilization over time.

5.6.2.1 (b) Improving the quality of condom

One of the inhibiting factors to condom use that emerged was the perceived poor quality of the condoms offered freely at the institution, in terms of poor lubrication and thick texture. Earlier in the discussion, these two factors were discussed as being perceived as interfering with sensation during sexual engagement, and participants reported that lack of lubrication may lead to the condom breaking as a result of dryness and friction during sex. In this regard,

some participants suggested that more lubrication on condoms would assist with putting condoms on without a struggle, as well as preventing friction that may lead to condoms breaking. They also proposed that a thinner texture of the condom would improve attitudes to condom use, as the sexual sensation would be better. This illustrates that the physical qualities of condoms, in terms of adequate lubrication and better texture, may enhance condom use. However, since this study, the new brand "MAX condom" (which replaced the old free public sector's "Choice condom" brand) was launched in HEIs, in June 2016 and has been available, which may ameliorate this problem.

5.7 LIMITATIONS OF THE STUDY

Qualitative research is not aimed at being generalizable, but rather at gaining rich insights into the meanings of phenomena. Thus, the findings of this study provide a deeper understanding of students' behaviour, as far as attitudes, perceptions and practices of condom use is concerned. However, there are some important limitations in this study.

The first one is the small size of the study sample (students), which may not have captured the full diversity of potential participants. This sample was limited to only one campus out of eleven campuses of CPUT, with a study sample of sixteen students. It is therefore important to note that the insights gained are limited to this one study site and are therefore not representative of the whole site. Thus, with regard to the findings from this study sample, and the conclusions reached, we cannot be sure that these views, perceptions and practices reflect those of students from other CPUT campuses. However, the demographical profile at the other CPUT campuses is similar to the one where this study was conducted. In addition, the findings related only to CPUT, and therefore do not necessarily reflect the views and practices at other national universities. Nevertheless, 'transferability' means that similar methods could be used to conduct studies on other campuses, and insights can be gained from the results of this study.

Another limitation of the study was that the topic was a sensitive one, and therefore some students may have found it difficult and uncomfortable to reply to some of the questions. The participants that were not using condoms might have felt uncomfortable and hesitant to divulge such information for fear of being judged by the researcher. However, this was

limited by attempting to create a comfortable atmosphere as far as possible, so that participants would feel freer to share their views and experiences.

5.8 CONCLUSION

In this study, the SEM was applied as a framework in discussing the findings. While it became clear that the students of CPUT had heightened awareness about the use of condoms for the prevention of HIV infection, it also appeared that engaging in unsafe sex was common. This implies that there is a gap between knowledge and the application of the knowledge about condom usage as this study has shown that many CPUT students did not practise protected sex.

Factors such as: lack of knowledge and poor understanding of condom use at a personal level; intimate relationship status; gendered power relations; inadequacies in institutional condom availability, accessibility, education, and insufficient coverage in condom demonstrations; inadequate addressing of the increased sexual risks when alcohol is served at social events; societal association between preference of purchased condoms over freely available ones and men being perceived as having a higher societal status; fear of stigma; parental disapproval; and religious barriers emerged as contributing to poor condom use. These factors inhibited condom use, and correct and consistent use, and consequently placed students at increased risk of contracting HIV.

In conclusion, the study findings show that there is a demonstrable need for HIV prevention interventions to be scaled up, and a need to address the factors hindering condom use among students. Based on these findings, the next, and final, chapter will provide a conclusion and outline some recommendations.

CHAPTER 6 - CONCLUSION AND RECOMMENDATIONS

6.1 SUMMARY

This study aimed to explore the attitudes, practices and perceptions of CPUT's students towards condom use from students' and study peer educators (PEs)' perspectives. The findings showed that there were multiple factors influencing the attitudes, perceptions and practices of CPUT's students towards condoms use. The students were mostly aware of HIV transmission and of the benefits of using condoms correctly and consistently, but there were some who did not perceive this as worthwhile, or who lacked sufficient information. Negative attitudes and perceptions towards condom use were related to decreased sexual pleasure and the belief that condoms did not provide 100% protection. Relationships with one sexual partner were also crucial in determining condom use, with issues related to beliefs that a partner would be faithful, or that negotiating condom use in the context of a perceived monogamous relationship would be problematic, and that, with one sexual partner, risk was likely to be reduced. These are issues that have arisen elsewhere and appeared to be no different in this more educated and young population. Issues influencing consistent use were both similar and different to other contexts. CPUT, as an educational institution, was not always scrupulous in ensuring that condoms were accessible and available to students. Stigma; alcohol use; and parental, and religious values were other important factors influencing condom use. These factors were often interconnected, and collectively impacted on the students' perceptions, attitudes and practices with regard to condom use. There are interesting new insights in this regard that may provide insight to other higher education institutions.

6.2 A HEALTH PROMOTION APPROACH TO CONDOM USE AMONGST STUDENTS IN HEIS

Addressing the issue of condom use on tertiary institution campuses involves adopting a holistic approach to promoting the health of students in HEIs. The Ottawa Charter (World Health Organization, 1986), as a framework for health promotion approach, is employed here

to address the different levels of factors influencing condom use amongst students in HEIs. This involves focusing on the five action areas of the Ottawa Charter:

(1) Building healthy policies with regards to condom use at CPUT. This places the issue of HIV, STIs and condom use amongst students on the agenda of policy makers at the tertiary institution more extensively, and also on a national level for tertiary institutions. Current policies and bodies should be revisited on an ongoing basis in terms of new evidence arising.

(2) Creating a more supportive environment on tertiary institution campuses that generates optimal living conditions and studying conditions for students. This includes reducing the barriers that hinder accessibility, usage and availability of condoms. Having healthy policies will also create a supportive environment.

(3) Strengthening community action through the involvement of the different communities, tertiary institution and student bodies in setting priorities, making decisions, planning and implementing strategies to promote effective condom use with regards to students in HEIs.

(4) Developing personal skills. This involves enhancing life skills and education regarding HIV prevention and condom use. This may also involve empowerment of students, with a particular focus on how best to enable empowerment of female students within the context of their broader upbringing, communities and specific tertiary institution communities, to develop skills for assertiveness and negotiation.

(5) Re-orienting health services offered to students in HEIs, so that health services engage in health promotion, in addition to clinical and curative services. This can be achieved by involving other departments besides the HIV unit in condom promotion at CPUT.

6.3 RECOMMENDATIONS

Given the multiple factors identified by the study, inside and outside the university, that influence the attitudes, perceptions and practices of university students with respect to condom use, for CPUT to improve in knowledge of condom use and bridge the gap between knowledge and practice among CPUT students, the following recommendations are suggested. However, it is difficult to know whether they will all be achievable.

6.3.1 RECOMMENDATIONS FOR THE INSTITUTION

6.3.1.1 Scaling up the Condom Promotion Programme

Condom promotion and distribution programmes should be intensified if HIV prevention programmes are to be effective. This enhancement will increase **availability** and **accessibility**, as well as **intensive education** on correct use of condoms and HIV prevention.

6.3.1.1 (a) Increasing condom availability and leadership

- The HIV Unit needs to design and implement Condom Promotion and Distribution guidelines or standard operating procedure (SOP), which will guide the PEs (who are mostly responsible for this task) regarding distribution channels and processes that will increase availability of condoms to the students. This will ensure condom availability at all times, as this emerged as a challenge, and some PEs also admitted that they did not often fill up the dispensers as they should. This guide will stipulate the frequency of distribution and the target outlets (such as events venues, as students raised complaints that these venues are currently not attended to).
- Implementing a monitoring strategy that will ensure an uninterrupted and readily available supply of condoms at the distribution outlets. Besides the PEs who are responsible for the condom distribution task, the HIV unit needs to have a champion for this program, such as a permanent staff member who will be responsible on an ongoing basis. The condom promotion champion needs to employ improved monitoring tools that will better identify condom stock shortage/running out at the HIV unit, and elsewhere on the campus. A balance stock card/sheet can be used in the unit, and in which the stock of condoms will be documented on arrival and also signed out when condoms are taken out for distribution, with a balance documented at each time. In this way, the condom champion will be able to take note when stock is running low and be prompted to log a new order. Another possible tool should be able to detect the unavailability of condoms elsewhere on the campus. A barcode system where all dispensers need to have a sticker with a barcode identifying the location of each dispenser so that if the dispenser is empty, anyone who identifies an empty dispenser can scan the barcode on their mobile phones and it will send an automatic

message to the HIV unit's webpage immediately, with the location of the dispenser to be filled-up. The champion and any other staff member at the unit having access to this, will be able to see the message. In this way, this tool will be able to identify empty condom dispensers on time, to address students' complaints about this as a problem.

- Expanding the distribution intervention by identifying strategic places within the university environs and campus residences where there is high traffic of students (such as student centres, classrooms, laboratories, at institution's entrance points and corridors, places within the residences and other places that students have identified as important, such as entertainment venues), as students complained that condoms were available only at limited collection points. This will increase the distribution at these outlets and increase frequency of condom distribution.
- Implementing a condom marketing programme through visible posters and media (such as on LCD TV screens that are mounted around campus buildings, and also through video clips on the HIV Unit's face-book page, as well as on the institution's social media pages (face-book and twitter), as this is not currently occurring. The posters and live demonstrations will assist by showing a step-by-step condom demonstration and specifying the points of condom collection in the institution.

6.3.1.1 (b) Increasing accessibility

- Design private condom dispensers that can be mounted inside the toilet cubicles, additional to the ones that are in the bathroom as a whole. This will attempt to address some of the embarrassment students reported in picking up condoms in public spaces. Students generally found that it may be embarrassing to be seen carrying condoms, and ideas to address this should be workshopped with students directly.
- The higher education sector, including CPUT, needs to consider obtaining stocks of improved quality condoms, in terms of texture (thickness), as most students complained about this aspect. This might significantly improve use of condoms. The recent introduction of colourful and flavoured condoms could improve use. The idea of have outlets for condom distribution that involve a small charge, in addition to having free condoms outlets should be considered given that some students considered this necessary to show elevated status and care for partners.

6.3.1.1 (c) Intensive education on correct condom use

I suggest there is a call for more intensive condom education and employing different strategies, and recommend the following strategies that might work better:

- Currently, CPUT hosts a condom promotion campaign only once a year according to the health calendar, and the HIV awareness event is only twice a year through HCT Campaigns. These campaigns need to be hosted more frequently to provide more awareness of HIV infection prevention and to increase students' knowledge on how to use condoms correctly. These campaigns are good platforms for condom use demonstration and are therefore likely to improve knowledge on correct use of condoms, which can assist in preventing condom use failures.
- Orientation period sessions of 1st year students when the HIV Unit staff are invited to market the unit can also be used as an opportunity for condom demonstration.
- Creating **partnerships** with other units in the institution in tackling this challenge. In achieving this, CPUT can coordinate intra-institutional responses to the subject in question. At present, condom promotion is solely the responsibility of the HIV unit. Other units such as student health clinics, student counselling department as well as other departments dealing with students need to be involved. For example, one-on-one sessions can be provided at the student health clinic, especially when students are accessing STI services or requesting emergency contraceptives due to unsafe sexual behaviours practiced.

6.3.1.1 (d) Intensive education on HIV

- ❖ HIV Academic Curriculum Integration

- Implement a compulsory HIV Curriculum Program that will integrate HIV/STIs prevention information into the university curriculum as a module. This module needs to be included in all faculties of the institution. In this program, academics or lecturers need to be capacitated in terms of being trained in the mechanisms of HIV infection in order for them to effectively convey correct and consistent information to the students.

- Employ methods that will influence students to have more knowledge on HIV prevention, for example, having smaller group discussions within the curriculum, with students discussing how to implement and support one another in HIV prevention.
- Educational sessions can also be used to increase knowledge of students on Pre-and-Post Exposure Prophylaxis in order to prevent HIV infection and keep a negative HIV status as well as on importance of being adherent to antiretroviral treatment if infected so as to ensure lower infectivity and stay healthy.
- Employ methods that will increase students' knowledge on what happens in the body when infected with HIV and not treated. In this regard, PLWH can be invited to give talks and the audio-visual aids can also be utilised. It is also advisable that CPUT becomes transparent in making available to the students the current HIV infection statistics in their institution, as the students showed interest in seeing that while campaigns took place at their institution, they were not provided with feedback on these events' outcomes.

❖ Expanding the Awareness Programmes of HIV prevention

The HIV awareness programmes need to be expanded through drawing in issues from the broader context. This can be enforced through incorporating and collaborating with other departments' events as follows:

- **Religious values** – The CPUT's Student Christian Organisation (SCO) and the Seventh-Day Adventist Students Movement (SDASM) should be engaged in routine HIV prevention campaigns to break the condom use stigma related to religion. The churches' opposition towards condom use tended to lead to negative feelings about condom use altogether, or difficulties in consistent use among students as often in church they were being told not to use condoms or that condoms are only for use by certain kinds of people. HIV Unit staff or PEs need to request slots in the events hosted by SCO, as well as in gatherings of different religious organisations (such as SDASM, Light House Chapel and Assemblies of God) at CPUT to raise awareness. In this way, the religious organisations will learn more about the need for non-stigmatised use of condoms (Osonwa et al., 2013). It is also advisable to target having at least one PE based at each of these organisations.

- **Parental values –** During the **Open Day events** at the institutions, which are attended by most students' parents, the parents can be informed about the perceived benefits on why they should encourage their children at university regarding safer sexual practices. PEs can also run smaller groups at these open-day events where they discuss the influence of parental upbringing and how to deal with this issue on a more ongoing basis. These discussions can also include ways of addressing the issue of fearing being seen with condoms (to keep condoms unseen), especially for those students that are still living with parents.
- **Media platforms –** Social networks are known to be a better platform to attract students, therefore, effective HIV/AIDS prevention messages could reach many students through the institution's social networks webpages (such as Facebook and Twitter) where video clips may be used. Other means of spreading information through media could be through the as institution's radio slots, LCD TV screens, and by sending mass messages to their students' email addresses. Individuals that are influential with students can be used. For example, during the institution's social events, an influential young musician, as well as leaders in the different political or social organisations (at CPUT) can also be invited to spread the word.

6.3.1.2 Creating a supportive and conducive environment on university campuses

6.3.1.2 (a) Limiting alcohol accessibility in the institution and supporting excessive alcohol users

There is a demonstrable need for entertainment events being hosted for students to be modified to be more suitable for the environment, as it is believed that alcohol is available in these institutions' social events at no cost. This leads to excessive alcohol consumption and greater risk of unprotected sexual behaviours.

- The institution should, in consultation with the Student Representative Council (SRC), limit their alcohol budget in the entertainment area and find other methods of entertaining the students with limited alcohol being available. This could avoid condoning excessive alcohol use by students. Sponsoring of these events by alcohol companies should be avoided. Also, condoms need to be available close by in these entertainment venues.

- The institution's housing department in collaboration with student counselling unit need to design and implement an alcohol-related program that will support and encourage students to self-limit on alcohol use. This program can involve providing information through awareness campaigns (at campus and residences) around alcohol use risks and highlighting the alcohol/HIV link as well as to discourage excessive alcohol use. A buddy system can also be implemented, in which students need to watch, support and advise their friends who are drinking excessively.

6.3.1.3 Behavioural modification interventions/programmes

HIV prevention messages should seek to achieve even the smallest amount of behavioural change. It is recommended that CPUT design and implement youth-friendly strategies in addressing this effectively with students, such as peer-led programmes. This might result in a more effective behaviour modification intervention through the influence of fellow students. This suggests calls on PEs to be the change drivers of this programme. Therefore, the Peer-Education programme that is currently in place needs to be scaled up, taking into account reorientation programmes and values clarification programmes suggested below, particularly for PEs that appeared to adopt a judgemental attitude towards students:

- To implement activities focussing on behaviour change conducted by PEs themselves. The more interaction (frequent talks about sex and condoms) the students have with PEs, the more influential it could be. This should encourage building student self-esteem and agency, instead of being judgemental. This may eventually be successful in removing the stigma against condom collection and use among students. Most students are more comfortable and feel more free to talk about this type of topic when it is addressed by their peers.
- PEs need to be visible at most social events hosted for students and use these events as platforms to influence behaviour change. For example, they could be assigned slots in these events for talks on reducing sexual risk-taking behaviours, and touch on topics such as safe sexual practices, minimising MCPs, limiting alcohol use, etc.
- They also need to distribute condoms at venues hosting these social events, as it was reported that condoms were unavailable and, yet students tended to have unplanned sex at these events.

6.3.1.4 Empowerment Programme for female students

Study findings revealed that the female students tended to be submissive to their male partners, and they appear to be the ones most affected in many ways regarding HIV infection. CPUT needs to evaluate programmes targeting women's health with a view to rolling out and expanding a continuous young women's programme. This will be an approach to fast track efforts to empower this group.

This programme needs to empower female students through workshops that will build and increase self-confidence, and consequently their assertive skills (to be able to refuse unsafe sex) and condom negotiation skills. In this way, they will be able to avoid risky sexual behaviours, thereby decreasing HIV infection and unplanned pregnancies. However, this cannot be done without also involving male students, either on their own or with female students. In addition, students need to be encouraged as a group to engage with patriarchal attitudes in the communities in which they live. They will not be able to sustain equal female and male agency in sexual relationships if this is not addressed more broadly in the contexts in which they come from, live or go back to. There are numerous evaluated programmes that have shown some success, such as 'Stepping Stones' (Jewkes & Morrel, 2010); male gender transformative programmes run by Sonke Gender Justice (Stern & Cooper, 2014); and cash transfer or earning programmes for young women (Cluver et al., 2013) that the university can draw on. The programme also needs to change students' mindsets to counteract negative attitudes towards condom use so as to counteract feelings of shame in using condoms.

6.3.2 RECOMMENDATIONS FOR HEALTH CARE PROVIDERS

- Judgemental attitudes tend to hinder access to sexual and reproductive health services and condoms for young people, therefore health care workers (HCWs), inclusive of PEs, need to adopt non-judgemental and youth-friendly attitudes, so as to gain the trust of students and be able to hear where and when they fail with condom use and to provide workable advice and support accordingly.
- The user-errors and discomfort issues that resulted in incomplete condom use highlight the need for more intensive counselling strategies to rectify these problems,

and the need to take seriously the problems students may be experiencing. HCWs, including PEs, should enquire about condom-associated problems when counselling students, and discuss possible solutions, as it is not enough to only emphasise the importance of using condoms throughout sexual activity. They need to also have an ear to the challenges encountered.

6.3.3 RECOMMENDATIONS FOR OTHER STAKEHOLDERS

Buy-in of Student Representative Council (SRC)

Most importantly, we need to recognise that young people need to be engaged with, and play an active role in the design of any interventions that will affect them. Without this, any interventions are unlikely to succeed. Students tend to pay more attention when the information comes from their leaders in the same age group. In this regard, CPUT needs to have the buy-in of the SRC and any other influential student bodies, and engage with them to play a role in designing the interventions that will affect students. In this manner, these student bodies will be involved in HIV prevention interventions, and be able to influence students in adopting less risky sexual behaviours.

6.3.4 RECOMMENDATIONS FOR FURTHER RESEARCH

This study has found that the male condoms were favoured over female condoms; female condoms were not easily acceptable or accessible due to less marketing and fear of its appearance, discomfort and lack of knowledge in how to use them. As a result, the use of female condoms at this institution appeared to be negligible. In this regard, the researcher recommends that further research be done on female condoms, to devise supportive strategies for this method to be more acceptable, and consequently increase its uptake and use. The issue of the female condom is vital, as it is believed that when females are efficiently empowered in this method, there is the possibility of their having more power in their sexual relationships and ultimately in taking control and avoiding unsafe sexual practices.

6.4 CONTRIBUTIONS OF THE STUDY

What appears to be an increase in new HIV infections had been noted at CPUT over the years. Whether more students were testing for HIV, or whether this represented a real increase is unclear. The causes of this increasing HIV incidence have not been clearly described. The present study contributes towards describing factors influencing students in condom use, which has an impact on HIV infection. This qualitative study captured the attitudes, perceptions and practices of the sexually active students towards condoms and their use at this institution, a population that is vulnerable to STIs, including HIV infection. The findings of this study provide insights into attitudes and perceptions towards condoms and condom use practices that may be of use at other tertiary education institutions in the Western Cape Province. In terms of transferability as explained by Shenton (2004), other researchers can conduct studies using a similar methodology to conduct their own studies. Findings from the present study can assist in modifying and reinforcing HIV prevention attempts and approaches to prevent more students from getting infected at CPUT. There is an urgent need for enhanced preventative interventions as highlighted in this study. It is strongly recommended that this study act as a foundation upon which more studies may be conducted.

In conclusion, HIV/AIDS remains a public health problem globally. At present, correct and consistent condom use is the most effective measure to prevent HIV and other STIs amongst sexually active individuals. Promoting condom use will not only reduce the rate of HIV infections, but also create a healthier community at CPUT. It is important to have better mechanisms to address the various factors influencing condom use amongst tertiary institution students.

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APPENDICES

LIST OF APPENDICES

Appendix 1: Information Sheet – Students

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

APPENDIX 1

INFORMATION SHEET – STUDENTS

Project Title: Understanding the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape.

What is this study about?

My name is Beauty Sweetness Kola and I am a post-graduate student conducting this research for a mini-thesis at the University of the Western Cape. This is requirement for the Masters in Public Health that I am completing at the University. I am inviting you to participate in this research project because you are a student aged between 18-24 years old studying at Cape Peninsula University of Technology (CPUT). The purpose of this research project is to explore the attitudes, practices and perceptions, of CPUT's students towards condom use from the perspectives of the students and student peer educators.

We hope that this research will contribute to a better understanding of issues that support or hinder students in condom use in trying to prevent risks of infection with HIV.

What will I be asked to do if I agree to participate?

The study will be conducted at CPUT. You will be asked to participate in the interview once and the interview will be conducted in a private place at this institution. The interview will take about 40 minutes of your time. You will be asked questions that involve sharing the information you have about students' attitudes, perceptions and practices towards condom use in preventing HIV infection. The interview will be tape recorded with your permission, so that I can listen to it afterwards to make sure I have remembered everything you have said.

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UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. Only I as the researcher, will have access to the recorded information from the interviews. The tape recordings of the interviews will be locked away and the information on the tapes will be destroyed after the interviews have been transcribed. To ensure your anonymity, your name will not be included on the recorded interview, but will be replaced with a study number that will act as an identification code. Only the researcher will have access to knowing how the identification code links to a person who was interviewed.

To ensure your confidentiality, the information received during the interview will remain confidential between the participant and the researcher. The information collected will be kept locked away in a cabinet, and only the researcher will have access to the records. Only the identification codes will be used on transcribed interviews. The consent forms that the participants interviewed sign will be kept separate from the transcribed interviews so that the two are not linked.

If I write a report or article about this research project, I will not give any names with respect to the information I have collected, so that your identity will be protected.

What are the risks of this research?

There may be some risks from participating in this research study such as feeling uneasy or embarrassed to respond to some questions. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary if you would like this, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

The information you give for this research is not designed to help you personally, but we hope that, the insights from this research will contribute to CPUT providing students at the institution with HIV

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

prevention programs that take better account of the issues that help or hinder them in using condoms to protect themselves against the possibility of HIV infection.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify as a student at this institution.

What if I have questions?

This research is being conducted by Beauty Sweetness Kola from School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Beauty Sweetness Kola at: 5 Straso Court, Andries Pretorius Street, Parow, Telephone number 0214609030 or 0826272848, e-mail address: kolas@cput.ac.za.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Helen Schneider
School of Public Health
Head of Department
University of the Western Cape
Private Bag X17
Bellville 7535
soph-comm@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee. (REFERENCE NUMBER: *15/7/256*)

Appendix 2: Information Sheet – Student Peer-Educators

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

APPENDIX 2

INFORMATION SHEET – STUDENT PEER EDUCATORS

Project Title: Understanding the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape.

What is this study about?

My name is Beauty Sweetness Kola and I am a post-graduate student conducting this research for a mini-thesis at the University of the Western Cape. This is requirement for the Masters in Public Health that I am completing at the University. I am inviting you to participate in this research project because you are a student peer educator aged between 18-24 years old studying at Cape Peninsula University of Technology (CPUT), and involved in the CPUT's HIV unit. The purpose of this research project is to explore the attitudes, practices and perceptions, of CPUT's students towards condom use from the perspectives of the students and student peer educators.

We hope that this research will contribute to a better understanding of issues that support or hinder students in condom use in trying to prevent risks of infection with HIV.

What will I be asked to do if I agree to participate?

The study will be conducted at CPUT. You will be asked to participate in the interview once and the interview will be conducted in a private place at this institution. The interview will take about 40 minutes of your time. You will be asked questions that involve sharing the information you have about students' attitudes, perceptions and practices towards condom use in preventing HIV infection. The interview will be tape recorded with your permission, so that I can listen to it afterwards to make sure I have remembered everything you have said.

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UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2609 Fax: 27 21-959 2872
E-mail: zopk-comm@uwc.ac.za

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. Only I as the researcher will have access to the recorded information from the interviews. The tape recordings of the interviews will be locked away and the information on the tapes will be destroyed after the interviews have been transcribed. To ensure your anonymity, your name will not be included on the recorded interview, but will be replaced with a study number that will act as an identification code. Only the researcher will have access to knowing how the identification code links to a person who was interviewed.

To ensure your confidentiality, the information received during the interview will remain confidential between the participant and the researcher. The information collected will be kept locked away in a cabinet, and only the researcher will have access to the records. Only the identification codes will be used on transcribed interviews. The consent forms that the participants interviewed sign will be kept separate from the transcribed interviews so that the two are not linked.

If I write a report or article about this research project, I will not give any names with respect to the information I have collected, so that your identity will be protected.

What are the risks of this research?

There may be some risks from participating in this research study such as feeling uneasy or embarrassed to respond to some questions. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary if you would like this, an appropriate referral will be made to a suitable professional for further assistance or intervention.

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: sophi-comm@uwc.ac.za

What are the benefits of this research?

The information you give for this research is not designed to help you personally, but we hope that, the insights from this research will contribute to CPUT providing students at the institution with HIV prevention programs that take better account of the issues that help or hinder them in using condoms to protect themselves against the possibility of HIV infection.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify as a student at this institution.

What if I have questions?

This research is being conducted by Beauty Sweetness Kola from School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Beauty Sweetness Kola at: 5 Straso Court, Andries Pretorius Street, Parow, Telephone number 0214609030 or 0826272848, e-mail address: kolas@cput.ac.za.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Helen Schneider
School of Public Health
Head of Department
University of the Western Cape
Private Bag X17
Bellville 7535

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809 Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

soph-comm@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee. (REFERENCE NUMBER: *15/7/256*)

Appendix 3: Participant Consent Form

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

APPENDIX 3

PARTICIPANT CONSENT FORM

Title of Research Project: Understanding the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate out of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name.....

Participant's signature.....

Date.....

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Appendix 4: Interview guide for students

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

APPENDIX 4

(Researcher to record the following information on the audio-tape for transcription purposes)

Date of interview: (dd/mm/yyyy): _____

Duration (length of time taken) for interview (minutes/hour): _____

Participant study identifier number: _____

Male or Female _____

Background information to be asked of participant ***(and recorded on audio tape for transcription purposes)***

Current age of participant: _____

Interview guide for students

Attitude towards condom use:

1. What are your opinions on condom use?
2. In your opinion, when should someone use condoms and when should they not use it?
3. What should be the best practice with regards to condom use?
4. Do you think that condoms offer the best protection against HIV and other STIs when used?
5. What are your thoughts on condom use negotiation in intimate partner relationships?

Perception towards condom use:

6. What are your views on the use of condoms and the quality of a sexual experience when using condoms?
7. What do you think are some of the challenges that students may face with regards to using condoms?

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Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

8. What you do you think may make things easier for students with regards to using condoms?
9. In your view, is there anything that could be done by the Cape Peninsula University of Technology to encourage students to use condoms, and if so, what could be done?
10. What do you think about the availability and accessibility of condoms at this institution?
11. How else do you think condoms could be made more available and accessible to students to encourage use?

Practice towards condom use:

12. How often do you use condoms?
13. Based on your experiences, what influences your use of condoms?
14. Have there been any circumstance/s that you have not used a condom/s? Can you tell me a bit about what the circumstances have been in which you haven't used a condom/s.
15. Where do you get your condoms from? Do you ever collect condoms from the condom dispensers placed at various places at campus?
16. Have you ever bought a condom? If yes, how do you think a bought condom compares with the free condoms from the condom dispensers at CPUT?
17. Who do you think should make the decision to use condoms or not use condoms in an intimate relationship?
18. What are some of the challenges that you face when it comes to obtaining and using condoms? What are some of the things that make it easier when it comes to obtaining and using condoms?

Appendix 5: Interview Guide for Peer-Educators

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

APPENDIX 5

(Researcher to record the following information on the audio-tape for transcription purposes)

Date of interview: (dd/mm/yyyy): _____

Duration (length of time taken) for interview (minutes/hour): _____

Participant study identifier number: _____

Male or Female _____

Background information to asked of participant ***(and recorded on audio tape for transcription purposes)***

Current age of participant: _____

Interview guide for Peer-educators

Attitude towards condom use:

1. What are your views around condom use by fellow students?
2. In your opinion what should the best condom use practices for the students?
3. What do you think is students' awareness regarding condoms offering the best protection against HIV and other STIs when used?
4. What do you know about students' condom negotiation in their intimate relationships?

Perception towards condom use:

5. What do you think are some of the challenges facing fellow students with regard to using condoms?
6. What do you think are some of the issues that make it easier for fellow students with regard to using condoms?
7. In your opinion, is there anything that could be done by CPUT to encourage condom use by students? If so what can you suggest could be done?

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UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: zoph-comm@uwc.ac.za

8. What other strategies do you think could be used for condoms to be made more available to students and to encourage use?

Practice towards condom use:

9. Based on your experiences of being around with fellow students, what influences their use of condoms?
10. Do you think some of the students ever had a challenge of failing to use a condom?
11. In your view, do the students collect condoms from condom dispensers placed at various places at campus?
12. In your experience of being around with fellow students, do they ever buy a condom? How do they compare the purchased ones to the free condom from the condom dispensers at campus?
13. What do you think are some of the challenges that students face when it comes to obtaining and using condoms? What are some of the things that make it easier for students when it comes to obtaining and using condoms?

Appendix 6: Demographic Form for Participants

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

APPENDIX 6

Demographic form for students

Socio-demography

Date of interview: (dd/mm/yyyy): _____

Duration (length of time taken) for interview (minutes/hour): _____

Participant study identifier number: _____

Gender: _____

Current age of participant: _____

Year of study: _____

Race: _____

Province of origin: _____

1

Appendix 7: Demographic Form for Student Peer-Educators

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: zoph-comm@uwc.ac.za

APPENDIX 7

Demographic form for student Peer-educators

Socio-demography

Date of interview: (dd/mm/yyyy): _____

Duration (length of time taken) for interview (minutes/hour): _____

Participant study identifier number: _____

Male or Female Peer-Educator: _____

Current age of participant: _____

Year of study: _____

Period of being Peer-Educator: _____

Race: _____

Province of origin: _____

Appendix 8: Classification of Themes

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

APPENDIX 8

The table below, represents the themes and codes that were salient in the data.

Table 3 - Classification of themes

CATEGOGIES	THEMES	CODES
Attitudes towards condom use	Positive attitudes	Protection against sexually transmitted infections and pregnancy
		Effective protection entails correct and consistent condom use
	Negative perceptions and attitudes	Condoms decrease sexual pleasure
		Condom safety is not always certain
	Judgmental perceptions and attitudes held by the KIs	Reasons for not using condoms are perceived as excuses
		Assumptive attitudes of the KIs that students' condom collection or uptake is low
		Perceived knowledge of students on condom use
Condom use initiation and sexual decision-making		Mutual decision-making
		Men dominate in sexual decision-making
Condom use and practices		Current and consistent condom use
		Inconsistent use of condom
		Understanding on basic steps of condom use
	Factors influencing condom use	Personal knowledge on correct condom use
		Factors affecting acceptability of female condoms
		Alcohol consumption
		Disruption of sexual experience
		Intimate partner relationship status
		Parental and religious values
		Free versus purchased condoms
		Institutional condom availability and supply

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UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

Condom accessibility and availability		Attitudes and perceptions of the KIs regarding students' condom - collecting for other purposes
		Peer and social attitudes
Students' proposals towards improving attitudes, practices and access to condoms	Empowerment	Increasing awareness, information and understanding on condom use
		Frequent awareness activities
		Positive mind-set and self-confidence
	Favourable environmental factors	Increasing condom availability and accessibility
		Convenient packaging, lubrication and texture of condoms
		Personal mood and foreplay

Appendix 9: Coding Framework

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

APPENDIX 9

CODING FRAMEWORK

Table 4 - Coding Framework

Categories	Definition	Coding rule
Attitudes	An attitude is described as the participants' evaluative positive or negative way of responding to people, views and situations	Codes were assigned related to the personal feelings of the participants towards condom use
Perceptions	A perception is the way an issue is understood and a person's related beliefs and opinions.	Codes were assigned to statements of the participants' related to their perceptions of whether use of condoms was worthwhile or not and the reasons for their views
Practices	A practice is the actual application or use of something.	Codes were assigned to participants statements on their use or non-use of condoms during sexual intercourse or on the way he/she practices safer sex and their reasons for practices.

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Appendix 10: UWC Senate Research Committee Ethics Approval

UNIVERSITY of the WESTERN CAPE

DEPARTMENT OF RESEARCH DEVELOPMENT

18 January 2016

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Ms B Kola (School of Public Health)

Research Project:	Understanding the attitudes, perceptions and practices, towards condom use un preventing HIV infection among university students: A Qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape.
Registration no:	15/7/256

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2988/2948 . F: +27 21 959 3170
E: pjosias@uwc.ac.za
www.uwc.ac.za

Appendix 11: CPUT Health and Wellness Sciences Research Committee Ethics Approval

Cape Peninsula
University of Technology

HEALTH AND WELLNESS SCIENCES RESEARCH ETHICS COMMITTEE (HW-REC)
Registration Number NHREC: REC- 230408-014

P.O. Box 1906 • Bellville 7535 South Africa
Symphony Road Bellville 7535
Tel: +27 21 959 6917
Email: sethn@cput.ac.za

8 April 2016
REC Approval Reference No:
CPUT/HW-REC 2015/H27

Faculty of Health and Wellness Sciences

Dear Ms Beauty Sweetness Kola

Re: APPLICATION TO THE HW-REC FOR ETHICS CLEARANCE

Approval was granted by the Health and Wellness Sciences-REC on 2 February 2016 to Ms Kola for ethical clearance. This approval is for research activities related to staff research in the Department of Biomedical Sciences at this Institution.

TITLE: Understanding the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape.

Supervisor: Prof Diane Cooper

Comment:
Approval will not extend beyond 9 April 2017. An extension should be applied for 6 weeks before this expiry date should data collection and use/analysis of data, information and/or samples for this study continue beyond this date.

The investigator(s) should understand the ethical conditions under which they are authorized to carry out this study and they should be compliant to these conditions. It is required that the investigator(s) complete an **annual progress report** that should be submitted to the HWS-REC in December of that particular year, for the HWS-REC to be kept informed of the progress and of any problems you may have encountered.

Kind Regards

Mr. Navindhra Naidoo
Chairperson – Research Ethics Committee
Faculty of Health and Wellness Sciences

Appendix 12: CPUT HIV Unit Letter of Approval

Cape Peninsula
University of Technology

HIV/AIDS UNIT

Date: 20 January 2016

Dear Sr Kola

Letter of support/approval to conduct a study through the HIV/AIDS Unit.

Study Title: Understanding the attitudes, perceptions and practices, towards condom use in preventing HIV infection among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape.

I hereby acknowledge your letter dated 20 January 2016 along with the following documents with respect to your planned study:

1. Request for a letter of support from the HIV/AIDS Unit
2. Research Proposal
3. Ethics Approval from the University of Western Cape

I hereby provide approval to conduct your study through the HIV/AIDS Unit pending CPUT Ethics approval. Kindly send us a copy as soon as you received approval.

I wish you all the best with your studies.

Regards

Melanie Marais
HIV/AIDS Coordinator